CARLYLE LAND



Land south and east of Adastral Park

Suffolk





Arboricultural Impact Assessment

Land South and East of Adastral Park On Behalf of: CEG



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Reviewer	CC
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Summary

An arboricultural survey has been carried out, and this report prepared to support an Outline application for up to 2,000 dwellings, an employment area of c0.6ha (use Class B1), primary local centre (comprising use Classes A1, A2, A3, A4, A5, B1, C3, D1 and D2), secondary centre (comprising possible use Classes A1, A3 and A5), a school, green infrastructure (including Suitable Accessible Natural Green Space (SANGS), outdoor play areas, sports ground and allotments/community orchards), public footpaths and cycleways, vehicle accesses and associated infrastructure for the site Land south and east of Adastral Park.

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*.

1 tree (T200), 3 tree group sections (G17, G85, G89) of moderate quality and value, 4 trees of low quality and value (T10, T198, T201 & T202) and 6 tree groups of low quality and value (G1, G2, G7, G84 section, G191 section, G194 section) may require removal to accommodate the proposed development layout.

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

Southern Ecological Solutions Ltd has been instructed to produce an Arboricultural Impact Assessment for an Outline application for up to 2,000 dwellings, an employment area of c0.6ha (use Class B1), primary local centre (comprising use Classes A1, A2, A3, A4, A5, B1, C3, D1 and D2), secondary centre (comprising possible use Classes A1, A3 and A5), a school, green infrastructure (including Suitable Accessible Natural Green Space (SANGS), outdoor play areas, sports ground and allotments/community orchards), public footpaths and cycleways, vehicle accesses and associated infrastructure for the site Land south and east of Adastral Park. 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 for an Outline application for up to 2,000 dwellings, an employment area of c0.6ha (use Class B1), primary local centre (comprising use Classes A1, A2, A3, A4, A5, B1, C3, D1 and D2), secondary centre (comprising possible use Classes A1, A3 and A5), a school, green infrastructure (including Suitable Accessible Natural Green Space (SANGS), outdoor play areas, sports ground and allotments/community orchards), public footpaths and cycleways, vehicle accesses and associated infrastructure for the site Land south and east of Adastral Park.

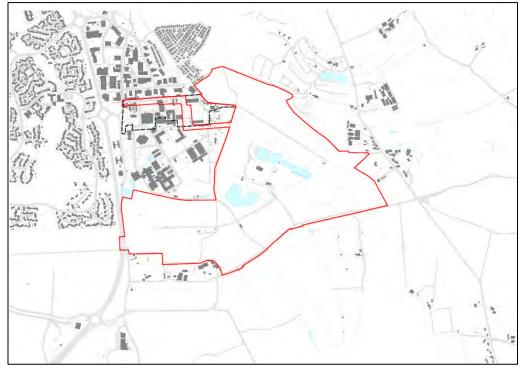


Image 1: Extent of proposed works.

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 search undertaken with the Suffolk Coastal District Council's website identified that none of the trees are the subject of Tree Preservation Orders (TPOs) and the site is not part of a local Conservation Area (CA).

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

The site visits were undertaken from the 10th to the 18th January 2017 by Southern Ecological Solutions Ltd. The weather was overcast but dry.

2.2 Site description

The proposal site comprised of a number of arable fields and a large section of the site was being quarried with the materials stored throughout different locations. The majority of the tree cover formed tree groups which were positioned along and beyond the boundaries of the site with the centre of the site presenting limited tree cover.

2.3 The subject trees

A total of one hundred and thirty three individual trees, ninety five tree groups, eleven hedgerows and two woodlands were identified as the subject of this report. These comprised a range of arboricultural values from low to high, and 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

- 2.4.1 A range of tree cover was found throughout the site with the high value trees that were found positioned beyond the northern boundary of the site and along Newbourne road to the south. The majority of the tree cover formed groups which provided natural barriers between the site and the surrounding area.
- 2.4.2 Spratts wood was situated to the north of the site and presented a native mix of species. The woodland was considered to be of high arboricultural value and ecological value to the site and the surrounding area. Observed were large piles of green waste which could lead to the compaction of the soil in the woodland and could result in damaging the roots of the trees throughout the woodland. The woodland was found to contain scheduled monuments the appreciation of which is damaged by the green waste mounding.
- 2.4.3 The Scheduled Monuments are also at risk of harm if trees that are growing on top of the monument are uprooted by high winds. In response to a pre-application request from Historic England the trees growing on and around the scheduled monument will be felled. It is anticipated that the identification of the trees to be removed and the methodology for doing this will be agreed via a planning condition, but it is likely it will involve felling the trees and leaving the roots to rot in situ without digging them out. This would require Scheduled Monument Consent.
- 2.4.4 Many of the trees found along Newbourne road were seen to be in good condition and form and were considered to be of high arboricultural value. These trees lined the road and were a feature of the local landscape as they were surrounded predominantly by arable farm land.
- 2.4.5 To the south of the site and along Newbourne road were a number of large established tree groups. These groups provided natural barriers between the site and the surrounding area and were considered to be predominantly of moderate arboricultural value.

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 3 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.

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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.

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.

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

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 1 tree of moderate quality and value (T200) 4 trees of low quality and value (T10, T198, T201 & T202) and 4 tree groups of low quality and value (G1, G2, G7 & a section of G84) may require removal to accommodate the proposals. As this is an outline application it is unclear whether these trees will be required to be removed as it may be possible to incorporate them into the design at the detailed design stage as part of public open spaces/ residential gardens. It is also proposed to remove trees growing on the Scheduled Monument in Spratt's Plantation as heritage mitigation; it is anticipated that the trees would be identified via planning condition and these works will require Scheduled Monument Consent.

3.5 Trees to be pruned

Opportunities for remedial pruning works to trees on site may be appropriate to ensure the trees are suitable for future retention and able to be incorporated into the future design. Spratts wood (W82) contained large amounts of green waste which was thought to be fly tipped there. The removal of this waste would be beneficial to the surrounding trees as the material could cause compaction to the ground over a long period of time and damage the trees roots. Spratts wood contained a scheduled monument the appreciation of which is damaged by the green waste mounding. All tree pruning/felling work to facilitate the development can be found at appendix 2 and 7. The woodland would also benefit from a woodland management plan to increase the woodlands longevity and maintain its importance to the local area.

3.6 Root protection area incursions

At this stage there will not be any RPA incursions but this should be reviewed at the detailed stage to determine the true extent of the developable parcels.

3.7 Protection of retained trees

Protective barrier fencing will be required for all tree cover that is suitable for retention.

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 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 5 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.

4.5 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 (<u>Directory of Tree Surgeons - Arboricultural Association</u>). The main contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority regarding planning constraints in regards to trees, and that no protected species or habitats are harmed whilst carrying out site clearance or tree surgery works.

5.0 Conclusions

- A range of tree cover was found throughout the site with the high value trees that were found positioned beyond the northern boundary of the site and along Newbourne road to the south. The majority of the tree cover formed groups which provided natural barriers between the site and the surrounding area.
- 5.2 Spratts wood was situated to the north of the site and presented a rich native mix of species. The woodland was considered to be of high arboricultural value and ecological value to the site and the surrounding area. Observed were large piles of green waste which could cause compaction of the soil in the woodland and result in damaging the roots of the trees throughout the woodland. The woodland was found to contain a scheduled monument the appreciation of which is damaged by the green waste mounding. Therefore, Historic England should be consulted before the removal of this waste is undertaken.
- 5.3 With the proposed design layout provided by the client it is indicated that 1 tree of moderate quality and value (T200) 4 trees of low quality and value (T10, T198, T201 & T202) and 4 tree groups of low quality and value (G1, G2, G7 & a section of G84) may require removal to accommodate the proposals. As this is an outline application then it is unclear whether these trees will be required to be removed as it may be possible to incorporate them into the design at the detailed design stage.
- In order to reduce the risk of damage to the schedule monument it is proposed that the trees that are growing on the scheduled monument are felled in order to prevent potential damage if the trees are uprooted by high winds. It is anticipated that these trees will be identified via planning condition. Scheduled Monument Consent will be required for the works.
- 5.5 The majority of trees are located outside the development therefore will not be greatly affected by the proposed development. Development provides the opportunity to increase the sites overall tree stock through structured new tree planting which can reinforce existing areas of tree cover.

6.0 Recommendations

- 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 3).
- 6.2 With the proposed design layout provided by the client it is indicated that 1 tree of moderate quality and value (T200) 4 trees of low quality and value (T10, T198, T201 & T202) and 4 tree groups of low quality and value (G1, G2, G7 & a section of G84) may require removal to accommodate the proposals. As this is an outline application then it is unclear whether these trees will be required to be removed as it may be possible to incorporate them into the design at the detailed design stage.
- Opportunities for remedial pruning works to trees on site may be appropriate to ensure the trees are suitable for future retention and able to be incorporated into the future design. Spratts wood (W82) contained large amounts of green waste which was thought to be fly tipped there. The removal of this waste would be beneficial to the surrounding trees as the material could cause compaction to the ground over a long period of time and damage the trees roots. This wood also contained a scheduled monument the appreciation of which is damaged by the green waste mounding. All tree pruning/felling work to facilitate the development can be found at appendix 2 and 7. The woodland would also benefit from a woodland management plan to increase the woodlands longevity and maintain its importance to the local area.
- 6.4 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.
- 6.5 If the recommendations made within this report are followed this scheme should be achievable in arboricultural terms and should be broadly 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. This data was used for the tree survey, so the positions of the trees were 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. With the exception of the trees in the North West corner of the site which were plotted by hand.
- 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 Contact

Name	Company/organisation	Tel. no.
Adam Dayman	Southern Ecological Solutions Ltd	01268 711021

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;
- DETR Tree Preservation Orders A Guide to the Law and Good Practice;
- 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.

