Bloor Homes

Land South of Banbury Rise, Banbury

Arboricultural Assessment

July 2022

FPCR Environment and Design Ltd
Registered Office: Lockington Hall, Lockington, Derby DE74 2RH
Company No. 07128076. [T] 01509 672772 [F] 01509 674565 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft	AW / 15.06.22	TCB / 17.06.22
A	Draft	AW / 21.06.22	TCB / 21.06.22
B	Final	AW / 12.07.22	TCB / 12.07.22

CONTENTS

TABLES

PLANS

APPENDICES

1.0 INTRODUCTION

1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Bloor Homes to present the findings of an Arboricultural Assessment and survey of trees located at Land South of Banbury Rise, Banbury (hereafter referred to as the site), OS Grid Ref SP 434 402.

1.2 The survey was carried out on 14th December 2021.

Scope of Assessment

1.3 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.

1.4 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.

1.5 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.

1.6 This report has been produced to accompany an outline planning application for a 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.

Site description

1.7 The site comprises of arable field parcels. To the north of the site is a newly constructed residential development known as 'Banbury Rise'. The existing residential edge of Banbury is found along the eastern boundary of the assessment area. To the south and to the west of the site is Withycombe Farm and the existing farm track with further arable fields beyond. Tree cover was typical for an agricultural setting and comprised of individual trees, groups of trees, hedgerows and a single offsite woodland.

2.0 PLANNING POLICY

National Planning Policy Framework July 2021

2.1 National Planning Policy is defined by the National Planning Policy Framework (NPPF). This sets out the Government's most current and up to date planning policies for England and how these should be applied. The current NPPF is dated July 2021.

2.2 Paragraphs 10 and 11 of the NPPF state that there is a presumption in favour of sustainable development and states that for decision making, the LPA should be '*c) approving development proposals that accord with an up-to-date development plan without delay'.* In the absence of a development plan or the development plan is out of date, the acting LPA should grant planning consent so far as the development proposals do not breach the policies and guidance outlined in the NPPF.

2.3 In relation to arboriculture, the NPPF also states that:

- *131 '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 (footnote 50), 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. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users' (footnote 50: unless, in specific cases, there are clear, justifiable and compelling reasons why this would be inappropriate)*
- *180 (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 (footnote 63) and a suitable compensation strategy exists';*

  and provides specific guidance that:

- *180 (d) 'development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity'.*

2.4 With reference to paragraph 180 (c), examples of what is deemed to be *'wholly exceptional'* are included within Footnote 63 and provides the examples of '*infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat'.*

Statutory Considerations

2.5 Local authorities have a Duty under the Town and Country Planning Act to create Tree Preservation Orders (TPO) in order to protect and preserve specific trees and woodlands that bring significant amenity benefit to a particular site or location. Under a TPO it is a criminal offence to cut down, top, lop, uproot or wilfully destroy a tree protected by that Order, or to cause or permit such actions, if carried out without the prior written consent of the acting LPA. Anyone found guilty of such an offence is liable and in serious cases, may result in prosecution and incur an unlimited fine.

2.6 No direct consultation with the Local Planning Authority has taken place, however, it is understood having used the online search facility on the website for the Local Planning Authority, Cherwell District Council that there are no Tree Preservation Orders and Conservation Areas that would apply to any trees present on, or in close proximity to the assessment site and therefore no statutory constraints would apply to the development in respect of trees. Before any tree works are undertaken confirmation of the online information should be sought from the Local Authority.

2.7 Information provided on Tree Preservation Orders and Conservation Areas is accurate to the date of this assessment and cannot be assumed to remain unchanged. The last check was carried out on the 15th December 2021.

Non-Statutory Considerations

2.8 In order to compile existing baseline information on relevant arboricultural considerations information was requested from both statutory and non-statutory nature conservation organisations. The Multi Agency Geographic Information for the Countryside (MAGIC)[1] website highlighted no tree cover within the site as or included within the following:

- The Priority Habitat Inventory, Deciduous Woodland
- The National Forestry Inventory

3.0 SURVEY METHODOLOGY

3.1 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 arboriculturist and has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence on 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.

3.2 Trees have been assessed as groups, hedgerows or woodland 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.

[1] http://magic.defra.gov.uk/

- For the purposes of this assessment, a hedgerow is described as any boundary line of trees or shrubs less than 5m wide at the base and are managed under a regular pruning regime.
- For the purposes of this assessment woodland is described as a habitat where 'trees are the dominant plant form. The individual tree canopies generally overlap and interlink, often forming a more or less continuous canopy'[4]. Woodlands, however, are not just formed of trees and generally include a great variety of other plants. These will include 'mosses, ferns and lichens, as well as small flowering herbs, grasses and shrubs'[5].

