Brandon Estates Limited

Coventry Stadium, Brandon

Arboricultural Assessment

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1.0 INTRODUCTION

1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Brandon Estates Limited to present the findings of an Arboricultural Assessment and survey of trees located at Coventry Stadium, Brandon (hereafter referred to as the site), OS Grid Ref SP 407 773, as shown in the Assessment Boundary Plan. The survey was carried out on 18th October 2017 & reviewed on 7th October 2020.

1.2 The tree survey and assessment of existing trees has been carried out in accordance with guidance contained within British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendations'* (hereafter referred to as BS5837). The guidelines set out a structured assessment methodology to assist in determining which trees would be deemed either as being suitable or unsuitable for retention.

1.3 The guidance also provides recommendations for considering the relationship between existing trees and how those trees may integrate into designs for development; demolition operations and future construction processes so that a harmonious and sustainable relationship between any retained trees and built structures can be achieved.

1.4 The purpose of the report is therefore to firstly present the results of an assessment of the existing trees' arboricultural value, based on their current condition and quality and to secondly provide an assessment of impact arising from the proposed development of the site.

1.5 This report has been produced to accompany a planning application for residential development and has included an assessment of any impact to the tree cover. The survey has therefore focused on any trees present within or bordering the site that may potentially be affected by the future proposals or will pose a constraint to any proposed development.

1.6 The site is located in Brandon which is approximately 8 kilometres east of Coventry. The site consists of land which was previously occupied by Coventry Stadium and contains disused stadium with associated buildings, hard standing and infrastructure. Rugby Road (A428) is situated to the south and Speedway Lane to the east. The northern and western boundaries are defined by established woodland with a mixture of mature and early mature tree cover evenly distributed across the site albeit confined to the boundaries. A wide range of species are present with English oak *Quercus robur* being dominant.

1.7 No direct consultation with the Local Planning Authority, Rugby Borough Council has taken place, however it is understood that there are a number of Tree Preservation Orders which apply to a number of trees present within the assessment area and therefore statutory constraints apply to the development in respect of trees. Plan detailing trees covered by the TPO has been included within the report as Appendix C and further details are given in Chapter 4.

2.0 METHODOLOGY

2.1 The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of BS5837. The survey has been undertaken by a suitably qualified and experienced arboriculturalist and has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence to any proposals. Trees were assessed for their arboricultural quality and benefits within the context of the proposed development in a transparent, understandable and systematic way.

2.2 Trees have been assessed as groups or woodlands where it has been determined appropriate. The term group has been applied where trees form cohesive arboricultural features either aerodynamically, visually or culturally including biodiversity or habitat potential for example parkland or wood pasture. An assessment of individual trees within groups or woodlands has been made where a clear need to differentiate between them, for example, in order to highlight significant variation between attributes including physiological or structural condition or where a potential conflict may arise.

2.3 Trees have been divided into one of four categories based on Table 1 of BS5837, *'Cascade chart for tree quality assessment'*. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds. Categories A, B and C are applied to trees that should be of material considerations in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.

2.4 **Category (U) – (Red):** Trees which are unsuitable for retention and are 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. Trees within this category are:

- Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.
- Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.
- Trees that are infected with pathogens of significance to the health and/ or safety of other nearby trees or are very low-quality trees suppressing adjacent trees of better quality.
- Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.

2.5 **Category (A) – (Green):** Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years with potential to make a lasting contribution. Such trees may comprise:

- Sub category (i) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.

- Sub category (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
- Sub category (iii) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.

2.6 **Category (B) – (Blue):** Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years with potential to make a significant contribution. Such trees may comprise:

- Sub category (i) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.
- Sub category (ii) trees present in numbers, usually growing 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.
- Sub category (iii) trees with material conservation or other cultural value.

2.7 **Category (C) – (Grey):** Trees that are considered for retention and are of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Such trees may comprise:

- Sub category (i) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
- Sub category (ii) trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value or trees offering low or only temporary / transient screening benefits.
- Sub category (iii) trees with no material conservation or other cultural value.

Tree Schedule

2.8 Appendix A presents details of any individual trees, groups, hedgerows and woodlands found during the assessment including heights, diameters at breast height, crown spread (given as a radial measurement from the stem), age class, comments as to the overall condition at the time of inspection, BS5837 category of quality and suitability for retention and the root protection area.

2.9 General observations particularly of structural and physiological condition for example the presence of any decay and physical defect and preliminary management recommendations have also been recorded where appropriate.

Ancient Woodland

2.10 Ancient woodland in England is defined as an area that has been continuously wooded since at least 1600 AD. 'Continuously wooded' does not require there to have been a continuous cover of trees and shrubs across the entire area. Habitats such as glades, deer lawns, rides, ponds and streams, as well as gaps created by natural occurrences, and forestry may all occur within woodland.

2.11 Ancient woodland includes both ancient semi-natural woodland and plantations on ancient woodland sites:

- Ancient semi-natural woodland (ASNW) is where the stands are composed predominantly of trees and shrubs native to the site that do not obviously originate from planting. However, woodlands with small planting of trees native to the site would still be included in this category. The stands may have been managed by coppicing or pollarding or the tree and shrub layer may have grown up by natural regeneration.
- Plantations on ancient woodland sites (PAWS) these are areas of ancient woodland where the former native tree cover has been felled and replaced by planted trees, predominantly of species not native to the site. These sites often retain some of the ancient woodland features such as soils, ground flora, fungi and woodland archaeology.

2.12 Ancient woodland is a resource of great importance for its wildlife, soils, recreation, cultural value, history and the contribution to diverse landscapes.

2.13 The assessment area is situated to the south east of Ancient semi-natural woodland, namely Birchley Wood and New Close Wood.

Image 1: Ancient semi-natural woodland designation

Other Considerations

2.14 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations. Knowledge of soil type was not known at the time of this tree assessment. If a current soil survey of the site has taken place then it must be read in conjunction with the results of the tree survey.

2.15 The exact position of individual trees or species included as part of a tree group, hedgerow or woodland should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths in accordance with NHBC Chapter 4.2 Building near Trees.

Conditions of Tree Survey

2.16 The survey was completed from ground level only and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches were not undertaken at this stage as this level of survey is beyond the scope of the initial assessment. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

Site Plans

2.17 The individual positions of trees and groups have been shown on the Tree Survey Plan. The positions of trees are based on a topographical / land survey, as far as possible, supplied by the client. Where topographical information has not identified the position of trees and hedgerows, their relation to any existing surrounding features has been plotted using a global positioning system and aerial photography to provide approximate locations. The crown spread, root protection area and shade pattern (where appropriate) are also indicated on this plan.

2.18 As part of this assessment, a Tree Retention Plan has been prepared to show the proposed layout in relation to the existing tree cover allowing an assessment of any potential conflicts. The plan also identifies which trees would be required to be removed or retained as part of the proposed development.

2.19 The Detailed Access Arrangement Plan shows the location of the detailed access position in relation to the surrounding tree cover allowing the identification of any potential conflicts through implementation of the site access.

Tree Constraints and Root Protection Areas

2.20 Below ground constraints to future development are represented by the area surrounding the tree containing sufficient rooting volume for the specimen to have the best chance of survival in the long term which is identified as the root protection area (RPA). The RPA has been calculated in accordance with section 4.6 of BS5837 and requires suitable protection in order for the tree to be successfully incorporated into any future scheme. Where applicable the shape of the Root Protection Area has been modified to take into account the presence of any nearby obstacles (existing or past) which may have restricted root growth and the likely root distribution i.e., the presence of hard standing, structures and underground apparatus.

2.21 Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree in any one group and so may exceed the Root Protection Area required for some of the individual specimens within the group. Further detailed inspection of the individual trees forming a group may be required where development impacts upon the group.

2.22 Above ground constraints such as the current crown spread of the trees and an illustration of the shade pattern (where appropriate) have been considered and identified within the Tree Survey Plan and Tree Retention Plan indicates their potential area of shading influence.

3.0 RESULTS

3.1 A total of sixty-eight individual trees, twenty-five groups of trees and a single woodland were surveyed as part of the Arboricultural Assessment. Trees were surveyed as individual trees and groups of trees where examples are clearly present as per the description. Refer to the Tree Survey Plan and Appendix A – Tree Schedule for full details of the trees included in this assessment. The table below summarises the trees assessed. Several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Table 1: Summary of trees by category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T39	1		0
Category A (High Quality / Value)	T50, T51, T52, T53, T54, T60, T61, T62	8		0
Category B (Moderate Quality / Value	T24, T28, T29, T30, T33, T40, T49, T55, T56, T57, T58, T64, T65, T66, T67	15	G1, G10, G12, W1	4
Category C (Low Quality / Value)	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T25, T26, T27, T31, T32, T34, T35, T36, T37, T38, T41, T42, T43, T44, T45, T46, T47, T48, T59, T63, T68	44	G2, G3, G4, G5, G6, G7, G8, G9, G11, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25	22

3.2 Tree cover was restricted to the boundaries of the site due to its past use for motorsport activities and car parking. Tree cover differed in certain areas with mature established specimens of English oak observed to the south within a linear group and then to the north either as single specimens or as part of the wider woodland. Ornamental planting can be found within roadside verges to the south along with self-set trees along the eastern boundary providing a wide range of species and forms.

