ENERGY AND CLIMATE CHANGE ENVIRONMENT AND SUSTAINABILITY INFRASTRUCTURE AND UTILITIES LAND AND PROPERTY MINING AND MINERAL PROCESSING MINERAL ESTATES WASTE RESOURCE MANAGEMENT

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**BANKS FARM RENEWABLES** 

**COMMON FARM SOLAR** 

**ARBORICULTURAL CONSTRAINTS & OPPORTUNITIES REPORT** 

DECEMBER 2021





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**DECEMBER 2021** 

#### **PREPARED BY:**

Jenna Young

**REVIEWED BY:** 

**Moray Simpson** 

**APPROVED BY:** 

Chris Bean

**Technical Director** 

Associate Director

Arboriculturist

Movey Simpson

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DRAWINGS	TITLE	SCALE
NT15562-006 R	ev. A Tree Location & Constraints Plan Sheets 1-4	AO@1:1000



#### 1 INTRODUCTION

#### 1.1 Brief

- 1.1.1 Wardell Armstrong LLP (WA) was commissioned by Banks Renewables Limited to undertake a BS5837:2012 Arboricultural Constraints and Opportunities survey at a site (hereafter referred to as 'the Site') located at Common Farm, Rotherham at approximate OS grid SK E: 50186 N: 86519.
- 1.1.2 The purpose of this report is to provide an objective assessment of the constraints and opportunities posed by trees and hedgerows that are located on land on and immediately adjacent to the Site. The identified tree constraints can be used by architects, master planners and highway engineers to assist in master planning/ layout design of the proposed solar farm ensuring that the development is sustainable in the long term by ensuring that important trees are retained and incorporated into the proposed development design, where possible. This approach accords with best practice as set out in British Standard (BS) 5837:2012, which is a planning policy requirement of most Local Planning Authorities (LPAs) in the UK.
- 1.1.3 The arboricultural survey included a desktop review and a Site visit. The survey followed the methodology as set out in BS5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations (The British Standards Institution, 2012).
- 1.1.4 The position of trees and hedgerows is based on the Tree Locations Plan prepared by Wardell Armstrong Ref. NT15562 RJB 2021-09-25 dated 25<sup>th</sup> September 2021.

## 1.2 Site Context

1.2.1 The Site is located at Common Farm, which is located to the east of Dinnington, Rotherham, Yorkshire. The nearest post code to the Site is S25 4AH. The site is comprised of arable agricultural fields, bordered by hedgerows and individual trees. There are two small woodlands bordering the site to the north and north-west of the Site. To the north and west are further agricultural fields and to the east are industrial buildings and an area of scrub land and trees bordering Dinnington. Bordering the Site to the south is Common Road, and to the south-east is Todwick Road, with more arable agricultural land.

#### 1.3 **Development Proposal**

1.3.1 The proposed development is a solar farm.



#### 1.4 Trees & the Planning Process

- 1.4.1 Under s197 of the Town & Country Planning Act 1990, LPAs have a legal duty to consider the protection of trees and the planting of new trees on development Sites when granting planning permission. LPAs must also consider the potential effects, whether detrimental or positive, that proposed developments will have on retained trees, and the effect that these trees will have on the users of the development.
- 1.4.2 The Site is located within the administrative boundaries of the Local Planning Authority Rotherham Metropolitan Borough Council (RMBC). RMBC's relevant planning policies are detailed below:

#### Rotherham Local Plan Core Strategy 2013-2028

#### Policy CS 20 – Biodiversity and Geodiversity

'The Council will conserve and enhance Rotherham's natural environment. Biodiversity and geodiversity resources will be protected and measures will be taken to enhance these resources in terms of nationally and locally prioritised sites, habitats and features and protected and priority species. Priority will be given to:

a. Protecting the integrity of European and nationally designated sites for nature conservation, biodiversity and geodiversity, from inappropriate development;

b. Supporting the positive management and protection of nationally, regionally and locally designated sites for nature conservation;

c. Conserving and enhancing populations of protected and identified priority species by protecting them from harm and disturbance and by promoting recovery of such species populations to meet national and local targets;

d. Conserving and enhancing sites and features which have demonstrable biodiversity and geodiversity value, including woodland, important trees, hedgerows, watercourse, caves, crags and structures, but which are not included in designated sites;

e. Supporting the delivery of objectives set out in the Rotherham Biodiversity Action Plan and the Yorkshire and Humber Biodiversity Strategy and Delivery Plan,

*f.* Supporting the production of further relevant biodiversity and ecological network strategies identified by local partnerships, to deliver the restoration and expansion of priority habitats, including within identified biodiversity opportunity areas;



g. Supporting the delivery of objectives set out in the UK Geodiversity Action Plan, other relevant geodiversity strategies;

h. Encouraging the inclusion of natural environment assets, networks and opportunity areas in Green Infrastructure development;

*i.* Supporting the maintenance of nature conservation evidence bases to ensure that adequate, up-to-date and relevant evidence on environmental characteristics and prospects is available;

*j.* Managing land use sympathetically, understanding the naturally functioning processes of habitat succession, flood & water management and climate change adaptation; contributing to landscape-scale and green infrastructure delivery;

k. Protecting soil resources and managing the release of the best and most versatile agricultural land, taking into account it's economic and other benefits and releasing only areas of poorer quality in preference to that of a higher quality;

*I. Ensuring that development decisions will safeguard the natural environment and will incorporate best practice including biodiversity gain, green construction, sustainable drainage and contribution to green infrastructure'.* 

# Rotherham Local Plan – Supplementary Planning Document No. 11 Natural Environment

## Hedgerows

'62 Hedges provide shelter, nesting and foraging sites for a wide variety of species and act as wildlife corridors if they are dense and wide enough. They are a Priority Habitat under the NERC Act (2006). The following principles should be considered:

- Plant hedges consisting of a number of wildlife friendly species so that fruit, seed and nectar will be provided throughout most of the year; a minimum of four species is recommended.
- Provide space for dense hedges to grow to at least 2 metres wide with a wide margin on each side for long grasses to grow at their base.
- Locate new hedges so that they will contribute towards forming a local wildlife habitat network with neighbouring hedges, trees, shrubs, scrub, wildflower rich grassland and watercourses.



- Plant native hedges, such as hawthorn, blackthorn and holly, along boundaries where security is important.
- Ensure adequate access and resources are provided for long-term maintenance.
- Hedgerows should not be managed by flailing which is very damaging to the hedgerow and to the species it supports. Any hedgerow management regime shall be undertaken outside of bird nesting season'.

#### **Trees and shrubs**

'63 Native trees and shrubs provide shelter, nesting sites and fruit for birds. Their flowers provide nectar for bees and other insects. Provision of dead and decaying wood is valuable to a range of invertebrates which depend upon it to complete all or part of their life cycles. Dense scrub provides good cover and food for birds, insects and reptiles. The following principles should be considered:

- Provide native, wildlife friendly tree and shrub species of varying height and structure. A variety of species will also provide a protracted supply of pollen, nectar and fruit.
- Locate trees and shrubs so that they provide continuity with nearby existing habitat.
- Retain trees with holes and dead wood as these are particularly valuable for wildlife such as bats, birds, insects and fungi. Also retain woody cuttings, stumps and fallen branches on site.
- Herbaceous plants and/or long grass in front of shrub/tree areas will provide additional wildlife interest and maintain moisture beneath'.
- 1.4.3 National Planning Policy in England is detailed in the National Planning Policy Framework (NPPF). The last revised version of the NPPF (July 2021) includes the following three paragraphs on trees and development, with paragraph 131 giving weight to the retention and planting of trees on development site and paragraph 180 giving specific protection to Ancient Woodland, Veteran and Ancient trees:

'NPPF Para. 131: Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the longterm maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with



highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users'.

**'NPPF Para. 174:** Planning policies and decisions should contribute to and enhance the natural and local environment by:

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland'.

**'NPPF Para 180**: When determining planning applications, local planning authorities should apply the following principles:

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'

- 1.4.4 Table B.1 (See Figure 1) taken from British Standard 5837:2012 gives guidance on the level of information required by LPAs in order to make an informed decision on the impact of development on trees. Where trees are present on proposed development Sites, highlighting arboricultural constraints at an early stage in the design process is crucial to ensuring the successful retention and subsequent integration of good quality trees into the design layout.
- 1.4.5 When the tree constraints have been considered and a detailed site layout designed, specific site layout impacts on the trees proposed to be retained (and on those adjacent to the site) are considered via an Arboricultural Impact Assessment (AIA) and Tree Protection Plan (TPP). When the development design is finalised, taking into account the arboricultural impacts, it is usual for the LPA to condition the protection of the trees on site during the construction/ installation phase. This can be achieved via the production of an Arboricultural Method Statement (AMS) and TPP. These will detail how trees will be protected and include a methodology for any works within tree RPAs in order to ensure that tree protection conditions can be discharged. These steps accord with the recommendations in BS 5837:2012 as detailed in Table B.1 as shown in Figure 1.
- 1.4.6 This Arboricultural Constraints & Opportunities Report and accompanying Tree Location & Constraints Plan fulfils the requirement to present the existing



arboricultural constraints for the Site to enable the LPA to assess the impacts as part of the planning application for the solar farm on the Site.

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions)	Existing and proposed finished levels
	Tree retention/removal plan (finalized)	Tree protection plan
	Retained trees and RPAs shown on proposed layout	Arboricultural method statement – heads of terms
	Strategic hard and soft landscape design, including species and location of new tree planting	Details for all special engineering within the RPA and other relevant construction details
	Arboricultural impact assessment	
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or	Arboricultural site monitoring schedule
	where installed using a trenchless method	Tree and landscape management plan
	Dimensioned tree protection plan	Post-construction remedial works
	Arboricultural method statement – detailed	Landscape maintenance schedule
	Schedule of works to retained trees, e.g. access facilitation pruning	
	Detailed hard and soft landscape design	

Table B.1 Delivery of tree-related information into the planning system

Figure 1: BS 5837:2012 Table B.1.

#### 1.5 Statutory Legal Protection

- 1.5.1 The two main sources of protection afforded to trees are i) Conservation Area (CA) control and ii) Tree Preservation Orders (TPO).
- 1.5.2 Trees within Conservation Areas are protected under the Town & Country Planning Act 1990 (as amended), which affords blanket<sup>1</sup> protection to trees with a stem diameter of 75 mm and above when measured at 1.5 m from ground level.
- 1.5.3 Trees may also be protected by a TPO under the Town & Country Planning Act 1990 (as amended) and The Town and Country Planning (Tree Preservation) (England) Regulations 2012
- 1.5.4 It is a criminal offence to carry out any unauthorised works to trees that are either protected by a TPO or located within a CA, including:

<sup>&</sup>lt;sup>1</sup> Protection is similar to that afforded to trees protected by TPO.



- Cutting down, uprooting or wilfully destroying a tree, or wilfully damaging, topping or lopping a tree in such a manner as to be likely to destroy it;
- Any works that contravene the provisions of a TPO; and/or
- Any works in contravention to the regulations.
- 1.5.5 Penalties for non-compliance of a TPO and/or CA can be unlimited, if tried in a County Court, and up to £20,000 if tried in a Magistrates Court. Note, if the Local Planning Authority decides to also prosecute under the Proceeds of Crime Act 2002 in addition to prosecuting under the Town and Country Planning Act 1990, the fine can be unlimited in a Magistrates court.
- 1.5.6 It should be noted that the felling of trees prior to receiving full planning permission may also require a felling licence under the Forestry Act 1967. This requires that any persons wishing to fell 5 m<sup>3</sup> of trees within any of the following three-month periods (January to March, April to June, July to September and October to December) applies for a felling licence from the Forestry Commission. There are a number of exemptions to this requirement, with some of the more relevant exemptions including:
  - Pruning trees;
  - Felling fruit trees or trees growing in a garden, orchard, churchyard or designated public open space;
  - Felling trees that, when measured at a height of 1.3 m from the ground, have a diameter of 8 cm or less;
  - Felling trees immediately required for the purpose of carrying out development authorised by full planning permission;
  - Felling necessary for the prevention of danger or the prevention or abatement of a nuisance<sup>2</sup> (e.g. threat/danger to a third party); and
  - Felling necessary to prevent the spread of a quarantine pest or disease.
- 1.5.7 Other legislation that affords a lesser or indirect level of protection to trees includes the following:
  - The Wildlife & Countryside Act 1981 (as amended);
  - Conservation of Habitats and Species (amendment) Regulations 2017; and

<sup>&</sup>lt;sup>2</sup> NB - This only applies when a real and/or immediate danger is present.