1.4 Legal Constraints and Liabilities

- 1.4.1 **Tree Preservations Orders/ Conservation Areas:** A search undertaken with the Suffolk Coastal District Council's website identified that none of the trees are the subject of Tree Preservation Orders (TPOs) and the site is not part of a local Conservation Area (CA).
- 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 - Tree Survey Sheets

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CEG

Tree Survey Schedule - Key To Terms

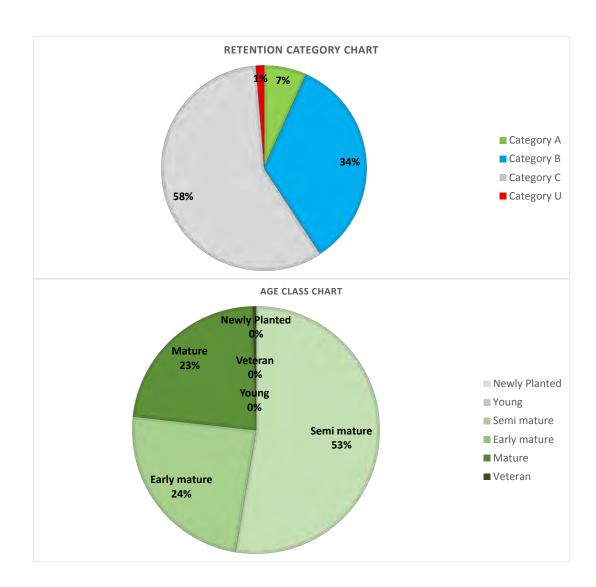
Age Classification	Description
NP	Newly planted
Y (Young)	An establishing tree that could be easily transplanted.
SM (Semi Mature)	An established tree still to reach its ultimate height and spread and with considerable growth potential.
EM (Early Mature)	A tree reaching its ultimate height and whose growth is slowing however it will still increase considerably in stem diameter and crowr 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 ol great ecological, cultural or aesthetic value.

Abbreviation	Description
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 multistemmed trees or trees with low forks or irregular stems.
Stems	Numbers of stems or M/S = multi-stemmed.
Crown clear	Height of first significant branch above ground level and direction of growth.
Crown Spread NSEW	Crown spread at the four cardinal points. Ø = average crown radius.
Condition	G = good; F = fair; P = poor; D = dead
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 m² 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 fo purpose to ensure the successful long-term retention of a tree.

BS Category	Description
А	High quality and value (non-fiscal) with at least 40 years remaining life expectancy.
В	Moderate quality and value with at least 20 years remaining life expectancy.
с	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.

Retention	
Category	Total
Category A	16
Category B	81
Category C	138
Category U	3
	238

Age Class	Total
Newly Planted	0
Young	0
Semi mature	127
Early mature	58
Mature	55
Veteran	1
	241



Tree Survey Schedule

Client: CEG Site Name: Adastral Park Surveyed By: Adam Dayman Date: 18/01/2017

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		-	
SOUTH	BOLUTION	OGICAL	

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span C (Years)		Radii Single Stem	RPA
nei ito:	species	2.5	(,	N	Е	S	W	Age	Condition	Comments	Tree Work	(100.5)		Stem	
G1	Silver Birch (Betula pendula).	150	7	1	1	1	1	SM	Fair	Dense undergrowth. Interlocking crowns. Unable to gain access in centre of large pond	No work required.	10+	C1	1.8	10
G2	Silver Birch (Betula pendula). Crack Willow (Salix fragilis).	350	8	4	4	4	4	EM	Fair	Dense undergrowth. Interlocking crowns. Trees between quarry silt ponds	No work required.	10+	C1	5.9	111
G3	Silver Birch (Betula pendula).	250	10	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Crossing and rubbing branches. Dense undergrowth at base. Interlocking crowns. Linear tree group. Adjacent to silt pond	No work required.	10+	C1	3.0	28
G4	English Oak (Quercus robur). Silver Birch (Betula pendula).	150	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood throughout crown.	No work required.	10+	C1	1.8	10
G5	Silver Birch (Betula pendula).	250	8	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Interlocking crowns. Linear tree group.	No work required.	10+	C1	3.0	28
G6	English Oak (Quercus robur). Silver Birch (Betula pendula).	100	4	1	1	1	1	SM	Fair	Dense undergrowth. Interlocking crowns. Linear tree group. Large bank with self set scrub gorse and other species throughout	No work required.	10+	C1	1.2	5
G 7	Sessile Oak (Quercus petraea).	160	4	1.5	1.5	1.5	1.5	SM	Fair	Linear tree group. Planted standards along arable field boundary with no obvious major defects.	No work required.	10+	C1	1.9	12
G8	Scots Pine (Pinus sylvestris).	250	8	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Interlocking crowns.	No work required.	20+	C2	3.0	28
G9	English Oak (Quercus robur). Silver Birch (Betula pendula). Scots Pine (Pinus sylvestris).	150	5	1	1	1	1	SM	Fair	Dense undergrowth. Interlocking crowns. Linear tree group. Hardy self set shrubs on side of bank	No work required.	10+	C1	1.8	10
T10	English Oak (Quercus robur).	180	4	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Included union.	No work required.	10+	C1	3.1	29
G11	English Oak (Quercus robur).	340	7	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Interlocking crowns. Unbalanced crown shape.	No work required.	10+	C2	5.8	105

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
nei noi	Species	1.5	(,	N	Е	S	W	Age	Condition	Comments	Tree Work	(10013)		Secili	
G12	Field Maple (Acer campestre).	150	7	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	10+	C2	2.5	20
T13	English Oak (Quercus robur).	400	8	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Major deadwood observed. Situated offsite.	No work required.	20+	C2	4.8	72
			9	4	4	4	4			Typical crown form with no obvious major defects. Major deadwood observed. Dense undergrowth at base. Situated offsite. Tree situated on boundary line.					
T14	Sycamore (Acer pseudoplatanus).	370	9	4	4	4	4	EM	Fair	on boundary line.	No work required.	20+	C1	4.4	62
G15	Elder (Sambucus nigra). Field Maple (Acer campestre)	120	5	1	1	1	1	SM	Poor	Dense undergrowth at base. Multi stemmed from base. Minor deadwood observed.	No work required.	<10	C1	1.4	7
G16	Scots Pine (Pinus sylvestris).	370	12	3	3	3	3	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	B2	4.4	62
G17	Scots Pine (Pinus sylvestris).	370	12	3	3	3	3	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	B2	4.4	62
G18	Blackthorn (Prunus spinosa). Field Maple (Acer campestre).	250	7	2.5	2.5	2.5	2.5	EM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	10+	C2	4.3	57
T19	Silver Birch (Betula pendula).	150	7	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed.	No work required.	10+	C1	1.8	10
G20	Silver Birch (Betula pendula). Field Maple (Acer campestre). White Poplar (Populus alba). Scots Pine (Pinus sylvestris).	180	6	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Interlocking crowns. Open even crown.	No work required.	40+	C2	2.2	15
T21	White Poplar (Populus alba).	240	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Dense undergrowth at base. Minor deadwood observed.	No work required.	20+	C1	4.1	52
T22	Scots Pine (Pinus sylvestris).	270	7	2.5	2.5	2.5	2.5	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed.	No work required.	20+	C1	3.2	33
T23	White Poplar (Populus alba).	260	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Minor deadwood observed. Dense undergrowth. Leaning South.	No work required.	10+	C1	4.4	61
G24	White Poplar (Populus alba).	100	4	1	1	1	1	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth. Linear tree group.	No work required.	10+	C1	1.2	5

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread	w		6 III.	Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
				N	E	5	VV	Age	Condition		Tree Work				
T25	Scots Pine (Pinus sylvestris).	280	6	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown.	No work required.	10+	C1	3.4	35
	English Oak (Quercus robur).						_			Co dominant from base. Crossing and rubbing branches. Major					
T26	Sweet Chestnut (Castanea sativa).	830	12	8	8	8	8	М	Fair	deadwood observed. Low crown. Open even crown. Included union.	No work required.	20+	B1	14.1	624
G27	English Oak (Quercus robur). Silver Birch (Betula pendula).	500	10	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Major deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Included union. Situated offsite. Open even crown.	No work required.	20+	B2	6.0	113
G28	Silver Birch (Betula pendula).	330	10	3	3	3	3	EM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Crossing and rubbing branches. Multi stemmed from base. Minor deadwood observed. Open even crown. Interlocking crowns.	No work required.	20+	B2	5.6	99
	English Oak (Quercus robur).	500								Typical crown form with no obvious major defects. Minor deadwood observed. Major deadwood observed. Low crown. Open even crown.		20			153
G29	Silver Birch (Betula pendula).	600	10	6	6	6	6	EM	Fair	Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	B2	7.2	163
G30	English Oak (Quercus robur).	600	10	5	5	5	5	EM	Fair	Dense undergrowth at base. Dense ivy on main stem. Unable to inspect stem due to dense ivy. Minor deadwood observed. Major deadwood observed.	No work required.	20+	C2	7.2	163
T31	English Oak (Quercus robur).	680	12	9	9	9	9	EM	Good	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Situated offsite.	No work required.	40+	A1	8.2	209
		200								Typical crown form with no obvious major defects. Multi stemmed				0.0	
T32	Crack Willow (Salix fragilis).	300	9	4	4	4	4	SM	Fair	from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	10+	C2	8.8	244
G33	Crack Willow (Salix fragilis).	180	6	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Minor deadwood observed.	No work required.	10+	C1	3.1	29
	Leyland Cyp									Typical crown form with no obvious major defects. Dense					
T34	(X Cupressocyparis leylandii).	350	9	3	3	3	3	EM	Fair	undergrowth at base. Major deadwood observed. Low crown.	No work required.	10+	C2	7.3	166
G35	Crack Willow (Salix fragilis). Field Maple (Acer campestre).	200	6	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Multi stemmed from base. Low crown. Trees positioned around pond.	No work required.	10+	C1	3.4	36
355							-10	2	. 201	parameter and points			31		
G36	Blackthorn (Prunus spinosa).	150	4	1	1	1	1	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth. Interlocking crowns.	No work required.	10+	C1	1.8	10
T37	Weeping Willow (Salix X chrysocoma).	700	12	6	6	6	6	М	Fair	Broken branches in crown. Co dominant from base. Major deadwood observed. Dense undergrowth at base. Included bark present in fork. Unbalanced crown shape. Trees positioned around pond.	No work required.	20+	B2	11.9	443