3.3 Overall tree cover was considered to be fair in condition with only minor defects noted. Trees were generally found to be of conditions typically associated with specimens that have seen little in the way of targeted management. Trees situated within areas associated with the stadium had been subjected to poor management and therefore were generally in a poorer condition.

3.4 The majority of tree cover was recorded as being moderate in arboricultural quality and retention category B. These included collections of trees such as G1 and W1 which collectively were considered to offer key landscape features within the surrounding landscape whilst containing individual specimens with impaired conditions such as suppressed crowns, broken material and large quantities of dead wood. Mature examples of English oak were predominantly observed with white willow *Salix alba* and silver birch *Betula pendula* also considered to be moderate quality.

3.5 Trees of high arboricultural quality were limited to examples of mature English oak with a single Austrian pine *Pinus nigra*. Only eight individual specimens were recorded as retention category A, all being situated along the northern boundary or within the northeast corner. These specimens exhibited significant proportions with stem diameters regularly recorded over 1000mm and crown spreads exceeding 10m. All of these trees were situated outside the existing boundary fencing for the stadium although both above and below ground constraints extended past the fence lines.

3.6 Only a single tree, T39 was considered to be unsuitable for retention in its current condition. This mature plum *Prunus sp.* exhibited signs of extensive decline with significant crown dieback and due to its position adjacent to Speedway Lane its removal is recommended.

3.7 The remaining tree cover observed across the site was considered to offer only low arboricultural quality and therefore recorded as retention category C. This tree cover comprised of specimens that had seen poor past management with unsympathetic pruning, bark wounds and damage caused by the presence of surrounding infrastructure such as metal fencing. Sporadic self-set trees and ornamental roadside or garden planting were also included within this category along with specimens which exhibited multiple defects such as broken branches, crossing and rubbing material, dense ivy, and suppressed crown forms. Although a high quantity of tree cover was considered to be low in quality, they still collectively provide key screening properties around the site boundaries along with diverse species mix and wildlife importance.

4.0 ARBORICULTURAL IMPACT ASSESSMENT

4.1 The following paragraphs present a summary of the tree survey and discussion of particular trees and groups recorded in the context of any proposed development in the form of an Arboricultural Impact Assessment in accordance with section 5.4 of BS5837. Any final tree retentions will need to be reconciled with the advice contained within this report.

4.2 The AIA has been based upon the Illustrative Masterplan drwg no. 27510 – 001 rev H and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for residential development with primary access point, internal road network, sports provision surrounded by green infrastructure which includes public open space, drainage attenuation, new and existing tree cover. An overlay of the above layout has been incorporated in the Tree Retention Plan to assist in identifying the relationship and any potential conflicts between the proposals and the existing trees.

4.3 At this outline application stage, the proposed layout has been largely designed around the natural features of the site, including trees and hedgerows thereby avoiding losses where possible.

4.4 To facilitate the proposed development as per the above plan there will be no significant tree loss required for the main development area which is to be positioned within the area currently occupied by the stadium facility. The only loss of trees required to allow the development to proceed would be the facilitation of the proposed access point to the south of the site along with a small portion of tree cover for the residential area.

4.5 The existing trees on site, situated around the site boundaries along with the mature and established tree cover to the north are to be retained maintaining key landscape features providing a mature appearance to the proposed development. Additional new tree planting is to be included throughout the site providing a natural division and filtered views between the proposed residential area and green space to the west. Along with amenity tree planting proposed throughout the residential area, new tree planting will increase and enhance the net amount of tree cover on the site.

4.6 G24, a low-quality linear tree group which had developed along the line of a metal boundary fence will need to be removed to facilitate the residential area. Although the proposals do not require the complete removal of this group it is recommended that it is removed in it's entirely. Specimens have grown within the fence line which would need to be removed as part of the demolition of the existing hard surfaces. The low-quality material present is not deemed suitable for retention within the proposed public open space and new tree planting would provide more suitable tree cover of a higher quality.

4.7 The required tree losses and tree works in relation to the access point are detailed further in paragraphs below and in the Detailed Access Plan (8135-A-04).

4.8 The proposed main vehicular access for the development is to be positioned to the south east of the site off Rugby Road. In order to facilitate the access at this point a number of trees from the boundary tree group will need to be removed to provide the access junction and its required visibility splays for safe passage onto Rugby Road. A small number of trees situated within the roadside verge will also need to be removed. Some of the remaining tree cover along Rugby Road may also require pruning works to provide sufficient clearance for visibility purposes.

4.9 The proposed 5.5m wide access road and 2.0m footpaths forged onto the Rugby Road will require the removal of three trees within G1 identified as English oak along with hawthorn understory. Roadside trees T20, T21 and T22 along with G8, a small group of elm, goat willow and birch set back from G1 will also need to be removed. The removal of this tree cover should not be considered as detrimental due to the retention of the vast majority of tree cover situated along this boundary. New tree planting along the proposed access road and within the green open space immediately behind G1 will provide mitigation for the required losses.

4.10 Trees situated to the west of the access point may require pruning works consisting of crown raising and the removal of low epicormic growth or low foliage from understory material. Although these trees were regarded as moderate quality any pruning work required would be minimal and would not have a detrimental effect on their long-term health or visual amenity.

4.11 Although the removal of the trees identified provides sufficient room for the access road, the alignment will still encroach upon the root protection areas of mature oak trees situated either side of the access road. These trees are the subject of a Tree Preservation Order and the successful retention of these trees is important. Due to this it will be necessary to construct the point of access using 'Tree Friendly Construction Techniques' referred to as 'no dig construction'; details of this type of construction is provided within paragraphs 4.17 to 4.19.

4.12 The western portion of the site is to become green open space and sports provision which will incorporate new tree planting. To provide sufficient developable area for sports provision the removal of tree cover along the eastern boundary of W1 will be required. Tree cover within this area is natural regeneration of tree cover from the wider woodland and is not considered to be of particular importance to the overall quality of W1. Removal of a small portion of tree cover will not cause detrimental impacts to the wider tree cover and landscape.

4.13 In accordance with general advice and guidance from several relevant organisations and governing bodies such as English Heritage, National Trust and local authority, a well-designed landscaping scheme will provide areas for extensive tree planting which will not only offer suitable mitigation for any tree losses incurred due to the proposed access, but from an arboricultural perspective the tree cover generally across the site will be increased and enhanced.

4.14 Alongside native planting, new ornamental species should be introduced to the proposed built element. These species will enhance the urban environment providing visual amenity along with greater biodiversity. The considered selection of different trees will offer characteristics such as seasonal colour; wildlife encouragement; improved screening of views or buildings whilst reinforcing others.

Careful consideration when deciding tree species suitable for the site would need to be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour, water demand and maintenance requirements in relation to both the built form of the new development and existing properties. Consideration on the effects of water demand of different tree species and soil type should also be applied where appropriate.

4.15 A series of footpaths positioned throughout the site will provide a link to existing public footpaths. Where these footpaths pass through boundary tree cover it will be necessary to ensure that the alignment avoids any existing trees. Footpath surfaces should be considered to reduce any potential impact upon adjacent trees. The use of informal surfaces such as bark/woodchip is recommended to avoid the requirement for excavation and the construction of hard/nonporous structures.

No Dig Construction

4.16 As stated within the above paragraphs the proposed access road and an adjoining footpath will be located within the RPA of certain trees which are to be retained. Conventional methods used in the construction of highways and footpaths involve soil excavation to allow sufficient depth for installation of a compacted sub-base material. This method of construction can potentially cause detrimental impact to adjacent trees through root severance and soil compaction should the accumulation of loads bear down on the soil. Soil compaction compresses the soil closing up the pores especially in the upper levels and so reduces the infiltration of water and oxygen available to roots which prevents them growing through the soil. This will impede air movement into and out of the soil around the roots and consequently reduce the availability of oxygen to the roots. The effect on the tree is usually progressive shoot and branch dieback until a new balance has been reached between reduced capacity of the damaged root system to absorb water and the demands of the leaves although the damage usually results in the loss of or dead hazardous branches. If damage is progressive or so severe that such a balance cannot be achieved the tree will ultimately die.

4.17 The specification for undertaking construction of permanent porous hard surfacing using ‘no-dig’ techniques, suitable for use when requiring a vehicle access and pathway beneath the crown spread and within the root protection area of a mature tree is therefore recommended. Various specifications are shown in Appendix D, which demonstrates a permeable surface supported by a Cellular Confinement System above a Geo-Textile Membrane. Implementation of a porous no-dig construction would also reduce the need to provide drainage within the RPA of a retained tree; however, soil analysis would be required to determine the porosity of the ground to ensure sufficient infiltration could be achieved. By undertaking such a construction method, the retained trees will be sufficiently protected, and the access arrangement successfully integrated alongside the existing trees.

