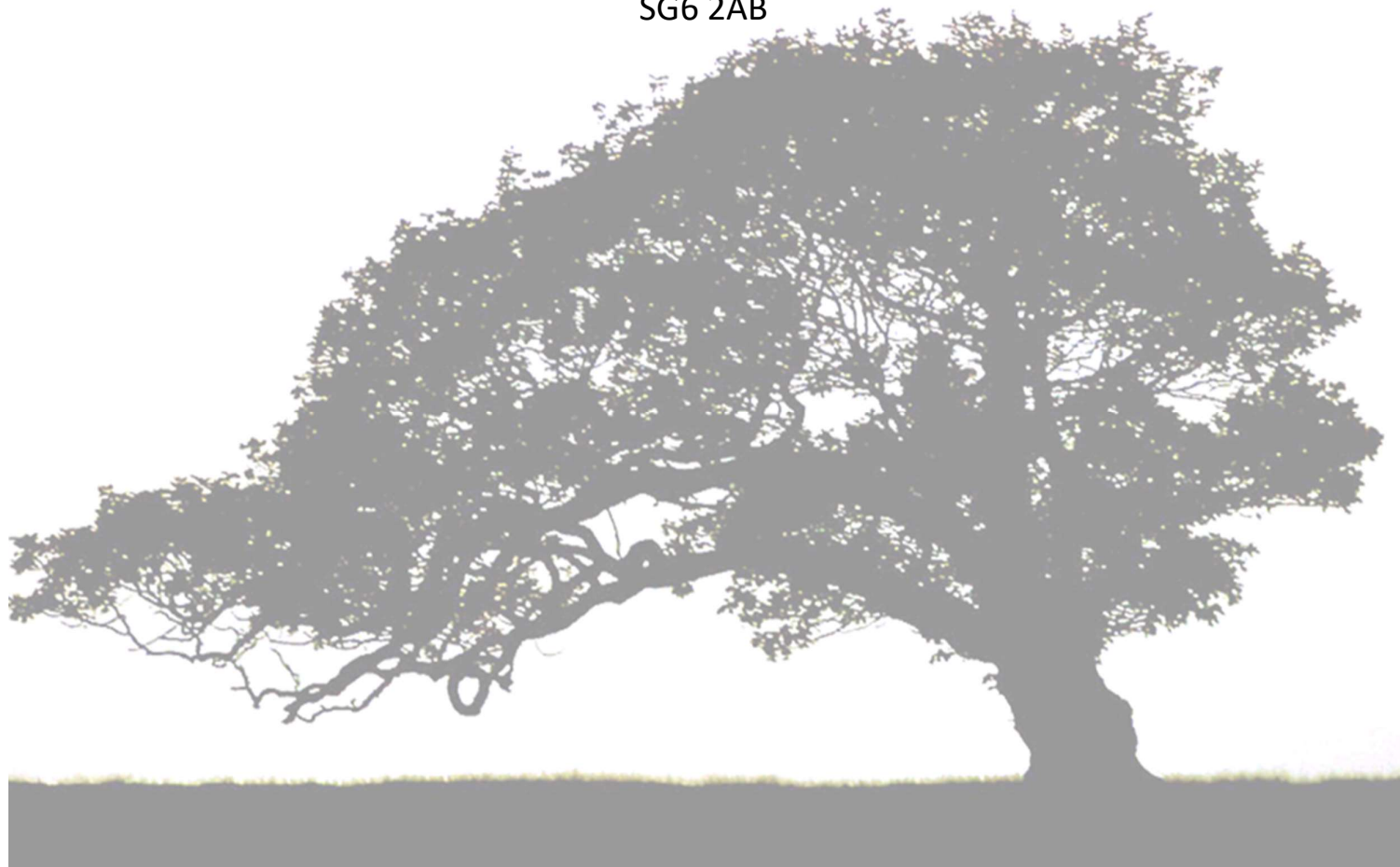


Arboricultural Planning Report For:

Guysfield Care Home
Willian Road
Willian
Letchworth Garden City
SG6 2AB



Client:	Caring Home Group Limited
Report Date:	24/06/2024
Survey Date:	19/06/2024
Report Ref.:	24 2574
Rev. No.:	3
Checked By:	KM

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Document Details

Site address:	Guysfield Care Home, Willian Road, Willian, Letchworth Garden City, SG6 2AB
Ref:	24 2574
Site visit undertaken by:	Rob Anderson FdSc, ND Arb, MArborA
Date of site survey:	19/06/2024
Report prepared by:	Rob Anderson FdSc, ND Arb, MArborA
TPP Ref:	24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA
Revision:	3

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1 Introduction

1.1 Instructions and Terms of Reference

- 1.1.1 Arb Consultancy Ltd was instructed by Caring Home Group Limited to survey the subject tree(s) in order to assess their general condition and to provide an arboricultural report relating to the proposed development at Guysfield Care Home, Willian Road, Willian, Letchworth Garden City, SG6 2AB.
- 1.1.2 The purpose of this arboricultural report is to assess the direct and indirect effects of the proposed development on the surveyed tree(s) and to recommend such measures as are necessary to safeguard them in a sustainable manner.
- 1.1.3 An electronic copy of the existing site layout and proposal was provided and this formed the basis of the Tree Protection Plan.
- 1.1.4 As stated above this Report and Survey is intended for planning purposes only and in no way constitutes a safety inspection of any of the trees onsite. We recommend that all trees undergo a full safety inspection to fulfil the owner's duty of care as defined by both civil law and the Occupiers' Liability Acts of 1957 & 1984.

Rev 1 - Report & Plan Revision 17/03/2020

Scheme revised following further arboricultural advice. Alterations include relocation of the proposed footprint and repositioning of most areas of the proposed hard standing to areas outside of the RPAs.

Rev 2 - Report & Plan Revision 20/07/2020

Scheme revised following further arboricultural advice. Alterations include further repositioning of areas of the proposed hard standing to areas outside of the RPAs and the inclusion of soil retaining features south of the main structure. Hard/soft landscaping detail also added.

Rev 3 - Report & Plan Revision 24/06/2024

Scheme revised following further arboricultural advice and updated tree constraints. Alterations include less proposed hard surfacing and building within the RPA of the Retained Blue Atlas Cedar (tree 1) allowing for a better chance of successful retention.

1.2 Documents Used

Topographical Survey/Existing Site Layout: Existing Site Plan GHCH-ORA-ZZ-XX-DR-A-1002.dwg

Proposed Site Layout: Proposed Site Plan 4870-ORA-ZZ-XX-DR-A-1004.dwg



1.3 Contact Details

Role	Contact Name	Company
Client	Caring Home Group Limited	
Architect /Agent	Gary Caudrey	Oliver & Robb Architects
Project Arboriculturist	Rob Anderson FdSc, ND Arb, MArborA	Arb Consultancy Ltd
LPA Tree Officer	TBC	North Hertfordshire District Council

1.4 Abbreviations

The following abbreviations will be used throughout this report:

BS 5837	British Standard – ‘BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations’
AIA	Arboricultural Implications Assessment
AMS	Arboricultural Method Statement
LPA	Local Planning Authority
VTA	Visual Tree Assessment
RPA	Root Protection Area
TPP	Tree Protection Plan
TPO	Tree Preservation Order
CA	Conservation Area
CEZ	Construction Exclusion Zone
CCS	Cellular Confinement System
BNG	Biodiversity Net Gain