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
			` '	N	Е	S	W	Age	Condition		Tree Work	, , , , , , , , , , , , , , , , , , ,			
Т38	Silver Birch (Betula pendula).	330	10	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Minor deadwood observed.	No work required.	20+	B2	6.9	148
130	Silver Birch (betala pendula).	330	10	,	,	,	,	LIVI	Tall	Hoffi base. Willion deadwood observed.	No work required.	201	DZ.	0.5	140
T39	Crack Willow (Salix fragilis).	680	12	10	10	10	10	M	Good	Crossing and rubbing branches. Multi stemmed from base. Major deadwood observed. Low crown. Open even crown. Interlocking crowns. Dense undergrowth at base.	No work required.	20+	B1	15.0	707
G40	Lawson Cypress (Chamaecyparis lawsoniana).	550	14	3	3	3	3	М	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Linear tree group. Dense undergrowth at base. Buffer screen around quarry to surrounding area.	No work required.	20+	B2	6.6	137
	(11111)														
G41	English Oak (Quercus robur). Silver Birch (Betula pendula). Crack Willow (Salix fragilis).	500	15	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Low crown. Open even crown. Unable to inspect in full due to proximity to open water.	No work required.	20+	B2	6.0	113
H42	Beech (Fagus sylvatica). Blackthorn (Prunus spinosa). Hazel (Corylus avellana).	75	2	0.5	0.5	0.5	0.5	SM	Fair	Unmaintained hedgerow. Field boundary hedgerow. Dense undergrowth at base. Dense brambles throughout.	No work required.	10+	C2	0.9	3
G43	Silver Birch (Betula pendula). Sycamore (Acer pseudoplatanus). Leyland Cyp (X Cupressocyparis leylandii).	300	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	B2	3.6	41
043	cyp (x cupressocypans leylandil).	300	0	3	3	3	3	SIVI	raii	tree group. Situated offsite.	No work required.	20+	DZ.	3.0	41
H44	Beech (Fagus sylvatica). Hazel (Corylus avellana).	75	1.5	0.5	0.5	0.5	0.5	SM	Fair	Unmaintained hedgerow. Field boundary hedgerow. Dense undergrowth at base.	Reinforce hedgerow with new structured planting.	10+	C2	0.9	3
T45	English Oak (Quercus robur).	860	9	6	6	6	6	EM	Fair	Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Low crown. Open even crown. Situated offsite.	Sever ivy.	20+	B1	10.3	335
CAS	English Oak (Quercus robur).	490	10	6	6			SNA.	Foir	Broken branches in crown. Crossing and rubbing branches. Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Low crown. Open even crown. Interlocking crowns. Situated offsite. Tree situated on boundary line.	Councille	20.	n a	5.8	104
G46	English Oak (Quercus robur).	480	10	0	6	6	6	SM	Fair	onsite. Tree situated on boundary line.	Sever ivy.	20+	B2	5.8	104
H47	Lawson Cypress (Chamaecyparis lawsoniana).	250	5	1	1	1	1	EM	Fair	Typical crown form with no obvious major defects. Maintained hedgerow. Dense undergrowth at base.	No work required.	20+	C2	3.0	28
T48	English Oak (Quercus robur).	710	12	8	8	8	8	SM	Good	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Situated offsite. Good vitality and vigour. branch stubs observed. landscape value	No work required.	40+	B1,B2	8.5	228
T49	English Oak (Quercus robur).	500	8	5	5	5	5	SM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. Situated offsite.	No work required.	20+	B1	6.0	113
T50	English Oak (Quercus robur).	350	7	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Situated offsite.	No work required.	20+	C1	4.2	55

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
	·		` '	N	Е	S	W	Age	Condition		Tree Work	, , , , , , , , , , , , , , , , , , ,			
T51	English Oak (Quercus robur).	490	10	5	6	6	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. Situated offsite. Unbalanced crown shape. Broken branches in crown. Light ivy coverage on main stem. Minor	No work required.	20+	C1	5.9	109
T52	English Oak (Quercus robur).	1330	15	10	10	10	10	М	Fair	deadwood observed. Major deadwood observed. Low crown. Open even crown. Situated offsite. Ivy has been severed in the past. Peeling bark observed.	No work required.	40+	A1	15.0	707
T53	English Oak (Quercus robur).	400	8	5	5	5	5	SM	Fair	Major deadwood observed. Low crown. Poor shape & form. Situated offsite.	No work required.	20+	C1	4.8	72
T54	English Oak (Quercus robur).	770	13	8	8	8	8	EM	Good	Typical crown form with no obvious major defects. Broken branches in crown. Crossing and rubbing branches. Major deadwood observed. Open even crown. Situated offsite. Peeling bark on deadwood	No work required.	20+	B1	9.2	268
T55	English Oak (Quercus robur).	850	12	10	10	10	10	м	Good	Typical crown form with no obvious major defects. Light ivy coverage on main stem. Major deadwood observed. Open even crown. Dense undergrowth at base. Situated offsite. Large crown. Branch socket cavities	No work required.	40+	A1	10.2	327
T56	English Oak (Quercus robur).	850	15	10	10	10	10	М	Good	Typical crown form with no obvious major defects. Broken branches in crown. Crossing and rubbing branches. Light ivy coverage on main stem. Major deadwood observed. Open even crown. Situated offsite. Branch socket cavities presenting ecological features	No work required.	40+	A1,A3	10.2	327
T57	English Oak (Quercus robur).	950	13	8	8	8	8	М	Fair	Basal cavity. Light ivy coverage on main stem. Major deadwood observed. Low crown. Open even crown. Dense undergrowth at base. Exposed heartwood. Interlocking crowns. Situated offsite. Large cavity at base.	Monitor.	20+	В3	11.4	408
T58	English Oak (Quercus robur).	850	14	8	5	8	8	М	Fair	Typical crown form with no obvious major defects. Light ivy coverage on main stem. Major deadwood observed. Unbalanced crown shape. Torn limbs in crown	No work required.	20+	B1	10.2	327
T59	English Oak (Quercus robur).	850	14	8	8	8	8	М	Fair	Typical crown form with no obvious major defects. Light ivy coverage on main stem. Major deadwood observed. Low crown. Open even crown. Situated offsite. Torn limbs in crown. Branch socket cavities throughout.	No work required.	20+	B1	10.2	327
G60	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Holly (Ilex aquifolium). Scots Pine (Pinus sylvestris).	500	12	7	7	7	7	EM	Fair	Broken branches in crown. Crossing and rubbing branches. Dense ivy on main stem. Major deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite. Large established boundary group presenting landscape and ecological value with established understory.	No work required.	20+	B2,B3	6.0	113
G61	Ash (Fraxinus excelsior). English Oak (Quercus robur). Holly (Ilex aquifolium). Scots Pine (Pinus sylvestris).	350	10	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	C2	4.2	55
G62	English Oak (Quercus robur). Holly (Ilex aquifolium).	500	12	7	7	7	7	EM	Fair	Broken branches in crown. Crossing and rubbing branches. Dense ivy on main stem. Major deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite. Large established boundary group presenting landscape value.	No work required.	20+	B2	6.0	113

Tree		Stem Ø (mm) at	Height		Crown	Spread						Est Life span	Grade	Radii Single	RPA
Ref No.	Species	1.5m	(m)		-	-			0 1711	Comments	·	(Years)		Stem	
Т63	English Oak (Quercus robur).	850	12	N 7	7	7	W 7	Age M	Condition	Broken branches in crown. Crossing and rubbing branches. Multi stemmed from base. Minor deadwood observed. Major deadwood observed. Low crown. Open even crown. Tree situated offsite with crown overhanging onto site. Cracks in deadwood presenting eco features	Tree Work No work required.	20+	B1	14.4	653
										Broken branches in crown. Crossing and rubbing branches. Major					
T64	English Oak (Quercus robur).	750	15	8	8	8	8	EM	Fair	deadwood observed. Open even crown. Situated offsite.	Remove large hanger	20+	B1	9.0	255
T65	Scots Pine (Pinus sylvestris).	450	13	4	4	4	4	EM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Situated offsite. Branch stubs observed.	No work required.	20+	B1	5.4	92
G66	Scots Pine (Pinus sylvestris).	350	9	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Major deadwood observed. Situated offsite.	No work required.	20+	C2	4.2	55
T67	English Oak (Quercus robur).	150	5	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. Situated offsite.	No work required.	10+	C1	1.8	10
										Typical crown form with no obvious major defects. Co dominant from base. Minor deadwood observed. Low crown. Open	·				
T68	English Oak (Quercus robur).	250	7	3	3	3	3	SM	Fair	even crown. Dense undergrowth at base.	No work required.	20+	C1	4.3	57
Т69	English Oak (Quercus robur).	160	5	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Low crown. Open even crown.	No work required.	10+	C1	1.9	12
H70	English Oak (Quercus robur). Blackthorn (Prunus spinosa). Hazel (Corylus avellana).	100	1.5	1	1	1	1	SM	Fair	Maintained hedgerow. No obvious major defects. Dense bramble throughout	No work required.	10+	C2	1.2	5
G71	English Oak (Quercus robur).	400	9	5	5	5	5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. Interlocking crowns. Situated offsite.	No work required.	20+	B1	4.8	72
G72	Ash (Fraxinus excelsior). English Oak (Quercus robur). Holly (Ilex aquifolium).	200	6	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Linear tree group. Situated offsite.	No work required.	10+	C2	2.4	18
T73	English Oak (Quercus robur).	300	5	2	4	4	2	SM	Fair	Low crown. Minor deadwood throughout crown. Unbalanced crown shape.	No work required.	10+	C1	3.6	41
T74	English Oak (Quercus robur).	400	8	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Low crown. Open even crown. Previously pollarded.	No work required.	10+	C1	4.8	72
G75	English Oak (Quercus robur).	450	10	5	5	5	5	SM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Low crown. Open even crown.	No work required.	20+	C2	5.4	92