4.18 A method statement approach will be best to ensure works are not going to significantly impact on these trees and that the correct tree protection measures are provided to safeguard the trees from damage. It is also recommended that a specialist in designing and engineering cellular confinement systems is consulted to ensure that the correct specification is achieved.

Statutory Constraints

4.19 The following table details which trees are included in the Rugby Borough Council Tree Preservation Orders (TPO):

- Land at Gossett Lane adj. Coventry Stadium, Brandon (TR4.269)
- Coventry Stadium, Rugby Road, Brandon (TR.222)

Table 2: Tree Preservation Order Details

Tree No, taken from FPCR	TPO reference no.
G1	TR4.222 (G1)
W1, T64, T65, T66, T67, T68, G15, G16	TR4.269 (W1)
W1, T60, T61, T62, G12, G25	TR4.296 (W2)

4.20 Two Tree Preservation Orders are situated within close proximity to the site namely:

- New Close Wood & Birchley Wood, Binley Woods, Nr Coventry (TR4.10)
- TPO Privet Covert, Brandon (T.01.100)

4.21 The trees identified within the TPO's are protected by law from felling or uprooting, pruning including 'topping/lopping' and willful damage or destruction. The granting of full planning permission would override the protection afforded by the Tree Preservation Order to those trees shown as removed to facilitate the proposals within the approved plans.

4.22 Prior to any tree surgery and / or felling of protected trees it will be necessary to apply to the relevant local planning authority to gain consent for the works. For more information regarding Conservation Areas and Tree Preservation Orders it is advised that contact is made with the Local Planning Authority's arboricultural officer, or other such relevant person.

New Tree Planting

4.23 New tree planting will form an integral part of the new development however, proposals for new tree planting should be appropriate for the future use of the site and not just aim to improve the existing tree population.

4.24 As part of the development proposals an adequate quantity of structured tree planting has been demonstrated predominantly within areas of open space. New tree planting has also been shown in or close to hard landscaped areas such as alongside the primary access road and within the roadside verges. The purpose and function of this new tree planting should be understood from the start of any design stages so that key objectives from a landscape perspective can also be achieved.

4.25 The success of any landscaping scheme relies on an adequate provision of a high quality rooting environment within which trees can thrive and reach their full potential. Planting trees with due care and consideration can, in the long term, provide a greater return on a schemes green investment and ensure trees remain healthy and grow to mature proportions. Healthy mature trees integrate well into the built environment; increase the maturity of the landscape; help provide a natural green and leafy urban environment in which people would want to reside whilst also benefiting local wildlife.

4.26 The planting of trees within confined urban environments should consider the use of appropriately designed planting pits specifically engineered to promote tree health and longevity. The rooting environment will need to provide an adequate volume of quality soil for roots to suitably develop by calculating the amount of available soil volumes needed and selecting species whose mature size is compatible with the site. This is an integral component of the planning stage (Lindsey & Bassuk, 1991).

4.27 Wherever possible, following discussions with the developer and utility companies, common service trenches should be specified to minimise land take associated with underground service provision and facilitation access for future maintenance.

4.28 The landscaping scheme should consider the use of both native tree species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value). Species choices should be selected on the basis of their suitability for the final site use. Furthermore, during the design process consultation should be made with the Local Planning Authority to obtain information on their tree strategy and incorporate the planting proposals with any local policies and initiatives and/or Biodiversity Action Plans (BAP).

4.29 Careful consideration would need to be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour, water demand, soil type and maintenance requirements in relation to both the built form of the new development and existing properties. Through careful species selection, the landscape scheme shall reduce the risk of trees being removed in the future on the grounds of nuisance. Nuisance can be perceived in a number of ways and vary from person to person however most commonly, within the context of trees, low overhanging branches, excessive shading, seasonal leaf fall and the misinformed perception that trees close to buildings cause damage.

4.30 Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts.

Tree Management

4.31 The layout of the development is currently reserved for subsequent approval. In the course of a reserved matters application pursuant to layout, a review of the relationship between the layout and the retained trees should be undertaken by a qualified arboriculturalist to assess the existing tree cover and prepare a schedule of tree works.

4.32 All retained trees should be subjected to sound arboricultural management as recommended within section 8.8.3 of BS5837 *Post Development Management of Existing Trees,* where there is a potential for public access in order to satisfy the landowner's duty of care. Additionally, inspections annually and following major storms should be carried out by an experienced arboriculturalist or arborist to identify any potential public safety risks and to agree remedial works as required.

4.33 All tree works undertaken should comply with British Standard 3998:2010 and should therefore be carried out by skilled tree surgeons. It would be recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors.

4.34 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

General Design Principles in Relation to Retained Trees

4.35 In a subsequent Reserved Matters application following the final layout of the scheme, assessment of the distance of proposed development in relation to the calculated root protection area of retained trees should be made which will inform the final layout.

4.36 Ground investigation through the use of pneumatic excavation, such as an Air Spade and digging of trial pits, may be required should there be areas where it is not possible to modify the layout to avoid conflict with retained trees. Ground investigations would aim to determine the actual location of the physical roots without causing them damage in the process. Such an assessment would enable consideration of the practicality and suitability of certain 'tree friendly' construction methods and would better inform decision making for a design.

4.37 Further assessment of the impact to actual roots found during the ground investigations can then be made and solutions reached thus, greatly reducing any potential future impacts on retained trees whilst allowing the development to proceed and minimising risks to future tree health. Ultimately the aim would be to reduce conflicts between trees and buildings and achieve successful tree retention.

4.38 The use of "no-dig" construction methods should be considered prior to decisions being made as to the removal of each tree concerned, where conflicts between trees identified for retention and the layout arise. Such methods of construction and the use of industry led specialist engineering solutions i.e. three dimensional "load bearing" cellular confinement systems can be used particularly in the case of carriageways, footways and driveways in order to avoid unnecessary losses of trees.

4.39 The routing of below ground services should also be considered with regard to the retained trees as part of a subsequent reserved matters application pursuant to layout. As recommended by the guidance given in section 7.7 of BS5837 services, where possible, should not encroach within the Root Protection Areas of retained trees. If below-ground services are proposed within a Root Protection Area, modifications to the alignment of the service route may need to be made in order to minimise adverse effects on root stability and overall tree health.

4.40 Consideration may also need to be given to the potential for tree roots of newly planted trees and hedgerows to affect or compromise the future services. As far as feasible, it would be preferable that proposed services near both the existing and any new planting should be ducted for ease of access and maintenance and grouped together to minimise any future disturbance.

5.0 TREE PROTECTION MEASURES

5.1 Retained trees will be adequately protected during works ensuring that the calculated root protection area for all retained trees can be appropriately protected through the erection of the requisite tree protection barriers. Measures to protect trees should follow the guidance in BS5837 and will be applied where necessary for the purpose of protecting trees within the site whilst allowing sufficient access for the implementation of the proposed layout. These have been broadly summarised below.

General Information and Recommendations

5.2 All trees retained on site will be protected by suitable barriers or ground protection measures around the calculated RPA, crown spread of the tree or other defined constraints of this assessment as detailed by section 6 and 7 of BS5837.

5.3 Barriers will be erected prior to commencement of any construction work and before demolition including erection of any temporary structures. Once installed, the area protected by fencing or other barriers will be regarded as a construction exclusion zone. Fencing and barriers will not be removed or altered without prior consultation with the Project Arboriculturalist.

5.4 Any trees that are not to be retained as part of the proposals should be felled prior to the erection of protective barriers. Particular attention needs to be given by site contractors to minimise damage or disturbance to retained specimens.

5.5 Where it has been agreed, construction access may take place within the root protection area if suitable ground protection measures are in place. This may comprise single scaffold boards over a compressible layer laid onto a geo-textile membrane for pedestrian movements. Vehicular movements over the root protection area will require the calculation of expected loading and the use of proprietary protection systems.

5.6 Confirmation that tree protective fencing or other barriers have been set out correctly should be gained prior to the commencement of site activity.

Tree Protection Barriers

5.7 Tree protection fencing should be fit for the purpose of excluding any type of construction activity and suitable for the degree and proximity of works to retained trees. Barriers must be maintained to ensure that they remain rigid and complete for the duration of construction activities on site.

5.8 In most situations, fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground. For particular areas where construction activity is anticipated to be of a more intense nature, supporting struts, acting as a brace should be added and fixed into position through the application of metal pins driven into the ground to offer additional resistance against impacts. Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative will be specified appropriate to the level / nature of anticipated construction activity. The recommended methods of fencing specifications for this site have been illustrated in Appendix B.

5.9 It may be appropriate on some sites to use temporary site offices, hoardings and lower level barrier protection as components of the tree protection barriers. Details of the specific protection barriers for the site can be provided should the application be approved, as part of a site specific Arboricultural Method Statement for a Reserved Matters application and in accordance with the guidance contained within BS5837.

Protection outside the exclusion zone

5.10 Once the areas around trees have been protected by the barriers, any works on the remaining site area may be commenced providing activities do not impinge on protected areas.

