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BS5837 Arboricultural Report,

Arboricultural Impact Assessment

and Method Statement

OUR REFERENCE	AC.2021.526
CLIENT	Mr Graham Cox
SITE	Land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS
REPORT BY	I S Thompson (known as Tom) M. Arbor. A., BSc. (Hons) Arb,
	MSc. eFor
DATE	20 th November 2021
DATE OF SITE VISIT	1 st November 2021

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Land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS

Application Ref No Unknown

The proposed works consist of five apartment blocks to the centre of the site with associated parking, access roads, infrastructure, and landscaping around the outside. The proposed works also consist of an extension to the existing cemetery area, as part of the proposed development

Report produced by

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Date......11th November 2021.....

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Executive Summary

The proposal is to construct five apartment blocks to the centre of the site with associated parking, access roads, infrastructure, and landscaping around the outside on land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS.

The proposed works also consist of an extension to the existing cemetery area, as part of the proposed development.

The impact of the retained trees on the proposed building and vice a versa have been assessed and found to be consistent with the long-term health of the retained trees and sustainability of the building provided that build and protection methods in accordance with industry best practice and BS 5837: 2012 (Trees in relation to design, demolition and construction – recommendations), are followed as specified.

This report includes supporting arboricultural information to accompany the planning application. The supporting information demonstrates that there will be no encroachment into the RPAs (Root Protection Areas), of any protected trees as a result of the proposed development. The tree protection measures, and any mitigation measures are also outlined.

The Nation Planning Policy Framework (NPPF) document further emphasizes the importance of trees and the natural environment.

"Planning policies and decisions should contribute to and enhance the natural and local environment by:



- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland," (NPPF, July 2021).



Possible conflicts are;

There are 18 trees that require their Root Protection areas (RPAs) to be protected during the proposed development.

This is addressed Arboricultural Method Statement (AMS) Section 1, Construction Exclusion Zone, as shown on the tree protection plan AC.2021.526 TPP-01 Rev A.

Site access is addressed in Section 3 of the AMS, Access Details, and on the tree protection plan AC.2021.526 TPP-01 Rev A.

The AMS addresses Contractors' Car Parking in Section 4, Site Huts and Toilets in Section 5, and Storage Space in Section 6, and on the tree protection plan AC.2021.526 TPP-01 Rev A.

There are some recommendations for tree work. This is in Section 12 of the AMS, Remedial Tree Work.

The recommendations for supervision are addressed in Section 16 of the AMS, Arboricultural Supervision.

1 Terms of Reference

- 1.1 I have been instructed in writing by Mr Graham Cox of Kind Build with regards to a planning application to be made by himself in respect of the above development on land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS and report on the following in accordance with BS 5837 Trees in Relation to Design, Demolition and Construction Recommendations 2012:
- I. Tree survey
- II. Arboricultural Impact Assessment
- III. Arboricultural Method Statement
- IV. Tree Protection Plan
 - 1.2 The site was surveyed by I. S. Thompson (known as Tom) on Monday 1st November 2021 in the afternoon. The weather was dry and sunny, and visibility was good. The relative quantitative and qualitative tree data was recorded to assess the condition of the trees, their value, and any constraints that they pose to the prospective development and where necessary the tree protection measures, and construction methods required to ensure their safe retention.
 - 1.3 The tree information recorded relates to the tree condition, age, safe useful life expectancy, location, canopy spread, canopy height and tree height and direction of first significant branch as well as any tree work that is required.
 - 1.4 I have based this report on my site observations and investigations, and I have come to conclusions in the light of my qualifications obtained and experience gained whilst working in the field of arboriculture. I have qualifications and practical experience in arboriculture and forestry and list the details in Appendix I.

1.5 Limitations and Use of Copyright:

- 1.5.1 All rights in this report are reserved. No part of it may be reproduced or transmitted, in any form or by any means without our written permission. Its contents and format are for the exclusive use of Mr Cox and his associates. It may not be sold, lent out or divulged to any third party not directly involved in this situation without the written consent of Arbor Cultural Ltd. This report will remain the intellectual property of Arbor Cultural Ltd. until payment has been received in full.
- 1.5.2 This report contains all my advice and opinions and any representation and/or statements that have or may have been made which are not specifically and expressly included in this report should not be relied upon and no responsibility is taken for the accuracy of such statements.
- 1.5.3 The Inspections were carried out based on ground level, Visual Tree Assessment (VTA) examination of external features of each individual tree. Binoculars were used to assess the aerial parts. The report and recommendations relate to the condition of the trees and their relationship to their surroundings at the time of inspection only. All measurements, proportions and assessments of age are approximate.
- 1.5.4 Visual assessment, in accordance with accepted arboricultural practice, was based on apparent vitality (leaf cover, extension growth), presence of deadwood and die back, fractured, and detached limbs, evidence of excessive basal movement and external indications of stem and basal decay likely to affect the structural condition of the tree.
 No decay detection equipment either invasive or non-invasive was employed.

- 1.5.5 Trees are living organisms whose health and condition can change rapidly. The conclusions and recommendations in this report are only valid for one year. This report will be invalidated if there are any changes to the site as it stands at present, e.g., building of extensions, excavation works, importing of soils, extreme weather events etc.
- 1.5.6 The survey findings are of a preliminary nature regarding assessment of risk of direct damage (by contact) from trees to built structures. No soil samples were taken, or trial pits were dug, therefore no risk assessment was carried out regarding subsidence (indirect damage). No parts of the drainage or service systems were inspected on site as I am not qualified to do so.
- A principal aspect of tree inspections in relation to proposed developments is an assessment of the risk posed by trees in proximity to people or property. Generally, tree risk will increase with the age of the trees. The benefits afforded by the trees will also increase with age. The management recommendations will be guided by an analysis of the risk posed by the trees and the benefits afforded by them.

1.7 Documentation

- **1.7.1** The following documentation was provided when the work was commissioned.
- Letter/Email to confirm commission of the work.
- Plan of the site, Ref LL488-200-0001P1, received on 17th November 2021 showing the existing and proposed layout.



1.8 Disclaimer

- **1.8.1** I have no connection with any of the parties involved in this situation that could influence the opinions expressed in this report.
- **1.8.2** Following an initial site visit to assess the likely position of the proposed development, the following arboricultural information is provided in support of the application.

2. Introduction

2.1 Site

2.1.1 The site of the proposed development is within the current boundary of land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS, and will be adjacent to several currently unprotected but significant trees. Following the site meeting the measures identified in this report are designed to minimise any likely impacts of the trees on the new structure and its foundations and any likely impacts of the construction on the retained trees, see plan AC.2021.526 TPP-01 Rev A attached.

2.2 Trees

- 2.2.1 Some of the trees are in the cemetery with many along the site boundary with the proposed development site on land to the west of Froghall Lane, Chigwell, see Images 1 to 9. The groups of trees G1 to G5 are on the current site along with two hedge, H1 and H2, see Images 10 to 15. They collectively provide a contribution to the appearance and character of the cemetery, Froghall and the surrounding area. A schedule of the significant trees, their condition and category of retention is attached as Appendix VI.
- 2.2.2 An accurate topographical survey of the site was not provided. The tree locations were measured in relation to the site boundaries and other known features and triangulated and are accurate to +/-1.5m. So, the drawing number AC.2021.526 TPP-01 Rev A provides a good representation of the tree location in relation to the site and the proposed development.

- 2.2.3 The trees have been assessed and categorised in relation to the methodology in Table 1 of BS 5837 (2012) Trees in Relation to Design, Demolition and Construction, as specified in Appendix III. The results are recorded in Appendix VII.
- 2.2.4 There were a total of 80 individual trees surveyed. This comprised of 8 ash trees, one goat willow, four white willow, a silver birch, a robinia, 10 hawthorn, 43, Leyland cypress trees, and 12 oak trees. There were no A category trees, 52 B1 category trees, 15 B2 category trees, eight C1, category, and four C2 category trees with one U category tree.
- **2.2.5** There were also five groups of self-set scrub comprising of mostly hawthorn and bramble, which were all classified as C2. There were also cypress hedges, classified as C2's.
- **2.2.6** Any trees not included individually in the survey were either in groups or had other trees whose constraints exceeded theirs in respect to the proposed development and all associated works.
- 2.2.7 All tree works considered necessary for health and safety reasons or to facilitate the development will be agreed with the Local Planning Authority and undertaken in accordance with the planning conditions attached to the planning consent. They will be undertaken in accordance with British Standard 3998 (2010) Recommendations for Tree Works, unless otherwise specified with clear justification for any deviation from the British Standard. This will be undertaken by an arboricultural contractor approved by the Local Authority Tree Officer.

