

The Thomas Family & Bloor Homes Limited

Land at Newlands Farm, Wokingham

Arboricultural Assessment

December 2023

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1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of The Thomas Family & Bloor Homes Limited to present the findings of an Arboricultural Assessment and survey of trees located at Land at Newlands Farm, Wokingham (hereafter referred to as the site), OS Grid Ref SU 83329 66400.
- 1.2 The survey was carried out on 15 August 2022.

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 a planning application for a Suitable Alternative Natural Green Space (SANG) 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 is located between Bracknell and Wokingham in Berkshire. It is surrounded by a mixture of pine woods, grazing pasture, a golf course and fruit farms. The Site itself encompasses a number of grazing pasture field parcels and small areas of woodland. There is a series of ditches and streams across the Site. The site tree stock was English oak Quercus robur dominant with silver birch Betula pendula, and Scots pine Pinus sylvestris also present. Species that grow well in wet conditions were also recorded around the site boundaries and in the woodland parcels and included Crack Willow Salix fragilis, Goat Willow Salix caprea, and Alder Alnus glutinosa.



2.0 PLANNING POLICY

National Planning Policy Framework December 2023

- 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 December 2023.
- 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 Following consultation with the Local Planning Authority, Wokingham Borough Council, it is understood that there is a Tree Preservation Order, namely TPO-0316-1986, which applies to the eastern extent of woodland W3 and therefore statutory constraints apply to the development in respect of trees. A plan detailing trees covered by the TPO has been included within the report as Appendix C and further details are given in Chapter 4.
- 2.7 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 16th November 2023.

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 tree cover within the site as or included within the following:
 - The Priority Habitat Inventory, Deciduous Woodland
 - The National Forestry Inventory
- 2.9 The Priority Habitat Inventory is a spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance.²
- 2.10 The deciduous woodland inventory is a rolling programme designed to provide accurate information about the size, distribution, composition and condition of forests and woodlands.³
- 2.11 Priority habitat designation and inclusion within the National Forestry Inventory does not provide any statutory protection.

https://www.forestresearch.gov.uk/tools-and-resources/national-forest-inventory/

http://magic.defra.gov.uk/

² Contains public sector information licensed under the Open Government Licence v3.0.



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 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.
- 3.2 Trees have been assessed as groups 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.
 - 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 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.

Ancient and Veteran Trees

- 3.4 Veteran trees and Ancient Woodland are important components of the landscape, their importance can be for a number of reasons including that of their ecological, social, cultural and historic value.
- 3.5 Veteran Trees and Ancient Woodlands are material considerations within the planning process and their importance is specifically recognised within the National Planning Policy Framework (NPPF) 2023, which defines the terms ancient or veteran tree as:
 - 'A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'6
- 3.6 Various published methodologies are currently available which, due to the complexity and subjectivity of the process of defining and assessing these trees, often have conflicting definitions. This assessment, and the criteria used for defining ancient/veteran trees and the identification of attributable ancient/veteran features, has been based on a range of currently published guidance and resources.

⁴ http://www.countrysideinfo.co.uk/woodland manage/whatis.htm

⁵ http://www.countrysideinfo.co.uk/woodland manage/whatis.htm

⁶ Ministry of Housing, Communities and Local Government. (2019). National Planning Policy Framework. London: Ministry of Housing, Communities and Local Government.



Ancient Woodland

- 3.7 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.
- 3.8 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.
- 3.9 Ancient woodland is a resource of great importance for its wildlife, soils, recreation, cultural value, history and the contribution to diverse landscapes.

BS5837 Categories

- 3.10 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).
- 3.11 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.
- 3.12 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.
- 3.13 **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.
- 3.14 **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.
- 3.15 **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

3.16 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.



- 3.17 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.
- 3.18 A Detailed Access Arrangement Plan has been provided to demonstrate the location of the primary 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

- 3.19 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.
- 3.20 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.
- 3.21 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.
- 3.22 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.
- 3.23 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

3.24 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.



- 3.25 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.
- 3.26 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.
- 3.27 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.
- 3.28 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 95 individual trees, 26 groups of trees, and three woodlands 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

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees and Woodlands	Total
Category U - Unsuitable	T7, T44, T46	3	-	0
Category A (High Quality / Value)	T1, T2, T3, T10, T11, T13, T14, T15, T16, T17, T18, T19, T22, T23, T26, T27, T32, T33, T39, T40, T42, T43, T45, T49, T50, T52, T53, T56, T57, T58, T59, T60, T61, T62, T63, T66, T67, T68, T69, T70, T75, T76, T77, T79, T80, T81, T83, T85, T86, T88, T90, T91, T92, T94, T95	55	G3, G8, G11, G15, G16, G18, G19, G20, G22, W1, W2, W3	12
Category B (Moderate Quality / Value	T4, T6, T12, T20, T24, T29, T30, T34, T35, T38, T41, T54, T55, T64, T74, T78, T82, T89	18	G2, G7, G10, G12, G17, G23, G24, G25	8
Category C (Low Quality / Value)	T5, T8, T9, T21, T25, T28, T31, T36, T37, T47, T48, T51, T65, T71, T72, T73, T84, T87, T93	19	G1, G4, G5, G6, G9, G13, G14, G21, G26	9



4.5 The majority (53%) of the trees located on and adjacent to the site were attributed Category A status due to their good structural and physiological condition and anticipated life expectancies in excess of 40 years.

Ancient and Veteran Trees

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

Woodlands

- 4.7 G18, G19, W2, W3, T92, and T95 are classed as Priority Habitat Inventory Deciduous Woodland (England) 'a Lowland mixed deciduous woodland includes woodland growing on the full range of soil conditions... Quercus robur is generally the commoner oak (although Quercus petraea may be abundant locally) and may occur with virtually all combinations of other locally native tree species'[2]
- 4.8 G18, G19, W2, W3, T92, and T95 are included in the Nationale Forestry Inventory as Broadleaved Woodland, T1 T85, G8, and G10 are included as Conifer Woodland, and G2, G3, and G12 (located to the east of Old Wokingham Road) are included as Mixed mainly broadleaved.
- 4.9 Woodland W2, Watley's Copse is recorded as Ancient Semi Natural Woodland (ASNW).
 Statutory Constraints
- 4.10 The following table details which trees are included in the Wokingham Borough Council Tree Preservation Order (TPO), TPO-0316-1986. The trees identified within the TPO are protected by law from felling or uprooting, pruning including 'topping' and wilful damage or destruction.

Table 2: Tree Preservation Order / Conservation Area details

Tree No. taken from FPCR	TPO reference no.
W3 (eastern extent outside of redline)	W1

4.11 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.

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 SANG General Arrangement Plan 10930-FPCR-ZZ-ZZ-DR-L-0005 (FPCR, 2023) and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for the creation of a new SANG including extensive planting, a boardwalk, footpath, and associated parking and access. 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 3: Summary of Impact on Tree Stock

	Trees to be Retained	Total	Trees to be Removed in full or part	Total
Category U - Unsuitable	-	0	T7, T44, T46	3
Category A (High Quality / Value)	T1, T2, T3, T10, T11, T13, T14, T15, T16, T17, T18, T19, T22, T23, T32, T33, T39, T40, T42, T43, T45, T49, T50, T52, T53, T56, T57, T58, T59, T60, T61, T62, T63, T66, T67, T68, T69, T70, T76, T77, T85, T86, T88, T90, T91, T92, T94, T95, G3, G8 (part), G11, G15, G16, G18, G19, G20, G22, W1, W2, W3	59 full 1 part	T26, T27, T75, T79, T80, T81, T83, G8 (part),	7 full 1 part
Category B (Moderate Quality / Value	T4, T6, T12, T20, T30, T34, T35, T38, T41, T54, T55, T64, T74, T78, T89, G2, G7, G10 (part), G12, G17, G23, G24 (part), G25	23 full 2 part	T24, T29, T82, G10 (part), G24 (part)	3 full 2 part
Category C (Low Quality / Value)	T5, T8, T9, T21, T31, T36, T37, T47, T48, T51, T65, T71, T72, T73, T93, G4, G5, G6, G13, G14, G21 (part), G26	22 full 1 part	T25, T28, T84, T87, G1, G9, G21 (part)	6 full 1 part

5.3 The majority of the tree removals proposed on site are towards the new entrance from the Old Wokingham Road. This is to accommodate the main vehicular access to the site and associate pedestrian footpaths. The removals also allow for better visibility when vehicles and entering and exiting the site. Due to there only being one existing access point to the site and this being a



narrow lane the tree removals in this area are unavoidable to ensure safe vehicular and pedestrian movements to and from the site.

