

BURGESS HILL TOWN FC

Arboricultural Impact Assessment



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ARBORICULTURAL IMPACT ASSESSMENT

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1 INTRODUCTION

- 1.1 This Arboricultural Impact Assessment (AIA) has been prepared by RPS on behalf of Surfacing Standards Ltd in respect of the proposed development at Burgess Hill Town FC.
- 1.2 A tree survey of the application area was carried out by RPS in July 2024 in accordance with the requirements of BS5837:2012. The details recorded during the survey can be seen in the Tree Schedule at Appendix B and displayed spatially on the Tree Constraints Plan at Appendix C.
- 1.3 This report has also been prepared in accordance with the requirements set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'(BS5837:2012).¹
- 1.4 The purpose of this report is to:
 - Provide an assessment of the quality of the surveyed trees with reference to the categories and sub-categories listed within Table 1 - BS5837:2012.
 - Assess and quantify the arboricultural impact of the proposed development within the survey area, based on the proposed development layout.
 - Provide additional arboricultural information and advice in relation to the protection of trees throughout the development of the site.
 - Provide a Tree Removal and Protection Plan to detail the proposed protective measures to be taken in respect of the trees during development of the site.
- 1.5 The Tree Removal and Protection Plan included in Appendix D identifies the following:
 - Trees to be retained
 - Trees to be removed
 - Alignment and design of protective fencing
 - Root Protection Area (RPA) of trees
- 1.6 The Tree Removal and Protection Plan shall be made available to all relevant site operatives prior to and throughout the construction process, so they understand the scope and importance of the tree protection measures.
- 1.7 To minimise the potential for harm to occur to retained trees, all works shall be carried out in accordance with the Tree Protection measures and construction techniques detailed within this report. In particular, the establishment of a Construction Exclusion Zone (CEZ) by erection of Tree Protection Fencing, will minimise the potential for harm to occur to retained trees.

¹ British Standards Institute. British Standard (BS5837) Trees in Relation to Design, Demolition and Construction - Recommendations. 2012.

2 SITE LOCATION

- 2.1 The survey site is located at Burgess Hill Town FC, Maple Dr, Burgess Hill RH15 8DL.
- 2.2 The land is roughly centred on OS grid reference TQ 31815 20317. The Local Planning Authority (LPA) governing this site is Mid Sussex District Council.
- 2.3 The Soilscape of the area in which the survey site is situated typically consists of Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils².
- 2.4 The site comprised the existing football club ground with a single pitch and tree cover around the edge of the ground.

Tree Preservation Orders & Conservation Areas

- 2.5 Trees covered by a Tree Preservation Order are protected under the Town and Country Planning Act 1990 (Trees Regulation 2012). The local authority must be consulted, and permission sought for any works that may affect them.
- 2.6 A Tree Preservation Order (TPO) is an order made by a LPA to protect specific trees, groups of trees or woodlands in the interests of amenity. An Order prohibits the:
 - cutting down
 - topping
 - lopping
 - uprooting
 - wilful damage
 - wilful destruction

of trees without the LPA's written consent. If consent is given, it can be subject to conditions which have to be followed. Cutting roots is also a prohibited activity and requires the authority's consent.

- 2.7 If a tree is not covered by a TPO but it situated within a Conservation Area, similar restrictions apply. Any works required to a tree situated within a Conservation Area must be notified to the LPA, using a 'section 211 notice', 6 weeks before carrying out the work, unless an exception applies.
- 2.8 A desktop investigation using Mid Sussex District Council's³ interactive online map confirmed that there are no Tree Preservation Orders across the site, nor is the site situated within a designated Conservation Area.

Ancient Woodland and Veteran Trees

- 2.9 In accordance with the National Planning Policy Framework (NPPF) (December 2024) section 193(c):

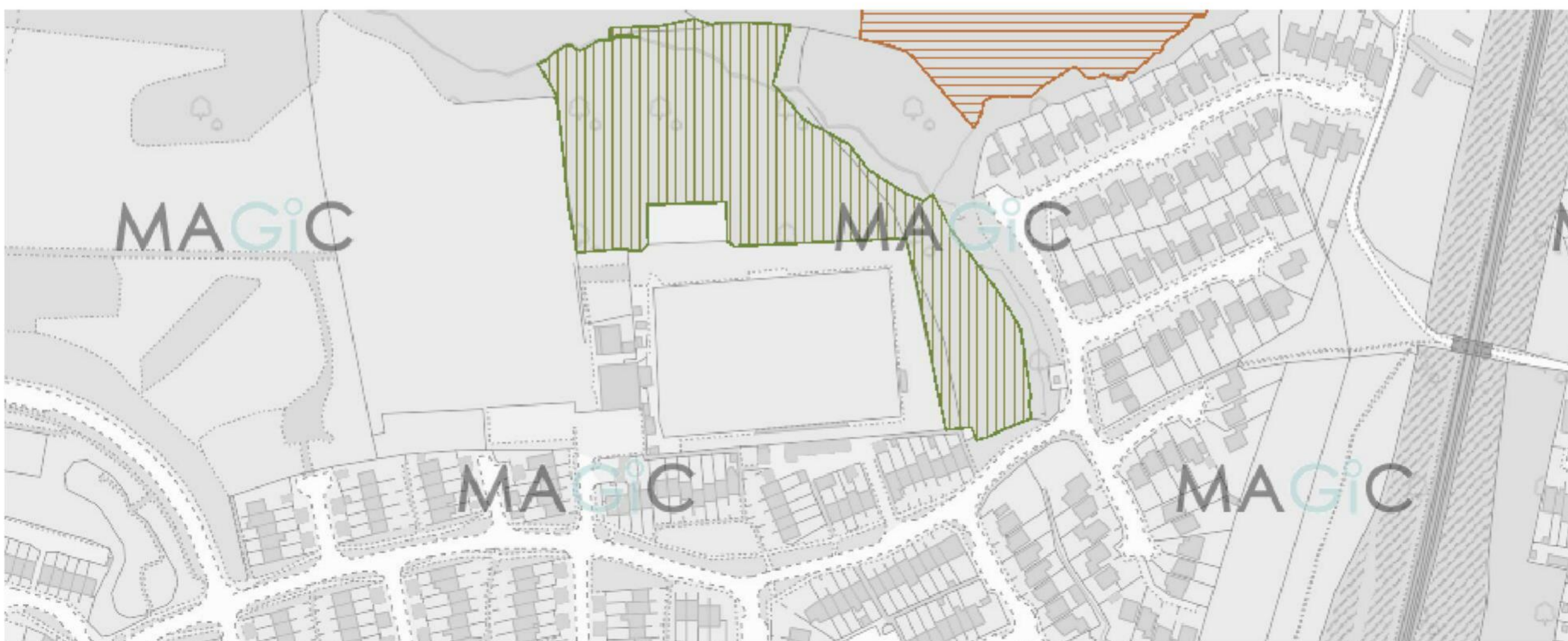
² <https://magic.defra.gov.uk/MagicMap.aspx>

³ <https://www.midsussex.gov.uk/planning-building/trees-and-hedgerows/tree-preservation-order-tpo-map/>

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development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁷⁰ and a suitable compensation strategy exists⁴

- 2.10 Forestry England and Natural England⁵ published standing advice for ancient woodlands and ancient and veteran trees in the context of developments, which is a material consideration for LPA. This guidance advises on the minimum RPA calculations which must be used, with minimum distances identified as:
- Fifteen metres between any development and ancient woodland boundary.
 - Fifteen times the diameter of its stem or 5m from the edge of its canopy, whichever is greater, around any ancient or veteran tree.
- 2.11 The use of semi-natural habitats for buffer zones as a means of protection is encouraged to contribute to the wider ecological network and enhance the green infrastructure area. Further guidance is provided on the compensation measures which may be applied should adverse impacts arise.
- 2.12 A desktop investigation using the Magic Map Application⁶ confirmed that there is a designated Ancient Woodland adjacent to the site, as shown in the screenshot below. The Ancient Woodland has been shown and cross referenced with the tree survey data on the Tree Constraints Plan at Appendix C, denoted with a solid green hatch.



