



Newlands Developments

Land to the West of Sheffield Road, Hoyland

Arboricultural Assessment

June 2020

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1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Newlands Developments to present the findings of an Arboricultural Assessment and survey of trees located at Sheffield road, Hoyland, Barnsley (hereafter referred to as the site), OS Grid Ref SK355997.
- 1.2 The survey was carried out on 27th of April 2020.

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 Hybrid planning application for a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage and landscaping. The application will be formed of:
- a) *Outline with all matter reserved apart from means of access for up to 71,515 sq.m of employment uses (B1, B2, B8)*
 - b) *Full application for 31,570 sq.m of B8, new link road including new roundabout to link with Hoyland south Masterplan Area (Local Plan references HS68, HS65, HS61, HS58, HS6, SL5)*
- 1.7 The report has therefore included an assessment of any impact to the tree cover, focussing 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

- 1.1 The site is situated directly to the east of the M1 and is located on the western edge of Hoyland. The site itself comprises of several agricultural field parcels of mixed use, including arable to horse grazing.
- 1.2 The tree stock consists mostly of naturally colonised individual trees and groups of native broadleaved trees which were predominately located upon the field boundaries. Due to the intensive nature of land management and agricultural use, tree cover across the site was generally low and of moderate and low arboricultural quality.

- 1.3 Throughout the site field boundaries were typically enclosed by native species hedgerows some of which supported individual mature broadleaved trees.
- 1.4 Structural buffer planting is present along the motorway corridor and also present along Tankersley Lane which bisects the northern and southern areas of the site. There is also further buffer planting present upon the north east corner of the site surrounding the existing cricket pitch.
- 1.5 Although not within the application boundary, a broadleaved mixed species woodland locally referred to as Bell Ground is located to the south and directly adjacent to part of the southern boundary.

Planning Policy

National Planning Policy Framework 2019

- 1.6 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 February 2019.
- 1.7 Paragraph 11 of the NPPF states 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.
- 1.8 In relation to arboriculture, the NPPF also states that:
 - 175(c) '*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*';

and provides specific guidance that:

 - 175(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*'.
- 1.9 Examples of what is deemed to be '*wholly exceptional*' are included within Footnote 58 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

- 1.10 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 willfully 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.

- 1.11 Anyone found guilty of such an offence is liable and in serious cases, may result in prosecution and incur an unlimited fine.
- 1.12 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, Barnsley Metropolitan Borough 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.
- 1.13 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 18th of May 2020.

Non-Statutory Considerations

- 1.14 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
- 1.15 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
- 1.16 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
- 1.17 Priority habitat designation and inclusion within the National Forestry Inventory does not provide any statutory protection.

¹ <http://magic.defra.gov.uk/>

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

³ <https://www.forestryresearch.gov.uk/tools-and-resources/national-forest-inventory/>

2.0 SURVEY METHODOLOGY

- 2.1 The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of BS5837. The survey has been undertaken by a suitably qualified and experienced 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.
- 2.2 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.
 - 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.
- 2.3 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.

Ancient and Veteran Trees

- 2.4 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.
- 2.5 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) 2019, 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
- 2.6 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

⁴ http://www.countrysideinfo.co.uk/woodland_manage/whatis.html

⁵ http://www.countrysideinfo.co.uk/woodland_manage/whatis.html

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

identification of attributable ancient/veteran features, has been based on a range of currently published guidance and resources.

Ancient Tree

- 2.7 The definition of an ancient tree has been based on Ancient Tree Guide No. 4 (ATF, 2008) which suggest ancient should be used for a tree that:

'has passed beyond maturity and is old, or aged, in comparison with other trees of the same species.'

- 2.8 Perhaps most notably, the tree concerned should be very old, relative to others of the same species.

- 2.9 Further to this, in accordance with guidance for use in the Ancient Tree Hunt (Owen & Alderman, 2008), as cited within Lonsdale (2013)⁷ an ancient tree is one that has all or most of the following characteristics:

- a) biological, aesthetic or cultural interest, because of its great age;
- b) a growth stage that is described as ancient or post-mature; or
- c) a chronological age that is old relative to others of the same species.

Guided by Lonsdale (2013)⁶ characteristics a) and b) are mainly based on developmental and morphological criteria whilst characteristic c) relates specifically to chronological age. Developmental characteristics (represented by characteristic b) above) tend to develop with the increasing age of a tree and include:

- A large girth by comparison with other trees of the same species⁸
- Aging and associated decay (leading to hollowing) of the central wood
- Changes in crown architecture (Raimbault, 2006)⁹
- A progressive or episodic reduction in post-mature crown size - 'retrenchment' (Lonsdale 2004; Rust & Roloff, 2002)

In practice calculating the average age / lifespan of a tree is difficult and not always entirely reliable due to a lack of available demographic information. As such, in order to inform the assessment of chronological age, the assessment has made use of stem girth as a guide using the chart provided within Lonsdale (2013) (shown below in figure 1), as well as available historical evidence (mapping etc).

⁷ ⁶ Lonsdale, D. (Ed.). 2013. Ancient and other veteran trees: further guidance on management. London: The Tree Council.

⁸ Woodland Trust, Ancient Tree Forum (2008). Ancient Tree Guide no.4: What are ancient, veteran and other trees of special interest?. Grantham: Unknown. 7.

⁹ Raimbault, P.F. (2006). A basis for morpho-physiological tree assessment. Pro. Seminar, Arboricultural Association/Treework Environmental Practice, Ashton Court, Bristol, UK, 23rd & 24th March 2006.

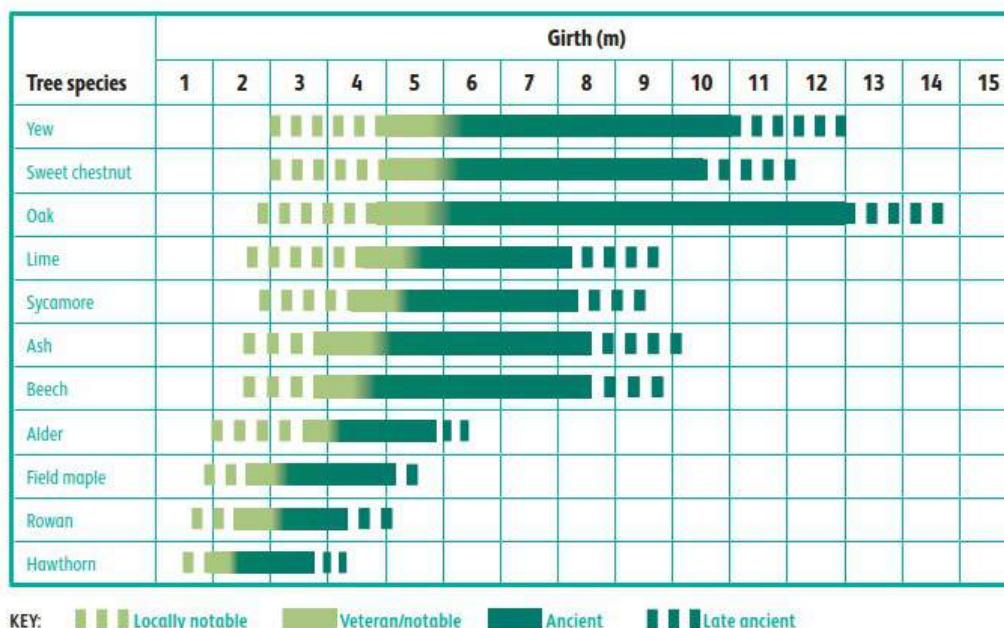


Figure 1: The chart of girth in relation to age and development classification of trees, as shown in Lonsdale (2013)¹⁰.

Veteran Trees

- 2.10 The definition of a veteran tree has been based on within Lonsdale (2013) as a tree: *‘which has survived various rigours of life and thereby shows signs of ancientness, irrespective of its age’.*
- 2.11 However, for the purpose of the BS5837:2012 assessment, to qualify as a veteran tree, the tree concerned requires a stem girth which is considered large for its species (within the range set out in Fig. 1 above) and shows signs of crown retrenchment and evidence of decay processes in stem, branches or roots such as dead and decaying wood or fungal fruiting bodies of heart-rot (wood decay) species. These trees should also possess significant amounts of dead wood in the crown or fallen about the ground beneath the trees crown.
- 2.12 In principal, reference has been made to Owen & Alderman (2008) and Reed, H. (2000). *Veteran Trees: A Guide to Good Management*. English Nature and more recently Lonsdale, D (ed.) (2013) *Ancient and other Veteran Trees: Further Guidance on Management*, The Tree Council & Ancient Tree Forum for guidance on the recognition of both ancient and veteran trees.
- 2.13 Level 3 of the Specialist Survey Method (SSM) of de Berker & Fay (2004)¹¹ has also been utilised for gathering survey information as this provides a standardised framework for recording characteristic ancient/veteran features.

¹⁰ Lonsdale, D. (Ed.). 2013). Ancient and other veteran trees: further guidance on management. London: The Tree Council.

¹¹ de Berker, N., & Fay, N. (2004). English Nature Research Report Number 529 – Evaluation of the Specialist Survey Method for Veteran Tree Recording. Bristol: Treework Environmental Practice.