2.2.8 If at any time additional pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 Recommendations for Tree Works (2010), unless otherwise specified with clear justification for any deviation from the British Standard. This will be undertaken by an arboricultural contractor approved by the Local Authority Tree Officer.

2.3 Proposed Development

- **2.3.1** The proposed works consist of five apartment blocks to the centre of the site with associated parking, access roads, infrastructure, and landscaping around the outside.
- **2.3.2** The proposed works also consist of an extension to the existing cemetery area, as part of the proposed development.

2.4 Issues of Light and Shading

- 2.4.1 The proposed position of the new dwellings will not be shaded by any retained trees.
 This will allow adequate sunlight to reach all the windows during the summer and winter months.
- **2.4.2** It is not anticipated that the proposed development will increase pressure for tree pruning or tree removal due to shading or the loss of natural light.

2.5 Description (including levels)

2.5.1 This is currently an area of pastoral farmland with some emerging scrub woodland, mostly comprising of hawthorn, birch, and gorse, with a row of Leyland cypress trees along the existing northern boundary line. The site is slopes slight downwards from north to south.

2.6 Soils

- 2.6.1 There is no information provided about the soils and there was no investigation undertaken. From the British geological Service (BGS) website it is likely that the soil is London Clay mainly comprised of bioturbated or poorly laminated, blue-grey, or grey brown, slightly calcareous, silty to very silty clay, clayey silt and sometimes silt, with some layers of sandy clay, (BGS Viewer, 2021).
- **2.6.2** The BGS viewer has no information about the likely drift layer, (BGS Viewer, 2021).
- **2.6.3** It is likely that the soil below foundation depth will be of a shrinkable nature.

3 Arboricultural Impact Assessment

3.1 Presence of Tree Preservation Orders (TPO) or Conservation Area Designation

- 3.1.1 The Local Planning Authority has not yet been contacted to establish whether any Tree Preservation Order (TPO) covers any of the trees, or to determine if the site is situated within a Conservation Area (CA). It would be necessary to determine whether either of these planning controls are in operation before commencement of any tree works.
- **3.1.2** The client has informed me that there are no TPOs in place and it is not in a Conservation Area. I have not verified with the LPA.

3.1.2 Exemptions

There are two exemptions when this notification or permission are not required. They are detailed below:

- Removal of an imminent threat to people or property
- Removal of deadwood or dead trees

3.2 Effects on the amenity value of the trees by the development and facilitation pruning.

3.2.1 There are two oak trees T12 and T13 that are to be removed for the access road a B1 and C1 category tree respectively, and an ash tree T22 a B1 category tree is to be removed for one of the apartment blocks. There is also a U category oak tree that is to be removed due to its poor condition.

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- 3.2.2 For the additional grave space there are only two individual trees that are proposed for removal. These are T45 and T46 both semi mature Leyland cypress trees to make way for the new access. Additionally, most of G1, comprising of scrub woodland predominantly hawthorn and gorse with some ash saplings all less than 75mm in diameter will be removed to make way for new grave spaces. Consequently, there will be a minimal effect to their amenity value of the area.
- 3.3 Potential incompatibilities between the layout and the trees proposed for retention.
- **3.3.1** There is no proposed construction of foundations within the RPA of any retained trees.
- **3.3.2** There will not be any services installed within any Root Protection Area (RPA). The services will be run into the site along the new access that is to be created.
- 3.3.3 The crowns of all retained trees will remain unaffected by the proposed development.

 All tree surgery works will be undertaken prior to construction activity and in accordance with the Arboricultural Method Statement Section 12 Remedial Tree Works.
- **3.3.4** Site access will be from the south-western end of the site via Woodland Road, or from the western edge of the site via Mount Pleasant Road. These are the two new entrances that are being created for the site.

3.4 Infrastructure requirements – Highway Visibility, Lighting, CCTV, Services

- **3.4.1** There is no requirement for any tree removal or pruning to create adequate highway visibility. There will be no requirement for street lighting or CCTV visibility, or services close to any of the trees.
- **3.4.2** No services or other infrastructure requirements will have any impact on the retained trees.

3.5 Mitigating tree loss and new planting

3.5.1 The landscaping is being addressed in a separate plan and methodology.

3.6 Proximity of trees to structures

- 3.6.1 The impact of trees on buildings and vice versa and allowance for future growth have all been considered in the siting of the new buildings and structures. Tree size, future growth, light/shading, leaf, and fruit nuisance etc. have received due attention and are not considered to be an issue. This is due to the considerable distance of the retained trees from the development and the protection measures proposed within this report.
- **3.6.2** The structure has been placed well outside of the RPAs of trees and therefore exceeds the recommendations of BS 5837.



- 3.6.3 Overall, the processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report are adhered to at all times by the contractors e.g., the positioning of a stout fence is placed between the retained trees and all construction activities prior to commencement of any works and for it to remain intact and in position throughout the duration of the construction activities.
- 3.7 Issues to be addressed by the arboricultural method statement.
- Protective fencing to be established around the retained trees.
- Site access
- Contractor's parking, welfare facilities and storage areas
- Remedial tree work

Arboricultural Method Statement

Tree Protection throughout the Duration of Demolition and Construction Works

All the details specified in this method statement will need to be supervised by an

Arboricultural Consultant with suitable qualifications and experience.

Arboricultural Method Statement includes a Tree Protection Plan to identify:

- Trees to be retained identified with a dashed line with RPA written within it and green, blue, or grey location marker circles and the corresponding A, B or C category label.
- Protective fence positions identifying the Construction Exclusion Zones (CEZ).
- Measurements to identify fence positioning in relation to centre of tree or other known features.
- Contractor huts and storage areas

1 Construction Exclusion Zone

- 1.1 No works will be undertaken within any Construction Exclusion Zone (CEZ). The CEZs are to be afforded protection at all times and will be protected by fencing. A protective fence shall be erected prior to the commencement of any site works e.g., before any materials or machinery are brought on site, development or the stripping of soil commences.
- 1.2 The fence shall have signs attached to it stating that this is a Construction Exclusion Zone and that NO WORKS are Permitted within the fence, see Image 4 in Appendix II. The tree protection fencing may only be removed following completion of all construction works.

- 1.3 The fence is required to be sited in accordance with the Tree Protection Plan Reference AC.2021.526 TPP-01 Rev A enclosed with this method statement.
- 1.4 They must be constructed as per Figures 1 and 2 in BS 5837 2012 and be fit for excluding any construction activity, (See Appendix II). Any other fence or barrier used must be fit for the purpose.
- panels, around 3.5m long and 2 m tall. They shall be fixed into the ground on scaffold poles driven at least 1 m into the ground. They shall be supported by rear struts also secured to posts driven into the ground, see Figure 1 in Appendix II.
- **1.6** All bolts shall be secured from inside the fencing to prevent easy removal from the outside during the construction phase.
- 1.7 Where there are **existing hard surfaces**, then rubber feet can be used to support the fencing, but these rubber feet shall be secured into the ground with road pins or other robust metal pins, to prevent the fencing being moved. This stall also be secured by rear struts which are also pinned into the ground, see Figure 2 in Appendix II.
- **1.8** All tree protection fencing shall be regarded as sacrosanct and will not be removed or altered without prior written consent of the Local Authority Tree Officer.

2 Ground Protection Measures

2.1 The tree protection fencing will extend to the full extent of the RPA of all retained trees, so there is not requirement for any ground protection measures as part of this development.

3 Access Details

3.1 All access for construction vehicles will be from the south-western end of the site via Woodland Road, or from the western edge of the site via Mount Pleasant Road. These are the two new entrances that are being created for the site, as shown on the plan AC.2021.526 TPP-01 Rev A.

4 Contractors car parking

4.1 This will be on-site as shown on the tree protection plan AC.2021.526 TPP-01 Rev A.

5 Site Huts and Toilets

5.1 This will be on-site, as shown on the tree protection plan AC.2021.526 TPP-01 Rev A.

6 Storage Space

6.1 This will be on-site, as shown on the tree protection plan AC.2021.526 TPP-01 Rev A.

7 Additional Precautions

- 7.1 No storage of materials or lighting of fires will take place within any construction Exclusion Zone. No mixing or storage of materials will take place up a slope where they may leak into a Construction Exclusion Zone.
- 7.2 There shall generally be a presumption against burning on site. Where it does occur, no fires will be lit within 20 metres of any tree stem and will consider fire size and wind direction so that, no flames come within 5m of any foliage. Situations where fires are not permitted at all are:
- Where the ground is waterlogged as the heat will transfer through the water and damage tree roots significant distances away.
- During periods of drought, where there are peaty or highly organic soils, as there is a risk of underground fires occurring.
- **7.3** No notice boards, cables or other services will be attached to any tree.
- 7.4 Materials which may contaminate the soil will not be discharged within 10m of any tree stem. When undertaking the mixing of any material it is essential that, any slope of the ground does not allow contaminates to run towards a tree root area.
- 7.5 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 meters of the trunk of any retained trees. In the event of any accident of spillage in or adjacent to the protected trees the contractor/staff is to immediately stop work in the vicinity and inform the project arboriculturist.