3.3 An assessment of individual trees within groups, hedgerows or woodland 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.

BS5837 Categories

3.4 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).

3.5 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.

3.6 **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.

3.7 **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:

[4] http://www.countrysideinfo.co.uk/woodland_manage/whatis.htm
[5] http://www.countrysideinfo.co.uk/woodland_manage/whatis.htm

- 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.

3.8 **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.

3.9 **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.

Site Plans

3.10 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 these have 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.

3.11 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.

Tree Constraints and Root Protection Areas

3.12 Below ground constraints to future development are represented by tree roots and the soil environment in which they grow which needs to be protected if the tree is to be retained. Tree rooting systems are essential for the uptake of water and nutrients, serving the storage of carbohydrates for the future growth and function of the tree, and form structural anchorage and support for the stem and crown. The perceived rooting area of the tree; referred to as the root protection area (RPA) needs to be protected if the tree is to be retained.

3.13 The RPA is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. The RPA has been calculated in accordance with Annex C, D and Section 4.6 of BS5837:2012 and requires suitable protection in order for the tree to be successfully incorporated into any future scheme. As such, the RPA of existing trees is an important material consideration when considering site constraints and planning development activities.

3.14 Where applicable the shape of the Root Protection Area has been modified to consider 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. 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.

3.15 Whilst it is generally accepted that a tree's roots may extend far greater distances than the notional RPA, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients), with roots predominantly located in the upper 1,000 mm of the soil horizon; the RPA offers an accepted protective buffer from development.

3.16 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.

Considerations and Limitations of the Tree Survey

3.17 The survey was completed from ground level only and from within the boundary of the site. Aerial tree inspections or an assessment of 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.

3.18 The statements made in this report regarding the assessed trees does not take into account the effects of extreme / adverse weather conditions, changes in land use prior to the site's development, unforeseen accidents or anti-social behaviours, such as vandalism, which occur since the date of the survey. As such, the assessment of tree condition given within applies to the date of survey and cannot be assumed to remain unchanged.

3.19 It will be necessary to review all comments and observations made within this report, in accordance with sound arboricultural practice, within two years of the date of survey (unless explicitly stated elsewhere within this report). Further review may also be necessary where site conditions change or works to trees are carried out which have not been specified in detail within this report.

3.20 Hedgerows are identified as a Habitat of Principal Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The tree survey conducted, in accordance with BS5837, does not assess hedgerows against the Hedgerow Regulations 1997 or specifically from an ecological perspective, and is outside the scope of this assessment.

3.21 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within tree groups and hedgerows to assist structural calculations for foundation design of structures in accordance with current building regulations. The exact position of individual trees or species included as part of a tree group 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.

4.0 RESULTS

4.1 A total of eleven individual trees, ten groups of trees, one woodland and four hedgerows 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.

Tree Schedule

4.2 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.

4.3 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.

4.4 Several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Results Summary

4.5 The species recorded on site were, on the whole, fairly typical for the setting. Ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus* were the most abundant species observed during the assessment.

4.6 The tree cover ranged from high (Category A) to unsuitable (Category U). The majority of individual trees, groups and hedgerows were regarded as either moderate (Category B) or low (Category C) quality. A single individual tree, which was located offsite, and one woodland were

recorded as high quality, these were either particularly good examples of their species or boundary tree cover that was of particular visual importance.

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T10	1		0
Category A (High Quality / Value)	T6	1	W1	1
Category B (Moderate Quality / Value	T2, T7	2	G4, G6, G7, G8, G9, H4	6
Category C (Low Quality / Value)	T1, T3, T4, T5, T8, T9, T11	7	G1, G2, G3, G5, G10, H1, H2, H3	8

Northern Boundary

4.7 The northern boundary was relatively devoid of any tree cover but for a linear section along the north western side of this boundary. In this area four category C specimens (T1, T3, T4 & T5) were located within H1, a category C hedgerow. These specimens exhibited typical features such as deadwood and broken branches. T2 was a moderate quality, category B sweet chestnut *Castanea sativa.* This specimen was of an over mature age, housing storm damage and major deadwood throughout.

Southern Boundary

4.8 The main arboricultural feature found along the southern boundary was G8. This group consisted primarily of mature sycamore specimens with an understory consisting of blackthorn *Prunus spinosa,* English oak *Quercus robur,* field maple *Acer campestre* and wych elm *Ulmus glabra.* The majority of stems were densely clad in ivy and dense undergrowth was found throughout the group. A number of failed trees were observed however they did not detract from the overall landscape value of the group. This group provided a key landscape feature and created a visual screen between the assessment area and the land to the south. To the west of G8 was H3, a typical, well-maintained hedgerow and growing within H3 was T10. T10 was the only category U specimen recorded during the assessment. This specimen of wych elm was had succumb to Dutch elm disease and showed no signs of live growth.