⁴ <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

⁵ <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions>

⁶ <https://magic.defra.gov.uk/MagicMap.aspx>

3 NATIONAL AND LOCAL PLANNING POLICY

National Planning Policy Framework (NPPF) December 2024⁷

- 3.1 In relation to this report, there are three paragraphs of the NPPF which should be considered. Paragraph 136 states: *“Trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly planted trees, and that existing trees are retained wherever possible.”*
- 3.2 Paragraph 180 (B & D) states: *“Planning policies and decisions should contribute to and enhance the natural and local environment by:*
- 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;*
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”*
- 3.3 And most importantly, paragraph 186 (A, C & D) states: *“When determining planning applications, local planning authorities should apply the following principles:*
- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
 - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
 - d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*

Local Planning Policy: Mid Sussex District Plan 2014 – 2031⁸

DP37: Trees, Woodland and Hedgerows

- 3.4 *Strategic Objectives: 3) To protect valued landscapes for their visual, historical and biodiversity qualities; 4) To protect valued characteristics of the built environment for their historical and visual qualities; and 5) To create and maintain easily accessible green infrastructure, green corridors and spaces around and within the towns and villages to act as wildlife corridors, sustainable transport links and leisure and recreational routes.*
- 3.5 *Evidence Base: Green Infrastructure mapping; Mid Sussex Ancient Woodland Survey, Tree and Woodland Management Guidelines, Tree Preservation Order records.*

⁷ <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

⁸ <https://www.midsussex.gov.uk/media/3406/mid-sussex-district-plan.pdf>

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- 3.6 *The District Council will support the protection and enhancement of trees, woodland and hedgerows, and encourage new planting. In particular, ancient woodland and aged or veteran trees will be protected.*
- 3.7 *Development that will damage or lead to the loss of trees, woodland or hedgerows that contribute, either individually or as part of a group, to the visual amenity value or character of an area, and/ or that have landscape, historic or wildlife importance, will not normally be permitted.*
- 3.8 *Proposals for new trees, woodland and hedgerows should be of suitable species, usually native, and where required for visual, noise or light screening purposes, trees, woodland and hedgerows should be of a size and species that will achieve this purpose.*
- 3.9 *Trees, woodland and hedgerows will be protected and enhanced by ensuring development:*
- incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and*
 - prevents damage to root systems and takes account of expected future growth; and*
 - where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and*
 - has appropriate protection measures throughout the development process; and*
 - takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance on-site green infrastructure and increase resilience to the effects of climate change; and*
 - does not sever ecological corridors created by these assets.*
- 3.10 *Proposals for works to trees will be considered taking into account:*
- the condition and health of the trees; and*
 - the contribution of the trees to the character and visual amenity of the local area; and*
 - the amenity and nature conservation value of the trees; and*
 - the extent and impact of the works; and*
 - any replanting proposals.*
- 3.11 *The felling of protected trees will only be permitted if there is no appropriate alternative. Where a protected tree or group of trees is felled, a replacement tree or group of trees, on a minimum of a 1:1 basis and of an appropriate size and type, will normally be required. The replanting should take place as close to the felled tree or trees as possible having regard to the proximity of adjacent properties.*
- 3.12 *Development should be positioned as far as possible from ancient woodland with a minimum buffer of 15 metres maintained between ancient woodland and the development boundary.*

4 SURVEY METHODOLOGY

- 4.1 The tree survey was completed by Stefan Kowalczyk of RPS and the report was written by Elva Preston of RPS and authorised by David Cox, a professional member of the Arboricultural Association and Chartered Landscape Architect of RPS Group.
- 4.2 The tree survey was carried out in accordance with the requirements set out in BS 5837:2012 “Trees in Relation to Design, Demolition and Construction – Recommendations”. The survey does not constitute a full arboricultural condition assessment involving the detailed inspection of trees in relation to their structural condition, decay, and any other physical and pathogenic defects.
- 4.3 During the survey, all information was digitally captured on site, using a tablet running Axciscape 4.07 software. This is a program specifically designed for arboricultural surveying, which allows trees to be located directly onto a digital copy of a sites topographical survey.
- 4.4 The tree survey involved a visual inspection from the ground of individual specimens and where deemed appropriate, trees have been assessed as groups of trees, woodland and hedgerows. Characteristics such as their amenity value, condition and dimensions have been recorded. A full breakdown of tree characteristics recorded during the survey can be seen in Appendix A.
- 4.5 Each arboricultural feature is marked on the Tree Constraints Plan at Appendix C with an identification number (T1, G1, H1, W1 etc), which can be seen at and cross referenced with the Tree Schedule at Appendix B. The Tree Schedule shows a breakdown of the raw data collected during the site visit.
- 4.6 The locations of the trees are based upon a topographic survey produced by Stuart Bailey Land Surveyor in April 2024.
- 4.7 Measurements for tree height, minimum crown clearance and crown spread were rounded to the nearest 0.5m. Stem diameter measurements were recorded to the nearest 10 mm using a diameter tape where access to the stem was possible.
- 4.8 Trees retention categories were assigned by the following criteria and have been differentiated on the Tree Plans using the following colours:
- Category A:** Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B:** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C:** Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category 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. However, it may be possible to retain some trees assigned to retention Category U, where public access to them is limited, as they may exhibit conservation value providing unique wildlife habitat.
- 4.9 Categories A, B and C have further sub-categories with regards to the reasons for tree retention:
- 1) Mainly arboricultural qualities.
 - 2) Mainly landscape qualities.
 - 3) Mainly cultural values, including conservation.

ROOT PROTECTION AREA

- 4.10 The protection of the roots and soil structure within the RPA should be treated as a priority. To avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated in accordance with section 4.6 of BS5837:2012. They have been displayed on the Tree Plans with a magenta circle and may be modified in shape where deemed necessary by obvious root barriers observed on site (although the total area remains the same).
- 4.11 This methodology is recommended as the minimum area around a tree that contains sufficient roots and rooting volume to maintain viable tree vigour and structure. Where groups of trees, woodlands and hedgerows have been assessed, the RPA has been shown based on the average sized tree stem in each arboricultural feature, and so may fall short/exceed the RPA required for some of the individual specimens within the feature.

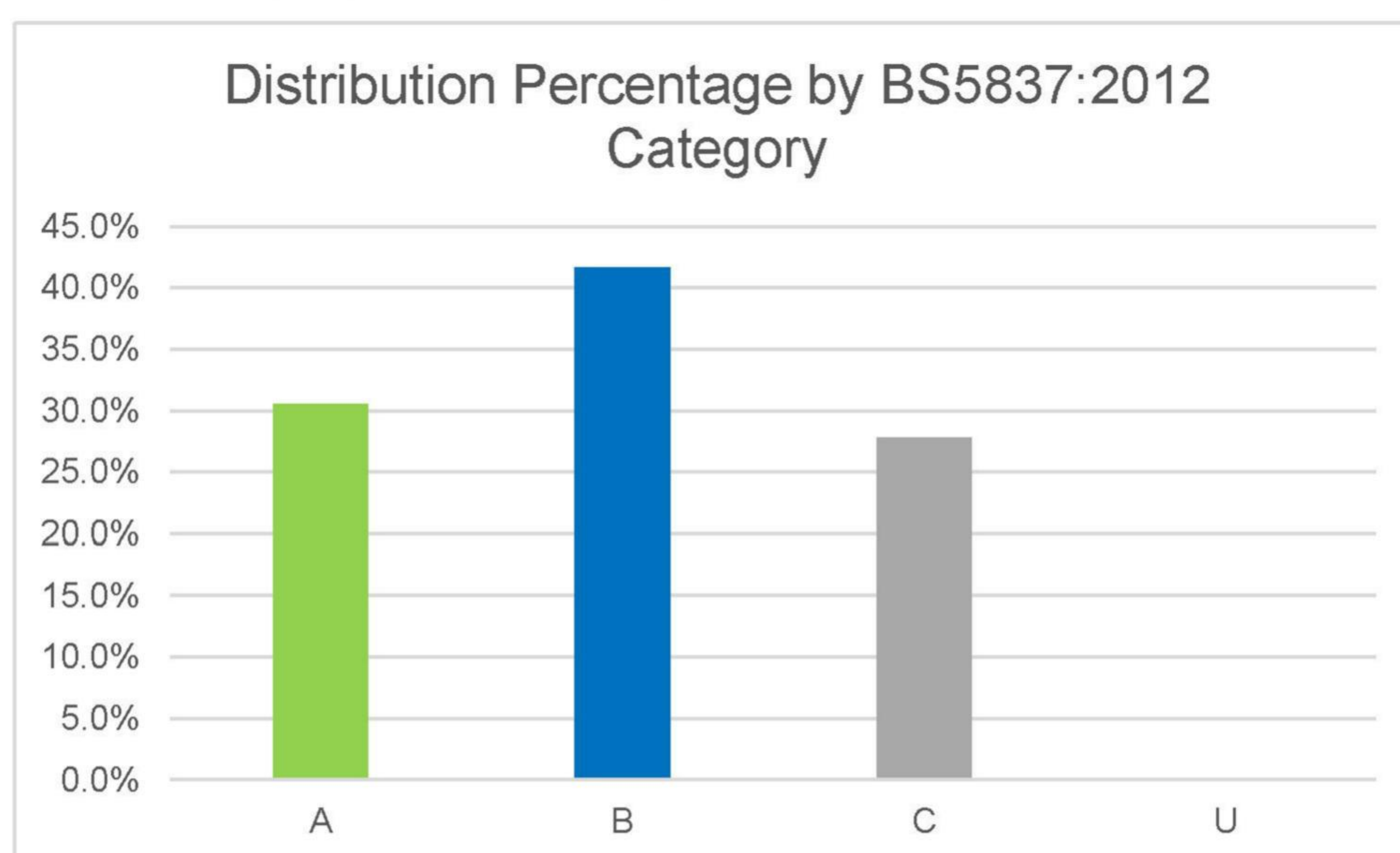
Limitations

- 4.12 The findings of this survey are not valid following adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events.
- 4.13 Trees are dynamic structures which are constantly growing and changing. Whilst reasonable effort has been made to identify defects which may compromise the trees longevity, no guarantee can be given as to the safety or otherwise of any individual tree or arboricultural feature. Due to the unpredictable laws and forces of nature, no tree can ever be deemed as safe. Natural failure of intact trees does occur, and changing climatic conditions can cause damage to even apparently healthy trees.
- 4.14 Trees were not climbed or inspected below ground level and inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. If trees have been recorded beyond the extent of the site, all dimensions have been estimated (unless stated otherwise) and the assessment of these trees has occurred from land within the Client's ownership and publicly accessible land only (unless formal access has been arranged to these additional areas).
- 4.15 The desktop study confirming statutory and non-statutory constraints uses publicly accessible third-party information, meaning the results of this exercise are only as accurate as the information available at the time of the assessment.
- 4.16 Provisional Tree Preservation Orders (TPOs) may be made whenever a LPA deems it appropriate, with only those persons interested in the land served with a copy of the Order. A further search for the presence of TPOs should be carried out prior to commencement of any tree works or removals specified within this report.
- 4.17 Where possible, the location of the arboricultural features identified at the site have been plotted using a topographical survey, which has been supplied by the client.

