

APPENDIX SEVEN – TREE SURVEY



Arboricultural Impact Assessment

Hill House Farm, Chigwell, Essex.

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Summary

An arboricultural survey has been carried out, and this report prepared to support a planning application for the provision of a residential development site. The development will comprise residential dwellings with internal access road, driveways and associated green areas on land to the north of Chigwell Road, Chigwell, Essex.

All trees that could be affected by the proposals were identified and inspected, with their details listed in Appendix 2.

This report seeks to provide information in accordance with British Standard *BS 5837:2012, Trees in relation to design, demolition and construction*.

With the proposed design layout provided by the client it is indicated that 22 individual trees (T1, T2, T3, T4, T5, T6, T7, T8, T9, T28, T29, T42, T43, T44, T46, T47, T49, T50, T51, T53, T54 & T63), 2 group of trees (G1, G2 & G3), and 6 areas young woodland (W1, W2, W6, W7, W8 & W9) will require removal to accommodate the proposals.

Provided precautions to protect the identified trees are specified and implemented through the measures included in this report, the development proposal will have little impact on the retained trees or their wider contribution to amenity and character.

If the recommendations made within this report are followed, the development should be achievable in arboricultural terms and should be acceptable to the local planning authority.

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1.0 Introduction

1.1 Instruction

An Arboricultural survey has been carried out, and this report has been prepared to support the proposed development of the site. The development will comprise of residential dwellings, a care home, and public open space, at land at Hill House, Chigwell.

It has been produced in accordance with the principles of British Standard *BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations* and includes the following information to accompany a planning application:

- details of significant trees including an assessment of condition using BS 5837 categorisation;
- a plan showing tree survey information, retention categorisation and root protection areas;
- an assessment of the impact of the proposal on trees and any wider impact that has on local amenity and any impact trees may have on the proposed development;
- an arboricultural method statement dealing with the protection and management of the trees to be retained; and
- a schedule of tree works to facilitate construction.

1.2 The proposal

The proposal is to develop the grazing land to at Hill House, Chigwell.



Image 1: Extent of proposed development envelope.

1.3 **Scope and purpose of this report**

This report covers trees on the site and those adjacent to the site which could be affected by any development. It is concerned with the impact the development may have on trees and the effect retained trees may have on the development. Its purpose is to allow the Local Planning Authority to assess the tree information as part of the planning submission.

1.4 **Legal constraints**

A desktop search made with Epping Forest District Council confirmed that a number of the trees on site are the subject of Tree Preservation Orders (TPOs).

Anyone wishing to undertake works to prune or remove a tree with a Tree Preservation Order or within a Conservation Area will require written authorisation from the Local Planning Authority before any works can proceed.

1.5 **Other information included in this report**

The following information is included in Appendix 1:

- *documents and information provided;*
- *legal constraints and liabilities;*
- *survey methodology;*
- *contacts; and*
- *reference documents.*

2.0 Site Visit and Observations

2.1 Site visit

A site visit was undertaken on 29th April 2017 by Southern Ecological Solutions Ltd. The weather was overcast but dry.

2.2 Site description

The proposal site comprised an area of young tree planting with mature mixed broadleaf trees around the southern and eastern boundaries forming linear features and un-maintained hedgerows along field boundaries.

2.3 The subject trees

A total of 68 individual trees, 3 groups of trees and 9 young woodland areas were identified as the subject of this report. These comprise 21 'B' category, 43 'C' category and 4 'U' category individual trees, 3 'C' category groups of trees, 7 'B' category woodland and 2 'C' category woodland were identified in accordance with section 4.5 and table 1 of BS3837:2012 'Trees in relation to design, demolition and construction – Recommendations' (see Appendix 1).

2.4 Comments on specific trees

The majority of trees form cohesive linear groups along the southern and eastern boundaries which provide valuable screening to the site.

3.0 Arboricultural Impact Assessment

3.1 Generic summary of the impact on trees

Development can adversely impact on trees by causing them to be removed to facilitate the development, or in the future, by adversely affecting their potential for retention through disturbance in Root Protection Areas (RPAs)¹ or through post development pressures to prune or remove.

At the design stage, disturbance within the RPA should be avoided. If unavoidable, (which may need demonstrating), consideration must be given to any construction activity such as demolition, including removal of existing hard surfaces, changing soil levels and the provision of services where within RPAs, as well as new surfaces and structures.

Construction of hard surfaces and other construction may be acceptable within RPAs providing specialist methods of design and construction are used. This will often result in the use of minimal or no-dig methods which result in higher finished levels which must be allowed for during design due to the effect on access thresholds and structure heights etc.

The ability of trees to tolerate some disturbance depends on individual circumstances including prevailing site conditions, tree species, age and condition and this will be assessed by the project arboriculturist.

Protection measures, usually a combination of barriers and ground protection must be in place before any works, including site clearance, begin, and stay in place for as long as a risk of damage remains (Please refer to the Tree Protection Plan - TPP). The protection of trees must take account of the buildability of the proposal, including services, and ensure that all activities such as storage of materials, parking and the use of plant and vehicles can be accommodated outside of RPAs. Particular care and planning is necessary in the operation of excavators, lifting machinery and cranes to ensure all vehicle movement and lifting operations will not impact on retained trees. It is common practice for an Arboricultural Method Statement (AMS) to be produced following planning consent to address these issues and may form part of planning conditions in relation to trees.

3.2 Tree survey plan (TSP)

The plan found at appendix 4 shows the existing trees numbered and categorised in accordance with BS 5837. Below ground constraints are represented by the RPA. The above ground constraints are represented by the trees crown spread and height where appropriate. The survey plan is an aid to design and should not be used post consent on site; the tree protection plan is to be used for this purpose.

¹ Root Protection Area (RPA) - A layout design tool indicating the minimum area surrounding the tree that contains sufficient rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. Assessed according to the recommendations set out in clause 4.6 of BS 5837. It is calculated by multiplying the radius squared by 3.142. Clause 4.6.2 of BS 5837 states that the RPA may be changed in shape, taking into account local site factors, species tolerance, condition and root morphology.

3.3 **Tree protection plan (TPP)**

Stems and crown spreads are coloured based on their categories for trees to be retained whilst trees to be removed have red hatched/shaded. Tree protection is shown as barriers and/or ground protection defining the Construction Exclusion Zone (CEZ)² and any areas requiring non-standard methods of demolition or construction are shown.