Eastern Boundary

4.9 Along this boundary were a number of linear planted groups that formed a buffer between the assessment area and the existing residential dwellings to the east. G1 was a group of Leyland cypress Cupressocyparis leylandii which was situated offsite. It was typical for its species and exhibited no obvious defects. South of this group was G2, a mixed group of planted broadleaved species. It comprised of ash, common lime *Tilia x europaea,* field maple, hawthorn *Crataegus monogyna*, rowan *Sorbus aucuparia* and Tibetan cherry *Prunus serulla Tibetica.* Due to the age and planting density of this group it provided limited screening of the adjacent properties. It could be improved through management and supplementary planting.

4.10 Situated offsite was the only individual category A specimen. This English oak specimen was found in the rear garden of one of the adjoining properties and was located approximately 4m from the edge of the assessment area. It was of typical form and showed no obvious defects, however the specimen was surveyed from a distance due to its offsite position.

4.11 G3 and G5 were two category C groups that were situated along the boundary of the assessment area. They were of limited arboricultural value, however, did confer a degree of screening. Features found throughout these groups included broken branches, dense undergrowth and a lack of management. Situated between G3 and G5 was G4. This group was considered to be of moderate quality due to its composition and landscaping value. The group was made up mainly of moderate quality English oak and sycamore with the occasional Leyland cypress being found amongst them.

4.12 G7 was the most significant feature along this boundary and was of a very similar composition to G8. This group provided a screen between the assessment area and the properties to the east. It was of landscape importance and a key arboricultural feature of the site.

Western Boundary

4.13 Situated offsite was the high quality, category A woodland, W1. This woodland was primarily comprised of high-quality beech *Fagus sylvatica* specimens with the occasional planted Scots pine *Pinus sylvatica* being found within the woodland. The understory of the woodland was made up of blackthorn, elder *Sambucus nigra,* English oak, field maple, sycamore and hazel *Corylus avellana.* The woodland was a key landscape feature and visible from vantage points across the site. No major defects were noted, and the overall condition of the woodland was considered to be good.

4.14 H4 ran along the western boundary, this hedgerow was considered to be of moderate quality due to its density and well managed form. Within H4 was T11, this category C wild cherry *Prunus avium,* was situated to the west of H4 and was therefore offsite. It was of typical form and exhibited no major defects.

4.15 Forming the southern boundary of Withycombe Farm was G9. This group was of moderate quality and provided a screen between the assessment area and the rear garden of the farmhouse. It was made up primarily of horse chestnut, lime and sycamore with an understory of blackthorn, elder and hazel. No major defects were noted however signs of flail damage were noted to the lower sections of the crown.

4.16 A recently planted group (G10) was found along the eastern and northern edge of Withycombe Farm. This group was of semi-mature to early-mature age and of fair overall condition. It comprised of a broadleaved planting mix made up of ash, English oak, field maple, hazel, holly *Ilex aquifolium*, holm oak *Quercus Ilex* and dogwood *Cornus sanguinea*. This group was awarded category C classification.

Central Area

4.17 Dissecting the northern and southern parcels was H2 and the individual specimens (T7, T8 and T9) which stood within it. H2 was a typical hedgerow of little arboricultural merit. T8 and T9 were both mature specimens of ash that were very similar in respect of features. T7 was a moderate quality, multi-stemmed sycamore. This specimen measured approximately 19m in height and had

stems ranging from 200mm to 400mm. The specimen housed no major obvious compromising features.

Ancient and Veteran Trees

4.18 None of the assessed trees were considered as ancient or veteran trees in accordance with accepted methodologies and guidance.

5.0

5.0 ARBORICULTURAL IMPACT ASSESSMENT

5.1 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.

5.2 The AIA has been based upon the Concept Plan (P20-1853_02H) and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for residential development. An overlay of the 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 and hedgerows.

Table 2: Summary of Impact on Tree Stock

	Trees to be Retained	Total	Trees to be Removed in full or part	Total
Category U - Unsuitable	T10	1		
Category A (High Quality / Value)	T6, W1	2		
Category B (Moderate Quality / Value	T2, G4, G6, G9, H4	5	T7, G7, G8	3
Category C (Low Quality / Value)	T1, T3, T4, T5, T8, T9, T11, G1, G3, G10	10	G2, G5, H1, H2, H3	5

5.3 Due to the nature of the site and the location of the majority of tree cover being confined to the periphery of the site, the proposals will retain most of the tree stock recorded during the assessment.

