

Lower Thames Crossing
6.3 Environmental Statement
Appendices
Appendix 7.12 Arboricultural
Impact Assessment

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Lower Thames Crossing

Appendix 7.12 Arboricultural Impact Assessment

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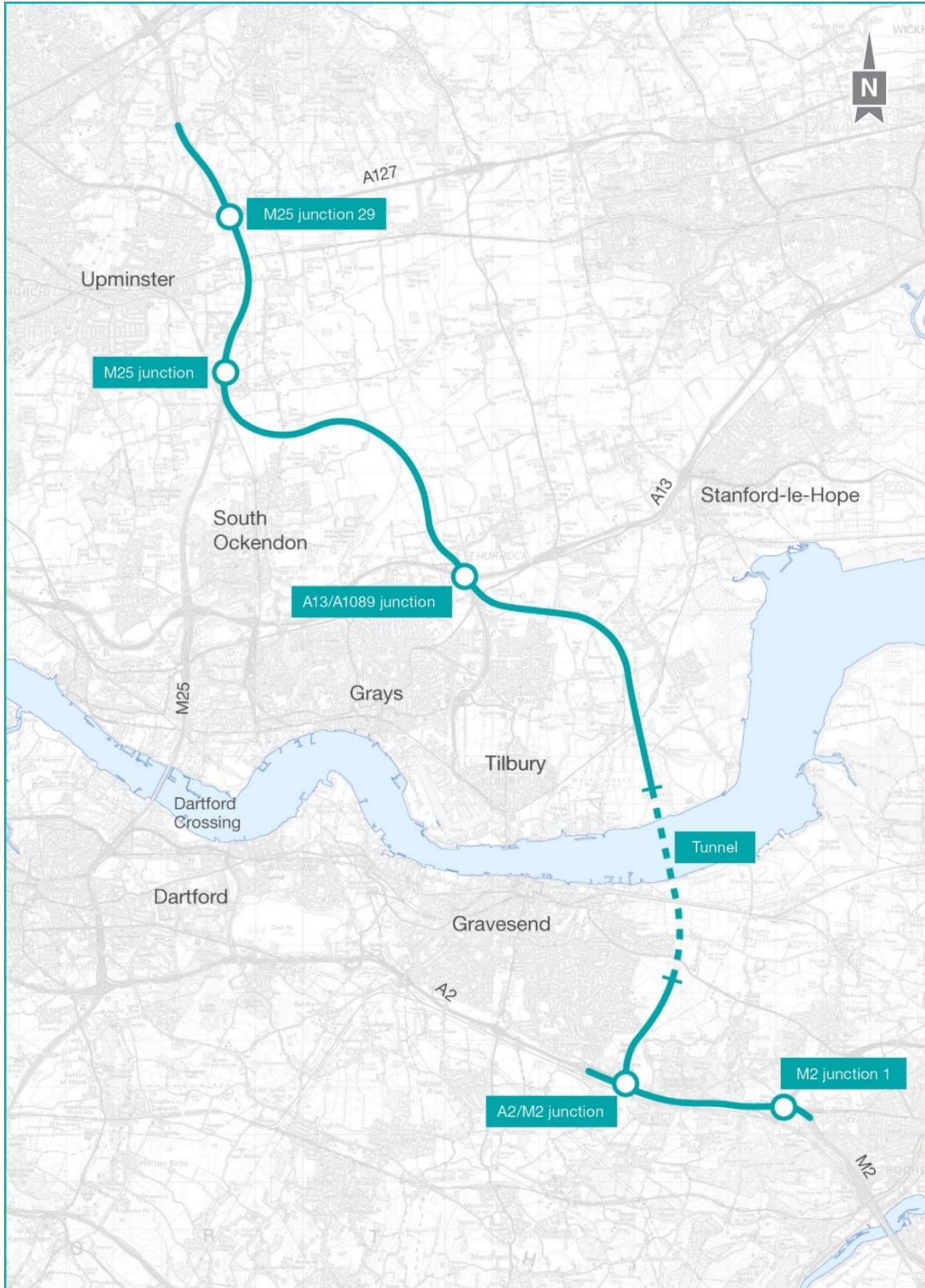
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1 Introduction

- 1.1.1 The A122 Lower Thames Crossing (the Project) would provide a connection between the A2 and M2 in Kent and the M25 south of junction 29, crossing under the River Thames through a tunnel. The Project route is presented in Plate 1.1.
- 1.1.2 The A122 would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13, M25 junction 29 and the M25 south of junction 29. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.
- 1.1.3 Junctions are proposed at the following locations:
- a. New junction with the A2 to the south-east of Gravesend
 - b. Modified junction with the A13/A1089 in Thurrock
 - c. New junction with the M25 between junctions 29 and 30
- 1.1.4 To align with National Policy Statement for National Networks (Department for Transport, 2014) policy and to help the Project meet the Scheme Objectives, it is proposed that road user charges would be levied in line with the Dartford Crossing. Vehicles would be charged for using the new tunnel.
- 1.1.5 The Project route would be three lanes in both directions, except for:
- a. link roads
 - b. stretches of the carriageway through junctions
 - c. the southbound carriageway from the M25 to the junction with the A13/A1089, which would be two lanes
- 1.1.6 In common with most A-roads, the A122 would operate with no hard shoulder but would feature a 1m hard strip on either side of the carriageway. It would also feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling. The A122 design outside the tunnel would include emergency areas. The tunnel would include a range of enhanced systems and response measures instead of emergency areas.
- 1.1.7 The A122 would be classified as an ‘all-purpose trunk road’ with green signs. For safety reasons, walkers, cyclists, horse riders and slow-moving vehicles would be prohibited from using it.
- 1.1.8 The Project would include adjustment to a number of local roads. There would also be changes to a number of Public Rights of Way, used by walkers, cyclists and horse riders. Construction of the Project would also require the installation and diversion of a number of utilities, including gas pipelines, overhead electricity powerlines and underground electricity cables, as well as water supplies and telecommunications assets and associated infrastructure.

1.1.9 The Project has been developed to avoid or minimise significant effects on the environment. The measures adopted include landscaping, noise mitigation, green bridges, floodplain compensation, new areas of ecological habitat and two new parks.

Plate 1.1 Lower Thames Crossing route



2 Assessment methodology

2.1.1 This report presents an assessment of the arboricultural impacts of the Project during construction and has been compiled in support of the ES. This report is supported by Figures 7.22 to 7.24 (Application Document 6.2).

2.2 Guidance

2.2.1 An arboricultural survey and Arboricultural Impact Assessment (AIA) has been undertaken in accordance with recommendations provided within British Standard BS 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (British Standards Institution, 2012) (BS 5837).

2.3 Scope of assessment

2.3.1 The scope of assessment has been defined with reference to BS 5837 Clause 5.4. The assessment fulfils the following requirements:

- a. Description of the baseline resource as it relates to arboricultural features that may be impacted by the Project
- b. An Arboricultural Impact Assessment (AIA)
- c. Identification of the scope of an Arboricultural Method Statement (AMS)

2.3.2 This assessment deals solely with the arboricultural aspects of the A122 Lower Thames Crossing. Potential tree-related impacts which may arise in respect of visual amenity and conservation are addressed within ES Chapter 7: Landscape and Visual, and Chapter 8: Terrestrial Biodiversity, respectively.

2.4 Survey boundaries

2.4.1 The desk-based study uses a survey boundary which is defined as all land within the Order Limits plus a 100m offset. The use of a 100m offset beyond the Order Limits has been applied as a means of ensuring that all relevant statutory and environmental designations are captured and recorded.

2.4.2 The tree survey uses a survey boundary which is defined as all land within the Order Limits plus a 15m offset. A 15m offset has been applied as a means of ensuring compliance with BS 5837 which recommends that all trees whose Root Protection Areas (RPAs) extend into the developable area are surveyed and any impacts subsequently assessed. The BS 5837 caps RPAs with a maximum radius of 15m. An exception to the survey boundary is made in relation to veteran or ancient trees, in which instances survey work was extended to include trees up to 45m from the Order Limits. This accounts for the larger protective areas associated with veteran or ancient specimens and ensures that they are recorded in instances where they may be influenced by construction.

2.4.3 The area for the tree survey has been further refined by division into priority areas and non-priority areas. The sub-division was undertaken based on the professional judgement of the Project environmental team with priority areas defined as those surrounding the A2-M2, the M2/A2/Project junction, the

A13/A1089 Project junction and the Project/M25 junction. Also identified as priority areas were sections of land either side of Hoford Road, the Mardyke, and land adjacent to the M25 in proximity to Hobbs Hole and Codham Hall Wood areas of ancient woodland. An additional priority area was also defined as including a small land parcel close to the northernmost extent of the Ockendon Link. The remainder of the survey area was defined as non-priority.

- 2.4.4 The priority and non-priority survey areas are shown in Figure 7.22 Tree Survey Dual Scope Layout (Application Document 6.2), with the relevant survey scope set out below in the section on Tree survey.

2.5 Baseline data collection

- 2.5.1 Baseline data collection has been obtained through:

- a. A desk-based study
- b. A survey of trees, tree groups and wooded areas.

Desk-based study

- 2.5.2 A desk-based study was initially undertaken in 2019 and was subsequently updated in October 2021 and April 2022. The purpose of the desk-based study is to identify the presence of any statutory and environmental designations which may apply to arboricultural features within the survey area. Information relating to the presence, or absence, of statutory and environmental designations has been used to inform the scope of subsequent tree surveys and to guide design.

