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Arboricultural Impact Assessment

& Method Statement:

Springfield House
Springfield Close
East Preston
West Sussex
BN16 2SZ

REPORT PREPARED FOR:

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Ref: jwmb/ rpt1/ springfieldhouse/ AIAAMS

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1.0 Introduction

1.1 Purpose & Use of the Method Statement

- 1.1.1 This impact assessment & method statement report has been prepared for submission to Arun District Council (ADC) to accompany a planning application for a 3 bay garage, revised parking hard standing and a new swimming pool at Springfield House, Springfield Close, East Preston, West Sussex, BN16 2SZ. This statement is intended to demonstrate the feasibility of construction without harm to the retained tree resource on and adjoining the site. See material accompanying this report for full details of the proposals.
- 1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.
- 1.1.3 Copies of this document should be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the designated arboriculturist is replaced.

1.2 Terms of Reference

- 1.2.1 I am instructed by Mr Julian Chatterton of Castle Property Developments Ltd to prepare an arboricultural impact assessment & method statement report to accompany a planning application for a proposed 3 bay garage, revised parking arrangement/ hard standing and a new 6m x 10m swimming pool at Springfield House, Springfield Close, East Preston, West Sussex, BN16 2SZ with reference to BS5837:2012 Trees in relation to design, demolition & construction-Recommendations (BS5837:2012).

1.3 Development Proposals & Impact Assessment

- 1.3.1 See section 1.1.1 & accompanying material for full details of the development proposals. The new layout is for a minor modification to that approved in June 2017 (planning reference R/ 91/ 17/ PL). A slightly amended parking layout is envisaged with a 3 bay garage in a different location as shown at Appendix A, which also shows the location of the proposed pool immediately west of the new parking area.
- 1.3.2 All surveyed trees are retained with these proposals N.B. the radial crown spread of trees in TL 13 is now an average of 4m after recent approved tree works and there is adequate crown separation off the pool.
- 1.3.3 The garage footprint and parking/ driveway area make a low and acceptable encroachment into the root protection areas (RPA) of tree 17 (with mitigation where appropriate) and a very low encroachment into the RPA of tree 16-both offsite trees.
- 1.3.4 Finished hard standing parking surfaces will be constructed to a root friendly 'No Dig' specification with a porous surface to allow water infiltration to those areas of the RPA of trees 16 & 17. If levels need to be made up this can be achieved using 4-20mm 'no fines' clean angular stone: full details can be agreed via the discharge of an appropriate condition. See Appendix E for further guidelines.

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- 1.3.5 The proposed 3 bay garage makes a minor encroachment into the RPA of tree 17. To match levels with the wider site a drop in levels of 100mm maximum across the garage footprint is required. Given the minor extent of the encroachment into the RPA of tree 17 this impact is considered to be low & acceptable.
- 1.3.6 The majority of site works will take place beyond the RPA of retained trees and canopies. Retained trees will be protected through the course of development by fencing to the specifications recommended by BS5837:2012-see Appendix C for details.

1.4 Sequence of Works

- 1.4.1 The sequence of works should be as follows:

- ¿ tree works required to allow or facilitate development: minor crown lift for clearance of trees 16 & 17 if required
- ¿ laying/ extending of service runs as required
- ¿ erection of tree protection barrier (T PB) on advised line(s)
- ¿ excavation & construction of swimming pool on lines indicated
- ¿ construction of parking hard standing to 'No Dig' specification: minimum areas shown at Appendix A; construction of 3 bay garage where indicated
- ¿ removal of T PB
- ¿ soft landscaping if envisaged

1.5 Site Supervision

- 1.5.1 Site supervision' an individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. This person must:
- ¿ be present on site for the majority of the time
 - ¿ be aware of the arboricultural responsibilities
 - ¿ have the authority to stop any work that is causing, or has the potential to cause, harm to any retained tree
 - ¿ be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities
 - ¿ make immediate contact with the local authority and/ or the designated arboriculturist in the event of any tree related problems occurring, whether actual or potential

1.6 Site Monitoring

- 1.6.1 The site agent will be responsible for monitoring all arboricultural works, inspecting protective fencing and monitoring any works within exclusion zones. The designated arboriculturist will be available for site visits on a basis to be agreed between client and planning authority when/ if appropriate or required i.e. if required by condition. A record of site visits will be maintained for inspection on site and copies forwarded to the developer/ agent and to the local planning authority. A certificate of practical completion should be produced for sites deemed by all parties to merit this.
- 1.6.2 Principal contact information: 1/. James Bell. Arbortrack Systems Ltd. Arboricultural Consultant 07986 122074. 2/. Mr Mark Warwick ADC Arboricultural Officer. 01983 737500 or email mark.warwick@arun.gov.uk. 3/. Mr Julian Chatterton. Castle Property Developments Ltd. 07917 888686. 4/. Site agent details to be advised.

1.7 Statement Adoption

- 1.7.1 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.
- 1.7.2 If conflicts between any part of a tree and the building arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

2.0 Pre-Development Site Preparation

2.1 Arboricultural Works

- 2.1.1 A small crown lift of trees 16 & 17 to provide adequate clearance over the parking area and 3 bay garage may be necessary and can reasonably be achieved if required.

2.2 Preparation of Surfaces

- 2.2.1 n/a

2.3 Installation of Tree Protective Barrier

- 2.3.1 The TPB must be comprised of a vertical and horizontal scaffold framework, braced to resist impacts, with vertical tubes spaced at a maximum level of 3m. On to this weldmesh panels should be securely fixed with wire scaffold clamps: see section 6.2.2 and Figure 2 of BS5837:2012 (Appendix C). Hardboard or marine ply sheets can be used as an alternative to weldmesh panels but these must be firmly fixed to the framework. The location of the TPB is shown in Appendix A.
- 2.3.2 This TPB is to be erected before any construction work commences on site, is to remain 'in situ' undamaged for the duration of all work or each phase, and is only to be removed once all work is completed. If any work other than preparatory tree work is deemed necessary prior to the erection of fencing the designated arboriculturist should be informed to enable his/ her presence to oversee the work being carried out.
- 2.3.3 The only other exception is the completion of soft landscaping but if any excavations, however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any arboricultural protection measures incorporated. The TPB should carry waterproof warning notices denying access within RPAs.
- 2.3.4 The Tree Protection Plan in Appendix A illustrates where the protective fencing should be located to form the boundary of the Tree Protection Zone (TPZ). The TPZ is an exclusion zone and suitable steps should be taken to prevent access by pedestrians and vehicles and the storage of any works materials and equipment should be located outside of the TPZ.

2.4 Pre-Development Site Inspection

- 2.4.1 At the instigation of the client/site agent or ADC, upon erection of the fencing the designated arboriculturist will meet the relevant local authority member on site to check the standard of the work(s). If there are any amendments to the protective fencing these will be agreed at this meeting, confirmed in writing, and undertaken thereafter.

3.0 Development Phase

3.1 General Precautions

- 3.1.1 No fires shall be made on any part of the site, or within 10m of the furthest extent of the canopy of any tree or group tree to be retained on site or on land adjoining.
- 3.1.2 No spilling or pouring of fuels, oils, solvents or tar shall be made on any part of the site.
- 3.1.3 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- 3.1.4 No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- 3.1.5 No storage of materials shall be made within the protective fences.
- 3.1.6 No breaching or moving of the protective fences shall occur without the approval of the designated arboriculturist.
- 3.1.7 Alterations in levels within the tree protection fence areas shall be avoided.

3.2 Root Protection Areas

- 3.2.1 The RPA is a desirable zone of protection around the trees' rooting system and these have been marked on the plan in Appendix A. The RPAs will lie within the TPZ and therefore, be fully fenced off (see Appendix A) unless where appropriate ground protection is offered.

3.3 Site Access, Accommodation & Storage

- 3.3.1 Many site activities are potentially damaging to trees e.g. material storage, parking, soil compaction and the use of plant machinery. In this latter example particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees when in use or in accessing the site.

3.4 Routing & Installation of Services

- 3.4.1 It is assumed that service runs will be extended to the garage & pool in a manner that avoids the RPAs of retained trees.
- 3.4.2 Where crown interference with mature trees is a possibility, over-ground services will be routed in an alternative direction. In relation to this, any landscaping taking place should accommodate the presence of over-ground services and take mature tree size into account.

3.5 Demolition Measures (n/a)

3.6 Changes in Grade

- 3.6.1 The upper layer of top soil (top 60cm) contains the majority of a tree's roots and if this is disturbed by a change in ground level, serious damage can be caused. On this basis, as a minimum, level changes should be avoided within RPAs.
- 3.6.2 If any significant section of ground level requires raising within RPAs, this should be achieved using coarse, granular material such as pebbles. See section 7.4.4.4 of BS5837:2012.
- 3.6.3 If ground levels need to be altered within 1.5 metres of any tree trunk prior agreement must be sought and given by the local authority tree officer.