BS5837 Categories

- 2.14 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).
- 2.15 Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds. Categories A, B and C are applied to trees that should be of material considerations in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.
- 2.16 **Category (U) – (Red):** Trees which are unsuitable for retention and are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Trees within this category are:
- Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.
 - Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.
 - Trees that are infected with pathogens of significance to the health and/ or safety of other nearby trees or are very low quality trees suppressing adjacent trees of better quality.
 - Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.
- 2.17 **Category (A) – (Green):** Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years with potential to make a lasting contribution. Such trees may comprise:
- Sub category (i) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.
 - Sub category (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
 - Sub category (iii) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.
- 2.18 **Category (B) – (Blue):** Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years with potential to make a significant contribution. Such trees may comprise:
- Sub category (i) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.

- Sub category (ii) trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.
- Sub category (iii) trees with material conservation or other cultural value.

2.19 **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

- 2.20 The individual positions of trees and groups have been shown on the Tree Survey Plan in Appendix C. 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.
- 2.21 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

- 2.22 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.
- 2.23 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.
- 2.24 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.

- 2.25 Whilst it is generally accepted that a trees 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.
- 2.26 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

- 2.27 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.
- 2.28 The statements made in this report regarding defects in 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 behaviors, 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.
- 2.29 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.
- 2.30 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.
- 2.31 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.

3.0 RESULTS

- 3.1 A total of sixty-two individual trees, forty-eight groups of trees, one woodland and twenty 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 Appendix C - 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

- 3.2 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.
- 3.3 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.

Tree Survey Plans

- 3.4 The individual positions of trees and groups have been shown in Appendix C - Tree Survey Plan (drwg.no. 9295-T-01 & 02). 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.
- 3.5 Several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Results Summary

- 3.6 The trees recorded by the survey were predominately self-set native broadleaved species which had naturally colonised and generally restricted to field parcel boundaries as part of hedgerows, both within and around the perimeter of the site. Structural buffer planting of mixed native species was present along the western boundary running adjacent to the M1 and bordering Tankersley Lane. A broadleaved woodland was also located within the southern area of the site, although outside of the application boundary.

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T6, T11, T14, T16, T20, T25, T30, T44, T60	8		
Category A (High Quality / Value)	T46, T48, T56	3	W1	1
Category B (Moderate Quality / Value)	T5, T12, T15, T17, T18, T19, T21, T26, T32, T39, T41, T45, T47, T49, T50, T51, T52, T53, T55, T58, T59, T61, T62	23	G1, G4, G7, G12, G13, G15, G17, G18, G19, G20, G22, G32, G33, G38, G44, G45, G46, H5	18
Category C (Low Quality / Value)	T1, T2, T3, T4, T7, T8, T9, T10, T13, T22, T23, T24, T27, T28, T29, T31, T33, T34, T35, T36, T37, T38, T40, T42, T43, T54, T57, T63	28	G2, G3, G5, G6, G8, G9, G10, G11, G14, G16, G21, G23, G24, G25, G26, G27, G28, G29, G30, G31, G34, G35, G36, G37, G39, G40, G41, G42, G43, H1, H2, H3, H4, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20	49

- 3.7 T56, an ash *Fraxinus excelsior* was located within the northern boundary of W1 Bell Ground woodland. The specimen showed evidence of historic management through pollarding at four metres above ground level and displayed several features characteristic of veteran trees (refer to sub-section paragraphs 3.4- 3.13 and 4.16-4.18).
- 3.8 The significant veteran features included a large stem failure evident within the eastern crown which had naturally developed extensive decay and rot at the pollard point providing dead wood habitat. Also present throughout the crown were several large diameter branch socket cavities, high proportions of delaminating and missing bark leading to further evidence of decay processes, several branch stubs resulting from past failures and development of major deadwood. A further significant features was the presence of extensive internal hollowing of the main stem and using a simple percussion test on site, indicated the hollowing to extend from ground level to a minimum of height of 3m above ground level. Significant stem hollowing is a specific associated habitat feature of veteran trees. As such, T56 was considered category A sub-category (iii) due to its high ecological, cultural and historical value as a veteran tree.
- 3.9 T46, an English oak *Quercus robur* and T48, a horse chestnut *Aesculus hippocastanum* were both mature specimens which had developed full crowns and were dominant within the landscape and were located within the southern region of the site. They were considered to be category A due to their high arboricultural quality and amenity value.
- 3.10 Located within the southern area of site W1 is a broadleaved woodland, locally referred to as Bell Ground standing at a height of 15m with varying native species present such as ash *Fraxinus excelsior*, English oak *Quercus robur*, beech *Fagus sylvatica*, goat willow *Salix caprea*, hawthorn *Crataegus monogyna*, silver birch *Betula pendula*. Showing typical woodland characteristics, a category A was given due to its high ecological and landscape value.

- 3.11 Across the site approximately thirty-eight percent of the individuals and groups of trees were considered as category B as they displayed positive attributes such as good canopy form, good vigour, structure, height, and no major defects.
- 3.12 Buffer planting being T18, T19, G6, G8, G15, G21, G22, G38 and G39 are present along the motorway buffer zone on the western boundary and also present within the northern region of the proposed site along Tankersley Lane. These groups hold moderate screening value and were of varying arboricultural quality.
- 3.13 Approximately forty-four percent of the individual trees and groups onsite were considered to be low or of unsuitable quality and value for retention and therefore categorised as C or U. The trees were a varying mix of species from ash *Fraxinus excelsior*, goat willow *Salix caprea*, hawthorn *Crataegus monogyna* to English oak *Quercus robur* and sycamore *Acer pseudoplatanus*. The trees were mostly situated on the field boundaries and within hedgerows. The trees were deemed as being of low or unsuitable quality from the presence of various defects which included cavities, major deadwood, dieback present within canopy, storm damage, broken branches, wood decaying fungal bodies, failed stems, large wounds, branch socket cavity, and weak unions.
- 3.14 A collection of U category specimens were present on the site being T14, T16 and T60.
- 3.15 T20 a mature goat willow *Salix caprea* was found to be in a moribund condition with limited future potential and a categorisation of U was given. Due to its location and current condition regardless of development this specimen should be removed.

Ancient and Veteran Trees

- 3.16 One of the assessed trees, T56 was considered as being a veteran tree in accordance with accepted methodologies and guidance.
- 3.17 To afford these trees greater protection, the RPA calculation has been calculated in accordance with the guidelines detailed within Ancient and other Veteran Trees: Further Guidance on Management (Lonsdale, D (ed.) (2013). The Tree Council & Ancient Tree Forum. The RPA is defined as a distance equal to 15 times the trees stem diameter, or five metres beyond the canopy, whichever is the greater (Read, 2000).
- 3.18 Where this assessment has identified veteran trees, further survey work of those trees and their communities will be required to establish the presence of associated communities. From an ecological perspective veteran trees provide a rare and specialist niche habitat and therefore preservation of this habitat is considered highly important. Veteran trees and many of their associated specialised species are becoming increasingly rare within the landscape and therefore some veteran tree landscapes and their associated species are now protected, both nationally and Europe wide through the Natura 2000 Directive.

Woodlands

- 3.19 W1 is 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]

^[2] (<https://magic.defra.gov.uk/MagicMap.aspx>)

4.0 ARBORICULTURAL IMPACT ASSESSMENT

- 4.1 The following paragraphs present a summary of the tree survey and discussion of particular trees and groups recorded in the context of any proposed development in the form of an Arboricultural Impact Assessment in accordance with section 5.4 of BS5837. Any final tree retentions will need to be reconciled with the advice contained within this report.
- 4.2 The AIA has been based upon the pHp Architects Site Plan (project number 4400) and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage, and landscaping.
- 4.3 An overlay of the layout has been incorporated in the Appendix C - Tree Retention Plan to assist in identifying the relationship and any potential conflicts between the proposals and the existing trees and hedgerows.
- 4.4 Full removal of T15, T17, T18, T19, T21, T26, T27, T28, T53, T55, T56 T58, T61, G6, G7, G8, G9, G10, G15, G16, G17, G21, G22, G40, G41, G42, G47 and G48 would be needed to facilitate the proposal.
- 4.5 T15, T17, T18, T19, T21, T53, T55, T58, T61, G7, G15, G17, G22 and G47 are moderate quality individual trees alongside the remaining category C groups. The proposals are set to deliver a landscaping scheme as part of the development which will include new tree planting on landscaped bunds and within the open space areas therefore the required loss of trees to the scheme will be mitigated against. As such, the removal of the listed trees should not be seen as a constraint upon the development and long term, as the replacement planting will compensate for loss of canopy cover.
- 4.6 To facilitate the proposed development the full removal of H3, H4, H5, H6, H7, H11 and H12 will also be required. The hedgerows are of low arboricultural quality except for H5 which is of moderate arboricultural quality. The removal of these specimens due to their low quality should not be seen as a constraint upon development from an arboricultural perspective.
- 4.7 To facilitate the development part removal of G16, G37 and G43 would also be needed. Due to the small proportion of these groups needing to be removed, seeing most being retained it will not impact the overall vitality of the grouping nor adversely impact the overall contribution of these groups in the local landscape.
- 4.8 Part removal of H10, H14 and H15 will also be needed, all of which were considered to be of low arboricultural value. The removal of small sections of these hedgerows would be considered from an arboricultural perspective as having only a low impact overall as these hedgerows would be replanted as part of the new landscape planting schemes. It may also be possible to consider translocation of the current area of hedgerow to be removed into already established gaps within H10, H14 and H15. Translocation may offer the opportunity to mitigate against any possible loss whilst also facilitating the proposed development plans.
- 4.9 A total of four individuals being T14, T16, T20 and T60 are of unsuitable quality to retain and should be removed.