5.11 All weather notices should be attached to the protective fencing to indicate that construction activities are not permitted within the fenced area. The area within the protective barriers will then remain a construction exclusion zone throughout the duration of the construction phase of the proposed development. Protection fencing signs can be provided upon request.

5.12 Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles where they are in close proximity to retained trees.

5.13 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree stem. No concrete should be mixed within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

5.14 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.

5.15 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.

5.16 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees, must be removed with due care (it may be necessary to remove such trees in sections).

Protection of Trees Close to the Site

5.17 A number of trees were located on the boundaries of the site and therefore the root protection area and crown spread of these trees will need to be protected in the same way as all the retained trees within the site. All trees located outside the boundaries of the assessment site yet within close proximity to works should be adequately protected during the course of the development by barriers or ground protection around the calculated root protection area.

5.18 Any trees which are to be retained and whose Root Protection Areas may be affected by the development should be monitored, during and after construction, to identify any alterations in quality with time and to assess and undertake any remedial works required as a result.

Protection for Aerial Parts of Retained Trees

5.19 Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment as part of the construction works it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obstructive branches. Any such equipment would have potential to cause damage to parts of the crown material, i.e., low branches and limbs, of retained trees within the protective barriers. This is termed as 'access facilitation pruning' within BS5837. Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.

5.20 A pre-commencement site meeting with contractors who are responsible for operating machinery will be required, as described above, to firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.

5.21 In the event of having caused any branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with British Standard 3998:2010 and in agreement with the Local Planning Authority prior to correcting the damage, upon completion of development.

6.0 CONCLUSION

6.1 The site is located in Brandon and consists of land which was previously occupied by Coventry Stadium containing a disused stadium, associated buildings, hard standing and infrastructure. Tree cover was restricted to the boundaries of the site due to its past use and overall was considered to be fair in condition with only minor defects noted. Trees were generally found to be of conditions typically associated with specimens that have seen little in the way of targeted management. English oak was the dominant species with lower proportions of other native species providing a diverse range.

6.2 To facilitate the proposed development no significant tree losses will be required. The only losses of trees required are to facilitate the proposed access point to the south of the site off Rugby Road along with a linear tree group for the residential element. The majority of the existing trees on site are to be retained and incorporated into the green open space surrounding the areas of residential development thereby maintaining key landscape features whilst providing a mature setting to the proposed development.

6.3 Additional new tree planting is to be included throughout the site providing a natural division between the proposed residential area to the east and green space to the west.

6.4 The proposed main vehicular access for the development positioned to the south will require the removal of selected tree cover from within G1 along with a small number of ornamental roadside planting. The remaining tree cover along Rugby Road may require minor pruning works to provide sufficient clearance for visibility purposes for safe passage of vehicles and pedestrians.

6.5 The proposed access road and adjoining footpath to the southeast will need to be constructed using ‘No Dig Construction’ techniques. This will ensure the successful retention of the surrounding moderate quality tree cover which is the subject of a Tree Preservation Order.

6.6 On balance, although the proposals would necessitate the loss of a small number of individual trees and understory tree cover, the vast majority of tree cover will be retained and incorporated throughout the site within areas of green space away from areas of development. Mitigation for the small number of tree losses will be extensive and would include landscaping of the new open space; associated gardens and green spaces with new tree planting providing additional green corridors throughout the site. The creation of an extensively planted landscape to the west will also create the opportunity to increase tree cover in the local area along with enhancing the local visual amenity. The development should be seen as an opportunity to transform what is currently a derelict site.

KEY

- Category U - Trees / Groups Unsuitable for Retention (BS 5837:2012)
- Category A - Trees / Groups of High Quality (BS 5837:2012)
- Category B - Trees / Groups of Moderate Quality (BS 5837:2012)
- Category C - Trees / Groups of Low Quality (BS 5837:2012)
- Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
- T1 (A) G1 (A) — Individual / Group Number and BS5837:2012 Category
- Woodland (Colour Indicates BS5837:2012 Category)

Scale 1:2000 @ A3

0 50 100m

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule .

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

rev	date	description	by
-	01.11.2017	First Issue	TCB

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Brandon Estates Limited

project
Brandon Stadium
Coventry

drawing title
TREE SURVEY PLAN

scale	drawn	date
1:2000 @ A3	TCB	Nov 2017

drawing number
8135-A-02

rev
-

CAD file: K:\8100\8135\ARB\Plans\Tree Survey Plan.dwg

KEY

- Tree/Group to be Retained
- Tree/Group to be removed to facilitate the proposals
- Category U - Unsuitable for retention on arboricultural grounds
- Root Protection Area (Shown for retained trees only)
- T1 (A) G1 (A) — Individual / Group Number and BS Category
- Woodland to be Retained (Colour Indicates BS5837:2012 Category)

Scale 1:2000 @ A3

0 50 100m

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

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rev	date	description	by
-	01.11.2017	First Issue	TCB
A	11.12.2017	Revised layout and access	TCB
B	12.04.2021	Revised layout and access	TCB
C	01.07.2021	Revised layout	TCB

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client
Brandon Estates Limited

project
Brandon Stadium
Coventry

drawing title
TREE RETENTION PLAN

scale	drawn /checked	date
1:2000 @ A3	TCB/HR	July 2021

drawing number
8135-A-03

rev
C

CAD file: K:\8100\8135\ARB\Plans\Tree Retention Plan.dwg

KEY

Tree/Group to be Retained

Tree/Group to be removed to facilitate the proposals

Root Protection Area
(Shown for retained trees only)

T1 (A)
G1 (A)

Individual / Group Number and BS Category

Scale 1:500 @ A3

0 10 20 30m

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

rev	date	description	by
-	01.11.2017	First Issue	TCB
A	11.12.2017	Revised access	TCB
B	12.04.2021	Revised access	TCB
C	01.07.2021	Revised layout	TCB

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client
Brandon Estates Limited

project
Brandon Stadium
Coventry

drawing title
DETAILED ACCESS PLAN

scale
1:500 @ A3

drawn /checked
TCB/HR

date
July 2021

drawing number
8135-A-04

rev
C

CAD file: K:\8100\8135\ARB\Plans\Tree Retention Plan.dwg

Appendix A - Tree Schedule

Measurements	Age Class	Overall Condition	Root Protection Area (RPA)
Height - Measured using a digital laser clinometer (m)	YNG: Young trees up to ten years of age	G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention	• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). • The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected. • Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	SM: Semi-mature trees less than 1/3 life expectancy	F - Fair: Trees with minor rectifiable defects or in the early stages of stress from which it may recover	
Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)	EM: Early mature trees 1/3 – 2/3 life expectancy	P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term	
Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	M: Mature trees over 2/3 life expectancy	D - Dead: This could also apply to trees in an advanced state of decline and unlikely to recover	
	OM: Over mature declining or moribund trees of low vigour	The BS category particular consideration has been given to the following • The health, vigour and condition of each tree • The presence of any structural defects in each tree/group and its future life expectancy • The size and form of each tree/group and its suitability within the context of a proposed development • The location of each tree relative to existing site features e.g. its screening value or landscape features • Age class and life expectancy	
	V: Veteran tree possessing certain attributes relating to veteran trees		

Structural Condition
The following is an example of considerations when inspecting structural condition: • The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay • Soil cracks and any heaving of the soil around the base • Any abrupt bends in branches and limbs resulting from past pruning • Tight or weak 'V' shaped forks and co-dominant stems • Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994) • Cavities as a result of limb losses or past pruning • Broken branches or storm damage • Damage to roots • Basal, stem or branch / limb cavities • Crown die back or abnormal foliage size and colour

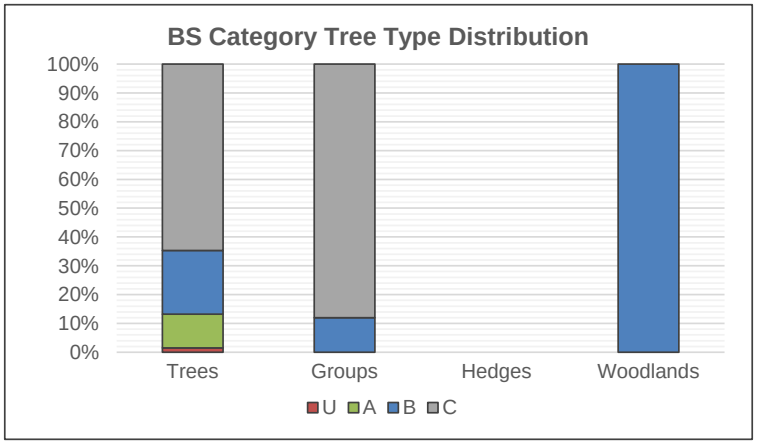
Quality Assessment of BS Category
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 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 150mm.
Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value

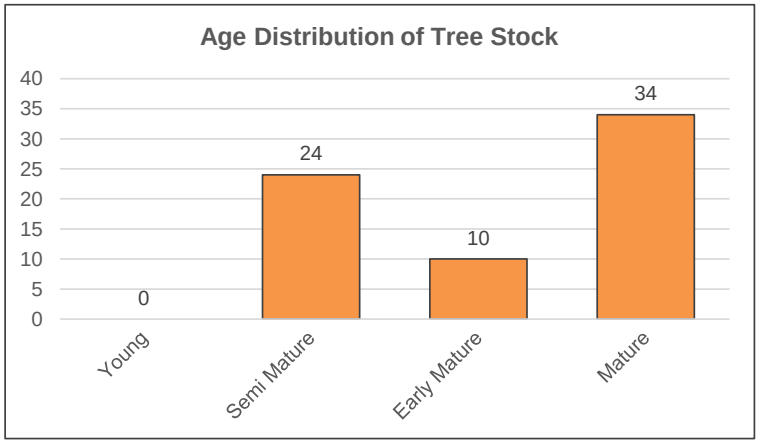
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T39	1		0
Category A	T50, T51, T52, T53, T54, T60, T61, T62	8		0
Category B	T24, T28, T29, T30, T33, T40, T49, T55, T56, T57, T58, T64, T65, T66, T67	15	G1, G10, G12, W1	4
Category C	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T25, T26, T27, T31, T32, T34, T35, T36, T37, T38, T41, T42, T43, T44, T45, T46, T47, T48, T59, T63, T68	44	G2, G3, G4, G5, G6, G7, G8, G9, G11, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25	22
	Total	68	Total	26

BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.