- 5.4 The Category U trees recorded as part of the survey are recommended for removal on the grounds of arboricultural best practice.
- 5.5 Small sections of G21 (C), and G24 (B) will require removal to accommodate two of the new footbridges proposed at three points throughout the site. The footbridges will be minimal impact utilising the RootBridge screw system which has been discussed with Green Grid Systems. Footings have been designed to utilise a cellular confinement system to minimise impacts to the rooting environment. It is considered that the footbridge proposed within the RPA of G22 (A) will be constructed under the canopy of the trees in this group.
- Due to the spatial constraints on site and the footpath length requirements some minor encroachments are proposed in the 15m ASNW buffer to the north-east of W2. The trees in W2 are largely rooted off site along and beyond the boundary line, the 15m therefore starts at the boundary. Between the stems of the trees in W2 and the proposed works is a stream which is likely acting as a barrier to surface root growth. The removal of some of the existing bunds is proposed and the installation of a raised boardwalk footpath to the north-east of the stream which will not be altered or worked on as part of the proposals. The bunds will be gently scraped back by small plant under the direct supervision of an arboriculturist and natural timber will be used to construct the boardwalk. The boardwalk will be secured posts with concrete footings which will be hand dug and lined with a geotextile membrane to prevent contamination of the surrounding soils. Whilst the works are within the 15m buffer it is considered that they will be incorporated into the buffer and become naturalised and would be appropriate in the course of managing any woodland. A footbridge is already in place over the stream to the south of W2 setting a precedent of built structures within the 15m buffer of the ASNW.
- 5.7 The boardwalk also incurs into the RPAs of T92, G20, G25, W3. Whilst these incursions are minimal it is considered the above methods could also be used in the RPAs of these trees; hand dug secured posts with concrete footings lined with a geotextile membrane.
- The self-binding gravel footpath incurs into the RPAs of G15, W1, and W3, these incursions are minimal, less than 5% of the total RPAs, and do not require the removal of any the trees in G15, W1, and W3. The impacts to G15, W1 and W3 are not considered to have a negative affect on the structural or physiological condition of the trees in these groups.

Tree Management

- 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.
- 5.10 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.

5.11 One of the main aims of the project is habitat creation and improvement with minimal vegetation and tree removal. If required vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist during the bird-breeding season (March - September inclusive).

6.0 TREE PROTECTION MEASURES

6.1 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

- 6.2 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.
- 6.3 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.
- 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.
- 6.5 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.
- 6.6 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

- 6.7 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.
- 6.8 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.
- 6.9 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.



6.10 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 of Trees Close to the Site

- 6.11 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.
- 6.12 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

- 6.13 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.
- 6.14 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.
- 6.15 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.

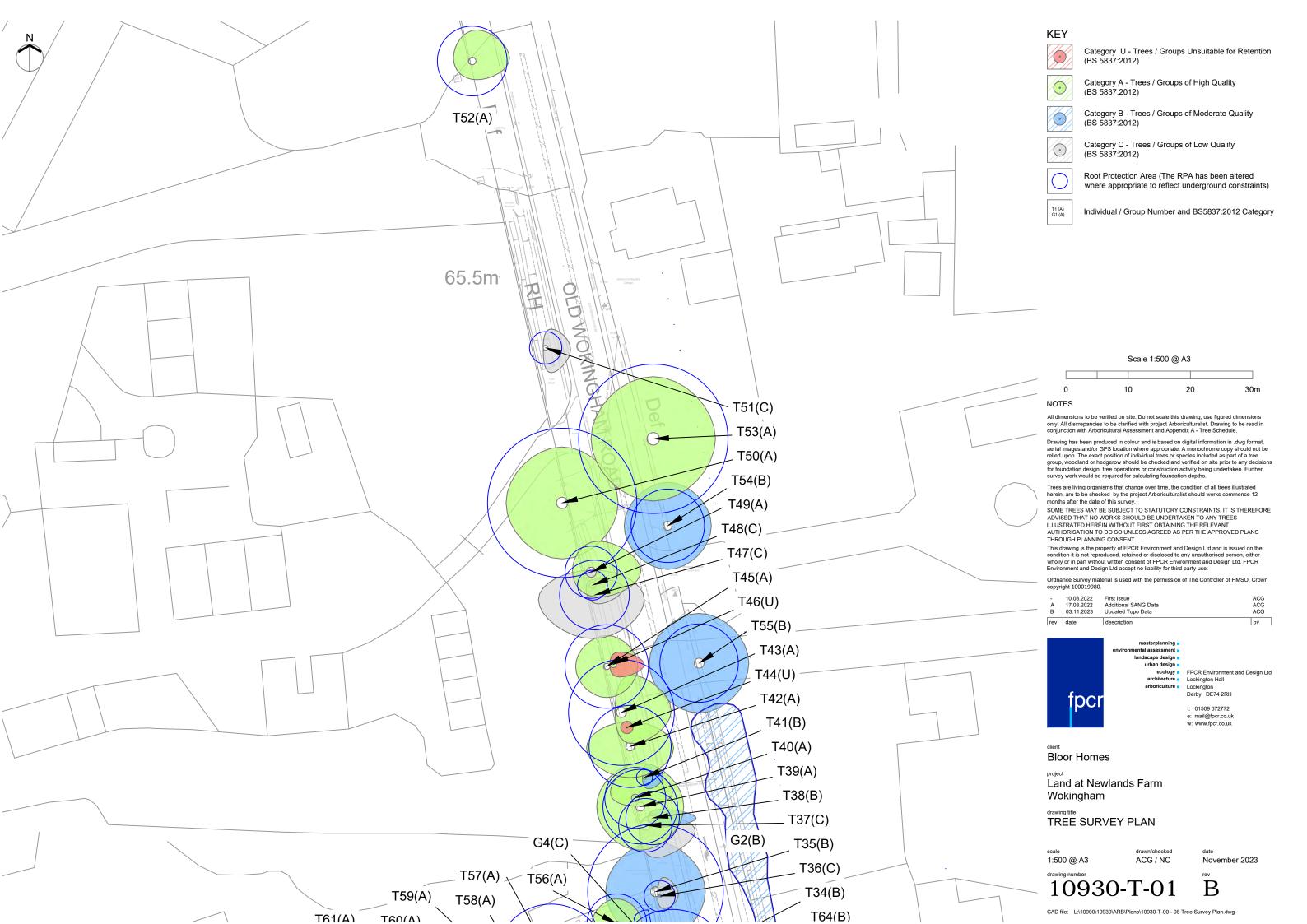
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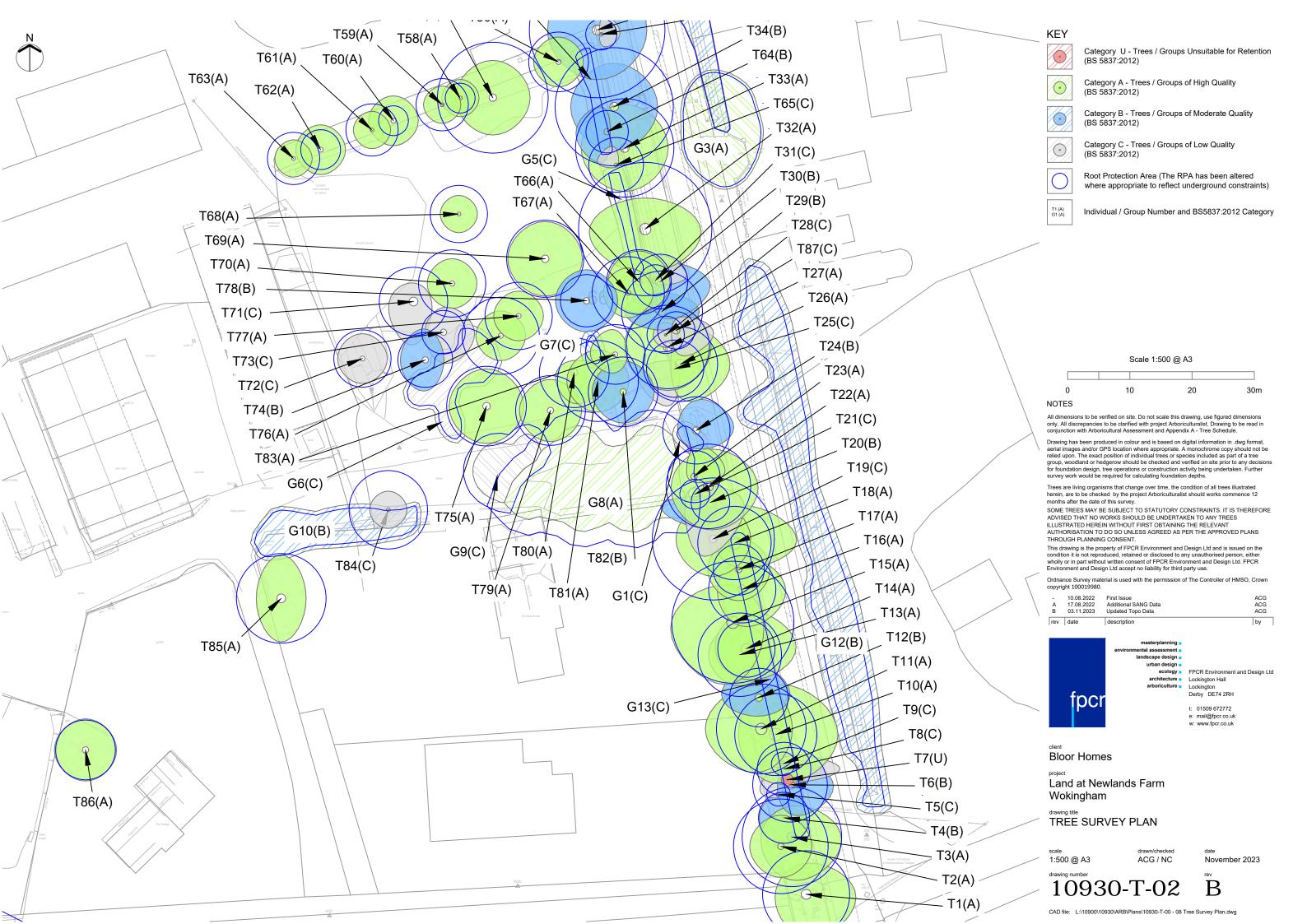
- 7.1 The site tree stock was English oak *Quercus robur* dominant with silver birch *Betula pendula*, and Scots pine *Pinus sylvestris* also present. Species that grow well in wet conditions were also recorded around the site boundaries and in the woodland parcels and included Crack Willow *Salix fragilis*, Goat Willow *Salix caprea*, and Alder *Alnus glutinosa*.
- 7.2 Seven individual Category A trees and part of one group, three individual Category B trees and part of two groups, and four Category C trees, two full groups, and part of one group will require removal to accommodate the creation of the SANG. These trees are predominantly located towards the site entrance and their removal is considered necessary to improve the restricted site access and to enable a safe entrance/exit for both drivers and pedestrians.
- 7.3 Three footbridges are proposed throughout the site, whist small pockets of tree removals are proposed to accommodate their construction low impact methods including cellweb and RootBridges will be employed to reduce impacts to retained trees.
- 7.4 The gentle scraping back of bunds in proposed within the RPA of W2. This will be supervised by an arboriculturist in the unlikely event that surface roots are found. The footings for the secured boardwalk posts will be lined with a geotextile membrane to prevent leachate into the surrounding soils.
- 7.5 The site proposals provide a meaningful opportunity to enhance and improve the site habitats and increase biodiversity. This includes the planting of 260 new trees, 117 specimens adapted to the wet areas of the site and 140 trees suited to drier rooting environments which will complement the existing site tree stock.
- 7.6 The impacts to retained trees and the proposed tree removals necessary to facilitate construction of the SANG infrastructure are not considered to be a constraint on development of the site.