- 4.10 It is recommended that where possible for selective category U individuals, such as T60, creating a 4m - 5m habitat monolith should be considered to maintain ecological potential and contribution to overall biodiversity whilst reducing and mitigate against any possible risk and removal of trees which could provide alternative habitat.
- 4.11 In conclusion, although there would be the loss of a number of trees to facilitate the proposals, a large proportion of the tree can be retained and incorporated into the sites landscaping scheme. These established trees will aid in softening the built element of the proposals in keeping with Hoyland as a whole.

Tree Management

- 4.12 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.
- 4.13 All tree works undertaken should comply with British Standard 3998:2010 and should therefore be carried out by skilled tree surgeons. It would be recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors.
- 4.14 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.

5.0 NEW TREE AND HEDGEROW PLANTING

- 5.1 As part of the development proposals an adequate quantity of structured tree planting has been demonstrated. The purpose and function of this new tree planting should be understood from the start of any design stages so that key objectives from a landscape perspective can also be achieved.

Trees

- 5.2 The landscaping scheme supporting the development proposals has been designed with consideration of 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 have been selected on the basis of their suitability for the final site use.
- 5.3 In line with the NPPF all schemes should aim 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 planting can therefore be used to contribute to this biodiversity gain.

Hedgerows

- 5.4 Hedgerows are identified as a Habitat of Principle 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.
- 5.5 Recommended species for native hedgerow planting are as follows:
- *Crataegus monogyna*
 - *Prunus spinosa*
 - *Cornus sanguinea*
 - *Corylus avellana*
 - *Acer campestre*

General Design Principles in Relation to Retained Trees

- 5.6 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.
- 5.7 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 ARBORICULTURAL METHOD STATEMENT AND TREE PROTECTION MEASURES

- 6.1 All trees retained on site will be protected by suitable barriers and in places ground protection around and within the calculated RPA, crown spreads or other defined constraints of this assessment as detailed by section 6 and 7 of BS5837. The Tree Protection Plan in Appendix C shows the position of the proposed fencing in pink.
- 6.2 Barriers will be erected prior to commencement of any construction work. 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 appointed arboriculturalist.
- 6.3 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.
- 6.4 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.
- 6.5 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

- 6.6 Tree protection fencing will 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 will be maintained to ensure that they remain rigid and complete for the duration of construction activities on site.
- 6.7 Fencing will comprise typical construction fencing panels such as Heras panels attached to scaffold poles driven vertically into the ground with supporting struts, acting as a brace added and fixed into position through the application of metal pins driven into the ground to offer additional resistance against impacts.
- 6.8 Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative could be considered, appropriate to the level / nature of anticipated construction activity. The recommended methods of fencing specifications for this site have been illustrated in Appendix B.
- 6.9 It may be appropriate on some sites to use temporary site offices, hoardings and lower level barrier protection as components of the tree protection barriers. Details of the specific protection barriers for the site can be provided should the application be approved, as part of a site specific Arboricultural Method Statement for a Reserved Matters application and in accordance with the guidance contained within BS5837.

Protection outside the exclusion zone

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

- 6.11 All weather notices should be attached to the protective fencing to indicate that construction activities are not permitted within the fenced area. The area within the protective barriers will then remain a construction exclusion zone throughout the duration of the construction phase of the proposed development. Protection fencing signs can be provided upon request.
- 6.12 Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles where they are in close proximity to retained trees.
- 6.13 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree stem. No concrete should be mixed within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.
- 6.14 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.
- 6.15 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.
- 6.16 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees, must be removed with due care (it may be necessary to remove such trees in sections).

Protection of Trees Close to the Site

- 6.17 A number of trees were located on the boundaries of the site and therefore the root protection area and crown spread of these trees will need to be protected in the same way as all the retained trees within the site. All trees located outside the boundaries of the assessment site yet within close proximity to works should be adequately protected during the course of the development by barriers or ground protection around the calculated root protection area.
- 6.18 Any trees which are to be retained and whose Root Protection Areas may be affected by the development should be monitored, during and after construction, to identify any alterations in quality with time and to assess and undertake any remedial works required as a result.

Protection for Aerial Parts of Retained Trees

- 6.19 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.
- 6.20 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.

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

Removal of Protective Fencing

- 6.22 Following the completion of all construction works and in agreement with the project arboriculturalist the tree protection fencing will be removed carefully as to avoid causing root disturbance. This operation can be carried out prior to soft landscaping works such as new planting, mulching, grass sowing etc.

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
Pyrus communis	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
Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa	M: Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading OM: Fully mature, at the extremes of expected life expectancy, vigour decreasing, declining or moribund 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.	Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value 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	10-20 years

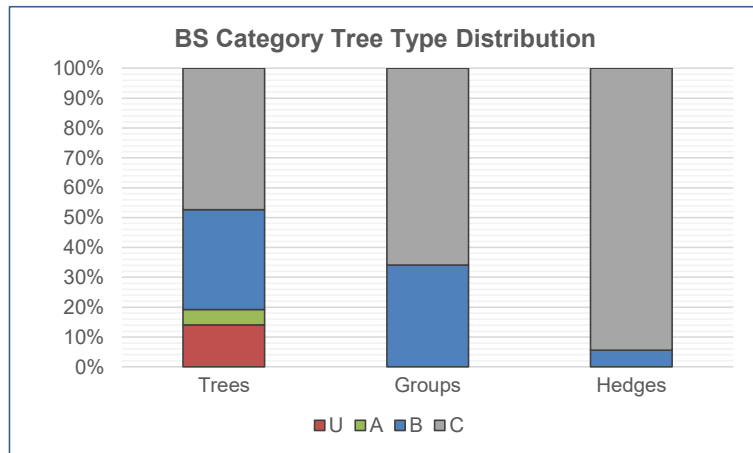
Structural Condition	Physiological Condition
Good - No significant structural defects	Good - No significant health problems
Fair - Structural defects that can be remediated	Fair - Symptoms of ill-health that can be remediated
Poor - Significant defects beyond remediation, present a risk of failure in 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.

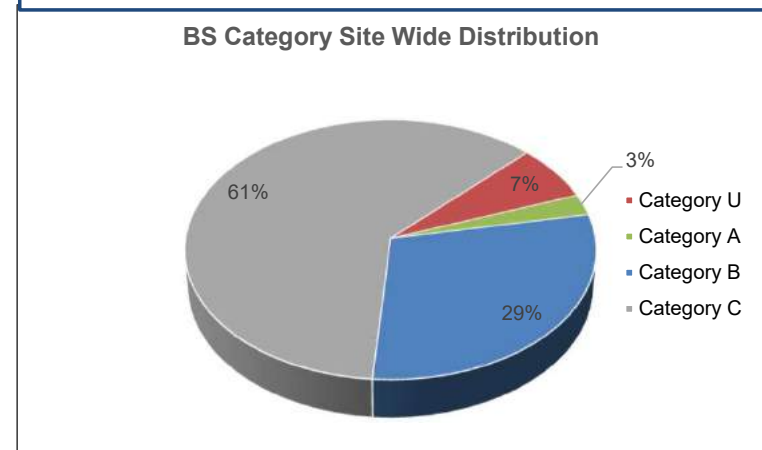
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T6, T11, T14, T16, T20, T25, T30, T44, T60	8		
Category A	T46, T48, T56	3	W1	1
Category B	T5, T12, T15, T17, T18, T19, T21, T26, T32, T39, T41, T45, T47, T49, T50, T51, T52, T53, T55, T58, T59, T61, T62	23	G1, G4, G7, G12, G13, G15, G17, G18, G19, G20, G22, G32, G33, G38, G44, G45, G46, H5	18
Category C	T1, T2, T3, T4, T7, T8, T9, T10, T13, T22, T23, T24, T27, T28, T29, T31, T33, T34, T35, T36, T37, T38, T40, T42, T43, T54, T57, T63	28	G2, G3, G5, G6, G8, G9, G10, G11, G14, G16, G21, G23, G24, G25, G26, G27, G28, G29, G30, G31, G34, G35, G36, G37, G39, G40, G41, G42, G43, H1, H2, H3, H4, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20	49
Total		62	Total	68