- 2.5.3 The desk-based study reviewed existing arboricultural information available in the public domain. The study has considered the following statutory and environmental constraints.

Tree preservation orders

- 2.5.4 The Town and Country Planning Act 1990 Section 198 provides local planning authorities with the power to impose Tree Preservation Orders (TPOs) where it is *'expedient in the interests of amenity to make provision for the preservation of trees or woodlands'*. The purpose of a TPO is described in Tree Preservation Orders and Trees in Conservation Areas (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, 2014) The purpose is described as the protection of specific trees, groups of trees and woodlands *'if their removal would have a significant negative impact on the local environment and its enjoyment by the public'*.
- 2.5.5 Details of TPOs were obtained from Gravesham Borough Council, the London Borough of Havering and Thurrock Council and are included in the Book of Plans (Application Document 2.18). Details were received in June and October 2021.

Ancient and veteran trees

- 2.5.6 The National Planning Policy Framework (Department for Levelling Up, Housing and Communities, 2021) (NPPF) defines ancient or veteran trees as *'A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran*

trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'

2.5.7 The NPPF further describes ancient and veteran trees as irreplaceable habitat. This is defined as one which '*would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity.*'

2.5.8 Details of potential ancient and veteran trees were obtained from the Woodland Trust's Ancient Tree Inventory (ATI). Additional information relating to a single potential veteran tree was also obtained from third-party survey data. This tree is located to the north-west of Orsett and positioned on the western side of Fen Lane.

Ancient woodland

2.5.9 The NPPF defines ancient woodland as '*An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS).*' The NPPF also describes ancient woodland as irreplaceable habitat.

2.5.10 Details of ancient woodland were obtained from Natural England's Ancient Woodland Inventory.

Tree survey

2.5.11 An initial tree survey was undertaken in November and December 2019. Subsequent survey work was also conducted in February 2020 and April 2022 in response to changes in the Order Limits.

2.5.12 The scope of the tree survey differs between priority and non-priority areas. The scope for each is described below:

- a. Priority areas – survey includes all trees, tree groups and wooded areas with stem diameters in excess of 75mm in diameter at 1.5m from ground level.
- b. Non-priority areas – Only high or moderate-quality trees, tree groups and wooded areas were surveyed. High and moderate-quality features are defined as those which qualify as category A or B specimens within BS 5837 Table 1 a summary of which is provided in Annex C. These include features which are either particularly good examples of their species, are rare or unusual, are of particular visual importance or have significant or material cultural, commemorative or conservation value.

Methodology

2.5.13 The tree survey was conducted with reference to the methodology detailed within BS 5837. Details of the tools, techniques and variations to the BS 5837 methodology are provided in Annex C.

2.5.14 Tree location and extent of surveyed arboricultural features was determined using the Bluesky's National Tree Map (NTM). The NTM utilises information from aerial photography, terrain and surface data and infrared imagery to plot the crowns of vegetation over 3m in height.

- 2.5.15 In accordance with BS 5837 trees have been recorded as tree groups where they combine to form distinct arboricultural features either aerodynamically, visually or because they contain trees of similar cultural and biodiversity value. Wooded areas have been recorded where larger expanses of trees exist and include areas of trees which may otherwise be referred to as copses, spinneys or shelterbelts.
- 2.5.16 Veteran and ancient trees were identified on the basis that they exhibited characteristics such as a hollowing out of the stem, retrenching canopies, decay fungi, large diameter stems and large-sized deadwood.
- 2.5.17 Where it was possible to align veteran and ancient trees with ATI records obtained through the desk-based study then this was undertaken and the term 'verified' is used within the tree survey schedule included in Annex E. Where this was not possible, then veteran and ancient trees identified solely via the tree survey are described as 'potential'.
- 2.5.18 The tree survey excluded areas of ancient woodland on the basis that the type and condition of individual trees are irrelevant to its overall quality and value. This exclusion is applied on the basis that the BS 5837 defines ancient woodland as a high-quality feature due to its conservation, historical and cultural value. This value is applied irrespective of its current silvicultural condition and is instead defined by future potential. This means that even ancient woodland which is in poor condition would qualify as a high-quality feature on the basis that it could be improved with appropriate management over a period of time.

2.6 Arboricultural impact assessment

Scope

- 2.6.1 The scope of the AIA includes the following:
- Evaluation of likely arboricultural impacts
 - Evaluation of the arboricultural constraints associated with retained trees
 - Details of the issues to be addressed by an arboricultural method statement (AMS).
- 2.6.2 Arboricultural constraints include the quality of each arboricultural feature and its physical attributes such as crown spread and rooting area. These constraints inform the tree protection measures which are applied during construction, and therefore the scope of the AMS.

Methodology

Removals and retention

- 2.6.3 The requirement for trees to be removed has been determined with reference to the 'Retained/removed woodland and trees model'. This model specifies areas where vegetation removal is required. It applies to all land within the Order Limits and takes account of the working area required for the main works, utilities and compounds.

2.6.4 A key consideration during the development of the ‘Retained/removed woodland and trees model’ has been the retention of existing trees. Areas of vegetation removal are therefore limited to that which is directly required for construction purposes.

2.6.5 No trees, tree groups or wooded areas outside the Order Limits would be removed.

Buffer zones

2.6.6 Ancient woodland, ancient trees and veteran trees: advice for making planning decisions (Natural England and Forestry Commission, 2022) recommends the use of buffer zones as a means of mitigating adverse impacts associated with development.

2.6.7 Buffer zones, which are to be applied around ancient woodland and ancient or veteran trees, may have multiple objectives, one of which is the protection of tree roots. A minimum buffer zone of 15m should be applied around ancient woodland while the buffer zone surrounding ancient and veteran trees is determined by the diameter of the stem.

2.6.8 Buffer zones represent a precautionary approach to the protection of tree roots insofar as they are larger than the RPAs recommended in BS 5837. The BS 5837 describes the RPA as ‘*the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of roots and soil structure is treated as a priority*’. The BS 5837 caps RPAs at a radius of 15m or with an area of 707m². The minimum buffer zone for ancient woodland starts at 15m and, for ancient veteran trees, is always 20% larger than an RPA and with no overall cap on radius or area.

2.6.9 Buffer zones associated with veteran and ancient trees may be larger than those associated with ancient woodland. This difference compensates for the possibility that, due to their age, ancient and veteran trees may exhibit reduced levels of vitality whereas ancient woodland, while aged in itself, may comprise only younger more vigorous trees. Trees with reduced vitality are less likely to tolerate disturbance to their roots or rooting environment and therefore require larger protective areas if they are to be sustainably retained.

2.6.10 Using guidance provided by Natural England and the Forestry Commission, relevant buffer zones have been applied to areas of ancient woodland, ancient or veteran trees identified through the ATI and potential ancient and veteran trees identified through the tree survey. Guidance advises that buffer zones should comprise green infrastructure and, on this basis, buffer zones have been modified to exclude areas of carriageway associated with the A2, the M25, Brewers Road, Park Pale, Thong Lane, Pea Lane and the B1421 Ockendon Road. Further modifications have excluded the High Speed 1 railway line and the footprint of substantive structures, including residential properties and hard surfaced parking areas. Buffer zones are shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).

2.6.11 For the purposes of this assessment any construction work within the buffer zone has the potential to adversely impact trees due to root damage or soil disturbance. The scope of the impact is dependent upon the extent of encroachment and the type of construction work which is to be undertaken.

Limitations to the assessment

2.6.12 The assessment is subject to the following limitations:

- a. Data pertaining to ancient or veteran trees has been obtained through reference to the ATI and was last checked in May 2022. Records held on the ATI are collected on a voluntary basis, therefore the absence of records does not necessarily demonstrate the absence of an ancient or veteran tree but may simply indicate a gap in recording coverage. Furthermore, while ATI records may be updated, this is not undertaken on a systematic basis. ATI records may therefore reference trees which may have died or which no longer exist.
- b. ATI data has been validated as part of the tree survey. This includes the surveying of six trees from within the ATI dataset and the identification of an additional 29 potential veteran trees not currently recorded on the ATI.
- c. The locations and extents of tree groups and wooded areas are based on NTM data relating to tree crowns and do not include references to stem locations. Tree groups and wooded areas do not include trees below 3m in height as these are absent from the NTM dataset. In instances where accurate stem locations are required, this will be achieved through the completion of a topographical survey to be undertaken for detailed design.
- d. Access to some areas within the survey boundary was not available due to permission not being granted by landowners. In order to fill gaps in survey data, an additional tree survey was completed in April 2022. The remaining areas within the survey boundary that could not be accessed have been indicated within Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2). No survey data was obtained from within these nine areas except in instances where trees could be adequately assessed from adjacent land. When viewed using aerial photography, unsurveyed areas consist wholly or partially of residential properties, grassed fields with hedges, areas of woody scrub, wooded copses and land forming part of Cobham Hall School. These are land uses which are generally less favourable for the formation of ancient, veteran or other high-quality trees. Notwithstanding the above, unsurveyed areas represent only a small proportion of the land encompassed by the tree survey boundary and do not affect the robustness of the survey results overall or subsequent assessment.
- e. All survey work was undertaken from a position of safety. In instances where safe access could not be achieved (i.e. due to dense vegetation or extreme topography) then survey data was estimated to the best of the surveyor's ability and nearest suitable publicly accessible vantage point or location where access had been agreed with the landowner.