7.6 In the event of spillage, the area is to be secured with sandbags on the line of the tree protection area and measures taken to drain/soak any spillage away from the protected area.

8 Demolition

8.1 There will be no demolition within any of the RPAs of retained trees, so there will not need to be any special measures or precautions undertaken other than the tree protection measures as detailed in the report and in AC.2021.526 TPP-01 Rev A, which shall be installed prior to any site works commencing.

9 Hard Surfaces within the RPA

9.1 There is no construction of any new hard surfaces within the RPA of any retained trees, so there is no requirement for any no-dig surface construction method statements.

10 Construction within the RPA (No-dig)

10.1 There is no construction within the RPA of any retained trees, so there is no requirement for any construction method statements to address this issue.

11 Foundation Designs

11.1 As there is no construction of foundations within the RPA of any retained trees there will be no requirement for any alternative foundation designs.

12 Remedial Tree Works

- 12.1 Tree works (see schedule at Appendix VII) will be undertaken in one phase, and this will be undertaken prior to any construction or demolition works and prior to the installation of any tree protection measures. All tree works are to be carried out in accordance with BS 3998 (British Standard Recommendations for Tree Work 2010) unless otherwise specified with clear justification for any deviation from the British Standard.
- 12.2 There are six trees that are proposed for removal as part of this applications. These are two oak trees T12 and T13 that are to be removed for the access road, and an ash tree T22 to be removed for one of the apartment blocks. There is also a U category oak tree that is to be removed due to its poor condition. G05 some self-set saplings and scrub will be removed.
- 12.3 For the additional grave space there are only two individual trees that are proposed for removal as part of this application. These are T45 and T46 both semi mature Leyland cypress trees to make way for the new access. Additionally, most of G1, comprising of scrub woodland predominantly hawthorn and gorse with some ash saplings will be removed to make way for new grave spaces.

- 12.4 If at any time additional pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 Recommendations for Tree Works 2010, unless otherwise specified with clear justification for any deviation from the British Standard.
- 12.5 Ideally tree surgery work and shrub and hedge removal should take place outside of the bird nesting season which is officially from February to August. As this is small-scale works with a relatively low cost this should be undertaken as soon as any planning permission is obtained so that it is completed before February and does not hold up any site works.
- 12.6 Tree work can be done in the bird nesting season but would require a watching brief of 20 minutes to check for bird activity and cannot proceed if bird nests are found to be present.

13 Use of Herbicides

13.1 It is not planned to use any herbicide in the proposed development unless they are used in the preparation of any no-dig construction. However, if any is required it shall be systemic, spot applied, and mixed according to manufacturer's recommendations.

14 Contingency Plan

14.1 Water is readily available on site and will be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact an arboriculturist for advice.

15 Responsibilities

- 15.1 It will be the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are adhered to always and that a monitoring regime regarding tree protection is adopted on site.
- 15.2 The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.
- 15.3 The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.
- 15.4 The fencing, signage and ground protection measures must be maintained in position at all times and shall be checked on a regular basis by an on-site person designated that responsibility.
- 15.5 The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site or those immediately adjacent to it.

16 Arboricultural Supervision

16.1 Since BS5837 was amended in 2012 site supervision has been identified as a key element of the process of protecting trees during construction. It requires that there be "an auditable system of arboricultural site monitoring. This should extend to arboricultural supervision whenever construction and development activity is to take place within or adjacent to any RPA."

16.2 Site Supervision

- **16.2.1** A site agent must be nominated to be responsible for all arboricultural matters on site. They must be nominated for each phase of work if demolition and construction contracts are to be awarded separately. The agent(s) must:
- Be present on site for most of the time.
- Be aware of the arboricultural responsibilities. This will require a site briefing/meeting between the agent and arboricultural consultant prior to the commencement of each phase of works.
- Have the authority to stop any work that is causing or has the potential to cause harm to any trees.
- Be responsible for ensuring that all site operatives are aware of their responsibilities towards trees on the site and the consequences of failure to observe these responsibilities.
- Make immediate contact with the local authority and/or a retained arboriculturist in the event of any tree related problems occurring, whether actual or potential
- > Contact details for Arbor Cultural Ltd are provided within this report.
- Contact details for local authority tree officer are;

Tree officer Mr Robin Hellier

Address. Epping Forest District Council Civic Offices, 323 High Street, Epping,

CM16 4BZ

Main Switchboard 01992 564000

Email <u>trees@eppingforestdc.gov.uk</u>

16.3 Arboricultural Consultant

- **16.3.1** A suitably qualified arboricultural consultant shall be appointed to oversee development works and liaise with the council and the developer and contractors during the construction phase to ensure compliance with these guidelines.
- **16.3.2** Note: Failure to fulfil planning conditions or breaches of statutory legislation can lead to delays due to "stop notices" and can lead to the prosecution of contractors and company directors.
- **16.3.3** Adequate site supervision can protect the developer from delays, stop notices, wasted expense and criminal prosecution.
- 16.3.4 The arboriculturalist will arrive at the site, check in at the site office and be safely escorted around the site by the site agent, checking the maintenance of tree protection measures. Routine visits will generally be unannounced. However, the arboriculturist will also visit subject to advance notification and agreement to supervise any agreed works within the RPA.

- 16.3.5 Monitoring shall involve a schedule of routine visits. The frequency of these visits will vary depending on the size of the proposed development and the site-specific constraints. For private single residential developments, this will normally involve monthly supervision but for larger sites with multiple structures this could be weekly or fortnightly. This will need to be agreed with the local tree officer.
- 16.3.6 These visits shall include a pre-commencement meeting to ensure that all tree protection measures have been implemented and a sign-off sheet at the end of the development. Each visit will be accompanied by a small report detailing the findings identifying any actions and addressing any issues that have arisen. This is to provide ongoing liaison between the local planning authority (LPA), and all personnel involved in the site development. Any defects requiring rectifying must be notified to the site agent the client and the LPA by email as soon as possible.
- **16.3.7** Emergency situations will be notified by phone calls. Appropriate records will be kept and made available to the LPA if required to show evidence of the site monitoring. An example of this is shown in Appendix V.
- 16.3.8 Supervision will not require the arboriculturist to be present throughout all operations, to ensure that all tasks are carried out as per the approved methodology. They will be required at key times during any planned or unplanned incursions into the tree protection areas. This supervision will require the arboriculturist to attend site, if not for the whole task, then long enough to ensure that all the arboricultural objectives are fully addressed. Where tasks are ongoing, provided that the arboriculturalist is satisfied that the method statement is being followed and after an appropriate briefing the supervision may be reduced to telephone or email contact between the site supervisor and the arboriculturist.

16.4 The critical stages for site supervision are as follows:

- Prior to the start of construction, all tree protection measures as described must be checked as appropriate and signed off by an arboriculturalist. There will be a precommencement meeting with all party attendance, including LPA tree officer, to ensure that there are no unresolved issues.
- At predetermined activity related times as specified in Table 1. The tree protection measures as described must be checked as being retained and signed off by an arboriculturalist. All defects to be reported to the client and LPA.
- The potentially damaging activity to the trees must be observed by a suitably qualified arboriculturalist to ensure that the method statements are adhered to, and the damage is kept to an absolute minimum. All defects to be reported to the client and LPA.
- At periodic intervals during the construction process, the tree protection measures must be checked as being retained and signed off. All defects to be reported to the client and LPA.
- V At the end of the construction phase, an arboricultural consultant must check that no damage has occurred to the trees and any remedial measures, e.g., de-compaction of soil must be recommended as required and remedial measures undertaken as soon as practicable. The outcome shall be reported to the client and local authority.

16.4.1 The site supervision visits will be documented and circulated to the site agent, developer, architect, and Local Planning Authority as appropriate. The reports will detail the date of the visit, the operations being supervised and any issues that require action to meet the aims and objectives of this method statement.