- Hedgerow Regulations (1997).
- 1.5.8 All of the above provide for the identification and safeguarding of flora and fauna that may be found in association with trees and woodlands.

## 1.6 **Protected Species**

- 1.6.1 Although this is not an assessment of the impacts of development upon ecology, it should be noted that trees can contain features (i.e. cavities, cracks, splits and loose bark) that may support such fauna species as bats and birds.
- 1.6.2 Bats and their roosts are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats & Species Regulations 2017 (as amended) and are also listed under Section 41 of the Natural Environment & Rural Communities (NERC) Act 2006.
- 1.6.3 Trees provide potential nesting habitat for birds and all UK birds and their active nests are protected under the Wildlife & Countryside Act 1981 (as amended). Bird species that are listed on Schedule 1 of The Act are also protected against disturbance of their active nest(s).
- 1.6.4 The UK government has advised that following the exit of the UK from the EU, the EU Withdrawal Act 2018 will ensure that all existing EU environmental law will continue to operate in UK law<sup>3</sup>. The UK government and devolved administrations will "amend current legislation to correct references to EU legislation [...] and ensure we meet international agreement obligations".

<sup>&</sup>lt;sup>3</sup> DEFRA (2018) Upholding Environmental Standards if there's no Brexit Deal [online]. Accessed 12.04.2019. Available at: <u>https://www.gov.uk/government/publications/upholding-environmental-standards-if-theres-no-brexit-deal/upholding-environmental-standards-if-theres-no-bre</u>



#### 2 THE SURVEY

#### 2.1 Desk Survey – Legal Constraints

- 2.1.1 WA accessed RMBCs interactive map<sup>4</sup> 9<sup>th</sup> September 2021 to ascertain whether any trees within and/or immediately adjacent to the site are protected by TPO and/or CA status.
- 2.1.2 Our check of the Council's online mapping revealed that there are no TPOs or CAs present on and immediately adjacent to the site at this time. However, it should be noted that this situation can change as LPA's can serve TPOs at any time. Therefore, it is advisable to check the protective status of these trees again prior to undertaking any planned works.
- 2.1.3 WA also conducted a search using the Woodland Trust's Ancient Tree Inventory<sup>5</sup> and DEFRA's Magic Map Application<sup>6</sup> on 9<sup>th</sup> September 2021 to ascertain whether any recorded veteran trees and ancient woodland, wood pasture and parkland and traditional orchard habitats are located within influencing distance of the Site.
- 2.1.4 The Ancient Tree Inventory does not contain any records of recorded veteran trees within the Site, which is confirmed by our survey. However, the Ancient Tree Inventory is a record of trees found by professionals and enthusiasts and submitted to the Woodland Trust for inclusion on the database and therefore is not a complete record and cannot be used to rule out the presence of veteran trees outside Site boundaries.
- 2.1.5 DEFRA's Magic Map listed no ancient woodland, wood pasture and parkland and traditional orchard habitats within the Site and also within influencing distance of the Site.

#### 2.2 Field Survey

- 2.2.1 The arboricultural survey was undertaken by an experienced arboriculturist, Russell Pearce, on 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> October using the methodology set out in BS5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations (see Appendices 2 and 3).
- 2.2.2 Weather conditions during the survey were clear and dry.

<sup>&</sup>lt;sup>4</sup> <u>https://maps.rotherham.gov.uk/mapping/</u>

<sup>&</sup>lt;sup>5</sup> <u>https://ati.woodlandtrust.org.uk/</u>

<sup>&</sup>lt;sup>6</sup> <u>https://magic.defra.gov.uk/magicmap.aspx</u>



- 2.2.3 Each individual surveyed tree (T), tree group (G), woodland (W) and hedgerow (H) was given a sequential reference number.
- 2.2.4 The surveyed trees and hedgerows were then identified by their common and/or Latin name. Where a number of surveyed trees formed a cohesive feature, such as groups, woodland compartments or whole woodlands, they were recorded, assessed and plotted as groups (G) or as woodland (W). Whilst not every tree within groups is surveyed, a representative sample of the largest edge trees were measured in order to be able to plot the group or woodlands crown spreads and RPAs. Where detailed plans show development proposed within a group or woodland, all trees within influencing distance of the development proposals are recorded, plotted and assessed.
- 2.2.5 A series of measurements were taken where appropriate, including:
  - Stem diameters measured at 1.5 m above ground level with a standard diameter measuring tape to enable RPAs to be calculated;
  - Tree height, crown height and height of first significant branch in the crown above ground level measured using a TruPulse 200L laser to inform on ground clearance, crown/stem ratio and shading; and
  - Crown (branch) spreads measured with a TruPulse 200L at the four cardinal points (i.e. north, east, south and west) to enable an accurate representation of the crowns to be plotted on the TPP.
- 2.2.6 A description of the life stage of each surveyed tree is identified as follows:
  - Young Newly planted trees and self-seeded trees;
  - Semi-mature Large nursery stock that can be newly planted or self-seeded trees still in the early stages of establishment;
  - Early mature Trees in the first third of their life cycle which is characterised by their quickness of growth and subsequently significant increase in size;
  - Mature Trees in the second third of their life cycle, characterised by reaching their ultimate size and slowing of annual incremental growth;
  - Late mature Trees in the final third of their life cycle, often characterised by showing signs of decline; and
  - Veteran Trees that show ancient tree characteristics irrespective of their age, such as crown retrenchment and decaying wood habitat.



- 2.2.7 An assessment of each tree's physiological and structural condition is identified as G (good), F (fair), P (poor) or D (dead).
- 2.2.8 An estimated remaining contribution in years within the context of the current site usage was identified as <10, 10+, 20+ or 40+.
- 2.2.9 The trees were then classified in accordance with the BS5837:2012 tree quality assessment categories 'A', 'B', 'C' and 'U' (see category criteria and grading within Appendix 3). 'A' and 'B' category trees are considered as 'high' and 'moderate' quality, respectively, and are considered as a constraint to development. As such, these trees should be retained and afforded appropriate protection during development. 'C' category trees are considered to be of 'lower' quality due to their condition or 'lower' amenity value and are, therefore not usually considered a constraint to development. 'U' category trees are those in such a 'poor' condition that they cannot usually be retained within the current site context for longer than ten years. It should be noted that in some cases, category 'U' trees may have valuable habitat/ecological value despite being in poor condition. In such cases, where it is safe to do so, these trees may be recommended for retention and/or pruning works. Where relevant, we will bring such trees to your attention. Where trees are located outside of the red and blue line site boundaries, irrespective of their BS 5837 categorisation, these should be considered as a constraint during the Site layout design process and protected during construction, as such trees are not within the control of the site owner.
- 2.2.10 Root Protection Areas (RPAs) are calculated for individual trees utilising the methodology set out in BS 5837:2012, which is calculated by multiplying the stem diameter (measured at 1.5 m from ground level) by twelve for single-stemmed trees and a variant on this for multi-stemmed trees. For surveys in England (and outside England where it is a Local Planning Policy requirement), individual veteran trees are given a standard BS 5837 RPA and also a secondary veteran tree RPA, to accord with government's standing advice 'Ancient woodland, ancient trees and veteran trees: protecting them from development' <sup>7</sup> and local planning policy, which is based on a calculation of fifteen times the stem diameter or five metres beyond the crown spread, whichever is greater.
- 2.2.11 For tree groups, woodlands and hedgerows, the calculated RPAs are based on a set distance from the canopy edge of the tree groups, woodlands and hedgerows. This

<sup>&</sup>lt;sup>7</sup> <u>https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences</u>



calculation is based on the largest stem diameter of the trees on the edge of the tree groups and woodlands and the crown spread measurement for these edge trees. A variant of the tree group and woodland RPA calculation is used to calculate hedgerow RPAs, with the calculation based on the largest stem diameter of the hedgerow woody plants and the hedgerow width.

2.2.12 Further details for each tree, and the groups of trees surveyed are set out in the Tree Survey Schedule (see Appendix 1) and on the Tree Location & Constraints Plan Ref. No. NT15562-006 Rev. A Sheets 1-4.



#### 3 SURVEY RESULTS AND EVALUATION

#### 3.1 **Tree Population**

- 3.1.1 The trees assessed and surveyed, which are located on and immediately adjacent to the Site included 176 individual trees, 43 tree groups, two woodlands and six hedgerows.
- 3.1.2 The survey revealed only two of the individual surveyed trees were classed as category 'A' quality, whilst 85 were classified as category 'B' quality, 58 as category 'C' quality and 30 as category 'U' quality. Such a high number of category 'U' quality trees were found, due to ash dieback disease being prevalent within the ash tree population on Site. Where there are existing targets e.g. roads, etc adjacent to these category 'U' quality ash trees, these trees have been recommended for urgent removal or monolithing e.g. the crown is removed and the stem retained for habitat reasons.
- 3.1.3 In terms of the surveyed groups and woodlands, 19 were classified category 'B' quality, 22 were classified as category 'C' quality and four were classified category 'U' quality. No 'A' quality groups/woodlands were found during the survey.
- 3.1.4 A detailed description of all trees and groups of trees surveyed and recommended works can be found in the Tree Survey Schedule in Appendix 1. Tables 1 and 2 below summarises the BS 5837 quality grading of the trees found on Site, with these figures represented in graph format in Figures 2 and 3.



	Table 1: In	dividual Trees Quality As	sessment Summary	
Tree quality	А	В	С	U
Individual Trees Identification	T162, T163	T2, T5, T7, T8, T9, T10, T11, T12, T13, T15, T16, T17, T19, T21, T23, T25, T26, T27, T29, T30, T31, T32, T33, T34, T35, T36, T38, T39, T40, T41, T44, T48, T52, T53, T54, T55, T58, T69, T70, T74, T75, T76, T78, T89, T91, T92, T93, T94, T96, T97, T98, T99, T100, T105, T109, T110, T114, T115, T116, T117, T120, T121, T127, T128, T129, T132, T133, T134, T135, T136, T147, T148, T149, T150, T151, T156, T159, T161, T164, T167, T168, T169, T170, T174, T174	T1, T3, T6, T14, T18, T20, T22, T24, T28, T37, T42, T43, T45, T49, T51, T59, T61, T62, T63, T64, T65, T67, T68, T71, T77, T80, T81, T87, T90, T95, T102, T103, T104, T106, T107, T108, T112, T118, T119, T122, T123, T124, T125, T126, T130, T131, T140, T141, T142, T143, T152, T154, T155, T160, T171, T172, T173, T175	T4,T46,T47,T50,T56,T 57,T60,T66,T72,T73,T 79,T82,T83,T84,T85,T 86,T88,T101,T111,T1 13,T137,T138,T139,T 144,T145,T146,T157, T158,T165,T166
Totals	2	85	58	30

Tab	le 2: Tree Groups	& Woodlands Qualit	y Assessment Summa	ary
Tree quality	А	В	С	U
		G6, G7, G8, G10,	G1, G4, G5, G9,	G2, G3, G24, G35
		G11, G15, G20,	G12, G13, G14,	
Tree Groups and		G22, G25, G27,	G16, G17, G18,	
Woodland		G28, G29, G31,	G19, G21, G23,	
Identification		G33, G37, G40,	G26, G30, G32,	
		G41, G42,W1	G34, G36, G38,	
			G39, G43,W2	
Totals	0	19	22	4



# Figure 2: Individual Trees Quality Summary





Figure 3: Tree Groups & Woodland Quality Summary

- 3.1.5 The surveyed hedgerows were not categorised, as BS 5837 does not include a methodology for the categorisation of hedgerows. However, the extent of the canopy spread and RPAs for hedges is shown on the Tree Location and Constraints Plan NT15562-006 Rev. A Sheets 1-4.
- 3.1.6 An assessment of the age class of the individual tree population on Site, reveals that the population is predominantly made up of semi-mature trees, with these accounting for 52% of the population. The remaining individual tree population is made of early-mature trees accounting for 20% of the population, young trees 15%, mature trees 12% and late-mature trees 1%. No veteran individual trees were found during the survey. A summary of the age class assessment for individual trees is shown in the graph in Figure 4.



Figure 4: Individual trees age class assessment summary.