3.4 **Trees to be removed**

With the proposed design layout provided by the client it is indicated that that *22 individual trees (T1, T2, T3, T4, T5, T6, T7, T8, T9, T28, T29, T42, T44, T46, T47, T49, T50, T51, T53, T54, T63 & T68), 1 group of trees (G3), and 6 areas young woodland (W1, W2, W6, W7, W8 & W9)* will require removal to accommodate the proposals **(Please refer to Tree Works Schedule Appendix 7)**.

3.5 **Trees to be pruned**

Opportunities for remedial pruning may be identified at a later stage of the development process. All tree pruning/felling work to facilitate the development can be found at appendix 3 and 7.

3.6 **Root protection area incursions**

No trees for retention have been identified at this stage as having their RPAs impacted by the proposed development layout. Details of work methodology close to trees can be found in appendix 6 of this report.

3.7 **Protection of retained trees**

Protective barrier fencing will be required to protect all trees identified for retention in accordance with BS 5837:2012. Details of barrier fencing specifications can be found in appendix 5 of this report.

3.8 **Specialist Design Considerations**

No trees for retention have been identified at this stage as needing specialist construction methods within their RPAs.

² Construction Exclusion Zone. An area based on the RPA in m² identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

4.0 Preliminary Arboricultural Method Statement

4.1 Introduction

This section is a preliminary arboricultural method statement specifying the methodology to be used for the protection of trees and works close to trees that have the potential to result in the loss of or damage to a tree. It includes details of site management and supervision required for successful tree retention.

Following planning consent, a detailed arboricultural method statement may be required, and should be secured by an appropriately worded planning condition.

4.2 Site clearance and set-up

4.2.1 Site clearance

Damage can easily be caused to trees to be retained during initial site clearance, therefore tree protection barriers must be in place before site clearance to protect trees identified in Section 3.

4.2.2 Site and fuel storage, cement mixing and washing points

All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage must be outside RPAs. No discharge of potential contaminants should occur within 10m of a retained tree stem or where there is a risk of run-off into RPAs.

4.2.3 Tree protection barriers

Appendix 5 includes guidance for protective barriers based on BS 5837:2012. The approximate location of the barriers and the CEZs is shown on the TPP. The precise location of the barriers and other protective measures should be confirmed at the pre-commencement meeting before any demolition or construction activities, including site clearance, start.

4.3 Ground protection

In areas where it is not possible to erect protective barriers, ground protection must be used to protect the CEZ of trees. Where it has been agreed during the design stage that vehicular or pedestrian access for the construction operation may take place within the CEZ, the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be within the CEZ at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the CEZ should be protected with ground protection.

4.4 Precautions when working in CEZs

Only work agreed with the local planning authority can be carried out within CEZs. Any works must be carried out in accordance with the details as set out in Appendix 6 which are summarised below.

4.4.1 Removal of existing surfacing

The site comprises areas of hardstanding therefore care must be taken to minimise the impact on all trees for retention if these surfaces are to be removed which will include machinery positioned outside RPAs and the use of hand tools in sensitive areas.

4.4.2 **Installation of new surfacing**

Full details of the new surfacing proposed is not known at the time of writing. However, if resurfacing is required within the RPAs of any trees it will be necessary to use non-standard methods of construction, ideally new substrates and finished surfaces should be of a porous design to allow water and air passage in and out.

4.4.3 **Installation of new services**

The exact location of services is often difficult to establish until construction is in progress. Where existing services within RPAs require upgrading or new services have to be installed in RPAs, conventional excavation techniques are unacceptable and great care must be taken to minimise any disturbance. Trenchless installation should be the preferred option but if that is not feasible, any excavation must be carried out by hand or using a compressed air lance. Methodology must comply with *NJUG Volume 4: Guidelines for the Planning, installation and Maintenance of Utility Apparatus in Proximity to Trees*.

4.4.4 **Tree works**

Recommendations for tree works can be found in the tree works schedule in Appendix 6. All works shall be in accordance with British Standard *BS 3998:2010 Tree work: Recommendations*, or in accordance with current best practice. The use of a competent tree surgery contractor is necessary to comply with this (follow link for a list of Arboricultural Association approved contractors [Directory of Tree Surgeons - Arboricultural Association](#)). The main contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority regarding planning constraints to trees, and that no protected species or habitats are harmed whilst carrying out site clearance or tree surgery works.

5.0 Conclusions

- 5.1 The tree population across the survey area comprise mature, early-mature, semi-mature and young mixed broadleaves of low and moderate arboricultural value.
- 5.2 Recommended tree removals are mainly of low value and their removals will have a negligible impact on the visual amenity of the area.
- 5.3 Standard protective barrier fencing in accordance with BS 5837:2012 will be required to create construction exclusion zones. Where this is not practical, a proprietary ground protection system, or a combination of fencing and ground protection must be used.
- 5.5 Provided tree protection and methods of work close to trees outlined in this report are followed, the impacts on the remaining trees will be negligible.

6.0 Recommendations

- 6.1 The trees identified for retention should be protected during the development phase in accordance with BS 5837:2012 'Trees in Relation to design, demolition and construction – recommendations' (Figure 2) to exclude construction activity within the root protection areas. Barrier fencing, ground protection or a combination of both should be used (see Tree Protection Plan in Appendix 2).
- 6.2 'C' category trees should not be considered as a constraint to the development, but their retention should be considered where they provide valuable screening.
- 6.3 Where new hard surfaces are proposed within the RPAs of trees to be retained, a 3-dimensional cellular confinement sub-base such as 'Cellweb' should be used to create a protected environment within the rooting area of the tree.
- 6.4 In areas where heavier structures encroach within the RPAs of retained trees, a 'Pile & Beam' or 'Raft' system of foundations should be used. Conventional strip foundations will not be used within the RPAs of trees where roots are likely to be present.
- 6.5 At outline stage a Arboricultural Method Statement (AMS) should be secured via an appropriately worded condition. The AMS will contain details regarding a pre-commencement meeting and agree the when any on site arboricultural monitoring will be required.
- 6.6 Provided tree protection and methods of work close to trees outlined in this report are followed, the impacts on the remaining trees will be negligible.
- 6.7 If the recommendations made within this report are followed, this scheme should be achievable in arboricultural terms and should be acceptable to the local planning authority.

Appendix 1 - Survey and Background Information.

1.0 Limitations

1.0.1 A detailed topographical plan showing the locations of individual trees was provided by the client, and used for the tree survey, so the positions of the trees was understood to be accurate and SES Ltd accepts no liability for the accuracy of any tree survey drawings based on the topographical plan supplied by the client.