5.4 Removals will be required for vehicular and pedestrian access. To connect the northern field parcel to the southern, a small section of low quality, category C hedgerow will require removing. This removal should not constrain the development on arboricultural grounds due to both its quality and the quantity of material to be removed. At this outline application stage, T7 has been shown as removed due to a conflict between the root protection area and the proposed link road, however at a detailed design stage the retention of this tree will be considered.

5.5 Pedestrian and cycle links are shown to connect the site to the recently developed area to the north, Dover Avenue to the east and to the land to the south of the site. These links will require a

small amount of tree cover to be removed. To access Dover Avenue a small section of G2 will require removal. This low-quality material does not pose a constraint to development. To the south of the site, small linear sections of G8 are shown to be removed to allow for the pedestrian link. Whilst this group was considered to be of moderate quality, the amount of material proposed to be removed is minimal and would not detract from the overall landscape value of this group. A section of H3 will also require removal to allow for the construction of the pedestrian links. Again, this removal should not constrain the development. Furthermore, a section of H1 will be removed to create a pedestrian link, the removal of this material should not constrain the development on arboricultural grounds.

5.6 To the east of the development, G5 will require pruning back towards the boundary to facilitate the construction of the developable area. The part removal of this group ensures that there is still a buffer between the site and the abutting properties and the material to be removed was of low quality and heavily covered in brambles.

5.7 G7 will also require partially removing to create the developable area, whilst this tree cover was considered as moderate quality, the amount of material to be removed would not be detrimental to the overall quality of the group. A small proportion of trees will be removed and pruned back and this will not detract from the screening value provided by the group.

5.8 Overall, from an arboricultural perspective the amount of tree cover required for removal in order to facilitate the proposals would not be considered to significantly reduce the overall amenity value provided by the surveyed tree cover. The proposals retain the majority of tree cover, and this will be incorporated into the development. The large moderate quality boundary groups (G6-G8) will continue to act as screening and buffer the development from views to the east. The site has ample space for new tree planting which will mitigate for any removals. Where new trees are planted, they must be suitable for their location and well maintained in their formative years to ensure that they establish themselves.

Tree Management

5.9 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 arboriculturist to assess the existing tree cover and prepare a schedule of tree works.

5.10 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 arboriculturist or arborist to identify any potential public safety risks and to agree remedial works as required.

5.11 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.

5.12 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

5.13 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.

5.14 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.

5.15 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.

5.16 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.

5.17 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.

5.18 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.

6.0 NEW TREE AND HEDGEROW PLANTING

Trees

6.1 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).

6.2 In line with the NPPF all schemes should aim to achieve a net gain in biodiversity value. Nationally recognised biodiversity metrics allow for the inclusion of, not limited to, newly planted scattered trees, woodlands and hedgerows as a means of compensating for loss of habitat as part of the development. Tree and shrub planting can therefore be used to contribute to this biodiversity gain.

6.3 To maximise biodiversity value (and contribution to net gain) native species or varieties should be specified. Such provisions can be incorporated into both the hard and soft landscaping of the scheme. It is recommended that tree and hedgerow specifications are made following consultation with guidance published by the Local Planning Authority.

6.4 When deciding upon suitable tree species, 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.

6.5 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.

Hedgerows

6.6 Hedgerows are identified as a Habitat of Principal Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Consequently, it is important that the proposed scheme delivers a net gain in terms of linear hedgerows through new planting to compensate for any losses. Species should be native, and characteristic of the locality.

Rooting Environment and Soil Volumes

6.7 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.

6.8 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. Crucially the aim will be 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 & Bask, 1991).

6.9 In a natural environment free from constraints to growth, it has been proven through research that root systems can extend up to three times the radius of the tree crown and although in an urban environment there is often insufficient space to accommodate the extent of the full potential for root growth, all efforts should be made to at least provide as much soil volume as possible. One researched method of calculating the minimum required soil volume is as follows:

Table 3: Example of calculating Soil Volume for New Tree Planting (Source: CIRIA C712 and Calculating Target Soil Volumes – Green Blue Urban)

Projected canopy area of mature tree (m) x depth 0.6m		
Calculation 1	Projected mature canopy diameter (metres)	= 3 (Diameter)
Calculation 2	Projected mature canopy area (square metres), (n x Radius^2)	= 7.1 (Area)
Calculation 3	Target soil volume (cubic metres), (Area x 0.6m)	= 4.24 (Volume)
	Target soil volume	= 4.24m^3

General Planting Recommendations

6.10 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.

6.11 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.

7.0 TREE PROTECTION MEASURES

7.1 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

7.2 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.

7.3 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 Arboriculturist.

7.4 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.

7.5 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.

7.6 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

7.7 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.