#### 4 SUMMARY AND RECOMMENDATIONS

- 4.1.1 The initial BS 5837:2012 tree survey was undertaken by Wardell Armstrong on 11<sup>th</sup>-13<sup>th</sup> October 2021, with the results of which informing this report and associated Tree Location & Constraints Plan Ref. NT15562-006 Rev. A Sheets 1-4.
- 4.1.2 The trees on and immediately adjacent to the Site are currently not protected by Tree Preservation Orders, nor is the Site in a Conservation Area.
- 4.1.3 There are no Ancient or Veteran Trees on or immediately adjacent to the Site. There are also no ancient woodlands or wood pasture and parkland and traditional orchard habits within and adjacent to the Site.
- 4.1.4 A number of ash trees within the Site have been colonised by ash dieback disease, with removal and monolithing reduction works recommended urgently for those that are located adjacent to targets such as roads and footpaths. Full details of the recommended tree works, with timescales for undertaking the works can be found in the survey schedule in Appendix 1 of this report.
- 4.1.5 The next stage in the process is to utilise this arboricultural constraints information to inform detailed site layout planning for the development on Site.
- 4.1.6 If the proposed solar scheme development is approved by the LPA, retained trees will need to be protected when the proposed development is constructed, with tree protection fencing as per the recommendations set out in BS 5837:2012. An example of the type of tree protection fencing recommended by the Standard is provided within Appendix 6 and an example of the type of signage required to be affixed to the fencing being provided in Appendix 7.
- 4.1.7 Where there are impacts within retained tree and hedgerow RPAs, mitigation measures will be required. An AMS can provide full mitigation details and specifications, which if required can be conditioned by the LPA.



## 5 REFERENCES

British Standard, BS 3998:2010 Tree work. Recommendations. (The British Standards Institution, 2010).

British Standard, BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. (The British Standards Institution, 2012).

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https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservationareas

Forestry Commission (2007) Tree Felling – Getting Permission.

Claus Mattheck (2007) Updated field guide for Visual Tree Assessment.

Forestry Commission & Natural England (Updated 4<sup>th</sup> January 2018) Ancient Woodland and Veteran Trees: Protecting them from Development – Guidance.

https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protectionsurveys-licences#veteran-trees



Appendix 1 Tree Survey Schedule Location: Common Farm (Job. No.: NT15562)

Estimated Stem Diameters & Other Measurements highlighted in this colour

Surveyor: Russell Pearce

Weather: Clear and dry

Survey Date: 11th, 12th & 13th October 2021

						Crown	Spread (	(m)								Cone	dition									
Item type: T (tree), G (group), H (hedge), W (woodland)	Tree/ Group Ref. No.	Botanical Name	Height(m)	Crown Clearance (m) & compass direction	North	East	South	West			Stem Diameter @ 1.5m (mm)			Number of stems	Age Class: Y (Young), SM (Semi- Mature), EM (Early-Mature), M (Mature), LM (Late-mature), V (Veteran)	<pre>Physiological Condition: G (Good), F (Fair), P (Poor), D (Dead)</pre>	Structural Condition: G (Good), F (Fair), P (Poor)	Estimated Remaining Contribution: (<10, 10+, 20+, 40+)	BS5837 Categorisation Grading	Sub Category	Comments	Preliminary management recommendations/ further works	Bat potential: L (Likely) U (Unlikely)	BS 5837 Root Protection Area (m²)	BS 5837 Root Protection Radius (m)	Veteran Tree Root Protection Radius (m)
т	1	Common Oak	4.5	2	2	0.5	1	1	100					1	Y	G	G	40+	С	1	Crown lifted over road. Good form and vitality.	No action required.	U	4.5	1.2	N/A
т	2	Common Oak	5	2	2	4	3	2.5	220					1	SM	G	G	40+	В	1	Good form and vitality.	No action required.	U	22	2.6	N/A
т	3	Common Oak	4	1.5 NW	2	3	3.5	4	220					1	SM	G	G	20+	С	1	Multiple impact branch tearouts over road.	No action required.	U	22	2.6	N/A
т	4	English Elm	8.5	2 W	4.5	5.5	5.5	6	320					1	SM	Ρ	F	<10	U		Significant (>90%) crown dieback caused by Dutch Elm disease. Advanced state of decline. Missing bark throughout crown.	Remove as part of development, if close to proposed structures.	U	46	3.8	N/A
т	5	Sycamore	18.5	4m S	4	4	4	4	330					1	SM	G	G	40+	В	1	Dense ivy covering stem. Good form and vitality. Crown lifted over access road.	No action required	U	49	4.0	N/A
т	6	Sycamore	2.5	0.5 SE	1.5	1.5	1.5	1.5	100					1	Y	G	G	40+	С	1	Good form and vitality. No defects noted.	No action required.	U	4.5	1.2	N/A
Т	7	Cappadocian Maple	5.5	2	2	3	3	3	120	110	100	140	130	5	SM	G	G	40+	В	1	Good form and vitality. No defects noted.	No action required	U	33	3.2	N/A
т	8	Sycamore	9	2m W	3.5	1.5	3.5	4.25	280					1	SM	G	G	40+	В	1	Minor asymmetric crown due to proximity of adjacent tree. Good form and vitality.	No action required.	U	35	3.4	N/A



Т	9	Common Oak	10.5	1.75m N	3	6.5	6.5	2	360			1	SM	G	G	40+	В	1	Asymmetric crown due to proximity of adjacent tree. Some powdery mildew on foliage in lower crown. Crown lifted over road.	No action required.	U	59	4.3	N/A
т	10	Sycamore	13	4	4.5	5	5	4	430			1	SM	G	G	40+	В	1	Dense ivy covering stem and primary branch framework. Crown lifted over road. Tar spot on foliage throughout crown.	No action required	U	84	5.2	N/A
т	11	Common Oak	10.5	4	4	4	4	4	340			1	SM	G	G	40+	В	1	Powdery mildew on foliage in lower crown.	No action required.	U	52	4.1	N/A
т	12	Common Oak	14	5m N	7	7	7	7	900			1	М	G	F	40+	В	1	Historic wound in upper centre of crown - open cavity with significant reaction/wound wood present.	No action required.	U	366	10.8	N/A
т	13	Common Oak	13	4	7	7	7	7	380			1	SM	G	G	40+	В	1	Ivy throughout crown. Minor deadwood throughout crown.	No action required.	U	65	4.6	N/A
т	14	Wild Cherry	5.5	1	5	6	4	4	160			7	EM	G	F	10+	С	1	Multiple acute included primary unions. Large exposed roots with minor mechanical damage. Two branch tear outs with some cavitation.	No action required.	U	81	5.1	N/A
т	15	Sycamore	10	2.5	6	5.5	5.5	5.5	370			1	SM	G	G	40+	В	1	No defects noted	No action required	U	62	4.4	N/A
т	16	Common Hawthorn	8.5	0.5	2.5	3	2.5	2.5	350	120		2	М	G	G	20+	В	1	Minor suppression by adjacent trees.	No action required	U	62	4.4	N/A
т	17	Weeping Willow	13.5	3 5	4	6.5	6.5	3	520			1	EM	G	G	20+	В	1	Minor stem lean to south- east. Minor deadwood throughout crown. Minor suppression by adjacent group.	No action required.	U	122	6.2	N/A
т	18	Common Ash	6	2	2.25	2.25	2.25	2.25	170			1	Y	G	G	40+	С	1	No defects noted.	No action required	U	13	2.0	N/A

т	19	Common Ash	13	2.5 N	6	6	6	6	440			1	SM	G	G	40+	В	1	No defects noted.	No action required	U	88	5.3	N/A
т	20	Common Ash	5.5	1.5	2	2.5	2.25	2	150			1	Y	G	G	40+	С	1	No defects noted	No action required	U	10	1.8	N/A
т	21	Leyland Cypress	15	1.5 S	5	5	5	5	710			1	EM	G	F	20+	В	1	Multiple acute, included primary unions.	No action required.	U	228	8.5	N/A
т	22	Copper Beech	7	0	4	2.5	1.5	2.5	230	120		2	SM	G	G	20+	С	1	Poor form. Suppressed by adjacent tree.	No action required	U	30	3.1	N/A
т	23	Weeping Willow	13.5	2	9	11	9	9	800			1	М	G	G	20+	В	1	Minor deadwood throughout crown. Multiple partially occluded pruning wounds from previous crown lift pruning	No action required.	U	290	9.6	N/A
т	24	Silver Birch	7	1.5	1.5	1	2	2	110			1	Y	G	G	40+	с	1	No defects noted	No defects noted	U	5.5	1.3	N/A
т	25	Weeping Willow	14	2 N	9	11	12	7	700	480		2	М	G	G	20+	В	1	Multiple large, partially occluded pruning wounds from previous crown lifting pruning.Moderate deadwood throughout.	No action required.	U	326	10.2	N/A
т	26	Hybrid Black Poplar	19	4 S	6	6	7	7	560			1	EM	G	G	20+	В	1	No detects noted.	No action required	U	142	6.7	N/A
т	27	Common Ash	13	4 S	5	5	7	6	440			1	EM	G	G	20+	в	1	No defects noted.	No action required	U	88	5.3	N/A
т	28	Atlas Cedar	7	0	2	2	2.5	1	150			1	SM	G	G	10+	С	1	Sweep at base of stem.Reduced crown density.	No action required	U	10	1.8	N/A
т	29	Silver Birch	6	2	3	3	3	2	120	80		2	SM	G	G	20+	В	1	No defects noted.	No action required	U	9.4	1.7	N/A
Т	30	Silver Birch	6.5	1.5 N	4	3.5	4.5	4	300			1	SM	G	G	20+	В	1	No defects noted.	No action required	U	41	3.6	N/A
Т	31	Common Oak	8.5	2	6	5	5	4.5	430			1	SM	G	G	40+	В	1	No defects noted.	No action required	U	84	5.2	N/A
т	32	Common Ash	7	1.5	3.5	4	4	3.5	320			1	SM	G	G	20+	В	1	Minor reduction in crown density.	No action required	U	46	3.8	N/A

т	33	Silver Birch	8	2 NE	2	3	4.25	2.5	280			1	SM	G	G	20+	В	1	Minor deadwood in lower crown.	No action required.	U	35	3.4	N/A
т	34	Common Oak	8.5	2 NE	9	8	6	6.5	430			1	SM	G	G	40+	В	1	Some impact damage to branches on south-west side. Minor deadwood throughout crown.	No action required.	U	84	5.2	N/A
т	35	Common Oak	8.5	2.25	5	4	5	4.25	410			1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	76	4.9	N/A
т	36	Common Oak	4.5	2	5	4.5	4.25	4	400			1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	72	4.8	N/A
т	37	Common Oak	3.25	1 NE	2.5	2	2	2	190			1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	16	2.3	N/A
т	38	Common Oak	15.5	4 NW	6	9.5	10	7.5	830			1	EM	G	G	40+	В	1	Good specimen. Partially occluded basal stem wound on north side. Minor deadwood throughout crown.	No action required.	U	312	10.0	N/A
т	39	Common Oak	8.5	2.25 N	6.5	8	7	4.5	440			1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	88	5.3	N/A
т	40	Common Oak	13.5	5 S	6.5	6.5	6.5	6	420			1	SM	G	G	40+	В	1	Good specimen. No defects noted.	No action required.	U	80	5.0	N/A
т	41	Common Oak	8	4	5.25	5	5	5	440			1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	88	5.3	N/A
т	42	Common Oak	2.75	0.5	2	2	2	2	130			1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	7.6	1.6	N/A
т	43	Common Oak	7.5	2	5	5	5	5	400			1	SM	F	G	10+	С	1	Reduced crown density, with some reactive epicormic growth in centre of crown. Deadwood in lower crown.	No action required.	U	72	4.8	N/A
Т	44	Common Oak	15.5	1 E S W	8	9	9	9	870			1	М	G	G	40+	В	1	Good specimen. Minor deadwood throughout crown.	No action required.	U	342	10.4	N/A
т	45	Silver Birch	5.5	1	3	3	3.5	2.5	250	110		2	Y	G	G	20+	С	1	No defects noted.	No action required	U	34	3.3	N/A