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
Rei No.	Species	1.5111	(m)	N	Е	S	W	Age	Condition	Comments	Tree Work	(Teals)		Steili	
G76	English Oak (Quercus robur).	400	8	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Low crown. Open even crown. Typical crown form with no obvious major defects.	No work required.	10+	C2	4.8	72
	Faralish Oak (Occasion askers)	550	12	_	_	_	-	614	F-1-	Crossing and rubbing branches. Major deadwood observed. Open	No words as a visual	20.	D4		127
T77	English Oak (Quercus robur).	550	12	7	7	7	7	SM	Fair	even crown. Situated offsite. Pollarded in the past.	No work required.	20+	B1	6.6	137
G78	English Oak (Quercus robur).	400	9	4	4	4	4	SM	Fair	Minor deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group.	No work required.	20+	C2	4.8	72
T79	English Oak (Quercus robur).	1070	18	11	11	11	11	М	Good	Broken branches in crown. Major deadwood observed. Open even crown. Branch socket cavities, torn limbs and branches, eco features, large crown buttress roots at base, one of limbs has failed in past leaving exposed heartwood at base and possible internal cavity.	No work required.	40+	A1	12.8	518
T80	Sycamore (Acer pseudoplatanus).	710	16	5	5	5	5	М	Fair	Basal epicormic growth. Basal cavity. Broken branches in crown. Minor deadwood observed. previous pruning, longitudinal cavity observed in upper crown, reduced back over fence line.	Monitor.	20+	B1	8.5	228
T81	English Oak (Quercus robur).	1150	15	10	10	10	10	М	Fair	Crossing and rubbing branches. Major deadwood observed. Low crown. Open even crown. situated in woodland, ivy severed in past, large stubs left from previous pruning , cracks in dead	No work required.	40+	A1	13.8	598
W82	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Elder (Sambucus nigra). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus).	650	15	5	5	5	5	EM	Good	Broken branches in crown. Crossing and rubbing branches. Dense ivy on main stem. Multi stemmed from base. Minor deadwood observed. Major deadwood observed. Low crown. Buffer group between site and surrounding area. Dense undergrowth. Dead trees throughout. Interlocking crowns. Woodland block. Large piles of green waste situated in the southern section of the woodland which could cause compaction.	Green waste in the section of woodland should be removed to stop further compaction and damage to trees. soil amelioration may be required. archaeologists to be. consulted before works start. Woodland management plan recommended	40+	A3	7.8	191
T83	English Oak (Quercus robur).	180	6	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Co dominant from base. Included union.	No work required.	10+	C1	3.1	29
G84	Sessile Oak (Quercus petraea).	150	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. soil mounded around base which could cause damage to the roots	No work required.	10+	C1	1.8	10
G85	English Oak (Quercus robur). Elder (Sambucus nigra). Scots Pine (Pinus sylvestris).	400	14	3.5	3.5	3.5	3.5	EM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group. closely planted pine screen providing a natural barrier between the site and the road	No work required.	20+	B2	4.8	72
G86	English Oak (Quercus robur). Silver Birch (Betula pendula).	500	10	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Major deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Included union. Situated offsite. Open even crown.	No work required.	20+	B2	6.0	113

Tree		Stem Ø (mm) at	Height		Crown	Spread						Est Life span	Grade	Radii Single	RPA
Ref No.	Species	1.5m	(m)	N	F	S	w	Age	Condition	Comments	Tree Work	(Years)		Stem	
G87	Scots Pine (Pinus sylvestris).	500	15	5	5	5	5	M	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Situated offsite. Large trees presenting limited defects	No work required.	20+	B2	6.0	113
G88	Ash (Fraxinus excelsior). English Oak (Quercus robur). Silver Birch (Betula pendula). Scots Pine (Pinus sylvestris).	400	12	3.5	3.5	3.5	3.5	EM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Minor deadwood observed. Situated offsite. Broken branches in crown.	No work required.	20+	B2	4.8	72
G89	English Oak (Quercus robur). Silver Birch (Betula pendula). Elder (Sambucus nigra). Scots Pine (Pinus sylvestris).	400	12	3.5	3.5	3.5	3.5	EM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Situated offsite. some small piles of spoil around the bases of the trees.	Sever ivy.	20+	B2	4.8	72
G90	English Oak (Quercus robur).	200	6	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Crossing and rubbing branches. Minor deadwood observed. Low crown. Open even crown. Interlocking crowns.	No work required.	10+	C1	2.4	18
T91	English Oak (Quercus robur).	260	7	3	3	3	1	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood throughout crown. Unbalanced crown shape.	No work required.	20+	C1	3.1	31
T92	English Oak (Quercus robur).	380	9	4	4	4	1	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Low crown. Unbalanced crown shape.	No work required.	20+	C1	4.6	65
Т93	English Oak (Quercus robur).	180	7	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Minor deadwood observed. Low crown. Unbalanced crown shape.	No work required.	10+	C1	2.2	15
T94	Sweet Chestnut (Castanea sativa).	380	12	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown.	No work required.	20+	B1	4.6	65
Т95	Sweet Chestnut (Castanea sativa).	150	7	2	2	2	1	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Minor deadwood observed. Unbalanced crown shape.	No work required.	10+	C1	2.5	20
Т96	Silver Birch (Betula pendula).	250	10	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	4.3	57
Т97	Silver Birch (Betula pendula).	200	8	3	3	3	3	SM	Good	Typical crown form with no obvious major defects. Basal epicormic growth. Multi stemmed from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	3.4	36
Т98	Silver Birch (Betula pendula).	250	9	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Multi stemmed from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	5.2	85
Т99	Sessile Oak (Quercus petraea).	250	9	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Low crown. Open even crown.	No work required.	10+	C1	3.0	28

		Stem Ø										Est Life		Radii	
Tree Ref No.	Charles	(mm) at	Height		Crown	Spread				Comments		span (Years)	Grade	Single	RPA
Rei No.	Species	1.5m	(m)	N	Е	S	W	Age	Condition	Comments	Tree Work	(rears)		Stem	
H100	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	100	4	1	1	1	1	SM	Fair	Dense undergrowth at base. Intermittent hedgerow with gaps present throughout. dense bramble throughout	Reinforce hedgerow with new structured planting.	10+	C1	1.7	9
	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Blackthorn (Prunus spinosa). Elder (Sambucus nigra). Scots Pine	250	40		_	4	4			Minor deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Dense undergrowth.					
W101 G102	(Pinus sylvestris). Silver Birch (Betula pendula). Scots Pine (Pinus sylvestris).	250 350	10	5	5	5	5	SM EM	Fair Good	Interlocking crowns. Linear tree group. Situated offsite. Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Major deadwood observed. Open even crown. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group. Situated offsite.	No work required. No work required.	20+	B2 B2	4.3	57 55
T103	Sessile Oak (Quercus petraea).	350	8	5	5	5	5	EM	Fair	Crossing and rubbing branches. Minor deadwood observed. Typical crown form with no obvious major defects. Pollarded in the past. Open even crown.	No work required.	20+	C2	4.2	55
T104	Scots Pine (Pinus sylvestris).	600	18	6	6	6	6	М	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. Tree situated offsite with crown overhanging onto site. Branch stubs observed.	No work required.	40+	A1	7.2	163
T105	Scots Pine (Pinus sylvestris).	600	18	6	6	6	6	М	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. Tree situated offsite with crown overhanging onto site. Branch stubs observed.	No work required.	40+	A1	7.2	163
T106	Sweet Chestnut (Castanea sativa).	550	12	6	6	6	6	EM	Fair	Broken branches in crown. Co dominant from base. Minor deadwood observed. Open even crown. Tree situated offsite with crown overhanging onto site.	No work required.	20+	B1	9.3	274
T107	Hybrid black poplar (Populus x canadensis).	780	18	5	5	5	5	М	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Dieback in crown. Minor deadwood observed. Major deadwood observed. Open even crown. Included union.	No work required.	20+	B1	9.4	275
T108	Hybrid black poplar (Populus x canadensis).	650	16	5	5	5	5	М	Fair	Broken branches in crown. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Open even crown. Leaning East into adjacent trees crown.	No work required.	20+	B2	7.8	191
T109	Hybrid black poplar (Populus x canadensis).	340	12	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Low crown. Adjacent to quarry track.	No work required.	20+	C2	7.1	157
G110	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). English Elm (Ulmus procera).	300	10	4	4	4	4	EM	Poor	Dense ivy on main stem. Dead elms observed. Dead trees throughout. Interlocking crowns. Linear tree group. Outgrown hedgerow with dead elms throughout.	Reinforce hedgerow with new structured planting.	10+	C2	5.1	81
T111	English Elm (Ulmus procera).	980	14	4	4	4	4	М	Fair	Basal epicormic growth. Longitudinal cavity on main stem. Minor deadwood observed. Major deadwood observed. Reduced back over field, nesting material in stem cavity at 3m, branch socket cavities observed.	No work required.	20+	В3	11.8	435
T112	English Oak (Quercus robur).	460	14	6	6	6	6	М	Fair	Basal epicormic growth. Multi stemmed from base. Minor deadwood observed. Major deadwood observed. Open even crown. Included union. Coppiced in the past. Four stems with included unions	No work required.	20+	В3	11.0	383