Age Distribution of Tree Stock shows the number of trees in each age category across the tree stock allowing assessment of their longevity to be made.





Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Silver Maple Acer saccharinum	9	230 250	4	SM	F	Twin stemmed from 1m Basal suckers present Situated adjacent to highway	52	4.1	C (i)
T2	Rowan Sorbus aucuparia	7	75	3	SM	F	Ornamental highway planting	3	0.9	C (i)
T3	Rowan Sorbus aucuparia	7	70	3	SM	F	Ornamental highway planting	2	0.8	C (i)
T4	Rowan Sorbus aucuparia	7	110	3	SM	D	Ornamental highway planting	5	1.3	C (i)
T5	Flowing cherry Prunus sp.	7	100 130	3	SM	F	Ornamental highway planting	12	2.0	C (i)
T6	Hawthorn Crataegus monogyna	7	190	3	SM	F	Ornamental highway planting	16	2.3	C (i)
T7	Silver Birch Betula pendula	7	210	3	SM	F	Ornamental highway planting	20	2.5	C (i)
T8	Hornbeam Carpinus betulus	7	250	3	SM	F	Ornamental highway planting	28	3.0	C (i)
T9	Field Maple Acer campestre	7	220	3	SM	F	Ornamental highway planting	22	2.6	C (i)
T10	Silver Birch Betula pendula	9	250	3	SM	F	Ornamental highway planting	28	3.0	C (i)
T11	Silver Maple Acer saccharinum	12	330	4	EM	F	Ornamental highway planting	49	4.0	C (i)
T12	Silver Birch Betula pendula	12	320	5	EM	F	Ornamental highway planting	46	3.8	C (i)
T13	Broad-leaved Cockspur Thorn Crataegus prunifolia	3	90	2	SM	F	Ornamental highway planting	4	1.1	C (i)
T14	Norway Maple Crimson King Acer platanoides 'Crimson King'	5	180	2	SM	F	Ornamental highway planting	15	2.2	C (i)
T15	Flowing cherry Prunus sp.	3	280	3	SM	F	Ornamental highway planting	35	3.4	C (i)
T16	Small leaved Lime Tilia cordata	5	210	2	SM	F	Ornamental highway planting	20	2.5	C (i)
T17	Rowan Sorbus aucuparia	4	140	2	SM	F	Ornamental highway planting	9	1.7	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T18	Rowan Sorbus aucuparia	5	120	2	SM	F	Ornamental highway planting	7	1.4	C (i)
T19	Rowan Sorbus aucuparia	3	140	2	SM	F	Ornamental highway planting	9	1.7	C (i)
T20	Broad-leaved Cockspur Thorn Crataegus prunifolia	3	100	2	SM	F	Ornamental highway planting	5	1.2	C (i)
T21	Silver Birch Betula pendula	6	130	2	SM	F	Ornamental highway planting	8	1.6	C (i)
T22	English Oak Quercus robur	6	180	3	SM	F	Highway Planting	15	2.2	C (i)
T23	Flowering Cherry Prunus 'Kanzan'	4	est 400	3	M	F	Stiuated off site withim front gardens	72	4.8	C (i)
T24	English Oak Quercus robur	16	est 350	4	EM	F	Typical crown form Situated offsite	55	4.2	B (i)
T25	English Oak Quercus robur	9	est 280	4	SM	F	Typical crown form Situated offsite	35	3.4	C (i)
T26	Hawthorn Crataegus monogyna	6	avg 200 200 200 200	3	M	F	Crossing and rubbing branches Multiple stems present Dead wood present	72	4.8	C (i)
T27	Hawthorn Crataegus monogyna	7	avg 6x200	4	M	P	Bark wounds present Branch stubs Dead wood present Pruning wounds observed	109	5.9	C (i)
T28	English Oak Quercus robur	18	est 600	8	M	F	Dense ivy present Branch stubs Dead wood present	163	7.2	B (i)
T29	English Oak Quercus robur	18	est 800	7	M	F	Situated offsite Unable to gain access No major defects noted	290	9.6	B (i)
T30	English Oak Quercus robur	18	est 580	7	M	F	Situated offsite Unable to gain access No major defects noted	152	7.0	B (i)
T31	English Oak Quercus robur	7	280	N - 0 S - 5 E - 3 W - 5	SM	F	Suppressed crown form	35	3.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T32	Goat Willow Salix caprea	6	280	N - 3 S - 5 E - 0 W - 4	EM	P	Self seeded specimen Poor form	35	3.4	C (i)
T33	English Oak Quercus robur	12	630	6	M	F	Typical crown form Epicormic growth No major defect noted	180	7.6	B (i)
T34	Silver Birch Betula pendula	13	170	2	SM	F	Tall and drawn form No major defects noted	13	2.0	C (i)
T35	Contorted Willow Salix matsudana Tortuosa	11	280	N - 1 S - 1 E - 5 W - 5	EM	P	Crossing and rubbing branches Multiple stems present Dead wood present	35	3.4	C (i)
T36	Lombardy Poplar Populus nigra 'Italica'	19	360	3	M	P	Formally twin stemmed with NW stem removed resulting in possible decay Typical crown form	59	4.3	C (i)
T37	Silver Birch Betula pendula	13	600	6	M	P	Bark wounds present Branch stubs Dead wood present Branch socket cavities observed Sparse crown	163	7.2	C (i)
T38	Leyland Cypress Cupressocyparis leylandii	10	380 290	2	M	F	Typical crown form No major defects noted	103	5.7	C (i)
T39	Wild Plum Prunus Sp.	7	over ivy 415	1	M	P	Specimen in extensive decline	N/A	N/A	U
T40	English Oak Quercus robur	13	over ivy 430	6	M	F	Dense ivy present Branch stubs Dead wood present	84	5.2	B (i)
T41	Ash Fraxinus excelsior	12	480	5	M	F	Dense ivy present Branch stubs Dead wood present	104	5.8	C (i)
T42	Hazel Corylus avellana	6	avg 60x30	5	M	F	Multi stemmed form Crossing and rubbing stems	24	2.8	C (i)
T43	Laburnum Laburnum anagyroides	5	avg 8x80	2.5	SM	F	Self seeded specimen Ornamental species	23	2.7	C (i)
T44	Goat Willow Salix caprea	8	680	4	M	P	Self seeded specimen Crossing and rubbing branches Typical crown form	209	8.2	C (i)
T45	Scots Pine Pinus sylvestris	7	370	N - 3 S - 3 E - 4 W - 6	EM	F	Lateral branch to west extends across site boundary No major defects noted	62	4.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T46	Weeping Willow Salix x sepulcralis 'Chrycosoma'	14	580	5	M	F	Tree has been topped in the past Epicormic growth present Dead wood noted	152	7.0	C (i)
T47	Norway Spruce Picea abies	15	260	3	EM	F	Typical crown form No major defects noted	31	3.1	C (i)
T48	Ash Fraxinus excelsior	12	260	4	EM	F	Suppressed crown form No major defects noted	31	3.1	C (i)
T49	English Oak Quercus robur	17	est 900	8	M	F	Dense ivy present Branch stubs Dead wood present Situated offsite	366	10.8	B (i)
T50	Austrian Pine Pinus nigra ssp. Nigra	17	760	5	M	G	Typical crown forms Dead wood present No major defects Situated off site	261	9.1	A (i)
T51	English Oak Quercus robur	16	est 950	8	M	F	Dense ivy present Branch stubs Dead wood present Typical crown form No major defects	408	11.4	A (i)
T52	English Oak Quercus robur	18	890	9	M	F	Dead wood present Typical crown form No major defects	358	10.7	A (i)
T53	English Oak Quercus robur	20	est 890	11	M	F	Dense ivy present Branch stubs Dead wood present Typical crown form No major defects	358	10.7	A (i)
T54	English Oak Quercus robur	16	850	11	M	F	Light ivy present Branch stubs Dead wood present Typical crown form No major defects	327	10.2	A (i)
T55	Beech Fagus sylvatica	16	340	5	EM	F	No major defects noted	52	4.1	B (i)
T56	English Oak Quercus robur	16	690	7	M	F	Dead wood present Typical crown form No major defects	215	8.3	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T57	English Oak Quercus robur	16	600	8	M	F	Dead wood present Typical crown form No major defects	163	7.2	B (i)
T58	English Oak Quercus robur	12	est 1100	8	M	F	Dense ivy present Branch stubs Dead wood present Situated off site	547	13.2	B (i)
T59	Hazel Corylus avellana	8	avg 100 100 100 100	2	M	F	Multi stemmed form Crossing and rubbing stems	18	2.4	C (i)
T60	English Oak Quercus robur	18	est 1250	10	M	F	Typical crown form Branch stubs Dead wood present Situated off site	707	15.0	A (i)
T61	English Oak Quercus robur	18	890	12	M	F	Typical crown form Branch stubs Dead wood present	358	10.7	A (i)
T62	English Oak Quercus robur	20	1350	13	M	F	Typical crown form Branch stubs Dead wood present No major defects	707	Capped at 15m	A (i)
T63	English Oak Quercus robur	11	430	4	EM	F	Typical crown form Branch stubs Dead wood present situated within earth mound	84	5.2	C (i)
T64	White Willow Salix alba	20	est 1250	6	M	F	Dense ivy present Crossing and rubbing branches Broken branches Dead wood present	707	15.0	B (i)
T65	English Oak Quercus robur	20	700	N - 4 S - 4 E - 10 W - 6	M	F	Dense ivy present Forms crown with adjacent tree Informal path to base Dead wood present	222	8.4	B (i)
T66	English Oak Quercus robur	20	440 420	N - 0 S - 6 E - 5 W - 6	M	F	Dense ivy present Forms crown with adjacent tree Informal path to base Dead wood present	167	7.3	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T67	English Oak Quercus robur	12	over ivy 650	5	M	F	Dense ivy present Typical crown form Dead wood present	191	7.8	B (i)
T68	Ash Fraxinus excelsior	17	over ivy 500	5	M	F	Dense ivy present Typical crown form Dead wood present	113	6.0	C (i)