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



Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Silver Birch <i>Betula pendula</i>	8	est 180	3	SM	F	Characteristic for species Potential future nuisance due to close proximity to telegraph pole	15	2.2	C (ii)
T2	Hawthorn <i>Crataegus monogyna</i>	6	est 300	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	41	3.6	C (i)
T3	Hawthorn <i>Crataegus monogyna</i>	6	est 200	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	18	2.4	C (i)
T4	Hawthorn <i>Crataegus monogyna</i>	4	est 200	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	18	2.4	C (i)
T5	Goat Willow <i>Salix caprea</i>	9	9x 300	4	M	G	Crossing and rubbing branches Included bark union Minor dead wood evident in the crown (<75mm) Multi stemmed from base	366	10.8	B (i)
T6	Elder <i>Sambucus nigra</i>	3	90 90	1	SM	P	Limited future potential <i>Auricularia auricula-judae</i> (jelly ear)	N/A	N/A	U
T7	Apple <i>Malus domestica</i>	5	220	3	EM	F	Basal cavity observed Crossing and rubbing branches Pollarded form(s)	22	2.6	C (i)
T8	Ash <i>Fraxinus excelsior</i>	9	270	4	SM	F	Characteristic for species Multi leadered form	33	3.2	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T9	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	6	120	1	Yng	G	Characteristic for species	7	1.4	C (i)
T10	Goat Willow <i>Salix caprea</i>	10	300 33	5	EM	P	Basal cavity observed Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	41	3.6	C (i)
T11	Swedish Whitebeam <i>Sorbus intermedia</i>	5	140	3	SM	P	Limited future potential	N/A	N/A	U
T12	Blue Cedar <i>Cedrus atlantica Glauca</i>	10	est 400	5	SM	F	Branch stubs evident Broken branches evident Characteristic for species Multi leadered form	72	4.8	B (i)
T13	Ash <i>Fraxinus excelsior</i>	10	est 200 220 200 150	4	SM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi stemmed from base	68	4.7	C (i)
T14	Elder <i>Sambucus nigra</i>	3	110 110 90	2	SM	P	Compacted ground at the base Limited future potential	N/A	N/A	U
T15	English Oak <i>Quercus robur</i>	12	750	8	M	F	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Wound at base of stem to south tree including well	254	9.0	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T16	Hawthorn <i>Crataegus monogyna</i>	5	150 280	1	EM	D	Dead trees noted	N/A	N/A	U
T17	English Oak <i>Quercus robur</i>	10	670	6	M	F	Barbed Wire attached to stem/s Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Browsing damage noted on main stem Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Wound at 1m to 1.5m on stem to south tree including well	203	8.0	B (ii)
T18	Hawthorn <i>Crataegus monogyna</i>	8	270 310 180	4	M	G	Basal suckers present Characteristic for species Multi stemmed from base	91	5.4	B (i)
T19	English Oak <i>Quercus robur</i>	12	est 450	6	EM	G	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) Multi leadered form	92	5.4	B (i)
T20	Goat Willow <i>Salix caprea</i>	10	300 300 150 150	6	M	P	Branch socket cavities observed Branch stubs evident Broken branches evident Dieback of the crown observed	N/A	N/A	U
T21		6	210 160 320	4	M	G	Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Multi leadered form	78	5.0	B (i)
T22	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	8	280	1	SM	F	Characteristic for species Multi stemmed from base	35	3.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T23	Horse Chestnut Aesculus hippocastanum	10	est 400	4	EM	P	Crossing and rubbing branches Delaminating bark on main stem Minor dead wood evident in the crown (<75mm)	72	4.8	C (i)
T24	Ash Fraxinus excelsior	7	est 150 150	3	SM	F	Base obscured Minor dead wood evident in the crown (<75mm) Multi stemmed from base Situating offsite	20	2.5	C (i)
T25	Wild Cherry Prunus avium	7	250	2	SM	D	Dead trees noted	N/A	N/A	U
T26	English Oak Quercus robur	9	340	4	SM	G	Characteristic for species Minor dead wood evident in the crown (<75mm) Multi leaved form Pruning wounds noted	52	4.1	B (i)
T27	Norway Maple Acer platanoides	11	320	N - 3 S - 3 E - 5 W - 3	SM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi leaved form Pruning wounds noted Minor damage to exposed roots on banking	46	3.8	C (i)
T28	English Oak Quercus robur	9	320	5	SM	P	Branch stubs evident Included bark union Minor dead wood evident in the crown (<75mm) Multi leaved form Pruning wounds noted Bifurcated at 4m up eastern most bifurcated stem fibre buckling present with delaminated bark present	46	3.8	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T29	Norway Maple Acer platanoides	9	430	6	EM	P	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Compacted ground at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Minor excavation and storage unit within RPA Soiled piled upmagainst stem	84	5.2	C (i)
T30	Norway Maple Acer platanoides	9	400	N - 7 S - 1 E - 5 W - 4	SM	P	Bark wounds noted Basal cavity observed Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Limited future potential Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Previously topped at 1.5m Excavation and storage unit within rpa Crown growing into building Soil piled against stem	N/A	N/A	U
T31	Ash Fraxinus excelsior	10	160 350	N - 5 S - 3 E - 4 W - 5	SM	F	Branch stubs evident Limited future potential Minor dead wood evident in the crown (<75mm) Multi stemmed from base Pruning wounds noted Retaining wall and 2m drop 0.01m to north of tree 50cm to south hard standing car park	67	4.6	C (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T32	English Elm Ulmus procera	14	upto 600	N - 8 S - 8 E - 8 W - 1	M	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Crossing and rubbing branches Low crown form Minor dead wood evident in the crown (<75mm) Multi stemmed from base Pruning wounds noted Retaining wall with 2m drop present 1m north of stem Tree growing into lamppost Bifurcated from 2m Hard standing within rpa to south east of stem	163	7.2	B (i)
T33	Ash Fraxinus excelsior	8	300 160 170	4	SM	F	Basal suckers present Growing from wall	65	4.6	C (i)
T34	Ash Fraxinus excelsior	8	350 320	4	SM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	102	5.7	C (i)
T35	Ash Fraxinus excelsior	8	310	4	SM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	43	3.7	C (i)
T36	Ash Fraxinus excelsior	12	350 610	6	SM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Twin stemmed from base	224	8.4	C (i)
T37	Ash Fraxinus excelsior	8	570	4	M	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	147	6.8	C (i)
T38	Hawthorn Crataegus monogyna	7	340 210	3	M	P	Minor dead wood evident in the crown (<75mm) Pruning wounds noted Suppressed crown form	72	4.8	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T39	English Oak Quercus robur	9	710	8	M	F	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Burrowing around base	228	8.5	B (i)
T40	Ash Fraxinus excelsior	9	540	5	EM	P	Basal cavity observed Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Waterlogged ground at base	132	6.5	C (i)
T41	English Oak Quercus robur	11	420 280	5	EM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	115	6.1	B (i)
T42	Silver Birch Betula pendula	10	200 80	2	SM	P	Minor dead wood evident in the crown (<75mm) Suppressed crown form	21	2.6	C (i)
T43	Silver Birch Betula pendula	10	200 240 180	2	SM	P	Minor dead wood evident in the crown (<75mm) Suppressed crown form	59	4.3	C (i)
T44	Sycamore Acer pseudoplatanus	10	400 420	6	EM	P	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Heartwood exposed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Pruning wounds noted Suppressed crown form	N/A	N/A	U
T45	Ash Fraxinus excelsior	15	850	12	M	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm)	327	10.2	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T46	English Oak Quercus robur	19	est 480 550 550	14	M	F	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) No major defects were noted	378	11.0	A (i)
T47	English Oak Quercus robur	10	est 450	5	EM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Typical crown form	92	5.4	B (i)
T48	Horse Chestnut Aesculus hippocastanum	17	Over ivy 1040	N - 7 S - 5 E - 6 W - 6	M	G	Basal suckers present Branch socket cavities observed Characteristic for species Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Good vigour and form Hard packed road running to north of stem by 50cm	489	12.5	A (i)
T49	Ash Fraxinus excelsior	11	650	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem	191	7.8	B (ii)
T50	Ash Fraxinus excelsior	13	360 410	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem	135	6.5	B (ii)
T51	Ash Fraxinus excelsior	13	538	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Overhead cables	131	6.5	B (ii)
T52	Ash Fraxinus excelsior	8	410	4	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Overhead cables	76	4.9	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T53	Sycamore Acer pseudoplatanus	16	690	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Exposed roots and cavity at base	215	8.3	B (ii)
T54	Ash Fraxinus excelsior	10	330	4	EM	F	Branch stubs evident Browsing damage noted on main stem Characteristic for species Dense ivy cover on main stem Overhead cables	49	4.0	C (i)
T55	English Oak Quercus robur	12	680	7	M	F	Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Potential Roost Features (PRF) Typical crown form	209	8.2	B (i)
T56	Ash Fraxinus excelsior	15	1560	8	V	F	Branch stubs evident Broken branches evident Heartwood exposed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Pollarded form(s) Pruning wounds noted Loss of eastern crown. Extensive decay at bowl	1720	23.4	A (iii)
T57	Ash Fraxinus excelsior	8	190 190 280	3	EM	F	Branch stubs evident Characteristic for species Multi stemmed from base No major defects were noted	68	4.7	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T58	Sycamore Acer pseudoplatanus	17	490 560	5	M	F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Multi stemmed from base Pruning wounds noted Bark wound 30cm x 100cm present at 1m on east side of stem	250	8.9	B (i)
T59	Ash Fraxinus excelsior	16	540	5	M	F	Basal suckers present Broken branches evident Flail damage evident Minor dead wood evident in the crown (<75mm) Rubbish rubble and debris at base of stem	132	6.5	B (i)
T60	Ash Fraxinus excelsior	16	570	N - 2 S - 6 E - 4 W - 4	M	P	Bark wounds noted Basal cavity observed Basal suckers present Minor dead wood evident in the crown (<75mm) Large wound from base to 4m with incipient decay and hollowing present on north side of stem	N/A	N/A	U
T61	Sycamore Acer pseudoplatanus	15	600	6	M	F	Branch socket cavities observed Branch stubs evident Broken branches evident Dense ivy cover on main stem Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form	163	7.2	B (ii)
T62	Sycamore Acer pseudoplatanus	12	550	N - 4 S - 3 E - 2 W - 4	EM	F	Basal suckers present Characteristic for species Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	137	6.6	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T63	Sycamore Acer pseudoplatanus	12	380	3	SM	P	Basal suckers present Characteristic for species Close cultivation of the soil Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Sparse / thinning crown	65	4.6	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	17	est 300	4	EM / M	F	Characteristic for species Interlocking crowns Situated offsite	41	3.6	B (ii)
G2	Ash Fraxinus excelsior Horse Chestnut Aesculus hippocastanum Silver Birch Betula pendula Rowan Sorbus aucuparia Common Larch Larix decidua Leyland Cypress Cupressocyparis leylandii Norway Spruce Picea abies	8	avg 160	2	Yng / SM	F / G	Characteristic for species Group of ornamental buffer planting	12	1.9	C (ii)
G3	Apple Malus domestica	7	avg 300	2	SM / EM	P / F	Basal suckers present Dead trees noted Phellinus ignarius Willow bracket	41	3.6	C (i)
G4	Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa		est 300	5	SM / EM	F / G	Base obscured Group of ornamental garden planting	41	3.6	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G5	Leyland Cypress Cupressocyparis leylandii	8	upto 320	4	EM	F	Characteristic for species Interlocking crowns Maintained hedgerow Situated offsite Previously topped	46	3.8	C (ii)
G6	Ash Fraxinus excelsior English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna	8	avg 250	2	SM	F	Bark wounds noted Crossing and rubbing branches Dead trees noted Interlocking crowns Minor dead wood evident in the crown (<75mm)	28	3.0	C (ii)
G7	Hawthorn Crataegus monogyna	7	upto 270	3	Yng / SM / EM / M	F / G	Characteristic for species Crossing and rubbing branches As a group B but as individuals C	33	3.2	B (ii)
G8	Ash Fraxinus excelsior Common Lime Tilia x europaea Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Norway Maple Acer platanoides	9	avg 300	4	SM	F	Characteristic for species Low crown form Situated offsite Motorway buffer	41	3.6	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G9	Hawthorn Crataegus monogyna	3	90 90 90	2	SM	F	Characteristic for species Crossing and rubbing branches	11	1.9	C (i)
G10	Field Maple Acer campestre Hawthorn Crataegus monogyna	6	avg 160	3	SM	F	Browsing damage noted on main stem Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Outgrown hedgerow	12	1.9	C (ii)
G11	Goat Willow Salix caprea Hawthorn Crataegus monogyna Privet Ligustrum ovalifolium	4	avg 80	1	Yng	F	Multi leadered form	3	1.0	C (i)
G12	Common Lime Tilia x europaea Field Maple Acer campestre Hawthorn Crataegus monogyna Wild Cherry Prunus avium Swedish Whitebeam Sorbus intermedia	9	avg 280	4	SM	F	Bark wounds noted Basal suckers present Branch stubs evident Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Hard standing road 0.5m on west side of stem Individuals Category C as group Category B	35	3.4	B (ii)
G13	Wild Cherry Prunus avium	9	upto 350	4	SM	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Hard standing road 0.5m on west side of stem Individuals Category C as group Category B	55	4.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G14	Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Wild Cherry Prunus avium	9	upto 350	4	Yng / SM	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Dead trees noted Failed trees Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Individuals Category C as group Category B Understorey of hawthorn and field maple	55	4.2	C (ii)
G15	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Norway Maple Acer platanoides Hazel Corylus avellana	7	avg 160	3	Yng / SM	F / G	Basal suckers present Branch stubs evident Broken branches evident Characteristic for species Included bark union Low crown form Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental boundary planting Litter present at base of trees Dense understorey of hazel and blackthorn	12	1.9	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G16	Blackthorn Prunus spinosa English Oak Quercus robur Goat Willow Salix caprea	8	avg 6x 200	5	SM	P	Basal suckers present Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Crossing and rubbing branches Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Water ditch running through group Oak tree in group has been topped at 1m			C (i)
G17	Blackthorn Prunus spinosa Common Lime Tilia x europaea Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium	8	upto 270	4	Yng / SM	F / G	Bark wounds noted Basal cavity observed Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Characteristic for species Dense undergrowth at the base Ornamental planted boundary group Rubbish and fly tipping at base of trees	33	3.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G18	Blackthorn Prunus spinosa Common Lime Tilia x europaea Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium Common Walnut Juglans regia	8	avg 340	N - 3 S - 3 E - 5 W - 3	SM	G	Broken branches evident Characteristic for species Included bark union Interlocking crowns Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	52	4.1	B (i)
G19	Alder Alnus glutinosa	12	upto 420	5	SM / EM	G	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) Pruning wounds noted 5 trees in group	80	5.0	B (ii)
G20	Ash Fraxinus excelsior Wych Elm Ulmus glabra	12	upto 400	6	SM	F	Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Included bark union Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Fence line within rpa to south Retaining wall with 2m drop present to 1m north of stems 6 trees present - 4 x elm 2 x ash	72	4.8	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G21	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Wild Cherry Prunus avium	7	avg 160	3	Yng / SM	F	Base obscured Characteristic for species Dense undergrowth at the base	12	1.9	C (ii)
G22	Ash Fraxinus excelsior Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Wild Cherry Prunus avium Common Larch Larix decidua Scots Pine Pinus sylvestris	10	est 300	4	Yng / SM / EM	F	Branch stubs evident Broken branches evident Flail damage evident Hazard beam present Minor dead wood evident in the crown (<75mm) Multi leadered form Motorway buffer group	41	3.6	B (ii)
G23	Ash Fraxinus excelsior Goat Willow Salix caprea Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	10	avg 240	3	Yng / SM	P / F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Dead trees noted Flail damage evident Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Situated on steep banking	26	2.9	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G24	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	10	avg 240	3	Yng / SM	P / F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Dead trees noted Flail damage evident Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Boundary buffer planting to motorway	26	2.9	C (ii)
G25	Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G26	Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G27	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G28	Hawthorn Crataegus monogyna	5	upto 300	3	M	F	Sporadic mature hawthorn on bank within horse bushes	41	3.6	C (ii)
G29	Hawthorn Crataegus monogyna	5	upto 300	3	M	F	Sporadic mature hawthorn on bank within horse bushes	41	3.6	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G32	Common Lime <i>Tilia x europaea</i>	15	upto 600	6	M	F	Characteristic for species Minor dead wood evident in the crown (<75mm) Situated offsite Typical crown form	163	7.2	B (ii)
G33	Beech <i>Fagus sylvatica</i> Common Lime <i>Tilia x europaea</i> Horse Chestnut <i>Aesculus hippocastanum</i> Sycamore <i>Acer pseudoplatanus</i>	15	upto 800	6	M	F	Characteristic for species Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Situated offsite Typical crown form	290	9.6	B (ii)
G34	Hawthorn <i>Crataegus monogyna</i> English Elm <i>Ulmus procera</i>	6	avg 6x 90	2.5	SM	P	Outgrown hedge with dead elm throughout	22	2.6	C (ii)
G35	Ash <i>Fraxinus excelsior</i> Hawthorn <i>Crataegus monogyna</i> Horse Chestnut <i>Aesculus hippocastanum</i>	10	upto 500	6	M	P	Bark wounds noted Base obscured Branch socket cavities observed Broken branches evident Dense ivy cover on main stem Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Potential Roost Features (PRF)	113	6.0	C (ii)
G36	Ash <i>Fraxinus excelsior</i> Hawthorn <i>Crataegus monogyna</i> Sycamore <i>Acer pseudoplatanus</i>	12	upto 400	5	M	P	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	72	4.8	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G37	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus English Elm Ulmus procera	12	upto 400	5	M	P	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	72	4.8	C (ii)
G38	Ash Fraxinus excelsior Sycamore Acer pseudoplatanus Common Larch Larix decidua	12	upto 400	5	M	F	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Fail trees within group	72	4.8	B (ii)
G39	Crack Willow Salix fragilis Elder Sambucus nigra English Elm Ulmus procera	10	upto 300	4	M	F	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Embankment planting	41	3.6	C (ii)
G40	Elder Sambucus nigra Hawthorn Crataegus monogyna	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G41	Elder Sambucus nigra Field Maple Acer campestre Hawthorn Crataegus monogyna	5	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G42	Elder Sambucus nigra Hawthorn Crataegus monogyna	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G43	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G44	English Oak Quercus robur	9	avg 350	4	SM	F	Interlocking crowns Minor dead wood evident in the crown (<75mm) Multi leadered form	55	4.2	B (ii)
G45	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus	12	avg 280	3	Yng / SM	P / F / G	Characteristic for species Crossing and rubbing branches Dead trees noted Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	35	3.4	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G46	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	8	avg 250	3	Yng / SM	P / F / G	Characteristic for species Crossing and rubbing branches Dead trees noted Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Predominantly hawthorn and goat willow	28	3.0	B (ii)
T14	Elder Sambucus nigra	3	110 110 90	2	SM	P	Compacted ground at the base Limited future potential	N/A	N/A	U
G48	Ash Fraxinus excelsior Alder Alnus glutinosa Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus Elder Sambucus nigra	8	avg 200	2	SM	P / F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Overhead cables Pruning wounds noted Flail damage	18	2.4	C (i)