7.8 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.

7.9 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.

7.10 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

7.11 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.

7.12 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.

7.13 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.

7.14 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.

7.15 Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times until safe enough to leave.

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

7.17 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

7.18 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.

7.19 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

7.20 Where it is deemed necessary to operate wide or tall plant within close proximity to trees it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obstructive branches as 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 arboriculturist.

7.21 A pre-commencement site meeting with contractors who are responsible for operating machinery is advised 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.

7.22 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.

rev	date	description	by
-	15/12/21	First Issue	AW
A	16.02.22	Updated Project Name	AW

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby DE74 2RH

t: 01509 672772
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

client
Bloors Homes Western

project
Land south of Banbury Rise
Banbury

drawing title
TREE SURVEY PLAN

scale	drawn/checked	date
1:2000 @ A3	AW/HCT	June 2022

drawing number
10511-T-01

rev
B

CAD file: L:\10500\10511\ARB\Plans\Tree Survey Plan.dwg

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.

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)
- Hedgerow (Colour indicates BS5837:2012 Category)
- 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
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)
- Woodland (Colour Indicates BS5837:2012 Category)

rev	date	description	by
-	15/06/22	First Issue	AW

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby DE74 2RH

t: 01509 672772
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

client
Bloors Homes Western

project
Land south of Banbury Rise
Banbury

drawing title
TREE RETENTION PLAN

scale	drawn/checked	date
1:2000 @ A3	AW/HCT	June 2022

drawing number
10511-T-02

rev
A

CAD file: L:\10500\10511\ARB\Plans\Tree Retention Plan.dwg

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.

KEY

- Tree/Group to be Retained
- Tree/Group proposed to be removed subject to relevant permissions
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Hedgerow proposed to be removed subject to relevant permissions
- 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
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)
- Woodland (Colour Indicates BS5837:2012 Category)

Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
Height - Measured using a digital laser clinometer (m)	**YNG**: Establishing, typically with good vigour and fast growth rates and strong apical dominance; c. less than 1/3 life expectancy	**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.	<10 years
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	**SM:** Semi-mature trees less than 1/3 life expectancy	**Category A -** Trees of high quality with an estimated remaining life expectancy of at least 40 years.	40+ years
Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)	**EM:** Established, typically vigorous and increasing in apical height and lateral spread; 1/3 - 2/3 life expectancy. Offers landscape significance	**Category B -** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	20-40 years
Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	**M:** Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading	**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.	10-20 years
	OM: Fully mature, at the extremes of expected life expectancy, vigour decreasing, declining or moribund	Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value	
	V: biological, cultural or aesthetic value comprising niche saproxylic habitat. Individuals of large proportions (stem girth) in comparison to trees of the same species/surviving beyond the typical age range for their species.	**The BS category particular consideration has been given to the following:** • 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	

Structural Condition	Physiological Condition
Good - No significant structural defects	**Good -** No significant health problems
Fair - Structural defects that can be remediated	**Fair -** Symptoms of ill-health that can be remediated
Poor - Significant defects beyond remediation, present a risk of failure in the foreseeable future	**Poor -** Significant ill-health. Unlikely the tree will recover in the long term
Dead - Dead tree with structural integrity of tree severely compromised	**Advanced Decline** / **Dead -** Advanced state of decline and unlikely to recover or Dead

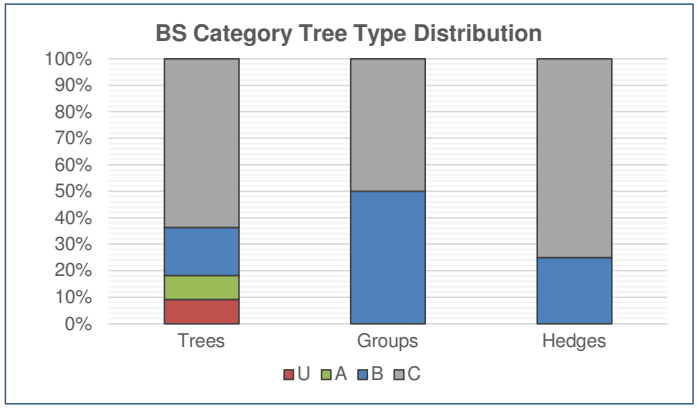
Root Protection Area (RPA)
• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). • The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully 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.