т	46	Common Oak	3.5	1	4	4	3	3.5	190	180		2	SM	G	F	20+	U		Previously topped beneath electricity lines - low aesthetic value. Will require ongoing management.	Remove as part of development, if close to proposed structures.	U	31	3.1	N/A
т	47	Common Oak	5.25	1.5 NE	4.5	4	4	4	370			1	SM	G	F	20+	U		Located beneath electricity lines. Heavily pruned back from power lines. Poor form and low aesthetic value. Will require ongoing management.	Remove as part of development, if close to proposed structures.	U	62	4.4	N/A
т	48	Common Oak	6.5	1.75 S	6.5	4.5	5	5	240	250		2	SM	G	G	40+	В	1	Minor deadwood within lower crown.	No action required.	U	54	4.2	N/A
т	49	English Elm	4.25	1.5	3	3.5	3	2.25	220			1	SM	F	G	10+	С	1	Reduced crown density. Minor peripheral dieback in outer crown.	No action required.	U	22	2.6	N/A
т	50	Common Ash	8.5	2 W	5	3.5	5	4.5	450			1	EM	F	G	<10	U		Tree in decline with ash dieback present. Dense ivy covering stem and primary branch framework. Large gap in crown from dieback. Low aesthetic value. Limited useful life expectancy.	Remove as part of development, if close to proposed structures.	U	92	5.4	N/A
т	51	Common Oak	4.5	1	3	2	2	2	210			1	Y	G	G	40+	С	1	At maturity tree will will need ongoing maintainance due to proximity of electricity lines.	Consider removal due to proximity of electricity lines.	U	20	2.5	N/A
т	52	Common Oak	8	2	6	6.5	8	6	560			1	EM	G	G	40+	В	1	Multiple occluded pruning wounds from previous crown lifting pruning. Limited access to stem due to ditch.	No action required.	U	142	6.7	N/A
т	53	Common Oak	4	0.5	4	4	4	4.25	330			1	SM	G	G	40+	В	1	Exposed tree with squat form.	No action required.	U	49	4.0	N/A
т	54	Common Oak	12	2.25 S	7	7	8	7	710			1	EM	G	G	40+	В	1	Good specimen. Lower crown flailed back to 4m in height. Deadwood within crown. Located at top of ditch.	No action required.	U	228	8.5	N/A

т	55	Common Oak	4.25	0	5	4.5	4.25	4.5	370				1	SM	G	G	40+	В	1	Flailed back to a height of 2.5m on west side.	No action required	U	62	4.4	N/A
т	56	Common Ash	7	0	3	3	3	1.5	280	300			2	SM	Ρ	Ρ	<10	U		Tree in advanced state of decline. Dense vegetation prevented access to stem. Ash dieback present. Deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	76	4.9	N/A
т	57	Common Ash	16	3 S	3	4.5	5	3	290				1	SM	Ρ	Ρ	<10	U		Ash dieback present with significant dieback and deadwood throughout.	Remove as part of development, if close to proposed structures.	U	38	3.5	N/A
т	58	Common Oak	5.5	0	4.5	5	5	4.5	440				1	SM	G	G	40+	В	1	Dense vegetation prevented access to stem. Minor deadwood throughout crown.	No action required.	U	88	5.3	N/A
т	59	Common Oak	3.5	0	2.25	4	4	3	120	110			2	Y	G	G	40+	С	1	No defects noted.	No action required.	U	12	2.0	N/A
т	60	Common Ash	9	25	2.5	5	4.5	4	260				1	SM	Ρ	F	<10	U		Ash dieback present with some localised dieback in crown and deadwood throughout. Low aesthetic value. Limited useful life expectancy.	Remove as part of development, if close to proposed structures.	U	31	3.1	N/A
т	61	Common Oak	11	3 E	7.5	9	6	2.5	590				1	EM	G	F	40+	С	1	Heavily pruned back / reduced on west side of crown away from electricity lines. Poor form. Limited useful life expectancy.	No action required.	U	157	7.1	N/A
т	62	Common Hawthorn	2.25	0	1.5	1	1	1	90				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	3.7	1.1	N/A
Т	63	Common Hawthorn	2	0.5	1.25	1.25	2	0.5	120				1	EM	F	G	<10	С	1	Low aesthetic value. Reduced crown density.	No action required.	U	6.5	1.4	N/A
Т	64	Sycamore	5	1	1.25	1.25	2	1	130				1	Y	G	G	40+	С	1	Tar spot on foliage throughout crown.	No action required.	U	7.6	1.6	N/A
Т	65	Common Hawthorn	3.5	0	1.5	1.75	2.25	1.5	90	110	110		3	EM	F	F	10+	С	1	Reduced crown density. Deadwood throughout crown.	No action required.	U	15	2.2	N/A

т	66	Common Ash	6	1.5 N	3.25	3	4	3.5	240	180	140		3	SM	Ρ	F	<10	U		Ash dieback present with significant dieback in upper crown. Limited useful life expectancy.	Remove as part of development, if close to proposed structures.	U	50	4.0	N/A
т	67	Common Ash	5	1	1.5	1.5	1.5	1.5	150				1	SM	G	G	40+	С	1	Minor peripheral dieback in upper crown.	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	10	1.8	N/A
т	68	Common Ash	5	1	2	2	1.5	1.25	140				1	Y	G	G	20+	С	1	Minor peripheral dieback in upper crown	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	8.9	1.7	N/A
т	69	Common Oak	5	1	3	3	3	2.5	220				1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	22	2.6	N/A
т	70	Goat Willow	8	0	4	7	8	6.5	800				1	М	G	G	10+	В	1	No access to stem, due to dense foliage. Minor deadwood throughout.	No action required.	U	290	9.6	N/A
т	71	Common Hawthorn	3	0	2	2	2	2	200	180	180		3	SM	F	G	10+	С	1	Reduced crown density. Rip outs and deadwood within crown.	- No action required	U	47	3.9	N/A
т	72	Common Hawthorn	3	0	2	4	2.5	1.5	120	100	120	140	4	EM	G	Ρ	<10	U		Multi stemmed at base with significant decay.	Remove as part of development, if close to proposed structures.	U	26	2.9	N/A
T	73	Common Ash	15.5	0	5	6.5	8	6	590				1	LM	Р	Р	<10	U		Large open cavity at base of tree on north side. Ash dieback disease with significant crown dieback.	Remove if land use intensifies near the tree, prior to intensification. Note, must be inspected by an ecologist for bats, prior to removal.	L	157	7.1	N/A
т	74	Common Hawthorn	2.25	0	2	2	2	2	90	80	110		3	SM	G	G	40+	В	1	No defects noted.	No action required.	U	12	2.0	N/A
т	75	Common Hawthorn	4	0	2	2	2	2	190	210			2	SM	G	G	40+	В	1	No defects noted.	No action required.	U	36	3.4	N/A

т	76	Coast Redwood	4	0	2	2.5	2	2	130	110	90	130	4	Y	G	G	40+	В	1	No defects noted.	No action required	U	24	2.8	N/A
т	77	Common Ash	16	4 N	8.5	9	9	8	630				1	М	F	F	10+	С	1	Reduced crown density. Moderate deadwood throughout crown. Occluded basal stem wound. Some peripheral crown dieback.	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	180	7.6	N/A
т	78	Common Hawthorn	5	0	4	4	4	4	110				6	SM	G	G	40+	В	1	Multi stemmed at base. No defects noted.	No action required.	U	33	3.2	N/A
т	79	Common Oak	2	0	2	1	2	1.5	150				1	SM	Ρ	F	<10	U		Stag headed crown. Chlorotic leaves throughout crown. Deadwood throughout Two relatively large branch tearouts on stem.	Remove as part of development, if close to proposed structures.	U	10	1.8	N/A
т	80	Common Oak	2.5	0.5	2	2.25	3	2	140				1	SM	F	G	10+	С	1	Chlorotic leaves throughout crown.	No action required.	U	8.9	1.7	N/A
т	81	Sycamore	2.5	0	1.5	1.5	1	0.25	100				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	4.5	1.2	N/A
т	82	Common Ash	5	2 NW	3	3	2.5	2	110	125	135		3	SM	Ρ	F	<10	U		Ash dieback - with significant crown dieback. Deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	21	2.6	N/A
Т	83	Common Ash	7.5	2.5	2.5	2	2.25	1.5	220				1	SM	Ρ	F	<10	U		Ash dieback disease present with significant crown dieback. Deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	22	2.6	N/A
т	84	Common Ash	6	1.5	1	2	2	1	110	90	140		3	SM	Р	F	<10	U		Ash dieback disease present with significant crown dieback. Deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	18	2.4	N/A

т	85	Common Ash	9.5	2.5 NE	4.5	4	2	2	390				1	EM	Ρ	F	<10	U		Ash dieback disease present with significant crown dieback. Bacterial canker throughout stem. Large deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	69	4.7	N/A
т	86	Common Ash	11	1 E	4	4	2	3	520				1	EM	Ρ	F	<10	U		Ash dieback disease present with significant crown dieback. Large deadwood throughout upper crown. Proximity to ditch limited access to stem.	Remove as part of development, if close to proposed structures.	U	122	6.2	N/A
т	87	Common Oak	4	0	2	1.5	2	0.5	80	90	95		3	Y	G	G	40+	С	1	No defects noted.	No action required.	U	11	1.8	N/A
т	88	Common Ash	4	2 5	0.5	0.5	2	0.5	130				1	Y	Ρ	F	<10	U		Ash dieback present with significant crown dieback. Heavily suppressed by adjacent tree.	Remove as part of development, if close to proposed structures.	U	7.6	1.6	N/A
т	89	Common Oak	13.5	1.5	7	8	6.5	5	620				1	EM	G	G	40+	В	1	No defects noted. Located within hedgerow.	No action required.	U	174	7.4	N/A
т	90	Common Ash	13	1.5	5.5	3	4	5	420				1	EM	F	F	10+	С	1	Some peripheral dieback in outer crown. Deadwood within crown. Located within hedgerow.	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	80	5.0	N/A
т	91	Common Oak	9.5	2	6	5.5	4.5	6.5	500				1	SM	G	G	40+	В	1	Good specimen. No defects noted. Located within hedgerow.	No action required	U	113	6.0	N/A
т	92	Common Oak	6.5	1	4.5	5	3	5	430				1	SM	G	G	40+	В	1	Flailed back to a height of 3m on south side. Snapped out hung up branch in south of crown. Located within hedgerow.	Remove snapped out hung up branch if land use intensifies near the tree.	U	84	5.2	N/A
т	93	Common Oak	4.25	0	2.5	4	2	3	328				1	SM	G	G	40+	В	1	No defects noted. Located within hedgerow.	No action required	U	49	3.9	N/A

т	94	Silver Birch	5	1.5	4.25	5	4	5	160	160			2	SM	G	G	20+	В	1	Snapped out hung up branch in southern lower crown. Located within hedgerow.	Remove hung up branch if land use intensifies near the tree.	U	23	2.7	N/A
т	95	Mountain Ash	4	0	2	2	1	2	75				6	SM	F	G	10+	С	1	Reduced crown density. Low aesthetic value. Located within hedgerow.	No action required.	U	15	2.2	N/A
т	96	Common Oak	6	1.5	4.5	5	4	4.25	350				1	SM	G	G	40+	В	1	Minor deadwood in lower crown. Located within hedgerow.	No action required.	U	55	4.2	N/A
т	97	Common Ash	14	4	7	8	7	6	620				1	EM	G	G	20+	В	1	Minor deadwood throughout. Some localised branch lions tailing within crown. Multiple occluded pruning wounds from previous crown lifts.	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	174	7.4	N/A
т	98	Common Ash	9	2 NW	6.5	7	4.5	5	410				1	EM	G	G	20+	В	1	Some minor localised lions tailing. Located within hedgerow.	Monitor for ash dieback disease, by re-inspecting summer 2022.	U	76	4.9	N/A
т	99	Silver Birch	7.5	1.5	2	2	2	2	130				1	SM	G	G	20+	В	1	No defects noted.	No action required.	U	7.6	1.6	N/A
т	100	Common Oak	15	3	6.5	6	5	6	420				1	EM	G	G	40+	В	1	Good specimen. No defects noted. Located within hedgerow.	No action required.	U	80	5.0	N/A
Т	101	Common Ash	10.5	2	4.5	4	4.5	5	210	220	245	180	4	EM	F	Ρ	<10	U		Significant decay at base with open cavity. Reduced crown density. Peripheral dieback. No access to stem due to proximity to ditch.	Remove if land use intensifies near the tree, prior to intensification. Note, must be inspected by an ecologist for bats, prior to removal.	L	84	5.2	N/A
т	102	Common Hawthorn	4	0	2	0	2	2	75				6	SM	G	F	10+	с	1	Significantly flailed back on south-east side.	No action required.	U	15	2.2	N/A
т	103	Common Hawthorn	4	0	2.5	3	0.25	2.5	80				8	SM	G	F	10+	С	1	Significantly flailed back on south-east side.	No action required.	U	23	2.7	N/A