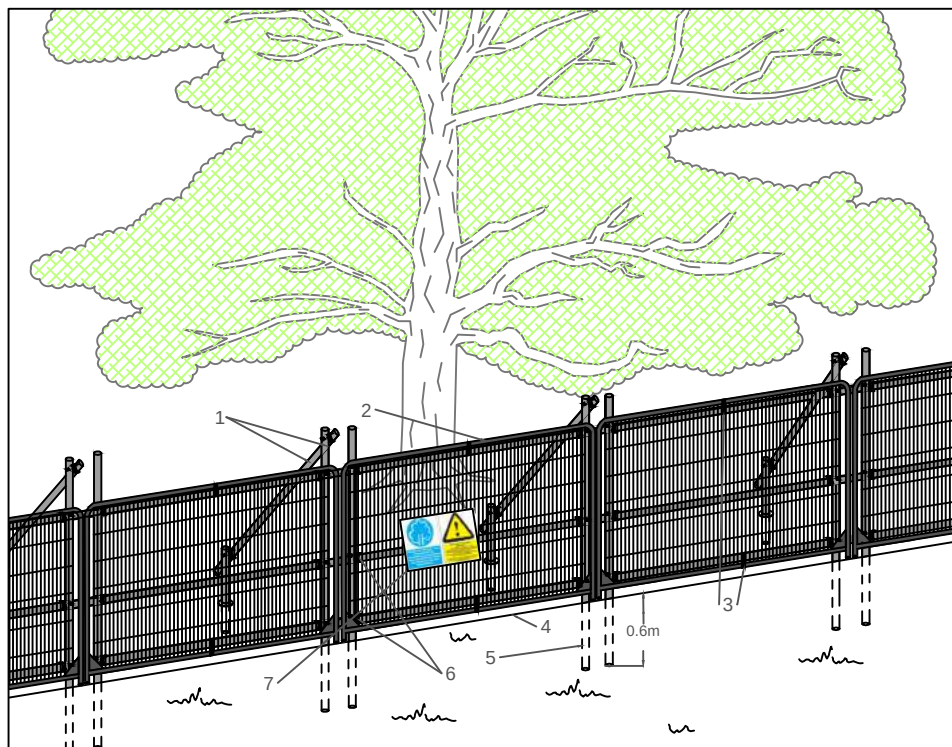
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G49	Ash Fraxinus excelsior Elder Sambucus nigra Common Lime Tilia x europeae Hawthorn Crataegus monogyna	14	avg 400	5	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Pruning wounds noted Basal suckers present Dense undergrowth and ivy at the base	72	4.8	B (ii)
G50	Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Norway Maple Acer platanoides	8	avg 250	2	SM	G	Ornamental planting Characteristic for species Hardstanding path running through group Minor dead wood evident in the crown (<75mm)	28	3.0	B (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Elder Sambucus nigra Goat Willow Salix caprea Hawthorn Crataegus monogyna	6	est 80 80 80	2	SM	P / F	Basal suckers present Gaps present in hedgerow Situated offsite Un-maintained hedgerow	9	1.7	C (i)
H2	Elder Sambucus nigra Goat Willow Salix caprea Hawthorn Crataegus monogyna	6	est 80 80 80	2	SM	P / F	Basal suckers present Gaps present in hedgerow Situated offsite Un-maintained hedgerow	9	1.7	C (i)
H3	Pyrus communis	6	est 100 100 80	3	SM	P / F	Basal suckers present Gaps present in hedgerow Un-maintained hedgerow	12	1.9	C (i)
H4	Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa		avg 100 100 100	2	SM / EM	P / F	Basal cavity observed Gaps present in hedgerow Outgrown hedgerow	14	2.1	C (ii)
H5	Hawthorn Crataegus monogyna	6	avg 8x 200	3	M	G	Characteristic for species Gaps present in hedgerow Historically laid but now lapsed	145	6.8	B (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H6	Hawthorn Crataegus monogyna	4	avg 80 80 80	1	EM	F	Gaps present in hedgerow Outgrown hedgerow	9	1.7	C (ii)
H7	Hawthorn Crataegus monogyna	4	avg 80 80 80	1	EM	F	Gaps present in hedgerow Outgrown hedgerow	9	1.7	C (ii)
H8	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wild Cherry Prunus avium Privet Ligustrum ovalifolium	7	avg 130	2	SM	P / F	Dead trees noted Gaps present in hedgerow	8	1.6	C (ii)
H9	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	4	avg 90	2	SM	F	Dead trees noted Dense undergrowth at the base Gaps present in hedgerow Minor dead wood evident in the crown (<75mm) Outgrown hedgerow	4	1.1	C (ii)
H10	Elder Sambucus nigra Hawthorn Crataegus monogyna Holly Ilex aquifolium	2	est 50	2	Yng / SM	F	Flail damage evident Gaps present in hedgerow Interlocking crowns Maintained hedgerow	1	0.6	C (ii)
H11	Hawthorn Crataegus monogyna	1	avg 60	1	SM	F	Flail damage evident Maintained hedgerow Previously laid hedgerow	2	0.7	C (ii)
H12	Hawthorn Crataegus monogyna	1	avg 60	1	SM	F	Flail damage evident Gaps present in hedgerow Maintained hedgerow Previously laid hedgerow	2	0.7	C (ii)