Table 1 Site Supervision Programme

	Activity	Comments
1	Inspection of all tree protection measures to	Report any defects or
	ensure that it is secure and fit for purpose prior to	damage to the client and
	work commencing. This will need to be signed off	the LPA and ensure that
	by the arboriculturalist.	they are made good.
2	Pre-commencement meeting with all party	Report any defects or
	attendance, including LPA tree officer, to ensure	damage to the client and
	that there are no unresolved issues. This will need	the LPA and ensure that
	to be signed off by the arboriculturalist.	they are made good.
3	Monthly monitoring of site and tree protection	Report any defects or
	measures. This will need to be signed off by the	damage to the client and
	arboriculturalist.	the LPA and ensure that
		they are made good.
Final	Completion of work, removal of all tree protection	Report any defects or
	measures and inspection of trees and root zone for	damage to the client and
	any damage. Any compaction of the soil must be	the LPA and ensure that
	rectified with remedial measures and damaged	they are made good.
	branches taken back to suitable growth points with	
	a clean cut. This will need to be signed off by the	
	arboriculturalist.	

17 Landscaping and Replacement Planting

17.1 The landscaping is being addressed in a separate plan and methodology.

References and Bibliography and Glossary of Terms

References and Bibliography

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- National House Building Council, (1992) Building near trees. NHBC Standards, Chapter 4.2
- Town & Country Planning Act Part VIII (1990). Issued by the Secretary of State for the Environment, HMSO.

Glossary of Terms

Bacterial canker Has lesions on the stems that can exude a gum like exudate that carries

the bacteria.

Brash Thin wood removed from trees.

Chlorosis/Chlorotic. An abnormal yellowing or blanching of the leaves due to lack of

chlorophyll.

Canopy/Crown Foliage bearing part of the tree.

Crown lifting. The removal of the lower branches of the tree.

Crown thinning. The complete removal of selected limbs/lateral branches to thin the

density of the crown.

Dysfunctional wood Woody tissues no longer function.

Epicormic growth Young, vigorous shoots arising from the external tissues of a stem.

Epicormic growth is usually induced if a limb is removed or is broken off

and the light factor changes (sprouts) or if a woody plant is coppiced or

pollarded.

Flush cut A pruning cut close to the parent stem which removes part of the branch

bark ridge.

Heartwood The heartwood is the dark area in the centre of the tree.

Lateral branch A side branch which arises from a main stem.

Mulch A layer of bulky organic material placed around the stem.

Occlusion (Occluded) The process of wound wood closing a wound.

Parasitic Organisms that live off other organisms, or hosts, to survive

Pathogen A micro-organism which causes disease in another organism.

Reaction Wood Additional wood that is put on by a tree to address increased loads.

Reaction Zone An area where reaction wood is formed.

Glossary of Terms Continued

Saprotrophic Organisms that at obtain their nutrition from non-living organic materials.

Soft rot A kind of wood decay in which a fungus degrades cellulose within the cell

walls, without causing overall degradation of the wall.

Stem Principal above ground structural component(s) of a tree that supports

its branches.

White rot Various kinds of wood decay in which lignin, usually together with

cellulose and other wood constituents is degraded.

Wound Injury in a tree caused by a physical force.

Wound Wood Additional wood that it put on by a tree is reaction to damage or

wounding, with the aim of healing over the wound.



Appendix I Abridged CV; Qualifications and Experience

IS Tom Thompson BSc (Hons Arb), MSc eFor, MArborA Cert Arb

1 Qualifications

Subjects	Level	Dates	
Bond Solon Expert Witness Training (CUBS)	Pass		2017
International Society of Arboriculture Certified Arborist	Pass	May	2012
Professional Tree Inspection Course (LANTRA)	Pass	April	2011
BSc Hons Arboriculture	(2.1)	2008	2009
FdSc Arboriculture	Distinction	2004	2007
MSc. Environmental Forestry (MSc eFor)	Pass	2001	2002
BSc. Hons Env Science (Conservation Management)	(2.2)	1997	2000
Environmental Studies	Access Course	1996	1997
Forestry & Practical Environmental Skills	NVQ I & II	1996	1997

2 Career Summary

Tom Thompson is a professional member of the Arboricultural Association (AA), an International Society of Arboriculture (ISA) Certified Arborist, Chairman of the Consulting Arborist Society (CAS), and an associate member of the Institute of chartered Foresters (ICF).

He was worked in the private and public sector, before setting up Arbor Cultural in 2014, to promote the value and benefits of trees.

He currently heads up the BIM4Arb group promoting Building Information Modelling (BIM) to the arboricultural industry.

He then spent five years working in new woodland creation, firstly for ADAS in the National Forest and then for 18 months with the Forestry Commission in Cobham, Kent. During this time, he began a degree in Arboriculture through Myerscough College.

This course enabled him to make the transition from forestry to arboriculture where he spent 5 years as a tree officer, firstly at St Albans and then more recently at King's Lynn and West Norfolk. He joined Connick Tree Care in May 2012, where he worked as their Principal Arboricultural Consultant.

Having worked as the principal tree consultant at Connick tree care for two years he left to established Arbor Cultural Ltd. In 2014, with the intent to provide professional advice in all aspects of tree consultancy, to enable clients to obtain planning permission, house purchase completion, and successfully address all tree related health and safety matters. He is passionate about trees, and he is keen to promote the economic value and benefits of the urban forest.

3 Areas of Competence

- Tree hazard risk assessments for tree owners
- Decay assessment and mapping
- Mortgage and Insurance reports to assess the influence of trees on buildings.
- Pre-development site surveys and arboricultural implication studies
- Tree management reports to prioritise maintenance programs.
- > Tree related insurance claims
- Diagnosis of tree disorders
- Arboricultural Expert Witness

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4 Selected Continual Professional Development

Training	Provider	Date	
Digital Integration Workshop	Landscape Institute	Jan	2020
Tree Planting conference	Palmstead Nursery	Jan	2020
Climate Change	Westminster Briefing	Dec	2019
Subsidence Report Writing	Consulting Arborist Society	Nov	2019
London Plane Conference	London Tree Officer Association	July	2019
VALID Tree Inspection Procedures	David Evans	June	2019
Expert Witness Conference	Bond Solon	Nov	2018
AA Registered consultant Workshop	Arboricultural Association	Nov	2018
iTree Seminar	Barcham Nursery	Nov	2018
Tree Safety and Beyond	MTOA & Frank Rinn	Sept	2018
Claus Mattheck Workshops	Sorbus	June	2018
Expert Witness Conference	Bond Solon	Nov	2017
Decay Workshops	MTOA & Frank Rinn	Sept	2017
Mortgage Report Writing	Lantra and CAS	June	2017

5. Professional Affiliations

Arboricultural Association (AA) Professional Member	since 2008
International Society of Arboriculture (ISA) Certified Arborist	since 2012
Consulting Arborists Society (CAS)	since 2014
Institute of Chartered Foresters Associate Members	since 2018
Royal Forestry Society	since 1999

Appendix II Specifications for Tree Protection Measures

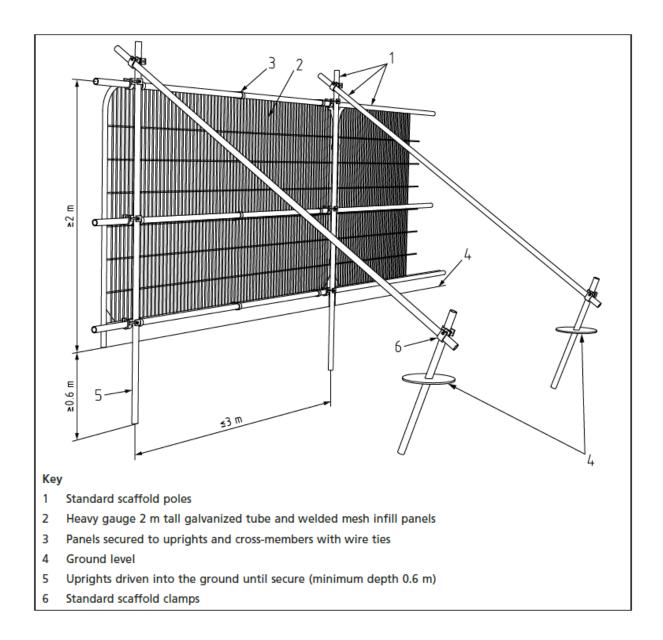


Figure 1 Default Tree Protection Fencing Design for All Soft Ground (BS5837 2012)