Т	104	Common Hawthorn	4.25	0	2.5	3	0	2	75				9	SM	G	F	10+	С	1	Significantly flailed back on south-east side.	No action required.	U	23	2.7	N/A
Т	105	Field Maple	8.5	0	6	6	6	6	200				7	EM	G	G	40+	В	1	Flailed back to 0.5m from stem to a height of 3m. Form indicates this was historically part of a hedgerow, previously maintained at 1m.	No action required.	U	127	6.3	N/A
т	106	Common Horse Chestnut	4.25	0.5 NW	3	3	3	3	160				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	12	1.9	N/A
т	107	Sycamore	4.25	0.5	3	3	3	3	130	110	150		3	Y	G	G	40+	С	1	No defects noted.	No action required.	U	23	2.7	N/A
т	108	Sycamore	4.25	0.5	3	3	3	3	150				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	10	1.8	N/A
т	109	Sycamore	6	1	3.5	3.5	2	2	260				1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	31	3.1	N/A
Т	110	Common Ash	14.5	0	7	7.5	9	7.5	630				1	М	G	G	20+	В	1	Some lions tailing in upper crown. Deadwood throughout. Located within hedgerow.	Remove deadwood >50 mm diameter if land use intensifies near the tree.	U	180	7.6	N/A
Т	111	Common Ash	15	4 W	7	7	7	7	980				1	М	F	Ρ	<10	U		Masses of Inonotus hispidus decay fungi fruiting bodies on stem at 4m from ground level, with multiple old brackets on the ground close to stem. Large limb snapped out in close proximity to the decay fungi. Deadwood throughout crown.	Remove as part of development, if close to proposed structures.	U	434	11.8	N/A
Т	112	Common Oak	11	3.5 S	5	5.5	6	5	390				1	SM	F	F	10+	С	1	Reduced density crown. Moderate deadwood throughout. Located within hedgerow.	Remove deadwood >50 mm diameter if land use intensifies near the tree.	U	69	4.7	N/A

т	113	Common Ash	14	4 NE	7	6	6.5	4	475				1	М	Ρ	Р	<10	U		Multiple Inonotus hispidus brackets decay fungi fruiting bodies throughout stem. Significant crown dieback Large deadwood within crown. Located within hedgerow.	Remove as part of development, if close to proposed structures.	U	102	5.7	N/A
Т	114	Common Oak	10.5	2.5	6	6.5	6	6	420				1	SM	G	G	40+	В	1	No defects noted. Located within hedgerow.	No action required.	U	80	5.0	N/A
т	115	Common Oak	14	3	6.5	9	9.5	6	980				1	М	G	G	40+	В	1	Good specimen. Large deadwood within crown. Damage to understand of scaffold branch on south side, however not significant. Located within hedgerow.	No action required.	U	434	11.8	N/A
т	116	Common Oak	10.5	1.5 E	7	5	6.5	6.5	630				1	SM	G	G	40+	В	1	Minor deadwood throughout crown. Located within hedgerow.	No action required.	U	180	7.6	N/A
т	117	Common Oak	10	2 E	5	4.5	5.5	5	340				1	SM	G	G	40+	В	1	No defects noted. Located within hedgerow.	No action required.	U	52	4.1	N/A
т	118	Holm Oak	4	1.5	1.5	2.25	1	1	60	80	120		3	Y	G	G	40+	С	1	Flailed back on south side with typical flailing damage. Located within hedgerow.	No action required.	U	11	1.9	N/A
т	119	Holm Oak	3.5	0	1.5	1.5	1.5	1.5	80	90			2	Y	G	G	40+	С	1	No defects noted. Located within hedgerow.	No action required.	U	6.6	1.4	N/A
т	120	Silver Birch	13	3 E	4.5	5	4.5	4.5	330				1	EM	G	G	20+	В	1	No defects noted. Located within hedgerow.	No action required.	U	49	4.0	N/A
Т	121	Common Oak	12	1.5 SE	5	5	5	5	320				1	SM	G	G	40+	В	1	No defects noted. Located within hedgerow.	No action required	U	46	3.8	N/A
т	122	Common Ash	13.5	2 N	5	6	5	4	420				1	EM	F	F	10+	С	1	Ash dieback disease, with peripheral crown dieback. Twin stemmed codominant at 2.25m. Located within hedgerow.	Monitor ash dieback, by re- inspecting summer 2022.	U	80	5.0	N/A

т	123	Common Ash	17	4	7	6.5	6	1.5	920				1	М	F	F	20+	С	1	Heavily pruned back from power lines in effect halving the crown. Localised dieback in upper crown. Previously topped at 4.5m. Located within hedgerow.	Monitor for ash dieback, by re- inspecting summer 2022.	U	383	11.0	N/A
т	124	Common Walnut	4	1.5	2	2	2	2	130				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	7.6	1.6	N/A
т	125	Common Walnut	3.5	1.5	1.5	1.5	1.5	1.5	110				1	Y	G	G	40+	С	1	No defects noted.	No action required.	U	5.5	1.3	N/A
т	126	Sycamore	4.5	0.5	2.5	2.5	4	4	70	85	100		3	Y	G	G	40+	С	1	No defects noted	No action required	U	10.0	1.8	N/A
т	127	Sycamore	14	2.25 E	6.5	6.5	6.5	6.5	470				1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	100	5.6	N/A
т	128	Sycamore	10.5	2.5	5.5	5.5	5.5	5.5	410				1	SM	G	G	40+	В	1	No defects noted.	No action required.	U	76	4.9	N/A
т	129	Common Oak	10.5	1	5.5	5.5	5.5	5.5	600				1	SM	G	G	40+	В	1	No defects noted. No access to stem due into dense vegetation.	No action required.	U	163	7.2	N/A
т	130	Common Oak	4	0.5	1.5	2	1.5	0.5	140				1	Y	G	G	40+	С	1	West side of crown flailed back.	No action required.	U	8.9	1.7	N/A
т	131	Common Oak	3.5	0	2	2	2	1	140				1	Y	G	G		С		Flailed back on west side of crown	No action required.	U	8.9	1.7	N/A
т	132	Common Ash	14	0 W	9	9	9	9	600	640			2	м	G	G	20+	В	1	Low open spreading crown. No access due to ditch and dense vegetation.	No action required.	U	348	10.5	N/A
т	133	Common Oak	10	2 NE	6	6	6	6	580				1	SM	G	G	40+	В	1	Ivy covered stem. Located within hedgerow.	No action required.	No	152	7.0	N/A
т	134	Common Hawthorn	4	0	3	3	2	3	320				1	EM	G	G	40+	В	1	Dense ivy covering stem and crown. Located within hedgerow.	No action required.	U	46	3.8	N/A

т	135	Field Maple	7	0	5	5	4	5	80				8	EM	G	G	40+	в	1	Dense ivy covering stem and primary branch framework. Located behind hedgerow.	No action required	U	23	2.7	N/A
т	136	Common Hawthorn	5	0	2.5	з	2.5	3	70				7	EM	G	G	40+	В	1	No defects noted.	No action required	U	16	2.2	N/A
т	137	Common Ash	12	2 W	5	5	5	5	630				1	EM	F	Ρ	<10	U		Large Inonotus hispidus decay fungi bracket in centre of crown. Significance decay at base of stem with open cavity. Percussion test indicates significant decay throughout stem. Multiple failed large branches.	Remove ASAP, due to proximity to the adjacent road.	U	180	7.6	N/A
Т	138	Common Ash	16	2.5 E	8	10	6	8	980				1	М	Ρ	Ρ	<10	U		Multiple Inonotus hispidus decay fungi brackets within crown. Historic stem snap out on south side at 3m. Large deadwood throughout crown. Located within hedgerow.	Monolith to 4m from ground. ASAP, due to proximity to the adjacent road.	U	434	11.8	N/A
т	139	Common Ash	6.5	1 W	5	5	5	5	400				1	SM	Р	F	<10	U		Profuse bacterial cankers throughout. Reduced crown density and lions tailing of branches. Located within hedgerow.	Remove ASAP due to proximity to the adjacent road.	U	72	4.8	N/A
т	140	Wild Cherry	6.5	0 W	4	4.5	4	4	180				6	SM	G	F	20+	с	1	Acute included primary unions. Minor deadwood throughout. Located within hedgerow.	No action required.	U	88	5.3	N/A
т	141	Goat Willow	4.5	0	4	4	4	4	380	320			2	SM	G	G	20+	С	1	No defects noted. No access to stem.	No action required	U	112	6.0	N/A
т	142	Goat Willow	6	1	7	7	7	7	600	600	600	600	4	М	F	F	10+	С	1	Reduced crown density. Located within hedgerow.	No action required.	U	651	14.4	N/A

т	143	Field Maple	6	1 E	2.5	1.5	3	2	230			1	SM	G	F	10+	С	1	Small stem cavity at 1.5m on east side. Heavily flailed back on east side. Located within hedgerow.	No action required	U	24	2.8	N/A
т	144	Common Ash	17.5	3 W	12	10	8	9	1200			1	LM	F	р	<10	U		Dense ivy covering stem. Very large historic limb failure at 4.5m on east side, decay in the resulting wound is significant. Multiple Inonotus hispidus decay fungi brackets throughout crown. Very large deadwood throughout crown. Located within hedgerow.	Monolith to 4m from ground level ASAP, due to proximity to the adjacent road. Note, must be inspected by an ecologist for bats before undertaking any works to the tree.	L	651	14.4	N/A
т	145	Common Ash	5.5	2	3	3	3	3	230			1	SM	Ρ	F	<10	U		Ash dieback disease, with significant crown dieback. Located within hedgerow.	Remove ASAP, due to proximity to the adjacent road.	U	24	2.8	N/A
т	146	Common Ash	24	6	8	8	8	8	980			1	Μ	Ρ	F	<10	U		Ash dieback disease with significant crown dieback, with <25% live crown left. Large deadwood throughout crown. Dense vegetation at stem base.	Monolith to 4m from ground level ASAP, due to proximity to the adjacent road.	U	434	11.8	N/A
т	147	Common Ash	12	4	6	5	6	5	410			1	SM	G	G	10+	В	1	No defects noted. Located within hedgerow.	No action required	U	76	4.9	N/A
Т	148	Field Maple	12	1	3	3	3	4.5	460			1	EM	G	G	40+	В	1	Slightly suppressed by adjacent trees. Located within hedgerow.	No action required.	U	96	5.5	N/A
т	149	Common Ash	14.5	0 W	6	5	5	6.5	340	360		2	SM	G	G	20+	В	1	Minor deadwood throughout. Located within hedgerow.	No action required.	U	111	5.9	N/A
т	150	Wild Cherry	6	0	6	5.5	5.5	4.5	400			1	SM	G	G	20+	В	1	No defects noted. Located within hedgerow.	No action required.	U	72	4.8	N/A
т	151	Common Ash	11	0 W	6	5	6	6	440			1	SM	G	G	20+	в	1	Dense ivy covering stem. Minor reduction in crown density. Located within hedgerow.	No action required.	U	88	5.3	N/A

т	152	Common Ash	6	0 W	3	3	3	3	270				1	SM	Ρ	F	10+	С	1	Low aesthetic value. Reduced crown density. Poor form and vitality	No action required.	U	33	3.2	N/A
т	153	Common Ash	6.5	0 W	3	3	3	3	230				1	SM	G	G	10+	С	1	Low aesthetic value. Located within hedgerow.	No action required.	U	24	2.8	N/A
т	154	Wild Cherry	5	0	4	4	4	4	290				1	SM	G	G	10+	С	1	Unremarkable tree.	No action required.	U	38	3.5	N/A
т	155	Common Ash	8	0.5	5	5	5	5	230	200	280		3	SM	F	G	10+	С	1	Reduced crown density. Located beyond hedgerow.	No action required	U	77	5.0	N/A
т	156	Field Maple	6	0	4.5	4.5	4.5	4.5	300	280			2	SM	G	G	40+	В	1	No defects noted. Located beyond hedgerow.	No action required	U	76	4.9	N/A
т	157	Common Hawthorn	4	0	2.5	2.5	2.5	2.5	300				1	SM	D	F	n/a	U		Dead tree beyond hedgerow	Remove ASAP, due to proximity to the adjacent road.	U	41	3.6	N/A
т	158	English Elm	9	2 W	4	4	4	4	330				1	SM	D	F	n/a	U		Dead from Dutch elm disease	Remove ASAP, due to proximity to the adjacent road.	U	49	4.0	N/A
т	159	Common Oak	12	2 W	6	6	6	6	340				1	SM	G	G	40+	В	1	Minor deadwood throughout.	No action required. Located within hedgerow.	U	52	4.1	N/A
т	160	Goat Willow	6	2	5	5	5	5	300	340			2	SM	G	G	20+	С	1	Flailed back on east side to current height of 3m. Located beyond hedgerow on ditch embankment.	No action required.	U	93	5.4	N/A
т	161	Common Oak	7.5	1.5 W	7	6	6.5	6.5	430				1	SM	G	G	40+	В	1	No defects noted. Located within hedgerow	No action required.	U	84	5.2	N/A
Т	162	Common Oak	16	4 N	10	9.5	9	9	720				1	EM	G	G	40+	А	1	Excellent specimen. No defects noted. Located beyond hedgerow.	No action required.	U	235	8.6	N/A
т	163	Common Oak	11	1	8	8	9	8	580				1	EM	G	G	40+	А	1	Excellent specimen. Open grown slightly squat form. Open balanced crown.	No action required.	U	152	7.0	N/A