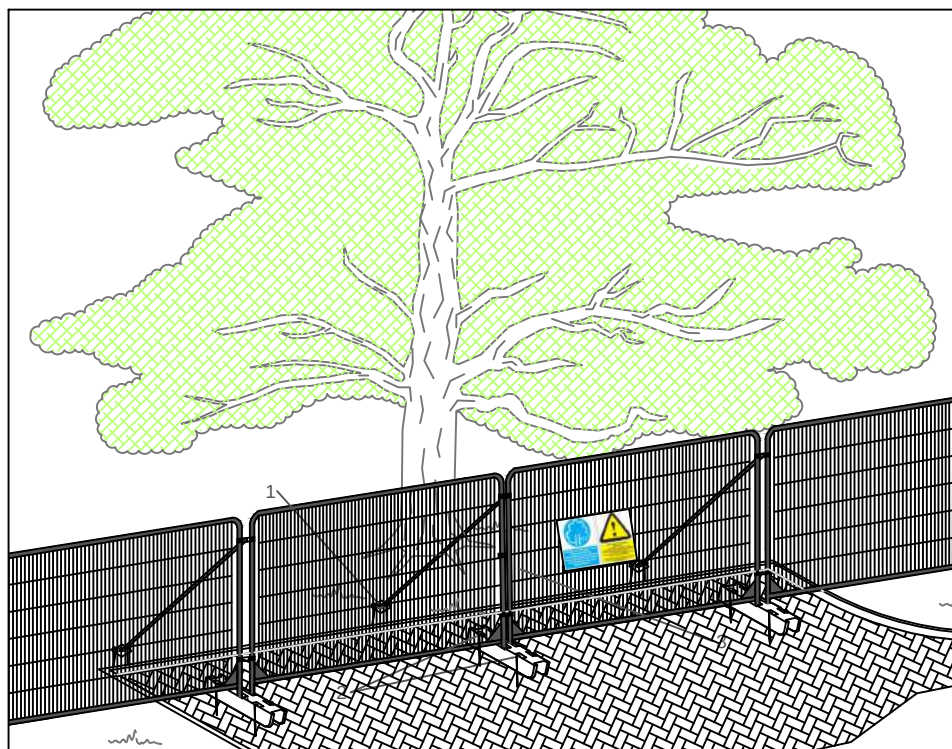
Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H13	Hawthorn Crataegus monogyna	3	est 50	1	EM	F	Maintained hedgerow	1	0.6	C (ii)
H14	Hawthorn Crataegus monogyna	3	est 50	1	EM	F	Maintained hedgerow	1	0.6	C (ii)
H15	Hawthorn Crataegus monogyna	4	est 50 58 50	2	EM	F	Un-maintained hedgerow	4	1.1	C (ii)
H16	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 50 58 50	1	EM	F	Maintained hedgerow			C (ii)
H17	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 50 58 50	1	EM	F	Maintained hedgerow	4	1.1	C (ii)
H18	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn	2	est 50 58 50	1	EM	F	Maintained hedgerow	4	1.1	C (ii)
H19	Hawthorn Crataegus monogyna	3	avg 70	1	SM	G	Maintained hedgerow	2	0.8	C (i)
H20	Elder Sambucus nigra Hawthorn Crataegus monogyna	3	avg 40 40 40	2	SM	F	Un-maintained hedgerow	2	0.8	C (i)

Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
WOODLANDS										
W1	Ash Fraxinus excelsior Beech Fagus sylvatica English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula	15	upto 400	4	EM	F	Characteristic for species Crossing and rubbing branches Interlocking crowns Minor dead wood evident in the crown (<75mm)	72	4.8	A (iii)



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

NOTES

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APPENDIX B PROTECTIVE FENCING SPECIFICATIONS

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



9295

Land to the West of Sheffield Road, Hoyland

Appendix C – Tree Plans
Arboricultural Assessment

CONTENTS

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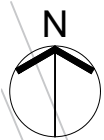
Tree Survey Plan (9295-T-02)

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Tree Retention Plan (9295-T-04)

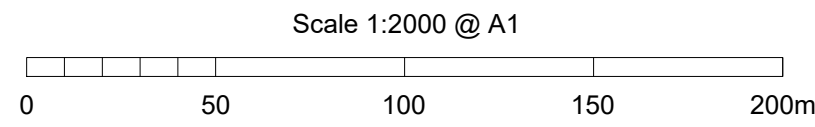
Tree Protection Plan (9295-T-05)

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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 Hatching (Colour Indicates BS5837:2012 Category)
-  Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
-  Individual / Group Number and BS5837:2012 Category



NOTES

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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.