- f. Hedgerows were not assessed as part of the AIA but are considered in Chapter 8: Terrestrial Biodiversity (Application Document 6.1).
- g. In instances where tree groups or wooded areas are partially removed, retained trees may become susceptible to windthrow. The risk of windthrow may be reduced by selectively retaining, removing or pruning specific trees along the edge of the retained area. This requires trees to be individually assessed for wind firmness and would be undertaken during detailed design. The likelihood of windthrow occurring and proposals for mitigation are therefore excluded from this assessment.

3 Desk study results

Tree Preservation Orders

- 3.1.1 A total of 48 separate TPOs were identified as affording statutory protection to trees within the study area. Details, which include the TPO name, details of the trees protected and the administering authority are provided in Annex A. The location and approximate extent of each TPO is shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).

Ancient and veteran trees

- 3.1.2 Records held by the ATI relate to a total of 12 ancient and 66 veteran trees within the study area. Of these trees only two ancient and two veteran trees are recorded north of the River Thames. The remaining 74 records relate to trees located south of the River Thames with the majority within, or in proximity to, land forming the Shorne Woods Country Park.
- 3.1.3 Third-party tree survey data, commissioned specifically to inform utility diversions and dated August 2021, identifies the presence of a single potential veteran tree within the study area. This tree is located north of the River Thames and is on the eastern side of Fen Lane.
- 3.1.4 The most frequent tree species associated with ancient and veteran trees include pedunculate oak *Quercus robur*, sweet chestnut *Castanea sativa* and hornbeam *Carpinus betulus*.
- 3.1.5 Although 78 ancient and veteran trees were identified within the study area, only five are within the Order Limits. These include one ancient tree to the north of Fen Lane, one veteran tree east of Beredens Lane, one veteran tree on the northern edge of Ashenbank Wood and two veteran trees close to the edge of the Shorne Woods Country Park.
- 3.1.6 Further details of the ancient and veteran trees recorded on the ATI are presented in Annex A with locations shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2), page 32 of which shows the location of the single potential veteran tree identified through third-party tree survey data.

Ancient woodland

- 3.1.7 Reference to Natural England’s ancient woodland inventory identifies 15 ancient woodlands which are wholly, or partially, located within the study area. Of these, eight are located south of the River Thames with the remainder located to the north. Details of these ancient woodlands are provided in Table 3.1.

Table 3.1 Details of ancient woodlands

Name	Grid reference (approximate centroid)	Area (ha)
Ashenbank Wood	TQ67286936	1.1
Chadwell Wood	TQ63837922	1.1
Claylane Wood	TQ66477047	10.1

Name	Grid reference (approximate centroid)	Area (ha)
Codham Hall Wood	TQ58488873	7.6
Coombegreen Wood	TQ57799012	8.6
Franks Wood	TQ58398755	0.7
Great Crabbles Wood	TQ70227015	5.2
Hobbs Hole	TQ58718813	1.3
Jacksons Wood	TQ57379079	0.8
Peartree Wood	TQ70307106	10.5
Sheepfold Wood	TQ60828084	0.5
Shorne and Brewers Woods	TQ68227022	36.0
Starmore Wood	TQ69677067	4.1
Unnamed	TQ70676925	0.6
Unnamed	TQ70046949	0.6

- 3.1.8 In addition to the ancient woodlands presented within Natural England’s ancient woodland inventory a further three areas of potential ancient woodland have also been recorded. These areas, identified through ecological surveys and assessments, are referenced within Chapter 8: Terrestrial Biodiversity and are named as Ockendon Railsides Site of Importance for Nature Conservation (SINC), Jermaines Wood SINC, and Rainbow Shaw Local Wildlife Site (LWS).
- 3.1.9 Overall, there is approximately 95.7ha of ancient woodland within the study area including the areas of potential ancient woodland detailed in Chapter 8: Terrestrial Biodiversity. The locations and extents of ancient woodland within the study area, including those sites not on the ancient woodland inventory, are shown on Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).

4 Tree survey results

- 4.1.1 The results of the tree survey are presented in Annex D and Annex E. The location and extent of each surveyed feature, including its feature type and BS 5837 category, is shown on Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).
- 4.1.2 The quality of surveyed arboricultural features is described with reference to the BS 5837 category classifications. These category classifications, defined as A, B, C and U, correspond to high, medium, low and very low-quality features respectively.
- 4.1.3 High-quality category A features include those which, by virtue of age and/or size, are rare, unusual or of particular visual importance. High-quality features include specimens with significant conservation, historical or commemorative value such as ancient or veteran trees. They are often features which have arisen over a considerable period of time and as a result of a unique set of circumstances. This means that there are often limited opportunities available for their substitution. High-quality features have an estimated life-expectancy in excess of 40 years under current site conditions.
- 4.1.4 Moderate-quality category B features include those which, by virtue of age and/or size, may qualify as high-quality specimens were it not for the presence of remedial defects, limited visibility or a life-expectancy which may not exceed 40 years. Due to their age and size, moderate-quality features generally offer limited opportunities for substitution within the foreseeable future.
- 4.1.5 Low-quality category C features include specimens with no particular arboricultural merits and those which present few visual, conservation or cultural benefits. While they have life-expectancies which exceed ten years, they are generally insufficiently aged or unique so as to limit opportunities for effective substitution.
- 4.1.6 Very low-quality category U features include specimens which, by virtue of poor health or structural condition, are unsuitable for retention beyond ten years. Their short life-expectancy dictates that they are of negligible arboricultural or visual value and, in the context of development, their substitution with new trees is often desirable.
- 4.1.7 Full details of the BS 5837 category descriptors used during the tree survey are provided in Annex C.

4.2 Priority areas

- 4.2.1 Table 4.1 summarises the results from the tree survey within the priority areas. It includes the number of each arboricultural feature recorded and how many were attributed to each of the four BS 5837 category classifications.

Table 4.1 Quality grading for all arboricultural feature types included in survey

BS 5837 category	Quality	Trees	Tree groups	Wooded areas
A	High	38	3	2
B	Moderate	64	139	2
C	Low	109	161	1
U	Very low	6	36	0
Totals		217	339	5

- 4.2.2 A total of 561 arboricultural features were recorded within the priority area including 217 individual trees, 339 tree groups and five wooded areas.
- 4.2.3 High-quality features comprise 38 trees, three tree groups and two wooded areas and make up 8% of the surveyed features. These include three trees, one tree group and one wooded area which are wholly or partially covered by TPOs 12-92, 1972-001 and 1981.003.
- 4.2.4 Three high-quality trees (referenced as T29, T183 and T290) have been identified as ancient or veteran specimens and are also recorded on the ATI. A further 17 trees (T41, T145, T184, T221, T223, T225, T226, T234, T237, T238, T242, T244, T460, T555, T609, T617 and T618) have been identified as potential veteran specimens, as have approximately 11 individual specimens within tree group G30. The location of all high-quality features is shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).
- 4.2.5 Moderate-quality features comprise 64 trees, 139 tree groups and two wooded areas and account for 36.5% of the surveyed features. Of these there are three trees and 15 tree groups which are wholly or partially covered by TPOs 12-92, 1960001, 07/1990 and 1972-001.
- 4.2.6 Low-quality features comprise 109 trees, 161 tree groups and one wooded area and account for 48% of the surveyed features. They include one tree and four tree groups which are wholly or partially covered by TPOs 12-92, 1960001 and 1972-001.
- 4.2.7 Very-low-quality features comprise six trees and 36 tree groups with no wooded areas and account for 7.5% of the surveyed features. Two very-low-quality tree groups are wholly or partially covered by TPO 07/1990.

4.3 Non-priority areas

- 4.3.1 Table 4.2 summarises the results from the tree survey within the non-priority areas. It includes the number of each arboricultural feature recorded and how many were attributed to each of the two BS 5837 category classifications which were used for survey work.

Table 4.2 Quality grading for all arboricultural feature types included in survey

BS 5837 category	Quality	Trees	Tree groups
A	High	23	2
B	Moderate	63	30
Totals		86	32

- 4.3.2 Within the non-priority survey areas 23 trees and two tree groups were identified as being of high-quality. Of these features there are 12 trees (T70, T133, T193, T198, T362, T363, T557, T558, T562, T563, T566 and T570) which have attributes which qualify them as potential veterans. Also, an additional three trees (T196, T197 and T630) are already recorded within the ATI and listed as veteran specimens. Both tree groups (G312 and G626) also contain individual trees with features which suggest they may have veteran potential. Tree group G626 is also covered by TPO 20-81. The location of all high-quality features is shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).
- 4.3.3 A total of 63 trees and 30 tree groups were surveyed and recorded as being of moderate quality. These include five trees and four tree groups which are variously covered by 20-81, 12/2010, 07/1990, 16-07 and 28/1991.
- 4.3.4 Within the non-priority areas, unsurveyed arboricultural features will, by default, comprise either low or very-low-quality trees, tree groups and wooded areas. Features may also include trees which, by virtue of having stem diameters below 75mm in diameter, fail to qualify for inclusion in a BS 5837 compliant survey.

5 Arboricultural impact assessment

5.1 Scope of adverse impacts

- 5.1.1 Adverse arboricultural impacts would arise in any instance where an arboricultural feature is removed, in whole or in part. The scope of the impact may vary and is directly dependent upon the quality of the arboricultural feature which is removed and the overall area of loss.
- 5.1.2 Adverse arboricultural impacts may also occur where the roots of retained trees become damaged or where their rooting environment becomes compromised. A rooting environment may become compromised if the soil becomes compacted or is disturbed through excavation, either temporary or permanent. Damage to tree roots may cause adverse effects to retained trees. Effects may include instability, reduced physiological function or, in extreme cases, even death.