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
Rei No.	species	1.5111	(m)	N	Е	S	W	Age	Condition	Comments	Tree Work	(rears)		Stem	
T113	English Oak (Quercus robur).	380	9	5	5	5	5	SM	Good	Typical crown form with no obvious major defects. Dense ivy on main stem. Minor deadwood observed. Open even crown. On grass verge adjacent to road	Sever ivy.	20+	C2	4.6	65
H114	Blackthorn (Prunus spinosa).	100	2	1	1	1	1	SM	Fair	Maintained hedgerow. Field boundary hedgerow. Dense undergrowth at base.	No work required.	20+	C2	1.2	5
T115	Holly (Ilex aquifolium).	250	8	3	3	3	3	EM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Low crown. Open even crown.	No work required.	20+	C2	5.2	85
T116	English Oak (Quercus robur).	1800	14	9	9	9	9	V	Fair	Basal cavity. Broken branches in crown. Dieback in crown. Major deadwood observed. Open even crown. Torn branches, known roost for pipistrelles, ecological value, major stem hollowing, Branch socket cavities.	Monitor.	40+	A3	15.0	707
T117	English Oak (Quercus robur).	500	12	6	6	6	6	EM	Fair	Typical crown form with no obvious major defects. Dense ivy on main stem. Minor deadwood observed. Open even crown. Good vitality.	Sever ivy.	40+	B1	6.0	113
T118	English Oak (Quercus robur).	400	10	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Adjacent to road	No work required.	20+	C1	4.8	72
T119	English Oak (Quercus robur).	870	12	7	7	7	7	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Broken branches in crown. Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Open even crown.	Sever ivy.	40+	A1	10.4	342
G120	Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Beech (Fagus sylvatica). Norway Maple (Acer platanoides).	400	13	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	B2	4.8	72
G121	Cherry (Prunus avium). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula).	250	6	3	3	3	3	SM	Fair	Dense undergrowth. Planted semi mature tree group with no obvious major defects.	No work required.	10+	C2	3.0	28
T122	English Oak (Quercus robur).	930	15	10	10	10	10	М	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Major deadwood observed. Open even crown. situated on edge of semi mature tree group adjacent to road	No work required.	40+	A1	11.2	391
T123	English Oak (Quercus robur).	510	12	5	5	5	5	SM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Co dominant from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	B1	8.7	235
T124	English Oak (Quercus robur).	950	12	5	5	5	5	М	Fair	Typical crown form with no obvious major defects. Major deadwood observed. peeling bark, reduced in past, adjacent to farm track and road, occluded wounds, branch stubs.	No work required.	20+	В3	11.4	408
T125	English Oak (Quercus robur).	350	6	3	3	3	3	EM	Fair	Basal epicormic growth. Multi stemmed from base. Minor deadwood observed. Low crown. Open even crown. Coppiced in the past.	No work required.	20+	C3	7.3	166

Tree		Stem Ø (mm) at	Height		Crown	Spread						Est Life span	Grade	Radii Single	RPA
Ref No.	Species	1.5m	(m)	N		c	w	Age	Condition	Comments	Tree Work	(Years)		Stem	
					_	,				Typical crown form with no obvious major defects. Basal epicormic growth. Dense undergrowth at base. Minor deadwood					
G126	Hawthorn (Crataegus monogyna).	200	6	2.5	2.5	2.5	2.5	SM	Fair	observed. Low crown.	No work required.	10+	C1	2.4	18
T127	English Oak (Quercus robur).	950	10	4	4	4	4	М	Poor	Broken branches in crown. Major deadwood observed. limited signs of live growth, has been reduced in the past. retain for eco feature	No work required.	<10	U	11.4	408
H128	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	150	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Maintained hedgerow. Field boundary hedgerow. Dense undergrowth at base.	No work required.	20+	C2	1.8	10
T129	English Oak (Quercus robur).	960	12	4	4	4	4	М	Fair	Dense undergrowth at base. Dieback in crown. Major deadwood observed. Open even crown. reduced in past, peeling bark, cracks in deadwood,	No work required.	20+	В3	11.5	417
T130	English Oak (Quercus robur).	500	11	5	5	5	5	SM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. crown lifted above field and road	No work required.	20+	B1	6.0	113
T131	Sweet Chestnut (Castanea sativa).	240	5	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown.	No work required.	10+	C1	2.9	26
T132	English Oak (Quercus robur).	750	12	6	6	6	6	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Open even crown. adjacent to road and arable field, torn limbs	Sever ivy.	20+	B2	9.0	255
T133	English Oak (Quercus robur).	1100	14	8	8	8	8	М	Fair	Typical crown form with no obvious major defects. Major deadwood observed. Open even crown. torn limbs, peeling bark, branch socket cavities.	No work required.	40+	В3	13.2	547
T134	Ash (Fraxinus excelsior).	180	6	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Open even crown.	No work required.	10+	C1	2.2	15
T135	English Oak (Quercus robur).	700	12	7	7	7	7	М	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Open even crown.	No work required.	40+	B2	8.4	222
T136	English Oak (Quercus robur).	1030	12	8.5	8.5	8.5	8.5	М	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Open even crown.	Sever ivy.	40+	A1	12.4	480
T137	English Oak (Quercus robur).	1520	13	9	9	9	9	М	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Open even crown. Branch socket cavities	Sever ivy.	40+	A1	15.0	707
T138	English Oak (Quercus robur).	1030	13	11	11	11	11	М	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Major deadwood observed. Open even crown. Branch socket cavities	Sever ivy.	40+	A1	12.4	480

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
				N	Е	S	W	Age	Condition		Tree Work				
H139	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	100	1	0.5	0.5	0.5	0.5	SM	Good	Maintained hedgerow. Dense undergrowth at base.	No work required.	10+	C2	1.2	5
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T140	Ash (Fraxinus excelsior).	400	9	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Broken branches in crown. Dense ivy on main stem. Minor deadwood observed. Low crown.	No work required.	10+	C1	8.3	218
										Typical crown form with no obvious major defects. Dense ivy on main stem. Multi stemmed from base. Major deadwood observed. Low crown. Open even crown. Coppiced in the past. Former					
T141	Sweet Chestnut (Castanea sativa).	330	11	7	7	7	7	EM	Good	coppice stool on boundary of arable field.	No work required.	20+	B3	12.5	493
T142	Field Maple (Acer campestre).	400	6	3	3	3	3	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Dense undergrowth at base. Minor deadwood observed. Low crown. Open even crown. Tree situated on boundary line.	No work required.	20+	C2	4.8	72
T143	English Oak (Quercus robur).	420	10	4	4	4	4	SM	Poor	Dense ivy on main stem. Dieback in crown. Major deadwood observed. Major crown dieback causing large amounts of deadwood	Sever ivy.	10+	C2	8.7	239
T144	English Oak (Quercus robur).	480	12	5	5	5	5	SM	Fair	Broken branches in crown. Crossing and rubbing branches. Dense ivy on main stem. Major deadwood observed. Open even crown. situated on grass verge adjacent to road	Sovering	20+	C2	8.2	209
1144	English Oak (Quercus robur).	480	12	5	5	5	5	SIVI	Fair	crown. situated on grass verge adjacent to road	Sever ivy.	20+	C2	8.2	209
T145	English Elm (Ulmus procera).	550	10	4	4	4	4	M	Fair	Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Major deadwood observed. on verge adjacent road	Sever ivy.	20+	C1	11.4	411
G146	English Elm (Ulmus process)	250	7	3	3	3	3	SM	Fair	Dense ivy on main stem. Dense undergrowth. Dead elms observed. Dead trees throughout. Interlocking crowns.	Sovering	10+	C2	3.0	28
G140	English Elm (Ulmus procera).	230		3	3	3	3	JIVI	rdii	Linear tree group.	Sever ivy.	10+	CZ	5.0	40
G147	Blackthorn (Prunus spinosa).	100	3	1	1	1	1	SM	Fair	Dense undergrowth. Large clump of blackthorn.	No work required.	10+	C1	1.2	5
G148	English Elm (Ulmus procera).	180	6	2	2	2	2	SM	Fair	Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Low crown. Understory tree group.	No work required.	10+	C1	2.2	15
										Crossing and rubbing branches. Dense undergrowth at base. Dense ivy on main stem. Unable to inspect stem due to dense Ivy. Minor deadwood observed. Major deadwood observed. roots					
T149	English Elm (Ulmus procera).	1160	12	8	8	8	8	М	Fair	observed above ground which were damaged when road was installed	Sever ivy.	20+	B3	13.9	609
T150	English Elm (Ulmus procera).	1200	12	6	6	6	6	М	Fair	Crossing and rubbing branches. Dense undergrowth at base. Dense ivy on main stem. Unable to inspect stem due to dense Ivy. Minor deadwood observed. Major deadwood observed.	Sever ivy.	20+	В3	14.4	652
T151	English Elm (Ulmus procera).	1000	5	0.5	0.5	0.5	0.5	М	Dead	Dead tree, main stem which has been colonised by ivy, retain for habitat	No work required.	<10	U	12.0	452

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
Rei No.	Species	1.5111	(111)	N	Е	S	W	Age	Condition	Comments	Tree Work	(Tears)		Stelli	
		1000	_	0.5	0.5	0.5				Dead tree, main stem which has been colonised by ivy,		10		12.0	450
T152	English Elm (Ulmus procera).	1000	5	0.5	0.5	0.5	0.5	М	Dead	retain for habitat	No work required.	<10	U	12.0	452
H153	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	100	1	0.5	0.5	0.5	0.5	SM	Good	Maintained hedgerow. Dense undergrowth at base.	No work required.	10+	C2	1.2	5
G154	English Elm (Ulmus procera).	150	6	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Buffer group between site and surrounding area. Linear tree group.	No work required.	10+	C1	1.8	10
0154	English Elli (ollius proceru).	150				_		Sivi	T dill	Ented tree group.	No work required.	101	CI	1.0	10
G155	English Oak (Quercus robur). Blackthorn (Prunus spinosa).	200	6	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	C2	2.4	18
T156	English Oak (Quercus robur).	920	15	9	9	9	9	М	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Dense ivy on main stem. Major deadwood observed. Open even crown.	Sever ivy.	40+	A1	11.0	383
T157	English Oak (Quercus robur).	1270	12	6	6	6	6	М	Fair	Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Low crown. ivy supressing trees crown	Sever ivy.	40+	B1	15.0	707
T158	English Oak (Quercus robur).	740	12	6	6	6	6	М	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. buttress roots	No work required.	20+	B2	8.9	248
T159	English Oak (Quercus robur).	780	12	6	5	6	6	М	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Branch socket cavities.	No work required.	20+	B2	9.4	275
G160	Ash (Fraxinus excelsior). English Oak (Quercus robur). Silver Birch (Betula pendula). Field Maple (Acer campestre).	200	7	2.5	2.5	2.5	2.5	SM	Fair	Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Adjacent to road.	No work required.	20+	C2	2.4	18
T161	English Oak (Quercus robur).	850	12	6	6	6	6	М	Fair	Dense undergrowth at base. Dense ivy on main stem. Major deadwood observed. Low crown. supressed by ivy	Sever ivy.	20+	B2	10.2	327
T162	English Oak (Quercus robur).	150	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Open even crown.	No work required.	10+	C1	1.8	10
T163	English Oak (Quercus robur).	100	5	1	1	1	1	SM	Fair	Typical crown form with no obvious major defects. Open even crown.	No work required.	10+	C1	1.2	5
T164	English Oak (Quercus robur).	160	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Dense ivy on main stem. Open even crown.	Sever ivy.	10+	C1	1.9	12