2 The Site

2.1 Site Appraisal

- 2.1.1 Guysfield Care Home (the 'site') as the name implies, is presently occupied by a care home for the elderly. The main building is located centrally within the site, comprising an older two-storey building and more recent single-storey and three-storey additions to the east.
- 2.1.2 The main site access and driveway is located midway along the southern boundary, in-line with the original part of the care home. A further access road, which is now heavily overgrown, enters the site in the western corner and runs parallel with the rear boundary until it meets the original part of the care home.
- 2.1.3 There is car parking to the south of the care home and hard standing set to the northeast corner and rear of the building. Remaining external areas to the east and south were formed of landscaped gardens, which were mostly lawn. Beyond the driveway to the west is a further area of lawn with overgrown gardens beyond.
- 2.1.4 The site was almost triangular, level to the north, then sloped gently down to the southeast corner. Within the site were a mixture of trees, hedges and shrubs, varied in species, age and size.
- 2.1.5 The tree stock was deemed to be of average to high amenity/landscape value, with most trees appearing in average health and vigour at the time of the assessment. A small number of trees were found to have health and/or structural issues.
- 2.1.6 Some of the surveyed trees/tree groups could not be fully inspected, for further details please see the tree schedule in Appendix 4.
- 2.1.7 It is not always possible to fully assess the trees, e.g.; where access is restricted. For further details please see the Appendix 4 Tree Schedule.
- 2.1.8 An aerial photograph of the site is included below:



Aerial image of site with indicative red line boundary (© Google Maps 2024)

2.2 Soils

- 2.2.1 Reference to the [BGS Geology Viewer \(BETA\)](#) indicates that the underlying geology of the site forms part of the Holywell Nodular Chalk Formation and New Pit Chalk Formation (undifferentiated), comprising mostly chalk. Superficial deposits are recorded as Lowestoft Formation – Diamicton.
- 2.2.2 Further reference to the Cranfield Soil and AgriFood Institute Soilscales viewer (www.landis.org.uk) suggests that the soil present within the site is likely to have a loamy/clayey texture and very alkaline pH. Soils are further described as being lime-rich, with impeded drainage and as being highly fertile.

3 The Trees

3.1 Categorisation, Assessment and Summary

- 3.1.1 The trees are generally of average arboricultural, landscape value with the majority being categorised a B or C quality.
- 3.1.2 A schedule of the surveyed trees is included within Appendix 4 of this report.



3.2 Protection Status

3.2.1 Tree Preservation Orders and Conservation Areas (Town and Country Planning Act 1990)

3.2.2 Our basic online searches suggest there to be no TPO's pertaining to trees/vegetation on or adjacent to the site, and that the site is located within the Willian Village Conservation Area CA.

3.2.3 Further to the above, it must be stated that searches undertaken by Arb Consultancy Ltd with specific regard to the statutory protection status of trees are preliminary in nature and collated with information obtained from the respective LPA website. Such information is only a guide as LPA websites and the information provided within them are subject to continual change.

3.2.4 It is therefore strongly advised that information pertaining to the statutory protection status of a tree or trees, on and/or adjacent to development sites be fully investigated by contacting the respective LPA directly. Should a TPO or CA status be confirmed then full details should be obtained in writing from the respective LPA.

4 The Proposal

4.1.1 The proposed consists of the redevelopment of existing care home and erection of detached 3 to 4 storey 70-bed residential nursing home (Class C2 use) with associated parking, landscaping and amenities

4.1.2 Following demolition, it is proposed to construct a new modern care home facility, located centrally within the site with adjusted access roads leading to a car parking area to the north and west. Throughout the site there will be comprehensive landscaping and adjustment of levels when outside the RPAs of retained trees.



5 Arboricultural Impact Assessment

5.1 Arboricultural Implications

- 5.1.1 The below arboricultural impacts associated with this development are intended to be read in conjunction with the attached combined Arboricultural Implications Assessment and Tree Protection Plan ref: 24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA
- 5.1.2 The footprint of the proposed new building is not within the RPA of any of the retained trees so no specialist demolition or building works are proposed.
- 5.1.3 To the east of the site are to be some comprehensive re-levelling works including the installation of a retaining wall. The wall will be installed either outside or on the extreme periphery of the RPAs to the retained trees. This work should not significantly impact the trees physiological condition. Other than tree protection fencing no other protection measures are proposed.
- 5.1.4 This layout has been crafted to best retain the Blue Atlas Cedar (tree 1). Works include removing the majority of the existing hard surfacing within its RPA and returning it back to soft landscaping. The only exception will be the installation of a lightweight pedestrian path and some seating around the tree to fully incorporate it into the design. The existing hard surfacing and the installation of the new path will be done in a sensitive manner including the use of above soil surfacing, as detailed within the method statement.
- 5.1.5 To the western end of the site a woodland walkway is to be installed, this will consist of a peg and board bound path with a woodchip base onto a geotextile fabric base. Given the very lightweight construction and the minimal incursions into the it will not have a significant impact on the adjacent trees.
- 5.1.6 There are small incursions into the RPAs of trees T6, T9 & T13 from the proposed parking. Each area, as identified on the TPPs will be subject to supervised hand excavation to the required depth; root severance (if required) will be undertaken by the project arboriculturist only. If roots are found the installation of any foundations will incorporate a suitable membrane to protect surrounding soils and roots from potential concrete leaching.



5.2 Recommended Tree Works

5.2.1 A schedule of tree works is provided below:

Tree No.	Proposed Works	Reason for Works
T2, T3, T17, T18, T19, T20, G21, T25, T26, T27, T28, G29, T30, T43, T44, T51	Fell to ground level	To facilitate the proposed development and landscaping.

Table 1: Recommended Tree Works

5.3 Mitigation

- 5.3.1 The proposed development requires the removal of a small number of established trees, therefore mitigation in the form of replanting is required.
- 5.3.2 Trees T17, T18, T19, T20, G21 T25, T28, T43 & T44 are generally of limited overall amenity/landscape value and their removal, if permitted, would not be overly detrimental to the site and/or surrounding treescape/landscape.
- 5.3.3 The removal of T1, T2, T26, G29, & T51 will be mitigated against by way of numerous tree planting to be undertaken about the site, including planting to the northern boundary to create effective new screening between the site and adjacent third-party properties

5.4 Tree Protection Measures

- 5.4.1 The principle of permitting temporary construction access within the RPA is established in BS 5837 clause 6.2.3. Where the requirement for access is justified then this may be achieved through the setting back of the protective fencing and the use of ground protection measures to protect the underlying soil.
- 5.4.2 All retained trees will be robustly protected in accordance with BS 5837. Full details of the necessary tree protection measures are provided within the Arboricultural Method Statement which can be found on page 13 of this report. These issues include:

Arboricultural Monitoring and Supervision

General Precautions

Tree Surgery

Tree Protection Fencing

Ground Protection

Removal of Hard Surfacing

New Hard Surfacing

Replacement Hard Surfacing



New Underground Services

Fencing

Soft Landscaping – General Precautions within RPA's

6 Conclusions

- 6.1.1 Having considered the arboricultural implications associated with this site and with further consideration to the proposed tree planting within the landscaping scheme, I believe the proposal to be arboriculturally sound.
- 6.1.2 Subject to full compliance with this report and the TPP, I believe that all retained trees can be adequately protected and will be safeguarded in a sustainable manner.

7 Bibliography

Anon., 1981. Wildlife and Countryside Act (Amended). s.l.:HMSO.

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British Standards Institute, 2010. Tree work - Recommendations. London: BSI.

British Standards Institute, 2012. Trees in relation to design, demolition and construction - Recommendations. London: BSI Standards Ltd.

National House Building Council, 2010. NHBC Standards Chapter 4.2. s.l.:NHBC.

Roberts, J., Jackson, N. & Smith, M., 2006. Tree Roots in the Built Environment. Norwich: The Stationary Office.

The National Joint Utilities Group, 2007. Volume 4 - NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees, s.l.: NJUG Publications.



8 Arboricultural Method Statement

The Arboricultural Implications Assessment highlights the approaches required to mitigate issues raised by the integration of existing trees into the proposed design. The Arboricultural Method Statement defines the site-specific specifications for tree protection and other details required to implement the recommendations in a realistic manner.