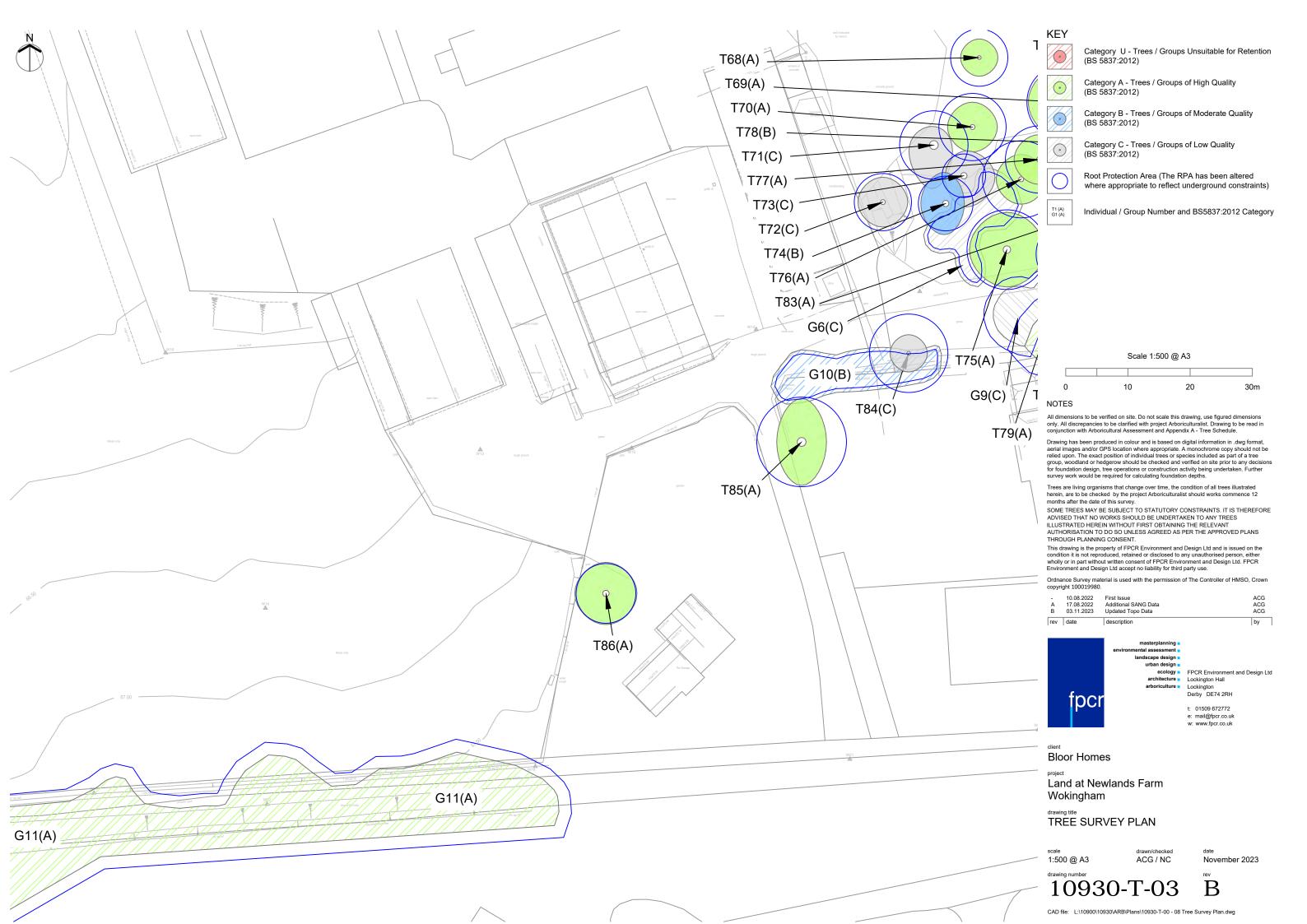
NOTES 10.08.2022 First Issue Additional SANG Data Updated Topo Data KEY 17.08.2022 03.11.2023 All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule. Category U - Trees / Groups Unsuitable for Retention (BS 5837:2012) 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. Category A - Trees / Groups of High Quality 0 (BS 5837:2012) ecology = FPCR Environment and Design Ltd
architecture = Lockington Hall 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. Category B - Trees / Groups of Moderate Quality Lockington Hall 0 (BS 5837:2012) Lockington Derby DE74 2RH tpcr SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES t: 01509 672772 Category C - Trees / Groups of Low Quality 0 ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS e: mail@fpcr.co.uk w: www.fpcr.co.uk (BS 5837:2012) THROUGH PLANNING CONSENT. This drawing is the property of FPCR Environment and Design Ltd and is issued on the Root Protection Area (The RPA has been altered condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd. FPCR Environment and Design Ltd accept no liability for third party use. where appropriate to reflect underground constraints) **Bloor Homes** Ordnance Survey material is used with the permission of The Controller of HMSO, Crown Individual / Group Number and BS5837:2012 Category Land at Newlands Farm Wokingham drawing title
TREE SURVEY PLAN scale Not To Scale ACG / NC 10930-T-00 CAD file: L:\10900\10930\ARB\Plans\10930-T-00 - 08 Tree Survey Plan.dwg 10930-T-04 10930-T-05 10930-T-06 10930-T-01 0000 10930-T-08 NILL 10930-T-07 10001 10930-T-02 10930-T-03