1.0.2 Trees are living organisms whose health and condition can change rapidly and all trees, even healthy ones, are at risk from unpredictable climatic and manmade events. The assessment of risk for any tree is based upon factors evident at the time of the inspection and the interpretation of those factors by suitably qualified inspectors. The health, condition and safety of trees should be checked on a basis commensurate with the level of risk and preferably on an annual basis.

1.0.3 Methodology

The trees were surveyed from ground level without detailed investigations. All trees with a trunk diameter of 75mm or above³ were surveyed. All dimensions were estimated unless otherwise indicated. Obvious hedges and shrub masses were identified where appropriate. Information collected is in accordance with recommendations in subsection 4.4.2.5 of BS 5837 and includes species, height, diameter, branch spread, crown clearance, age class, physiological condition, structural condition and remaining contribution. Each tree was then allocated one of four categories (U, A, B or C) to reflect its suitability as a material constraint on development.

1.1 Documents and information received

- *Topographical plan*
- *Proposed plan*

1.2 Contacts

Name	Company/organisation	Tel. no.
-	-	-
Callum Campbell	Southern Ecological Solutions Ltd	██████████

1.3 Reference documents

- *British Standards Institution (2012) BS 5837: Trees in relation to design, demolition and construction – Recommendations;*
- *British Standards Institute (2010) BS 3998: Tree work – Recommendations;*
- *National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees;*
- *DTLR (2001) Principles of Tree Hazard Assessment and Management - David Lonsdale.*

³ BS 5837 recommends that in most circumstances all trees over 75mm stem diameter should be included in a pre-planning land and tree survey

1.4 Legal Constraints and Liabilities

- 1.4.1 **Tree Preservations Orders/ Conservation Areas:** A desktop search made with Epping Forest District Council confirmed that a number of trees on site are the subject of Tree Preservation Orders (TPOs).
- 1.4.2 **Occupiers Liability 1957 and 1984:** The Occupiers Liability Act places a duty of care to ensure that no reasonably foreseeable harm takes place due to tree defects. Therefore, this report includes recommendations within the tree tables for work required for safety reasons. 'Common sense risk management of trees (National Tree Safety Group 2012)' states that *'the owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at common law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.'*
- 1.4.3 **Common Law:** This enables pruning back of the crown and roots of trees on adjacent land where they overhang neighbouring property, providing the work is reasonable and does not cause harm. This right does not override TPO and CA legislation.
- 1.4.4 **Ecological Constraints:** The Wildlife and Countryside Act 1981, as amended, The Conservation of Habitats and Species Regulations 2010 and the Countryside and Rights of Way Act 2000, provide statutory protection to species of flora and fauna including birds, bats and other species that are associated with trees. These could impose significant constraints on the use and timing of access to the site. It is the responsibility of the main contractor and tree surgery contractor to ensure that no protected species are harmed whilst carrying out site clearance or tree surgery works. Unless competent to do so, the advice of an ecologist must be sought.

Appendix 2 - Key to Tree Survey Sheets

2.0 Tree Survey Schedule - Key to terms

T = Tree G = Tree Group H = Hedge W = Woodland

Age Class:

NP	Newly planted
Y	Young - an establishing tree that could be easily transplanted
SM	Semi-mature - an established tree still to reach its ultimate height and spread and with considerable growth potential
EM	Early mature - a tree reaching its ultimate height and whose growth is slowing however it will still increase considerably in stem diameter and crown spread
M	Mature - a tree with limited potential for further significant increase in size although likely to have a considerable safe useful life expectancy
OM	Over mature - a senescent or moribund tree with a limited useful life expectancy
V	Veteran - a tree older than typical for the species and of great ecological, cultural or aesthetic value

Abbreviation:

Dia	Diameter of stem in millimetres at 1.5m above ground level for single-stemmed trees or in accordance with Annex C of BS 5837 for multi-stemmed trees or trees with low forks or irregular stems
Stems	Numbers of stems or M/S = multi-stemmed
Ht	Height in metres
Crown clear	Height of first significant branch above ground level and direction of growth
NSEW	Crown spread at the four cardinal points. \emptyset = average crown radius
Cond	Physiological condition. G = good; F = fair; P = poor; D = dead
Life exp	Estimated remaining contribution in years
RPR	Root protection radius in metres based on stem diameter
RPA	Root protection area. A layout design tool indicating the minimum area surrounding the tree that contains sufficient rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. Assessed according to the recommendations set out in clause 4.6 of BS 5837. It is calculated by multiplying the radius squared by 3.142. Clause 4.6.2 of BS 5837 states that the RPA may be changed in shape, taking into account local site factors, species tolerance, condition and root morphology
CEZ	Construction exclusion zone. An area based on the RPA in m ² identified by an arboriculturist, to be protected during development, including site clearance, demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree

BS cat: Category in accordance with Table 1 and section 4.5 of BS 5837.

A	High quality and value (non-fiscal) with at least 40 years remaining life expectancy
B	Moderate quality and value with at least 20 years remaining life expectancy
C	Low quality and value with at least 10 years remaining life expectancy, or young trees with a stem diameter below 150 mm
U	Unsuitable for retention. Existing condition is such that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. Note, category U trees can have existing or potential conservation value which it might be desirable to preserve

A, B and C category trees are additionally graded into: 1) Mainly arboricultural values; 2) Mainly landscape values; 3) Mainly cultural values including conservation.

Appendix 3 - Tree Survey Sheets

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T1	Sycamore (Acer pseudoplatanus)	15	550	5.5	5	5	5	.5	.5	M	Fair, minor deadwood, ivy	Sever ivy	20-40	B1	6.6	136
T2	Horse Chesnut (Aesculus hippocastanum)	12	1200	6	3	5	6	2	2	M	Fair, fungus, heavily reduced in size, decay to main stem, minor deadwood	None	20+	B1	14.4	651
T3	Horse Chesnut (Aesculus hippocastanum)	7	250	4	4	4	4	.8	.8	Y	Good	None	10-20	C1	3.0	28
T4	Horse Chesnut (Aesculus hippocastanum)	7	250	4	4	4	4	1	1	M	Good	None	10-20	C1	3.0	28
T5	Elder (Sambucus nigra)	6	150 x 2	2.5	2.5	2.5	2.5	.5	.5	Y	Good	None	10-20	C1	2.5	20
T6	Horse Chesnut (Aesculus hippocastanum)	9	900	.5	.5	.5	.5				Ivy clad stump	None	<10	U	10.8	366