This Arboricultural Method Statement must be read in conjunction with the approved Tree Protection Plan Ref: 24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA

8.1 Arboricultural Monitoring and Supervision

- 8.1.1 Effective tree protection can only be achieved by adherence to a logical sequence of works combined with effective arboricultural supervision and monitoring. Prior to the commencement of any works the site owner/manager will appoint a project arboriculturist to supervise and monitor the approved works.
- 8.1.2 The project arboriculturist's role is to ensure that all tree protection measures are fit for purpose, are implemented in accordance with the approved details and to the satisfaction of North Hertfordshire District Council. The owner/manager will be responsible for ensuring that all site personnel are made aware of the requirements of this method statement and that any future amendments are known and understood. Copies of the approved AMS will be available onsite, the requirements of which will be incorporated into all relevant site management documents and site induction procedures.
- 8.1.3 A pre-commencement site meeting will be held between the site manager, local authority tree officer and the project arboriculturist. The purpose of this meeting will be to ensure that all aspects of the tree protection measures are clear and understood and that any future sequencing and supervisory arrangements are agreed. The details of this meeting will be recorded and will be circulated to all parties in writing. The pre-commencement meeting also provides the opportunity for discussion between all parties as to the practical implications/challenges that may arise in facilitating the proposals in line with the AMS. Should the meeting identify additional constraints, or a sounder arboricultural approach, a variation encompassing these factors will be submitted to the LPA.
- 8.1.4 Once works commence the project arboriculturist will undertake a programme of monitoring and supervision. This may include phone and email contact with the site manager, regular site visits and direct supervision of sensitive works. The frequency of any monitoring and supervision will be determined by the intensity and proximity of works to trees and will be flexible enough to accommodate changes in the scheduling of tasks as they occur on the site.



- 8.1.5 The project arboriculturist will maintain a record of all aspects of the arboricultural monitoring and supervision and a copy will be sent to North Hertfordshire District Council upon completion of the project or as otherwise agreed. This will provide a record of compliance with any agreed tree protection measures and will assist in the efficient discharge of any relevant planning conditions.
- 8.1.6 A recommended programme of works detailing the necessary arboricultural inputs is included within Table 2 below:

8.2 Table of Arboricultural Supervision

Prior to any Demolition, Site Preparation or Construction Works Onsite	
Stage	Action/Operation
1.	Pre-commencement meeting between site manager, project arboriculturist and local authority tree officer. To discuss the precise location and timing of all tree protection measures. This is following tree removals and the Installation of all protective fencing and ground protection measures as show on the TPP.
After any Demolition and During any Site Preparation or Construction Works Onsite	
Stage	Action/Operation
2.	Construction of permanent ground protection i.e., Cellweb, for the main driveway within RPAs of tree T4.
3.	Supervised excavation of sub-base for parking area, within the RPAs of trees T6, T9 & T13.
4.	Removal and returning to soft landscaping of existing hard surfacing within the RPA of T1.
5.	Construction of permanent ground protection i.e., Cellweb within the RPA of T1
Once All Construction Activities are Complete	
Stage	Action/Operation
6.	Removal of all protective fencing and ground protection measures.
7.	Soft and hard landscaping works.
8.	Sign off by project arboriculturist.

Table 2: Recommended programme of works requiring arboricultural monitoring and supervision



8.3 Importance of Arranging the Pre-commencement Site Meeting

- 8.3.1 Prior to the importation of machinery, materials, and any commencement of groundworks, we advise that a suitable period be allowed for the arrangement of a pre-commencement site meeting with all relevant parties.
- 8.3.2 In our experience, this can vary between a few days to a few weeks and has the potential to delay the start of works onsite. Further guidance on this matter should be sought from the respective LPA.

8.4 General Precautions

- 8.4.1 All trees which are being retained onsite will be protected by protective fencing and/or ground protection as detailed in the following sections. Protective fencing will be erected before any materials or machinery is brought onto the site and before any demolition, development or stripping of soil commences. Once erected fencing will be regarded as sacrosanct and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the LPA.
- 8.4.2 Care will be taken to avoid damage in the following ways:
- Oil, bitumen, cement, or other material likely to be injurious to a tree will not be stored or mixed within 10m of any trunk unless contained within a bunded structure. Concrete mixing will not be carried out within 10m of a tree unless undertaken within a bunded container. Any spillage shall be immediately reported to the project arboriculturist who will determine what mitigation is required.
 - Fires will not be lit nearer than 5m the limit of the crown spread, will be downwind of the tree and will be prevented from becoming so large as to affect the tree.
 - Notice boards, telephone cables or other services will not be attached to any part of the tree. Trees to be retained will not be used as anchors for equipment used to remove stumps, roots, other trees or for any other purposes.
 - Care will be exercised when using cranes or similar equipment near the spread of the canopy of a tree.
 - It is essential that allowance be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
 - Stumps within the RPA will not be dug or pulled out but are to be ground out. Where possible, and with the agreement of all parties involved, standing stumps and debris should be left as a habitat for wildlife if circumstances allow. (British Standards Institute, 2012) (National House Building Council, 2010) (Wildlife and Countryside Act (Amended), 1981).



8.5 Tree Surgery

- 8.5.1 Tree works shall be carried out in accordance with BS3998:2010 *Recommendations for tree work* (British Standards Institute, 2010), industry best practice and in line with any works already agreed with North Hertfordshire District Council.
- 8.5.2 If during the course of these operations the need for other work becomes apparent, then the advice of the project arboriculturist will be sought. No works other than those detailed within the report will be carried out without the prior written consent of North Hertfordshire District Council.
- 8.5.3 Attention is paid to the common law right to prune overhanging trees back to boundaries. Should this be required then all efforts will be made to contact the tree owner prior to the commencement of works and all work will be undertaken without access onto third party land.
- 8.5.4 The statutory protection afforded by the Wildlife and Countryside Act 1981 (Amended) (Wildlife and Countryside Act (Amended), 1981) and Countryside and Rights of Way Act 2000 (Amended) (Countryside and Rights of Way Act 2000 (Amended), 2000) will also be adhered to. Where there is evidence that bats, nesting birds or other protected species are present then specialist advice will be obtained prior to the commencement of work. Further advice on bats is available from the Bat Conservation Trust (www.bats.org.uk) and on birds from the Royal Society for the Protection of Birds (www.rspb.org.uk).
- 8.5.5 All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

8.6 Tree Protection Fencing

- 8.6.1 Tree protection fencing will be used to prevent access to the RPAs of retained trees and will be erected within the locations shown on TPP ref. 24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA. Unless agreed in writing by the project arboriculturist and/or North Hertfordshire District Council the following shall apply:
- 8.6.2 Protective fencing (shown as a magenta line on the TPP) will be erected prior to any works onsite including demolition, groundwork or the importation of plant and materials.
- 8.6.3 Once erected protective fencing shall remain in situ until all construction activities are complete and shall only be varied with the written consent of the project arboriculturist and/or North Hertfordshire District Council.
- 8.6.4 The area to the rear of the protective fencing shall be considered to form a CEZ. No construction activities, storage of materials or pedestrian or vehicular access shall take place within the CEZ without the written consent of North Hertfordshire District Council.



- 8.6.5 Confirmation that the protective fencing has been correctly installed will be sought from the project arboriculturist prior to the start of any demolition works, construction activities or the importation of any plant or materials.
- 8.6.6 Protective fencing will comply fully with BS 5837 and will be erected to the standard described in Figure 1. All weather notices will be attached to the protective fencing at suitable intervals, an example of which is given in figure 2.
- 8.6.7 Regular daily checks will be carried out by the site manager to ensure that the barriers are still in place and functioning and any damage will be rectified without delay.