5.2 Removal of arboricultural features

- 5.2.1 Details of the areas of arboricultural features which are to be retained and removed are presented in Figure 7.24 Tree Removal and Retention Plan. Arboricultural features identified for retention, removal or partial removal are recorded as such within the tree survey schedule provided in Annex E.

Tree Preservation Orders

- 5.2.2 Site clearance requirements would necessitate the removal of trees which are covered by 15 separate TPOs. Likely adverse impacts extend from the removal of one, or a few, trees subject to TPO through to the loss of much larger areas of protected woodland. A description of the likely adverse impacts is provided in Table 5.1, and a description of the relevant parts of the Project which may require tree removal are listed in Schedule 7 of the draft DCO (Application Document 3.1).

Table 5.1 Adverse impacts to TPOs

TPO reference	Description of protected arboricultural features (reference within Schedule)	Administering authority	Description of likely adverse impact
1960001	One woodland (W1)	Gravesham Borough Council	Loss of a small number of trees from the north-eastern corner of the wooded area protected by the TPO
1972-001	One woodland (W1)		Loss of a small number of trees from the south-eastern and southern edges of the wooded area protected by the TPO
1999-001	One woodland (W1)		Loss of approximately 40-50% of the wooded area protected by the TPO

TPO reference	Description of protected arboricultural features (reference within Schedule)	Administering authority	Description of likely adverse impact
4-88	Eight trees (T1-T8)	London Borough of Havering	Potential loss of all trees covered by the TPO
12-92	Thirty-five trees and one area of trees (T1-T35, A1)		Removal of a small number of trees from the southern boundary of the TPO area
1-06	Two tree groups, one tree and one woodland (G1, G2, T1, W1)		Potential removal of all features covered by TPO
16-07	One woodland (W1)		Removal of a small number of trees from the north-eastern corner of the woodland covered by the TPO
13-72	Sixteen trees and three tree groups (T1-T5, T7-T18, G1, G2, G3)		Loss of trees along western boundary of overall area covered by TPO
14-97	One tree (T1)		Potential loss of the single tree covered by the TPO
19/1991	One area of trees (A1)		Removal of a small number of trees from the northern edge of the area covered by the TPO
20-81	Two areas of trees and one tree (A1, A2, T1)		Removal of a small number of trees on southern edge of an area covered by the TPO
01/1983	Two areas of trees and thirty-four trees (A1, A2, T1, T3-T21, T22, T23, T25-T38)	Thurrock Council	Removal of eight individual trees covered by the TPO
07/1990	Two woodlands (W1, W2)		Partial loss of one wooded area covered by the TPO
12/1999	Nine trees (T1-T5, T7-T10)		Removal of one tree covered by the TPO
28/1991	Woodland area		Loss of approximately half the wooded area covered by the TPO

Ancient woodland

5.2.3 Tree removal is specified within five areas of ancient woodland. Details of the woodland and the areas of tree removal are presented in Table 5.2.

Table 5.2 Areas of tree removal within ancient woodland

Name of ancient woodland	Area of tree removal (ha)
Claylane Wood	4.49
Codham Hall Wood	0.36
Shorne and Brewers Woods	0.48
Ockendon Railsides (also designated as a SINC)	0.25
Rainbow Shaw (also designated as a LWS)	0.85

- 5.2.4 Claylane Wood would experience the largest amount of tree removal. Tree loss would predominately occur on its eastern side and on land which is either within the main works construction area or would be used for utilities work. Some additional tree removal would take place within the western part of the woodland and is associated with the formation of a Public Right of Way.
- 5.2.5 Tree removal within Claylane Wood extends to 4.49ha and includes approximately 1.5ha of small trees and scrubby vegetation located within the existing easement associated with overhead 400kV power lines. This is an area within which maintenance requirements prohibit trees growing above several metres in height and where periodic clearance of trees is required. Trees growing within this easement are therefore unlikely to be retained long enough for them to achieve maturity or attain any significant size.
- 5.2.6 Tree removal within Codham Hall Wood, and Shorne and Brewers Woods, would be restricted to sections of woodland edge which abut the M25 and M2/A2/Brewers Road respectively.
- 5.2.7 Tree removal at Codham Hall Wood would be restricted to land within the main works construction area and is required in order to permit the construction work to roadside embankments. Within Shorne and Brewers Woods the main area of tree removal would occur north of the A2 and is required in order to facilitate construction of the junction between the M2/A2/Project junction. Additional much smaller areas of tree removal are also specified along the north-eastern side of Brewers Road and to either side of the eastbound A2 slip road. Tree removal in these areas is necessary to facilitate utilities work, earthworks and the installation of drainage pipes.
- 5.2.8 Ockendon Railsides SINC exists to either side of a branch of the London, Tilbury and Southend railway line. Some tree removal would occur on both sides of the railway but with the majority located on the eastern side between the M25 overbridge and Ockendon Road and also to the north and south of Ockendon Road. Tree removals are predominately outside the main works construction area and are necessary to facilitate utilities work.
- 5.2.9 Tree removal would also be required within the southern part of Rainbow Shaw. Within this woodland, located on the north-western side of Hoford Road, tree removal would be confined to the main works construction area and is necessary in order to permit construction of the carriageway, earthworks and utilities.
- 5.2.10 Construction work would require the removal of an estimated 6.43ha of trees from within areas of ancient woodland.

Ancient and veteran trees

- 5.2.11 None of the ancient or veteran trees listed in the ATI would be removed. However, six potential veteran trees identified during the tree survey would be removed. These are referenced as trees T41, T133, T145, T362, T363 and T570 within the tree survey schedule included in Annex E.
- 5.2.12 Tree T41, located south of the A2 and north-east of Halfpence Lane, would be removed to facilitate carriageway construction associated with the A2 junction, while T133, located north of the A2, would be removed on the basis that it is positioned within the earthworks required for the A2 junction. Tree T145 is located north of the A2 and south of the Inn on the Lake. This tree requires removal to facilitate earthworks and utilities work.
- 5.2.13 Trees T362 and T363 are located north of the route alignment and to the east of High House Lane. These trees and tree T570 which is located south-east of the junction of Ockendon Road and Pea Lane, would be removed to facilitate utilities work.
- 5.2.14 In addition to the above, the single potential veteran tree which is located on the eastern side of Fen Lane, and which was identified during surveys associated with utility diversions, is to be retained.

Other trees, tree groups and wooded areas

- 5.2.15 Table 5.3 presents the total number of individually surveyed trees, for each BS 5837 category, identified as either retained or removed.

Table 5.3 AIA results for individually surveyed trees

BS 5837 category	Quality	Retain	Remove
A	High	19	7
B	Moderate	65	62
C	Low	43	66
U	Very low	0	6
Totals		127	141

- 5.2.16 Construction activities would require the removal of 141 trees. Five of these trees are covered by a TPO and include four moderate-quality specimens and one low-quality specimen. Trees would be removed from TPOs 12-92, 20-81 and 4-88.
- 5.2.17 Table 5.4 presents the total number of tree groups, for each BS 5837 category, identified as either retained, removed or partially removed.

Table 5.4 AIA results for surveyed tree groups

BS 5837 category	Quality	Retain	Remove	Partially removed
A	High	3	1	1
B	Moderate	62	70	37
C	Low	35	108	18
U	Very low	6	27	3
Totals		106	206	59

- 5.2.18 Construction activities would require the removal of 206 tree groups. In total these tree groups have an approximate canopy area of 36.9ha. A further 59 tree groups would be partially removed. This equates to an approximate canopy area of 7.0ha.
- 5.2.19 Tree group removals would adversely impact three separate TPOs including 1972-001, 28/1991 and 12-92.
- 5.2.20 Table 5.5 presents the total number of wooded areas, for each BS 5837 category, identified as either retained, removed or partially removed.

Table 5.5 AIA results for wooded areas

BS 5837 category	Quality	Retain	Remove	Partially removed
A	High	1	1	0
B	Moderate	0	0	2
C	Low	0	0	1
U	Very low	0	0	0
Totals		1	1	3

- 5.2.21 Overall, approximately 3.7ha of high and moderate-quality wooded area would be lost. None of the wooded areas which would be removed are covered by a TPO.

5.3 Impacts to tree roots

- 5.3.1 Buffer zones are specified for ancient woodland and ancient and veteran trees, the purpose of which is the protection of tree roots. Buffer zones are shown in Figure 7.23 Existing Tree Constraints Plan (Application Document 6.2).

Ancient woodland

- 5.3.2 Construction work is specified within the buffer zones associated with seven areas of existing or retained ancient woodland.
- 5.3.3 Construction work south of the River Thames includes:
- The installation of new drainage pipes and manholes within the buffer zone of an unnamed woodland located at the junction between the M2 Medway Towns Bypass and the A289 Hasted Road. The woodland occupies part of a piece of land located south of the M2/A2 which is almost entirely bordered by the westbound off-slip serving junction 1.

- b. Construction activities in the form of utilities work and the formation of a Public Right of Way within the buffer zone associated with retained parts of Claylane Wood. Also, the A2 West Utility Hub abuts and encroaches into the buffer zone to the north.
- c. Utilities work is proposed in proximity to the north-western corner of Shorne and Brewers Woods and is within the buffer zone. Construction work, in the form of utilities work, earthworks and the installation of drainage pipe, would also take place within the buffer zone of retained trees on the north-eastern side of Brewers Road and to either side of the eastbound A2 slip road.