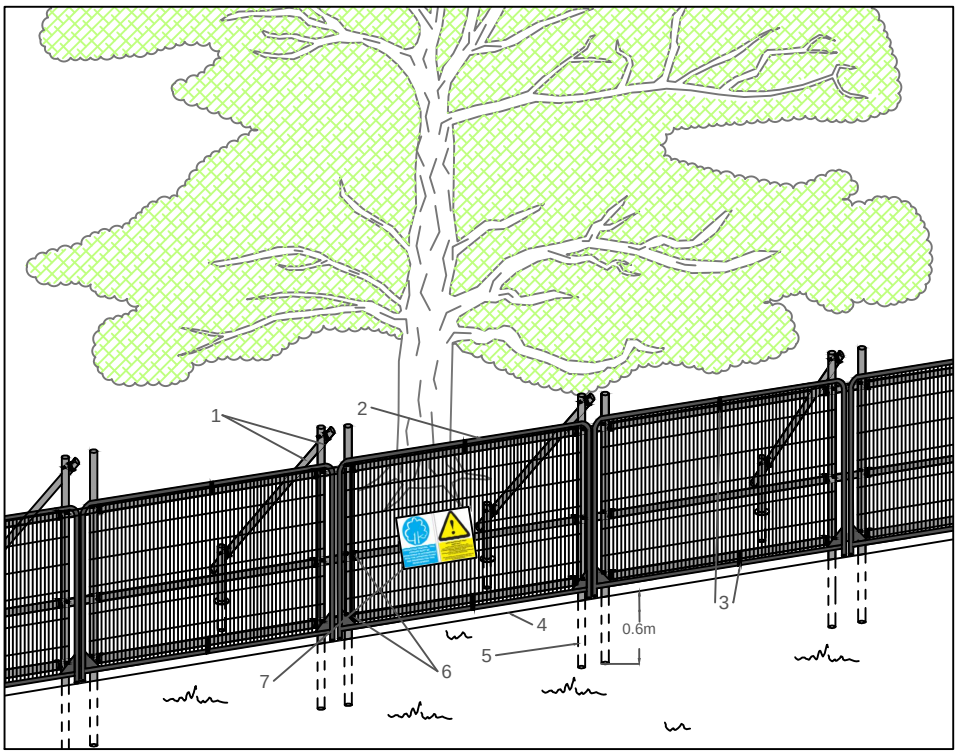
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Aspen Populus tremula Blackthorn Prunus spinosa English Elm Ulmus procera English Oak Quercus robur Hawthorn Crataegus monogyna Hazel Corylus avellana Yew Taxus baccata Laurel Prunus laurocerasus	14	upto 890	8	Y-EM	P-F	Boundary tree group along Brandon Road predominantly English Oak Low and interlocking crowns some suppressed in form Crossing and rubbing branches Epicormic growth Established ivy and understory trees Dead wood present Some trees subject to Tree Preservation Order no. 222	358	10.7	B (ii)
G2	English Oak Quercus robur	16	upto 520	8	M	F	Two tress situated within rear garden offsite Established ivy growth Bark wounds Interlocking crowns	122	6.2	C (ii)
G3	False Acacia Robinia pseudoacacia	16	upto 420	8	M	P-F	Group of four trees Interlocking crowns Specimens exhibit significant leaning stems Dead wood present	80	5.0	C (ii)
G4	Lawson Cypress Chamaecyparis lawsoniana	18	upto 550	3	M	F	Six trees within group Interlocking low crowns Crossing and rubbing branches	137	6.6	C (ii)
G5	Elder Sambucus nigra Hazel Corylus avellana Lawson Cypress Chamaecyparis lawsoniana	6	avg 150	1	EM	P-F	Group of trees along the edge of Speedway Lane Crossing and rubbing branches Low and interlocking crowns	10	1.8	C (ii)
G6	English Oak Quercus robur Silver Birch Betula pendula	16	upto 350	6	EM-M	F	Low and interlocking crowns some suppressed in form Crossing and rubbing branches	55	4.2	C (ii)
G7	Ash Fraxinus excelsior	7	upto 260	3	SM	F	Self set trees Interlocking crowns	31	3.1	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G8	English Elm Ulmus procera Goat Willow Salix caprea Silver Birch Betula pendula	11	upto 420	4	EM-M	F	Self set trees Interlocking crowns Crossing and rubbing branches	80	5.0	C (ii)
G9	English Oak Quercus robur	16	upto 450	6	M	F	Three trees in group Interlocking crowns Established ivy present Dead wood present	92	5.4	C (ii)
G10	English Oak Quercus robur	16	upto 780	8	M	F	Three trees in group Interlocking crowns Established ivy present Dead wood present	275	9.4	B (ii)
G11	English Oak Quercus robur Goat Willow Salix caprea	10	upto 350	6	M	P-F	Low and interlocking crowns some suppressed in form Crossing and rubbing branches	55	4.2	C (ii)
G12	English Oak Quercus robur Hazel Corylus avellana Silver Birch Betula pendula	14	upto 640	7	M	F	Group of four oak with understory Crossing and rubbing branches Dead wood present	185	7.7	B (ii)
G13	English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Prunus sp.	7	upto 250	3	M	F	Group of two oak with understory Crossing and rubbing branches Dead wood present Established ivy present Situated on earth bank	28	3.0	C (ii)
G14	English Oak Quercus robur Hawthorn Crataegus monogyna	14	upto 440	6	M	P-F	Group of oak with understory Crossing and rubbing branches Dead wood present Established ivy present Situated on earth bank Pruning wounds present	88	5.3	C (ii)
G15	White Willow Salix alba	20	upto 600	6	M	P-F	Group of trees along the edge of track Specimens have partially collapsed with regrown crowns Crossing and rubbing branches Established ivy present Dead wood present	163	7.2	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G16	Ash Fraxinus excelsior	18	upto 400	7	M	P-F	Group of three trees along the edge of track Crossing and rubbing branches Interlocking crowns Dead wood present	72	4.8	C (ii)
G17	English Oak Quercus robur Mountain Ash Sorbus aucuparia Lawson Cypress Chamaecyparis lawsoniana Yew Taxus baccata	12	upto 250	2	SM	F	Off site group of trees to front of private property Low interlocking crowns	28	3.0	C (ii)
G18	Gold Leyland Cypress Cupressocyparis leylandii 'Castlewellan'	6	upto 250	1	EM	F	Off site group of trees growing around the boundary of private property	28	3.0	C (ii)
G19	Leyland Cypress Cupressocyparis leylandii	14	est 400	3	M	F	Off site group of trees growing around the boundary of private property	72	4.8	C (ii)
G20	Lawson Cypress Chamaecyparis lawsoniana	12	est 350	3	EM	F	Off site group of trees growing around the boundary of private property	55	4.2	C (ii)
G21	Ash Fraxinus excelsior Hazel Corylus avellana Silver Birch Betula pendula Lawson Cypress Chamaecyparis lawsoniana Leyland Cypress Cupressocyparis leylandii	13	upto 300	3	EM	F	Boundary tree group along Speedway Lane Low and interlocking crowns some suppressed in form Crossing and rubbing branches	41	3.6	C (ii)
G22	Laurel Prunus laurocerasus	5	est 120	2	SM	F	Situated off site Unable to gain access	7	1.4	C (ii)
G23	Privet Ligustrum vulgare	5	upto 95	1	M	F	Outgrown hedge material	4	1.1	C (ii)