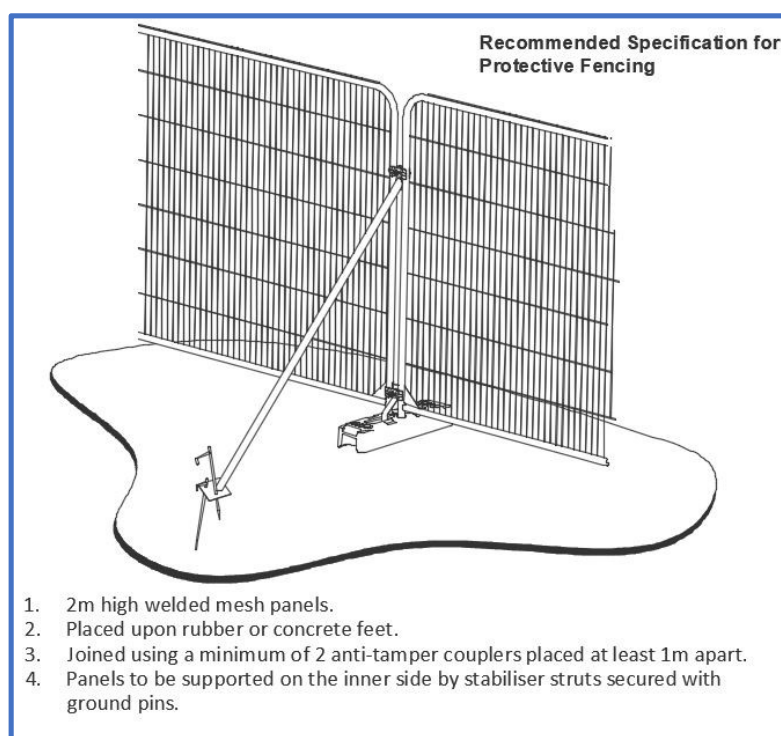


Figure 1: Example of protective fencing (BS 5837:2012)



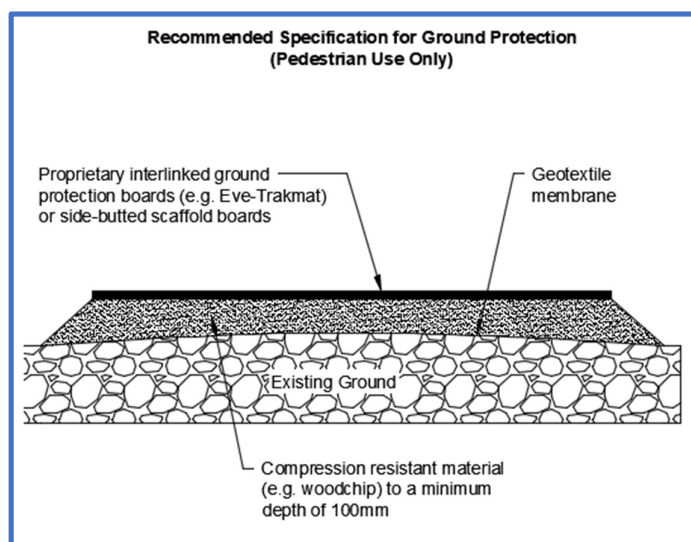
Figure 2: Example signage to be securely attached to fencing

8.7 Ground Protection

- 8.7.1 Ground protection will be used to protect the RPAs of retained trees and will be installed within the locations shown on TPP ref. 24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA. Unless agreed in writing by the project arboriculturist and/or North Hertfordshire District Council the following shall apply:
- 8.7.2 Ground protection will be installed prior to any works onsite including demolition, groundwork or the importation of plant and materials.
- 8.7.3 Areas of existing hard surfacing which are to be retained to act as temporary ground protection are highlighted on the TPP with red criss-cross hatch. Hard surfacing within these areas shall not be removed during demolition but shall be retained in situ throughout the course of the development and until all other works are complete.
- 8.7.4 Ground protection will be sufficiently robust to prevent damage occurring to the structure of the underlying soil. In order to accord with BS 5837 temporary ground protection will be installed in accordance with the following specification:



- 8.7.5 For pedestrian-only access, ground protection measures shall include a single thickness of scaffold boards placed on top of 100mm depth of compression resistant material (e.g., woodchip) laid onto a geotextile membrane.
- 8.7.6 For pedestrian activities and plant up to 2 tons in weight, proprietary interlinked ground protection boards will be used and placed on top of 150mm depth of compression resistant material (e.g., woodchip) laid onto a geotextile membrane.
- 8.7.7 For wheeled or tracked equipment exceeding 2 tons in weight a structural engineer will design an alternative system. This may include the use of temporary CCS, reinforced concrete slabs or track board systems, details of which are to be approved before construction commences.
- 8.7.8 Once installed ground protection shall remain in situ until all construction activities are complete and shall only be varied with the written consent of the project arboriculturist.



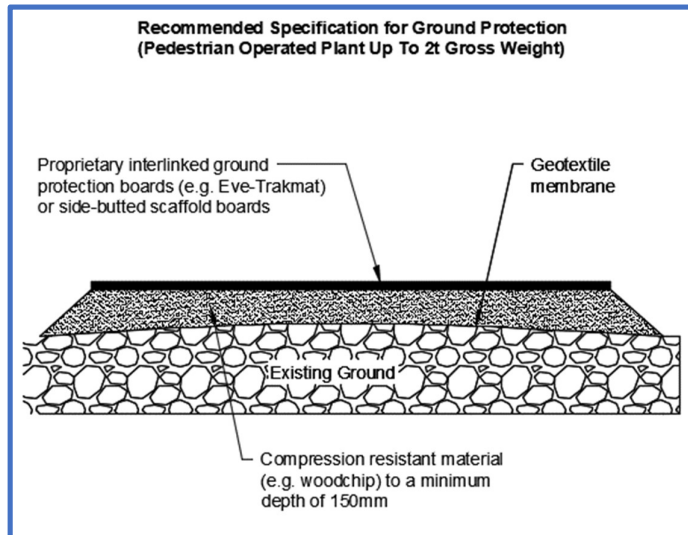


Figure 3: Example of ground protection (pedestrian operated plant up to a gross weight of 2t)

8.8 Removal of Hard Surfacing

- 8.8.1 Those areas of existing hard surfacing red cris-cross hatching on TPP ref. 24 2574 CH Guysfield Rev 3 TPP 2024-06-24 RA will be removed.
- 8.8.2 Removal will be delayed ensuring that the surfacing remains to be used as temporary ground protection and will only occur once all other demolition and construction activities are complete.
- 8.8.3 Removal shall be undertaken in strict accordance with the following methodology:
- 8.8.4 Any RPAs to be worked within are to be clearly marked out prior to any works. The markings will be suitable to indicate the extent of the RPA throughout the works.
- 8.8.5 The initial 'breaking up' of any surface may be carried out by low impact pneumatic tools (not breakers attached to diggers or JCBs), or preferably by hand if possible.
- 8.8.6 Where it is practicable the subsequent removal of debris will be carried out by hand. Should mechanical means be required due to the size of the debris, then a small (1.5ton) digger may be used providing that, when picking up debris, no tines/teeth from the bucket cause any damage to the underlying soil surface. Once left with manageable size pieces, hand removal will be used. Where the digger is employed, it will only travel on the undisturbed hard surface (within the RPA), clearing debris as it progresses out of the RPA.
- 8.8.7 No reduction in levels of the underlying soil surface will occur.
- 8.8.8 At no point is any heavy machinery permitted within the RPA, once the underlying soil surface is revealed.



- 8.8.9 The underlying soil may be levelled by the addition of up to 150mm of good quality topsoil to BS3882:2015 *Specification for topsoil and requirements for use*. Hand tools only will be used for any levelling works; this work will not disturb the underlying soil.