3.7 Construction Measures

- 3.7.1 The foundation of the 3 bay garage will be a concrete slab that requires a level drop of 100mm which will result in an overall level rise of 300mm with other levels raised to match.
- 3.7.2 Minimum areas of driveway/ hard standing within the RPA of trees 16 & 17 should be constructed to a 'No Dig' specification-see Appendix E for additional detail. Surfaces should be porous to allow water infiltration & gaseous exchange. Various products are available with warranty & guarantees: contact providers for full details. If 'No Dig' surfaces are laid at the end of the build then ground protection will be required through the course of the build. See Appendix E for further guidance.

3.8 Removal of Tree Protective Barrier

- 3.8.1 The protective fencing may be removed only upon completion of the development phase when all drainage and service runs have been installed and any site machinery has been removed.

3.9 Post Construction Landscaping

- 3.9.1 Following the developing phase, some trees may be subject to either landscaping or seeding beneath their canopy but at this stage the protective fencing will have been removed.
- 3.9.2 Any approved landscaping works should avoid the changing of ground levels or deep digging. Mechanised cultivation such as tractor-mounted rotoavation must not be used within the RPAs of existing trees.
- 3.9.3 Heavy machinery should not be used in the vicinity of any retained trees.
- 3.9.4 If herbicides are to be used they should be appropriate to their purpose and not in such a way as to damage any retained trees or vegetation.
- 3.9.5 Ideally, retained trees should be within a shrub area as this reduces the chances of compaction and disturbance of root systems.

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

- 4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

<u>Impact</u>	<u>Mitigation</u>	<u>Reference</u>	<u>Trees Affected</u>
Passage of machinery and storage of materials over RPAs	Construction of protective fencing to acceptable standards	Sections 2.3. Fencing spec Appendix C, Tree Protection Plan Appendix A	TL13, 16 & 17
Foundation works within RPAs of retained trees	Concrete slab foundation for garage	Section 3.7.1 & accompanying material	17
New hard standing within RPA	New driveway/ parking area installed to specialist 'No Dig' construction specification	Section 3.7.2 & Appendix E	16 & 17

5.0 Completion

5.1 Completion Meeting

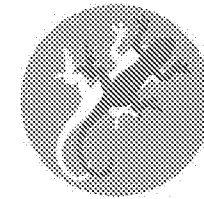
- 5.1.1 Following completion of the approved works on site, the designated arboriculturist will meet with a local authority representative and agree upon any remedial works deemed necessary (if any).
- 5.1.2 Any works agreed in the above meeting will be confirmed in writing and should be performed to BS3998:2010.
- 5.1.3 Any work proposed post development should be checked to avoid penalty for performing illegal work on a protected tree.



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APPENDIX B



LIZARD

Landscape Design and Ecology

ECE PLANNING

**Land at The Spires, Springfield Close
East Preston, West Sussex**

- Existing Tree Schedule

Prepared by	GS
Checked by	JJ
Date	13 th April 2017
Document Reference	LLD1149
Revision	01

April 2017 – Planning Issue

LLD1149.SCH01.TheSpires.ExistingTreeSchedule.Rev01.13.04.17

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 01	<i>Acer pseudoplatanus</i> (Sycamore); (2.7m Radius of nominal circle; RPA 23m²)	223 mm	7.0 m Clear Stem Height 2.0 m	N: 4.0 m E: 4.0 m S: 3.0 m W: 3.0 m	Young Estimated Remaining Contribution 10 + Years	Tree divides to codominant leaders at 1.3 m height; the union exhibits 15.0 cm of bark inclusion. The crown is held on many upright scaffolds. Growth is held to the north and east away from the adjacent large holm oak trees. Tree Protected by TPO Ref: R/1/14	C 1	Retain
TG 02 (i)	<i>Quercus ilex</i> (Holm Oak); (9.3m Radius of nominal circle; RPA 272m²)	766 mm CSD	14.0 m Clear Stem Height 4.0 m	N: 9.0 m E: 7.0 m S: 4.0 m W: 8.0 m	Early mature Estimated Remaining Contribution 10 + Years	Three deeply-fissured stems are present from the base, leaning north into the site. 1 no. stem has lost bark in a narrow stip 2.0m long. Lots of moderate deadwood is evident, as are pruning scars which are occluding but show signs of decay. Stem fusion is present at the base. The main union holds leaf litter. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	C 2	Retain
TG 02 (ii)	<i>Quercus ilex</i> (Holm Oak); (7.2m Radius of nominal circle; RPA 163m²)	589 mm	14.0 m Clear Stem Height 3.0 m	N: 6.0 m E: 4.0 m S: 5.0 m W: 3.5 m	Early Mature Estimated Remaining Contribution 10 + Years	The tree's butt is swept to the east. A large 80.0 cm x 30.0 cm wound is present to the west @ 2.0 m height; this is occluding but shows major decay. A major failed limb at 4.0 m height is hanging to the south. A large quantity of minor deadwood is present. Tree Protected by TPO Ref: R/1/14	C 2	Retain
TG 02 (iii)	<i>Quercus ilex</i> (Holm Oak); (6.6m Radius of nominal circle; RPA 137m²)	541 mm	12.0 m Clear Stem Height 3.5 m	N: 6.0 m E: 8.0 m S: 8.0 m W: 3.0 m	Early Mature Estimated Remaining Contribution 10 + Years	Tree divides to codominant leaders at 4.0 m height. A sealed wound at 2.5 m height shows historic exudates. Multiple moderate failures are present and occluding. Pruning scars are visible to the north. A wound at 50.0 cm to the south is occluding but exhibits decay. Lots of minor deadwood is visible. Tree Protected by TPO Ref: R/1/14	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TG 02 (iv)	<i>Quercus ilex</i> (Holm Oak) (5.7m Radius of nominal circle; RPA 102m ²)	468 mm	11.0 m Clear Stem Height 3.0 m	N: 0.0 m E: 2.0 m S: 8.0 m W: 8.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The tree arches heavily over the road; all growth is held to the south and west. Stem divides to codominant leaders at 6.0 m. Minor deadwood is noted. An occluding wound at the base holds moisture. Some low epicormic growths are noted. Tree Protected by TPO Ref: R/1/14	C 2	Retain
TG 02 (v)	<i>Quercus ilex</i> (Holm Oak); (8.4m Radius of nominal circle; RPA 222m ²)	684 mm	11.0 m Clear Stem Height 2.0 m	N: 0.0 m E: 6.0 m S: 7.0 m W: 3.0 m	Early Mature Estimated Remaining Contribution 10 + Years	All growth is held on 2 no. leaders leaning to the south. Major wounds are present at the base and at 1.5 m height; these exhibit brown cubical-rot. Stem becomes codominant at 5.0 m height; moderate deadwood is present lower in the crown and is caused by overshadowing. Recommendation: Further inspection would determine the extent of stem decay. Monitor tree annually and remove should the wounds further deteriorate. Tree Protected by TPO Ref: R/1/14	C 2	Retain
T 03	<i>Acer pseudoplatanus</i> (Sycamore); (5.7m Radius of nominal circle; RPA 102m ²)	462 mm	11.5 m Clear Stem Height 4.0 m	N: 5.0 m E: 5.0 m S: 5.0 m W: 5.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Tree displaying an even crown which has been historically lifted. Occluded scars are visible. Some decay is evident to a moderate scar at 3.0 m height to the south-west. Minor deadwood is present. Tree Protected by TPO Ref: R/1/14 Tree Surgery Works: Crown reduction of 1.9 m to the western aspect; crown-lift to 5.0 m height. Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 04	<i>Acer pseudoplatanus</i> (Sycamore); (6.9m Radius of nominal circle; RPA 150m²)	573 mm	15.0 m Clear Stem Height 3.0 m	N: 10.5 m E: 7.0 m S: 9.0 m W: 7.0 m	Early Mature Estimated Remaining Contribution 20 + Years	The crown divides at 4.0 m height; the union includes a 30.0 cm length of bark and several small Japanese Spindle stems from an adjacent shrub; some exudation is visible. The broad crown is mainly held to the north. The stem displays a slight lean north. Inspection of the tree was limited by surrounding vegetation. Tree Protected by TPO Ref: R/1/14 Tree Surgery Works : Crown reduction of 2.2 m to the eastern aspect; crown-lift to 5.0 m height. Tree Protection Measures : 'No-dig' construction within the tree RPA.	B 2	Retain
T 05	<i>Aesculus hippocastanum</i> (Horse Chestnut) (3.6m Radius of nominal circle; RPA 41m²)	290 mm	11.0 m Clear Stem Height 1.5 m (inc. canopy hang of 1.5m)	N: 3.0 m E: 2.0 m S: 3.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The tree displays occluding pruning scars and minor deadwood; The tree is overshadowed by T 04. Tree Protected by TPO Ref: R/1/14	C 1	Retain
T 06	<i>Fraxinus excelsior</i> (Ash); (4.2m Radius of nominal circle; RPA 55m²)	334 mm	8.5 m Clear Stem Height 2.5 m	N: 1.0 m E: 4.0 m S: 6.0 m W: 2.0 m	Semi-Mature Estimated Remaining Contribution <10 Years	The tree displays a very major wound from the base to 1.3 m height; this is occluding but 30% of the stem wall is absent; the heartwood has decayed almost completely. Growth is held to the south and is sparse. Tree Removal : Tree to be removed due to poor condition.	U	Remove