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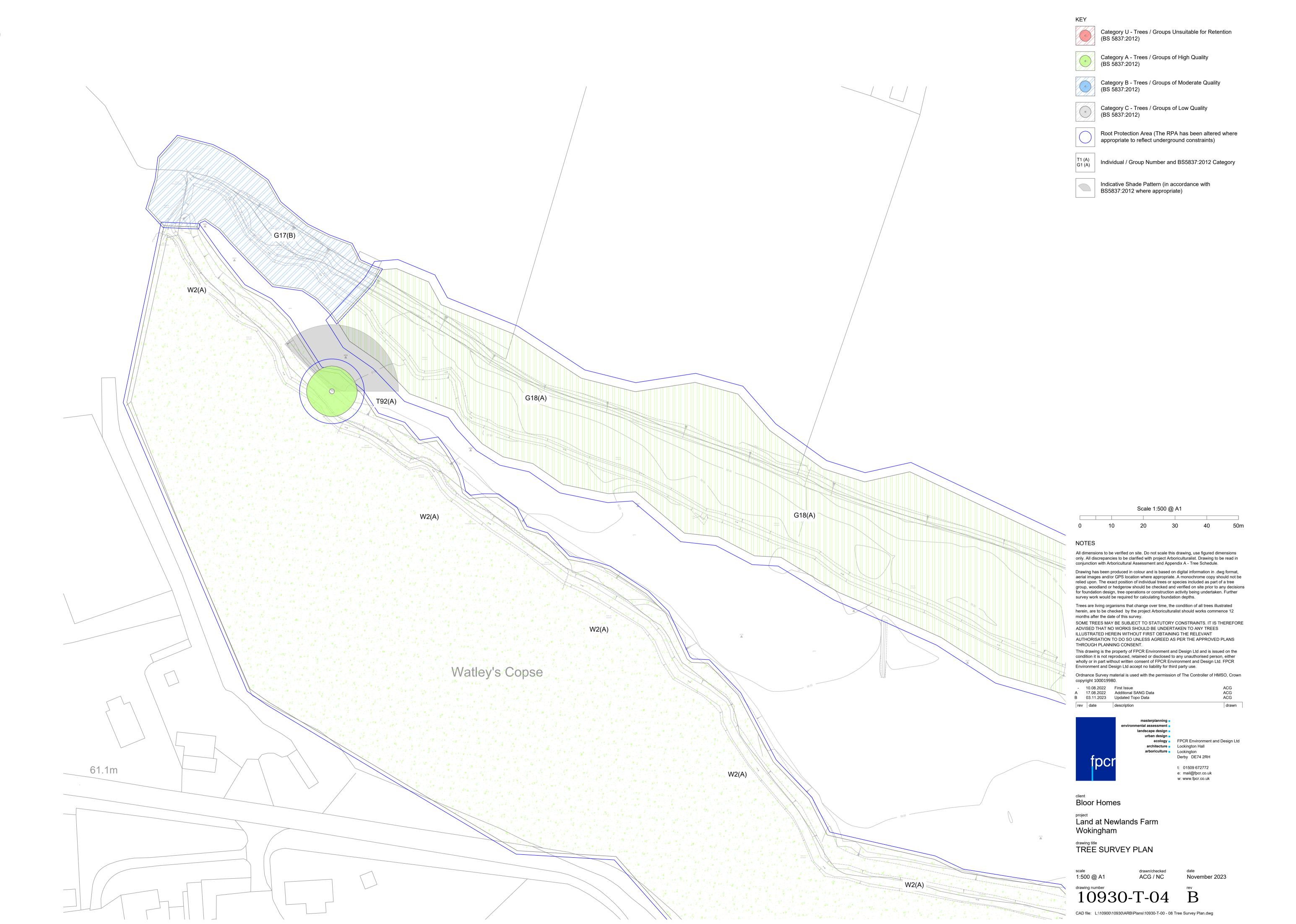
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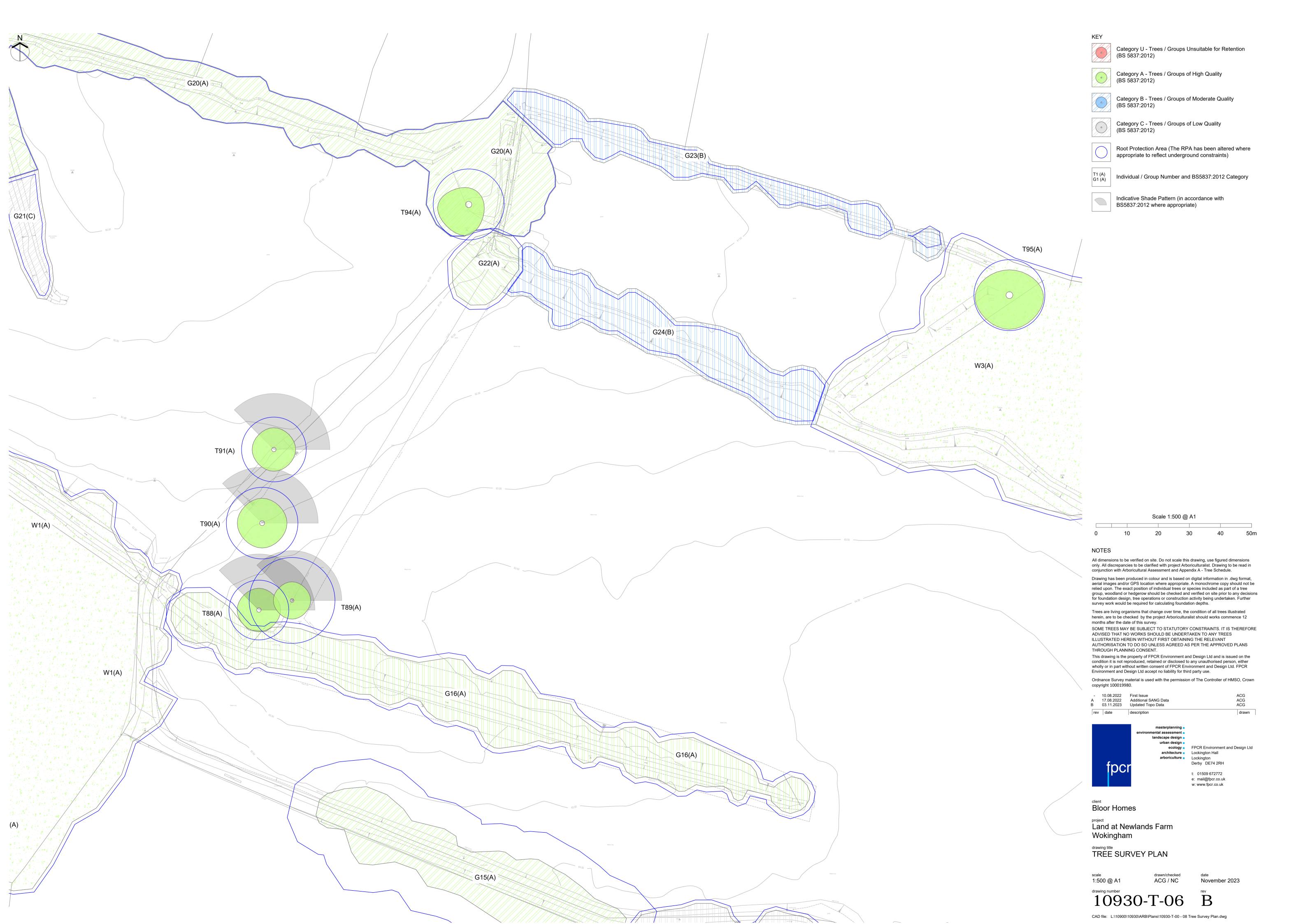