8.9 New Hard Surfacing

- 8.9.1 The construction of a traditional hard surface generally requires excavation and the creation of a compacted sub-base. Excavation and the compaction of underlying soil can be very damaging to tree roots and can have a significant detrimental impact on the health and stability of trees. When constructing hard surfacing within the RPA of any tree it is essential that this is achieved without either excavation or compaction. This can be accomplished through the use of a geotextile membrane and a CCS which is laid directly onto the soil within the RPA.
- 8.9.2 In order to ensure that the CCS is installed without detriment to trees, and to ensure that any associated conditions can be signed off on completion of the project, installation will adhere to the following guidelines:

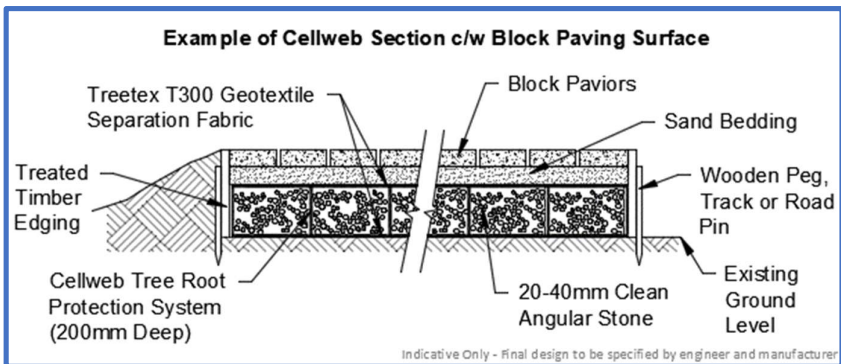
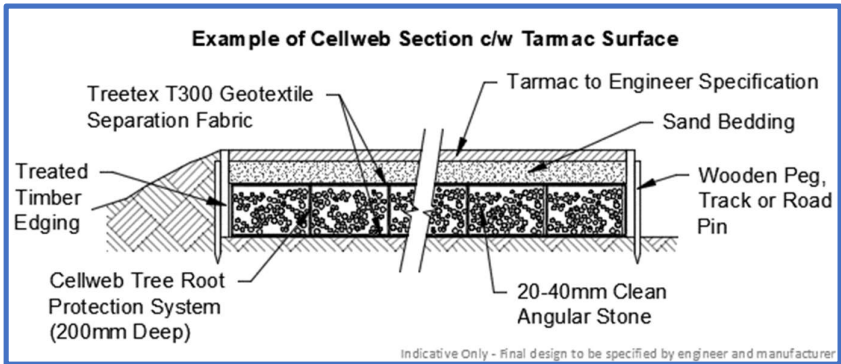
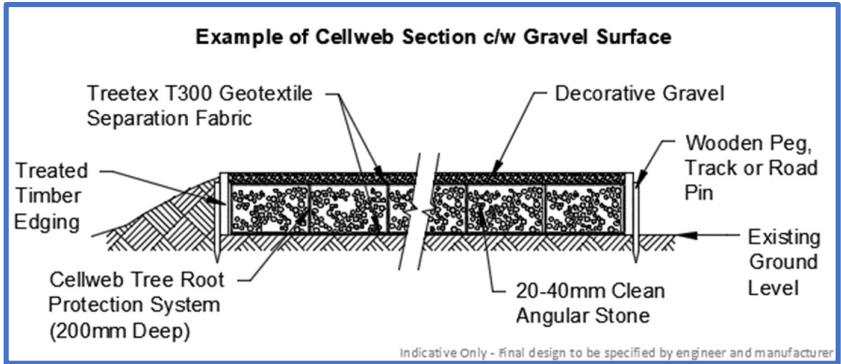
8.10 New Hard Surfacing

- 8.10.1 The RPAs of all nearby trees are to be marked out using water-soluble marker paint.
- 8.10.2 All staff involved will be made aware of this working methodology.
- 8.10.3 The levelling of minor soil undulations will be achieved through infilling with a granular material which does not inhibit vertical gaseous diffusion. Examples of the materials which may be used include no-fines gravel, washed aggregate, or cobbles.
- 8.10.4 Install a permeable geotextile membrane (e.g., Treetex) directly on top of the finished soil grade level.
- 8.10.5 Lay out the CCS and ensure edges are anchored open during the infill process.
- 8.10.6 Install kerbs and edgings directly on top of existing soil grade level. For light structures a treated peg and board will be used and for more substantial structures engineer approved items such as railway sleepers, drilled kerbstones or gabions will be utilised and held in place with track or road pins.
- 8.10.7 Fill the CCS ensuring that any machinery works only on the already filled areas of the CCS, whilst all remaining areas are filled. Typical infill consists of no fines angular granular material 20-40mm with a neutral pH.
- 8.10.8 Install a second layer of geotextile separator over the top of the filled CCS.
- 8.10.9 A temporary wearing course may now be installed if required. The temporary wearing course will consist of compacted Type 1 aggregate with holes left at 2m intervals to



ensure permeability and gaseous exchange. The temporary wearing course will be removed once construction activities are complete and will be replaced with the porous finished surface.

- 8.10.10 Install final permeable and gas-porous finished surface. This may consist of permeable block paving, porous tarmac or resin-bonded gravel as agreed in any associated condition or approved documentation.



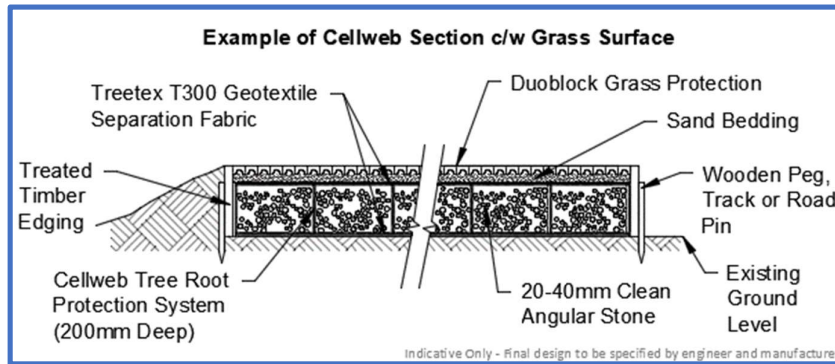


Figure 10: Illustrative example of the final surface with a tarmac/gravel/block paving/blocked grass wearing course

(Image used with the kind permission of Geosynthetics Ltd 01455 617139, www.geosyn.co.uk)

8.11 Replacement Hard Surfacing

- 8.11.1 Existing hard surfacing within the area for the main site entrance is to be replaced. This will be undertaken in accordance with the following methodology:
- 8.11.2 The RPAs of all nearby trees are to be marked out using water-soluble marker paint.
- 8.11.3 All staff involved will be made aware of this working methodology.
- 8.11.4 The existing hard surfacing will be removed using hand tools taking care not to disturb the underlying sub-base. The sub-base may be reinforced if necessary, providing that this can be accomplished without disturbance or compaction of the underlying soil.
- 8.11.5 A new wearing course will be laid directly onto the retained sub-base. This may consist of bonded gravel, tarmac, block pavers or similar as advised by a builder or professional paving expert.
- 8.11.6 Any new edging will be installed without the need for excavation. Examples of suitable edging include wooden boards secured with wooden pegs, sleepers secured with steel pins or drilled concrete kerb stones again secured with pins.

8.12 New Underground Services

- 8.12.1 Detailed drawings of proposed underground services have not been produced at this stage of the planning process, thus any potential impacts between trees shown retained on the TPP and proposed services have not been identified. It is likely, however, that services connections to the existing care home will be capable of re-use to serve the new development.



- 8.12.2 If for whatever reason new underground services are required, wherever possible any underground services shall be located outside the RPA of any retained tree. Underground services shall only be routed through the RPA of a retained tree with the written consent of the project arboriculturist and/or North Hertfordshire District Council.
- 8.12.3 Wherever possible services will be grouped together, will utilise common ducts and have all inspection chambers located outside of the RPA.
- 8.12.4 In situations where services must pass through the RPA of a retained tree then trenchless techniques will be used wherever possible. Receptor pits will be located outside the RPA and potentially toxic external lubricants will not be used.
- 8.12.5 In situations where trenchless techniques are impractical then the use of open trenches will only be considered if they can be excavated without the need for shoring of the sides. The method of excavation will be through the use of an 'air-spade' or similar to ensure that soil can be removed from around the tree roots whilst causing only minimal damage.
- 8.12.6 Any new services installed within the zone of influence (not just the RPA) of any proposed, or retained, tree will incorporate sealed and flexible joints and be sufficiently robust to avoid damage due to differential soil movement.
- 8.12.7 Both the installation of new services and the renovation of existing services must be carried out in accordance with NJUG Volume 4 (The National Joint Utilities Group, 2007), BS 5837:2012 Clause 7.7 and any other relevant best practice guidance relating to trees.