т	164	Downy Birch	16	4 S	6	6	6	6	320	310		2	EM	G	G	20+	В	1	Acute unions throughout.	No actions required	U	90	5.3	N/A
т	165	Crab Apple	6.5	1.5 S	4	4	6	3	450			1	М	Ρ	F	<10	U		Significant crown dieback >75%. In advanced state of declines. No access to stem due to dense vegetation.	Remove, low priority as located within dense vegetation. Can be left, unless land use intensifies near the tree.	U	92	5.4	N/A
т	166	Common Ash	9	2 E	5	6	4.5	4	150			6	SM	Ρ	F	<10	U	1	Significant crown dieback. Tree in decline. No access to stem due to dense vegetation.	Remove as part of development, if close to proposed structures.	U	61	4.4	N/A
т	167	Common Oak	6.5	1.5	6	6	5	4	380			1	SM	G	G	40+	в	1	Minor deadwood throughout crown.	No action required. No access, located on far side of ditch.	U	65	4.6	N/A
т	168	Common Oak	7	1	5	5	5	5	380			1	SM	G	G	40+	В	1	No defects noted. On far side of deep ditch.	No action required.	U	65	4.6	N/A
т	169	Common Oak	12.5		8	7.5	8.5	6.5	480	330		2	EM	G	G	40+	В	1	Pruning wounds and stubs from previous crown lifts. Multiple occluded pruning wounds.	No action required	U	153	7.0	N/A
т	170	Common Hawthorn	4.25	0	5	4	5	5	95			7	EM	G	G	20+	В	1	Acute primary unions. Minor reduction in crown density.	No action required.	U	29	3.0	N/A
т	171	Common Oak	9	2 W	5	4	5	4	560			1	М	G	F	20+	С	1	Large open cavity on east side of stem. Minor deadwood throughout.	Reduce crown by 3m ASAP, due to proximty of footpath. Note, an ecologist must inspect the tree for bats prior to undertaking any works to the tree.	L	142	6.7	N/A

т	172	Common Oak	9.5	2	4	6	5	3.5	660			1	М	G	F	10+	С	1	Longitudinal wounds from tip to base , possible lighting furrow. Significant stem wounds and open cavity. Percussion test indicates significant decay in stem.	Reduce crown by 3m ASAP, due to proximity of footpath. Note, an ecologist must inspect the tree for bats prior to undertaking any works to the tree.	L	197	7.9	N/A
т	173	Common Oak	10.5	3 SW	5	5.5	5	4.5	660			1	EM	F	F	20+	с	1	Crown becoming stag headed - large deadwood throughout crown. Large longitudinal wounds on underside of scaffold limbs one with an open cavity in west of lower crown ideal for bat habitat. Ganoderma brackets present at old pruning wound at 3m on west side.	Reduce or remove deadwood if land use intensifies underneath the tree. Aerial inspection to test for the deadwood structural strength. If solid it can be left. An ecologist must be consulted before doing any work on this tree.	L	197	7.9	N/A
т	174	Common Oak	11.5	3 N	8	9.5	9	6	940			1	Μ	G	G	40+	В	1	Occluded longitudinal wounds from stem base to 1.25m on west side. Minor deadwood throughout.	No action required.	U	400	11.3	N/A
т	175	Common Hawthorn	6.5	0	5.5	4.5	5	5	230			6	Μ	F	F	10+	С	1	Reduced crown density. Reduced leaf size. Deadwood throughout Iower crown.	Monitor for decline and re- inspect in 2 years.	U	144	6.8	N/A
т	176	Common Oak	6	0	4.5	4.5	4.5	4.5	580			1	SM	G	G	40+	В	1	Good specimen. No defects noted.	No action required.	U	152	7.0	N/A
G	1	Silver Birch	18	2.5m	As per f GPS at	topogra nd aeria	aphical s al image	urvey plan, ry plotting	250			1	SM	F	F	10+	С	2	Four trees in group. Deadwood within crowns. Lions tailed branches. One tree with two snaped-out branches in centre of crown.	No action required.	U	N/A	To edge of canopy	N/A

G	2	Plum	4	0.5	As per topographical survey plan, GPS and aerial imagery plotting	220			1	М	F	F	<10	U		Four trees in group. Large deadwood throughout crowns. Multiple shed limbs. Reduced crown density. In decline.	Remove as part of development, if close to proposed structures.	U	N/A	0.7m from edge of canopy	N/A
G	3	Lawson's cypress	15	0.5	As per topographical survey plan, GPS and aerial imagery plotting	300			1	EM	G	Ρ	<10	U		Previously topped at 8m with poorly attached regrowth. Multiple hung-up ripped out branches. Low aesthetic value. Limited useful life expectancy.	Remove as part of development, if close to proposed structures.	U	N/A	0.1m from edge of canopy	N/A
G	4	Black walnut	4.5	2	As per topographical survey plan, GPS and aerial imagery plotting	130			1	Y	G	G	10+	С	2	Four trees in group. Southern most tree is dead. No defects noted in other trees. Dense vegetation prevented access to stems.	Remove dead tree, if land use intensifies near the trees, prior to intensification	U	N/A	To edge of canopy	N/A
G	5	Hawthorn, Apple	4	0	As per topographical survey plan, GPS and aerial imagery plotting	220			1	SM	F	F	10+	с	2	Mixed group. Bounded to north and south by approximately 28 hawthorn (lapsed hedgerow trees) and with central group of 10 Apple trees. Poor form and reduced vitality. Multiple stem wounds with cavitation. Suppressed by adjacent trees.	No action required.	U	N/A	To edge of canopy	N/A
G	6	Common oak	9	15	As per topographical survey plan, GPS and aerial imagery plotting	420			1	SM	G	G	40+	в	2	Linear group of 11 trees. Minor deadwood throughout crowns. Central tree of group has large longitudinal stem wound from base to minimum 2m with cavity (potential bat habitat)	Remove central tree if land use intensifies near the tree, however it must be inspected by an ecologist first for bats.	L	N/A	0.1m from edge of canopy	N/A
G	7	Silver Birch	6	0	As per topographical survey plan, GPS and aerial imagery plotting	240			1	SM	G	G	20+	в	2	Three trees. Some lions tailing of branches, but not significant. DBH estimated average.	No action required.	U	N/A	To edge of canopy	N/A

G	8	Common oak, ash	9	0	As per topographical survey plan, GPS and aerial imagery plotting	380			1	SM	G	G	40+	В	2	Linear group of 6 trees, 5 common oaks and 1 ash.Pruning wounds from previous crown lifts. Some minor impact damage to lower crown.	No action required.	U	N/A	To edge of canopy	N/A
G	9	English elm	2	0	As per topographical survey plan, GPS and aerial imagery plotting	130			1	SM	F	F	10+	С	2	Hedgerow group of English elm. All multi stemmed. DBH is estimated avg.Heavily cut back for original flail. Low aesthetic value.	No action required.	U	N/A	1.1m from edge of canopy	N/A
G	10	Field maple, common oak, swamp cypress	9	0	As per topographical survey plan, GPS and aerial imagery plotting	210			1	SM	G	G	40+	В	2	Approximated 20 closely growing group of trees. Would be categorised as 'C' quality if assessed as individuals. Competing group of trees with phototropic form. Primarily field maple, with English oak and swamp cypress present.	No action required	U	N/A	To edge of canopy	N/A
G	11	Field maple, hawthorn	7.5	0	As per topographical survey plan, GPS and aerial imagery plotting	210			1	SM	G	G	20+	В	2	Linear group of 8 trees. Field maple and hawthorn.Flailed back to a height of 4m.	No action requirements.	U	N/A	To edge of canopy	N/A
G	12	Common Oak	6	1	As per topographical survey plan, GPS and aerial imagery plotting	500			1	SM	G	F	20+	С	2	Linear group of 27 trees beneath electricity lines. All trees are directly beneath recently installed electricity lines. All trees have been topped removing approx 50% of crowns. Low aesthetic value.	Consider removal due to ongoing management of the trees and related costs.	U	N/A	To edge of canopy	N/A
G	13	Hawthorn	3	0	As per topographical survey plan, GPS and aerial imagery plotting	140			1	SM	F	F	10+	С	2	Three trees in group. Reduced crown density. Previously topped at 1m. DBH is an estimated average due to dense foliage	No action required.	U	N/A	0.2m from edge of canopy.	N/A

G	14	Hawthorn, holly	5	0	As per topographical survey plan, GPS and aerial imagery plotting	250			1	SM	F	F	10+	С	2	Low value group. Reduced crown density. Deadwood within group.	Remove deadwood >50 mm diameter if land use intensifies near the tree.	U	N/A	To edge of canopy	N/A
G	15	Hawthorn, oak, holly	3	0	As per topographical survey plan, GPS and aerial imagery plotting	130			1	SM	G	G	20+	В	2	17 trees hawthorn, 1 oak and 2 Holly within group. Minor deadwood throughout.	No action required.	U	N/A	To edge of canopy	N/A
G	16	Common Hawthorn	3.5	0	As per topographical survey plan, GPS and aerial imagery plotting	220			1	EM	F	F	10+	С	2	Linear group of 4 hawthorn. Reduced crown density.	No action required.	U	N/A	1.2m from edge of canopy	N/A
G	17	Goat Willow	5	0	As per topographical survey plan, GPS and aerial imagery plotting	180			1	SM	G	G	20+	С	2	No defects noted	No action required.	U	N/A	To edge of canopy	N/A
G	18	Lime, sycamore, hawthorn	4.5	0.5	As per topographical survey plan, GPS and aerial imagery plotting	180			1	Y	G	G	40+	С	2	Seven trees in group. No defects noted.	No action required	U	N/A	0.2m from edge of canopy	N/A
G	19	Common Alder	4.5	0	As per topographical survey plan, GPS and aerial imagery plotting	340			1	SM	F	G	10+	С	2	Reduced crown density. Reduced leaf size. Reduced aesthetic value.	No action required	U	N/A	1.1m from edge of canopy	N/A
G	20	Hybrid Black Poplar	24	2.5	As per topographical survey plan, GPS and aerial imagery plotting	900			1	М	G	G	10+	В	2;1	Stems with minor lean to east. Minor deadwood throughout. Located within hedgerow. DBH estimated average. Located within hedgerow.	No action required.	U	N/A	2.8m from edge of canopy	N/A
G	21	Common Oak	5	1	As per topographical survey plan, GPS and aerial imagery plotting	300			1	SM	G	F	20+	C	2;1	Topped below power lines at current height. Low aesthetic value. Ongoing maintenance required. Located within hedgerow.	Consider removal due to ongoing maintenance requirments.	U	N/A	To edge of canopy	N/A
G	22	Aspen	16	3	As per topographical survey plan, GPS and aerial imagery plotting	360			1	EM	G	G	20+	В	2	Linear group of 19 trees. Good form and vitality. Minor deadwood throughout. Multiple acute unions throughout.	No action required.	U	N/A	To edge of canopy	N/A