5 APPRAISAL AND RECOMMENDATIONS

Summary of Tree Survey

- 5.1 During the survey 33 trees were surveyed as individuals. The survey also recorded 2 Group and 1 Woodland.
- 5.2 The arboricultural features are situated around the peripheries of the site, predominantly along the northern and eastern boundaries. Individual trees were picked up along the edge of the woodland (W36), which was the most significant arboricultural feature. It was of high arboricultural quality and comprised a native mix of species. For details on all of the information recorded during the site visit, please refer to the Tree Schedule in Appendix B.
- 5.3 The BS5837:2012 quality of the individually surveyed trees is broken down in



- 5.4 Figure 1 below.

Figure 1: BS5837:2012 quality of individual trees across the site

- 5.5 The BS5837:2012 quality of the Groups, Woodlands & Hedges recorded during the survey is broken down in Table 1 below.

Table 1: BS5837:2012 quality of Groups, Woodlands, Hedges and Scrub across the site

Type	A	B	C	U	Total
Groups	0	1	1	0	2
Woodlands	1	0	0	0	1
Hedges	0	0	0	0	0
Grand Total	1	1	1	0	3
Distribution Percentage	33.33%	33.33%	33.33%	0.00%	100%

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- 5.6 10 individual trees and 1 woodland surveyed on site was assessed as high arboricultural quality (category A). The 10 individual trees were all common oak *Quercus robur* and were predominantly mature in age but in good physiological and structural condition. Woodland W36 is designated as ancient woodland and comprised a mix of common oak, holly *Ilex aquifolium*, beech *Fagus sylvatica* and hornbeam *Carpinus betulus*. Again, it was in good overall condition and although situated along the boundary, the canopies encroached over the existing football club grounds.
- 5.7 14 individual trees and 1 group of trees were surveyed as moderate arboricultural quality (category B). 12 of the individual trees were common oak with the remaining 2 comprising 1 beech and 1 wild cherry *Prunus avium*. These individual trees were still mature in age and generally in good overall condition but were of slightly smaller proportions than the high-quality counterparts. G35 was a group of Monterey cypress *Cupressus macrocarpa* which was shelter belt planting located within the site boundary. The canopies were interlinked with woodland W36 and were suppressed by the woodland as a result. They were in fair overall condition but provided good screening value.
- 5.8 The remaining 9 individual trees and 1 group of trees were of low arboricultural quality (Category C). These lower quality specimens were scrappy in nature but still generally mature in age. Several specimens were growing in close proximity to the boundary fence which had impeded their form.

Planning considerations

- 5.9 Trees can offer many benefits, including the provision of visual amenity, softening or complementing the effect of the built environment, adding maturity to new developments and by making places more comfortable in tangible ways e.g. contributing screening and shade, reducing wind speed and turbulence, intercepting snow and rainfall, and reducing glare.
- 5.10 New tree planting opportunities should be considered as part of any potential redevelopment; this will help to broaden the age diversity of the tree cover within the area. Sufficient space should be provided for species with significant stature to grow out into maturity.
- 5.11 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is still a material consideration that is considered when dealing with planning applications.

Design and Site Layout Considerations

- 5.12 During any future site planning exercises, the current and future growth potential of the trees should be considered.
- 5.13 The Root Protection Area (RPA) should become an exclusion zone during construction works and for any development. It should be fenced-off and protected in accordance with BS5837:2012. The canopy is likewise susceptible to damage during construction work and requires similar protection.
- 5.14 No activities that result in excavations, changes in level or soil compaction should take place within the RPA of any retained trees, especially older mature trees. This would include the storage of materials, any construction work, trafficking by vehicles or even excessive trafficking by pedestrians.

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- 5.15 If some form of construction must take place within the RPA, then certain measures need to be adopted to avoid disturbance or damage to the roots and to maintain moisture infiltration and gaseous diffusion into the soil. It is recommended that these are detailed by a separate document called an Arboricultural Method Statement (AMS).

Services

- 5.16 Services likewise should be routed outside the existing or potential RPAs of trees. Where it is unavoidable, then certain measures should be employed to avoid damage to the tree's larger roots.
- 5.17 The location and siting of new facilities near trees should consider the potential impact on and conflict with both tree roots and canopy. This should consider the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree on the activities should also be considered regarding obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.
- 5.18 Any new services should avoid the RPAs of any retained tree. Where it is unavoidable, then the route of the services must be designed by an Engineer in consultation with an Arboriculturist. Further advice can be found in NJUG Volume 4- "Guidance for the planning, installation and maintenance of utility services in proximity of trees, 2007".

Tree Risk Management

- 5.19 It is recommended that a programme of periodic arboricultural assessments be undertaken to regularly assess the full health and safety of all trees both in full leaf and bare stemmed. The assessments should prioritise areas with high footfall and/or presence of a constant target and accord with arboricultural advice, taking account of relevant factors (where known) that affect safety such as the age class, condition, size and species of the trees.

6 ARBORICULTURAL IMPACT ASSESSMENT

Introduction

- 6.1 Trees have finite energy reserves, developed each year throughout the growing season, which are utilised for biological processes such as growth and defence against pests or diseases throughout the following year.
- 6.2 Any development in proximity to trees has the potential to cause harm to those trees unless control measures are identified and acted upon; as such it is essential to consider the relationship between the proposed development and the retained trees to identify what precautions are necessary, proportionate and appropriate.
- 6.3 Development has the potential to impact upon the above ground and below ground parts of trees. Whilst some damage that can occur, such as physical damage to the trees stems and branches from machinery movements, is clearly visible, the impact from other aspects of work common on development sites, which can have a significant effect upon the continued health of trees, are not always immediately evident.
- 6.4 Damage that is not immediately evident, but which can cause long term harm to retained trees, includes things such as damage to the soil structure by compaction causing root damage and levels changes altering the water table and affecting moisture availability.
- 6.5 In general by adopting appropriate methods of working, precautionary and protective measures, significant harm to retained trees can be avoided. The establishment of a CEZ by erection of Tree Protection Fencing will minimise the potential for harm to occur to retained trees.
- 6.6 The retention and protection of significant trees and vegetation will assist in assimilating the proposed development into the wider landscape and offer long term tree cover.
- 6.7 Furthermore, redevelopment of the site may offer an excellent opportunity to actively manage any retained vegetation and accordingly we recommend restorative tree works be undertaken as appropriate. This will further improve the amenity value and landscape setting of the site and increase the useful life of any retained trees.

Brief Description of Proposed Development

- 6.8 This document supports the proposed development, consisting of:
 - The construction of a new football pitch.
 - Construction of a goal storage area.
 - Erection of 15m high floodlighting columns.
 - Regrading of the existing pathways.
 - Inclusion of dugouts and technical area.
 - Construction of a raised viewing platform.

Reference Documents

- 6.9 To assess the impacts of the proposed development on the arboricultural features at the site, the proposed site plan was overlaid onto the TCP to create a Tree Removal and Protection Plan (TRPP). As well as identifying trees required to be retained and removed to facilitate the proposed development, the TRPP assessed potential conflicts between the arboricultural constraints (such as the RPA and tree crowns) and the proposed site plan. Mitigation measures

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to negate these conflicts (such as ground protection, tree protection fencing and pruning requirements) and to protect the trees during the construction process have been included on the TRPP, which can be found at Appendix D of this report.

The following documents have been referenced to create these plans:

- Topographical survey – 2314.dwg – April 2024.
- Proposed site plan – SSL3402 03 - Proposed Site Plan – December 2024.

Proposed Tree Removal

- 6.10 To facilitate the proposed development, there is the removal of 2 category C individual trees, T32 and T33.
- 6.11 T32 and T33 are both low quality, category C individual trees. Their removal will have minimal impact on the arboricultural value of the site as a whole and their loss should not be considered a significant arboricultural constraint.
- 6.12 The proposed development has sympathetically incorporated all of the site's moderate and high-quality tree cover, owing to the minimal changes from the existing land use across the site.