8.13 Boundary Fencing

- 8.13.1 Any trees, shrubs or other woody vegetation which obstructs the line of the fence will be cut back in accordance with BS3998:2010.
- 8.13.2 Any mixing of cement will be undertaken outside of the RPA. Where posts are to be secured using poured concrete, post holes will be lined with an impervious membrane to prevent leachate from entering the surrounding soil.
- 8.13.3 Where it is necessary to import materials using a wheelbarrow, boards will be laid on the surface of the ground to prevent compaction or rutting.
- 8.13.4 Post holes will be excavated with caution taking care not to damage roots or their bark. Soil can be removed from roots by using compressed air or a brush.
- 8.13.5 Roots less than 25mm in diameter may only be severed using a sharp tool such as a hand saw or secateurs. The cut should be as small as possible and must avoid leaving a ragged end.



- 8.13.6 Roots over 25mm diameter may only be cut on the advice of an arboriculturist and with the consent of North Hertfordshire District Council.
- 8.13.7 If a root over 50mm is encountered, or groups of roots over 25mm, then the excavated hole will be backfilled and the fence post located to an alternative location.
- 8.13.8 All spoil must be deposited outside the RPA.
- 8.13.9 Exposed roots, including any cut ends, must be protected from extremes of temperature and desiccation. If left exposed overnight they will be covered with a loose mix of soil and sand or wrapped with hessian.

8.14 Soft Landscaping – General Precautions within RPA's

- 8.14.1 After development soft landscaping operations have the capacity to cause damage to retained trees if not carried out correctly. In order to avoid unacceptable damage to trees it is essential that all works within the RPA of trees is planned and executed in accordance with the following guidelines:
- 8.14.2 Ground preparation will be carried out sensitively to ensure root damage is mitigated as much as is practicable and at no time will heavy machinery or a rotavator be used within any RPA.
- 8.14.3 There shall be no excavation or lowering of soil levels within any RPA.
- 8.14.4 Depressions may be levelled through infilling with a maximum depth of 150mm of loosely compressed good quality topsoil or other porous material.
- 8.14.5 Herbicide applications should be restricted to the use of translocated products such as glyphosate. These will be applied according to the manufacturer's instructions and drift onto non-target plants avoided.
- 8.14.6 Existing vegetation will be removed by hand. Turf will be removed using a mechanical turf stripper where necessary.
- 8.14.7 Compacted areas of soil will be broken up by inserting a garden fork into the soil to a depth of 300mm and gently moving it back and forth. This will be carried out only when the soil is dry and friable and in a manner which avoids damage to any underlying tree roots.
- 8.14.8 No works will be carried out within any RPAs if the soil moisture is of a level likely to allow compaction.



Appendices



Appendix 1 Site Photographs



Photograph 1: looking west along group G29



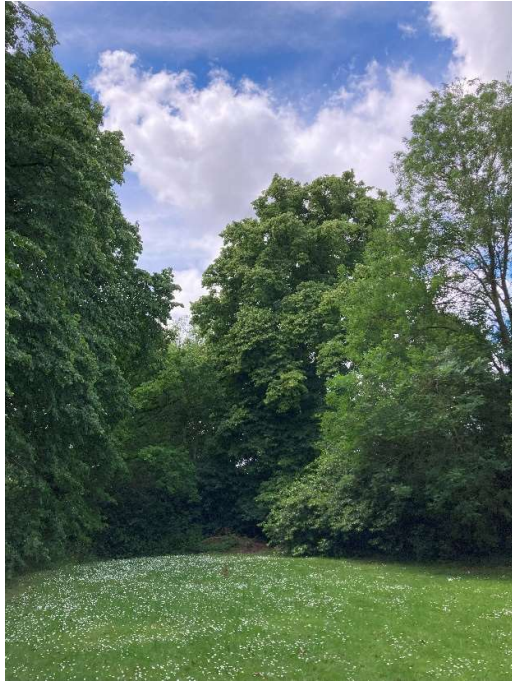
Photograph 2: Overview of tree T1



Photograph 3: Trees T17-20, G21 & part of T25 that are to be removed. G4 in the background.



Photograph 4: Trees along eastern boundary.



Photograph 5: Overview of trees growing in western corner T13 in the middle, T10 to the right



Appendix 2 Glossary of Terms and Abbreviations

TO (Tree Officer)	Representative officer of the LPA for tree related matters within the area of the authority.
LPA (Local Planning Authority)	The local government body that deals with all planning related issues within the area of the authority.
RPA (Root Protection Area)	Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m ² .
TPP (Tree Protection Plan)	Scale drawing prepared by an arboriculturist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the AMS, which can be shown graphically.
CEZ (Construction Exclusion Zone)	Area based on the RPA (in m ²), 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.
AIA (Arboricultural Implications/Impacts Assessment)	Study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.
AMS (Arboricultural Method Statement)	Methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree.
TPO (Tree Preservation Order)	A TPO is an order made by the LPA in respect of trees or woodlands. The principal effect of a TPO is to prohibit the: • cutting down, • uprooting, • topping, • lopping, • wilful damage, or • wilful destruction of trees without the LPAs consent. The cutting of roots, although not expressly covered in (1) – (4) above, is potentially damaging and so, in the Secretary of State's view, requires the LPAs consent.
CA (Conservation Area)	The law relating to CAs is in Part II of the Planning (Listed Buildings and Conservation Areas) Act 1990. CAs are areas of special architectural or historical interest the character or appearance of which it is desirable to preserve or enhance. They are designated by LPAs and are centred on listed buildings. Other buildings and landscape features, including trees, may also contribute to the special character of a CA.
NJUG (Nation Joint Utilities Group)	Trade Association for street works issues. Promotes best practice, self-regulation and a two-way relationship with Government and other relevant stake holders.



Appendix 3 Tree Survey

Scope and Method of Survey

- The report is concerned with the arboricultural aspects of the site only.
- The survey has been carried out in accordance with BS 5837: 2012 *Trees in relation to design, demolition, and construction - Recommendations*.
- The reference numbers of surveyed trees and tree groups are shown on the TCP/TPP, which is based on the scale drawings supplied.
- The tree survey was carried out from ground level only.
- No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
- Tree heights were estimated to the nearest 1m.
- Trunk diameters have been measured in accordance with Annex C of BS 5837: 2012. Diameters of single stem trees on level ground have been measured at 1.5m above ground level. The diameters of other commonly encountered stems have been measured where most appropriate and this is recorded within the schedule.
- The combined stem diameters for multi-stemmed trees have been calculated in accordance with BS 5837: 2012 paragraph 4.6.1. RPAs are calculated as an area equivalent to a circle with a radius 12 times the stem diameter.
- Tree canopies have been measured either by use of a laser range finder, tape measure or estimated where access has not been possible.
- No access was made onto third party property. Dimensions for trees on adjacent property, and those that at the time of the survey were inaccessible due to dense vegetation or adverse topography, have been estimated.
- The positions of trees not included on a topographical survey have been measured as accurately as possible. These positions must be considered approximate only. If the position of these trees is of critical importance, then a surveyor should be engaged to accurately record their location.
- This report in no way constitutes a health and safety survey. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be carried out.