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---	06.04.20	First Issue	HR
A	05.05.20	Updated Layout	AZS
B	05.06.20	Updated Layout	AZS
rev	date	description	drawn



- masterplanning
- environmental assessment
- landscape design
- urban design
- ecology
- architecture
- arboriculture

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- Lockington
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client
Newlands Developments

project
Land west of Sheffield Road, Hoyland
Hoylands

drawing title
TREE SURVEY PLAN

scale
1:2000@ A1

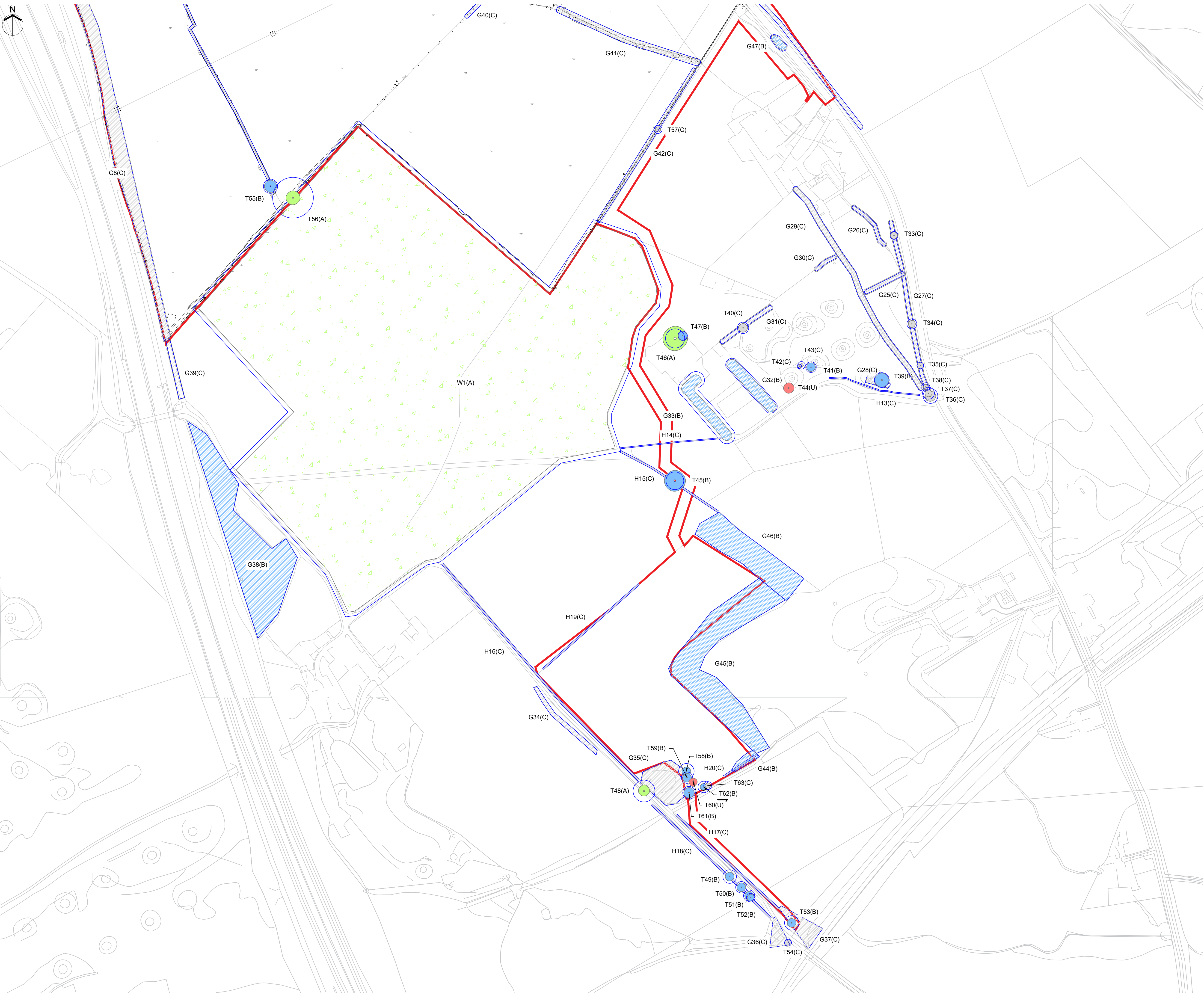
drawn/checked
SCC/HR

date
JUNE 2020

drawing number
9295-T-01

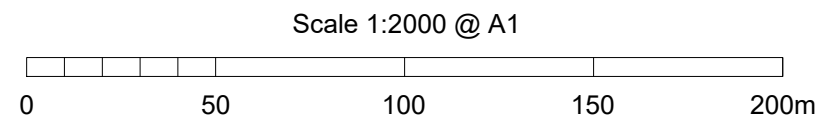
rev
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KEY

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



NOTES

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A	05.05.20	Additional Survey Information	AZS
B	05.06.20	Updated Layout	AZS
rev	date	description	drawn

client
Newlands Developments

project
Land west of Sheffield Road, Hoyland
Hoylands

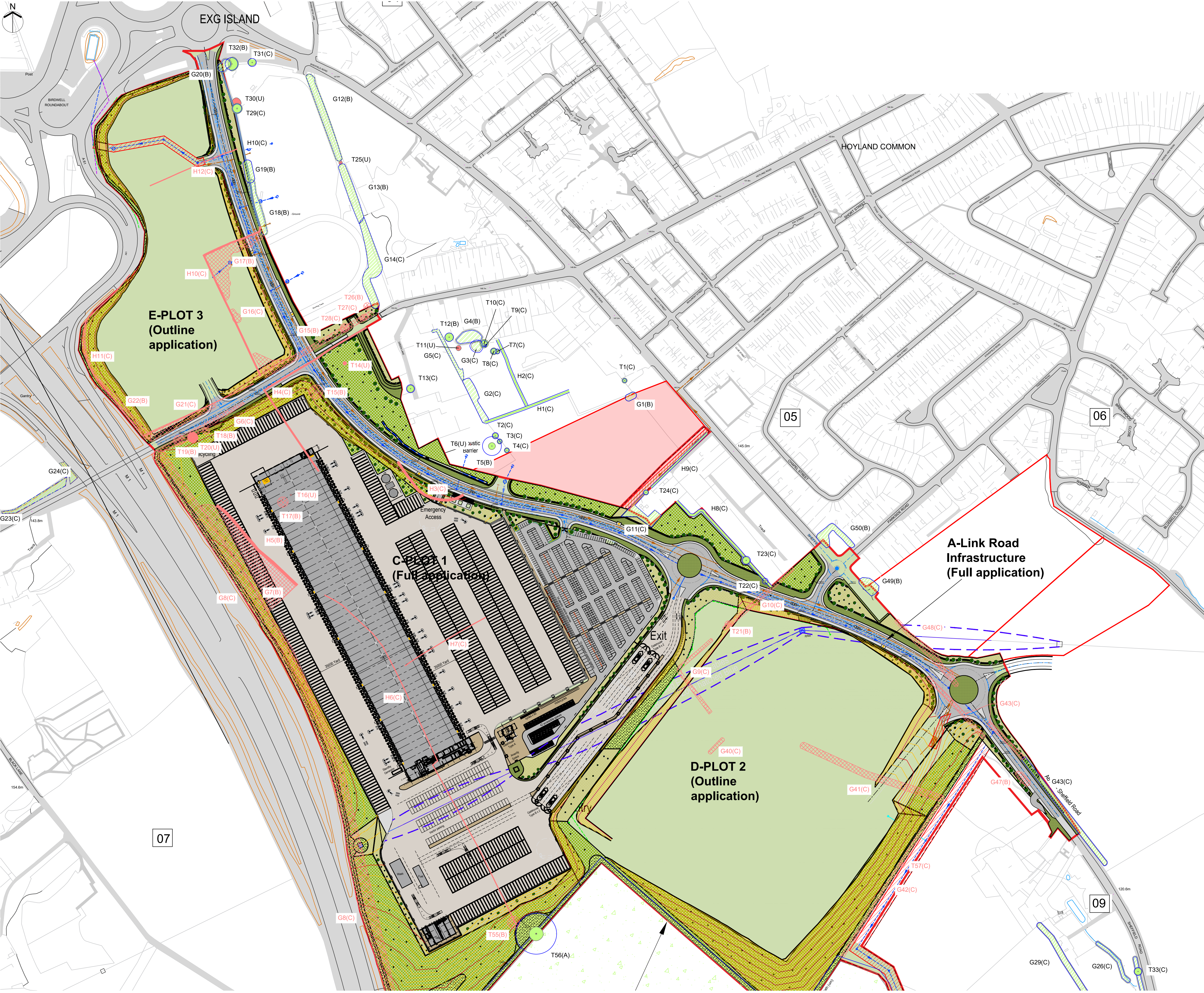
drawing title
TREE SURVEY PLAN

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

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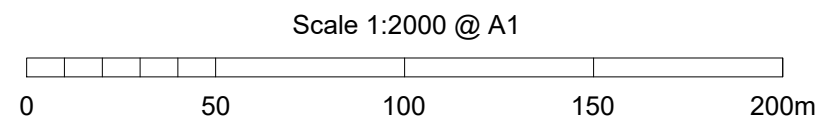
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scale 1:2000@ A1	drawn/checked SCC/HR	date JUNE 2020
drawing number 9295-T-02	rev B	