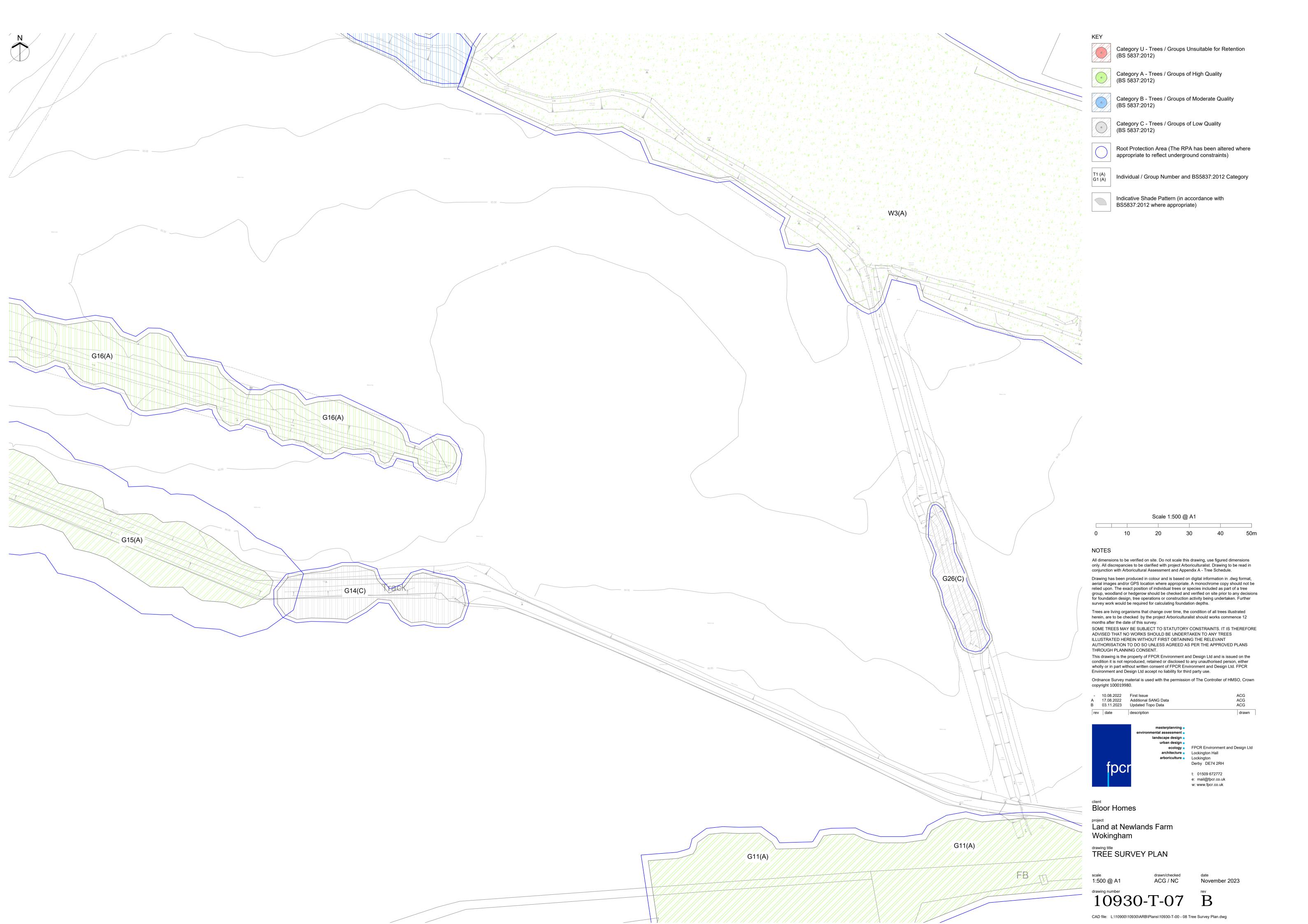


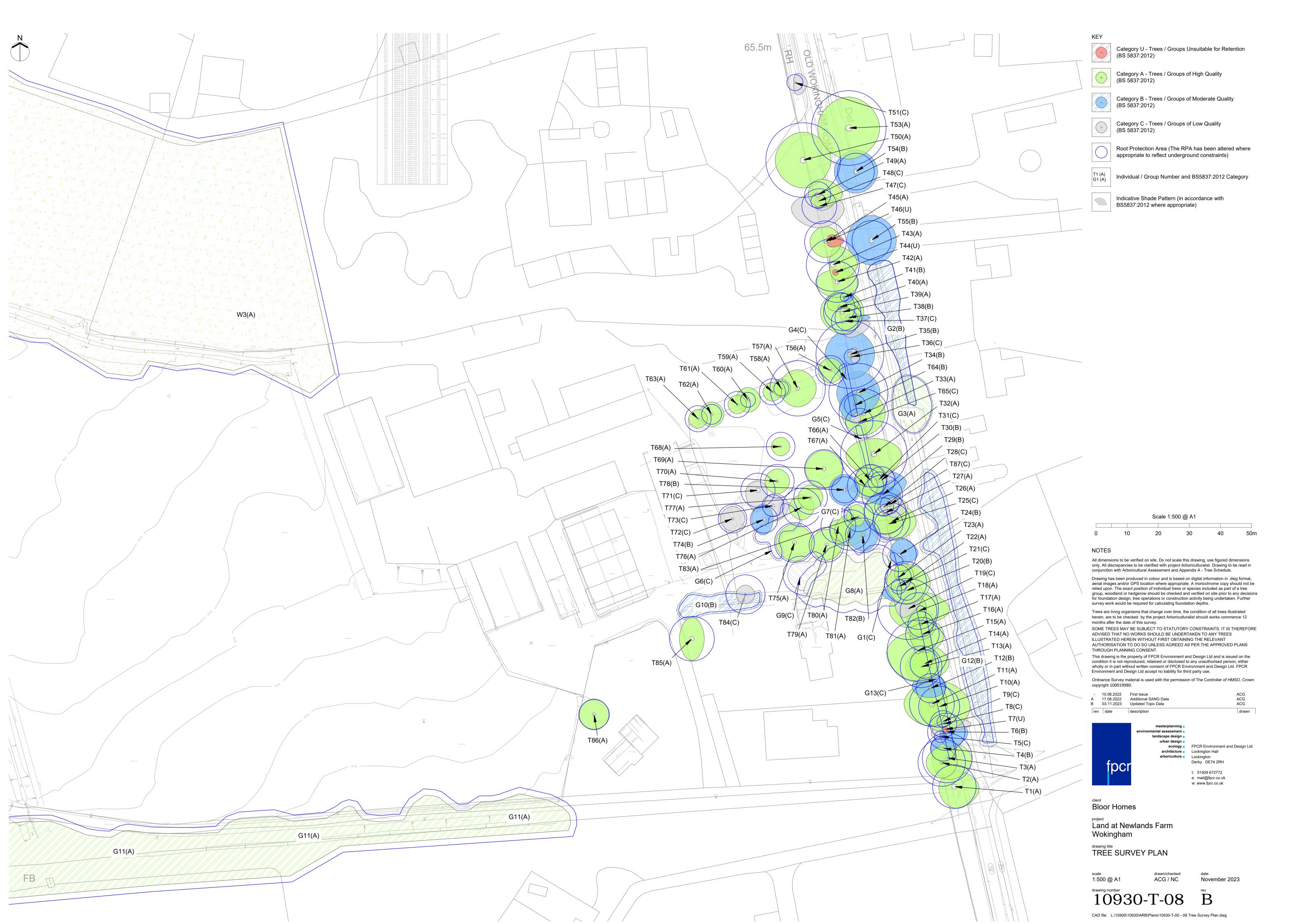










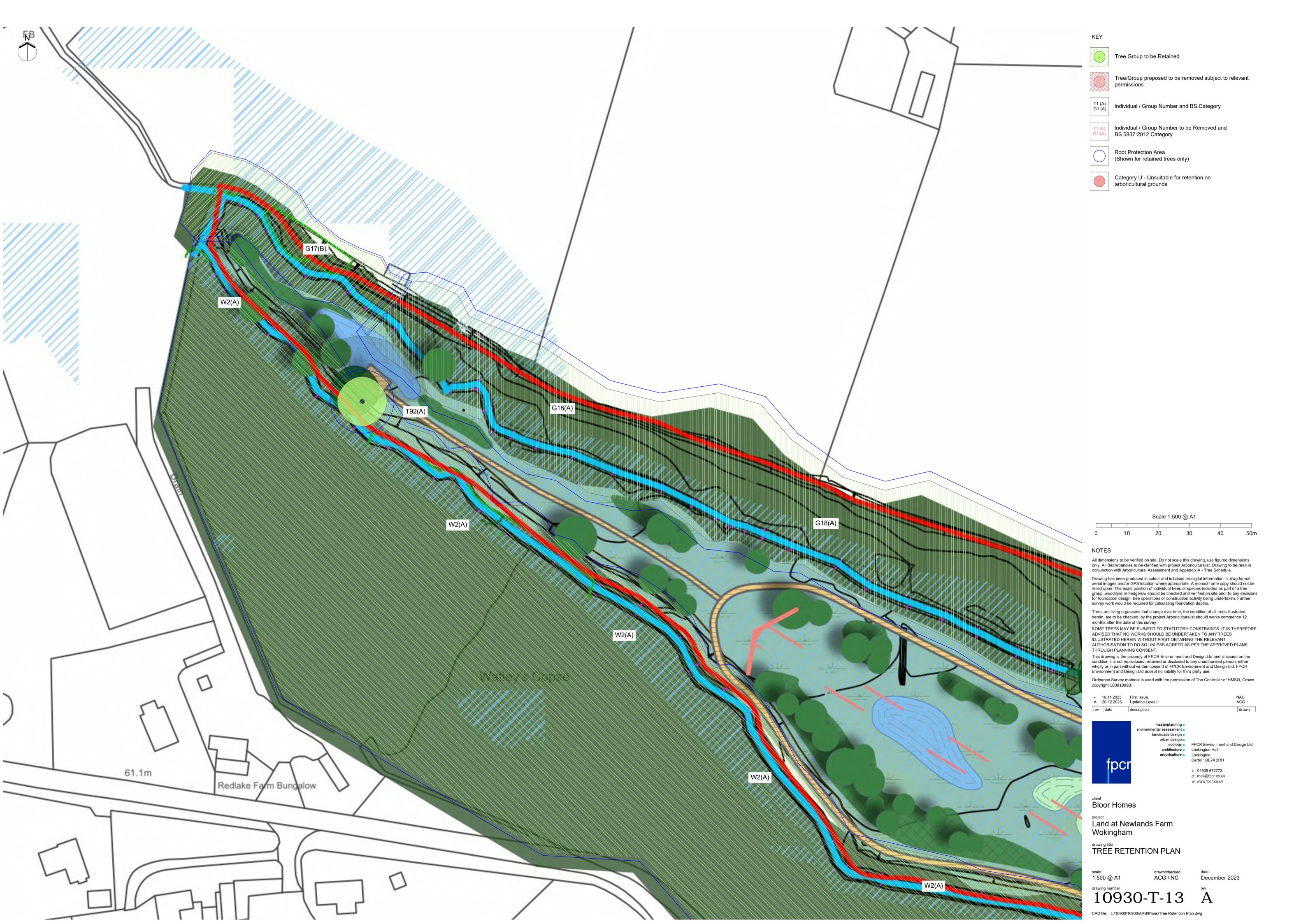




















Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
Height - Measured using a digital laser clinometer (m)			<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
	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
<u>Abbreviations</u>	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
est - Estimated stem diameter avg - Average stem diameter for multiple stems	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	
upto - Maximum stem diameter of a group	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 dev • The location of each tree relative to existing site features e.g. its screening value or landsca • 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)

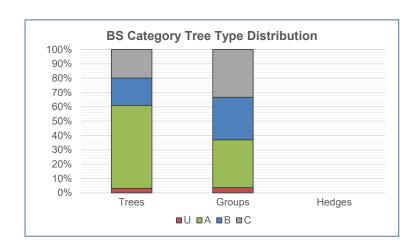
- The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m).
- The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots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

Land at Newlands Farm,Job No: 10930Date of SurveyWokinghamRev: A15th August 2022

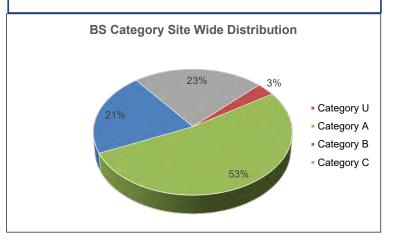
Appendix Summary

	Individual Trees	Totals	Tree Groups and Woodlands	Totals
Category U	T7, T44, T46	3		0
Category A	T1, T2, T3, T10, T11, T13, T14, T15, T16, T17, T18, T19, T22, T23, T26, T27, T32, T33, T39, T40, T42, T43, T45, T49, T50, T52, T53, T56, T57, T58, T59, T60, T61, T62, T63, T66, T67, T68, T69, T70, T75, T76, T77, T79, T80, T81, T83, T85, T86, T88, T90, T91, T92, T94, T95	55	G3, G8, G11, G15, G16, G18, G19, G20, G22, W1, W2, W3	12
Category B	T4, T6, T12, T20, T24, T29, T30, T34, T35, T38, T41, T54, T55, T64, T74, T78, T82, T89	18	G2, G7, G10, G12, G17, G23, G24, G25	8
Category C	T5, T8, T9, T21, T25, T28, T31, T36, T37, T47, T48, T51, T65, T71, T72, T73, T84, T87, T93	19	G1, G4, G5, G6, G9, G13, G14, G21, G26	9
	Total	95	Total	29