Summary of Categories BS 5837:2012

Trees unsuitable for retention	
U	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Identified by dark red colouration on the TCP/TPP. These trees should not be a consideration in the planning process.
Trees to be considered for retention	
A	Trees of high quality with an estimated remaining life expectancy of at least 40 years. Identified by light green colouration on the TCP/TPP.
B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Identified by mid blue colouration on the TCP/TPP.
C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Identified by grey colouration on the TCP/TPP. The following subcategories are applied. Trees may be allocated more than one subcategory, but this will not increase their overall value.
1: Mainly arboricultural values	
A1	Trees that are of particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g., the dominant and/or principal tree within an avenue).
B1	Trees that might be included in category A, but are downgraded because of impaired condition (e.g., the presence of significant though remediable defects including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention beyond 40 years; or trees lacking the special quality necessary to merit category A designation.
C1	Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
2: Mainly landscape values	
A2	Trees, groups, or woodlands of particular visual importance as arboricultural and/or landscape features.
B2	Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.
C2	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.
3: Mainly cultural values, including conservation	
A3	Trees, groups, or woods of significant conservation, historical, commemorative, or other value (e.g., veteran trees or wood-pasture).
B3	Trees with material conservation or other cultural value.
C3	Trees with no material conservation or other cultural value.

Table 3: Categories and descriptions as described in BS 5837:2012 Table 1



Explanation of Tree Survey Schedule

TREE No:	Allocated tree number, this may or may not be tagged onsite.	
HEIGHT:	Height of tree in metres.	
DBH:	Diameter of the tree at 1.5m from ground level or as otherwise described within Annex C of BS 5837:2012.	
CROWN SPREAD:	Shown as compass points N, E, S, W.	
CROWN HEIGHT:	Height of lowest branch foliage.	
FIRST SIGNIFICANT BRANCH:	Height above ground level of lowest significantly sized branch.	
AGE CLASS:	Y	Young (less than 1/3 through life expectancy).
	MA	Middle aged (from 1/3 to 2/3 through life expectancy).
	M	Mature (over 2/3 through life expectancy).
	OM	Over-mature (beyond average life expectancy).
	V	Veteran (of biological, cultural, or aesthetic value, usually beyond typical age range).
ESTIMATED REMAINING CONTRIBUTION:	The estimated number of years the tree will continue to make a safe and useful contribution to its surroundings, taking into account its current age and physiological and structural condition. (NB. This assumes that there will be no physical changes to its immediate environment).	
BS CATEGORY:	(Please refer to the BS 5837:2012 Table 1 for detailed descriptions) U: Trees unsuitable for retention – those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. A: Trees of high quality – with an estimated remaining life expectancy of at least 40 years. B: Trees of moderate quality – with an estimated remaining life expectancy of at least 20 years. C: Trees of low quality – with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.	
PHYSIOLOGY, STRUCTURE, WORKS REQUIRED:	Description of general form, including presence of physical defects, disease or decay and other appropriate details based on health, vitality, and overall structural integrity.	
ESTIMATED:	Y/N (Estimated stem dimension).	

Table 4: Explanation of Tree Survey Schedule



Appendix 4 Tree Schedule

Tree Number	Common Species Name	Height (m)	Trunk Diameter and stem count	Crown Spread (m)				Height of Crown	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
				N	E	S	W							
T1	Blue Atlas Cedar (Cedrus atlantica f. glauca)	25(4)	1240(1)	12.00	10.00	11.00	9.00	4.00	Mature	Average	Average	B2	Needles are slightly shorted than expected and slightly sparsely foliated. lights attached to trunk	14.9
T2	Leyland Cypress (X Cupressocyparis leylandii)	14(4)	620(1)	6.00	5.50	5.50	1.00	4.00	Mature	Average	Below average	C2	One sided crown: suppressed by adjacent specimen. Tight fork in main stem at 1.6m	7.4
T3	Leyland Cypress (X Cupressocyparis leylandii)	14(3)	390(1)	5.00	1.00	4.00	4.00	3.00	Early Mature	Average	Below average	C2	One sided crown: suppressed by adjacent specimen.	4.7
T4	Common Lime (Tilia X europaea)	23(2.5)	1060(1)	8.00	7.00	9.00	4.50	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Growing in a line of similar sized trees. Diameter measured over ivy.	12.7
T5	Common Lime (Tilia X europaea)	23(2.5)	870(1)	7.00	4.00	9.00	4.50	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Growing in a line of similar sized trees. Diameter measured over ivy.	10.4
T6	Horse Chestnut (Aesculus hippocastanum)	23(2)	920(1)	8.50	6.50	3.00	3.00	2.00	Mature	Average	Average	B2	Epicormic shoots throughout crown. Crown distorted due to group pressure. Diameter measured over ivy.	11.0
T7	Common Lime (Tilia X europaea)	23(2.5)	890(1)	8.00	4.50	10.00	4.00	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Crown distorted due to group pressure. Growing in a line of similar sized trees. Diameter measured over ivy.	10.7
T8	Common Lime (Tilia X europaea)	24(2.5)	930(1)	9.00	4.00	11.00	4.50	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Crown distorted due to group pressure. Growing in a line of similar sized trees. One dead branch in lower crown. Diameter measured over ivy.	11.2
T9	Common Lime (Tilia X europaea)	23(2.5)	1100(1)	8.50	4.00	9.00	7.50	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Crown distorted due to group pressure. Growing in a line of similar sized trees. Diameter measured over ivy.	13.2
T10	Common Oak (Quercus robur)	16(4)	1010(1)	10.00	6.00	12.00	7.00	4.00	Mature	Below average	Average	C2	Low vigour/poor extension growth. Epicormic shoots throughout crown. Low bud/leaf density. Diameter measured over ivy.	12.1
T11	Common Lime (Tilia X europaea)	22(2)	880(1)	8.00	6.00	6.00	7.00	2.00	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Diameter estimated due to undergrowth.	10.6
T12	Common Lime (Tilia X europaea)	18(1)	880(1)	6.00	6.00	6.00	7.00	1.00	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Diameter estimated due to undergrowth.	10.6
T13	Common Lime (Tilia X europaea)	24(2.5)	1060(1)	8.00	10.00	7.50	7.00	2.50	Mature	Good	Good	B2	Suckers around stem base. Diameter estimated due to undergrowth.	12.7
T14	Holly (Ilex aquifolium)	5(0)	280(1)	3.00	3.00	3.00	3.00	0.00	Mature	Average	Average	C2	Tree of low squat form.	3.4
G15	Holly (Ilex aquifolium),Ash (Fraxinus excelsior),Laburnum (Laburnum anagyroides),Lawson Cypress (Chamaecyparis lawsoniana)	15(1)	250(1)	4.00	4.00	4.00	4.00	1.00	Early Mature	Average	Average	C2	Cluster of trees consisting of c.7 larger ash trees and smaller understory trees. All smothered in ivy. Diameter is estimated average.	3.0
T16	Field Maple (Acer campestre)	17(2)	400(1)	3.00	6.00	6.00	6.00	2.00	Mature	Good	Good	A1	Growing within dense undergrowth. Tree appears to be in good condition. Diameter estimated due to undergrowth.	4.8