5.3.4 Construction work north of the River Thames includes:

- a. Earthworks within the buffer zone associated with retained trees at Codham Hall Wood. This encroachment would occur within the verge of the slip roads joining the M25 and the A127. Other construction work, associated with formation of a pond, would also occur within, and adjacent to, the buffer zone to the north and north-east of the retained area of woodland.
- b. Encroachment of the main works construction area into the buffer zone associated with retained trees at Rainbow Shaw. Encroachment is associated with the working area in proximity to earthworks and a ditch.
- c. Encroachment of the main works construction area into the buffer zone associated with Hobbs Hole on its westernmost side. Construction work is associated with the formation of earthworks and a retaining wall.
- d. Encroachment of the utilities working area into the buffer zone associated with retained trees at Ockendon Railsides. Encroachment would occur at two locations where utilities cross the London, Tilbury and Southend railway line.

5.3.5 Construction work within an ancient woodland buffer zone has the potential to cause damage to the roots of trees up to 15m away from the area of activity. Whether adverse impacts arise would be dependent upon whether construction work causes significant damage to the roots of individual trees within woodland or causes disturbance to their rooting environment.

5.3.6 The potential for construction activities to adversely impact trees growing within the aforementioned ancient woodland areas cannot be discounted. However, adverse impacts are unlikely to be significant insofar as they would not be so extensive as to materially affect the quality and value of the retained woodland areas. Significant adverse impacts shall be avoided by ensuring that buffer zones are specified and protected so as to ensure that the viability of the tree or woodland is maintained, as set out in Register of Environmental Actions and Commitments (REAC) measure LV030, in Appendix 2.2: Code of Construction Practice (Application Document 6.3). This may be achieved through the identification of rooting areas and the exclusion of damaging activities or the completion of activities in a manner which reduces scope for damage to occur.

Veteran trees

- 5.3.7 **T630:** One veteran tree, listed within the ATI, where construction activity is specified within its buffer zone. This tree, recorded as 185655 on the ATI and referenced as tree T630 in the arboricultural survey, is located on the eastern side of Beredens Lane and has a buffer zone with a radius of 27m.
- 5.3.8 Construction activities within the buffer zone comprise vehicular access for utilities work. The proposed access route would cross approximately 25% of the buffer zone and would take place on land which is cultivated for arable use. The regular cultivation of land will prevent tree root growth within the disturbed area of soil meaning that roots will generally only exist at depth.
- 5.3.9 Adverse impacts associated with vehicular access across part of the buffer zone can be mitigated through the use of ground protection measures as recommended in BS 5837. Subject to the implementation of such measures, there is no obvious reason why vehicular access should result in significant damage to tree roots or the surrounding soil. Adverse impacts to tree T630 are therefore unlikely to occur.
- 5.3.10 **T609:** One potential veteran tree where access for utilities work would also encroach into its buffer zone. This tree is located near the south-western corner of the Cranham Golf Course Solar Park and encroachment would potentially occur on the eastern side of its buffer zone. Encroachment would impact only a limited area and is unlikely to cause adverse effects such as significant physiological decline or a loss of quality or value. Probable outcomes include a temporary decline in vitality and associated reduction in annual growth.
- 5.3.11 **T29, T555, T557 and T558:** Potential veteran tree T29 is located east of Brewers Road near its junction with the A2 Watling Street. It is within the Order Limits and would have a new section of bridleway constructed within its buffer zone. Other potential veteran trees where a bridleway would be formed within their buffer zones are T557 and T558. Bridleway upgrades would also occur within the buffer zone of potential veteran tree T555.
- 5.3.12 Work to upgrade footpath FP136 to a bridleway would occur within the buffer zones associated with potential veteran trees T557 and T558. In both instances bridleway formation would occur close to trees' stems and within an area which supports roots that are important for nutrient absorption and structural stability.
- 5.3.13 Upgrades to the Mardyke Way bridleway may occur within, or on the edge of, the buffer zone associated with potential veteran tree T555. This tree is separated from the area of proposed construction by the Mardyke, a small river which flows north to south.
- 5.3.14 Construction work necessary to build, or upgrade, bridleways has the potential to cause significant damage to potential veteran trees T29, T555, T557 and T558. However, opportunities for the avoidance of damage are recommended within BS 5837. These include measures such as the avoidance of excavation and the use of surfacing which facilitates access while also providing protection for underlying roots and soil. Implementation of these measures within the buffer zones of trees T29, T555, T557 and T558 will ensure that all-weather access can be provided without risk of damage to adjacent trees. Tree protection measures shall be specified within an AMS and would be sufficient to maintain the viability of the trees, as set out in REAC measures LV028 and LV030, in Appendix 2.2: Code of Construction Practice (Application Document 6.3).

5.4 Arboricultural method statement

Scope

- 5.4.1 An Arboricultural Method Statement (AMS) shall be produced in accordance with recommendations set out in BS 5837 (REAC Ref. LV028). The AMS shall specify the tree protection measures which shall be applied and will address all construction activities which have the potential to result in the loss of, or damage to, any retained tree, tree group or wooded area. The AMS shall be supported by a Tree Protection Plan and shall be implemented prior to the commencement of any potentially damaging construction activities or site clearance works. The AMS shall be implemented under the supervision of the Environmental Clerk of Works.
- 5.4.2 The AMS shall adopt a precautionary approach to tree protection and shall seek, where practicable, to further reduce the extent of arboricultural removals across the entirety of the Project. The principle of avoiding tree removals will apply in relation to areas of ancient woodland, ancient and veteran trees and other high, moderate and low-quality arboricultural features (REAC Ref. LV001).
- 5.4.3 The AMS shall take account of standing advice prepared by Natural England and the Forestry Commission (2022) when specifying protection measures for ancient and veteran trees and ancient woodland (REAC Ref. LV030). This includes the following:
- Measures to prevent or mitigate the build-up of dust
 - The specification of RPAs which, for ancient or veteran trees are 15 times the diameter of the tree trunk or 5m beyond the canopy, whichever is the greater; and for ancient woodland, which are at least 15m from the boundary of the woodland.

Methodology

- 5.4.4 The AMS shall accurately specify the final extent of any tree removals and the precise location of any essential mitigation. This will be achieved through the specification of RPAs and the avoidance of potentially damaging construction activities within the RPAs of retained arboricultural features. This will be undertaken in the following manner.

Tree Surveys

- 5.4.5 Additional tree surveys shall be undertaken in respect of all arboricultural features where the encroachment of construction activities into their RPA may be a determining factor in whether they are retained or removed. Surveys shall also be undertaken in respect of any arboricultural feature where construction work may occur within, or adjacent to, its RPA including features located outside the Order Limits.
- 5.4.6 The purpose of these surveys shall be the accurate specification of RPAs and canopy spreads. Surveys relating to ancient or veteran trees, ancient woodland or other high and moderate-quality arboricultural features shall be supported by topographical survey data where this is necessary for the accurate positioning of tree stems.

- 5.4.7 The specification of RPAs associated with ancient or veteran trees shall be undertaken with reference to potential for them to exhibit reduced vitality and a limited tolerance to root disturbance. RPAs will maintain the same area as buffer zones but their shape may be modified to reflect areas of root distribution.

Specification of task specific tree protection measures

- 5.4.8 Construction activities within, or adjacent to, the RPAs of surveyed trees shall be assessed in order to identify any potential adverse impacts. Where practicable, construction activities which may generate adverse impacts shall be modified to provide embedded mitigation. Where this is not practicable then essential mitigation in the form of suitable tree protection measures shall be specified. Embedded and essential mitigation shall ensure that significant adverse impacts to retained arboricultural features are avoided. Significant adverse impacts include those which cause unsustainable physical or physiological damage such that it results in a reduction to estimated remaining life expectancy or a loss of value or visual amenity.

Provision of an AMS

- 5.4.9 A written tree protection specification shall be provided in the form of an AMS. Tree protection measures may include, but are not limited to, the erection of protective barriers, the implementation of working methodologies and the provision of specialist monitoring and supervision. The location of the specified tree protection measures shall be shown on the Tree Protection Plan.
- 5.4.10 Other matters which will be addressed by the AMS include the following:
- a. Protection of retained hedgerows where these occur within the Order Limits and are at risk during construction
 - b. A specification for any access facilitation pruning shall be provided where this is required. Access facilitation pruning is defined as a one-off tree pruning operation which is directly necessary to provide access for construction. The specification shall adhere to recommendations include within British Standard BS 3998: 2010 Tree work – Recommendations (British Standards Institution, 2010) and shall be informed by further survey work to identify specific crown dimensions and branch positions.
 - c. Tree groups and wooded areas which are to be partially removed shall be assessed and a specification provided which reduces the likelihood that retained trees would be subject to windthrow.
- 5.4.11 The felling and handling of veteran trees and trees within areas of ancient woodland which are identified for removal but where compensatory measures, such as the relocation of felled timber, are to be applied. The AMS shall reference the removal of these trees separately and will provide a suitable felling specification. Matters which are to be addressed include timings, felling methodology and temporary storage requirements (REAC Ref. LV031).

References

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Annex A Desk-based study

A.1 Results

Tree Preservation Orders

A.1.1 The desk-based study results relating to Tree Preservation Orders (TPOs) are presented in Table A.1. Information pertaining to location and extent is shown in the Book of Plans (Application Document 2.18 – Hedgerow and Tree Preservation Order Plans).