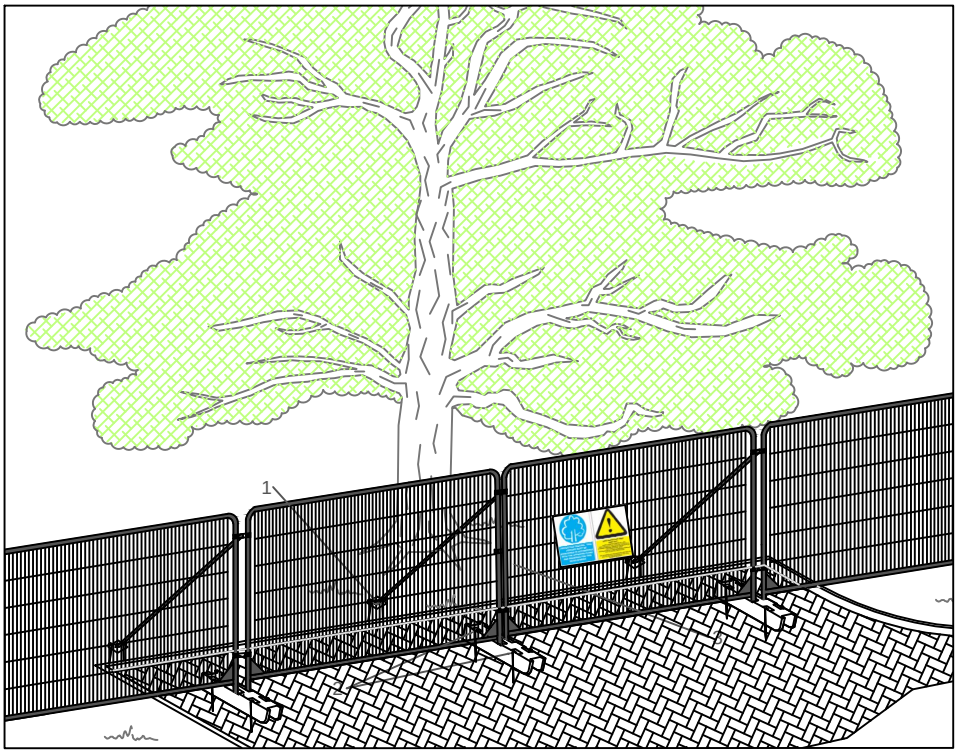
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G24	Ash Fraxinus excelsior Field Maple Acer campestre Goat Willow Salix caprea Hazel Corylus avellana Laurel Prunus laurocerasus	4	upto 100	1	SM	F	Interlocking low crowns Crossing and rubbing branches Planted along security fencing	5	1.2	C (ii)
G25	Field Maple Acer campestre Hawthorn Crataegus monogyna Hazel Corylus avellana Silver Birch Betula pendula Sycamore Acer pseudoplatanus	4	upto 150	1	SM	F	Interlocking low crowns Crossing and rubbing branches Planted along security fencing	10	1.8	C (ii)

Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
WOODLANDS										
W1	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna Hazel Corylus avellana Hybrid Black Poplar Populus x canadensis Silver Birch Betula pendula White Willow Salix alba Laurel Prunus laurocerasus Spindle Euonymus europaea Dogwood Cornus sanguinea Holly Ilex aquifolium	22	avg 850	10	SM-M	P-F	Collection of mature oaks forming woodland to the north and west Typical woodland forms with little management Dead wood present Broken branches Low and interlocking crowns Woodland edge is more sporadic as it enters the site Some trees subject of Tree Preservation Order No. TR4.269	327	10.2	B (ii)



Standard specification for protective barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs



Above ground stabilising systems

1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

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NOTES

drawing title

APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

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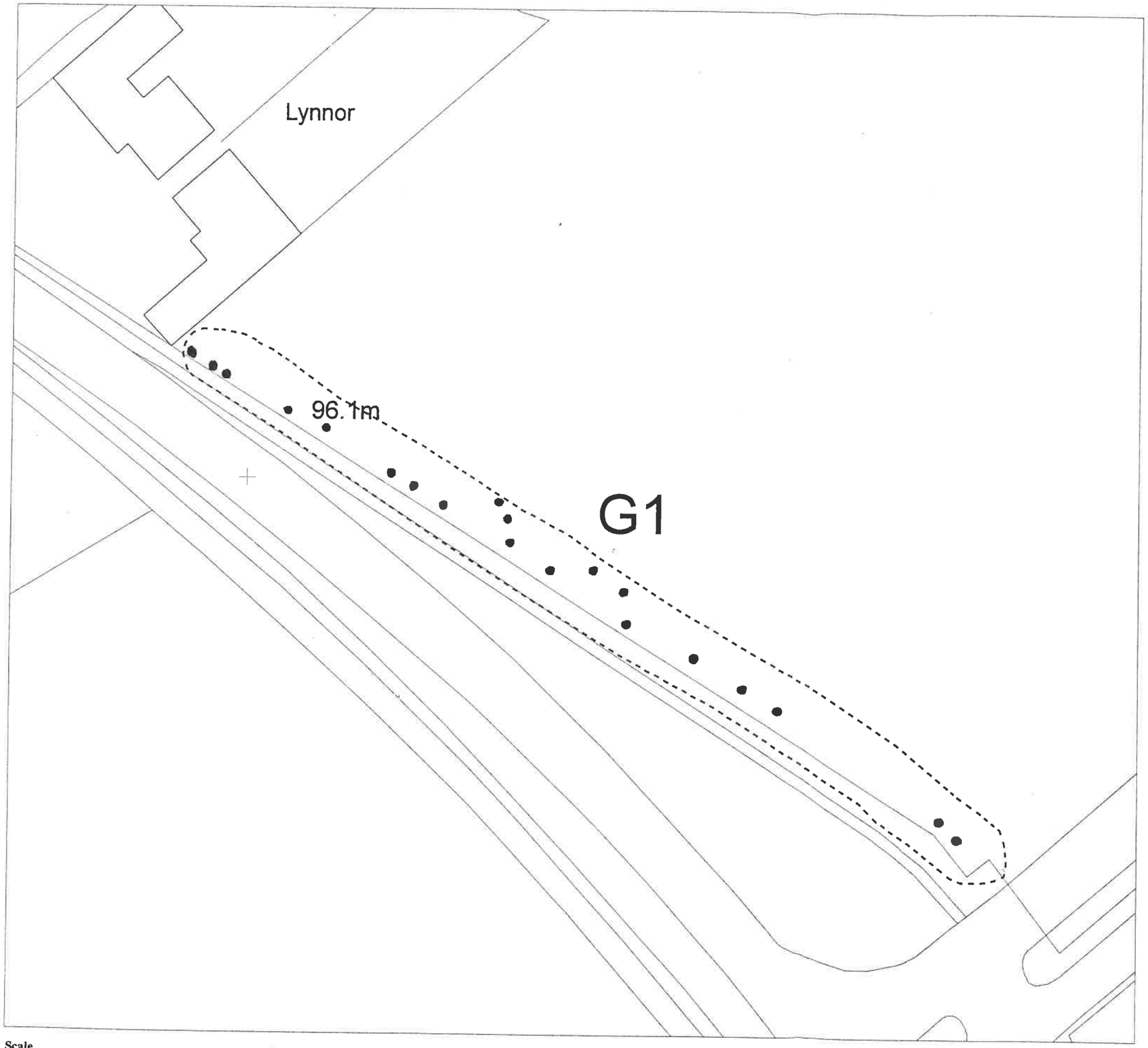