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T7	Horse Chesnut (Aesculus hippocastanum)	8	1100	0	2	2	1	1	3	OM	Heavily reduced crown, ganoderma, major deadwood	Reduce and retain for habitat	<10	U	13.2	547
T8	Horse Chesnut (Aesculus hippocastanum)	16	1000	7	7	3	7	2.5	2.5	M	Good to Fair, Cavities present, some dead wood, minor deadwood	None	40	B1	12	452
T9	Sycamore (Acer pseudoplatanus)	10	300x4	4	4	6	4	1.5	1.5	M	Growing out of culvert headwall, multi stemmed at base	Remove		C1	7.2	162
G1	Sycamore (Acer pseudoplatanus) Horse Chestnut (Aesculus hippocastanum) Hawthorn (Crataegus monogyna) Elder (Sambucus nigra) Goat Willow (Salix caprea)	14	200-300	Varies				2		M	Good	Management plan	20+	C1	3.6	40
T10	Common Ash (Fraxinus excelsior)	16	550x2	4	6	6	6	5	5	M	Good, limbs, major deadwood	None	40+	B2	9.3	273
T11	Sycamore (Acer pseudoplatanus)	14	480	4	6	6	6	1	1	M	Good	None	40+	B2	5.7	104

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T12	Horse Chesnut (Aesculus hippocastanum)	10	300	3	4	1.5	2	1	1	M	Fair	None	20+	C1	3.6	40
T13	Sycamore (Acer pseudoplatanus)	12	200	3	3.5	3	2	1	1	M	Fair, ivy clad, poor fork at 1m	Manage ivy	20-40	C1	2.4	18
T14	Horse Chesnut (Aesculus hippocastanum)	6	100	.2	.2	.2	.2				Dead	Remove	<10	U	1.2	4.5
T15	Sycamore (Acer pseudoplatanus)	10	800	3	2	4	4	1.5	1.5	Y	Good	None	20-40	C1	9.6	289
T16	Horse Chesnut (Aesculus hippocastanum)	16	800	7	6	7	6	1	1	OM	Good to Fair	None	20-40	C1	9.6	289
T17	Sycamore (Acer pseudoplatanus)	11	350	5	5	5	5	2	2	M	Good to Fair	None	20-40	B2	4.2	55
T18	Apple (Malus spp.)	6	150	3	4	2	0	0	0	Y	Good, lopsided	None	20-40	C1	1.8	10.2

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S, E, W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T19	Horse Chestnut (Aesculus hippocastanum)	12	450	4	4	6	5	3	3	M	Fair, lopsided	None	20-40	C1	5.4	91
T20	Horse Chestnut (Aesculus hippocastanum)	15	600	6	6	7	4	4	4	M	Fair, lopsided, weeping cavity at 4m	None	20-40	C1	7.2	162
T21	Common Ash (Fraxinus excelsior)	6	200	0	2	21		3	3	Y	Poor, ivy clad, lopsided	Coppice	20-40	C1	2.4	18
T22	Common Ash (Fraxinus excelsior)	9	200	1	3	3	1	3	3	Y	Poor, ivy clad, lopsided	Coppice	20-40	C1	2.4	18
T23	Horse Chestnut (Aesculus hippocastanum)	12	1000	4	5	6	5	5	5	OM	Fair, previously crown reduced, ivy, tight forks and cavities	Manage ivy, reinspect	<10	C1	12	452
T24	Common Ash (Fraxinus excelsior)	15	450	7	7	7	7	4	4	M	Fair, supect fork at 4m, ivy clad	Manage ivy, cimbing inspection	20-40	C1	5.4	91
T25	Horse Chestnut (Aesculus hippocastanum)	12	250	3	5	2	0	2	2	Y	Fari, leans, ivy, tight forks	Coppice	10-20	C1	3.0	28
G2	Sycamore (Acer pseudoplatanus) Common Ash (Fraxinus excelsior)	11	Var	Varies				1	1	Y	Fair, dead wood, ivy	Coppic front row adjacent to footway, manage ivy	10-20	C2	3.0	28
T26	Horse Chestnut (Aesculus hippocastanum)	15	600	4	4	6	4	3	3	OM	Fair, ivy	Manage ivy, climbing inspection	10-20	C1	7.2	162

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T27	Horse Chestnut (Aesculus hippocastanum)	15	900	6	4	6	3	4	3	OM	Fair, ivy	Manage ivy, climbing inspection	10-20	C1	10.8	366
T28	Horse Chestnut (Aesculus hippocastanum)	14	800	5	5	4	3	2	2	OM	Poor, declining	Remove	<10	U	9.6	289
T29	Sycamore (Acer pseudoplatanus)	12	150	3.5	3.5	3.5	3.5	2	2	Y	Good, ivy	Manage ivy	10-20	C1	1.8	10
T30	White Willow (salix alba)	10	500	5	5	3	2	0	0	M	Old coppice, pruned in part by neighbour	Coppice	10-20	C1	6.0	113
T31	White Willow (salix alba)	10	500	5	2	3	3	1	1	M	Old coppice, pruned in part by neighbour	Coppice	10-20	C1	6.0	113
T32	Common Ash (Fraxinus excelsior)	10	700	0	4	4	0	4	4	OM	Fair, monolith with cavities	None	10-20	C1	8.4	221
T33	Horse Chestnut (Aesculus hippocastanum)	12	550	5	4	4	5	2	2	OM	Fair	None	10-20	C1	6.6	136
W1	Horse Chestnut (Aesculus hippocastanum) Common Ash (Fraxinus excelsior) Hawthorn (Crataegus monogyna) Sycamore (Acer pseudoplatanus) Lombardy Polar (Populus nigra "Italica") Cherry (Prunus spp.) Apple (Malus spp.) Polplar (Populus spp.)	Ave 15	100-350	Varies				0	0	Y-M`	This block of w is generally in good condition, it is mixture of planted native and non native species and self seeded mainly native species, expanding at edges with self seeded hawthorn and ash.	Horse chestnut element could be removed and replaced or left as glade, some selective thinning of main body of woodland to improve light cast to shrub layer	40+	B3	4.2	55