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
INDIVI	DUAL TREES									
T1	English Oak Quercus robur	22	580	N - 5 S - 7 E - 8 W - 5	М	G	Bark wounds noted Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Crowns raised over road to produce high crown form Note overhead phone lines passing through the crown to the south	152	7.0	A (i),A (ii)
T2	English Oak Quercus robur	24	670	N - 5 S - 8 E - 7 W - 5	М	G	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Lights fixed to tree Strap noted at c. 4m agl which is beginning to girdle the stem Separated by ditch	203	8.0	A (i),A (ii)
Т3	Scots Pine Pinus sylvestris	27	630	5	М	G	Characteristic for species Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	180	7.6	A (i),A (ii)
T4	English Oak Quercus robur	16	340	4	М	F	Suppressed crown form Heavily shaded	52	4.1	B (ii)
T5	English Oak Quercus robur	10	160	N - 4 S - 0 E - 0 W - 3	EM	F	Light ivy cover Suppressed crown form	12	1.9	C (ii)
Т6	English Oak Quercus robur	15	420	N - 4 S - 5 E - 7 W - 2	М	F	Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Leaning to east	80	5.0	B (ii)
T7	English Oak Quercus robur	4	170	0	ОМ	D		N/A	N/A	U
Т8	English Oak Quercus robur	17	360	N - 2 S - 2 E - 9 W - 0	М	F	Branch stubs evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Pruning wounds noted Significant stem lean to east	59	4.3	C (ii)
Т9	English Oak Quercus robur	8	160	N - 0 S - 0 E - 0 W - 4	EM	Р	Light ivy cover Suppressed crown form	12	1.9	C (ii)
T10	English Oak Quercus robur	20	550	N - 8 S - 8 E - 10 W - 6	М	G	Epicormic growth evident within the crown Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Crown raised over road Severed dead ivy still present	137	6.6	A (i),A (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T11	English Oak Quercus robur	20	600	N - 7 S - 7 E - 5 W - 9	М	G	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) On bund separated from ditch and road	163	7.2	A (i),A (ii)
T12	English Oak Quercus robur	18	390	N - 5 S - 3 E - 5 W - 6	М	F	Dense ivy cover on main stem Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	69	4.7	B (ii)
T13	Scots Pine Pinus sylvestris	25	560	5	М	G	Characteristic for species Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	142	6.7	A (i),A (ii)
T14	English Oak Quercus robur	20	380	N - 6 S - 5 E - 8 W - 5	М	G	Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	65	4.6	A (i),A (ii)
T15	Scots Pine Pinus sylvestris	30	820	N - 6 S - 10 E - 5 W - 10	М	F	Characteristic for species Included bark union Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Included bark unions at bole Large lever arm to SW which might need reducing in length or removed to reduce the risk of failure over the road	304	9.8	A (i),A (ii)
T16	English Oak Quercus robur	16	450	N - 5 S - 6 E - 7 W - 4	М	G	Light ivy cover Minor dead wood evident in the crown (<75mm) Crown high over road	92	5.4	A (i),A (ii)
T17	English Oak Quercus robur	16	340	5	М	G	Light ivy cover Minor dead wood evident in the crown (<75mm)	52	4.1	A (i),A (ii)
T18	English Oak Quercus robur	16	Over ivy 490	N - 6 S - 4 E - 10 W - 3	М	G	Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Road sign attached on north side of stem at 1m	109	5.9	A (i),A (ii)
T19	English Oak Quercus robur	31	820	N - 5 S - 6 E - 6 W - 6	М	G	Characteristic for species Light ivy cover Localised root damage to north side	304	9.8	A (i),A (ii)
T20	English Oak Quercus robur	12	260	N - 1 S - 4 E - 1 W - 8	М	F	Branch stubs evident Light ivy cover Minor dead wood evident in the crown (<75mm) Cut marks in lower stem from severed ivy One sided crown	31	3.1	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T21	English Oak Quercus robur	10	200	N - 0 S - 10 E - 8 W - 0	М	Р	Branch stubs evident Minor dead wood evident in the crown (<75mm) Significant lean SW	18	2.4	C (i)
T22	English Oak Quercus robur	21	570	N - 6 S - 7 E - 8 W - 6	М	G	Branch stubs evident Characteristic for species Dense ivy cover on main stem Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Vine in lower stem	147	6.8	A (i),A (ii)
T23	Scots Pine Pinus sylvestris	25	350	N - 5 S - 2 E - 5 W - 2	М	G	Characteristic for species Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	55	4.2	A (i),A (ii)
T24	English Oak Quercus robur	20	450	N - 5 S - 3 E - 6 W - 3	М	F	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Low lateral over road which has been damaged by vehicles and dying back from tip	92	5.4	B (ii)
T25	Scots Pine Pinus sylvestris	20	380	N - 1 S - 6 E - 0 W - 6	М	F	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Sparse / thinning crown Declining condition Barbed wire girdling lower stem	65	4.6	C (ii)
T26	English Oak Quercus robur	20	500	N - 6 S - 6 E - 8 W - 1	M	G	Characteristic for species Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	113	6.0	A (i),A (ii)
T27	English Oak Quercus robur	20	560	7	М	G	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	142	6.7	A (i),A (ii)
T28	English Oak Quercus robur	6	250	2	EM	Р	Light ivy cover Suppressed crown form	28	3.0	C (ii)
T29	English Oak Quercus robur	20	540	N - 3 S - 3 E - 6 W - 6	М	G	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) See comments for T30	132	6.5	B (ii)
Т30	English Oak Quercus robur	18	370	N - 3 S - 6 E - 8 W - 2	М	F	Characteristic for species Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Slight sparseness to crown with small diameter dead branches throughout No obvious cause	62	4.4	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T31	English Oak Quercus robur	12	210	N - 4 S - 0 E - 5 W - 0	EM	F	Suppressed crown form	20	2.5	C (ii)
T32	English Oak Quercus robur	22	890	N - 5 S - 7 E - 9 W - 9	М	G	Characteristic for species Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form See photo of ground level area of wounding on south side of stem No associated cavity development beyond the exposed surface at the present time; appears very localised (only visually assessed)	358	10.7	A (i),A (ii)
Т33	English Oak Quercus robur	24	660	N - 7 S - 6 E - 7 W - 7	М	G	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	197	7.9	A (i),A (ii)
Т34	English Oak Quercus robur	18	790	N - 6 S - 6 E - 6 W - 7	М	F	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Storm damage present Lowest lateral east failed leaving branch socket cavity which when probed appeared to be compartmentalized Storm damage has caused loss of eastern lead stem from branch point at c. 8m Sections of minor die back to limb tips also present	282	9.5	B (ii)
T35	English Oak Quercus robur	18	910	8	М	F	Basal cavity observed Broken branches evident Storm damage present Note basal cavity Mid stem crown failure Bark damage to lower stem from vehicle collisions Major damage to northern root butress	375	10.9	B (ii)
T36	Beech Fagus sylvatica	9	210	N - 3 S - 2 E - 3 W - 0	EM	F	Branch socket cavities observed Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Limited contribution due to proximity to oak (T35)	20	2.5	C (ii)
Т37	English Oak Quercus robur	13	360	N - 1 S - 5 E - 8 W - 0	М	Р	Branch stubs evident Light ivy cover Bifurcated main stem at 1.5m open fork West lead stem failed All growth to east and over road	59	4.3	C (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T38	English Oak Quercus robur	16	360	N - 1 S - 1 E - 7 W - 0	М	F	Dieback of the crown observed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Dead ivy on stem One sided to East and over road	59	4.3	B (ii)
Т39	English Oak Quercus robur	22	500	7	М	G	Characteristic for species Etiolated form Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) High crown Presence of localised bark delamination at base of stem north east facing	113	6.0	A (i),A (ii)
T40	English Oak Quercus robur	16	380	N - 5 S - 2 E - 6 W - 4	М	F	Epicormic growth evident within the crown Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Overhead cables	65	4.6	A (ii)
T41	Hawthorn Crataegus monogyna	6	110	N - 2 S - 2 E - 3 W - 0	М	G	Characteristic for species One sided to east	5	1.3	B (ii)
T42	English Oak Quercus robur	22	550	N - 4 S - 5 E - 7 W - 7	М	G	Etiolated form Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	137	6.6	A (i),A (ii)
T43	English Oak Quercus robur	22	710	N - 6 S - 5 E - 8 W - 5	М	G	Branch stubs evident Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Note small holly growing directly to north	228	8.5	A (i),A (ii)
T44	Hazel Corylus avellana	7	70	1	ОМ	Р	Old hazel coppice stool Dead main stem, with only some minor regrowth	N/A	N/A	U
T45	English Oak Quercus robur	24	Over ivy 560	5	М	G	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	142	6.7	A (i),A (ii)
T46	Ash Fraxinus excelsior	20	340	N - 2 S - 2 E - 5 W - 0	М	Р	Dense ivy cover on main stem Dieback of the crown observed Minor dead wood evident in the crown (<75mm) Suspected ash die back present	N/A	N/A	U
T47	Ash Fraxinus excelsior	28	470	N - 4 S - 7 E - 8 W - 9	М	Р	Dieback of the crown observed Established ivy cover Etiolated form Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Suspected ash die back present	100	5.6	C (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T48	English Oak Quercus robur	14	200	N - 1 S - 3 E - 5 W - 1	EM	Р	Suppressed crown form Note dead tree directly to north	18	2.4	C (ii)
T49	English Oak Quercus robur	25	est 1000	9	М	F	Broken branches evident Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Overhead cables Storm damage present Off site Evidence of recent limb failure (limb has been cleared away) Isolated individual branch die back visible	452	12.0	A (i),A (ii)
T50	English Oak Quercus robur	16	350	N - 5 S - 4 E - 8 W - 3	М	G	Light ivy cover Minor dead wood evident in the crown (<75mm) Slight lean off vertical to east	55	4.2	A (i),A (ii)
T51	Ash Fraxinus excelsior	12	220	N - 3 S - 4 E - 4 W - 0	EM	F	One sided form	22	2.6	C (ii)
T52	English Oak Quercus robur	18	470	N - 5 S - 3 E - 6 W - 3	M	G	Epicormic growth evident within the crown Light ivy cover Minor dead wood evident in the crown (<75mm)	100	5.6	A (i),A (ii)
T53	English Oak Quercus robur	22	est 1000	10	M	G	Dense ivy cover on main stem Minor dead wood evident in the crown (<75mm) Overhead cables Situated offsite	452	12.0	A (i),A (ii)
T54	Ash Fraxinus excelsior	21	490	7	М	F	Established ivy cover Minor dead wood evident in the crown (<75mm)	109	5.9	B (ii)
T55	Ash Fraxinus excelsior	21	350 320 220	8	M	F	Established ivy cover Minor dead wood evident in the crown (<75mm)	124	6.3	B (ii)
T56	English Oak Quercus robur	16	est 400	4	М	G	Epicormic growth evident within the crown Minor dead wood evident in the crown (<75mm)	72	4.8	A (i),A (ii)
T57	Scots Pine Pinus sylvestris	22	740	6	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	248	8.9	A (i),A (ii)
T58	English Oak Quercus robur	8	est 200	3	EM	G	No major defects were noted	18	2.4	A (i),A (ii)
T59	Silver Birch Betula pendula	18	est 350	3	EM	G	Base obscured Minor dead wood evident in the crown (<75mm) No major defects were noted	55	4.2	A (i),A (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T60	English Oak Quercus robur	8	est 200	4	EM	G	No major defects were noted	18	2.4	A (i),A (ii)
T61	Silver Birch Betula pendula	18	est 350	3	EM	G	Base obscured Minor dead wood evident in the crown (<75mm) No major defects were noted	55	4.2	A (i),A (ii)
T62	English Oak Quercus robur	10	est 270	4	EM	G	No major defects were noted	33	3.2	A (i),A (ii)
T63	Silver Birch Betula pendula	18	est 350	3	EM	G	Base obscured Minor dead wood evident in the crown (<75mm) No major defects were noted	55	4.2	A (i),A (ii)
T64	Turkey Oak Quercus cerris	13	280	N - 4 S - 5 E - 0 W - 5	М	F	Asymmetrical crown	35	3.4	B (ii)
T65	Silver Birch Betula pendula	10	370	N - 3 S - 0 E - 0 W - 3	М	G	Top snapped out One sided	62	4.4	C (ii)
T66	English Oak Quercus robur	21	430	5	М	G	Etiolated form Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	84	5.2	A (i),A (ii)
T67	Scots Pine Pinus sylvestris	21	480	4	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	104	5.8	A (i),A (ii)
T68	Scots Pine Pinus sylvestris	18	380	3	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	65	4.6	A (i),A (ii)
Т69	Silver Birch Betula pendula	20	520	6	М	G	Characteristic for species Even crown form Minor dead wood evident in the crown (<75mm) Holly at base	122	6.2	A (i),A (ii)
T70	Scots Pine Pinus sylvestris	16	450	4	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	92	5.4	A (i),A (ii)
T71	Silver Birch Betula pendula	16	460	N - 3 S - 7 E - 3 W - 4	М	F	Limited future potential Minor dead wood evident in the crown (<75mm)	96	5.5	C (ii)
T72	Silver Birch Betula pendula	14	270 270	4	М	F	Branch stubs evident Broken branches evident Limited future potential Minor dead wood evident in the crown (<75mm) Twin stemmed from base	66	4.6	C (ii)
T73	Silver Birch Betula pendula	14	290	N - 4 S - 5 E - 5 W - 3	М	F	Basal cavity observed Limited future potential Minor dead wood evident in the crown (<75mm)	38	3.5	C (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T74	English Oak Quercus robur	15	370	N - 5 S - 5 E - 3 W - 4	EM	F	Broken branches evident Light ivy cover Minor dead wood evident in the crown (<75mm) Crown collapsed on east side lower section	62	4.4	B (ii)
T75	English Oak Quercus robur	20	510 150	6	М	G	Branch stubs evident Characteristic for species Even crown form Minor dead wood evident in the crown (<75mm)	128	6.4	A (i),A (ii)
T76	Scots Pine Pinus sylvestris	18	520	4	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	122	6.2	A (i),A (ii)
T77	Scots Pine Pinus sylvestris	18	450	4	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	92	5.4	A (i),A (ii)
T78	Silver Birch Betula pendula	16	350	5	М	G	Characteristic for species Even crown form Minor dead wood evident in the crown (<75mm)	55	4.2	B (ii)
T79	Scots Pine Pinus sylvestris	18	470	5	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	100	5.6	A (i),A (ii)
T80	Scots Pine Pinus sylvestris	18	470	N - 2 S - 5 E - 5 W - 3	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	100	5.6	A (i),A (ii)
T81	Scots Pine Pinus sylvestris	20	540	5	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	132	6.5	A (i),A (ii)
T82	Scots Pine Pinus sylvestris	20	470	5	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm) Sparse / thinning crown	100	5.6	B (ii)
T83	Scots Pine Pinus sylvestris	20	410	N - 4 S - 3 E - 2 W - 4	М	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	76	4.9	A (i),A (ii)
T84	Silver Birch Betula pendula	15	480 220	3	М	F	Characteristic for species Twin stemmed from base Leans to south	126	6.3	C (ii)
T85	Beech Fagus sylvatica	15	est 600	N - 7 S - 7 E - 4 W - 4	М	G	Low crown form Situated offsite	163	7.2	A (i),A (ii)
T86	Silver Birch Betula pendula	15	est 400	5	М	G	Characteristic for species Even crown form Low crown form Unable to gain access at the time of assessment Viewed from closest vantage point	72	4.8	A (i),A (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T87	English Oak Quercus robur	12	250	N - 2 S - 4 E - 6 W - 0	М	Р	Established ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Visible vertical trending crack in lower stem starting from 2m to c. 4m at branch union of main crown south facing Leaning to east Damage to bark of lowest lateral over the road	28	3.0	C (ii)
T88	English Oak Quercus robur	18	est 800	7	М	G	Minor Dead wood. Livestock using field around base regularly. Typical from for species. No major obvious defects.	290	9.6	A (i)
T89	English Oak Quercus robur	16	est 1160	6	М	F	Major Dead wood. Did back in crown. Broken branches. Livestock using field around base regularly. Typical from for species.	609	13.9	B (i)
Т90	English Oak Quercus robur	18	est 960	8	М	G	Minor Dead wood. Livestock using field around base regularly. Typical form for species. No major obvious defects.	417	11.5	A (i)
T91	English Oak Quercus robur	18	est 870	7	М	G	Minor Dead wood. Livestock using field around base regularly. Some small broken branches. Typical form for species. No major obvious defects.	342	10.4	A (i)
T92	English Oak Quercus robur	21	est 850	8	М	G	Minor Dead wood. North of watercourse and W2. Some small broken branches. Typical form for species. No major obvious defects.	327	10.2	A (i)
T93	English Oak Quercus robur	16	est 780	9	М	G	Stem dying back. Major Dead wood throughout.	275	9.4	C (i)
T94	English Oak Quercus robur	21	est 950	N - 5 S - 10 E - 5 W - 10	М	G	Minor deadwoood throughout. Small broken branches. Suspected lightening strike. Heartwood exposed but occluding well. Good form.	408	11.4	A (i)
T95	English Oak Quercus robur	20	est 950	N - 8 S - 10 E - 10 W - 11	М	F/G	Deadwoood throughout. Minor doeback noted. Rooted in soil bank. Lean to north but self righted growth pattern.	408	11.4	A (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUP	S OF TREES									
G1	Wild Cherry Prunus avium Holly Ilex aquifolium	7	110	2	EM	F	Characteristic for species Interlocking crowns Low crown form	5	1.3	C (ii)
G2	Ash Fraxinus excelsior Goat Willow Salix caprea Hawthorn Crataegus monogyna Holly Ilex aquifolium Myrobalam Plum Lawson Cypress Chamaecyparis Iawsoniana Lilac	14	upto 250	3	EM / M	F / C	Characteristic for species Interlocking crowns Multi stemmed from base Single stem forms	28	3.0	B (ii)
G3	English Oak Quercus robur	17	800	10	М	G	Even crown form Interlocking crowns Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	290	9.6	A (i),A (ii)
G4	Silver Birch Betula pendula Holly Ilex aquifolium Laural Prunus Laurocerasus Lawson Cypress Chamaecyparis lawsoniana	5	upto 100	2	М	F	Gorze shrubs also present as part of group This group forms understorey to main tree canopy above (recorded as individual trees)	5	1.2	C (ii)
G5	Silver Birch Betula pendula Holly Ilex aquifolium Laural Prunus Laurocerasus Lawson Cypress Chamaecyparis lawsoniana	5	upto 100	2	М	F	Gorze shrubs also present as part of group This group forms understorey to main tree canopy above (recorded as individual trees)	5	1.2	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G6	Silver Birch Betula pendula	16	200	3	М	F	Characteristic for species Interlocking crowns Minor dead wood evident in the crown (<75mm) Multi stemmed from base Single stem forms Twin stemmed from base Typical crown form	18	2.4	C (ii)
G7	Silver Birch Betula pendula Holly Ilex aquifolium	6	9x 100	3	М	G	Characteristic for species Even crown form Interlocking crowns Low crown form Multi stemmed from base Typical crown form	41	3.6	B (ii)
G8	Scots Pine Pinus sylvestris	22	upto 620	5	M	G	Characteristic for species Minor dead wood evident in the crown (<75mm)	174	7.4	A (i),A (ii)
G9	Silver Birch Betula pendula	14	280 250	3	М	P/F	Bark wounds noted	64	4.5	C (ii)
G10	Lawson Cypress Chamaecyparis Iawsoniana	11	upto 200	3	М	F	Evergreen screen	18	2.4	B (ii)
G11	English Oak Quercus robur Silver Birch Betula pendula Holly Ilex aquifolium Mountain Ash Sorbus aucuparia Sweet Chestnut Castanea sativa Scots Pine Pinus sylvestris	22	upto 670	6	М	F/G	Characteristic for species Interlocking crowns Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm)	203	8.0	A (i),A (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G12	English Oak Quercus robur Silver Birch Betula pendula Hazel Corylus avellana Holly Ilex aquifolium Laural Prunus Laurocerasus Mountain Ash Sorbus aucuparia Scots Pine Pinus sylvestris	18	upto 250	4	М	D/F	Characteristic for species Dead trees noted Etiolated form Interlocking crowns Light ivy cover Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Roadside boundary group of mixed species	28	3.0	B (ii),U
G13	Ash Fraxinus excelsior English Oak Quercus robur Silver Birch Betula pendula Holly Ilex aquifolium Laural Prunus Laurocerasus Sweet Chestnut Castanea sativa Lawson Cypress Chamaecyparis lawsoniana	8	upto 150	2	М	F/G	Dense undergrowth at the base Interlocking crowns Understorey vegetation to main tree canopy	10	1.8	C (ii)
G14	English Oak Quercus robur Turkey Oak Quercus cerris	14	avg 510	5	EM	F	Group if three stems. Most westerly stem dead. Some dead wood present. No major obvious defects.	118	6.1	C (ii)
G15	English Oak Quercus robur Silver Birch Betula pendula Aspen Populus tremula Turkey Oak Quercus cerris	20	avg 1150	5	EM	F/G	Close cultivation of the soil Typical crown form No major obvious defects. Some suppressed stems in group. Dead wood present throughout.	598	13.8	A (ii)