Tree		Stem Ø (mm) at	Height		Crown	Spread						Est Life span	Grade	Radii Single	RPA
Ref No.	Species	1.5m	(m)	N	E	S	W	Age	Condition	Comments	Tree Work	(Years)		Stem	
G165	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Hazel (Corylus avellana). Hornbeam (Carpinus betulus). Scots Pine (Pinus sylvestris).	160	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Dense ivy on main stem. Open even crown. Buffer group between site and surrounding area. Linear tree group.	Sever ivy.	10+	C1	1.9	12
T166	English Oak (Quercus robur).	240	4	2.5	2.5	2.5	2.5	SM	Fair	Major deadwood observed. Low crown. Open even crown. self set on grass verge	No work required.	20+	C1	2.9	26
G167	English Oak (Quercus robur). Silver Birch (Betula pendula). Norway Maple (Acer platanoides).	250	7	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. situated in centre of roundabout	No work required.	20+	C2	3.0	28
T168	English Oak (Quercus robur).	960	12	6	6	6	6	М	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Branch socket cavities, torn limbs	No work required.	20+	B3	11.5	417
T169	English Oak (Quercus robur).	700	7	2	2	2	2	М	Dead	Dead tree colonised by ivy retain for habitat.	No work required.	<10	C1	8.4	222
T170	English Oak (Quercus robur).	1130	10	8	8	8	8	М	Fair	Basal cavity. Broken branches in crown. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Major deadwood observed. Low crown. Pollarded in the past. Major stem hollowing and internal cavities	No work required.	20+	B3	13.6	578
T171	English Oak (Quercus robur).	700	14	6	6	6	6	М	Fair	Broken branches in crown. Crossing and rubbing branches. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Major deadwood observed. Low crown. Open even crown. ivy supressing growth	No work required.	20+	В3	8.4	222
T172	English Oak (Quercus robur).	1400	16	10	10	10	10	М	Fair	Broken branches in crown. Dense undergrowth at base. Dense ivy on main stem. Unable to inspect stem due to dense Ivy. Major deadwood observed. Open even crown.	No work required.	40+	A3	15.0	707
T173	English Oak (Quercus robur).	600	15	8	8	8	8	М	Fair	Typical crown form with no obvious major defects. Co dominant from base. Dense undergrowth at base. Dense ivy on main stem. Minor deadwood observed. Major deadwood observed. Open even crown.	No work required.	20+	В3	10.2	326
G174	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Field Maple (Acer campestre).	250	7	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.0	28
G175	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Blackthorn (Prunus spinosa).	250	8	3	3	3	3	SM	Fair	Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	10+	C2	3.0	28
T176	English Oak (Quercus robur).	800	12	5	5	5	5	М	Fair	Dense undergrowth at base. Minor deadwood observed. Major deadwood observed. Open even crown. large stem cavity where limb has torn out	No work required.	20+	C3	9.6	290

Tree		Stem Ø (mm) at	Height		Crown Spread							Est Life span	Grade	Radii Single	RPA
Ref No.	Species	1.5m	(m)	N	Е	S	W	Age	Condition	Comments	Tree Work	(Years)		Stem	
T177	English Oak (Quercus robur).	600	16	8	8	8	8	М	Good	Crossing and rubbing branches. Dense undergrowth at base. Multi stemmed from base. Minor deadwood observed. Major deadwood observed. Open even crown. some of the branches have fused together.	No work required.	20+	B2	14.4	652
G178	English Oak (Quercus robur).	250	6	3	3	3	3	SM	Fair	Buffer group between site and surrounding area. Interlocking crowns. Linear tree group. trees along grass verge	No work required.	20+	C2	3.0	28
T179	English Oak (Quercus robur).	650	12	6	6	6	6	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Broken branches in crown. Crossing and rubbing branches. Dense undergrowth at base. Major deadwood observed. Open even crown.	No work required.	20+	B2	7.8	191
G180	English Oak (Quercus robur). Blackthorn (Prunus spinosa). English Elm (Ulmus procera). Field Maple (Acer campestre). Scots Pine (Pinus sylvestris).	350	12	3.5	3.5	3.5	3.5	EM	Fair	Typical crown form with no obvious major defects. Major deadwood observed. Dense undergrowth. Dead elms observed. Dead trees throughout. Interlocking crowns. Linear tree group.	No work required.	20+	C2	4.2	55
G181	Silver Birch (Betula pendula). Sycamore (Acer pseudoplatanus).	380	12	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Minor deadwood observed. Open even crown. Dense undergrowth. Dead trees throughout. Interlocking crowns. Linear tree group. adjacent to road	No work required.	20+	B2	4.6	65
T182	Sycamore (Acer pseudoplatanus).	320	14	6	6	6	6	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Crossing and rubbing branches. Multi stemmed from base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	B1	7.7	185
G183	Silver Birch (Betula pendula). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus). Scots Pine (Pinus sylvestris).	300	13	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.6	41
G184	Scots Pine (Pinus sylvestris).	750	15	6	6	6	6	М	Fair	Typical crown form with no obvious major defects. Major deadwood observed. Low crown. Open even crown. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group. 3 trees closely planted forming a single large crown	No work required.	20+	B1	9.0	255
T185	Sycamore (Acer pseudoplatanus).	420	13	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Multi stemmed from base. Major deadwood observed. Low crown. Open even crown.	No work required.	20+	B1	10.1	319
T186	Sycamore (Acer pseudoplatanus).	260	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Minor deadwood observed. Open even crown.	No work required.	20+	C1	4.4	61
T187	Blackthorn (Prunus spinosa).	180	5	2	2	2	2	SM	Fair	Multi stemmed from base. Minor deadwood observed. Included union. adjacent to path, grown through fence	No work required.	10+	C1	3.1	29
T188	Blackthorn (Prunus spinosa).	100	4	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Low crown.	No work required.	10+	C1	1.2	5

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown Spread					Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
G189	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Blackthorn (Prunus spinosa). Sycamore (Acer pseudoplatanus). Lawson Cypress (Chamaecyparis lawsoniana). Scots Pine (Pinus sylvestris).	350	14	4	4	4	4	Age	Condition	Typical crown form with no obvious major defects. Major deadwood observed. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. buffer group adjacent to dual carriage way	Tree Work	20+	B2	4.2	55
G189	Blackthorn (Prunus spinosa). Field Maple (Acer campestre).	250	6	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Dense undergrowth at base. Multi stemmed from base. Minor deadwood observed. Low crown. Interlocking crowns.	No work required. No work required.	10+	C2	3.0	28
G191	Sycamore (Acer pseudoplatanus).	350	11	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Basal epicormic growth. Broken branches in crown. Dense undergrowth at base. Major deadwood observed. Low crown. Open even crown. Branch socket cavities.	No work required.	20+	C1	7.3	166
G192	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Blackthorn (Prunus spinosa). Hazel (Corylus avellana).	250	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.0	28
G193	Cherry (Prunus avium). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Blackthorn (Prunus spinosa). Sycamore (Acer pseudoplatanus).	450	15	6	6	6	6	EM	Fair	Typical crown form with no obvious major defects. Broken branches in crown. Major deadwood observed. Open even crown. Buffer group between site and surrounding area. Dense undergrowth. Dead trees throughout. Interlocking crowns. Linear tree group.	No work required.	20+	B2	5.4	92
G194	Blackthorn (Prunus spinosa). Field Maple (Acer campestre). Sycamore (Acer pseudoplatanus).	200	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.4	36
G195	Silver Birch (Betula pendula).	300	13	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Co dominant from base. Crossing and rubbing branches. Minor deadwood observed. Open even crown. Linear tree group. Interlocking crowns. Tree situated offsite with crown overhanging onto site.	No work required.	20+	B2	3.6	41
G196	Silver Birch (Betula pendula). Field Maple (Acer campestre).	300	11	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	C2	3.6	41
G197	Norway Spruce (Picea abies).	250	12	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	C2	3.0	28
T198	English Oak (Quercus robur).	280	4	3	3	3	3	SM	Good	Typical crown form with no obvious major defects. Low crown. Open even crown. large mounds of soil in close proximity	No work required.	10+	C1	3.4	35
G199	Elder (Sambucus nigra).	100	4	1	1	1	1	SM	Fair	Typical crown form with no obvious major defects. Multi stemmed from base. Minor deadwood observed.	No work required.	10+	C1	1.7	9
T200	Silver Birch (Betula pendula).	620	13	5	5	5	5	М	Good	Typical crown form with no obvious major defects. Broken branches in crown. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	B1	7.4	174