G	23	Lawson Cypress	16	0	As per topographical survey plan, GPS and aerial imagery plotting	320			1	EM	G	F	10+	С	2	Previously topped at 7m with typical form. Centres of crowns heavily shaded out. Two linear group set 1m apart and parallel, with 24 trees in total.	No action required.	U	N/A	To edge of canopy	N/A
G	24	Fir	8	1	As per topographical survey plan, GPS and aerial imagery plotting	300			1	SM	D	F	n/a	U		Two dead trees.	Remove ASAP, due to proximty to house and garden.	U	N/A	To edge of canopy	N/A
G	25	Oak, ash, birch, sycamore, hawthorn and hazel	12	1	As per topographical survey plan, GPS and aerial imagery plotting	230			1	SM	G	G	40+	В	2	Minor deadwood throughout. Some peripheral dieback in the ash trees.	Monitor for ash dieback disease , by re-inspecting summer 2022.	U	N/A	To edge of canopy	N/A
G	26	Ash, birch, oak, willow, alder, hazel, hawthorn	10	0	As per topographical survey plan, GPS and aerial imagery plotting	220			1	SM	F	G	10+	с	2	Ash dieback present, not yet significant. Minor deadwood throughout. Six dead trees within group. Some larger deadwood overhanging 3rd party land to the east.	Monitor for ash dieback disease , by re-inspecting summer 2022. Remove dead tees within 6 months as they are within falling distance of access road. Remove Deadwood overhanging 3rd party land within 6 months.	U	N/A	0.2m from edge of canopy.	N/A
G	27	Scots pine, hawthorn, hazel, oak	10	1 W	As per topographical survey plan, GPS and aerial imagery plotting	370			1	SM	G	G	40+	В	2	Seven Scots pine, with understorey of hawthorn, hazel and oak. Group with good aesthetic value. Minor deadwood throughout. Acute primary unions.	No action required.	U	N/A	1.0m from edge of canopy	N/A

G	28	Oak, ash, hawthorn, elder	10	0	As per topographical survey plan, GPS and aerial imagery plotting	300			1	EM	G	G	40+	В	2	Adjacent to site are smaller trees hawthorn and elder with oak and ash set further back from canopy edge.Three dead trees close to the canopy edge.	Remove dead trees iftargets introduced.	U	N/A	To edge of canopy	N/A
G	29	Common oak, ash	14	0	As per topographical survey plan, GPS and aerial imagery plotting	500			1	EM	G	G	40+	В	2;1	Large group of English Oak with ash interspersed. Nothing of note to record.	No action required.	U	N/A	To edge of canopy	N/A
G	30	Common Hawthorn	4	0	As per topographical survey plan, GPS and aerial imagery plotting	230			1	SM	G	G	10+	С	1,2	Flailed back on north side. Reduced crown density. Located within hedgerow.	No action required.	U	N/A	To edge of canopy	N/A
G	31	Common Ash	8	0	As per topographical survey plan, GPS and aerial imagery plotting	320			1	SM	G	G	20+	В	2	No defects noted.	No action required	U	N/A	To edge of canopy	N/A
G	32	Common Ash	11	1 W	As per topographical survey plan, GPS and aerial imagery plotting	580			1	EM	F	F	10+	С	2	Reduced crown density. Deadwood throughout. Located within hedgerow.	Remove deadwood if targets introduced.	U	N/A	1.0m from edge of canopy	N/A
G	33	Common Alder	12	0 N	As per topographical survey plan, GPS and aerial imagery plotting	490			1	EM	G	G	40+	В	2	Two trees. Stems with minor lean to east.	No action required	U	N/A	1.4m from edge of canopy	N/A
G	34	Common Ash	17	0 W	As per topographical survey plan, GPS and aerial imagery plotting	600			1	EM	F	F	10+	с	2	Nine trees. Reduced crown density. Bacterial canker present. Deadwood throughout northern most tree in the group, which also has multiple Inonotus hispidus decay fungi brackets in centre of crown with multiple large dead branches throughout crown. Dense ivy covering stems. Located within hedgerow.	Monolith northern most tree to a height of 4m from ground level ASAP due to proximity to road.	U	N/A	To edge of canopy	N/A
G	35	Common Ash	8	0	As per topographical survey plan, GPS and aerial imagery plotting	260			1	SM	Ρ	F	<10	U		Three trees located within hedgerow. Ash dieback disease, with significant crown dieback, with <25%live crown left.	Remove ASAP due to proximity to road.	U	N/A	0.6m from edge of canopy	N/A

G	36	Blackthorn - Prunus spinosa	4.5	0	As per topographical survey plan, GPS and aerial imagery plotting	55			1	SM	G	G	10+	С	2	No defects noted. Vast majority of stems below 75mm.	No action required	U	N/A	To edge of canopy	N/A
G	37	Ash, oak. Sycamore, birch, Lombardy poplar, hawthorn, blackthorn	14	0	As per topographical survey plan, GPS and aerial imagery plotting	550			1	EM	G	G	40+	В	2	Semi-mature to early- mature large group. Dominated by Ash and oak. Sycamore, birch and Lombardy poplar also present with hawthorn and blackthorn understory.Some peripheral dieback and stem cankers on ash trees. Some standing deadwood within group's. Limited access due to dense vegetation.	Monitor ash dieback disease, by re-inspecting summer 2022.	U	N/A	0.6m from edge of canopy	N/A
G	38	Common Hawthorn, crab apple	6	0	As per topographical survey plan, GPS and aerial imagery plotting	110			1	SM	G	G	10+	С	2	Reduced crown density. Low vitality. Approximately six trees in group, one of which is crab apple. No access to stems, due to dense vegetation.	No action required.	U	N/A	To edge of canopy	N/A
G	39	Blackthorn, hawthorn	5.5	0	As per topographical survey plan, GPS and aerial imagery plotting	200			1	SM	G	G	10+	С	2	Flailed back to a height of 4m. Some hawthorn within group.	No action required.	U	N/A	To edge of canopy	N/A
G	40	Oak, birch, goat willow, hawthorn, balckthorn, elder	15	0	As per topographical survey plan, GPS and aerial imagery plotting	590			1	SM	G	G	40+	В	2	Pocket woodland. Dominant species is Oak, with birch and goat willow present. Hawthorn, blackthorn and elder understory.	No action required.	U	N/A	To edge of canopy	N/A
G	41	White Willow	20	0	As per topographical survey plan, GPS and aerial imagery plotting	450			1	EM	G	G	10+	В	2	Twelve trees in linear group. On far side of ditch. Acute primary unions. High aesthetic value, when seen from a distance. Understory of young oak, hawthorn, blackthorn, goat willow.	No action required.	U	N/A	0.4m from edge of canopy	N/A

G	42	Common Oak	14	0	As per topographical survey plan, GPS and aerial imagery plotting	420			1	EM	G	G	40+	В	2	Approximately 15 trees in group. Multiple occluded and partially occluded pruning wounds from previous crown lifts. Minor deadwood throughout crowns.	No action required.	U	N/A	0.1m from edge of canopy	N/A
G	43	Oak, birch, goat willow, hawthorn.	5	0	As per topographical survey plan, GPS and aerial imagery plotting	160			1	Y	G	G	40+	С	2	Young group with occasionall semi-mature trees within.	No action required.		N/A	To edge of canopy	N/A
w	1	Oak, birch, ash, willow, hybrid poplars, hawthorn, blackthorn	12	0	As per topographical plan	470			1	EM	G	G	40+	в	1	Predominantly oak and birch, with ash, willow and hybrid poplars presents. Poplar crowns are above the general canopy to a height of 22m+. Hawthorn and blackthorn understory. Age range from Semi- mature to early mature.	No action required.	U	N/A	To edge of canopy	N/A
w	2	White willow, goat willow, sycamore, oak, hawthorn, holly elder, blackthorn	12	0	As per topographical plan	320			1	SM	F	F	10+	с	2;1	Young to Semi-mature woodland group. Scrubby appearance with trees generally looking in poor health. Multiple dead trees within group, with ten in close proximity to each other overhanging the site. Located on far side of ditch. White willow, goat willow, sycamore and oak. With Hawthorn, holly elder and blackthorn understory. Heavily flailed back away from site.	Remove the ten dead trees overhanging site if targets introduced.	U	N/A	To edge of canopy	N/A
н	1	Hawthorn	1.25	0	As per topographical plan	80			1	SM	G	G	40+	N/A		Maintained by flailing.	No action required	U	N/A	To edge of hedge	N/A
н	2	Hawthorn	1.75	0	As per topographical plan	85			1	EM	G	G	40+	N/A		Maintained by flailing.	No action required	U	N/A	To edge of hedge	N/A
н	3	Hawthorn	1.5	0	As per topographical plan	80			1	SM	G	G	20+	N/A		Maintained by flailing.	No action required.	U	N/A	To edge of hedge	N/A

Н	4	Goat willow	1.75	0	As per topographical plan	100			1	SM	F	F	10+	N/A	Very heavily flailed back hedgerow. Low aesthetic value.	No action required	U	N/A	To edge of hedge	N/A
Т	5	Hawthorn	4.5	0	As per topographical plan	150			1	EM	F	F	10+	N/A	Lapsed historic hawthorn hedgerow on far side of deep ditch. Previously maintained as 1m hedgerow. Individually, the hawthorns have a low aesthetic value, but collectively as a group offer a useful screening function. Some young oak and goat willow within hedgerow.	No action required.	U	N/A	To edge of hedge	N/A
Н	6	Hawthorn, crab apple, blackthorn, elder, goat willow	6	0	As per topographical plan	80				SM	G	G	20+	N/A	Lapsed scrubby hedgerow, previously maintained at 2m. Predominantly hawthorn. Crab apple, blackthorn, elder, goat willow also present. Located on far side of ditch. No defects noted.	No action required.	U	N/A	To edge of hedge	N/A



Appendix 2 Survey Methodology



# **Appendix 2: Survey Methodology**

The following features of each tree, group of trees or woodland have been recorded in the Arboricultural Data Sheets:

- Species includes common names.
- Height measured in metres from the stem base. Where the ground has a significant slope, the higher ground is selected.
- Crown height is measured in metres and is an indication of the average height at which the main crown begins.
- Stem diameter is measured in millimetres at 1.5m above the adjacent ground level (upslope on sloping ground).
- Crown spread is measured in metres and taken at the four cardinal points to derive an accurate representation of the crown.
- Age class of the tree is described as young, semi-mature, early mature, late-mature, mature or veteran.
- Physiological condition is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vitality, presence of disease and dieback.
- Structural condition is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.
- Life expectancy is classed as: less than 10 years (<10), at least 10 years (10+), at least twenty years (20+) or at least 40 years (40+). This is an indication of the number of years before the removal of the tree is likely to be required.
- Comments include a brief description of the tree with comments on the form, vitality, health and any significant defects that may be present.



Appendix 3 Tree Categorisation Method



# Appendix 3: Tree Categorisation Method

Table T Cascade chart T	for tree quality assessment			
Category and definition	Criteria (including subcategories where a	ppropriate)		ldentificatio on plan
Trees unsuitable for retention	(see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in	<ul> <li>Trees that have a serious, irremediat including those that will become un reason, the loss of companion shelte</li> <li>Trees that are dead or are showing</li> </ul>	ole, structural defect, such that their early loss viable after removal of other category U tree er cannot be mitigated by pruning) signs of significant, immediate, and irreversibl	is expected due to collapse, s (e.g. where, for whatever e overall decline	See Table 2
the context of the current land use for longer than	<ul> <li>Trees infected with pathogens of sig quality trees suppressing adjacent tr</li> </ul>	nificance to the health and/or safety of other ees of better quality	trees nearby, or very low	
io years	NOTE Category U trees can have existin see 4.5.7.	g or potential conservation value which it mig	ght be desirable to preserve;	
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for ret	ention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B	Trees that might be included in	Trees present in numbers, usually growing	Trees with material	See Table 2
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	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	conservation or other cultural value	
Category C	Unremarkable trees of very limited	Trees present in groups or woodlands, but	Trees with no material	See Table 2
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	merit or such impaired condition that they do not qualify in higher categories	without this conterring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	conservation or other cultural value	

A single tree, group or woodland can come under one or more sub-headings. This does not confer on it a higher value than a tree with a single value, for the purposes of this report.



Appendix 4 General Tree Constraints



# **Appendix 4: General Tree Constraints**

- Trees impose a constraint to development in a variety of ways. These principally include their rooting areas, referred to as Root Protection Areas (RPAs), their current and future crown spread, and their species characteristics (e.g. branch and fruit drop, production of 'honey dew', density of foliage etc). Where located on shrinkable clay soils, trees can also contribute to subsidence damage to buildings.
- Consideration should be given during the design stage to any incompatibilities between the design and tree retention. These include (but are not limited to) the effects on the amenity value provided by existing trees, working space required during construction, infrastructure/utility requirements, highway visibility requirements and foundation design to prevent the effects of subsidence.
- The RPA is calculated using the tree's diameter at 1.5m and represents the minimum area which should be left undisturbed around each retained tree to enable its survival following development.
- Tree root morphology is influenced by many factors including, but not limited to; past land use, the presence of roads, structures and underground services, drainage and soils. Any of these factors may result in non-uniform root growth and therefore result in an RPA represented as a polygon RPA that reflects suitable protection of the root system.
- The majority of tree roots are generally found within the top 600mm of soil, depending on soil types and profiles. Any disturbance or sudden changes to the rooting environment can result in damage being caused to roots and alterations to the roots physiological ability to absorb water, nutrients and undertake gaseous exchange.
- Where alterations have been made within the trees' rooting environment, the damage can often be observed within the crown of the trees, reduced vitality and increased deadwood production. Trees are likely to decline progressively, or in some circumstances may become a hazard where stability and structural integrity has been compromised by Site operations.
- The RPA must be protected by the installation of tree protection fencing prior to the commencement of development work on Site. The fencing provides a physical barrier that is secured, to prohibit activities considered detrimental to the retention of healthy trees (e.g. excavations, soil stripping, discharge of substances harmful to trees,



storage of materials, fires). In addition to this, it may be necessary to install specialist temporary ground protection which enables access within the RPA, without causing long-term detriment to the health of the tree/s.