Tree Pruning Works

- 6.13 No tree pruning works are required to facilitate the proposed development.
- 6.14 It may be necessary to lift the crowns of any trees that overhang the Tree Protection Fencing into the development site to lift them clear of works. This should be assessed on site as and when necessary and any pruning carried out to the specification laid out in Section 6 of this report.
- 6.15 This pruning work, if carried out in accordance with Section 6 of this report, should be minimally invasive and have little impact on the overall health of the tree.

Proposed Works Within Root Protection Areas / Buffer Zone

- 6.16 As the protection of soil and roots within the RPA must be treated as a priority, the primary position for any construction activities should be situated outside of these protected areas.
- 6.17 However, in instances where justification can be given to work within an RPA, technical solutions may be available to minimise the potential damage to tree roots and soil volume. If work is proposed within any RPAs of trees to be retained, a compensatory RPA offset must be demonstrated which borders the existing RPA and mitigation measure can be implemented to prevent damage to roots and improve the soil environment available to the tree.
- 6.18 No works within the RPAs of retained trees is foreseen to facilitate the proposed development.
- 6.19 However, a small section of the northeastern corner of the football pitch and footpath around the pitch incur within the 15m ancient woodland buffer zone. Given the existing location of the football pitch and associated infrastructure, this incursion is not foreseen to increase not worsen the setting to the woodland itself, so no additional arboricultural impact is foreseen on the ancient woodland. Furthermore, soft landscaping works are proposed between the football pitch and the trees along the woodland boundary which will improve the existing ancient woodland buffer zone environment.

Tree Planting and Green Infrastructure

- 6.20 A detailed planting plan should be considered to ensure appropriate compensation for the proposed tree loss and fulfil the requirements of the NPPF (December 2024). An appropriate tree planting strategy will provide an opportunity to incorporate feature trees, and through careful consideration for tree species can help diversify the tree population. This diversification will help to increase resilience to pests & diseases and in the long term, improve the arboricultural resource at the site.
- 6.21 This planting designs could also seek to provide a naturalistic setting to the existing woodland. Currently, this mostly comprises as mown sport pitch turf.

7 TREE WORKS

Standard of Work

- 7.1 The tree work required to facilitate this development will adhere to the following standards.
- 7.2 All tree works shall be carried out in accordance with BS3998:2010 and latest arboricultural best practice.
- 7.3 All tree work shall be carried out by suitably qualified, competent and insured arboricultural contractors in accordance with Arboricultural Association Standard Conditions of Contract and Specifications for Tree Works (2008) Edition and BS 3998:2010 Tree Work.
- 7.4 All green and woody waste generated by the tree works shall be removed from site and disposed of in an environmentally sustainable manner.
- 7.5 When a branch is removed at its point of attachment, injury of the wood and bark of the parent stem or branch above the cut shall be avoided. If a branch collar is visible, the final cut shall be just outside it and care shall be taken to avoid tearing retained wood and bark when the cut is made. Preliminary cuts shall be made, if necessary, so as to remove weight, before a final cut is made. Care shall be taken to prevent falling branches from harming other parts of the tree (including its roots), its surroundings, people or property. Heavy branches shall be removed in sections and, where necessary, shall be lowered with ropes.
- 7.6 Prior to the commencement of any tree works an appropriate risk assessment shall be produced to describe the measures required to fulfil the statutory safety obligations. It shall aim to identify and prioritise the necessary control measures and precautions.
- 7.7 Following the works, it is recommended that the trees are monitored on a regular basis to ensure their ongoing vitality and health. These inspections shall be completed by a suitably qualified and experienced person.

Timing of Works

- 7.8 Any tree works required shall be completed prior to any construction and enabling works on the site.
- 7.9 All works shall be timed to have regard to the phenological cycles of protected species that are associated with trees; notably birds and bats.
- 7.10 Nesting birds are protected by law and any removal / tree works should not be carried out during the bird nesting season (March-August inclusive). Should any vegetation be outlined for removal during this period, then an ecological inspection would be required to check that no nesting birds are present. Should checks reveal nesting birds the vegetation must remain until September or until an ecologist has certified that the fledglings have left the nest. A visual inspection for bats shall also be carried on mature / ivy clad trees prior to commencing operations.

8 OUTLINE TREE PROTECTION MEASURES

Construction Exclusion Zone

- 8.1 The protective fence line defines the Construction Exclusion Zone (CEZ), and the fencing shall not be moved or taken down at any time. Within the CEZ there must be no mechanical digging or scraping; no alteration to existing ground levels including soil stripping; no earthworks; and no handling or discharge of any chemical substance, concrete washings or of any fuels.
- 8.2 Furthermore, vehicular or pedestrian access and the storage of any materials is prohibited within the CEZ.
- 8.3 Additionally, no materials that may contaminate the soil such as concrete mixings, diesel oil and vehicle washings shall be discharged within 10m of the stem of any tree and no fires shall be lit within 10m of the maximum extent of a trees crown.

Tree Protection Fencing

- 8.4 Unless otherwise agreed in writing with the Arboricultural Consultant and/or LPA Tree Officer, the fencing system to be utilised shall be in accordance with Appendix E and compliant with BS5837:2012.
- 8.5 The tree protection fence shall be erected as shown on the Tree Removal and Protection Plan (Appendix D) included with is report.
- 8.6 The fence line shown is the minimum required, and the length of the fence shall be extended or adjusted on site as agreed with the Arboricultural Consultant to ensure satisfactory protection of all retained trees and RPAs.
- 8.7 Where proposed (permanent) construction site-hoarding provides the same level of protection to the retained trees and RPAs as the proposed tree protection fence, subject to agreement with the Arboricultural Consultant, the hoarding may serve as the tree protection fence. Notwithstanding, depending on the form and alignment of the construction site- hoarding it may be necessary to provide additional tree protection fence to ensure adequate protection of retained trees and RPAs as shown on the Tree Removal and Protection Plan.
- 8.8 Once the protective barrier is in place it must remain in situ throughout the course of the development until the completion of development, other than to facilitate agreed tree removal; see below.
- 8.9 Where necessary, tree protection fencing may be temporarily re-aligned in order to facilitate tree removal. Fencing is to be re-instated immediately following removal in a manner that encompasses the remaining trees and their respective RPAs.
- 8.10 During tree removal, no wheeled or tracked machinery is to enter the area previously encompassed by tree protective fencing as shown in the Tree Removal and Protection Plan.
- 8.11 Copies of the Tree Removal and Protection Plan shall be placed in the site office for reference by all site staff.
- 8.12 Signs detailing the purpose of the protective barrier shall be attached to the barriers at 10m intervals. Such signs should be weatherproof and shall be substantially in the form of the examples provided in . Signs must Appendix F be replaced as necessary should they be removed or become illegible.

ARBORICULTURAL IMPACT ASSESSMENT

- 8.13 Following erection of the protective barriers and prior to commencement of the development it is recommended that an inspection of the site, by either the Council's Tree Officer or the Arboricultural Consultant, is arranged to confirm fencing has been installed in accordance with the Tree Removal and Protection Plan and that any relevant arboreal conditions attached to the planning consent have been met.

Reporting

- 8.14 Should any arboricultural issues become apparent during the works the site manager should immediately contact the Arboricultural Consultant or the Council's Tree Officer for advice upon how to proceed.

9 SUMMARY

- 9.1 During the survey 33 trees were surveyed as individuals. The survey also recorded 2 Group and 1 Woodland.
- 9.2 The arboricultural features are situated around the peripheries of the site, predominantly along the northern and eastern boundaries. Individual trees were picked up along the edge of the woodland (W36), which was the most significant arboricultural feature. It was of high arboricultural quality and comprised a native mix of species. It is also designated as an area of ancient woodland.
- 9.3 To facilitate the proposed development, there is the removal of 2 category C individual trees, T32 and T33. T32 and T33 are both low quality, category C individual trees. Their removal will have minimal impact on the arboricultural value of the site as a whole and their loss should not be considered a significant arboricultural constraint.
- 9.4 It may be necessary to lift the crowns of any trees that overhang the Tree Protection Fencing into the development site to lift them clear of works. This should be assessed on site as and when necessary and any pruning carried out to the specification laid out in Section 6 of this report.
- 9.5 No works within the RPAs of retained trees is foreseen to facilitate the proposed development.
- 9.6 However, a small section of the northeastern corner of the football pitch and footpath around the pitch incur within the 15m ancient woodland buffer zone. Given the existing location of the football pitch and associated infrastructure, this incursion is not foreseen to increase the impact upon the woodland itself, so no additional arboricultural harm is foreseen on the ancient woodland.
- 9.7 Furthermore, soft landscaping works are proposed between the football pitch and the trees along the woodland boundary which will improve the existing ancient woodland buffer zone environment; these will likely comprise a naturalistic meadow edge to the woodland. Replacing mown amenity turf in most places.