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 07	<i>Salix sp.</i> (Willow sp.); (11.1m Radius of nominal circle; RPA 387m²)	912 mm CSD	10.5 m Clear Stem Height 3.0 m	N: 4.0 m E: 4.0 m S: 4.0 m W: 3.0 m	Mature Estimated Remaining Contribution 10 + Years	The stem divides to codominant leaders from 1.0 m height; the main stems exhibit evidence of historic pollarding and several years of re-growth. Growth is uneven and sparse lower in the canopy. Major pruning scars are yet to occlude. A major deadwood limb hangs low to the north-west. The eastern stem exhibits a 15.0 cm long cavity; the heartwood in the cavity has entirely decayed.	C 1	Retain
T 08	<i>Aesculus hippocastanum</i> (Horse Chestnut); (7.8m Radius of nominal circle; RPA 191m²)	646 mm	14.0 m Clear Stem Height 2.0 m (inc. canopy hang of 2.0 m)	N: 8.0 m E: 6.0 m S: 4.0 m W: 6.0 m	Early Mature Estimated Remaining Contribution 20 + Years	A twisting stem holds the crown to the north. Many occluded scars and some minor deadwood are visible. An open scar at 2.0 m height to the west is decayed with a cavity approximately 15.0 cm deep, which is holding soil. Tree Protected by TPO Ref: R/1/14	B 1	Retain
T 09	<i>Aesculus hippocastanum</i> (Horse Chestnut) (9.3m Radius of nominal circle; RPA 272m²)	751 mm	15.0 m Clear Stem Height 2.0 m (inc. canopy hang of 2.0 m)	N: 7.0 m E: 5.0 m S: 5.0 m W: 7.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Tree displays a tall crown on many small scaffolds. A large occluding wound is evident from 1.0 m - 3.0 m height; the heartwood is exposed. Multiple moderate limb failures are present. Tree Protected by TPO Ref: R/1/14	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 10	<i>Fraxinus excelsior</i> (Ash); (5.1m Radius of nominal circle; RPA 81m²)	404 mm	12.0 m Clear Stem Height 3.0 m	N: 3.0 m E: 5.5 m S: 5.0 m W: 5.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The stem divides to codominant leaders from 2.5 m height. The main union appears strong but several minor compression unions are present within the crown. Occluded scars and minor deadwood are present. An occluded seam is visible from 0.5 m - 3.0 m height; minor heartwood decay is evident.	C 1	Retain
T 11	<i>Populus sp.</i> (Poplar sp.); (9.3m Radius of nominal circle; RPA 272m²)	764 mm	18.0 m Clear Stem Height 5.0 m	N: 12.0 m E: 10.0 m S: 7.0 m W: 5.0 m	Mature Estimated Remaining Contribution 20 + Years	A large poplar tree which arches over the site; the crown divides at 9.0 m height. The stem leans to the north-east, and minor hanging deadwood is present in the crown to the south-east and west. Moderate deadwood is visible in the crown. Major mechanical damage is evident to exposed roots.	B 2	Retain
T 12	<i>Acer pseudoplatanus</i> (Sycamore); (6.3m Radius of nominal circle; RPA 124m²)	525 mm	10.0 m Clear Stem Height 4.0 m	N: 7.0 m E: 10.0 m S: 4.0 m W: 7.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Overshadowed by the poplar tree T 11. The tree divides to 3 no. stems from 0.8m height. Several major failures are present. The canopy exhibits sparse, uneven growth. Lots of minor deadwood is evident.	C 1	Retain
TL 13	<i>Chamaecyparis lawsoniana</i> (Lawson's Cypress) (6.0m Radius of nominal circle; RPA 113m²)	477 mm Average	9.0 m Clear Stem Height 0.5 m	N: 6.0 m E: 6.0 m S: 6.0 m W: 6.0 m	Mature Estimated Remaining Contribution 10 + Years	Broad bushy treeline of mature ornamental trees. The treeline provides good screening but is imposing within the site. Several sycamore and horse chestnut trees are present within the treeline. Many trees are multistemmed; large quantities of minor deadwood and dead foliage are present as typical for the species. Tree Surgery Works: Crown reduction (northernmost 5 no. trees) of up to 2.5 m to the eastern aspect. Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 14	<i>Acer pseudoplatanus</i> (Sycamore); (5.4m Radius of nominal circle; RPA 92m²)	446 mm	8.0 m Clear Stem Height 0.0 m	N: 3.0 m E: 3.0 m S: 3.0 m W: 2.0 m	Semi-Mature Estimated Remaining Contribution <10 Years	A major scar is present from the base up to 2.0 m height; this is occluding but heartwood decay is evident. Tree has been historically pollarded and is showing several years of re-growth. Large suckers are present at the base. Tree Removal: Tree to be removed due to poor condition.	U	Remove
TL 15	<i>Fagus sylvatica</i> (Beech); (2.7m Radius of nominal circle; RPA 23m²)	223 mm Average	9.0 m Clear Stem Height 2.0 m	N: 3.0 m E: 5.0 m S: 2.0 m W: 3.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	A historic hedge, which has overgrown into an untidy line of trees of upright form. Multiple failed leaders and limbs, and branch rubbing are evident. Those to the west are slightly larger and more uneven. Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	C 2	Retain
T 16	<i>Quercus ilex</i> (Holm Oak); (7.8m Radius of nominal circle; RPA 191m²)	633 mm CSD	11.0 m Clear Stem Height 2.0 m	N: 5.0 m E: 7.0 m S: 6.0 m W: 7.0 m	Early Mature Estimated Remaining Contribution 20 + Years	A large holm oak in an adjacent property. The tree is multistemmed on 4 no. stems from the base; the low broad canopy dominates this corner of the site. Major pruning scars are present low on the stems. Several narrow unions are noted but do not appear weak at present. Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	B 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 17	<i>Quercus ilex</i> (Holm Oak) (8.7m Radius of nominal circle; RPA 238m²)	709 mm CSD	11.0 m Clear Stem Height 2.5 m	N: 5.0 m E: 6.0 m S: 7.0 m W: 7.0 m	Early Mature Estimated Remaining Contribution 20 + Years	Growing in the adjacent property. The tree is multistemmed with 6 no. leaders from the base. The tree displays a rounded crown holding moderate deadwood and failures. Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	B 2	Retain
TG 18	<i>Acer pseudoplatanus</i> (Sycamore); (2.7m Radius of nominal circle; RPA 23m²)	223 mm Average	9.0 m Clear Stem Height 1.5 m	N: 2.5 m E: 5.0 m S: 4.5 m W: 2.0 m	Young Estimated Remaining Contribution 10 + Years	A small line of dense, self-seeded trees arching over the site. Minor limb failures and rubbing are evident. The trees add little to the site amenity.	C 1	Retain
TG 19	<i>Quercus robur</i> (Pendunculate Oak); (6.0m Radius of nominal circle; RPA 113m²)	477 mm Average	14.0 m Clear Stem Height 5.0 m	N: 4.0 m E: 7.0 m S: 6.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 20 + Years	Trees surrounded by holly bushes in an adjacent property. Inspection of the trees is limited by surrounding vegetation and the fence. Several major deadwood limbs are noted. The stems lean towards the north and south, with several overarched the site.	B 2	Retain
TG 20	<i>Cupressus macrocarpa</i> (Monterey Cypress); (9.0m Radius of nominal circle; RPA 255m²)	732 mm Average	16.0 m Clear Stem Height 3.1.5	<u>i / ii</u> N: 6 / 4 m E: 9 / 9 m S: 4 / 7 m W: 6 / 6 m	Mature Estimated Remaining Contribution 20 + Years	Trees representing dominant features within the site. The trees exhibit straight stems with no lower limbs; tree (ii) holds 1 no. drooping major limb lower in the crown. Tree (i) divides to codominant leaders at 5.0 m height. Minor deadwood is present, as are major pruning scars and failures. The trees lean away from each other and towards the north and south. Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	B 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TG 21	<i>Cupressus macrocarpa</i> (Monterey Cypress) (i) (13.2m Radius of nominal circle; RPA 547m²) (ii) (15.0 m Radius of nominal circle; RPA 707m²)	(i) 1082 mm (ii) 1464 mm	To 14.5 Clear Stem Height 2.0 m	<u>i / ii</u> N: 8 / 8 m E: 12 / 8 m S: 7 / 8 m W: 9 / 8 m	Mature Estimated Remaining Contribution 20 + Years	Cypress trees exhibiting lower, broader forms with rounded crowns holding minor deadwood. Tree (ii) holds 1 no. subdominant limb at 2.0 m height, with the main crown dividing at 3.0 m height. Tree (i) holds its crown at 4.0 m height. Major historic pruning is evident.	B 1	Retain
H 22	<i>Cupressus x leylandii</i> 'Golden' (Leyland Cypress 'Golden'); (1.5m Radius of nominal circle; RPA 7m²)	121 mm	3.0 m Clear Stem Height 0.0 m	As Shown	Semi-Mature Estimated Remaining Contribution 10 + Years	A neatly clipped ornamental hedge. Much of the eastern portion is directly under a large poplar tree and has largely died back.	C 2	Retain
T 23	<i>Ginkgo biloba</i> (Maidenhair Tree); (2.1m Radius of nominal circle; RPA 14m²)	159 mm	7.5 m Clear Stem Height 1.5 m	N: 3.0 m E: 2.5 m S: 2.5 m W: 2.5 m	Young Estimated Remaining Contribution 10 + Years	A small ornamental tree within the lawn. Tree is of excurrent, even form, displaying no defects but not of a significant size or age. Tree Protected by TPO Ref: R/1/14	C 1	Retain
T 24	<i>Populus sp.</i> (Poplar sp.) (12.6m Radius of nominal circle; RPA 499m²)	1035 mm	18.0 m Clear Stem Height 2.0 m	N: 11.0 m E: 10.0 m S: 10.5 m W: 11.0 m	Mature Estimated Remaining Contribution 20 + Years	A large, dominant poplar tree of upright form and very broad canopy. Moderate hanging deadwood is noted within the crown. Extensive damage is evident to major exposed roots within the lawn. Occluding major scars are visible to the stem. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	B 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 25	<i>Ilex aquifolium</i> (Holly); (2.7m Radius of nominal circle; RPA 23m²)	216 mm	9.0 m Clear Stem Height 0.0 m	N: 4.0 m E: 4.0 m S: 3.0 m W: 3.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Tree at the end of a track. The tall crown is held away from the west. The tree displays a vigorous, excurrent form. Tree Removal: Tree to be removed to accommodate proposed northern road access.	C 1	Remove
T 26	<i>Populus nigra</i> 'Italica' (Lombardy Poplar) (5.7m Radius of nominal circle; RPA 102m²)	462 mm	14.0 m Clear Stem Height 2.0 m	N: 6.0 m E: 4.0 m S: 3.0 m W: 5.0 m	Early Mature Estimated Remaining Contribution 20 + Years	The tree's stem leans slightly to the north. The tree is of fairly typical form for the species, displaying dense vertical growth. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	B 1	Retain
T 27	<i>Sorbus aria</i> (Whitebeam); (4.2m Radius of nominal circle; RPA 55m²)	350 mm	11.0 m Clear Stem Height 1.5 m	N: 3.0 m E: 5.0 m S: 2.0 m W: 3.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The tree leans south-east and holds sparse limbs over the site. The stem divides to 4 no. leaders from 2.0 m height; the stems are very upright with minor bark inclusion to the main union. Multiple limb failures and vertical epicormic growths are present. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 28	<i>Populus nigra</i> 'Italica' (Lombardy Poplar) (6.3m Radius of nominal circle; RPA 124m²)	509 mm	16.0 m Clear Stem Height 2.0 m	N: 6.0 m E: 7.0 m S: 6.0 m W: 6.0 m	Early Mature Estimated Remaining Contribution 20 + Years	Tree displays a slight lean towards the north; 1 no. major harp-form limb is held over the site to the east and is supported by a major rib running down the stem. Moderate failures and deadwood are visible within the crown. Recommendations: Consider/discuss with adjacent property owner the possibility of removing the overhanging limb to balance the tree canopy. Tree Surgery Works: Crown reduction of 2.4 m to the eastern aspect. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	B 1	Retain
T 29	<i>Betula pendula</i> (Silver Birch); (5.4m Radius of nominal circle; RPA 92m²)	446 mm	13.5 m Clear Stem Height 2.0 m	N: 5.0 m E: 7.5 m S: 4.0 m W: 4.0 m	Early Mature Estimated Remaining Contribution 20 + Years	The stem divides to 1 no. dominant and 1 no. subdominant leader from 3.5 m height. Growth is mainly held east over the site. Minor deadwood is present throughout the crown. Minor branch rubbing is noted. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	B 1	Retain
T 30	<i>Cupressus x leylandii</i> (Leyland Cypress); (2.7m Radius of nominal circle; RPA 23m²)	220 mm	7.5 m Clear Stem Height 2.0 m	N: 2.0 m E: 3.0 m S: 2.0 m W: 2.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	In an adjacent garden. The tree has been topped at 7.5 m height. The growth is mainly held to the east and exhibits lots of minor deadwood. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 31	<i>Acer pseudoplatanus</i> (Sycamore); (2.7m Radius of nominal circle; RPA 23m²)	213 mm	9.0 m Clear Stem Height 1.5 m	N: 4.0 m E: 4.0 m S: 5.0 m W: 3.0 m	Young Estimated Remaining Contribution 10 + Years	An uneven tree, exhibiting many occluding pruning scars and minor deadwood. A moderate limb is held to the south. Growth is mainly high and held to the north-east. Tree Removal: Tree to be removed to accommodate proposed northern road access.	C 1	Remove
SH 32	Native Shrubs and Scrub (1.5m Radius of nominal circle; RPA 7m²)	111 mm	7.0 m Clear Stem Height 0.0 m	As Shown	Young Estimated Remaining Contribution 10 + Years	Untidy small trees and scrub, along the track. The trees' only value is for wildlife. Species noted include holly; bramble; cherry; cypress and elder. Tree Removal: Tree to be removed to accommodate proposed northern road access.	C 3	Remove
T 33	<i>Sorbus sp.</i> (Sorbus); (4.2m Radius of nominal circle; RPA 55m²)	347 mm CSD	9.0 m Clear Stem Height 1.5 m	N: 3.5 m E: 3.0 m S: 3.5 m W: 4.5 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Tree which divides to 3 no. stems from the base; the stems arch to the north and south, then display strong vertical growth. Leader and branch rubbing is noted, as is moderate mechanical damage to a lower limb to the south. Minor failures are visible within the crown. The main union is narrow and holding soil. Eviden of bark inclusion is noted to the main union. Tree Removal: Tree to be removed to accommodate proposed northern road access.	C 1	Remove