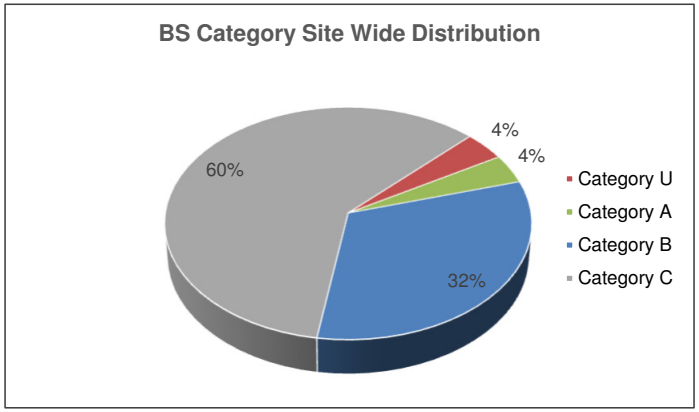
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T10	1		0
Category A	T6	1	W1	1
Category B	T2, T7	2	G4, G6, G7, G8, G9, H4	6
Category C	T1, T3, T4, T5, T8, T9, T11	7	G1, G2, G3, G5, G10, H1, H2, H3	8
	Total	11	**Total**	15

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

BS Category Site Wide Distribution shows the proportion of trees assessed in each category across the whole site which allows an interpretation of the site's overall quality.





Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Ash Fraxinus excelsior	8	est 210	3	EM	F	Basal suckers and epicormic growth throughout Light ivy cover Flail damage	20	2.5	C (i)
T2	Sweet Chestnut Castanea sativa	14	est 1030	N - 5 S - 5 E - 7 W - 8	OM	F	Significant and established basal growth Large diameter pruning wounds on southern side of stem at 3m Major deadwood throughout the crown Epicormic growth Storm damage to central apical leader Large branch stubs	480	12.4	B (i)
T3	Ash Fraxinus excelsior	10	est 350	3	EM	F	Basal suckers and epicormic growth throughout Light ivy cover No major defects Small quantities of minor deadwood	55	4.2	C (i)
T4	Ash Fraxinus excelsior	17	est 800	N - 4 S - 7 E - 5 W - 9	M	P / F	Dense ivy throughout Minor and major deadwood Storm damage to upper crown Epicormic growth	290	9.6	C (i)
T5	Sycamore Acer pseudoplatanus	7	est 180	3	SM	F	Self set specimen within hedgerow No major defects	15	2.2	C (i)
T6	English Oak Quercus robur	18	est 950	8	M	F / G	Situated offiste in rear garden Located approximately 4m from site boundary Enable to gain access due to its location No major defects were noted Typical form features and characteristics	408	11.4	A (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T7	Sycamore Acer pseudoplatanus	19	est 400 400 240 200 300	9	M	F	Multi stemmed from ground level Included union at base Minor deadwood throughout Light ivy cover Rhytisma acerinum Tar spot of sycamore	230	8.5	B (i)
T8	Ash Fraxinus excelsior	15	est 300 240	6	M	F	Basal suckers present Base obscured Branch stubs evident Broken branches evident Compacted ground at the base Crossing and rubbing branches Dense undergrowth at the base	67	4.6	C (i)
T9	Ash Fraxinus excelsior	10	est 400	7	M	F	Established regrowth from a lapsed section of hedgerow Minor deadwood noted Typical form	72	4.8	C (i)
T10	Wych Elm Ulmus glabra	5	est 140	2	SM	D	Dead tree Ophiostoma novo-ulmi Dutch elm disease	N/A	N/A	U
T11	Wild Cherry Prunus avium	8	est 8x 120	5	M	F	Situated offsite Multi stemmed from ground level Dense ivy No major defects	52	4.1	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	Leyland Cypress Cupressocyparis leylandii	15	est 250	4	M	F	Offsite linear group forming boundary to adajcent garden No major defects Typical form and characteristics	28	3.0	C (ii)
G2	Ash Fraxinus excelsior Common Lime Tilia x europaea Field Maple Acer campestre Hawthorn Crataegus monogyna Rowan Sorbus aucuparia Tibetan Cherry Prunus serrula Tibetica	11	avg 240	4	EM / M	F	Linear group found along boundary of site Planted group of trees Limited value No signs of management Provides some screening of adjacent development	26	2.9	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G3	Ash Fraxinus excelsior Beech Fagus sylvatica Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna Wild Cherry Prunus avium Alder Alnus glutinosa Laural Prunus Laurocerasus Rowan Sorbus aucuparia Lawson Cypress Chamaecyparis lawsoniana Cotoneaster Cotoneaster spp.	11	avg 310	4	SM / EM / M	F	Basal suckers present Base obscured Branch stubs evident Broken branches evident Characteristic for species Close cultivation of the soil Crossing and rubbing branches Epicormic growth evident within the crown Screens allotments to the east	43	3.7	C (ii)
G4	English Oak Quercus robur Sycamore Acer pseudoplatanus Leyland Cypress Cupressocyparis leylandii	18	est 580	6	M	F	Characteristic for species Dense undergrowth at the base Interlocking crowns Multi leadered form Flail damage to lower canopy Ivy cover from ground level to middle canopy Broken branches and minor storm damage Minor deadwood	152	7.0	B (ii)