APPENDICES

Appendix A

Tree Characteristics Recorded During Survey

Tree Ref No:	Sequential reference number of trees or groups of trees. Avenues, woodlands and hedgerows were also recorded on the tree constraints plan. # - denotes inaccessible trees (best estimates are made about the location, physical dimensions and characteristics.)				
Species	Species listed by common name, with scientific names (italic lettering).				
Height (m)	Estimated height of canopy to nearest metre.				
Branch Spread	branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown				
Stem diameter @ 1.5 m (m)	Estimated diameter of trunk at 1.5 m above ground level in metres unless otherwise indicated, multi-stemmed trees being measured in accordance with Annex C: BS5837:2012				
Existing height above ground level	To inform on ground clearance, crown/stem ratio and shading the estimated height of the first significant branch and direction of growth and canopy above ground level.				
Stem No.	Number of stems (if necessary) of individual tree.				
Life Stage	Expressed as:-	Y SM EM M	(Young) (Semi-mature) (Early mature) (Mature)	OM V D	(Over-mature) (Veteran) (Dead)
Physical Condition	Apparent condition expressed as the following categories, based upon a brief visual inspection from the ground only:-			Good Fair Poor Dead	
Comments / Management Recommendations	General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations and potential for wildlife habitats (not exhaustive).				
Estimated remaining contribution (years)	Estimated remaining contribution, in years (<10, 10+,20+,40+)				
Tree Quality Assessment Value: <u>Category</u>	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	A (Trees/Vegetation of high quality and value) B (Vegetation of moderate quality and value) C (Trees/Vegetation of low quality and value) U* (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)			
	* Category U trees can have existing or potential conservation value which might be desirable to preserve.				
Tree Quality Assessment Value: <u>Sub - Category</u>	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	1 (Trees with mainly <i>arboricultural</i> value) 2 (Trees with mainly <i>landscape</i> value) 3 (Trees with mainly <i>cultural / conservation</i> value)			

Appendix B

Tree Survey Schedule

TREE SURVEY SCHEDULE

Site: Burgess Hill Town FC, Leylands Park, Maple Park
Project Schedule Ref: JSL5210_750
Drawing Reference: JSL5210_700
Survey date: 03.07.2024

Surveyor: S. Kowalczyk
Status: For Planning
Revision: -
Notes: FSB - First Significant Branch



Ref. no	Species	Height (m)	Canopy Spread (m)					Crown Area	Stem dia. (mm)	Stem no. at 1.5m	Height of crown		FSB Height (Direction)	Age class	Condition	General Observations Management Recommendations		Estimated remaining contribution (yrs)	Tree Quality Category (BS5837)
			N	E	S	W	clearance (m)				clearance (m)								
T1	Quercus robur (Common Oak)	20	7	7	7	9	176	770	1	5	-	M	Good	Large woodland edge oak, superb tree.		40+	A2		
T2	Quercus robur (Common Oak)	20	7	7	7	9	176	770	1	5	-	M	Good	Large woodland edge oak, superb tree.		40+	A2		
T3	Quercus robur (Common Oak)	20	7	7	7	9	176	770	1	5	-	M	Good	Large woodland edge oak, superb tree.		40+	A2		
T4	Quercus robur (Common Oak)	20	7	7	7	9	176	770	1	5	-	M	Good	Large woodland edge oak, superb tree, not plotted on topo, location established.		40+	A2		
T5	Quercus robur (Common Oak)	20	5	7	5	9	132	770	1	5	-	M	Good	Large woodland edge oak, superb tree, not plotted on topo, location established.		40+	A2		
T6	Quercus robur (Common Oak)	20	5	7	5	9	132	770	1	5	-	M	Good	Large woodland edge oak, superb tree, not plotted on topo, location established.		40+	A2		
T7	Quercus robur (Common Oak)	20	5	7	5	9	132	680	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.		40+	A2		
T8	Quercus robur (Common Oak)	20	5	4	5	9	99	470	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.		20+	B2		
T9	Quercus robur (Common Oak)	20	5	4	4	9	92	470	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.		20+	B2		
T10	Quercus robur (Common Oak)	20	5	4	4	9	92	800	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.		40+	A2		

Note: This survey is based on a brief visual inspection from the ground. It is not intended as a full arboricultural inspection.
- indicates estimated/offsite tree. * - indicates off site tree. FSB - First Significant Branch.

Ref. no	Species	Height (m)	N	E	S	W	Crown Area	Stem dia. (mm)	Stem no. at 1.5m	crown clearance (m)	FSB Height (Direction)	Age class	Condition	General Observations Management Recommendations	remaining contribution (yrs)	Quality Category (BS5837)
T11	Quercus robur (Common Oak)	20	5	4	3	9	85	450	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.	20+	B2
T12	Quercus robur (Common Oak)	20	5	4	3	9	85	480350	2	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.	20+	B2
T13	Quercus robur (Common Oak)	20	5	4	3	9	85	750	1	5	-	M	Good	Large woodland edge oak, leaning west, large cavities from old pruning wound, not plotted on topo, location established.	20+	B2
T14	Quercus robur (Common Oak)	20	4	4	4	4	50	700	1	5	-	M	Poor	Large woodland edge oak, large cavities from old pruning wound, large wounds and ass decay at stem base, not plotted on topo, location established.	10+	C3
T15	Quercus robur (Common Oak)	20	4	6	8	2	79	400500	2	5	-	M	Fair	Twin stem from 0.5m with sat union, large woodland edge oak, large cavities from old pruning wound, not plotted on topo, location established.	20+	B2
T16	Quercus robur (Common Oak)	20	4	3	8	2	55	600	1	5	-	M	Fair	Large woodland edge oak, canopy bias south, not plotted on topo, location established.	10+	C2
T17	Quercus robur (Common Oak)	20	4	3	8	2	55	400	1	5	-	M	Fair	Large woodland edge oak, tall etiolated form, canopy bias south, not plotted on topo, location established.	10+	C2
T18	Quercus robur (Common Oak)	20	6	6	6	6	113	750	1	5	-	M	Poor	Large woodland edge oak, very little leaf cover remaining, no access to stem due to veg, not plotted on topo, location established.	10+	C2
T19	Fagus sylvatica (Beech)	20	5	5	5	5	79	450	1	5	-	M	Good	Appears to be in good health, no access to stem due to veg, not plotted on topo, location established.	20+	B2
T20	Quercus robur (Common Oak)	20	5	5	5	5	79	450	1	5	-	M	Good	Appears to be in good health. ivy clad stem, no access to stem due to veg, not plotted on topo, location established.	20+	B2
T21	Quercus robur (Common Oak)	20	6	6	6	6	113	550500	2	5	-	M	Good	Twin stem from 0.5m, poor union, limited access to stem due to veg, not plotted on topo, location established.	20+	B2
T22	Quercus robur (Common Oak)	20	6	6	6	6	113	500	1	5	-	M	Good	Limited access to stem due to veg, limited view of canopy, not plotted on topo, location established.	20+	B2
T23	Quercus robur (Common Oak)	20	6	6	9	6	141	550	1	5	-	M	Good	Limited access to stem due to veg, limited view of canopy, not plotted on topo, location established.	20+	B2

Note: This survey is based on a brief visual inspection from the ground. It is not intended as a full arboricultural inspection.

- indicates estimated/offsite tree. * - indicates off site tree. FSB - First Significant Branch.

Ref. no	Species	Height (m)	N	E	S	W	Crown Area	Stem dia. (mm)	Stem no. at 1.5m	crown clearance (m)	FSB Height (Direction)	Age class	Condition	General Observations Management Recommendations	remaining contribution (yrs)	Quality Category (BS5837)
T24	Quercus robur (Common Oak)	20	6	6	9	6	141	500	1	5	-	M	Good	Limited access to stem due to veg, limited view of canopy, ivy clad stem, not plotted on topo, location established.	20+	B2
T25	Quercus robur (Common Oak)	20	6	6	7	6	123	450	1	5	-	M	Good	Limited access to stem due to veg, limited view of canopy, ivy clad stem, not plotted on topo, location established.	20+	B2
T26	Quercus robur (Common Oak)	20	9	9	9	9	254	700700	2	5	-	M	Good	Large woodland edge tree, limited access to stem due to veg, twim stem, limited view of canopy, ivy clad stem, not plotted on topo, location established.	40+	A2
T27	Prunus avium (Wild Cherry)	15	6	6	6	6	113	3003002 50250	4	5	-	M	Good	Limited access to stem due to veg, multi stem, limited view of canopy, ivy clad stem, not plotted on topo, location established.	20+	B2
T28	Fraxinus excelsior (Ash)	10	4	4	4	4	50	250250	2	5	-	M	Fair	Limited access to stem due to veg and fences, growing on west side of boundary fence.	10+	C2
T29	Fraxinus excelsior (Ash)	10	4	4	4	4	50	350	1	5	-	M	Fair	Limited access to stem due to veg and fences, growing on east side of boundary fence.	10+	C2
T30	Quercus robur (Common Oak)	12	8	8	8	8	201	670	1	5	-	M	Good	Superb oak growing on west side of boudary fence, wide spreading canopy, nomd.	40+	A2
T31	Crataegus monogyna (Hawthorn)	12	4	4	4	4	50	300	1	5	-	M	Fair	Heavily ivy clad, inspection limited, growing on south side of boudary fence within scrub..	10+	C2
T32	Salix caprea (Goat Willow)	14	4	1	4	4	31	200200	2	5	-	M	Fair	Scrpny boundary tree growing on north side of boudary fence.	10+	C2
T33	Salix caprea (Goat Willow)	14	4	4	4	1	31	2002002 00250	4	5	-	M	Fair	Scrpny boundary tree, growing on north side of boudary fence.	10+	C2
G34	Salix caprea (Goat Willow), Fraxinus excelsior (Ash), Prunus spinosa (Blackthorn)	14	-	-	-	-	-	2002002 00250 (avg.)	-	5	-	M	Fair	Small group of scrappy trees.	10+	C2

Note: This survey is based on a brief visual inspection from the ground.
It is not intended as a full arboricultural inspection.