Table A.1 Tree Preservation Orders identified by the desk study

TPO reference	Description of protected arboricultural features (reference within Schedule)	Administering authority	Grid reference (approximate centroid)
1973.003	Six trees and two tree groups (T1 – T6, G1, G2)	Gravesham Borough Council	TQ65387076
1974.001	One tree group (G1)		TQ65407074
1974.003	One tree group and one tree (G1, T1)		TQ65457070
1977.009	One tree (T1)		TQ67347312
1981.003	Details not available		TQ69266986
1985.001	Four trees (T1 – T4)		TQ64417128
1960001	One woodland (W1)		TQ67556938
1972-001	One woodland (W1)		TQ67697039
1975-013	One woodland (W1)		TQ69646934
1999-001	One woodland (W1)		TQ66477047
7-49	Details not available		London Borough of Havering
2-85	Two tree groups (G1, G2)	TQ57648870	
4-88	Eight trees (T1-T8)	TQ58058504	
9-92	One area of trees, one tree group and one tree (A1, G2, T1)	TQ59238583	
12-92	35 trees and one area of trees (T1-T35, A1)	TQ58548670	
2-95	One tree group (G1)	TQ58748486	
1-06	Two tree groups, one tree and one woodland (G1, G2, T1, W1)	TQ58268498	
16-07	One woodland (W1)	TQ57868842	
13-72	16 trees and three tree groups (T1-T5, T7-T18, G1, G2, G3)	TQ58478518	
14-97	One tree (T1)	TQ58228504	

TPO reference	Description of protected arboricultural features (reference within Schedule)	Administering authority	Grid reference (approximate centroid)
15-82	Details not available		TQ59578778
16-87	One area of trees and one tree (A1, T1)		TQ59158621
19-91	One area of trees (A1)		TQ58198829
20-81	Two areas of trees and one tree (A1, A2, T1)		TQ57608965
22-83	One area of trees (A1)		TQ57928835
26-75	Two areas of trees and two tree groups (A1, A2, G1, G2)		TQ58738491
03/1976	One tree group (G1)	Thurrock Council	TQ61108186
01/1981	One area of trees (A1)		TQ60678047
01/1983	Two areas of trees and 34 trees (A1, A2, T1, T3-T21, T22, T23, T25-T38)		TQ64968096
04/1983	Ten trees (T1-T10)		TQ59618402
07/1990	Two woodlands (W1, W2)		TQ66257987
03/1995	29 trees (T1-T29)		TQ64598038
05/1998	Eight tree groups and 33 trees (G3, G4, G5, G6, G7, G12, G13, G14, T47-T58, T61-T70, T72-T84, T121)		TQ64088171
07/1999	Six trees (T1-T6)		TQ63828161
12/1999	Nine trees (T1-T5, T7-T10)		TQ67177931
03/2002	Seven trees (T1-T7)		TQ59498334
07/2002	One area of trees, one group of trees, 29 trees and one woodland (A1, G1, T1-T21, T25, T26, T29-T35, W1)		TQ63948185
02/2004	Two tree groups and two woodlands (G1, G2, W1, W2)		TQ66888032
04/2005	Seven trees (T1-T7)		TQ64138184
06/2005	Three trees (T1-T3)		TQ64128190
10/2009	Two trees (T1, T2)		TQ63498207
11/2009	One tree group (G1)		TQ64617894
11/2010	One tree (T1)		TQ64567884
12/2010	Five trees (T1-T5)		TQ67608005
13/1999	Twenty-nine trees (T1-T29)		TQ64028180
17/2000	Five trees (T1-T5)		TQ63927618
28/1991	Woodland area	TQ67047925	
35/2010	Three trees (T1-T3)	TQ64527881	

Ancient and veteran trees

A.1.2 The desk-based study results relating to ancient and veteran trees listed on the Ancient Tree Inventory (ATI) are presented in Table A.2. Locations are shown in Figure 7.23 Existing Tree Constraints Plan.

Table A.2 Ancient and veteran trees identified by the desk study

ATI reference	Measured girth	Grid reference	Species	Veteran status
10300	5.7	TQ63658210	Oak	Ancient tree
14385	5.8	TQ57908489	Pedunculate oak	Ancient tree
138877	5.5	TQ6811270707	Pedunculate oak	Ancient tree
138878	5.3	TQ6808670585	Sweet chestnut	Ancient tree
138879	2.6	TQ6806270591	Pedunculate oak	Ancient tree
138888	4.3	TQ6756370470	Pedunculate oak	Ancient tree
138889	4.1	TQ6756970460	Pedunculate oak	Ancient tree
138890	4.9	TQ6756170443	Pedunculate oak	Ancient tree
138891	4.3	TQ6756270407	Pedunculate oak	Ancient tree
138892	3.7	TQ6755670386	Pedunculate oak	Ancient tree
138985	1.9	TQ6764370366	Hawthorn	Ancient tree
139041	4.0	TQ6846770619	Ash	Ancient tree
2861	4.6	TQ58808489	Common lime	Veteran tree
12042	7.8	TQ67726938	Sweet chestnut	Veteran tree
12051	2.8	TQ67556889	Hornbeam	Veteran tree
28289	5.2	TQ68206949	Sweet chestnut	Veteran tree
28291	5.2	TQ68156944	Sweet chestnut	Veteran tree
43903	3.7	TQ68646980	Sweet chestnut	Veteran tree
138850	3.7	TQ6864069809	Sweet chestnut	Veteran tree
138851	5.9	TQ6869469772	Sweet chestnut	Veteran tree
138852	3.5	TQ6867269761	Sweet chestnut	Veteran tree
138853	3.8	TQ6872369747	Sweet chestnut	Veteran tree
138854	4.2	TQ6876969751	Sweet chestnut	Veteran tree
138857	3.5	TQ6901169741	Hornbeam	Veteran tree
138858	2.8	TQ6901269738	Hornbeam	Veteran tree
138859	2.1	TQ6901369741	Hornbeam	Veteran tree
138860	3.5	TQ6901269750	Hornbeam	Veteran tree
138867	3.9	TQ6872770586	Pedunculate oak	Veteran tree
138868	3.1	TQ6873670695	Pedunculate oak	Veteran tree
138869	3.5	TQ6874070701	Pedunculate oak	Veteran tree

ATI reference	Measured girth	Grid reference	Species	Veteran status
138874	4.0	TQ6868070549	Hornbeam	Veteran tree
138876	3.5	TQ6813970706	Pedunculate oak	Veteran tree
138884	3.5	TQ6763870498	Pedunculate oak	Veteran tree
138885	2.2	TQ6764870496	Pedunculate oak	Veteran tree
138886	3.2	TQ6763570494	Pedunculate oak	Veteran tree
138887	3.7	TQ6760170500	Pedunculate oak	Veteran tree
138973	3.3	TQ6776970042	Pedunculate oak	Veteran tree
138974	3.8	TQ6777270014	Pedunculate oak	Veteran tree
138983	3.7	TQ6763170370	Pedunculate oak	Veteran tree
138991	5.2	TQ6755770001	Sweet chestnut	Veteran tree
138992	4.5	TQ6771869978	Sweet chestnut	Veteran tree
138993	4.2	TQ6766969994	Sweet chestnut	Veteran tree
139000	2.7	TQ6789969845	Hornbeam	Veteran tree
139004	2.3	TQ6776369916	Hornbeam	Veteran tree
139008	2.5	TQ6786369791	Hornbeam	Veteran tree
139009	2.7	TQ6785569782	Hornbeam	Veteran tree
139019	2.5	TQ6773669982	Hornbeam	Veteran tree
139020	9.9	TQ6771869977	Sweet chestnut	Veteran tree
139021	4.0	TQ6768670052	Sweet chestnut	Veteran tree
139042	4.7	TQ6825670622	Ash	Veteran tree
139043	2.7	TQ6825370623	Ash	Veteran tree
139044	3.0	TQ6825170623	Ash	Veteran tree
139046	4.2	TQ6814370641	Ash	Veteran tree
139047	3.7	TQ6813970643	Ash	Veteran tree
139048	3.5	TQ6812970641	Ash	Veteran tree
139054	3.6	TQ6869969821	Pedunculate oak	Veteran tree
139055	3.9	TQ6871369800	Sweet chestnut	Veteran tree
139056	3.2	TQ6869369758	Sweet chestnut	Veteran tree
139057	3.2	TQ6863469776	Sweet chestnut	Veteran tree
171372	2.5	TQ6543070694	Common horse chestnut	Veteran tree
171373	2.5	TQ6543470691	Common horse chestnut	Veteran tree
171374	2.4	TQ6547970699	Common horse chestnut	Veteran tree
171375	2.8	TQ6546170713	Common horse chestnut	Veteran tree
171376	2.5	TQ6547270705	Common horse chestnut	Veteran tree
171395	2.2	TQ6568370658	Cherry	Veteran tree

ATI reference	Measured girth	Grid reference	Species	Veteran status
171424	2.2	TQ6768070590	Holly	Veteran tree
171425	1.9	TQ6769470620	Holly	Veteran tree
171429	9.6	TQ6781869856	Sweet chestnut	Veteran tree
171456	2.4	TQ6805070610	Silver birch	Veteran tree
171457	2.7	TQ6805370611	Silver birch	Veteran tree
171458	2.7	TQ6805970602	Silver birch	Veteran tree
171460	2.1	TQ6810270582	Holly	Veteran tree
171461	1.8	TQ6810270598	Holly	Veteran tree
171462	2.3	TQ6810570592	Holly	Veteran tree
171463	3.2	TQ6812270569	Holly	Veteran tree
175785	5.8	TQ69706940	Common beech	Veteran tree
182008	5.5	TQ67806960	Common ash	Veteran tree
185655	4.5	TQ5775690020	Pedunculate oak	Veteran tree

Annex B Tree survey methodology

Tools and techniques

- B.1.1 Tree location data capture was undertaken using ArcGIS collector iPad app with use of Global Positioning System (GPS) for plotting of features or hand plotting using high resolution aerial imagery purchased for GIS use on the Project.
- B.1.2 Table B.1 lists the techniques used to conduct the tree survey and the parameters measured.