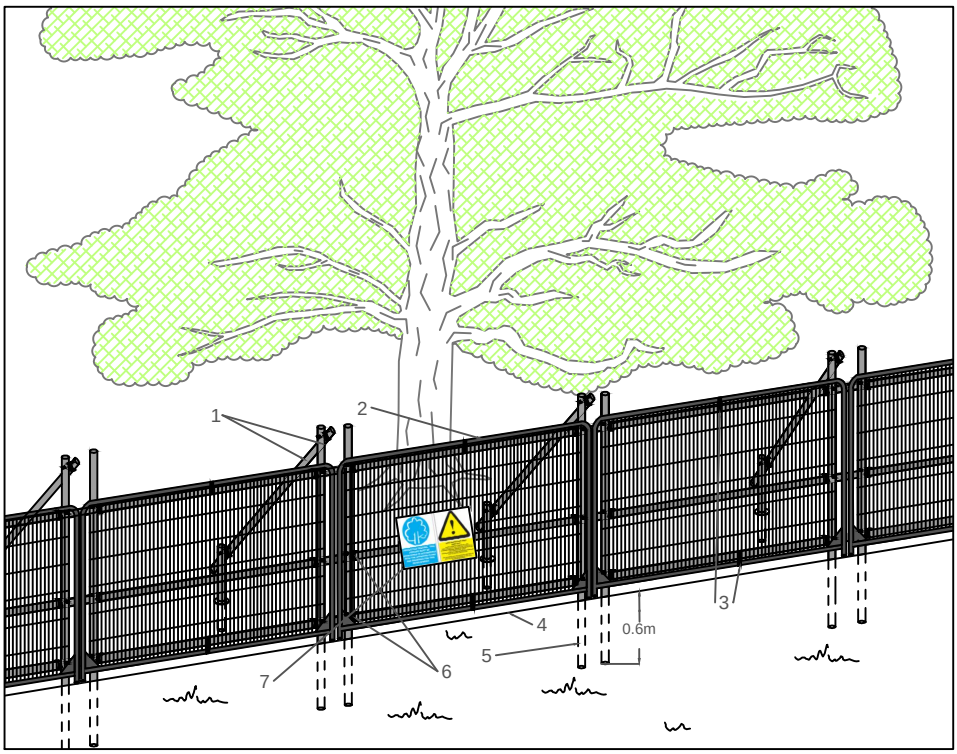
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G5	Ash Fraxinus excelsior Blackthorn Prunus spinosa Field Maple Acer campestre Sycamore Acer pseudoplatanus	17	est 400	5	EM / M	P / F	Bark wounds noted Basal suckers present Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Characteristic for species Close cultivation of the soil Crossing and rubbing branches Dense undergrowth at the base Epicormic growth evident within the crown	72	4.8	C (ii)
G6	Ash Fraxinus excelsior Elder Sambucus nigra Field Maple Acer campestre Sycamore Acer pseudoplatanus Hazel Corylus avellana	20	est 500	6	M	F	Canopy layer predominantly formed if sycamore Dense undergrowth and ivy throughout Screens existing development to the south Fly tipping throughout group Broken branches and minor deadwood observed	113	6.0	B (ii)
G7	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra Crab Apple Malus sylvestris	20	avg 550	7	M	F	Basal suckers present Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Characteristic for species Close cultivation of the soil Crossing and rubbing branches Dead trees noted Dense ivy cover on main stem Dense undergrowth at the base Epicormic growth evident within the crown Interlocking crowns Canopy layer made up of ash and sycamore with understory comprised of field maple blackthorn and elder Provides screening value by restricting views of the adjoining development	137	6.6	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G8	Ash Fraxinus excelsior Blackthorn Prunus spinosa English Oak Quercus robur Field Maple Acer campestre Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	18	avg 480	5	EM / M	F	Bark wounds noted Basal suckers present Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Characteristic for species Close cultivation of the soil Crossing and rubbing branches Dense ivy cover on main stem Dense undergrowth at the base Epicormic growth evident within the crown Failed trees Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Linear group forming southern boundary of site Mature sycamores make up the canopy layer of the group Dense sections of ivy and undergrowth Moderate landscape value	104	5.8	B (ii)
G9	Ash Fraxinus excelsior Blackthorn Prunus spinosa Common Lime Tilia x europaea Elder Sambucus nigra Horse Chestnut Aesculus hippocastanum Sycamore Acer pseudoplatanus Hazel Corylus avellana	19	avg 600	7	M	F	Basal suckers present Base obscured Branch stubs evident Broken branches evident Dense ivy and undergrowth found at base of group Close cultivation of soil on southern side of group and flail damage to the lower sections of the crown Forms a dense screen between the site and the residential dwelling to the north Occasional dead elder in group Interlocking crowns	163	7.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G10	Ash Fraxinus excelsior English Oak Quercus robur Field Maple Acer campestre Hazel Corylus avellana Holly Ilex aquifolium Holm Oak Quercus ilex Dogwood Cornus sanguinea	12	est 250	5	SM / EM	F	Planted buffer group between eastern side of dwelling and site Densely planted specimens obscure views of the dwelling No major defects noted Typical features and characteristics	28	3.0	C (ii)