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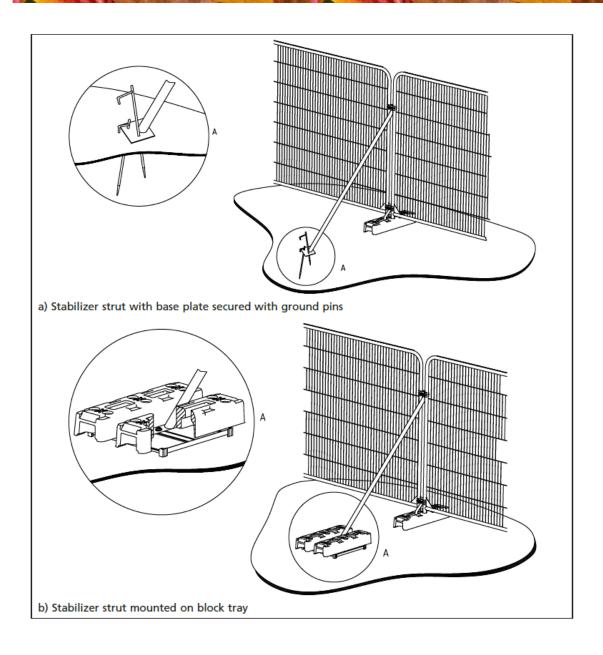
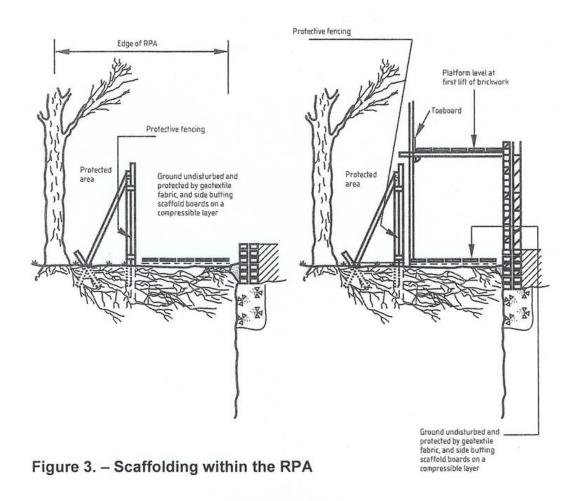


Figure 2 Tree Protection Fencing Design for Hard Surfaced Areas Only (BS5837 2012)

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This area has been identified as a Tree Protection Zone. No Access is to be Permitted

Do Not Enter Without Specific Instruction from the Tree Officer or Project Arboricultural Consultant

Figure 4 Construction Exclusion Zone Signage

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Appendix III Key to BS5837 Tree Survey Records

Tree No. Tree numbers applied as T1 etc. to each tree are as per the Tree Survey Plan and subsequent drawings, where trees occur as a cohesive group these are suffixed with a G, they are assessed as such, with all size data being given as mean figures unless otherwise stated. Any trees on-site and off-site that are appropriate to be included but are omitted from the topographical survey supplied are included in the schedule, though their positions are shown only indicatively.

The measurement conventions are as follows.

- a) Height, crown spread, and crown clearance are recorded to the nearest half metre (crown spread is rounded up) for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.
- b) Stem diameter is recorded in millimetres, rounded to the nearest 10 mm (0.01 m).
- c) Estimated dimensions (e.g., for off-site or otherwise inaccessible trees where accurate data cannot be recovered) should be clearly identified as such (e.g., suffixed with a "#").

Height (m) Tree height measured in metres.

Stem Diameter (mm) Stem diameter in millimetres measured at 1.5m above ground

level. Where the stem is divided below 1.5m, measurement is

taken as directed by BS 5837 Annex C.

Branch Spread (m) Radial crown spread in metres, measured for each of the four cardinal points of the compass from the centre of the trunk.

Height of Lowest Branch (m)

& Direction of growth Height above ground in metres of the lowest branch and use of the 4 cardinal points of the compass.

Life Stage:

Υ	Young	A recently planted or establishing tree that could be transplanted without
		specialist equipment, i.e., up to 12-14cm stem diameter.
SM	Semi-Mature	An establishing tree which is still exhibiting apical dominance and has
		significant growth potential.
EM	Early Mature.	A tree that has reaching its ultimate potential height and has lost.
		its apical dominance, and whose growth rate is slowing down but will still
		has potential for a significant increase in stem diameter and crown
		spread and has a significant safe life expectancy remaining.
М	Mature	A tree with limited potential for any increase in size but with reasonable
		safe useful life expectancy.
ОМ	Over Mature	A senescent or moribund specimen with a limited safe useful life
		expectancy.
V	Veteran	A tree of great age for species with important biological, aesthetic,
		conservation, or cultural value. Trees are in a state of decline due to old

age.

Condition of Trees

Physiological Condition (P) An assessment of the physiological condition (i.e., health/vitality) of the tree categorised into:

Good A tree in a healthy condition with no significant problems

Fair A tree generally in good health with some problems that can be remediated.

Poor A tree in poor health with significant problems that cannot be remediated.

Dead A tree without enough live material to sustain life.

Structural Condition (S) An assessment of the structural/safe condition of the tree

categorised into:

Good A tree in a safe condition with no significant defects.

Fair A tree in a safe condition at present but with defects or with significant defects

that can be remediated.

Poor A tree with significant defects that cannot be remediated.

Notes related to both physiological and structural condition follow the

categorization in order support the statement and give greater detail on the true

quality and value of the tree.

Preliminary Management Recommendations

These may include further investigations for the presence or extent of decay or climbed inspections, ivy removal or pruning works when access is a non-moveable aspect etc.

(NB this is not intended to be a specification for tree work and further advice maybe

required prior to implementation). Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practicable.

Estimated Remaining Life Contribution

This is an estimate of the remaining life contribution in years that the tree or group of trees is expected to have based on species, condition on the site in its current context. The following bands are used:

- <10 Tree is dead or dying and unlikely to contribute beyond 10 years.
- 10+ Tree is assessed as being able to contribute to the site for 10+ years.
- 20+ Tree is assessed as being able to contribute to the site for 20+ years.
- 40+ Tree is assessed as being able to contribute to the site for 40+ years.

Quality and Value Category Grade

U	Trees that cannot be realistically retained	Dark red
Α	Those trees of HIGH value quality to retain	Light green
В	Those trees of MODERATE quality to retain	Mid blue
С	Those trees of LOW quality to retain Grey	

Deadwood Categorisation

Minor Deadwood Less than 50mm in diameter or less than 3m in length

Major Deadwood Greater than 50mm in diameter or greater than 3m in length

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AC.2021.526 Land south of Chigwell Cemetery, Chigwell, Essex, IG7 5PS BS5837 Report & AIA 20th November 2021

Appendix IV Images



Image 1 T36-38 along the site boundary



Image 2 T42-45, along the site boundary

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Image 3 T45-60, along site boundary



Image 4 T57-71, along site boundary with G2 in the foreground on the right

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Image 5 T72 a hornbeam just inside the current site boundary



Image 6 T73 an ash tree exhibiting signs of ash dieback

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Image 7 G3, a cypress hedge along the right side, in the adjacent garden



Image 8 H1 a cypress hedge in the cemetery

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Image 9 T76-78 and T80 in the cemetery



Image 10 G1, running along the edge of the northern boundary of the current site,

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Image 11 G1, running along the edge of the northern boundary of the current site,



Image 12 G5, running along the southern edge of the site,

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Image 13 Scrub and brambles around T17 to T21.



Image 14 Scrub and brambles around T17 to T21.

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Image 15 T23 on the adjacent land behind the farm huts.



Image 16 Existing entrance into Woodland Road.

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Appendix V Arboricultural Supervision Recording Template

Client:		Planning Ref:	
Local Authority:		Date:	
Site Address			
Proposal:			
Visit Checklist	Y/N		Y/N
Tree Protection Fencing in place		Tree protection as approved	
Ground Protection in place		Ground Protection as approve	d
Tree or Ground protection breached		Trees damaged	
Site Agent briefed by AC			
AC briefed by Site Agent			
LPA informed			
Remedial action required			
Comments			
Recommendations			
Outcome			
1			
2			
3			
4			
5			

Date of Survey - 1st November 2021

		Stem		Tree	Ult					FSB		,		BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own I	Heigh	nt		FSB	Life	Life		Cai	nopy	Spre		Struct		Recommende	
	Species	(mm)	No	(m)	(m)		E, S,			(m)		Stage				E, S,	_		Condition	Comments	d Work	D (m)
	White willow <i>Salix</i>	300;160; 110	3	12	14				2			SM		B2	5		5		P Good, S Fair	Multi stemmed tree with tight unions and included bark in a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	No Action Required at this time	
	alba White willow Salix	450;230;				2	2	2		•	-		40+			5			P Good, S	Multi stemmed tree with tight unions and included bark in a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose. Forth		3.6
	Ash Fraxinus excelsior	420 210;100	2	12	16	3	3	3	3	1	1	SM	40+	B2 B2	5	4	4		Fair P Good, S Fair	stem was cut down. Fused stems. In a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR NAR	2.4
Т4	White willow Salix alba	410	1	9	14	4	4	4	4			SM	40+	B2	4	5	4	2	P Good, S Fair	Multi stemmed tree with tight unions and included bark in a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR	4.8