Tree Number	Common Species Name	Height (m)	Trunk Diameter and stem count	Crown Spread (m)				Height of Crown	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
				N	E	S	W							
T17	Ash (Fraxinus excelsior)	6(2)	160(1)	2.00	3.00	3.00	1.00	2.00	Early Mature	Good	Average	C2	Ivy growing into crown Diameter measured over ivy.	1.9
T18	Ash (Fraxinus excelsior)	18(3)	270,260(2)	6.00	7.00	3.00	5.00	3.00	Mature	Average	Below average	C2	Included bark present in main fork. Twin-stemmed from base. One sided crown to North and east. Diameter measured over ivy.	4.5
T19	Silver Birch (Betula pendula)	17(3)	260(1)	2.00	3.00	6.00	3.00	3.00	Over mature	Average	Average	U	Large areas of dark staining on main stem	3.1
T20	Ash (Fraxinus excelsior)	17(2)	370(1)	5.00	1.00	6.00	7.00	2.00	Mature	Average	Average	C2	One sided crown shape. Diameter measured over ivy.	4.4
G21	Portugal Laurel (Prunus lusitanica), Lawson Cypress (Chamaecyparis lawsoniana)	7(0)	180(1)	2.00	2.00	2.00	2.00	0.00	Mature	Average	Average	C2	Lose links group forming understory. Diameter is estimated average.	2.2
T22	Norway Maple (Acer platanoides)	17(3)	420(1)	2.00	3.00	4.00	4.00	3.00	Mature	Good	Below average	C2	Tree looks to have been heavily pruned	5.0
T23	Ash (Fraxinus excelsior)	15(4)	320(1)	1.50	2.00	2.00	2.00	4.00	Mature	Good	Below average	C2	Looks to have been heavily pruned. Diameter measured over ivy.	3.8
G24	Lawson Cypress (Chamaecyparis lawsoniana)	10(2)	230(1)	4.00	4.00	4.00	4.00	2.00	Mature	Average	Poor	C2	Line of trees that appear to have been planted as a hedge and left to grow. Been topped several times, Diameter is estimated average.	2.8
T25	Pencil Cedar (Juniperus virginiana)	13(3)	320,570(2)	2.00	4.50	5.50	3.00	3.00	Mature	Average	Average	B2	Slightly swept stem to the south. Twin stem from 1m	7.9
T26	Cedar of Lebanon (Cedrus libani)	22(4)	970(1)	10.00	7.50	8.00	9.00	4.00	Mature	Good	Average	B2	Minor occluded pruning wounds on main stem	11.6
T27	Lawson Cypress (Chamaecyparis lawsoniana)	8(2)	250(1)	2.00	2.00	2.00	2.00	2.00	Mature	Below average	Average	C1	Three stems that have grown as legs from main leader that has now been felled. Diameter estimated.	3.0
T28	Lawson Cypress (Chamaecyparis lawsoniana)	18(3)	620(1)	4.00	4.00	3.00	4.00	3.00	Mature	Below average	Average	C2	Growing on compacted soil mound with some roots exposed. Sparkly floated crown with ivy growing up the trunk. Diameter measured over ivy.	7.4
G29	Lawson Cypress (Chamaecyparis lawsoniana)	7(3)	270(1)	2.50	2.50	2.50	2.50	3.00	Mature	Average	Poor	C2	Line of mature and heavenly pruned trees. Poor quality but do provided some screening. Diameter is estimated average.	3.2
T30	Beech (Fagus sylvatica)	12(4)	600(1)	5.00	4.00	6.00	5.00	4.00	Mature	Good	Average	C2	Occluded pruning wounds on stem. Tree been reduced and growing back with dense canopy	7.2
T31	Yew (Taxus baccata)	9(2)	230(1)	3.00	5.00	2.00	3.00	2.00	Early Mature	Below average	Good	C2	Low vigour/poor extension growth. Crown distorted due to group pressure.	2.8
T32	Norway Maple (Acer platanoides)	14(3)	450(1)	3.00	2.00	8.00	4.50	3.00	Mature	Average	Below average	C2	Unbalanced crown shape. Crown structure biased to South. Multiple pruning wounds on stem	5.4
T33	Ash (Fraxinus excelsior)	22(4)	600(1)	7.00	8.00	10.00	10.00	4.00	Mature	Average	Average	C2	Inaccessible tree. Dense climbing plants hindering inspection. Diameter estimated due to undergrowth.	7.2
G34	Ash (Fraxinus excelsior), Lawson Cypress (Chamaecyparis lawsoniana)	11(0)	350(1)	3.00	3.00	3.00	3.00	0.00	Mature	Average	Average	C2	Area of trees that is fenced off and Inaccessible: diameter estimated.	4.2
T35	Apple (Malus)	6(1)	230(3)	1.00	3.00	5.00	5.00	1.00	Over mature	Below average	Below average	U	Decay present on stem. Cavity on stem. Low vigour/poor extension growth. Scattered deadwood.	4.8
T36	Silver Birch (Betula pendula)	15(4)	380(1)	5.00	3.00	2.00	5.00	4.00	Mature	Poor	Average	C2	Low vigour/poor extension growth. Sparse foliage.	4.6
T37	Norway Maple (Acer platanoides)	15(1)	390(1)	4.50	5.00	4.00	8.50	1.00	Mature	Good	Average	B2	One sided crown: suppressed by adjacent specimen.	4.7



Tree Number	Common Species Name	Height (m)	Trunk Diameter and stem count	Crown Spread (m)				Height of Crown	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
				N	E	S	W							
T38	Ash (<i>Fraxinus excelsior</i>)	15(2)	710(1)	7.00	7.00	9.00	11.50	2.00	Mature	Below average	Good	C2	Downgraded due to potential for Ash Dieback. Large spreading crown that's slightly sparsely foliated.	8.5
T39	Hawthorn (<i>Crataegus monogyna</i>)	6(0)	110(2)	2.00	1.00	3.00	3.00	0.00	Mature	Average	Average	C2	Multiple stems at ground level. One sided crown: suppressed by adjacent specimen.	1.9
T40	Norway Maple (<i>Acer platanoides</i>)	7(2)	380(1)	1.00	2.00	7.00	8.00	2.00	Mature	Average	Poor	C2	Scaffold limb has partly failed	4.6
T41	Beech (<i>Fagus sylvatica</i>)	13(1)	570(1)	6.00	5.00	5.00	6.00	1.00	Mature	Good	Average	B2	Occluded pruning wounds on stem, crown slightly sparsely foliated.	6.8
G42	Common Lime (<i>Tilia X europaea</i>), Norway Maple (<i>Acer platanoides</i>), Bird Cherry (<i>Prunus padus</i>)	9(2)	260(1)	3.00	3.00	3.00	3.00	2.00	Early Mature	Average	Average	B2	Area of off site planted woodland group	3.1
T43	Apple (<i>Malus</i>)	4(1)	200,180(2)	3.00	1.00	2.00	3.00	1.00	Over mature	Below average	Below average	C1	Small domestic fruit tree with decay in main stem	3.2
T44	Pear (<i>Pyrus</i>)	4(1)	210(1)	2.00	2.00	1.00	1.00	1.00	Early Mature	Good	Average	C2	Pruning wounds on stems.	2.5
T45	Red Horse Chestnut (<i>Aesculus carnea</i>)	19(1)	760(1)	7.00	8.00	7.00	4.00	1.00	Mature	Good	Below average	C2	Very one sided crown. Diameter measured over ivy.	9.1
T46	Common Lime (<i>Tilia X europaea</i>)	23(2.5)	950(1)	7.00	4.00	9.00	4.50	2.50	Mature	Good	Average	B2	Roadside tree: of value in the street scene. Suckers around stem base. Very dense basal suckers. Diameter estimated due to lower growth.	11.4
T47	Holly (<i>Ilex aquifolium</i>)	5(1)	200(4)	2.00	2.00	2.00	2.00	1.00	Mature	Average	Below average	C2	Cluster of three stems. Convoluted branch structure	4.8
T48	Holly (<i>Ilex aquifolium</i>)	13(0)	340,260(2)	5.00	5.00	3.00	3.00	0.00	Mature	Good	Average	B2	Stem divides below 1.5m. Ivy on stem.	5.1
T49	Monterey Cypress (<i>Cupressus macrocarpa</i>)	19(4)	950(1)	7.50	8.00	8.00	7.00	4.00	Mature	Average	Average	B2	Sporadic dead branches in upper crown	11.4
T50	Yew (<i>Taxus baccata</i>)	5(0)	200(1)	3.00	3.00	3.00	3.00	0.00	Mature	Average	Average	C2	Low squat crown shape	2.4
T51	Holly (<i>Ilex aquifolium</i>)	9(2)	380(1)	3.00	3.00	2.50	2.50	2.00	Mature	Poor	Average	C1	Sparse foliage.	4.6





Appendix 5 Tree Protection Plan