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown Spread					Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
	·		` '	N	Е	S	W	Age	Condition		Tree Work				
T201	Silver Birch (Betula pendula).	340	10	4	4	4	4	SM	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	4.1	52
T202	Silver Birch (Betula pendula).	460	10	5	5	5	5	SM	Good	Typical crown form with no obvious major defects. Dense undergrowth at base. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	5.5	96
T203	Silver Birch (Betula pendula).	300	8	4	4	4	4	EM	Fair	Broken branches in crown. Multi stemmed from base. Minor deadwood observed. Low crown. snapped limbs in crown	No work required.	10+	C1	6.2	122
G204	Silver Birch (Betula pendula). Sycamore (Acer pseudoplatanus). Scots Pine (Pinus sylvestris).	350	12	5	5	5	5	SM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Open even crown. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	B2	4.2	55
T205	Silver Birch (Betula pendula).	380	8	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. situated on mound	No work required.	20+	C2	4.6	65
T206	Hawthorn (Crataegus monogyna).	280	7	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. situated on mound	No work required.	20+	C2	3.4	35
T207	Scots Pine (Pinus sylvestris).	300	7	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	3.6	41
T208	Scots Pine (Pinus sylvestris).	450	11	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	B2	5.4	92
G209	Silver Birch (Betula pendula).	240	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. soil mounds close to base	No work required.	20+	C2	2.9	26
T210	English Oak (Quercus robur).	380	10	4.5	4.5	4.5	4.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. soil mounds close to base, tree tag 634,	No work required.	20+	B2	4.6	65
T211	Norway Maple (Acer platanoides).	450	11	5	5	5	5	EM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. soil mound adjacent to base	No work required.	40+	B1	5.4	92
T212	Silver Birch (Betula pendula).	480	12	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. large wound from base to 1m exposing heartwood, branch socket cavities in crown, branch stubs	No work required.	10+	C1	5.8	104
T213	Silver Birch (Betula pendula).	340	10	1	4	2	4	SM	Poor	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. one of limbs has failed causing an unbalanced crown and a large torn stub	No work required.	10+	C1	4.1	52

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	at Height Crown Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA			
Rei No.	Species	1.5111	(m)	N	Е	S	W	Age	Condition	Comments	Tree Work	(rears)		Stem	
T214	Silver Birch (Betula pendula).	300	11	3	3	3	3	SM	Poor	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. large tear out which has left a 3m wound exposing heartwood	No work required.	20+	C1	3.6	41
T215	Silver Birch (Betula pendula).	500	14	5	5	5	5	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. branch stubs, street tree, co dominant from 4m	No work required.	20+	B1	6.0	113
H216	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	100	3	1	1	1	1	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown.	No work required.	10+	C2	1.2	5
G217	English Oak (Quercus robur). Blackthorn (Prunus spinosa). Scots Pine (Pinus sylvestris).	150	5	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. dense group in centre of roundabout	No work required.	10+	C1	1.8	10
G218	Cherry (Prunus avium). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus).	300	12	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. buffer group adjacent to dual carriageway	No work required.	20+	B2	3.6	41
G219	Cherry (Prunus avium). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus).	300	10	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown. buffer group adjacent to dual carriageway	No work required.	20+	B2	3.6	41
H220	Cherry (Prunus avium). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). Cotoneaster (Cotoneaster frigidus).	150	5	1.5	1.5	1.5	1.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown.	No work required.	10+	C2	1.8	10
G221	English Oak (Quercus robur).	180	5	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Low crown. Open even crown.	No work required.	20+	C1	2.2	15
G222	Silver Birch (Betula pendula). Blackthorn (Prunus spinosa). Scots Pine (Pinus sylvestris).	250	10	3	3	3	3	SM	Fair	Buffer group between site and surrounding area. Dense undergrowth. Dense bramble throughout. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.0	28
G223	Silver Birch (Betula pendula). Norway Maple (Acer platanoides).	280	12	3.5	3.5	3.5	3.5	SM	Good	Typical crown form with no obvious major defects. Linear tree group.	No work required.	20+	C2	3.4	35
G224	Silver Birch (Betula pendula). Scots Pine (Pinus sylvestris).	260	8	2.5	2.5	2.5	2.5	SM	Good	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.1	31
G225	Scots Pine (Pinus sylvestris).	260	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.1	31

Tree		Stem Ø (mm) at	Height	t Crown Spread						Est Life span	Grade	Radii Single	RPA		
Ref No.	Species	1.5m	(m)	N	-	c	l w	Age	Condition	Comments	Tree Work	(Years)		Stem	
				IN.		3	VV	Age	Condition	Typical crown form with no obvious major defects.	HEE WOLK				
G226	Monterey Pine (Pinus radiata)	880	15	6	6	6	6	М	Fair	Minor deadwood observed. Adajcent to hard standing.	No work required.	20+	B1	10.6	350
G227	Whitebeam (Sorbus aria).	300	11	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Basal epicormic growth. Adajcent to hard standing.	No work required.	20+	C2	3.6	41
G228	Silver Birch (Betula pendula). Sweet Chestnut (Castanea sativa). Scots Pine (Pinus sylvestris). European Larch (Larix decidua).	480	10	4	4	4	4	SM	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Interlocking crowns. Linear tree group.	No work required.	20+	C2	5.8	104
T229	Alder (Alnus glutinosa).	980	12	5	5	5	5	М	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Branch tearout visible. Branch stubs. Adjacent to road.	No work required.	20+	B1	11.8	435
G230	Silver Birch (Betula pendula). Whitebeam (Sorbus aria).	260	11	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.1	31
G231	Silver Birch (Betula pendula). Whitebeam (Sorbus aria). Scots Pine (Pinus sylvestris).	260	11	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Interlocking crowns. Linear tree group.	No work required.	20+	C2	3.1	31
	English Oak (Quercus robur). Silver Birch (Betula pendula). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus).	200	8	2	2	2	2	SM	Fair	Typical crown form with no obvious major defects. Dense undergrowth. Linear tree group. Adjacent to road.	No work required.	10+	C1	2.4	18
Т233	Silver Birch (Betula pendula).	480	14	5	5	5	5	М	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Co dominant from base.	No work required.	20+	B1	8.2	209
T234	Silver Birch (Betula pendula).	440	14	5	5	5	5	М	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Branch tearout visible. Branch stubs.	No work required.	20+	B1	7.5	175
G235	Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Whitebeam (Sorbus aria).	300	9	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Interlocking crowns. Linear tree group.	No work required.	10+	C2	3.6	41
G236	Silver Birch (Betula pendula). Beech (Fagus sylvatica). Scots Pine (Pinus sylvestris). European Larch (Larix decidua).	250	10	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Linear tree group.	No work required.	20+	C2	3.0	28
G237	Lawson Cypress (Chamaecyparis lawsoniana).	400	15	4	4	4	4	EM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Dense undergrowth. Interlocking crowns. Linear tree group. Situated offsite.	No work required.	20+	C2	4.8	72
T238	Silver Birch (Betula pendula).	250	8	3	3	3	3	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Situated offsite.	No work required.	20+	C1	3.0	28

Tree Ref No.	Species	Stem Ø (mm) at 1.5m	Height (m)		Crown	Spread				Comments		Est Life span (Years)	Grade	Radii Single Stem	RPA
				N	E	S	W	Age	Condition		Tree Work				
G239	Silver Birch (Betula pendula).	250	11	2.5	2.5	2.5	2.5	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Situated offsite.	No work required.	20+	C2	3.0	28
G240	Silver Birch (Betula pendula).	400	10	4	4	4	4	SM	Fair	Typical crown form with no obvious major defects. Minor deadwood observed.	No work required.	20+	C2	4.8	72
T241	Lodgepole Pine (Pinus cordata)	780	12	6	6	6	6	М	Good	Typical crown form with no obvious major defects. Good vitality and vigour. Open even crown. Adajcent to hard standing.	No work required.	20+	B1	9.4	275

Appendix 3 - Tree Survey Plan and Tree Protection Plan (TSP/TPP)	

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CEG











Appendix 4 - Tree Protection Barriers & Ground Protection

4.0 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.

- 4.0.1 **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.
- 4.0.2 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.
- 4.0.3 **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

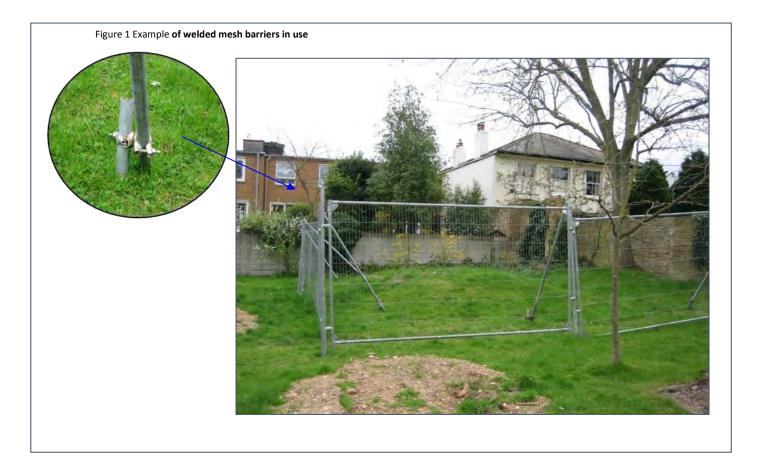


Figure 2 Default specification for protective barrier

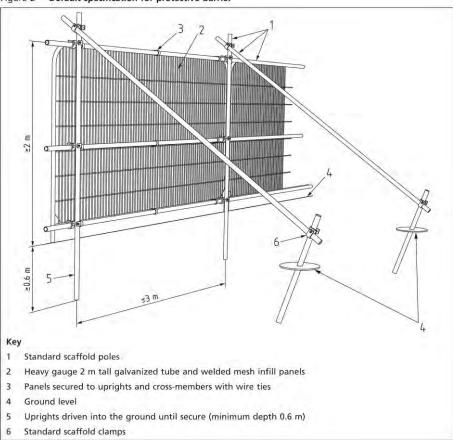
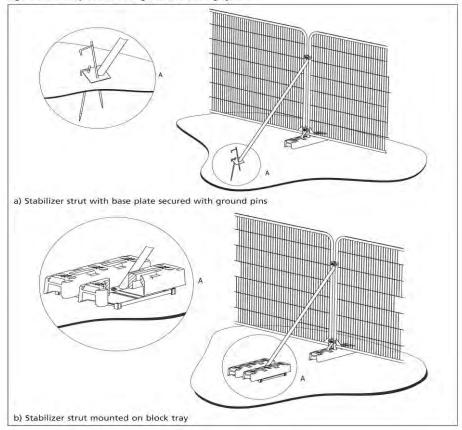


Figure 3 Examples of above-ground stabilizing systems



4.1 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.