Date of Survey - 1st November 2021

		Stem		Tree	Ult					FSB				BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own	Heigh	nt		FSB	Life	Life	5837	Ca	пору	Spre	ead	Struct		Recommende	Annex
	Species	(mm)	No	(m)	(m)		E, S,	_		(m)		Stage				, E, S,	-			Comments	d Work	D (m)
Т 5	Ash Fraxinus excelsior	160	1	10	16	4	4	4	4	1	1	SM	40+	B2	4	4	4	4	P Good, S Good	No significant defects. In a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR	1.2
	Oak Quercus robur	200	1	9	16	2	2	2	2	1	-	SM	40+	B2	4	4	4	4	P Good, S Good	No significant defects. In a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR	2.1
	White willow <i>Salix</i> alba	240, 250	2	9	16	3	3	3	3	1	1	SM	40+	В2	5	5	5	5	P Good, S Fair	Multi stemmed tree with tight unions and included bark in a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR	4.2
Т8	Oak Quercus robur	250	1	8	16	3	3	3	3	1		SM	40+	В2	4	4	4	4	P Good, S Fair	No significant defects. In a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose. Asymmetrical crown,	NAR	2.4
Т9	Oak Quercus robur	260	1	8	16	2	2	2	2	ı	-		40+	В2	2	2	6	2	P Good, S Fair	leaning to the south. In a field boundary group with an understory hedge of blackthorn, hawthorn and guelder rose.	NAR	3

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		Stem		Tree	Ult				_	FSB		i vey -		BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	l cr	own	Heigh	. +	Hgt	ECR	Life	Lifo	5837	Car	nony	Spre	hee	Struct		Recommende	
	Species	-	No	_	(m)			W (m						Cat			, W (Condition	Comments	d Work	D (m)
IO NO	Species	(mm)	NO	(m)	(m)	IN,	E, 3,	VV (11	יי ו	(m)	DIL	Stage	ЕХР	Cat	IN,	, E, 3,	, vv (1	111 <i>)</i>	Condition	Comments	a work	D (m)
	Oak																			Tree in poor health with	Remove an	
	Quercus																		P Poor, S	significant deadwood	plant a	
T 10	robur	200	1	16	9	2	2	2	2	_	_	SM	<10	υ	3	2	4	2	Poor	and die back.	replacement	2.1
			_			_			H										1.00.	Asymmetrical crown.	- opiacoment	
																				In a field boundary		
																				group with an		
	Oak																			understory hedge of		
	Quercus																		P Good, S	blackthorn, hawthorn		
T 11	robur	280	1	11	16	4	2	2	2	-	-	SM	40+	B2	2	3	5	4	Good	and guelder rose.	NAR	3
																					Remove to	
	Oak																				facilitate the	
	Quercus																		P Good, S		proposed	
T 12	robur	270	1	10	16	6	6	6	6	-	-	SM	40+	B2	4	4	4	4	Good	Along rear fence	development Remove to	3
	Oak																				facilitate the	
	Quercus																		P Good, S	Significant damage to	proposed	
T 12	robur	270	1	9	16	3	3	3	3	3	w	SM	40+	C2	4	3	4	4	Poor	the buttress roots.	development	3
1 13	Oak	270	1	9	10	3	3	3	3	3	VV	SIVI	40+	C2	4	3	4	4	P001	the buttless roots.	development	3
	Quercus																		P Good, S	Open grown tree on		
T 14	robur	260	1	8	12	2	2	2	2	2	w	SM	20+	В2	4	3	4	5	Good	edge of hedge	NAR	2.7
			_	,								-								Open grown tree on		
																				edge of hedge.		
	Oak																			Cavity in stem and root		
	Quercus	170, 220,																	P Fair S	damage and dieback		
T 15	robur	160	3	6	10	2	2	2	2	2	S	SM	40+	C2	4	3	4	4	Poor	evident.	NAR	3.9
	Oak																					
	Quercus																		P Good, S			
T 16	robur	120	1	7	16	3	3	3	3	-	-	EM	20+	B2	3	3	3	3	Good	No significant defects	NAR	1.5
	Hawthorn																					
																			D Eair C	Multi stemmed tree		
T 17	Crataegus	00# 4	6	7	,	,	,	,	,			CRA	ا ۱۸۸۰		2	,	,	,	P Fair S		NAD	2.4
11/	monogyna	80# Ave	6	7	7	2	2	2	2	-	-	SM	40+	C2	3	3	3	3	Fair	with a sparse top	NAR	2.4

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		Stem		Tree	Ult					FSB				BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own	Heigh	nt	Hgt	FSB	Life	Life	5837	Ca	nopy	/ Spr	ead	Struct		Recommende	
	Species	(mm)	No	(m)	(m)		E, S,	_		(m)		Stage				, E, S	-			Comments	d Work	D (m)
		, ,				<u> </u>	Ī	Ì	ĺ			0 .						Ĺ				
	Hawthorn																					
	Crataegus																		P Good, S	Twin stem with included		
T 18	monogyna	130, 130	2	6	10	2	2	2	2	-	-	SM	40+	B2	2	3	2	3	Fair	bark	NAR	2.1
	Birch																			Lean		
	Betula 					_	_	_								_	l _		P Good, S	Mechanical damage 1-		
T 19	pendula	180	1	10	14	2	2	2	2	-	-	SM	40+	B2	3	5	3	1	Fair	1.5m on west side. Basal and epicormic	NAR	2.1
																				growth		
	Goat willow																			Lean to the west		
	Salix																		P Good, S	Pollard with decay in		
T 20	caprea	240	1	6	6	٥	0	0	o	_	_	SM	10+	C2	3	2	3	5	Poor	main stem	NAR	2.4
	capica	240	_		 	۲	۲	Ť	Ť			3111	10.		Ť		Ť	Ť	1 001	mani stem	TV/ CI	
	Hawthorn																			Open grown tree with		
	Crataegus																		P Good, S	multi stems and		
T 21	monogyna	250, 120	2	6	10	2	2	2	2	-	-	SM	40+	C1	3	2	3	3	Fair	included bark	NAR	3.6
																					Remove to	
	Ash																				facilitate the	
	Fraxinus																		P Good, S		proposed	
T 22	excelsior	180	1	7	16	2	2	2	2	-	-	SM	40+	B1	3	3	2	3	Good	No significant defects	development	1.5
	Oak																		D C C			
T 22	Quercus	250#		•	4.0	١.	١.	١,	ا ا			C. A.	40.	D4		_	_ ا	_	P Good, S		NAD	
1 23	<i>robur</i> Leyland	350#	1	8	16	4	4	4	4	-	-	SM	40+	B1	4	6	6	6	Good	No significant defects	NAR	4.2
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 24	leylandii	580	1	14	20	0	0	2	0	_	_	SM	40+	B1	4	4	4	4	Good	beyond boundary	NAR	6
	Leyland		_						Ť								Ė		1000	Seyona sounaany		
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 25	leylandii	440	1	12	20	0	0	2	0	-	-	SM	40+	B1	2.5	2.5	2.5	2.5	Good	beyond boundary	NAR	4.8
	Leyland																					
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 26	leylandii	390	1	12	20	0	0	2	0	-	-	SM	40+	B1	2.5	2.5	2.5	2.5	Good	beyond boundary	NAR	4.2

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		Stem		Tree	Ult					FSB				BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own l	Heigh	nt	Hgt	FSB	Life	Life	5837	Ca	nopy	Spr	ead	Struct		Recommende	Annex
ld No	Species	(mm)	No	(m)	(m)	N,	E, S,	W (m	1)	(m)	Dir	Stage	Ехр	Cat	N,	, E, S	, W (m)	Condition	Comments	d Work	D (m)
	Leyland																					
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 27	<i>leylandii</i> Leyland	400	1	12	20	0	0	2	0	-	-	SM	40+	B1	3	3	3	3	Good	beyond boundary	NAR	4.2
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 28	leylandii	310	1	12	20	0	0	2	0	_	_	SM	40+	B1	2	2	2	2	Good	beyond boundary	NAR	3
	Leyland	010				_	Ť		Ť								T -				1	
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 29	leylandii	430	1	12	20	0	0	2	0	-	-	SM	40+	B1	2.5	2.5	2.5	2.5	Good	beyond boundary	NAR	4.5
	Leyland																			No simulfinant defeate		
	cypress																		P Good, S	No significant defects. Approximately 1.5m		
T 20	Cupressus × leylandii	340	1	12	20	0	0	2	0	_	_	SM	40+	B1	2	2	2	2	· ·	beyond boundary	NAR	3.6
1 30	Leyland	340	1	12	20	U	U		U	-	-	SIVI	40+	DI			 _	-	Good	beyond boundary	INAK	3.0
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 31	Ieylandii	350	1	14	20	0	0	2	0	-	-	SM	40+	В1	2	2	2	2	Good	beyond boundary	NAR	3.6
	Leyland																					
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 32	<i>leylandii</i> Leyland	370	1	14	20	0	0	2	0	-	-	SM	40+	B1	2.5	2.5	2.5	2.5	Good	beyond boundary	NAR	4.2
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 33	leylandii	410	1	14	20	0	0	2	0	_	_	SM	40+	В1	2.5	2.5	2.5	2.5		beyond boundary	NAR	4.5
	Leyland		_	<u> </u>					Ħ							T	T			, , , , , , , , , , , , , , , , , , , ,		
	cypress																			No significant defects.		
	Cupressus ×																		P Good, S	Approximately 1.5m		
T 34	leylandii	580	1	14	20	0	0	2	0	-	_	SM	40+	B1	3	3	3	3	Good	beyond boundary	NAR	6
	Leyland																			No significant defect		
	cypress																		D C	No significant defects.		
	Cupressus ×	FF0	4	1.4	20	_		,				CB4	40.	D4	,	,	,	,	P Good, S	Approximately 1.5m	NAB	[]
1 35	leylandii	550	1	14	20	0	0	2	0	-	-	SM	40+	B1	3	3	3	3	Good	beyond boundary	NAR	5.1