Table B.1 Survey techniques and parameters

Data field	Tools and techniques used
Stem diameter at breast height (DBH) taken from 1.5m at ground level	Diameter measuring tape and recorded in millimetres
Structural and physiological condition	External visual tree assessment (from the ground)
Buffer zones	For veteran and ancient trees, calculation method taken from standing advice from Natural England and the Forestry Commission (2022)
Tree quality assessment	Cascade chart and grading methodology in BS 5837:2012 (BSI, 2012) – see Annex D

BS 5837:2012 deviations in survey methodology

- B.1.3 Deviation from the methodology detailed within BS 5837:2012 was employed during the tree survey. Table B.2 lists the specific deviations and provides the reasoning for each one.

Table B.2 Deviations from standard BS 5837:2012 methodology

Survey element	Standard survey methodology	Deviation from standard methodology	Justification
Topographical survey	Tree survey data to be aligned with tree stem locations identified on a topographical plan	Tree locations identified through reference to the National Tree Map	National Tree Map is sufficiently accurate for impacts to be assessed in relation to preliminary design. A topographical survey will inform the Arboricultural Method Statement
Hedgerows	All hedgerows assessed and recorded	Hedgerows not included within this tree survey	Hedgerow assessments undertaken as part of ecology surveys

Survey element	Standard survey methodology	Deviation from standard methodology	Justification
Canopy height	Canopy height measured from ground	No canopy heights presented in data	Used for determining construction access conflicts – likely to change and greater detail would be required to determine pruning requirements
Branch break	Lowest branch height and direction of growth	No branch break info presented in data	Used for determining construction access conflicts – likely to change and greater detail would be required to determine pruning requirements

Documents and files provided

B.1.4 Table B.3 lists the documents and files used in the planning and implementation of the tree survey, preparation of this report and production of the associated figures.

Table B.3 Documents and files used

Document title	Document number/file name	Purpose
Order Limits	Figure 7.24 Trees Removal and Retention Plan	Order Limits used to determine the survey boundaries and survey buffer extents
Project route Alignment	Figure 7.24 Trees Removal and Retention Plan	Project design detail used during tree survey
Retained/removed woodland and trees model	Figure 7.24 Tree Removal and Retention Plan	Matching of arboricultural impacts

Annex C Chart for tree quality assessment

C.1.1 The quality of surveyed arboricultural features was determined with reference to BS 5837 Table 1. The descriptors used for each quality category are presented in Table C.1.

Table C.1 Chart for tree quality assessment, taken from BS 5837

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality. 		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
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).

Category and definition	Criteria (including subcategories where appropriate)		
<p>Category B Trees of moderate quality with an estimated remaining life expectancy of at least 40 years</p>	<p>Trees that might be included in 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.</p>	<p>Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.</p>	<p>Trees with material conservation or other cultural value.</p>
<p>Category C Trees of low quality with an estimated remaining life expectancy of at least 40 years.</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.</p>	<p>Trees with no material conservation or other cultural value.</p>

Annex D Tree survey schedule key

D.1.1 Table D.1 provides a key to the tree survey schedule presented in Annex F.

Table D.1 Key for tree survey schedule

Item	Explanation
Tree ID	<ul style="list-style-type: none"> • Individual reference number
Type	<ul style="list-style-type: none"> • T – Tree • G – Group • W – Woodland
Species	<p>Common name</p> <p>For tree groups and wooded areas only the most frequent species may be recorded.</p>
Diameter at breast height (DBH)	<p>Tree stem diameter in millimetres (mm) measured at 1.5m from the ground. This figure relates to both single-stemmed trees or the combined DBH for multi-stemmed trees.</p>
Age class	<ul style="list-style-type: none"> • Young (Y) – A tree in the first quarter of its life span • Semi-mature (SM) – A tree in the latter stages of its first quarter, well established • Early mature (EM) – A tree halfway through its life span, significant further growth potential • Mature (M) – A tree at or near its potential maximum size which is still growing vigorously in the third quarter of its life span • Over-mature (OM) – A tree in decline in the final quarter of its life span
BS 5837 category	<ul style="list-style-type: none"> • Category A – high quality with a minimum remaining life expectancy of 40 years • Category B – moderate quality with a minimum remaining life expectancy of 20 years • Category C – low quality with a minimum remaining life expectancy of 10 years • Category U – unsuitable for retention
Observations	<p>Observations relevant to the BS 5837 category award and/or a basic description of the arboricultural feature</p>
Ancient / veteran tree	<ul style="list-style-type: none"> • Ancient (verified) – a tree of ancient status recorded on the Ancient Tree Inventory (ATI) • Veteran (verified) – a tree of veteran status recorded on the ATI • Ancient (potential) – a tree with features of an ancient tree but not recorded on the ATI • Veteran (potential) – a tree with features of a veteran tree but not recorded on the ATI • '-' denotes no obvious features associated with an ancient or veteran tree
ATI ref.	<p>Unique reference number attributed to trees recorded on the ATI</p>
TPO	<p>Tree Preservation Order name (if applicable)</p>

Item	Explanation
Impact	<ul style="list-style-type: none"> • Retain • Remove • Part remove (applies to tree groups and wooded areas only)
Buffer zone	<p>An area surrounding an ancient or veteran tree or area of ancient woodland which is specified for the purpose of protecting roots.</p> <p>Specified in accordance with standing advice from Natural England and the Forestry Commission (2022).</p>
-	<p>Attribute is not relevant to the arboricultural feature and does not apply / arboricultural feature does not exhibit any attributes which are noteworthy..</p>

Annex E Tree survey schedule

Table E.1 Tree survey schedule

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
1	G	Birch, hazel	120	SM	B	Highway planting on cutting.	-	-	-	Retain	-
2	G	Highways mix	150	SM	B	Highways planting on cutting.	-	-	-	Part remove	-
3	G	Oak, birch	350	EM	C	-	-	-	-	Part remove	-
4	G	Sweet chestnut, Scots pine, birch	275	EM	B	Roadside trees growing within ancient woodland buffer zone. Surveyed from a position of safety as no safe access.	-	-	-	Part remove	-
5	G	Oak, birch, sweet chestnut, ash	550	EM	B	No access across slip road. Highways planting around edge. Older EM trees set back. Trees in decline. Major deadwood habitat present. Prolific ivy.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
6	G	Hazel, field maple, ash, goat willow, sweet chestnut.	150	Y	C	Highways screening.	-	-	-	Part remove	-
16	G	Oak, field maple, holly, alder, ash, hazel, hawthorn, goat willow, western balsam poplar	150	SM	B	HS1 screening planting.	-	-	-	Part remove	-
17	G	Oak, yew, field maple, ash, birch, goat willow, hornbeam	220	SM	B	On HS1 land.	-	-	-	Part remove	-
18	G	Hazel, goat willow, oak, dogwood, hawthorn	150	SM	C	Highways screening.	-	-	-	Remove	-
19	G	Goat willow, hawthorn, crack willow, birch, cherry, hazel	200	SM	B	-	-	-	-	Remove	-
20	G	Field maple, ash, hazel, oak, birch, cherry, yew	220	SM	B	Landscape screen planting for HS1.	-	-	-	Retain	-
21	G	Field maple, oak, hazel, birch, yew, hornbeam, beech, sweet chestnut, cherry, goat willow	410	EM	B	Screening for golf course. Mainly hazel coppice. Some older oaks. Occasional larger hornbeam and beech at 520mm DBH max.	-	-	-	Retain	-
22	G	Field maple, hazel, birch, sycamore, hawthorn,	270	SM	C	Screen planting along Public Right of Way.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
23	G	Hawthorn, ash, elder, oak	370	EM	B	Mainly hawthorn and ash with occasional larger oak. Standing dead trees. Major deadwood.	-	-	-	Retain	-
24	G	Oak, sweet chestnut, hornbeam, holly, hawthorn	880	EM	B	Ash and oak standards with sweet chestnut throughout. Mostly EM with some mature trees. Largely unmanaged although trees on edge of course show pruning wounds. Standing dead trees.	-	-	-	Retain	-
25	G	Oak	1080	M	B	Group of oaks on woodland edge. More mature than surrounding trees. Storm damage. Fractures. Moderate deadwood. Stem and canopy cavities.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
26	G	Hawthorn, ash, elder	380	EM	B	Area of distinct change. Low-density hawthorn stand with occasional ash and oak standards of EM. Moderate deadwood.	-	-	-	Retain	-
27	G	Maple	180	SM	C	Highways planting.	-	-	-	Remove	-
28	G	Birch, oak, hawthorn, hazel	200	SM	C	Viewed from distance. HS1 planting.	-	-	-	Part remove	-
30	G	Sweet chestnut, ash, sycamore, birch	1700	OM	A	No access. Sweet chestnut trees with major deadwood. Storm damage. Fractures. Stem/canopy cavities. Fallen trees regenerating. Some retrenchment. Several large diameter specimens. Verified veteran within group. Not clear which. More potential veteran trees (circa 11).	Veteran (verified) / veteran (potential)	-	-	Retain	25.5