- 4.1.1 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.



- 4.1.2 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.

4.1.3 Example of proprietary ground protection panels



Appendix 5 - Methods of Work Close to Trees

5.0 Guidance for working within RPAs

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

5.1 Removal of hard surfaces within RPAs

- 5.1.1 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.
- 5.1.2 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.
- 5.1.3 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.
- 5.1.4 The mini-digger will work from the existing hard surface pulling the debris away from the tree/s.
- 5.1.5 No excavation of existing soil beneath the hard surface will take place.
- 5.1.6 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.
- 5.1.7 Upon completion, the protective fencing must be moved out to the edge of the CEZ or ground protection used if access is required.

5.2 Services

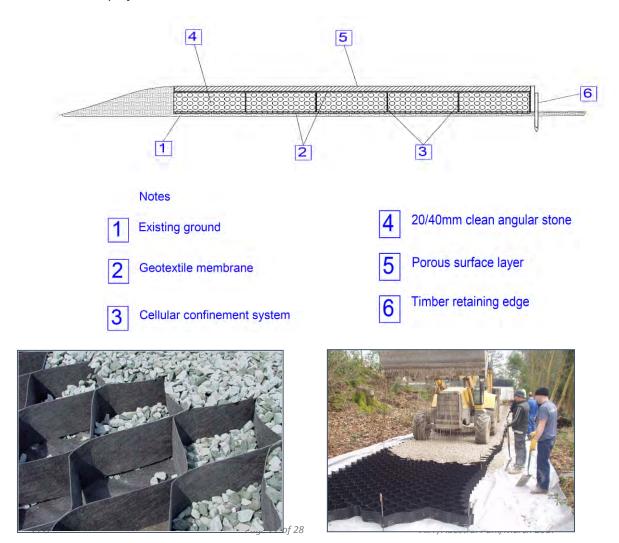
- 5.2.1 The location and direction of new services should be designed to allow for services to be routed away from the RPAs of retained trees.
- 5.2.2 If any services need to run through a CEZ the main contractor must contact the project arboriculturist before any works are undertaken. Agreement will 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.

5.3 New hard surfaces within RPAs

- 5.3.1 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.
- 5.3.2 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.

5.3.3 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.



- 5.3.4 The following design criteria for non-dig will need to be considered when installing new hard, permeable surfacing within Root Protection Areas (RPAs) of retained trees:
 - Maintain oxygen diffusion through new surface to rooting area (3-12% by volume)
 - Maintain sufficient passage of water to the rooting area (12-40% by volume)
 - Maintain existing ground levels to avoid unsustainable root damage (severance/or asphyxiation)
 - Avoid compaction by maintaining a soil structure sufficient to sustain root growth (soil bulk density below 1.6q/cc)
- 5.3.5 The above criteria will provide the conditions for continued tree growth and preservation. Site analysis of the soil type and its Californian Bearing Ratio (CBR) should be established prior to determining the specific depth of products to be adopted for the no-dig sub-base system.
- 5.3.6 Footpaths normally require a depth of 100mm and, 150mm to 200mm depths are used for residential driveways, while greater depths may be required for the passage of heavier traffic such as for construction access and delivery vehicles.
 - 1. The use of a three dimensional cellular confinement system within an LIS is an acceptable approach, which aims to fulfil the above design criteria. This system maintains the passage of oxygen and water to root systems; avoids root loss through severance or asphyxiation and minimises the potential for soil compaction. It is achieved by using Geotextile membranes and the introduction of the three dimensional Cellular Confinement System product. The material is laid onto a geotextile membrane covering the soil, whose existing levels within the Root Protection Area (RPA) of retained trees, is to be maintained so far as practicable.
 - 2. Retained trees must first be protected during all stages of the development including demolition, by the erection of fencing as shown in the diagram below and with reference to specifications and the Tree Protection Plan (TPP). Installing the LIS may require the re-positioning of the tree protection fencing to a secondary location in line with TPP and associated method statement. This follows the recommendations provided within British Standard 5837:2012 'Trees in relation to design, demolition and construction Recommendations'.
 - 3. Where ground levels are to be raised more than 150mm within the RPA this should be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. For example: nofines gravel (MOT Type 3), washed aggregate, structural soil (min. 20% sand content) or cobbles.
 - 4. The approved wearing course is to be laid over the cellular confinement system. Where it is to cover in excess of 20% of the RPA of a previously uncovered RPA, justification is to be provided.
 - 5. The use of a non-woven Geotextile beneath the cellular mattress acts as a separation/filtration layer and should be filled with **no-fines** stone in the 20-40mm range. This operation will be carried out avoiding the use of heavy machinery within the RPA of retained trees. Once filled, the perforated cellular wall structure provides mechanical interlock for infill materials, increasing the shear strength while allowing lateral drainage and gaseous exchange.
 - 6. The system will be used as a permanent base for a wearing course and/or will provide a temporary site access for root protection. The minimum depth for CCS material is 75mm but depths up to 400mm may be suitable; the material required will depend on the load bearing capacity of the final surface. A structural engineer should design all engineering solutions to surfaces.

5.4 Fencing within RPAs

5.4.1 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.

5.5 Landscaping works within RPAs

- 5.5.1 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.
- 5.5.2 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.
- 5.5.3 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.
- 5.5.4 Topsoil and other materials must be transported by wheelbarrow on running boards when working within CEZs.

Appendix 6 - 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
G1	Silver Birch (Betula pendula)	Fell	To accommodate the proposed layout.	C1
G2	Silver Birch (Betula pendula) Crack Willow (Salix fragilis)	Fell	To accommodate the proposed layout.	C1
G7	Sessile Oak (Quercus petraea)	Fell	To accommodate the proposed layout.	C1
T10	English Oak (Quercus robur)	Fell	To accommodate the proposed layout.	C1
G17	Scots Pine (Pinus sylvestris).	Fell section	To provide sufficient space for the access.	B2
H44	Beech (Fagus sylvatica) Hazel (Corylus avellana)	Reinforce hedgerow with new structured planting.	To increase hedgerows longevity	C2
T45	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B1
G46	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B2
T57	English Oak (Quercus robur)	Monitor.	Monitor cavity at base for health and safety reasons.	В3
T64	English Oak (Quercus robur)	Remove large hanger	On health and safety grounds	B1
W82	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Elder (Sambucus nigra). Norway Maple (Acer platanoides). Sycamore (Acer pseudoplatanus).	Green waste in the section of woodland should be. Archaeologists to be. Consulted before works start. Woodland management plan recommended	To reduce the risk of damage to the roots through soil compaction. Woodland management plan to provide a structured future management plan which will ensure the woodlands value is maintained.	АЗ
G84	Sessile Oak (Quercus petraea).	Fell section	To accommodate the proposed layout.	C1
G85	English Oak (Quercus robur). Elder (Sambucus nigra). Scots Pine (Pinus sylvestris).	Fell section	To provide sufficient space for the access.	B2
G89	English Oak (Quercus robur). Silver Birch (Betula pendula). Elder (Sambucus nigra). Scots Pine (Pinus sylvestris).	Fell section	To provide sufficient space for the access.	B2
H100	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	Reinforce hedgerow with new structured planting	To increase hedgerows longevity	C1
G110	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). English Elm (Ulmus procera).	Reinforce with new structured planting	To increase tree groups longevity	C2
T113	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	C2
T116	English Oak (Quercus robur)	Monitor.	Monitor cavity at base for health and safety reasons.	A3

	Г		To made and the state of succession	
T117	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B1
T119	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	A1
T132	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B2
T136	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	A1
T137	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	A1
T138	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	A1
T143	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	C2
T144	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	C2
T145	English Elm (Ulmus procera).	Sever ivy.	To reduce the risk of crown suppression.	C1
G146	English Elm (Ulmus procera).	Sever ivy.	To reduce the risk of crown suppression.	C2
T149	English Elm (Ulmus procera).	Sever ivy.	To reduce the risk of crown suppression.	В3
G150	English Elm (Ulmus procera).	Sever ivy.	To reduce the risk of crown suppression.	В3
T156	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	A1
T157	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B1
T161	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	B2
T164	English Oak (Quercus robur)	Sever ivy.	To reduce the risk of crown suppression.	C1
G165	English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Silver Birch (Betula pendula). Hazel (Corylus avellana). Hornbeam (Carpinus betulus). Scots Pine (Pinus sylvestris).	Sever ivy.	To reduce the risk of crown suppression.	C1
G191	Sycamore (Acer pseudoplatanus).	Fell section	To provide sufficient space for the access.	C1
G194	Blackthorn (Prunus spinosa). Field Maple (Acer campestre). Sycamore (Acer pseudoplatanus).	Fell section	To provide sufficient space for the access.	C2
T198	English Oak (Quercus robur)	Fell	To accommodate the proposed layout.	C1
T200	Silver Birch (Betula pendula)	Fell	To accommodate the proposed layout.	B1
T201	Silver Birch (Betula pendula)	Fell	To accommodate the proposed layout.	C1
T202	Silver Birch (Betula pendula)	Fell	To accommodate the proposed layout.	C1

Appendix 7 - Specific report caveats

- 7.0.1 The survey was based on a topographical drawing provided by the client. Therefore, SES Ltd takes no responsibility for the accuracy of the trees locations. The accurate locations of tree cover in the North West corner of the site was not available at the time of the survey therefore the trees have been plotted approximately. Their exact locations should be checked on site before any works is undertaken.
- 7.0.2 No internal diagnostic equipment was used other than a sounding mallet and probe.
- 7.0.3 The survey is concerned solely with arboricultural issues.
- 7.0.4 Any work with trees will discharge the due diligence requirements of all relevant wildlife and countryside legislation.
- 7.0.5 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.
- 7.0.6 This report is valid for 12 months.

7.1 Copyright and non-disclosure

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