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		Stem		Tree	Ult					FSB		,		BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own	Heigh	nt	Hgt	FSB	Life	Life	5837	l _{Ca}	nopy	/ Spr	ead	Struct		Recommende	Annex
	Species	(mm)	No	(m)	(m)		E, S,			(m)		Stage				, E, S	-			Comments	d Work	D (m)
Т 36	Leyland cypress Cupressus × leylandii	370	1	14	20	1	1	4	1	-	_	SM	40+	B1	3	3	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.2
Т 37	Leyland cypress Cupressus × leylandii	420	1	14	20	1	1	4	1	1	-	SM	40+	B1	3	1	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.5
Т 38	Leyland cypress Cupressus × leylandii	470	1	13	20	1	1	4	1	ı	ı	SM	40+	B1	3	3	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	5.1
Т 39	Leyland cypress Cupressus × leylandii	320	1	13	20	1	1	4	1	1	ı	SM	40+	B1	3	2	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
T 40	Leyland cypress Cupressus × leylandii	260	1	13	20	1	1	4	1	1	ı	SM	40+	B1	3	1	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3
T 41	Leyland cypress Cupressus × leylandii	370	1	13	20	1	1	4	1	-	-		40+	B1	3	2	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.9

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		Stem		Tree	Ult					FSB		,		BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	l cr	own	Heigł	nt	Hgt	FSB	Life	Life	5837	l _{Ca}	nopy	, Snr	ead	Struct		Recommende	Annex
	Species	(mm)	No	(m)	(m)		E, S,	_		(m)		Stage				, E, S				Comments	d Work	D (m)
	Leyland cypress Cupressus × leylandii	390	1	13	20	1	1	4	1	-	-	SM	40+	B1	3		3	3		No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.2
	Ash Fraxinus excelsior	90	1	8	16	1	1	1	1	1	-	SM	40+	C1	1	1	1	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	1.2
T 44	Leyland cypress Cupressus × leylandii	180	1	10	20	0	0	2	0	ı	ı	SM	40+	B1	2	3	2	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	1.8
T 45	Leyland cypress Cupressus × leylandii	410	1	11	20	1	1	4	1	1	1	SM	40+	B1	3	3	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.2
T 46	Leyland cypress Cupressus × leylandii	360	1	11	20	0	0	4	0	1	1	SM	40+	B1	3	2	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
T 47	Hornbeam, Carpinus betulus	120	1	10	16	0	0	0	0	ı	-		40+	B1	2	2	2	1	P Good, S Fair	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	1.8

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		Stem		Tree	Ult					FSB		i vey -		BS					Phys &			RPA
T	T		Chama			ر ا		l laiak			FCD	1:6-	1:6-		C -		Cmm		-		D	
Tree		Diam	Stem	Hgt	Hgt		own	_		_	FSB			5837		nopy	-		Struct		Recommende	Annex
Id No	Species	(mm)	No	(m)	(m)	N,	E, S,	W (m	1)	(m)	Dir	Stage	Exp	Cat	N,	E, S,	. W (I	m)	Condition	Comments	d Work	D (m)
																				No significant defects.		
																				Approximately 1.5m		
	Hornbeam,																			beyond boundary		
	Carpinus																		P Good, S	Mutual crown		
T 48	betulus	130	1	10	16	0	0	0	0	_	_	SM	40+	B1	2	1	2	2	Fair	suppression	NAR	1.5
<u> </u>	2000.00		_			_		_	Ť			0				_				Suppression		
	Ash																			No significant defects.		
	Fraxinus																		P Good, S	Approximately 1.5m		
T 49	excelsior	110	1	8	16	1	1	1	1	•	-	SM	40+	C1	2	3	2	3	Good	beyond boundary	NAR	1.2
	l																			No significant defects.		
	Leyland																			Approximately 1.5m		
	cypress																		D.C. J.C.	beyond boundary		
	Cupressus ×	250				١,		١.	ا ٍ ا			63.4		D4	_		١.	_	P Good, S	Mutual crown		
1 50	leylandii	250	1	9	20	0	0	4	0	-	-	SM	40+	B1	3	3	3	2	Good	suppression	NAR	2.1
	Ash																			No significant defects.		
	Fraxinus																		P Good, S	Approximately 1.5m		
T 51	excelsior	100	1	10	13	1	1	1	1	-	_	SM	40+	C1	3	1	3	1	Fair	beyond boundary	NAR	1.2
<u> </u>									Ħ			<u> </u>					Ť	_				
																				No significant defects.		
	Leyland																			Approximately 1.5m		
	cypress																			beyond boundary		
	Cupressus ×																		P Good, S	Mutual crown		
T 52	leylandii	460	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	3	3	2	Good	suppression	NAR	4.8
																				No significant defects.		
	Leyland																			Approximately 1.5m		
	cypress																			beyond boundary		
	Cupressus ×																		P Good, S	Mutual crown		
T 53	leylandii	460	1	13	20	٥	0	4	ا ه	_	_	SM	40+	B1	3	2	3	3	Good	suppression	NAR	4.8
1 23	regiunun	700		13	20				U	_		3141	701	DI	,				300u	Juppi Coolon	137-111	7.0

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		Stem		Tree	Ult					FSB		•		BS					Phys &			RPA
Tree	Tree	Diam	Stem	Hgt	Hgt	Cr	own	Heigh	nt	Hgt	FSB	Life	Life	5837	Ca	nopy	Spr	ead	Struct		Recommende	Annex
ld No	Species	(mm)	No	(m)	(m)	N,	E, S,	W (n	1)	(m)	Dir	Stage	Ехр	Cat	N,	, E, S	, W (m)	Condition	Comments	d Work	D (m)
	Leyland cypress Cupressus × leylandii	420	1	13	20	0	0	4	0	-	1	SM	40+	B1	3	3	2	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.5
	Leyland cypress Cupressus × leylandii	320	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	2	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
	Leyland cypress Cupressus × leylandii	370	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	2	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.9
	Leyland cypress Cupressus × leylandii	380	1	13	20	0	0	4	0	-		SM	40+	B1	3	3	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.2
	Leyland cypress Cupressus × leylandii	340	1	13	20	0	0	4	0	ı	-	SM	40+	B1	3	1	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
	Leyland cypress Cupressus × leylandii	320	1	13	20	0	0	4	0	-	-	SM	40 +	B1	3	3	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6

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		Stem		Tree	Ult					FSB		Life	Life	BS					Phys &			RPA
Tree	Tree Species	Diam (mm)	Stem	Hgt	Hgt	Cr	own	Heigh	nt	Hgt				5837	Ca	nopy	/ Spr	ead	Struct		Recommende	Annex
Id No			No	(m)	(m)	N,	N, E, S, W (m)		ո)	(m)	Dir	Stage	Ехр	Cat	N	, E, S	, w (m)	Condition	Comments	d Work	D (m)
	Leyland cypress Cupressus × leylandii	290	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	2	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3
	Leyland cypress Cupressus × leylandii	300	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	2	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.3
	Leyland cypress Cupressus × leylandii	290	1	13	20	0	0	4	0	-	-	SM	40+	B1	3	2	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.3
	Leyland cypress Cupressus × leylandii	330	1	13	20	0	0	4	0	_	_	SM	40+	B1	3	2	3	2	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
	Leyland cypress Cupressus × leylandii	330;250	2	13	20	0	0	4	0	-	_	SM	40+	C1	2		2	2	P Good, S Fair	Part fall with a swept stem Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.5
	Leyland cypress Cupressus × leylandii	270;120	1	13	20	0	0	4	0	_	-	SM	40+	C1	2	2	2		P Good, S Fair	Part fall with a swept stem Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3