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
W2	Common Ash (Fraxinus excelsior) Hawthorn (Crataegus monogyna) Blackthorn (Prunus spinosa) Common Oak (Quercus robur) Cherry (Prunus spp.) Field maple (Acer campestre)	VAR	100-350					0	0	Y	This planted woodland is generally in good condition, mixture of planted native and self seeded trees native species, it is expanding at edges with self seeded hawthorn and ash.	selective thinning of main body of woodland to improve light cast to shrub layer	40+	B3	4.2	55
W3	Apple (Malus spp.) Common Oak (Quercus robur) Hazel (Corylus avellana) Common Ash (Fraxinus excelsior)	VAR	50-200					0	0	Y	This planted woodland is generally in good condition, mixture of planted native and self seeded trees native species, it is expanding at edges with self seeded hawthorn and ash.	selective thinning of main body of woodland to improve light cast to shrub layer	40+	B3	2.4	18

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
W4	Field Maple (Acer campestre)	VAR	100-200					0	0	Y	This woodland block is a near monoculture of Field Maple. The trees are in good condition with only a few failing as a result of the intense competition for light and moisture	selective thinning of main body of woodland to improve light cast to shrub layer, clearanc of clumps of trees to allow other species to beintroduce would reduc the reliance on Fiedmaple to maintain this important screen	40+	B3	2.4	18
W5	Field Maple (Acer campestre) Hawthorn (Crataegus monogyna)	VAR	100-200					0	0	Y	This narrow bely of trees has expanded as self-seeded trees have developed.	Narrower than the other woodland blocks, low level thinning and coppice will provide somevariety in growth.	40+	B3	2.4	18

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
W6	Field Maple (Acer campestre) Hawthorn (Crataegus monogyna) Common Ash (Fraxinus excelsior) ,Blackthorn (Prunus spinosa)	VAR	100-200	Varies				0	0	Y	This planted woodland is generally in good condition, mixture of planted native and self-seeded trees native species, it is expanding at edges with self -seeded hawthorn and ash.	selective thinning of main body of woodland to improve light cast to shrub layer	40+	B3	2.4	18
W7	Field Maple (Acer campestre) Hawthorn (Crataegus monogyna) Common Ash (Fraxinus excelsior)	VAR	100-200	Varies				0	0	Y	This planted woodland is generally in good condition, mixture of planted native and self-seeded trees native species, it is expanding at edges with self- seeded hawthorn and ash.	selective thinning of main body of woodland to improve light cast to shrub layer	40+	B3	2.4	18

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
W8	Field Maple (Acer campestre) Hawthorn (Crataegus monogyna) Common Ash (Fraxinus excelsior) Sycamore (Acer Pseudoplatanus)	VAR	100-400	Varies				0	0	Y-M`	The mature willows within this woodland block are relatively short lived, the bulk of the woodland is self seeded and of relatively low quality.	selective thinning of main body of woodland to improve light cast to shrub layer	40+	C1	4.8	72
W9	Field Maple (Acer campestre) Hawthorn (Crataegus monogyna) Common Ash (Fraxinus excelsior) Sycamore (Acer Pseudoplatanus)	VAR	100-1000	Varies				0	0	Y-OM`	Mature and over mature woodland block with some substantial specimens. Generally in good condition, with the exception of the horse chestnuts along the road side and the many poor quality self seeded tree growing at the edge of the highway footpath.	Thinning of the larger poorer trees and coppicing most of the self seeded trees will improve light penetration and the smothered shrub layer.	40+	C1	12	452

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S,E,W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
G3	Orchard species	4 - 6	100-300	VARIES				1	1	M	Small orchard group of fruit trees	None	20-40	C1	3.6	40
T34	Horse Chestnut (Aesculus hippocastanum)	10	450	4	4	4	4	2	2	M	Good	None	10-20	C1	5.4	91
T35	Horse Chestnut (Aesculus hippocastanum)	10	250	5	4	3	2	2	2	M	Good	None	10-20	C1	3.0	28
T36	Common Ash (Fraxinus excelsior)	10	300	4.5	4.5	4.5	4.5	1.5	1.5	M	Good	None	20-40	B2	3.6	40
T37	Common Ash (Fraxinus excelsior)	6	800	4	4	4	4	0	0	OM	Large monolith, some small sidebranches and self seeded tree at base, cavities, potential bat roost	Manage growth to prevent collapse	40+	B2	9.6	289
T38	Common Oak (Quercus robur)	10	150	3	3	3	3	.5	.5	Y	Good	None	40+	B2	1.8	10.2
T39	Common Oak (Quercus robur)	12	550	6	5	5	5	1	1	M	Good	None	40+	B2	6.6	136
T40	Common Oak (Quercus robur)	12	300	2	3	5	4	3	3	Y	Good	None	40+	C1	3.6	40
T41	Common Oak (Quercus robur)	11	300	4	3	3	3	2	2	Y	Fair, declining	None	<10	C1	3.6	40

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S, E, W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T42	Common Oak (Quercus robur)	11	300	1	1	2	2	1	1	Y	Poor, declining	None	<10	C1	3.6	40
T43	Hornbeam (Carpinus betulus)	10	550	4	3	4	4	1	1	OM	Poor, dying	Reduce crown by 50%	10-20	C1	6.6	136
T44	Common Oak (Quercus robur)	12	500	5	6	7	4	2	2	M	Good	None	20-40	C1	6.0	113
T45	Willow (Salix caprea)	12	1000	7	7	7	7	0	0	M	Poor, dying, partial collapse	Remove	<10	U	12	452
T46	Common Oak (Quercus robur)	10	600	4	4	4	4	1	1	OM	Poor, dying	Remove	<10	C1	7.2	162
T47	Common Oak (Quercus robur)	14	750	6	6	6	6	1	1	OM	Fair, cavities, ivy, dead wood	Manage ivy, climbing inspection	20-40	C1	9.0	254
T48	Common Oak (Quercus robur)	12	300	4	4	4	4	1	1	M	Good	None	40+	B2	3.6	40
T49	Common Oak (Quercus robur)	10	450	4	4	5	5	2	2	M	Good	None	40+	B2	5.4	91
T50	Common Oak (Quercus robur)	10	450	4	4	4	4	2	2	M	Fair	None	20-40	C1	5.4	91
T51	Horse Chestnut (Aesculus hippocastanum)	15	900	7	4	8	7	4	2	OM	Fair	None	10-20	C1	10.8	366
T52	Sycamore (Acer pseudoplatanus)	15	1000	8	5	4	8	2	2	OM	Fair	None	10-20	C1	12	452
T53	Common Oak (Quercus robur)	10	300	0	4	6	6	1	1	M	Fair, lopsided	None	10-20	C1	3.6	40