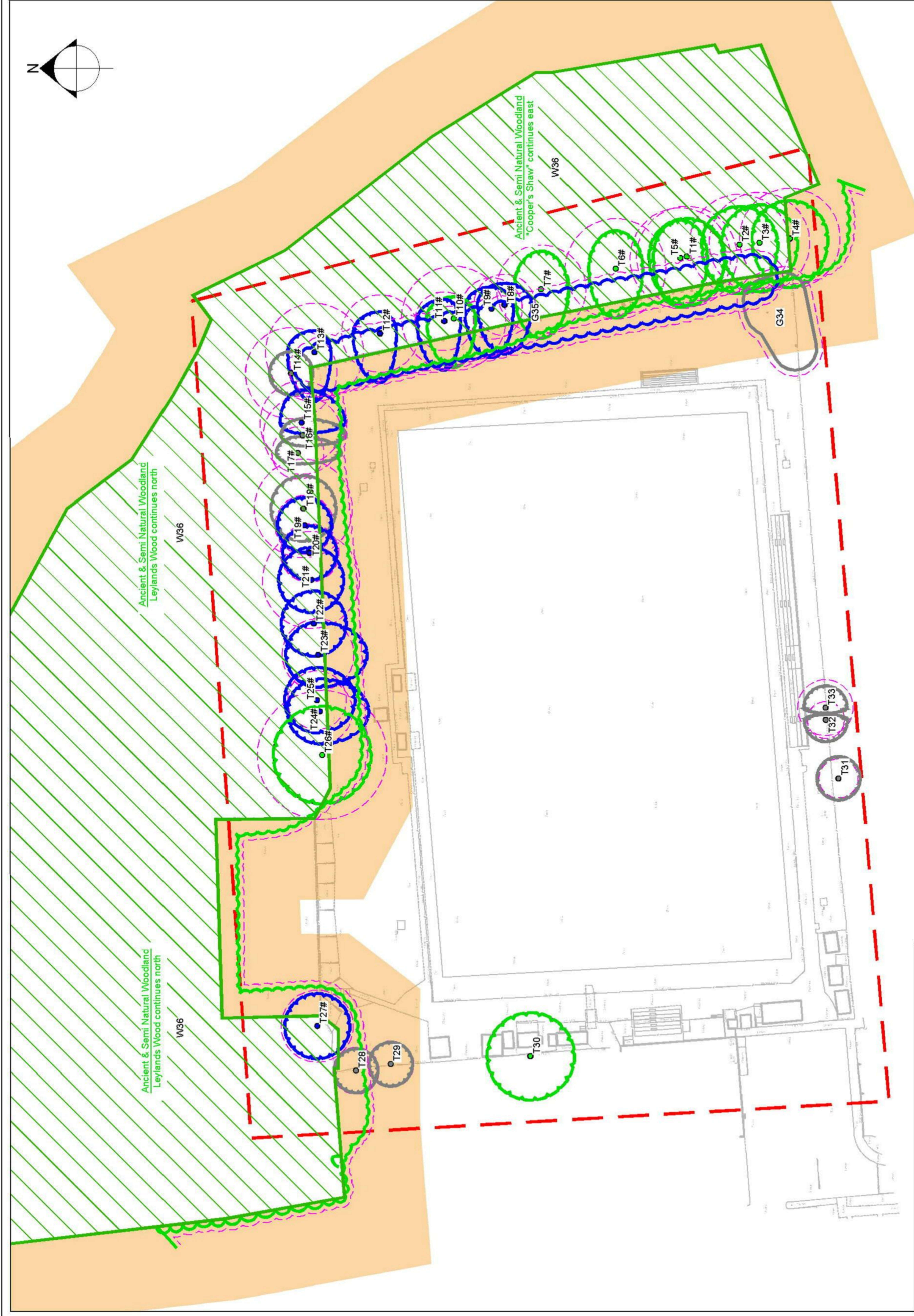
- indicates estimated/offsite tree. * - indicates off site tree. FSB - First Significant Branch.

Ref. no	Species	Height (m)	N	E	S	W	Crown Area	Stem dia. (mm)	Stem no. at 1.5m	crown clearance (m)	FSB Height (Direction)	Age class	Condition	General Observations Management Recommendations	remaining contribution (yrs)	Quality Category (BS5837)
G35	Cupressus macrocarpa (Monterey Cypress)	20	-	-	-	-	-	350 (avg.)	-	5	-	M	Fair	Shelter belt of evergreen even age trees planted within the site boundary, canopies are inter mixed with woodland edge oak trees located offsite, norther half of line are less well developed due to group pressure from woodland to east being domonant, provide good dense svreening.	20+	B2
W36	Quercus robur (Common Oak),Ilex aquifolium (Holly),Fagus sylvatica (Beech),Carpinus betulus (Hornbeam)	22	-	-	-	-	-	500 (avg.)	-	5	-	M	Good	Mature boundary woodland, listed as ancient woodland, canopies encroach over fc as can be seen on the tree constraints plan.	40+	A3

Note: This survey is based on a brief visual inspection from the ground.
It is not intended as a full arboricultural inspection.
- indicates estimated/offsite tree. * - indicates off site tree. FSB - First Signifigant Branch.

Appendix C

Tree Constraints Plan



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Notes

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2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.

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Key

Survey and Assumed Site Boundary.

Tree with numbered reference, canopy spread and coloured BS5837:2012 tree quality category as shown below. # = Tree detail/location estimated (inaccessible tree, not plotted on topo)

Woodlands & Groups with numbered reference, canopy extents and coloured BS5837:2012 tree quality category as shown below. W1

BS 5837:2012 Tree Quality Categories - Table 1

- Category A - High quality
- Category B - Moderate quality
- Category C - Low quality
- Category U - Unsuitable for retention

Designated Ancient & Semi Natural Woodland

Natural England's recommended 15m buffer zone for Ancient Woodland

Root protection area (RPA) calculated in accordance with Section 4.6 - BS5837:2012

Rev	Description	By	CB	Date



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Project Burgess Hill Town FC
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Title Tree Constraints Plan