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TG 34	<i>Pinus sylvestris</i> (Scot's Pine); (4.2m Radius of nominal circle; RPA 55m²)	350 mm Average	11.0 m Clear Stem Height 3.5 m	N: 4.0 m E: 6.0 m S: 3.0 m W: 5.0 m	Early Mature Estimated Remaining Contribution 20 + Years	Pine trees with high, uneven crowns. Trees are of varying forms; tree (iv) has no growth to the south; tree (iii) has a broad crown held on 3 no. scaffolds; tree (ii) is suppressed by tree (i). Moderate failures are present lower in the crown as typical for the species. Trees Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPAs.	B 2	Retain
T 35	<i>Acer pseudoplatanus</i> (Sycamore); (3.9m Radius of nominal circle; RPA 48m²)	321 mm CSD	6.0 m Clear Stem Height 2.5 m	N: 0.5 m E: 8.0 m S: 3.5 m W: 0.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The tree's stem curves steeply east holding all growth into the site. Moderate deadwood is noted and the tree displays little vigour. Tree Surgery Works: Crown reduction of 4.0 m to the eastern aspect. Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain
T 36	<i>Betula pendula</i> (Silver Birch); (4.5m Radius of nominal circle; RPA 64m²)	366 mm CSD	13.0 m Clear Stem Height 2.0 m (inc. 1.5 m canopy hang)	N: 5.0 m E: 6.0 m S: 5.0 m W: 6.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	2 no. multistemmed trees growing close together. Several moderate failures are noted to the stems. 1 no. narrow union includes 30.0 cm of bark to the southern tree. Tree Protected by TPO Ref: R/1/14 Tree Surgery Works: Crown reduction of 1.5 m to the eastern aspect; crown-lift to 4.0 m height. Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain
T 37	<i>Cupressus sp.</i> (Cypress sp.); (9m Radius of nominal circle; RPA 255m²)	748 mm	14.5 m Clear Stem Height 1.5 m	N: 8.0 m E: 6.5 m S: 2.0 m W: 8.0 m	Early Mature Estimated Remaining Contribution 10 + Years	Tree beomes codominant at 3.0 m height; a major failed leader has resulted in extensive decay of the union. Large quantities of minor deadwood are noted. 1 no. major limb is held over the adjacent track. Tree Surgery Works: Crown-lift to 4.0 m height. Tree Protection Measures: 'No-dig' construction within the tree RPA.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TG 38	<i>Cupressus sp.</i> (Cypress sp.); (i) 8.4m Radius of nominal circle; RPA 222m²) (ii) 8.1m Radius of nominal circle; RPA 206m²) (iii) 5.1m Radius of nominal circle; RPA 81m²) (iv) 6.0m Radius of nominal circle; RPA 113m²)	(i) 684 mm (ii) 658 mm (iii) 413 mm CSD (iv) 477 mm	16.0 m Clear Stem Height 3.0 m	N: 6.0 m E: 4.0 m S: 6.0 m W: 3.0 m	Early Mature Estimated Remaining Contribution 10 + Years	Uneven, untidy cypress trees within the garden. Tree (iii) becomes codominant at 1.0 m height; the union displays minor bark inclusion. Multiple pruning scars and limb failures are noted lower within the crowns; moderate hanging deadwood is present throughout. The trees are a significant feature within the site but are not of good form or condition. Recommendations: Remove deadwood and failed limbs from the crowns. Tree Surgery Works: Crown reduction of 1.5 m to the eastern aspect; crown-lift to 4.0 m height. Tree Protection Measures: 'No-dig' construction within the tree RPAs.	C 1	Retain
T 39	<i>Pinus radiata</i> (Monterey Pine); (12.0m Radius of nominal circle; RPA 452m²)	980 mm	18.0 m Clear Stem Height 4.0 m	N: 7.5 m E: 9.5 m S: 7.0 m W: 6.0 m	Mature Estimated Remaining Contribution 20 + Years	Dominant and imposing pine tree whose stem leans to the east. Minor heave is noted to the adjacent ground and many major exposed roots display mechanical damage. Several major failures are noted within the crown. Scars lower to the stem are all occluding and typical for the species. Recommendations: Tree is to be inspected annually, and any deterioration in its angle of repose noted. Should the lean increase the tree should be considered for removal. Major deadwood limbs should be removed as noted. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: 'No-dig' construction within the tree RPA.	B 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 40	<i>Ilex aquifolium</i> (Holly); (3.3m Radius of nominal circle; RPA 34m²)	274 mm CSD	6.0 m Clear Stem Height 0.0 m	N: 3.5 m E: 3.5 m S: 3.5 m W: 3.5 m	Semi-Mature Estimated Remaining Contribution 10 + Years	A holly tree displaying a dense, conical crown with vigorous growth. The tree is multistemmed from the base. Minor deadwood is noted within the foliage. Tree Removal: Tree to be removed to accommodate proposed northern road access.	C 1	Remove
TG 41	<i>Betula pendula</i> (Silver Birch); (4.2m Radius of nominal circle; RPA 55m²)	344 mm Average	12.0 m Clear Stem Height 2.0 m	N: 4.0 m E: 4.0 m S: 5.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Individual birch trees spread through the north-eastern section of the garden. Trees (ii-v) are narrow, upright forms; tree (i) holds a small canopy, with 1 no. large, low limb from 3.0 m height spreading to the south-east. This tree displays woodpecker holes to the stem. All trees exhibit minor deadwood and failures. Trees Protected by TPO Ref: R/1/14 (excluding northernmost tree) Tree Removal: Tree group to be partially removed (northernmost 3 no. trees removed) to accommodate proposed northern road access and garage. Tree Surgery Works: Crown reduction (2nd tree to south only) of 0.9 m to the northern aspect.	C 2	Part Retain / Part Remove
TG 42	<i>Acer pseudoplatanus</i> (Sycamore); (4.5m Radius of nominal circle; RPA 64m²)	376 mm Average	11.0 m Clear Stem Height 2.0 m	N: 4.0 m E: 4.0 m S: 4.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Sycamore trees within the lawn displaying even, rounded crowns. Minor failures are evident within the crowns. Several narrow unions were noted however these appear to be stable. Tree Protection Measures: Operation zone and manual excavation within the tree RPAs.	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TG 43	<i>Prunus sp.</i> (Cherry sp.); (1.5m Radius of nominal circle; RPA 7m²)	121 mm Average	5.0 m Clear Stem Height 1.0 m	N: 2.0 m E: 2.0 m S: 2.0 m W: 2.0 m	Young Estimated Remaining Contribution 10 + Years	A patch of untidy ornamental trees. The trees display uneven stems and generally sprawling forms; they add little to site amenity. Tree Removal: Tree group to be removed to accommodate proposed northern garage.	C 2	Remove
T 44	<i>Acer pseudoplatanus</i> (Sycamore); (8.1m Radius of nominal circle; RPA 206m²)	672 mm	15.0 m Clear Stem Height 3.5 m	N: 7.0 m E: 7.0 m S: 6.0 m W: 6.0 m	Early Mature Estimated Remaining Contribution 20 + Years	A large, vigorous sycamore tree adjacent to the garage. The stem divides at 2.5 m height into several upright stems with narrow unions. The main union includes a large quantity of bark and exhibits signs of moisture retention or exudation. Tree Protected by TPO Ref: R/1/14 Tree Protection Measures: Operation zone and manual excavation within the tree RPA.	B 2	Retain
T 45	<i>Prunus cerasifera</i> (Cherry Plum); (7.2m Radius of nominal circle; RPA 163m²)	598 mm @ 1.0 m	7.5 m Clear Stem Height 2.0 m	N: 3.0 m E: 3.0 m S: 3.5 m W: 4.0 m	Mature Estimated Remaining Contribution 10 + Years	An ornamental tree which divides to multiple stems at 1.0 m height. The tree is generally of dense, untidy form displaying a large number of pruning scars. The main union includes some bark.	C 1	Retain