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S, E, W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T54	Horse Chestnut (Aesculus hippocastanum)	12	700	4	4	7	6	3	3	OM	Poor	None	<10	C1	8.4	221
T55	Horse Chestnut (Aesculus hippocastanum)	12	500	3	4	4	4	6	6	M	Fair	None	10-20	C1	6.0	113
T56	Horse Chestnut (Aesculus hippocastanum)	12	600	7	5	4	5	2	2	OM	Fair, storm damaged canopy top	None	10-20	C1	7.2	162
T57	Horse Chestnut (Aesculus hippocastanum)	12	500	3	4	6	6	5	5	OM	Fair	None	10-20	C1	6.0	113
T58	Common Ash (Fraxinus excelsior)	14	800	4	5	5	4	4	4	OM	Fair, larg limb shed, decay	None	10-20	C1	9.6	289
T59	Horse Chestnut (Aesculus hippocastanum)	8	400	.5	.5	.5	.5	0		OM	Collapsed	Remove	10-20	C1	4.8	72
T60	Common Ash (Fraxinus excelsior)	10	700	4	6	7	6	5	5	OM	Fair, deacy, cavity	None	10-20	U	8.4	221
T61	Horse Chesnut (Aesculus hippocastanum)	12	300	4	4	4	4	2	2	OM	Fair, deay at base of main stem	Remove	<10	C1	3.6	40
T62	Common Ash (Fraxinus excelsior)	12	700	4	6	6	6	7	8	OM	Poor, partial collapsed canopy	N	<10	U	8.4	221
T63	Plum (Prunus spp.)	6	300	4	4	4	4	0	0	M	Good	None	10-20	C1	3.6	40
T64	Horse Chestnut (Aesculus hippocastanum)	12	600	4	4	5	4	2	2	OM	Fair, wire embedded in base of stem, cavities	None	10-20	C1	7.2	162

Tree No.	Common Name (Scientific Names)	Height (m)	DBH (mm)	N	E	S	W	Height of branch clearance N, S, E, W	Height of crown clearance	Age class	Physiological/Structural condition problems/comments	Preliminary management	Estimated remaining contribution years	BS category U, A, B, C	Radii single stem	RPA
T65	Common Ash (Fraxinus excelsior)	12	600	3	3	4	3	8	8	OM	Cavities, top missing, ivy	Remove	<10	U	7.2	162
T66	Horse Chestnut (Aesculus hippocastanum)	12	450	3	3	3	4	2	2	OM	Fair, cavities	None	10-20	C1	5.4	91
T67	Horse Chestnut (Aesculus hippocastanum)	12	450	3	4	7	4	2	2	OM	Fair, lopsided	None	10-20	C1	5.4	91
T68	Willow (Salix alba)	12	400	4	4	4	4	0	0	Y	Good	None	10-20	C1	4.8	72

See appended

Appendix 5 - Tree Protection Barriers & Ground Protection.

5.0 Design of welded mesh, Heras type tree protection barrier

Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place. The default specification should be in accordance with 6.2.2.2 of BS 5837, as set out below.

- 5.0.1 **Specifications:** Barrier shall be a minimum 2 m high. It shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. See Figure 2 overleaf.
- 5.0.2 Where site circumstances and associated risk of damaging incursions into the RPA do not necessitate the default level of protection, an alternative specification may be used if agreed with the local authority. An example would be 'Heras' type welded mesh panels on rubber or concrete feet. The panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts. See Figure 3 overleaf. All-weather notices should be attached to the barrier with words such as 'TREE PROTECTION ZONE - NO ACCESS'.
- 5.0.2 **Location:** Barriers shall be positioned on the perimeter of the Root Protection Area to define the Construction Exclusion Zone or as specified in the Tree Protection Plan.

Shown on the Tree Protection Plan by a dashed black line

Figure 1 Example of welded mesh barriers in use



Figure 2 Default specification for protective barrier

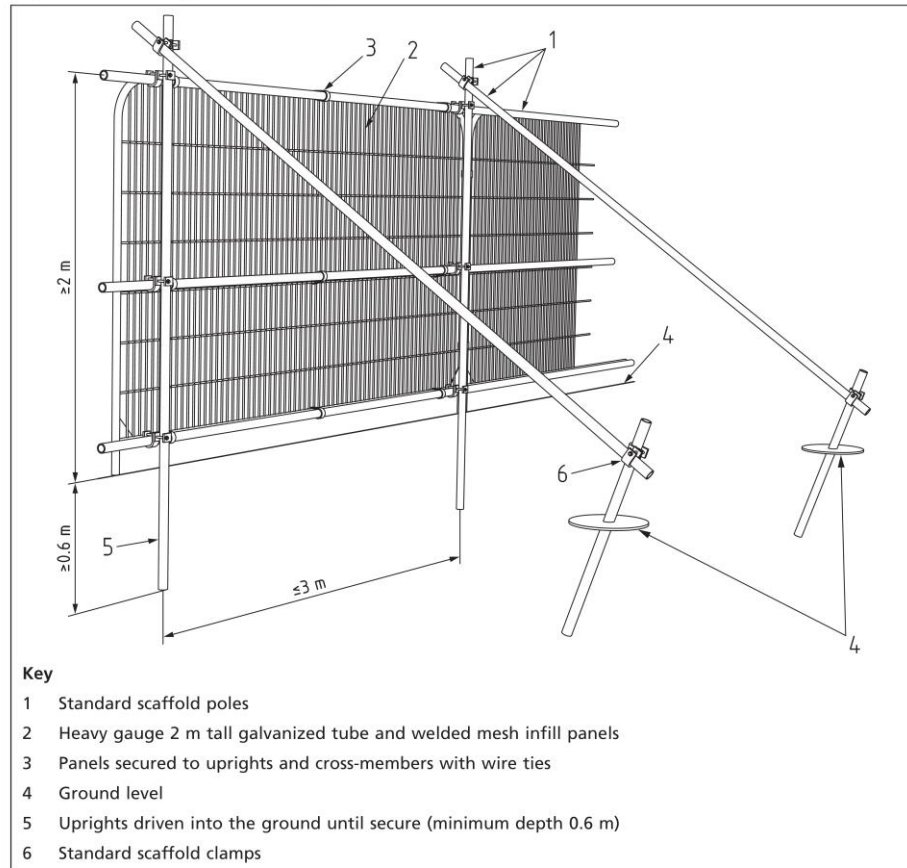
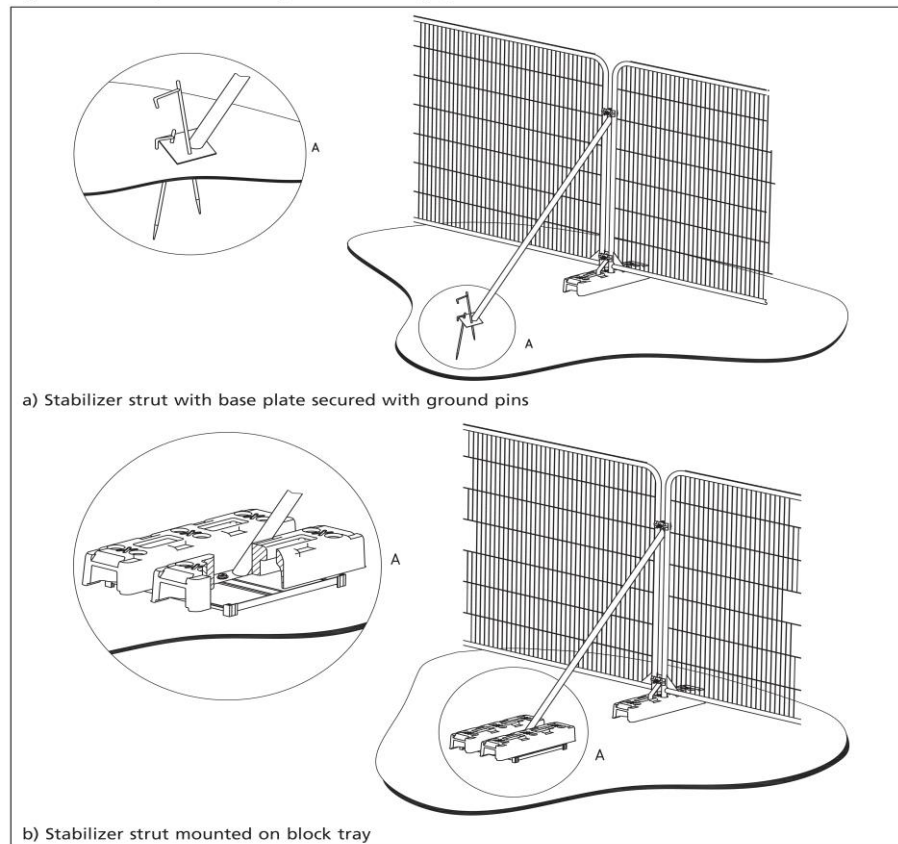