Status Drawn By PM/Checked by
For Planning SK DC

Job Ref Scale @ A3 Date Created
JSL5210 1:750 July 2024

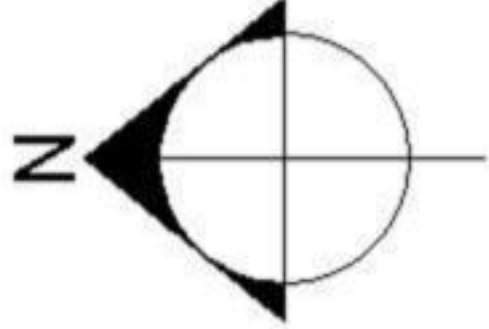
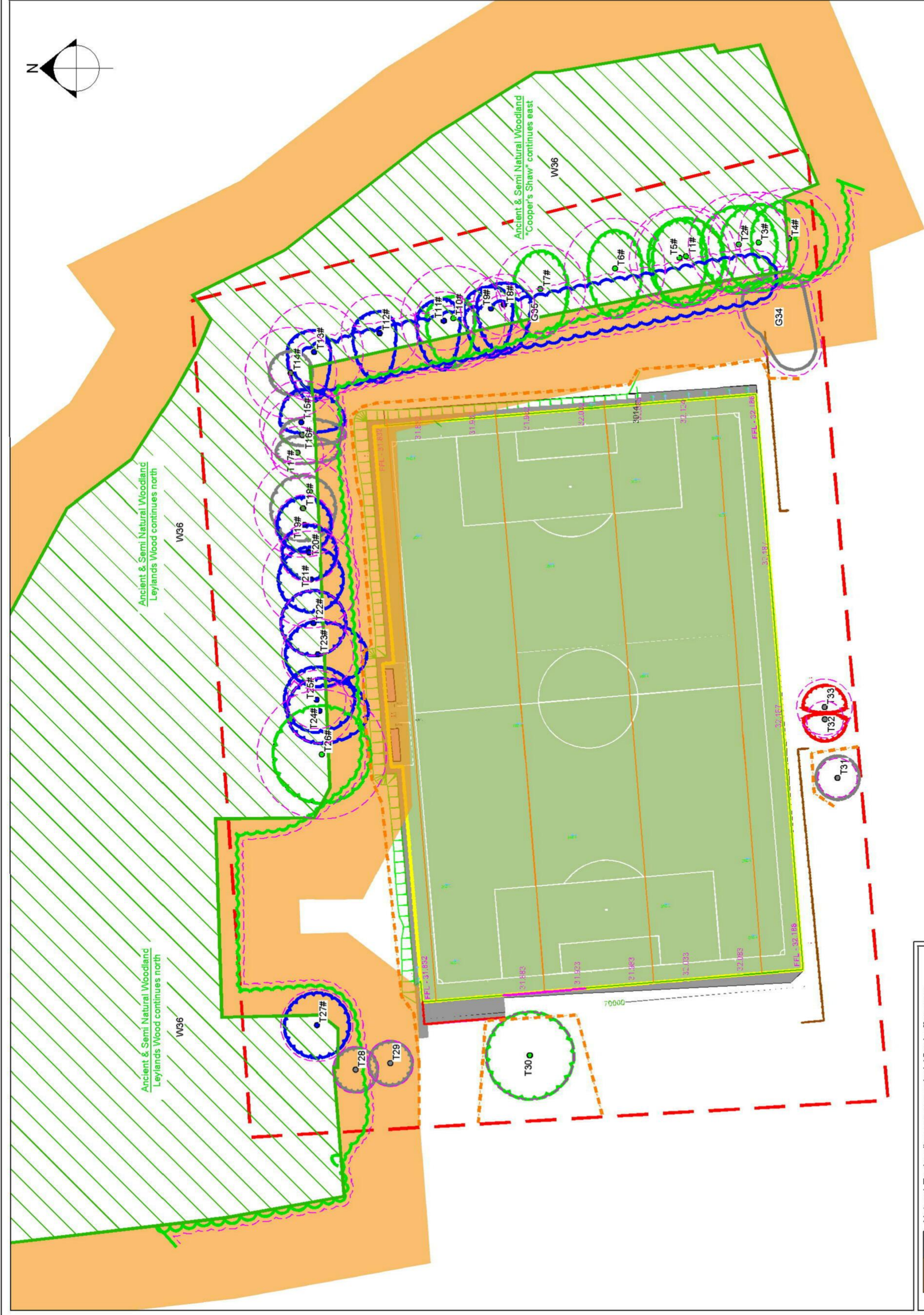
RPS Drawing / Figure Number Rev
700 -

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- NOTES:**
- Refer to RPS Tree Survey Report & Schedule for further details.
 - Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
 - Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
 - Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period: generally, although not restricted to, March - August inclusive.
 - Further guidance on the protection afforded by Ancient & Semi Natural Woodland can be found at - <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions>
 - Survey based upon topographic survey produced by Stuart Bailey Land Surveyor, Drw # 2314 / 01, April 2024.

Appendix D

Tree Removal & Protection Plan



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Notes

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2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.

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Key

Survey and Assumed Site Boundary.

Tree with numbered reference. Canopy spread and coloured BS5837:2012 tree quality category as shown below. # = Tree details/location estimated (inaccessible tree, not plotted on topo)

W1
Woodlands & Groups with numbered reference. Canopy extents and coloured BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

Category A - High quality

Category B - Moderate quality

Category C - Low quality

Category U - Unsuitable for retention

Designated Ancient & Semi Natural Woodland

Tree to be removed with numbered reference. Canopy spread and BS5837:2012 tree quality category.

Root protection area (RPA) calculated in accordance with Section 4.6 - BS5837:2012

Temporary protective fencing in accordance with Section 6.2 - BS5837:2012. See inset details for example details.

Rev	Description	By	CB	SK	EP	Date
P01	First Issue					05.02.25

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Title Tree Removals and Protection Plan

Status For Planning

Drawn By EP

PM/Checked by SK

Job Ref JSL5210

Scale @ A3 1:750

Date Created February 2025

RPS Drawing / Figure Number 710

Rev P01

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DETAIL A
Tree protection barrier (see notes)

DETAIL B
Tree protection barrier (see notes)

DETAIL C
Tree protection barrier (see notes)

DETAIL D
Tree protection barrier (see notes)

DETAIL E
Tree protection barrier (see notes)

DETAIL F
Tree protection barrier (see notes)

DETAIL G
Tree protection barrier (see notes)

DETAIL H
Tree protection barrier (see notes)

DETAIL I
Tree protection barrier (see notes)

DETAIL J
Tree protection barrier (see notes)

DETAIL K
Tree protection barrier (see notes)

DETAIL L
Tree protection barrier (see notes)

DETAIL M
Tree protection barrier (see notes)

DETAIL N
Tree protection barrier (see notes)

DETAIL O
Tree protection barrier (see notes)

DETAIL P
Tree protection barrier (see notes)

DETAIL Q
Tree protection barrier (see notes)

DETAIL R
Tree protection barrier (see notes)

DETAIL S
Tree protection barrier (see notes)

DETAIL T
Tree protection barrier (see notes)

DETAIL U
Tree protection barrier (see notes)

DETAIL V
Tree protection barrier (see notes)

DETAIL W
Tree protection barrier (see notes)

DETAIL X
Tree protection barrier (see notes)

DETAIL Y
Tree protection barrier (see notes)

DETAIL Z
Tree protection barrier (see notes)

NOTES:

Natural England's recommended 15m buffer zone for Ancient Woodland

Refer to RPS Tree Survey Report & Schedule for further details.

Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.

Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.

Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period; generally, although not restricted to, March - August inclusive.

Further guidance on the protection afforded by Ancient & Semi Natural Woodland can be found at - <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions>

Survey based upon topographic survey produced by Stuart Bailey Land Surveyor, Drw # 2314 / 01, April 2024.

Appendix E

Example Tree Protection Barriers (BS5837:2012 Fig 2 & 3)