H 46	<i>Cupressus x leylandii</i> (Leyland Cypress); (1.5m Radius of nominal circle; RPA 7m²)	124 mm Average	4.0 m Clear Stem Height 0.5 m	As Shown	Semi-Mature Estimated Remaining Contribution 10 + Years	A small section of ornamental hedge. The hedge has been recently cut back and displays re-growth. Lots of dieback is present to the north.	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 47	<i>Cedrus libani</i> (Cedar of Lebanon); (6.6m Radius of nominal circle; RPA 137m²)	535 mm	11.5 m Clear Stem Height 2.5 m	N: 7.0 m E: 6.0 m S: 7.0 m W: 7.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	An ornamental tree displaying minor crown-lift and dieback. Scars to the stem are occluding. 1 no. woodpecker hole is present to the stem and appears recent. The stem leans east at the apex. The tree is of pleasing form but adds little to the site amenity.	C 1	Retain
T 48	<i>Acer sp.</i> (Maple); (2.7m Radius of nominal circle; RPA 23m²)	220 mm	7.0 m Clear Stem Height 1.5 m	N: 3.5 m E: 3.5 m S: 3.5 m W: 4.0 m	Young Estimated Remaining Contribution 10 + Years	An ornamental tree within the grass. The tree displays an even crown and several minor failures.	C 1	Retain
SH 49	Mixed Species Ornamental Shrubs: <i>Forsythia sp.</i> ; <i>Choisya sp.</i> ; <i>Eleagnus sp.</i> ; <i>Buddleia sp.</i> ; <i>Cupressus sp.</i> ; (1.5m Radius of nominal circle; RPA 5m²)	105 mm Average	4.0 m Clear Stem Height 0.0 m	As Shown	Mature Estimated Remaining Contribution 10+ Years	Mixed ornamental shrubs to the site borders. Species include Forsythia; Choisya; Eleagnus; Buddleia. A number of small trees are also noted including Birch; Pine; Cypress and Maple. The vegetation is well established but is ornamental in nature.	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
H 50	<i>Chamaecyparis lawsoniana</i> (Lawson's Cypress); (1.5m Radius of nominal circle; RPA 7m²)	121 mm Average	3.0 m Clear Stem Height 0.0 m	As Shown	Semi-Mature Estimated Remaining Contribution 10 + Years	An ornamental hedge in the adjacent property. The hedge has been topped relatively recently and displays dense foliage. The hedge provides some screening to the site.	C 2	Retain
T 51	<i>Cupressus sp.</i> (Cypress); (7.8m Radius of nominal circle; RPA 191m²)	649 mm Estimated	18.0 m Clear Stem Height 3.0 m	N: 6.0 m E: 6.0 m S: 6.0 m W: 6.0 m	Mature Estimated Remaining Contribution 20 + Years	A cypress tree displaying a tall, conical crown and dense excurrent growth. Minor deadwood is noted within the crown. The tree is situated within an adjacent property and therefore detailed inspection was not possible.	B 1	Retain
T 52	<i>Cupressus sp.</i> (Cypress sp.); (11.4m Radius of nominal circle; RPA 408m²)	949 mm	17.0 m Clear Stem Height 7.0 m	N: 5.0 m E: 5.0 m S: 5.0 m W: 5.0 m	Mature Estimated Remaining Contribution 20 + Years	A large cypress tree exhibiting a high crown and straight stem with many occluding scars. A major pruning scar runs from the ground to 2.0 m height; this is occluding but the heartwood is decaying. Minor hanging deadwood is noted within the crown.	B 2	Retain
T 53	<i>Pittosporum crassifolium</i> 'Variegatum' (Variegated Karo); (2.4m Radius of nominal circle; RPA 18m²)	201 mm CSD	9.5 m Clear Stem Height 0.0 m	N: 4.0 m E: 3.0 m S: 3.0 m W: 4.0 m	Early Mature Estimated Remaining Contribution 10 + Years	A tall, bushy ornamental shrub/tree. The tree is multistemmed from the base. The foliage is vigorous and healthy.	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 54	<i>Eucalyptus sp.</i> (Eucalyptus Gum Tree); (9.3m Radius of nominal circle; RPA 272m²)	770 mm	14.0 m Clear Stem Height 4.0 m	N: 8.0 m E: 6.0 m S: 5.0 m W: 4.0 m	Early Mature Estimated Remaining Contribution 10 + Years	The tree's stem twists anti-clockwise for the first 3.0 m; there is a major wound present from 0.5 m - 1.5 m height. This is occluding but displays a white rot. The tree is vigorous but of untidy form. Minor failures are noted within the crown.	C 1	Retain
T 55	<i>Ilex aquifolium</i> (Holly); (5.4m Radius of nominal circle; RPA 92m²)	427 mm CSD	8.0 m Clear Stem Height 1.5 m	N: 3.0 m E: 3.0 m S: 4.0 m W: 2.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Holly tree growing under holm oaks. The stem divides to 3 no. leaders from the base. The tree displays a tall, even crown with most growth held to the north-east.	C 1	Retain
TG 56	<i>Malus sp.</i> (Apple sp.) (3.6m Radius of nominal circle; RPA 41m²)	299 mm Average	8.0 m Clear Stem Height 1.5 m	N: 5.0 m E: 4.0 m S: 3.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Apple trees growing in the lawn. The stems divide at 2.0 m height. Growth is held to the north away from large holm oak trees. Minor pruning scars and deadwood are noted within the crowns.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
TL 57	<i>Quercus ilex</i> (Holm Oak); (i) (6.3m Radius of nominal circle; RPA 124m²) (ii) (3.3m Radius of nominal circle; RPA 34m²) (iii) (9.0m Radius of nominal circle; RPA 255m²) (iv) (6.6m Radius of nominal circle; RPA 137m²) (v) (6.3m Radius of nominal circle; RPA 124m²)	(i) 525 mm (ii) 258 mm (iii) 735 mm (iv) 529 mm CSD (v) 503 mm	14.0 m Clear Stem Height 3.0 m	<u>N: E: S: W:</u> (i) 2/ 6/ 7/ 0 (ii) 4/ 6/ 0/ 4 (iii) 4/ 6/ 7/ 3 (iv) 4/ 3/ 7/ 3 (v) 4/ 3/ 4/ 4	Early Mature Estimated Remaining Contribution 20 + Years	A dense line of holm oak trees with their growth mainly held to the south over the road. The trees exhibit evidence of interference from other trees in the line. Several moderate limb failures are noted lower in the crowns. Tree (iii) divides to multiple stems at 3.0 m height. The union includes approximately 80.0 cm of bark. Tree (iv) is multistemmed from 0.7 m; the union appears to be sound. Recommendations: Tree (iii) should be monitored and removed should its condition further deteriorate. Trees Protected by TPO Ref: R/1/14	B 2	Retain
TG 58	<i>Acer platanoides</i> (Norway Maple); (6.3m Radius of nominal circle; RPA 124m²)	504 mm Average	7.0 m Clear Stem Height 1.0 m	N: 5.0 m E: 5.0 m S: 5.0 m W: 5.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Trees displaying broad, even crowns. Several narrow unions are noted; 1 no. union to tree (i) includes some bark. Westernmost Tree Protected by TPO Ref: R/1/14	C 2	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 59	<i>Ilex aquifolium</i> (Holly); (5.1m Radius of nominal circle; RPA 81m²)	401 mm CSD	6.0 m Clear Stem Height 0.0 m	N: 3.0 m E: 3.0 m S: 3.0 m W: 3.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Holly trees growing within the shrub border. The tree displays a dense conical form and even growth.	C 2	Retain
T 60	<i>Auracaria aruacana</i> (Monkey-Puzzle Tree); (3.3m Radius of nominal circle; RPA 34m²)	251 mm	8.0 m Clear Stem Height 0.0 m	N: 2.5 m E: 2.5 m S: 2.5 m W: 2.5 m	Semi-Mature Estimated Remaining Contribution 10 + Years	An ornamental tree within the lawn, exhibiting even dense growth and a pleasing form. No major defects were noted. Tree Protected by TPO Ref: R/1/14	C 1	Retain
T 61	<i>Cedrus atlantica 'Glauca'</i> (Blue Atlas Cedar); (4.2m Radius of nominal circle; RPA 55m²)	328 mm	11.0 m Clear Stem Height 2.0 m	N: 3.5 m E: 3.5 m S: 3.5 m W: 3.5 m	Young Estimated Remaining Contribution 10 + Years	An ornamental tree within the lawn, exhibiting even growth and a pleasing form. Several lower limbs have been removed and the wounds are occluded. The tree is vigorous and could grow significantly in size. Tree Protected by TPO Ref: R/1/14	C 1	Retain
TG 62	<i>Acer sp.</i> (Maple); (3.9m Radius of nominal circle; RPA 48m²)	318 mm Average	11.0 m Clear Stem Height 2.0 m	N: 4.0 m E: 4.0 m S: 4.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	Trees within the lawn displaying even crowns and minor deadwood. The stems display a slight lean to the north.	C 1	Retain

Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
T 63	<i>Malus sp.</i> (Apple sp.); (2.7m Radius of nominal circle; RPA 23m ²)	223 mm	6.0 m Clear Stem Height 1.7 m	N: 5.0 m E: 3.0 m S: 1.0 m W: 4.0 m	Semi-Mature Estimated Remaining Contribution 10 + Years	The stem divides to 2 no. leaders at 1.8 m height and leans to the north; most of the growth is held to this aspect. Pruning scars are evident, as is minor decay to the base. Minor deadwood is noted within the crown. Some root damage is also noted.	C 1	Retain
T 64	<i>Malus sp.</i> (Apple sp.) (6.6m Radius of nominal circle; RPA 137m ²)	547 mm	6.0 m Clear Stem Height 1.5 m	N: 5.0 m E: 4.0 m S: 4.0 m W: 5.0 m	Mature Estimated Remaining Contribution 10 + Years	A mature apple tree whose stem leans to the north. The stem divides to 4 no. stems at 1.8 m height; the union displays evidence of bark inclusion and decay from a failed leader. Growth is dense and held low, with minor deadwood noted. Tree Surgery Works: Crown reduction of 0.8 m to the western aspect. Tree Protection Measures: Operation zone and manual excavation within the tree RPAs.	C 1	Retain
T 65	<i>Magnolia sp.</i> (Magnolia); (4.5m Radius of nominal circle; RPA 64m ²)	372 mm	6.0 m Clear Stem Height 1.0 m	N: 4.0 m E: 4.0 m S: 3.0 m W: 3.0 m	Early Mature Estimated Remaining Contribution 10 + Years	The stem divides to codominant leaders at 0.3 m height; the leaders re-fuse a 1.1 m height. There is approximately 60.0 cm of included bark at the union. Several major limbs are also fusing. The tree displays vigorous growth.	C 1	Retain
TG 66	<i>Malus sp.</i> (Apple sp.); (5.1m Radius of nominal circle; RPA 81m ²)	419 mm CSD	7.0 m Clear Stem Height 1.5 m	N: 6.0 m E: 4.0 m S: 4.0 m W: 5.0 m	Semi-Mature Estimated Remaining 10 + Years	A group of untidy trees within the shrub border. The trees lean north away from the holm oaks. The stem unions are narrow and include bark. Pruning scars and minor deadwood are noted to the trees. Several trees are cankered and are exuding sap. Tree Surgery Works: Crown reduction of 1.2 m to the western aspect. Tree Protection Measures: Operation zone and manual excavation within the tree RPAs.	C 1	Retain