Figure 3 Examples of above-ground stabilizing systems



Figures above are reproduced with the permission of the British Standards Institute.

5.1 Ground protection

In areas where it is not possible to erect protective fencing, ground protection must be used to protect the CEZ of trees. Where it has been agreed during the design stage, and as shown on the tree protection plan, that vehicular or pedestrian access for the construction operation may take place within the CEZ, the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be within the CEZ at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the CEZ should be protected with ground protection. **This must be installed before any site activity takes place to protect soil structure and tree roots.**

5.1.1 Ground protection must be fit for the purpose of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. It might comprise one of the following:

- *for pedestrian movements or the erection of scaffolding within the RPA the installation of ground protection in the form of a single thickness of scaffold boards either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip laid onto a geotextile);*
- *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards or panels placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane; or*
- *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*



5.1.2 The following is a list of suppliers of temporary ground protection including polymer, metal or wooden panels. Other companies supply similar products and the following are given only as an example:

- www.ground-guards.co.uk
- www.evetrakway.co.uk
- www.trakmatseurope.com
- www.centriforce.com
- www.marwoodgroup.co.uk
- www.groundtrax.com

Cellular confinement no-dig systems can also be used.

5.1.3 Example of proprietary ground protection panels



Appendix 6 - Methods of Work Close to Trees

6.0 Guidance for working within RPAs

(This chapter sets out the general principles that must be followed when working in RPAs).

6.1 Removal of hard surfaces within RPAs

- 6.1.1 All structures including hard surfaces, walls and fences within construction exclusion zones (CEZ) must be removed following the methods detailed below to minimise damage to tree roots.
- 6.1.2 The use of conventional tracked and wheeled machinery causes damage to soil structure from compaction and damage to roots from excavation and must not be used within the CEZ. All areas of hard surfacing requiring removal within a CEZ will be broken up using a hand held pneumatic drill or mounted hydraulic breaker attached to a digger located outside the CEZ. The broken rubble will then be removed by hand.
- 6.1.3 The only exception to this is where the hard surface is of such a size as not to be reachable from outside the CEZ. In this situation, a rubber tracked mini-digger will be used. The maximum working height of the machine must be less than the lowest branch of any overhanging trees.
- 6.1.4 The mini-digger will work from the existing hard surface pulling the debris away from the tree/s.
- 6.1.5 No excavation of existing soil beneath the hard surface will take place.
- 6.1.6 Immediately after removal of the hard surface, topsoil or sharp sand must be used to cover the soil surface and any roots to prevent drying out.
- 6.1.7 Upon completion, the protective fencing must be moved out to the edge of the CEZ or ground protection used if access is required.

6.2 Services

- 6.2.1 The location and direction of new services should be designed to allow for services to be routed away from the RPAs of retained trees.
- 6.2.2 If any services need to run through a CEZ the main contractor must contact the project arboriculturist before any works are undertaken. Agreement will then be sought from the LPA tree officer on methodology. Works will only begin with the agreement of the LPA. Methodology used must comply with *NJUG Volume 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*, which can be summarised as:
 - *hand excavate only;*
 - *work carefully around roots only cutting as a last resort;*
 - *do not cut roots over 25mm in diameter without referring to the project arboriculturist; and*
 - *for roots less than 25mm in diameter use a sharp tool to make a clean cut leaving as small a wound as possible.*

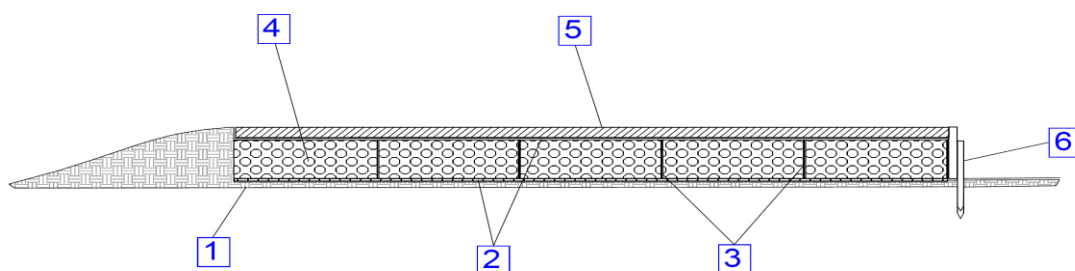
6.3 New hard surfaces within RPAs

6.3.1 Where it has been agreed with the LPA that hard surfaces are acceptable within RPAs of retained trees, these will require designing to be of above ground, no-dig construction to minimise impact on tree roots and soil structure. In addition, finished surfaces of the car parking and paved areas will need to be of porous design to allow water and air passage in and out.