- No traditional construction works should take place within the RPA of retained trees. However, in some circumstances and where there is an overriding requirement for construction and the retention of trees, it may be appropriate to employ techniques and use materials that allow trees to be retained, whilst enabling the construction. For hard surfacing, such as drives, roads and footways, utilising no-dig construction techniques and using three-dimensional geogrids and permeable wearing course materials may be appropriate. For built structures within RPAs, the use of pile and above ground level beam foundations and/or cantilevered engineering solutions can enable structures to be constructed within RPAs. The project arboriculturist should be consulted on the appropriateness of building within retained tree RPAs, as this is not appropriate for all trees and soil types.
- Where aerial parts of the tree crowns extend beyond the edge of the RPA, consideration should be given to protection of these parts, allowing for protection during development processes including working space. It may be appropriate to consider pruning of aerial parts to allow construction clearances and future nuisance abatement, this however must be considered by the project arboriculturist and the LPA. Where development proposals identify a need for working within the RPA/crown spread of retained trees and it can be demonstrated that retained trees remain viable, then it is important that the project arboriculturist is contacted to advise and prepare an AMS and identify appropriate stages of supervision.



Appendix 5 Report Limitations



# **Appendix 5: Report Limitations**

- Trees are influenced by a variety of environmental variables, which can affect the health
  of trees causing biomechanical and physiological changes. All comments made on tree
  health reflects their physical condition at the time of the survey. Due to the changeable
  nature of trees and other site/environmental conditions, which may influence trees, the
  preliminary management recommendations/ further works for the surveyed trees
  undertaken, which can be found in Appendix 1 of this report, are only valid for a period of
  12 months from the date of the Site survey (11<sup>th-</sup>13<sup>th</sup> October 2021). These
  recommendations relate specifically to the general maintenance of tree health and safety
  and do not affect the implications of this arboricultural assessment and therefore, the
  results of the survey remain valid beyond 13<sup>th</sup> October 2022.
- This Constraints and Opportunities report and the associated TCLP is based on a topographical survey plan supplied by the client. Where tree stem locations are not shown on the topographical survey, these are plotted using GPS plotting and/ or the utilisation of site features to manually plot the tree stem locations and canopy spreads for tree groups. Aerial photography is also utilised to plot tree group canopy spreads, where utilisation of GPS is not feasible. These methods provide a good representation of the surveyed trees; however, please note that the GPS used is not sub-metre accurate. WA cannot be held responsible for inaccurate tree locations, where trees are not shown on the topographical survey plan supplied to us by the client.
- Although comments and recommendations on the safety of particular trees may have been made, this survey is not a Tree Risk Management Survey and thus should not be treated as such. All trees were surveyed from ground level only and in a solely visual nature. However, where trees have been identified as presenting an imminent safety risk due to structural defects, this has been brought to the attention of the client and treated as a separate matter. Should trees require further detailed assessment (decay detection, aerial inspections) and do not present an imminent safety risk, the information will be detailed within the survey schedules.
- Any management recommendations have been made in accordance with BS3998: 2010 Tree Works – Recommendations; and/or industry best practice. Works have been recommended in accordance with any statutory obligations on the landowners or occupiers.



- This survey did not include an ecological survey of vegetation or habitat areas. Any ecological issues incidentally observed during the survey are reported on in the tree schedule.
- For the purpose of this report no samples were obtained from Site for analysis or any other reason.
- The survey did not include soil sampling to determine whether the soil is shrinkable. Such analysis should be carried out by a specialist to ensure building foundations are adequate in accordance with current National House Building Council Guidelines (NHBC).



Appendix 6 Tree Protection Fencing









Appendix 7 Tree Protection Signage





#### **Appendix 7: Tree Protection Signage**





Appendix 8 Glossary of Common Terms Used in Arboriculture



#### Glossary of Common Terms Used in Arboriculture

**Abscission**. The shedding of a leaf or other short-lived part of a woody plant.

Abiotic. Pertaining to non-living agent's e.g. environmental factors.

**Absorptive Roots**. Non-woody short-lived roots, generally having a diameter less than one millimetre, the primary function of which is the uptake of water and nutrients.

**Access Facilitation Pruning**. One off pruning operation to provide access for development operation. Pruning that will not be detrimental to trees health or amenity.

**Arboricultural Method Statement (AMS)**. A methodology for the implementation of development where encroachment within the RPA has the potential to cause damage or loss of retained trees.

**Arboriculturist**. Someone who through relevant training and experience has gained knowledge in the expertise of trees.

**Adaptive Growth**. The process by where wood formation rates increasing in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium.

Adaptive Roots. The adaptation of existing roots; or a production of new roots in response to damage or decay.

Adventitious Buds, Roots, Shoots. Which grow in other than primary apical control.

Anchorage. The process in which a tree uses its roots system to support itself within the soil structure.

**Ancient:** A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species.

Arisings. Parts of the tree that has been removed for disposal, branches, leaves, roots etc.

Canker. Area of dead cambium killed by overlying pathogenic tissues.

Cavity. A hole in the woody structure of the tree; often caused through decay.

Cleaning Out. The removal of dead, diseased crossing branches, damaged branches and alien structures.

**Competent Person**. Person with training and experience in accordance with the proposed matter being addressed, having an understanding of a particular matter being approached.

**Condition**. An indication of the physiological vitality of a tree, but not the stability of a tree.

Construction. A Site based operation that has the potential to affect retained trees.

Construction Exclusion Zone. An area based on the RPA from which construction activity is prohibited.

**Coppicing**. Removal of all aerial parts of the tree leaving a stump for regeneration of new shoot.

Crown/Canopy. The parts of the tree that supports the leaves.

Crown Lifting. The removal of limbs and small branches to a specified height above ground level.

**Crown Thinning**. The removal of a proportion of secondary branch growth throughout the crown to produce an even density well balanced crown structure.

**Crown Reduction/Reshaping**. Removal in the height to a specified description to maintain a flowing crown structure.

**Deadwood**. Non-functional branches which no longer support natural growing conditions of the tree but may be beneficial for the support of habitats and species, possibly including rare saproxylic invertebrates. Thus, may also be referred to as 'Decaying Wood Habitat' or 'Dysfunctional wood'. Size ranges for deadwood referred to in this report and/or Appendix 1: - Small (<75 mm diameter), Medium (76 – 150 mm), Large (151-



300) mm and Very large >301 mm. For some species such as oak etc, the risk of deadwood falling from the tree can be lesser than for other species, due to the variety of wood strengths of different tree species.

Defect. Any area of the tree that no longer has an optimal mechanical uniformity of stress. Defects may or

may not affect the long-term retention of the tree(s), depending upon severity, the likelihood of the defect(s) failing and the location of the tree(s) (Target).

**Dieback**. Death of woody parts of the tree starting at distal ends of the tree.

**Disease**. Damage occurring to living organisms as a result of pathenogenic micro-organisms.

**Distal**. Furthest distance away from the main body of the tree.

**Dysfunction**. In woody tissues, the loss of physiological function, especially water conduction, in sapwood.

Epicormic Growth. Growth from dormant or adventitious buds, not developing from the first shoot.

**Girdling Roots**. A circling root which constricts the stem or roots, with the potential to cause death and the restriction of flow within the phloem.

**Heartwood**. Dysfunctional xylem which no longer has conductive properties, but which has become an integral structural part of the tree.

**Heave**. The swelling of shrinkable clay soils, often when vegetation has been removed allowing soil rehydration to develop, with the potential for listing structures (e.g. walls).

Included Bark/Acute Forks. Face to face contact of bark usually at fork unions, or branch unions.

**Lopping/Topping**. A term used to describe the removal of large sized branches

**Monolith**. Removing some or most of the trees crown and sometimes the upper stem, in order to retain as much of the tree as standing deadwood habitat for ecological reasons.

Pathogen. A micro-organism that causes disease within another organism.

**Phytotoxic**. Toxic to plants.

**Pollarding**. The removal of the tree canopy to produce knuckles where new growth develops and is removed cyclically usually performed on young trees.

Pruning. Selective removal of parts of the tree to achieve a desired outcome.

**Root Protection Area(RPA)**. An area around a tree identified by multiplying the stem diameter at 1.5 m from ground level by 12 to produce a radial area or rooting volume around a tree to be protected Ref. BS 5837: 2012.

Service. Any above and below ground structure or apparatus for utility provision.

**Size of part**. Relating to risk assessments, identifying the size of the hazard, or parts of a tree which may cause harm if failure occurs.

**Stem(s)**. The main structure from the ground up supporting the crown.

**Stress**. In plants, the physiological depletion as a result of environmental influences.

Structure. A manufactured object, such as building, roads, path, wall or excavated structures.

**Structural Roots**. The primary larger diameter roots which hold and support the aerial parts of the tree.

**Subsidence**. The shrinkage of soil through the absorption of water via vegetation and the sinking effects on surrounding architectural structures.

**Targets**. In risk assessment, persons or property at risk of harm as a result of a hazard (falling tree, branch, etc.).



**Transitioning Veteran Trees:** Trees with some veteran features, but not sufficient veteran features to be considered full veteran trees. They contribute to the veteran tree resource and, through the ageing process are expected to become true veterans in time, before which they offer bridge and continuity habitat for important saproxylic invertebrates and fungi.

**Tree Protection Plan (TPP)**. A scaled drawing informed by descriptive text where necessary, based upon finalised Site proposals, showing trees for retention and illustrating the tree and landscape protection measures.

**Veteran Tree**. Tree that, by recognized criteria, shows features of biological, cultural or aesthetic characteristics of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Windthrow. The blowing over a tree at its roots.



DRAWINGS



#### wardell-armstrong.com

STOKE-ON-TRENT Sir Henry Doulton House Forge Lane Etruria Stoke-on-Trent ST1 5BD Tel: +44 (0)1782 276 700

BIRMINGHAM Two Devon Way Longbridge Technology Park Longbridge Birmingham B31 2TS Tel: +44 (0)121 580 0909

BOLTON 41-50 Futura Park Aspinall Way Middlebrook Bolton BL6 6SU Tel: +44 (0)1204 227 227

BRISTOL Desklodge 2 Redcliffe Way Bristol BS1 6NL

#### BURY ST EDMUNDS 6 Brunel Business Court

6 Brunel Business Court Eastern Way Bury St Edmunds Suffolk IP32 7AJ Tel: +44 (0)1284 765 210 CARDIFF Tudor House 16 Cathedral Road Cardiff CF11 9LJ Tel: +44 (0)292 072 9191

CARLISLE Marconi Road Burgh Road Industrial Estate Carlisle Cumbria CA2 7NA Tel: +44 (0)1228 550 575

EDINBURGH Great Michael House 14 Links Place Edinburgh EH6 7EZ Tel: +44 (0)131 555 3311

GLASGOW 2 West Regent Street Glasgow G2 1RW Tel: +44 (0)141 433 7210

LEEDS 36 Park Row Leeds LS1 5JL Tel: +44 (0)113 831 5533

#### LONDON

Third Floor 46 Chancery Lane London WC2A 1JE Tel: +44 (0)207 242 3243

NEWCASTLE UPON TYNE

City Quadrant 11 Waterloo Square Newcastle upon Tyne NE1 4DP Tel: +44 (0)191 232 0943

TRURO Baldhu House Wheal Jane Earth Science Park Baldhu Truro TR3 6EH Tel: +44 (0)187 256 0738

International offices:

ALMATY 29/6 Satpaev Avenue Hyatt Regency Hotel Office Tower Almaty Kazakhstan 050040 Tel: +7(727) 334 1310

MOSCOW 21/5 Kuznetskiy Most St. Moscow Russia Tel: +7(495) 626 07 67