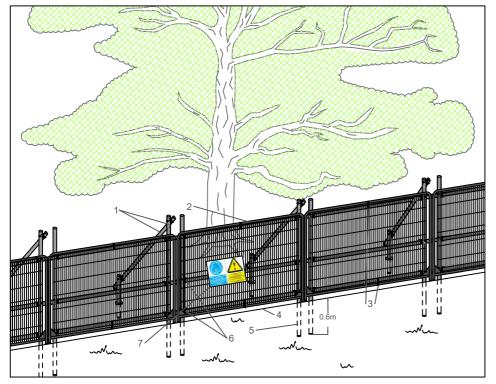
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G16	English Oak Quercus robur Silver Birch Betula pendula Prunus sp. Turkey Oak Quercus cerris Scots Pine Pinus sylvestris	15	avg 550	5	EM	E/C	No major obvious defects. Some suppressed stems in group. Dead wood present throughout. Dey ditch to South of group. Small access path with crops to north.	137	6.6	A (ii)
G17	Ash Fraxinus excelsior English Oak Quercus robur Silver Birch Betula pendula Alder Alnus glutinosa Hazel Corylus avellana	20	avg 550	6	EM	F	No major obvious defects. Some suppressed stems in group. Ditch to South of group.	137	6.6	B (ii)
G18	English Oak Quercus robur Silver Birch Betula pendula Alder Alnus glutinosa Rowan Sorbus aucuparia Scots Pine Pinus sylvestris	23	avg 900	8	EM / M		Mature alders excellent examples of species. No major obvious defects. Dead wood present throughout. Dry ditch to South of group.	366	10.8	A (ii)
G19	Silver Birch Betula pendula Alder Alnus glutinosa	22	avg 600	8	EM / M	F/G	Mature alders excellent examples of species. No major obvious defects. Historical boundary features. Dry ditch to South of group.	163	7.2	A (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G20	English Oak Quercus robur Goat Willow Salix caprea Silver Birch Betula pendula Alder Alnus glutinosa	18	avg 650	8	EM / M	F/G	No major obvious defects. Group located along ditch. Boundary feature.	191	7.8	A (ii)
G21	Goat Willow Salix caprea Silver Birch Betula pendula	8	avg 75	2	EM / M	F	No major obvious defects. Group located along ditch. Gorse understorey.	3	0.9	C (ii)
G22	Turkey Oak Quercus cerris	16	avg 700	7	EM	G	Minor Dead wood throughout. Group of two oaks. Inonotus hispidus Shaggy bracket	222	8.4	A (ii)
G23	English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Alder Alnus glutinosa Turkey Oak Quercus cerris	10	avg 420	6	EM	F/G	Minor Dead wood throughout. Some gaps in group. No major obvious defects. Rooted along dry ditch.	80	5.0	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G24	English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Alder Alnus glutinosa	10	avg 400	6	EM	E/C	Minor Dead wood throughout. Some dead birch stems. Some gaps in group. No major obvious defects.	72	4.8	B (ii)
G25	English Oak Quercus robur Silver Birch Betula pendula Turkey Oak Quercus cerris Scots Pine Pinus sylvestris	16	avg 350	4	М	F/G	Younger boudary group connection W1 and W2 No major defects	55	4.2	B (i)
G26	English Oak Quercus robur Goat Willow Salix caprea Holly Ilex aquifolium Silver Birch Betula pendula	10	avg 350	5	EM		Small boudary group between fields No major defects	55	4.2	C (i)