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		Stem		Tree	Ult		FSB BS Phys &										RPA					
Tree	Tree	Diam	Stem	Hgt	Hgt	Crown Height				Hgt	FSB	Life	Life	5837	Canopy Spread				Struct		Recommende	Annex
	Species	(mm)	No	(m)	(m)		N, E, S, W (m)			(m)		Stage				, E, S			Condition	Comments	d Work	D (m)
Т 66	Leyland cypress Cupressus × leylandii	270	1	13	20	3	3	4	3	-	_	SM	40+	B1	3	3	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3
Т 67	Leyland cypress Cupressus × leylandii	340	1	13	20	3	3	4	3	-	-	SM	40+	B1	3	1	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.9
Т 68	Leyland cypress Cupressus × leylandii	340	1	13	20	3	3	4	3	ı	ı	SM	40+	B1	3	2	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.6
т 69	Leyland cypress Cupressus × leylandii	300	1	13	20	3	3	4	3	1	1	SM	40+	B1	3	1	3	1	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3.3
Т 70	Leyland cypress Cupressus × leylandii	270	1	13	20	3	3	4	3	1	ı	SM	40+	B1	3	1	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	3
T 71	Leyland cypress Cupressus × leylandii	430	1	13	20	3	3	4	3	-	-		40+	B1	3	3	3	3	P Good, S Good	No significant defects. Approximately 1.5m beyond boundary Mutual crown suppression	NAR	4.8

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		Stem Tree Ult FSB BS Phys &																RPA				
Tree	Tree	Diam	Stem	Hgt	Hgt	l cr	own I	Haiah	1	Hgt	FSB	Life	Lifo	5837	Car	nonv	Snr	hee	Struct		Recommende	
		-		_	_			_		_						• • •			l			
Id No	Species Hornbeam,	(mm)	No	(m)	(m)	IN,	E, S,	vv (m	1 <i>)</i>	(m)	Dir	Stage	Exp	Cat	IN,	E, 3,	, VV (I	m) I	Condition	Comments	d Work	D (m)
	Carpinus	210;400;																	P Good, S			
			_	1.4	1.0	١,	_		_			CD4	ا ۵۰۰	D4	,	_	١,	١,	Fair	N A Iti ata mana ad	NAD	,,
1 /2	betulus	130	3	14	16	4	4	4	4	-	-	SM	40+	B1	3	5	4	3	Fair	Multi stemmed Symptoms of ash	NAR	3.6
	Ash																			dieback as it is just		
	Fraxinus																		P Poor S	starting to flush, small		
		240		43		١,	١		۱ ,			CD.A	40.	64		_	_ ا				NAD	,,
1 /3	excelsior	210	1	13	14	4	4	4	4	-	-	SM	10+	C1	1	3	5	3	Good	tufty leaflets	NAR	2.4
	Oak																			6m back behind site		
	Ouercus																		P Good, S	boundary and footpath		
	Α	440		4.6	4.0	_	_	_	_				ا ۵۰۰	D4	C II	c u	ـــــ	с и	1	· · · · · · · · · · · · · · · · · · ·	NAD	
T 74	<i>robur</i> Black	410	1	16	16	5	5	5	5	-	-	EM	40+	B1	6#	6#	6#	6#	Good	on railway land.	NAR	4.8
	locust,																					
	Robinia																					
	pseudoacac																		P Fair, S			
T 75	ľ	380	1	10	16	4	4	3	4	_	_	SM	40+	B1	5	-	5.5	_	Good	Minor crown dieback	NAR	4.5
1 /3	iu	360		10	10	4	4	3	4	<u> </u>	-	SIVI	40+	DI	3	5	3.3	-	Good	Williof Crown dieback	IVAK	4.5
	Hawthorn																					
	Crataegus																		P Good, S			
T 76	monogyna	50	8	8	12	3	3	3	3			SM	40+	B1	3	2	2	,	Fair	Multi stemmed	NAR	1.8
1 /6	monogynu	30	•	0	12	3	3	3	3	-	-	SIVI	40+	DI	3				rall	Multi Stemmed	INAK	1.0
	Hawthorn																			Multi stemmed with		
	Crataegus																		P Good, S	mutual crown		
T 77	monogyna	160	1	10	12	4	4	4	4	_		SM	40+	B1	3	1	1	1	Fair	suppression	NAR	1.8
' ' '	monogyna	100		10	12	-	-	-	-			3141	40+	DI	3		_	-	i ali	Suppression	IVAIN	1.8
	Hawthorn																			Multi stemmed with		
	Crataegus																		P Good, S	mutual crown		
T 78	monogyna	190	1	10	12	4	4	4	4	_	_	SM	40+	B1	4	4	1	2	Fair	suppression	NAR	2.4
''	Ash	150	-	10	12	╌	-		-	-		3141	701		-	_	┢	ŕ	i uli	эцри сээгон	IVAII	2.7
	Fraxinus																		P Good, S			
T 79	excelsior	120	1	8	16	4	4	4	4	_	_	SM	40+	B1	3	3	1	3	Good	No significant defects	NAR	1.5
'''	CACCISIOI	120		,		-	-	-7	+			3141	-5.				Ė	Ť	P Good, S	110 Significant acreets		-:-
T 80	Unknown	70	1	6	16	1	1	1	1	_	_	SM	40+	C1	2	2	1	1	Good	No significant defects	NAR	0.9
. 55								_	ட்	<u> </u>		2.7.		<u> </u>	_		<u> </u>		1000	Jigimicant acreets	1	

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		Ctom		Tree	Ult							,		BS					Phys &			RPA
T	T	Stem	Chains					l latak		FSB	FCD	1:6-	1:6-	_	Cal				_		D	
Tree		Diam	Stem	Hgt	Hgt			n Height			FSB		Life		Canopy Spread N, E, S, W (m)				Struct		Recommende	Annex
Id No	Species	(mm)	No	(m)	(m)	N,	E, S,	W (n	1)	(m)	Dir	Stage	Exp	Cat	N,	, E, S,	. W (m)	Condition	Comments	d Work	D (m)
																				Mostly hawthorn and		
																				bramble that has self		
	Mixed			_		_	_	_							_	_	_		P Good, S	set.		
G 1	species	Vary	Many	6	16	0	0	0	0	-	-	SM	40+	B2	4	4	4	4	Good	No significant defects Mostly hawthorn and	NAR	N/A
																				· '		
																				bramble that has self		
١	Mixed			_		١ ـ		١.							_	١.	١.	١.	P Good, S	set.		
G 2	species	Vary	Many	6	16	0	0	0	0	-	-	SM	40+	B2	4	4	4	4	Good	No significant defects	NAR	N/A
	Leyland																			Row of cypress trees in		
	'																			an adjacent garden,		
	cypress																		P Good, S	planted as a hedge.		
	Cupressus ×	\/am.	D.4	_	1.0	١,	١,	١,	ا ۾ ا			CD4	40.	D2	•	١,	٦	١,		l'	NAD	21/2
G 3	leylandii	Vary	Many	6	16	0	0	0	0	-	-	SM	40+	B2	2	2	2	2	Good	No significant defects Mostly hawthorn and	NAR	N/A
																				bramble that has self		
	Mixed																		P Good, S	set.		
G 4	species	Vary	Many	6	16	0	0	0	o		_	SM	40+	B1	4	4	4	4	Good	No significant defects	NAR	N/A
4	species	vary	ivially	0	10	۳	0	•	-		_	SIVI	40+	DI	-	4	-	4	Good	Mostly hawthorn, birch,	Remove to	IN/A
																				and bramble that has	facilitate the	
	Mixed																		P Good, S	self set.	proposed	
65	species	Vary	Many	6	16	0	o	0	0	_	_	SM	40+	B2	4	4	4	4	Good	No significant defects	development	N/A
ا ا	эрссісэ	vary	ivially		10	۳	۳	۰	H			3141	70.	D2		-	-	1	0000	No significant defects	acvelopment	11/7
	Leyland																			Row of cypress trees in		
	cypress																			an adjacent garden,		
	Cupressus ×																		P Good, S	planted as a hedge.		1
H 1	leylandii	Vary	Many	6	16	0	0	0	0	_	_	SM	40+	B2	2	2	2	2	Good	No significant defects	NAR	N/A
	, .	,																		J		
	Leyland																			Row of cypress trees in		
	cypress																			an adjacent garden,		1
	Cupressus ×																		P Good, S	planted as a hedge.		1
H 2	Ieylandii	Vary	Many	6	16	0	0	0	0	_	_	SM	40+	В3	2	2	2	2	Good	No significant defects	NAR	N/A