KEY

- Tree Group to be Retained
- Tree/Group to be removed to facilitate the proposals
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Hedgerow Proposed to be Removed to Facilitate the Development upon Approval of the Application
- Root Protection Area (Shown for retained trees only)
- Individual / Group Number and BS Category
- Individual / Group Number to be Removed and BS 5837:2012 Category



NOTES

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A	05.05.20	Updated Layout	AZS
B	19.05.20	Updated Layout	AZS
C	05.06.20	Updated Layout	AZS
D	16.06.20	Updated Layout	AZS
rev	date	description	drawn

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- masterplanning
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client
Newlands Developments

project
**Land west of Sheffield Road, Hoyland
Hoylands**

drawing title
TREE RETENTION PLAN

scale
1:2000@ A1

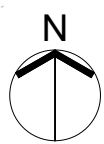
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SCC/HR

date
JUNE 2020

drawing number
9295-T-03

rev
D

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08

09

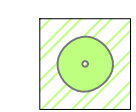
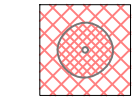
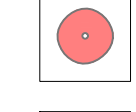
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(Outline
application)

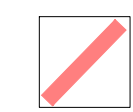
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AREA

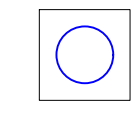
Existing Woodland

B-Landscape Infrastructure &
Drainage
(Full application)

KEY

-  Tree Group to be Retained
-  Tree/Group to be removed to facilitate the proposals
-  Category U - Unsuitable for retention on arboricultural grounds
-  Hedgerow Proposed to be Retained and Incorporated into the New Development

 Hedgerow Proposed to be Removed to Facilitate the Development upon Approval of the Application

 Root Protection Area
(Shown for retained trees only)

T1 (A)
G1 (A) Individual / Group Number and BS Category

T1 (A)
G1 (A) Individual / Group Number to be Removed and BS 5837:2012 Category

---	06.04.20	First Issue	HR
A	05.05.20	Additional Survey Information	AZS
B	19.05.20	Updated Layout	AZS
C	05.06.20	Updated Layout	AZS
D	16.06.20	Updated Layout	AZS

rev	date	description	drawn
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project
Land west of Sheffield Road, Hoyland
Hoylands

drawing title
TREE RETENTION PLAN

scale
1:2000@ A1

drawn/checked
SCC/HR

date
JUNE 2020

drawing number

9295-T-04

rev

D

CAD file: K:\9200\9295\ARB\Plans\9295-T-03&04 - Rev A-Tree Retention Plan.dwg

NOTES

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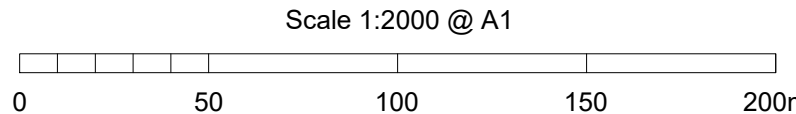
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KEY

- Tree Group to be Retained
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- 6.0m Line of Protective Barriers (and distance from tree or retained structure)
- Root Protection Area (Shown for retained trees only)
- Individual / Group Number and BS Category



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—	15.05.20	First Issue	AZS
A	19.05.20	Layout Update	AZS
B	05.06.20	Layout Update	AZS
C	16.06.20	Updated Layout	AZS

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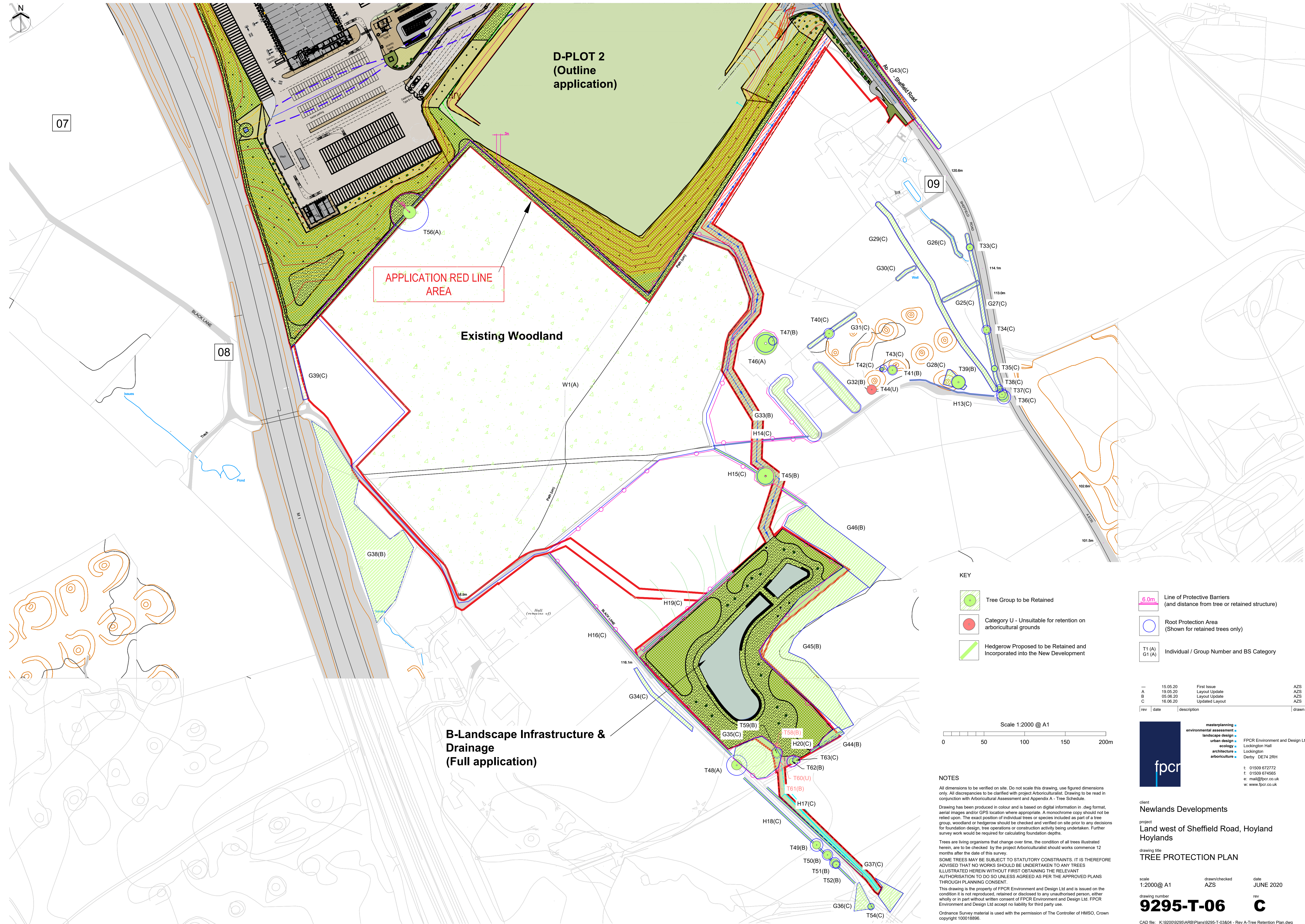
client
Newlands Developments

project
**Land west of Sheffield Road, Hoyland
Hoylands**

drawing title
TREE PROTECTION PLAN

scale 1:2000@ A1	drawn/checked AZS	date JUNE 2020
drawing number 9295-T-05	rev C	

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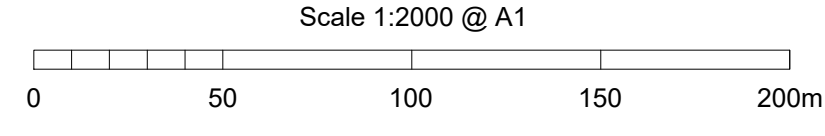


KEY

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—	15.05.20	First Issue	AZS
A	19.05.20	Layout Update	AZS
B	05.06.20	Layout Update	AZS
C	16.06.20	Updated Layout	AZS
rev	date	description	drawn



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project
Land west of Sheffield Road, Hoyland Hoylands

drawing title
TREE PROTECTION PLAN

scale
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drawing/checked
AZS

date
JUNE 2020

drawing number
9295-T-06

rev
C

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