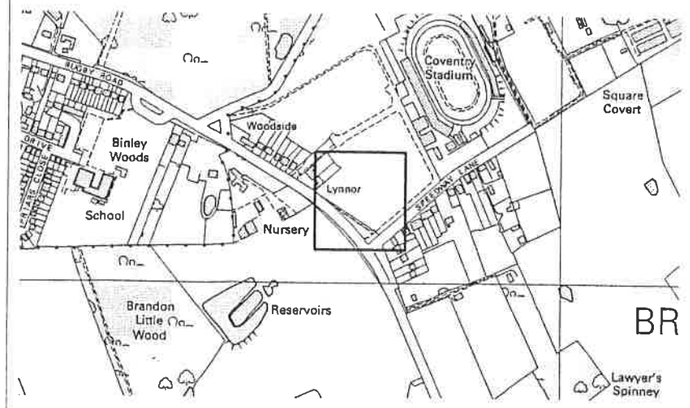
Scale

1:500

North

Location Plan **Scale 1:10,000**

North



TREE PRESERVATION ORDER

Number T. R.	Date
222	15th July 2003

Location Coventry Stadium
Rugby Road
Brandon

Key

Group of Trees

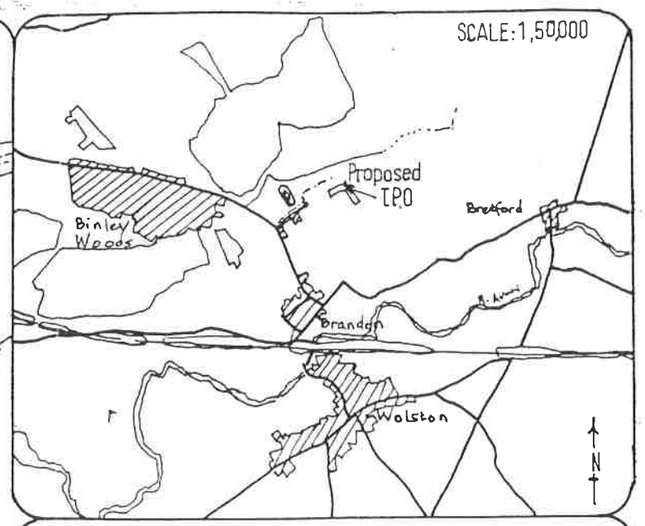
G1 : Group of ~~approx~~. 20 Oaks

PLANNING SERVICES

TECHNICAL SERVICES DEPARTMENT Tel.No. (01788) 533533
P.O. Box 123, Town Hall, Rugby. CV21 1ZP Fax.No.(01788) 533778
John Ware, B.A., M.C.D., Dip. L.A., Head of Planning Services

136103

BOROUGH RUGBY COUNCIL



T.P.O PRIVET COVERT. BRANDON

T.01.100

No: 7/2/8

— BOUNDARY OF T.P.O

W1: 200+ Mainly Ash, Birch & Oak

Coventry Stadium

Speedway Track

Square Covert

Privet Covert

W1

Pond

Pond

Pond

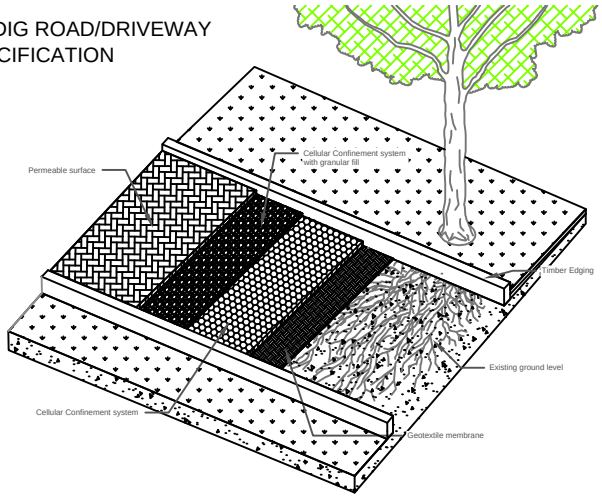
A428

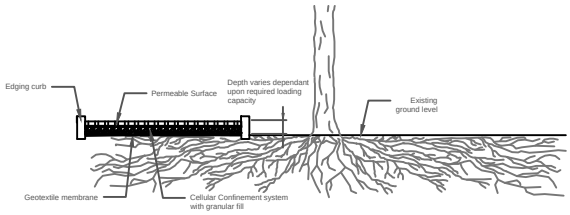
Scale: 1.2500

N

SEPT 86

NO-DIG ROAD/DRIVEWAY SPECIFICATION





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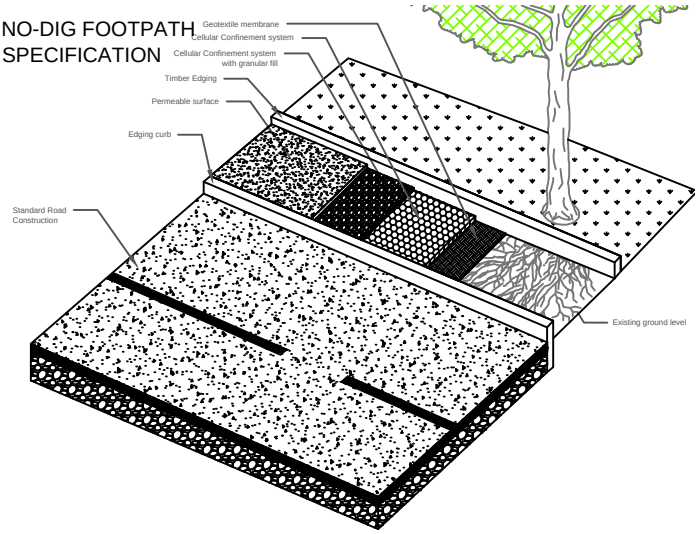
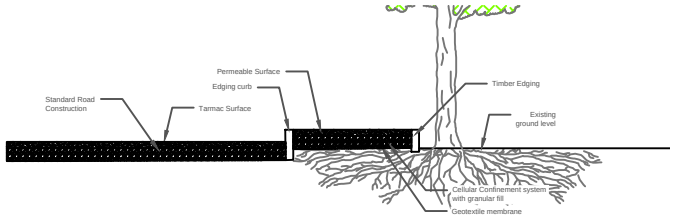
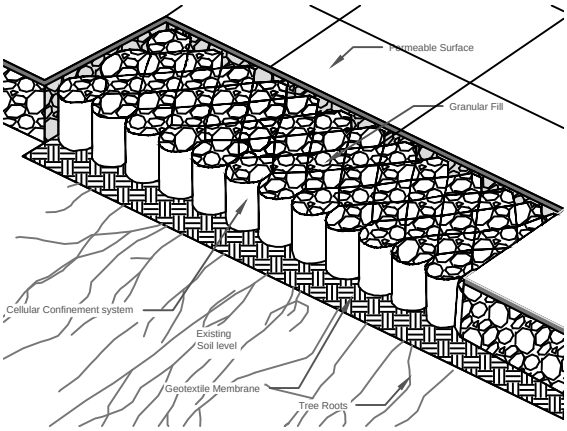
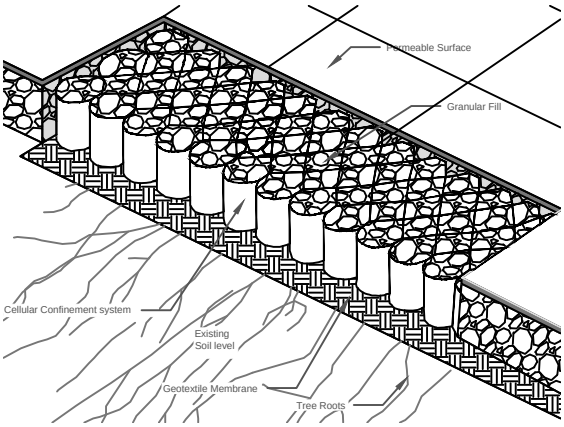
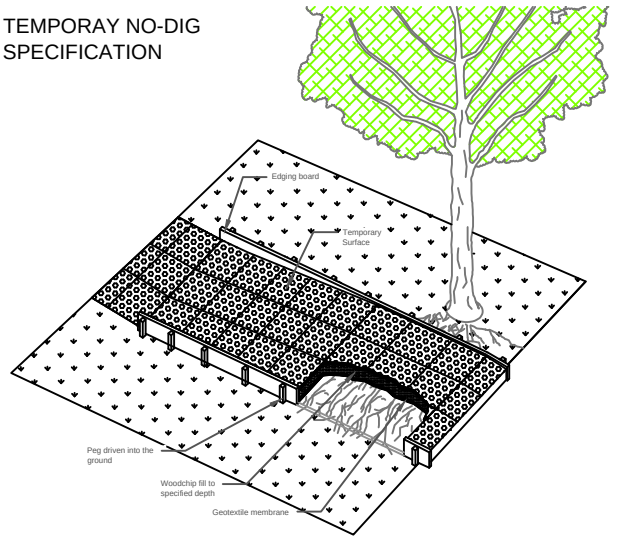


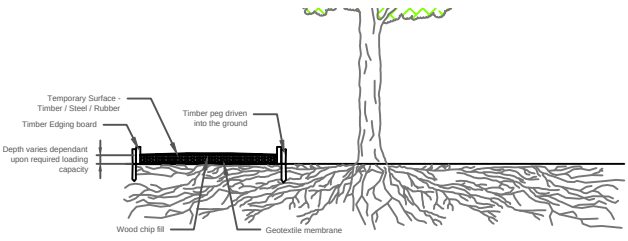






TEMPORAY NO-DIG SPECIFICATION





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drawing title

APPENDIX D
NO DIG TECHNIQUES

CAD file: J:\7100\7131\ARB\BS5837\Plans\Appendix D - No Dig Specification.dwg

NOTES

All dimensions to be verified on site. Do not scale this drawing.
All discrepancies to be clarified with project Arboriculturalist.