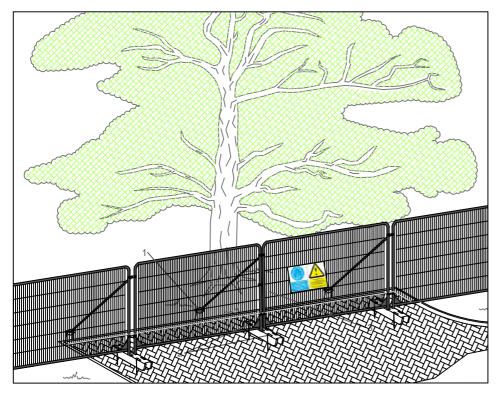
Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
WOODL	ANDS									
W1	English Oak Quercus robur Silver Birch Betula pendula Rowan Sorbus aucuparia Turkey Oak Quercus cerris Scots Pine Pinus sylvestris	19	avg 590	6	EM / M	F/G	Predominantly oak standards with some birch. Rhodendron understorey. No major obvious defects. Some suppressed stems Dead wood present throughout.	157	7.1	A (ii)
W2	English Oak Quercus robur Goat Willow Salix caprea Silver Birch Betula pendula Alder Alnus glutinosa Hazel Corylus avellana Holly Ilex aquifolium Rowan Sorbus aucuparia Alder buckthorn Frangula alnus	19	avg 590	6	EM / M	F/G	Oak and birch dominant. Himalayan balsam on watercourse to north. Ditch wet but low water quality.	157	7.1	A (ii)

Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
W3	Crack Willow Salix fragilis English Oak Quercus robur Goat Willow Salix caprea Silver Birch Betula pendula Wild Cherry Prunus avium Alder Alnus glutinosa Hazel Corylus avellana Holly Ilex aquifolium Scots Pine Pinus sylvestris	24	avg 700	7	EM / M	F/G	Alder dominant woodland with open glade features. Large birch specimens. Canopy closes slightly as woodland transitions east with alder becoming less dominant.	222	8.4	A (ii)



Standard specification for protective barrier

- Standard scaffold poles 1.
- 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)
- Standard scaffold clamps 6.
- Construction Exclusion Zone signs



Above ground stabilising systems

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



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APPENDIX B PROTECTIVE FENCING SPECIFICATIONS

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NOTES

APPENDIX C – TPO Map