6.3.2 An illustrative example of a cellular confinement no-dig system can be found below. The actual system will need to be designed by a structural engineer to accommodate the loadings anticipated.

6.3.3 The principles to follow are:

- *no excavation other than the removal of existing hard surfaces if required, or the removal of surface vegetation and no more than 50mm of leaf litter, vegetation debris etc;*
- *a method to spread and support the load of the hard surface and anticipated usage without causing compaction of the soil structure beneath;*
- *the use of a porous sub-base and finishing layer to allow water and air diffusion in and out of the soil;*
- *porosity must be designed to be long-term and not to block with fine particles in the short-term; therefore, irregular, no-fines aggregate must be used; and*
- *the pH of the aggregate must be considered as many conventional road stones have very high pH values which can damage susceptible trees and therefore aggregates with a near neutral pH should be preferred.*



Notes

- 1** Existing ground
- 2** Geotextile membrane
- 3** Cellular confinement system

- 4** 20/40mm clean angular stone
- 5** Porous surface layer
- 6** Timber retaining edge



6.4 Fencing within RPAs

- 6.4.1 Where posts are to be installed within RPAs the holes must be dug carefully by hand. If roots with a diameter of 25mm or greater are found, the position of the post must be moved. Roots smaller than 25mm diameter can be cut with sharp tools leaving as small a wound as possible. The sides of the hole should be lined with an impermeable membrane such as plastic sheeting to prevent the caustic and toxic effects of wet cement in the concrete from damaging tree roots.

6.5 Landscaping works within RPAs

- 6.5.1 Landscape operations within tree protection zones have the potential to damage trees if not carried out with care; in addition, the removal of protective fencing to carry out landscape operations may allow other contractors in previously protected areas.
- 6.5.2 If protective fencing is taken down to facilitate landscaping operations, the area of the CEZ must be delineated by pins and marker tape, spray paint, or some other method to clearly show the extent of the CEZ.
- 6.5.3 The preparation of soil for planting and turf laying must be carried out by hand where within CEZs. Cultivation should be kept to a minimum and new topsoil added must not exceed 100mm in depth within 1m of the stem of any tree.
- 6.5.4 Topsoil and other materials must be transported by wheelbarrow on running boards when working within CEZs.

Appendix 7 - Tree Work Schedule

7.0 Tree Work Schedule

All tree works to be undertaken in accordance with *BS 3998:2010 Recommendations for tree works*, or industry best practice.

Tree no.	Species	Proposed works	Reason	Grade
T1	Sycamore	Fell and remove stump	To enable layout	B1
T2	Horse chestnut	Fell and remove stump	To enable layout	B1
T3	Horse chestnut	Fell and remove stump	To enable layout	C1
T4	Horse chestnut	Fell and remove stump	To enable layout	C1
T5	Elder	Fell and remove stump	To enable layout	C1
T6	Horse chestnut	Fell and remove stump	To enable layout	U
T7	Horse chestnut	Fell and remove stump	To enable layout	U
T8	Horse chestnut	Fell and remove stump	To enable layout	B1
T9	Sycamore	Fell and remove stump	To enable layout	C1
T28	Horse chestnut	Fell and remove stump	To enable layout	U
T29	Sycamore	Fell and remove stump	To enable layout	C1
T42	Oak	Fell and remove stump	To enable layout	C1
T43	Oak	Fell and remove stump	To enable layout	C1
T44	Oak	Fell and remove stump	To enable layout	C1
T45	Willow	Fell and remove stump	To enable layout	C1
T46	Oak	Fell and remove stump	To enable layout	C1
T47	Oak	Fell and remove stump	To enable layout	B1
T49	Oak	Fell and remove stump	To enable layout	B1
T50	Oak	Fell and remove stump	To enable layout	C1
T51	Horse chestnut	Fell and remove stump	To enable layout	B1
T53	Oak	Fell and remove stump	To enable layout	B1
T63	Plum	Fell and remove stump	To enable layout	C1
G1	Sycamore, hawthorn	Fell and remove stump	To enable layout	C2
G2	Sycamore, ash	Fell and remove stump	To enable layout	C2
G3	Apple	Fell and remove stump	To enable layout	C2
W1	Mixed	Fell and remove stump	To enable layout	B2
W2	Mixed	Fell and remove stump	To enable layout	B2
W6	Mixed	Fell and remove stump	To enable layout	B2
W7	Mixed	Fell and remove stump	To enable layout	B2
W8	Mixed	Fell and remove stump	To enable layout	B2
W9	Mixed	Fell and remove stump	To enable layout	B2

Appendix 8 - Specific Report Caveats

8.0 Specific report caveats

- 8.0.1 The survey was based on a topographical plan provided by the client. Any trees missed off the topo where plotted by hand.
- 8.0.2 No internal diagnostic equipment was used other than a sounding mallet and probe.
- 8.0.3 The survey is concerned solely with arboricultural issues.
- 8.0.4 Any work with trees will discharge the due diligence requirements of all relevant wildlife and countryside legislation.
- 8.0.5 Trees are dynamic living organisms whose health and condition can change rapidly. Any changes to the tree or conditions close to the tree may change the stability and condition of the tree and a further examination would be required and may affect the validity of this report.
- 8.0.6 This report is valid for 12 months.

8.1 Copyright and non-disclosure

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Key

Category A - trees of high quality and value

Category B - trees of moderate quality and value

Category C - trees of low quality and value

Category U - trees of unsuitable for retention

Tree is not identified on TOPO, therefore, location of the tree is not accurate

Group of trees / hedge

Root protection area

Trees to be removed

Specialist design considerations

Ground protection

Tree protective barriers

This drawing was produced in colour - a monochrome copy should not be relied upon. Contractors must check all dimensions on site. Any discrepancies must be reported to the arboricultural consultant before proceeding. ©SES 2017.

Sudbury Stables Downham,
Essex CM11 1LB

Phone: 01268 711021
Website: www.ses-eco.co.uk

Site

Hill House Farm, Chigwell

Client

client

Drawing title

Tree Survey and Protection

Drawing no.

1

Scale

1:2000 @A3

Date

24.01.18

Revision

0

Drawn by

JMG

Orientation