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Tree No.	Species	Diameter @1.5m	Height (approx.)	Spread (approx.)	Age	Condition/Preliminary Recommendations	Category	Status
H 67	<i>Cupressus x leylandii</i> 'Golden' (Golden Layland Cypress); (1.5m Radius of nominal circle; RPA 7m ²)	120 mm (Average)	3.0 m Clear Stem Height 0.0 m	As Shown	Semi-Mature Estimated Remaining Contribution 10 + Years	A heavily clipped, very dense hedgerow to the site frontage. The hedge appears to be largely dead beneath the overhanging holm oaks. Hedge Removal: 6.5 m section of hedge requires removal to accommodate proposed road access.	C 2	Partial Retain / Partial Remove
H 68	<i>Euonymus japonicus</i> (Japanese Spindle); (1.5m Radius of nominal circle; RPA 7m ²)	110 mm (Average)	3.0 m Clear Stem Height 0.0 m	As Shown	Mature Estimated Remaining Contribution 10 + Years	An ornamental hedge with dense, continuous foliage and very vigorous growth. The hedge provides good screening to the site.	C 2	Retain

CATEGORY DIVISION - BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'

Trees to be considered for retention

Category A

- Trees whose retention is most desirable to include; trees of high quality having an estimated longevity of over 40 years;

1. Mainly Arboricultural Qualities

- Trees that are particularly good examples of their species, especially if rare or unusual

2. Mainly Landscape Qualities

- Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

3. Mainly cultural values, including conservation

- Trees of significant historical, commemorative or other value, or good specimens of rare or unusual species

Category B

- Trees where retention is desirable to include; trees of moderate quality having an estimated longevity of over 20 years;

- Trees that might be included in the higher category, but because of significant impaired but remediable condition are downgraded

- Trees present in numbers offering a higher collective categorisation than as individually rated; trees occurring in groups but due to situation, offering little contribution in the context of the wider locality

- Trees having some material conservation or cultural value

Category C

- Trees of low quality having an estimated longevity of over 10 year, or young trees with a stem diameter below 150mm;

- Trees in adequate or impaired condition, or those which can be retained with minimal tree surgery, but not worthy for inclusion in the high or moderate category

- Trees present in numbers without having significant landscape value

- Trees having no material conservation or other cultural value

Trees unsuitable for retention

Category U - Trees not for retention within the context of existing land use;

- Trees that are unviable due to serious, irremediable structural defect; early loss is expected due to collapse;
- Trees that are dead or showing signs of significant, immediate, irreversible decline;
- Trees infected with pathogens of significance to health and subsequent safety, and threat thereof to trees nearby;
- Trees of very low quality suppressing the development of those of greater quality;
- Trees that will become unviable after the removal of other trees for reasons above.

CSD – Combined Stem Diameter;

- Root Protection Areas calculated for multiple stemmed trees based upon a combined stem diameter in accordance with BS 5837:2012.

- The location and constraints of existing trees and vegetation within the survey site are illustrated within drawing; LLD1149/01 – Tree Constraints Plan.
- Tree retention and protection measures are illustrated in; LLD1149/02 Tree Retention and Protection Plan.
- For guidance of the retention and protection of trees refer to; LLD1149 Arboricultural Impact Assessment.

Tree Inspection – Explanation Key

Tree Ref No. – A unique number identifying each tree on an accompanying site plan.

Species – Tree Species – Recorded as a common and Latin name for species.

Height – Approximate tree height above ground level expressed in metres.

(Groups of trees will be surveyed with the average height given. Where accurate heights are required these can be obtained with optical instruments.)

SD – Stem Diameter

The tree trunk stem diameter measured at 1.5 m above ground level in millimetres.

(On sloping ground this is 1.5 m above ground level. Where two or more stems are present below 1.5 m the tree will be surveyed immediately above the root flare.)

Crown Spread

The approximate extent of the spread of branches in the crown taken from the tree trunk to outer edge of general crown of individual trees or the canopy spread of the multiple trees and groups.

Measured along the four cardinal points, to derive an accurate representation of the dimensions.

(The figure is the distance of the general crown line. In certain cases an exceptional or etiolated branch may extend beyond the stand figure.)

Life Stage

	Life Stage	Definitions
Y	Young	Recently planted or established tree that could be transplanted with the correct equipment
E/M	Early-mature	An established tree, but with some growth to make before reaching its potential maximum size. A tree within its first third of life span.
S/M	Semi-mature	A tree reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread. A tree in its second third of life span.
M	Mature	A mature specimen with limited potential for any significant increase in size, even if healthy. A tree within its final third of life span.
O/M	Over-mature	A senescent (<i>declining/degradation</i>) or moribund specimen of low vigour within its final third of expected life span. Possibly containing sufficient structural defects with safety and/or duty of care implications.
V	Veteran	Specimen exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individual surviving beyond the typical age range for the specimen concerned.
D	Dead	The tree is dead and cannot be clarified as a veteran tree. Its age up till death is of no significance.

Physiological Condition

	Condition	Definition
G	Good	Generally in good health typical of the species needing little, if any attention. Few minor defects of little overall significance such as physical damage or suppressed branches. Showing no adverse risk of failure/defects.
F	Fair	A tree or trees of minor but rectifiable defects or in the early stages of stress, from which it may recover. Showing minor signs of deterioration. This could include a major defect in its early life stage, or multiple minor defects. A tree that may require work to remove or improve a defect.
P	Poor	A tree or trees with major structural and physiological defects or stressed such that it would be a risk to retain in its current or future known situation. Unlikely to return to a good condition given time or remedial work.
D	Dead	A tree or trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or are becoming or have become dangerous.

Structural Condition

The structural condition is defined by the presence of any decay pathogens and/or physical defects and problems following inspection of the root and buttress area, trunk, branches, both primary and secondary and crown including twigs, leaves and buds.

Recommendations (*Remedial Action*)

In order to identify priorities and assist in tree management recommended works are categorized according to the perceived level of urgency that the recommended treatment requires.

Prioritisation considers:

- Significance of any identified defect such as the presence of any decay and/or physical defect based on root and buttress area, trunk, scaffold limbs and crown
- Tree size, or tree part considered likely to fail.
- Nature of target area vulnerable to direct impact from tree or part, considered likely to fail and apparent frequency of target area usage.
- Apparent imminence of failure of the identified tree or part

Included are any recommendations for further investigation of suspected defects that require more detailed assessment, decay deflection, ivy removal and other obstruction or potential for wildlife habitat.

Arboricultural works are specified and should be carried out in accordance within the guidelines of the British Standard **BS3998: 2010 'Recommendations for Tree Works'**

Work Priority

Based on the collection of data above, the management recommendations are categorised by priority in accordance with the below table.

Category	Priority	Response
A	Urgent	Within 24 hours
B	Very High	Within 30 days
C	High	Within 6 months
D	Moderate	Within 12 months
E	Low	Work to be carried out as and when at the owners/managers discretion

Inspection Frequency

A period of time specified in months and/or years that this tree should undergo a full and detailed inspection as could also be determined in the above recommendations and work priority.

Dead wood

Dead wood	Definition / Size
Minor	Material up to 2.5 cm in diameter.
Moderate	Dead wood 2.5 cm to 10 cm in diameter.
Major	Dead wood 10 cm in diameter and above.

Target - (*Definition of risk (Target either people, vehicles and/or property)*)

Risk	People	Property	Vehicular
Very High	36 per hour - Constant	£200,000 > or inhabited	Major trunk roads, built up area
High	10 – 100 per hour	£50,000 - £200,000	Principle rd, non built up area
Medium	1 – 10 per hour	£10,000 - £50,000	Minor road moderate use
Low	< 1 per hour	£2,000 - £10,000	Minor road low use
Very Low	< 1 per day	£100 - £2,000	Private roads and tracks
Unlikely	< 1 per week	£10 - £100	None

(Risks can alter depending on variables which need to be taken into consideration at the time of inspection)

Appendix C Tree Protective Fencing Detail (from BS5837:2012)