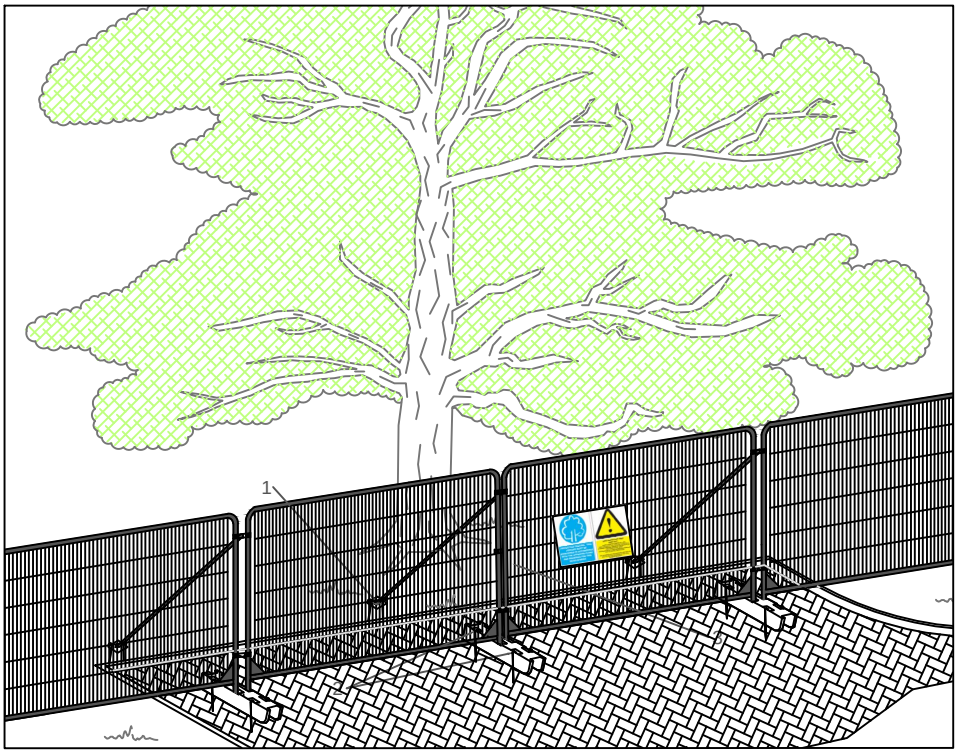
Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Yew Taxus baccata	2	est 120	1	M	P / F	Maintained by flail Occasional gaps Light ivy cover	7	1.4	C (ii)
H2	Elder Sambucus nigra Field Maple Acer campestre Sycamore Acer pseudoplatanus Hazel Corylus avellana	2	est 6x 60	1	M	F	Maintained hedgerow	10	1.8	C (ii)
H3	Field Maple Acer campestre Hawthorn Crataegus monogyna Wych Elm Ulmus glabra	1.5	est 6x 60	0.5	M	F	Maintained hedgerow Gaps present	10	1.8	C (ii)
H4	Blackthorn Prunus spinosa Elder Sambucus nigra Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	1.5	avg 120	1	M	G	Well maintained dense boundary hedgerow	7	1.4	B (ii)

Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
WOODLANDS										
W1	Beech Fagus sylvatica Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Sycamore Acer pseudoplatanus Hazel Corylus avellana Scots Pine Pinus sylvestris	18	avg 400	5	SM / EM / M	G	Basal suckers present Base obscured Branch stubs evident Broken branches evident Characteristic for species Crossing and rubbing branches Interlocking crowns Minor dead wood evident in the crown (<75mm) Woodland block which abuts the southwestern corner of the site Primarily beech with occasional pine noted No major defects were observed	72	4.8	A (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

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby DE74 2RH

t: 01509 672772
f: 01509 674565
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

NOTES

drawing title

APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

CAD file: S:\Arb resources\Basic Templates\Tree Protection\Appendix B - Protective Fencing A4.dwg