Figure 2 Default specification for protective barrier

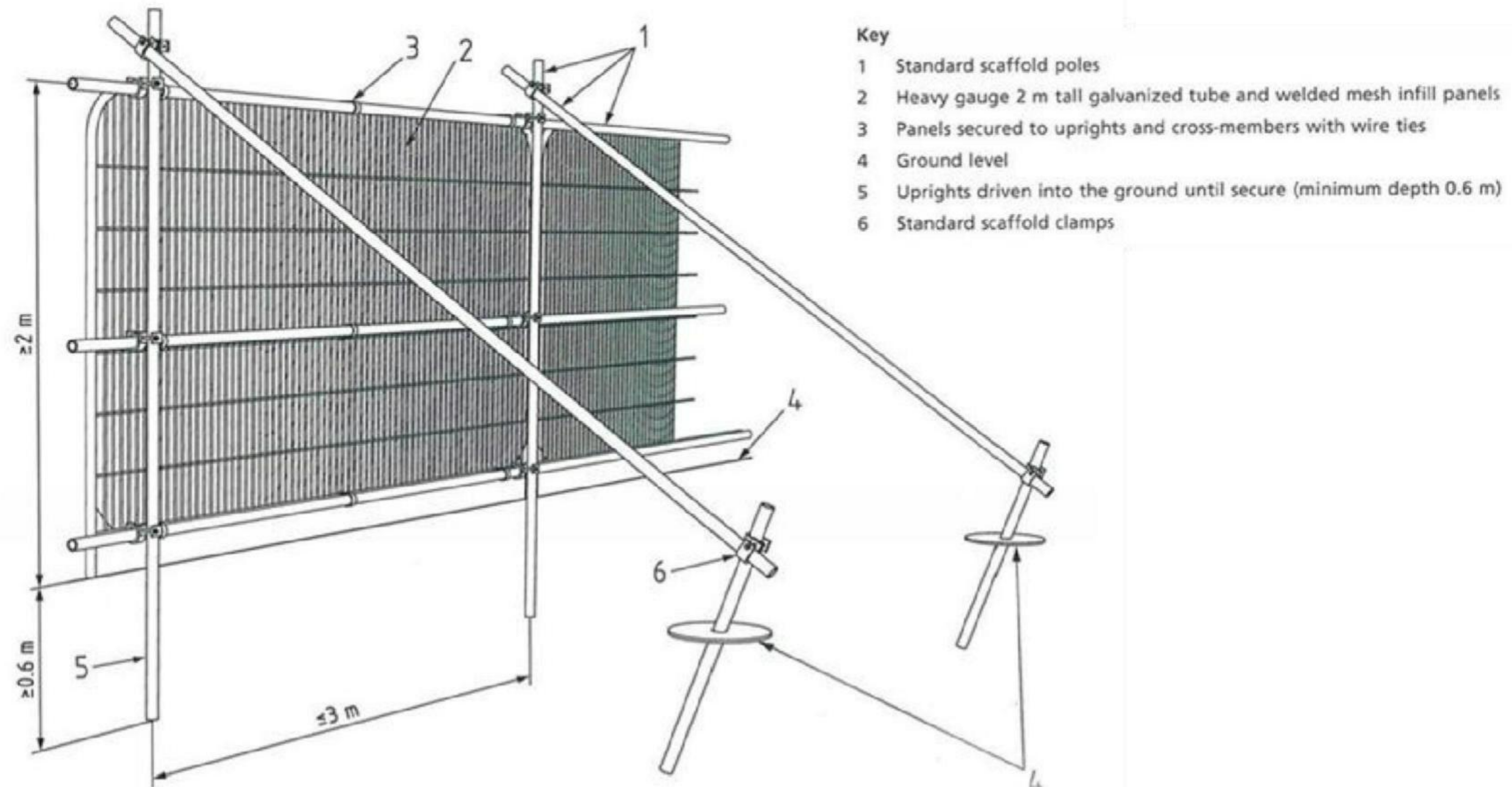
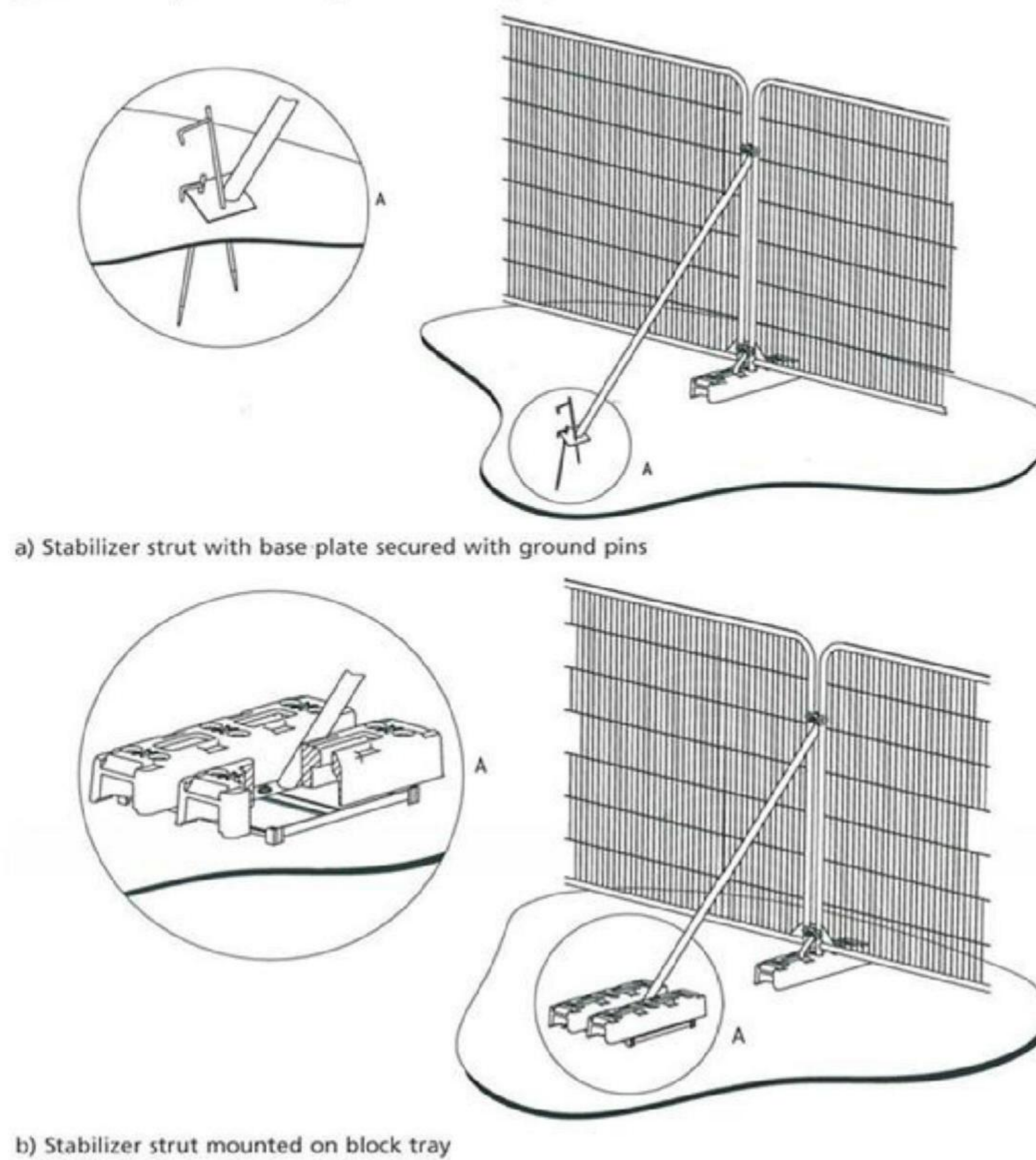


Figure 3 Examples of above-ground stabilizing systems



Appendix F

Construction Exclusion Zone (CEZ) Sign



Appendix G

Arboricultural Glossary

Age-class - A general classification of the tree into either - young, semi-mature, early mature, mature, over-mature, or veteran.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Arboreal - In connection with, or in relation to, trees.

Arboriculturist – Person who has, through relevant education, training and experience, gained recognised qualifications and expertise in the field of trees in relation to construction.

Arboricultural Implications Assessment (AIA) – 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.

Arboricultural Method Statement (AMS) – Methodology for the implementation of any aspect of development that has the potential to result in the loss of or damage to a tree. Note The AMS is likely to include details of an on-site tree protection monitoring regime.

Asymmetric crown- Crowns that have a morphological bias in a particular direction. This can give the tree an aesthetically unfavourable appearance but can also subject the tree to uneven wind- loading forces and potentially result in failure.

Basal – Referring to the bottom part of a tree's stem.

Basifugal mortality – A natural process seen in trees in an advanced life stage whereby the trees extremities die back, and the inner crown expresses new growth, in order to conserve energy reserves.

Bifurcated - A growth characteristic, where two stems of similar size grow from the same point. Can create an inherent weakness.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Brown Rot- Decay caused by certain species of fungus which results in the affected wood becoming brittle and liable to suddenly 'break out', especially if in key structural areas.

Buttress flares – Extensions of the basal stem of a tree that provide additional structural support. See reaction wood.

ARBORICULTURAL IMPACT ASSESSMENT

Bifurcated- A growth characteristic, where two or more stems of similar size grow from the same point.
Can create an inherent weakness.

Cable braces – Cable braces used to support the crown of a tree, reduce impacts caused by wind- throw oscillation.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Central leader- See apical dominance.

Chalara ash dieback- A disease affecting ash trees caused by the fungus *Hymenoscyphus fraxineus*. Usually fatal, the disease causes leaf loss and crown dieback in infected trees. It was first confirmed in Britain in 2012.

Chlorosis- yellowing of leaves which can be caused by a range of factors, often an indicator of nutrient deficiency.

Compaction - The compressing & hardening of soil around tree root systems, due to vehicular/pedestrian use etc. Loss of pore space between soil granules limits water movement and gaseous exchange and inhibits root growth.

Companion shelter- Shelter provided by neighbouring trees in groups to one another, factors such as wind throw are reduced due to supporting branches and interlocking root systems. Removing individual trees on the peripheries of such groups can expose neighbouring trees to environmental factors they have not previously been subjected to and can lead to individual failure.

Competent person – Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached

Note 1 A competent person understands the hazards and the methods to be implemented to eliminate or reduce the risks that can arise. For example, when on site, a competent person is able to recognise at all times whether it is safe to proceed.

Note 2 A competent person is able to advise on the best means by which the recommendations of this British Standard may be implemented.

Condition – Assessment based on a visual and professional view giving consideration to many factors such as tree health, structural integrity and suitability of its position.

Conservation dead- wooding- Removal of deadwood using 'coronet cuts' that mimic the way a branch would naturally break off, maximising deadwood habitat availability for invertebrates.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

ARBORICULTURAL IMPACT ASSESSMENT

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a tree's branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure.

D.B.H. - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Form - A general assessment of the shape and position of the tree within its environment.

Hanger – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a structural weakness.

Invertebrate tower – Pollarding of a (usually dead) tree to a safe height that leaves part of the main stem as a deadwood habitat for invertebrate species.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immovable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen - An agent that causes disease, especially a living microorganism such as a bacterium or fungus.

Phototropic growth – Growth responding to a light stimulus i.e. the sun. This can influence the form of a tree, particularly where other factors e.g. buildings or other trees, affect the amount/ direction light is received.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

ARBORICULTURAL IMPACT ASSESSMENT

Reaction wood - Essentially additional wood laid down by the tree to compensate for structural defects such as cavities.

Rhizosphere - The rhizosphere is the narrow region of soil that is directly influenced by root secretions and associated soil microorganisms. In particular, mycorrhizal fungi form a symbiotic relationship with trees and assist in the assimilation of phosphates essential to the tree's health.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Root Protection Area (RPA) – 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 m².

Scaffold limbs - The main structural branches within the crown.

Tree Removal & 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.

U.L.E – 'Useful Life Expectancy' is an estimate based on currently known factors of the possible remaining life of the tree as an asset. AKA 'Estimated remaining contribution'.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

White Rot - A type of decay caused by certain species of fungi which results in the affected wood becoming flexible with little compressive strength.