Figure 2 Default specification for protective barrier

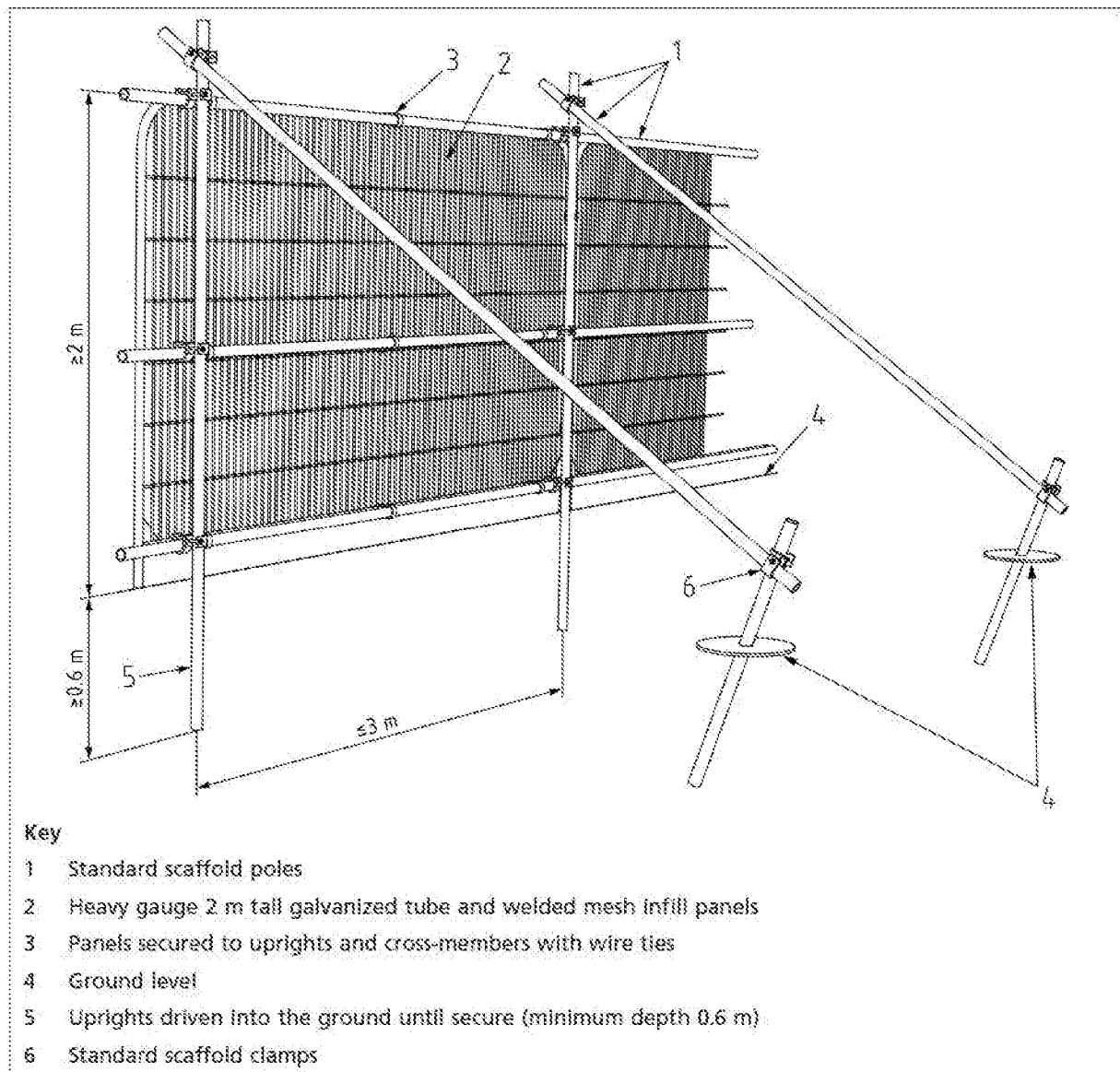
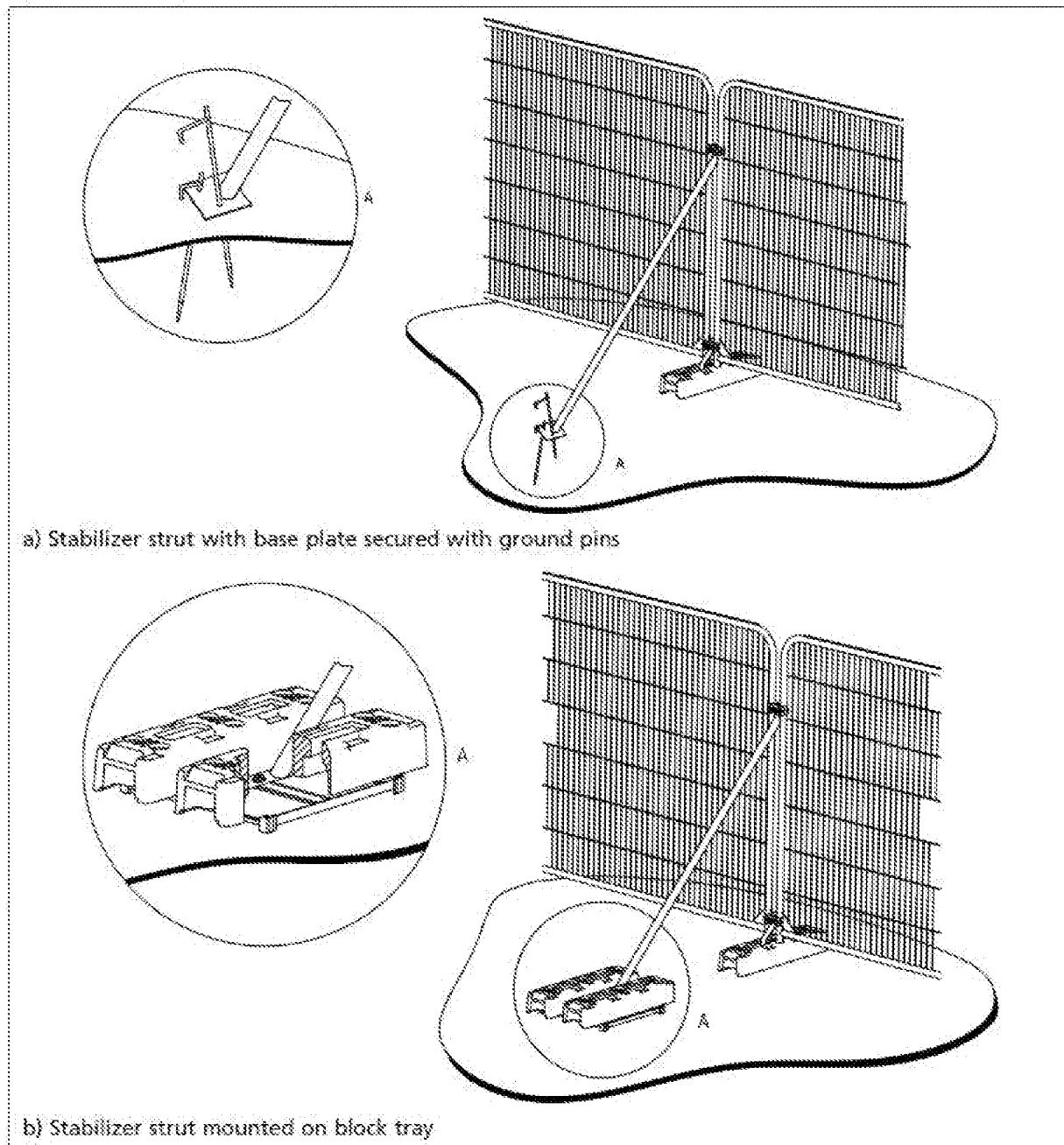


Figure 3 Examples of above-ground stabilizing systems



Appendix D

1.0 Glossary of Terms & Abbreviations

Canker	Disease damaged area of a tree, usually caused by fungus or bacteria.
Co-dominant Stem	A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.
Crown Lift	The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduce	The reduction of a tree's height or spread while preserving its natural shape.
Crown thin	The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood	The removal of all dead, dying and diseased branches from a tree. Also, wood which is dead.
Dieback	Where branches are beginning to show signs of death usually at the tips in the crown.
Epicormic shoots	Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor.
Formative pruning	The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown.
Included bark	Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.
Pollarding	A method of tree management in which the main trunk of the tree is cut at about 4m, and the resulting branches are then cropped on a regular basis.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.
Topping	Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree.

2.0 General Guidelines

- 2.1 All work must be to BS 3998:2010 – Tree work-Recommendations
- 2.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and should be covered by adequate public liability insurance.
- 2.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.
- 2.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of the designated arboriculturist.
- 2.5 It is advisable to have trees inspected by designated arboriculturist regularly. On this site it is recommended that these inspections are made every year.

Appendix E

No Dig' Construction-Guidance Notes

- ¿ Install F4M Geotextile Separation Fabric over cleared levelled ground surface N.B. ensure that existing material is carefully removed and levels altered minimally: infill with salt free sharp sand where necessary.
- ¿ The cellular confinement system (e.g.1 x 100 mm 'ProtectaWeb' (or equivalent) cellular confinement system subject to site requirements & manufacturer's recommendations) is then laid on the membrane and adjacent panels are stapled together. Place staking pins to maintain 'ProtectaWeb' cells open.
- ¿ Panels are then backfilled with 100mm depth of no-fines 20-40mm particle size stone (clean granular fill).
- ¿ The construction should ideally be undertaken between May and October when the ground is sufficiently dry to prevent compaction occurring. The sub-base should be flat, that is to say any small hollows should be filled with sharp sand to bring up to surrounding levels.
- ¿ The geotextile should be laid out and not trafficked across at any time.
- ¿ The 'ProtectaWeb' confinement system should be laid out and worked on as the contractor progresses across the length of the area. The panels are sequentially filled with the no-fines aggregate, each serving as a platform for the next section.
- ¿ There is no need at any time for the ground to be crossed by heavy traffic. The particles/ gravel pieces are transported from the on site storage area over the freshly-laid confinement system BY WHEELBARROW and installed BY HAND. There will be no trespass on to the root protection area beyond the installation of the confinement system itself.
- ¿ The infill can then be rolled to compact the particles and create a tight interlock across the cells. The finished surface can then be laid on top. Again no fines material to be used: porous tarmac is recommended for this site given the level changes that are required.
- ¿ New kerb lines may be cast into the ProtectaWeb cells.
- ¿ During the main construction phase a wearing course should be placed over the 'Protectaweb' system.
- ¿ For technical data on the ProtectaWeb system always refer to the manufactures guidelines for design and implementation.

Further technical advice can be gained from the manufacturer(s) including Wrekin Products, Geosynthetics or Core LP.