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
31	G	Ash, oak, sycamore, Scots pine	320	EM	B	Mainly ash. Managed roadside. Minor deadwood.	-	-	-	Part remove	-
32	G	Lime, hazel, yew, hawthorn, goat willow, holly	100	Y	B	Screen planting.	-	-	-	Retain	-
33	G	Birch, hazel, goat willow	120	Y	C	Screen planting on HS1 land.	-	-	-	Retain	-
34	G	Hazel, goat willow, birch	100	Y	B	No access. Screen planting for school.	-	-	-	Retain	-
36	G	Sweet chestnut, sycamore, Douglas fir, ash, oak, birch	900	M	B	Woodland edge by HS1. Mature sweet chestnut. Managed. Major deadwood. Fallen deadwood strapped to trees. Some mature oak. Cleared areas with regeneration.	-	-	1960001	Retain	-
39	G	Oak	1100	M	B	Linear group of mature oaks. Major deadwood. Storm damage. Lashed on deadwood. Canopy cavities. Stem cavities.	-	-	1960001	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
40	G	Field maple, hazel, birch, sweet chestnut, oak	170	Y	C	On HS1 land. No access.	-	-	1960001	Retain	-
43	G	Birch, sweet chestnut, sycamore	400	SM	C	Fill in planting. Some EM sweet chestnut coppice. Fallen trees.	-	-	-	Remove	-
44	G	Sweet chestnut, ash, birch, alder	350	EM	B	Younger trees aside from large, sweet chestnut. Minor deadwood. Standing dead.	-	-	-	Remove	-
45	G	Sweet chestnut	1150	OM	B	Group of sweet chestnut. Mature to OM. Major deadwood. Dieback in upper canopy. Stem cavities. Canopy cavities.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
46	G	Sweet chestnut	1100	M	B	Major deadwood within canopy. Cavities. Dieback within upper canopy. Managed. and in various states of decline. Tree to north has largest stem diameter of 1100mm. Other trees have diameters of 600-800mm.	-	-	-	Remove	-
48	G	Sweet chestnut, hazel, ash	590	M	B	Remnant woodland strip between roads. Predominantly mature sweet chestnut with hazel coppice. Low density. Major deadwood. Standing dead. Cavities within crown.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
55	G	Hazel, oak, ash, goat willow, birch, field maple, sweet chestnut, yew	280	SM	C	All recently planted. Recreational usage. Some small breaks in planting formation. Trenches dug throughout. Managed. Mostly hazel coppice.	-	-	-	Remove	-
56	G	Hazel, birch, oak, cherry	150	SM	C	No access. HS1 screening.	-	-	-	Part remove	-
57	G	Hazel, birch	150	SM	C	No access. Mainly hazel coppice.	-	-	-	Retain	-
58	G	Hazel, goat willow, birch	150	SM	C	No access. Mainly young hazel coppice. Occasional EM goat willow. Larger EM oak (500mm) from adjacent woodland along edge.	-	-	-	Retain	-
60	G	Oak, sycamore, horse chestnut, beech	870	M	C	Driveway trees. Minor stem damage. Poor form.	-	-	-	Retain	-
61	G	Hazel, birch, oak, cherry, field maple	160	SM	B	HS1 screening.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
62	G	Sweet chestnut, oak, beech, Leyland cypress, weeping willow, alder	900	M	B	No access. Mature sweet chestnuts and oak with EM cypress.	-	-	-	Retain	-
74	G	Field maple, ash, elm, hawthorn,	570	M	B	Field boundary linear group. Mature ash coppice stools. Moderate deadwood. Stem and canopy cavities. Diameter 180mm x ten trees. X 7 ash stools.	-	-	-	Retain	-
77	G	Sweet chestnut, wild cherry, oak, hazel, birch, goat willow, alder	700	M	B	Overstood chestnut coppice. Mature stools. Moderate deadwood. Stem cavities. Ash canker. Strip of SM planting on HS1 embankment of birch. Alder. Hazel.	-	-	-	Remove	-
78	G	Birch, hazel, hawthorn, alder	120	Y	C	No access. Pond screening.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
79	G	Oak, birch, Norway maple, apple, hawthorn, field maple, hornbeam, beech	320	EM	B	Mixed broadleaf species with EM maples to east. Younger staked trees throughout of SM. Poor pruning cuts. Some decay.	-	-	-	Remove	-
80	G	Oak, sycamore	500	EM	B	Large pruning wounds on lower stems with decay. Minor deadwood. Managed.	-	-	-	Remove	-
82	G	Hawthorn, goat willow, sycamore, ash, field maple, white willow, birch	400	EM	C	No access. Viewed from distance. In gully. Unmanaged. Fallen trees. Larger sycamore to north.	-	-	-	Remove	-
83	G	Field maple, poplar sp., birch, oak, cherry, ash, goat willow	180	SM	C	Highways screening.	-	-	-	Remove	-
84	G	Hazel, field maple, ash, hawthorn, oak, yew	150	SM	C	Provides low-level visual amenity.	-	-	-	Remove	-
85	G	Hazel, birch, cherry, hawthorn, field maple, alder, damson	180	SM	C	Screening for property to south. Larger birch with young in planting.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
90	G	Lime, hawthorn	450	EM	B	Circa eight EM limes with younger understory of hawthorn, field maple and elder. Prolific ivy. Screening for houses.	-	-	-	Remove	-
91	G	Lawsons cypress, sycamore	280	EM	B	Five cypress trees and a sycamore within property. Screening from road. No access. Viewed from distance.	-	-	-	Remove	-
92	G	Leyland cypress	450	EM	C	Rear garden of middle house.	-	-	-	Remove	-
93	G	Cherry, sycamore, Leyland cypress	440	M	C	Prolific ivy on cherry tree. Semi-mature sycamore trees.	-	-	-	Remove	-
94	G	Oak, Scots pine, hawthorn	160	SM	C	Viewed from distance. No access.	-	-	-	Remove	-
95	G	Birch, oak, field maple, beech, cherry, hawthorn	150	SM	C	Viewed from distance. HS1 screening.	-	-	-	Part remove	-
98	G	Birch	120	SM	C	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
99	G	Cherry, field maple, oak, birch, hazel, hawthorn	150	Y	C	HS1 planting.	-	-	-	Remove	-
100	G	Cherry, hawthorn	160	SM	C	On cutting. Highways planting. SM cherry with younger hawthorn.	-	-	-	Remove	-
101	G	Cherry, birch, ash, hawthorn, hazel	120	SM	C	No access. Highways planting.	-	-	-	Remove	-
102	G	Oak, field maple, holly, alder, ash, hazel, hawthorn, goat willow, western balsam poplar	150	Y	B	HS1 screening.	-	-	-	Retain	-
103	G	Oak, field maple, holly, alder, ash, hazel, hawthorn, goat willow, western balsam poplar	200	SM	B	HS1 screening.	-	-	-	Retain	-
104	G	Hybrid poplar	160	Y	B	No access. Observed from distance.	-	-	-	Remove	-
105	G	Hazel, goat willow, hawthorn	200	SM	B	Planted hedge line.	-	-	-	Retain	-
108	G	Aspen, ash	180	SM	B	Screen planting.	-	-	-	Retain	-
109	G	Goat willow	190	EM	C	Multi-stemmed cluster.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
111	G	Alder, hawthorn, blackthorn, hazel, hawthorn, hybrid poplar, sycamore, ash, crack willow	650	M	B	Limited access to survey. Highways planting of young to mature tree stock.	-	-	-	Remove	-
112	G	Hybrid poplar	710	M	B	Moderate deadwood in mid-to lower canopy.	-	-	-	Remove	-
113	G	Ash, pine, hazel, crack willow, hybrid poplar, cherry, alder	690	EM	B	Planting restricted to embankment offering screening to public park and dwellings.	-	-	-	Part remove	-
116	G	Hawthorn	150	EM	C	Most likely highways planting.	-	-	-	Remove	-
117	G	Leyland cypress	250	EM	C	Height reduced and managed.	-	-	-	Remove	-
118	G	Field maple, ash, hazel, hawthorn, silver birch	100	Y	C	Highways planting.	-	-	-	Remove	-
119	G	Leyland cypress, cherry	360	EM	C	Garden screening trees and ornamental cherries.	-	-	-	Remove	-
120	G	Leyland cypress	380	EM	C	Garden screening trees.	-	-	-	Remove	-
121	G	Field maple, hawthorn, blackthorn, dogwood	250	M	C	Roadside planting.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
122	G	Leyland cypress	310	EM	C	Garden screen planting.	-	-	-	Remove	-
124	G	Oak	290	SM	B	Semi-mature healthy trees.	-	-	-	Remove	-
125	G	Goat willow, field maple, ash	170	Y	B	Limited access highways planting.	-	-	-	Remove	-
126	G	Goat willow, cherry, field maple, hawthorn	230	EM	B	Limited access.	-	-	-	Remove	-
127	G	Oak, sweet chestnut, oak, ash, cherry, hawthorn, hazel, silver birch	120	Y	B	Native tree planting plot with tubes in place.	-	-	-	Remove	-
128	G	Sweet chestnut, oak	860	EM	B	Sweet chestnut coppice woodland with occasional individual tree.	-	-	-	Remove	-
130	G	Ash, oak, silver birch, sweet chestnut, hornbeam, hawthorn	680	EM	B	Old chestnut coppice stools with larger oak trees.	-	-	-	Remove	-
134	G	Oak, ash, hawthorn, elm	550	EM	B	Field boundary group. Mostly SM elm and hawthorn with one EM ash.	-	-	1972-001	Part remove	-
135	G	Elm, hawthorn, ash	300	SM	B	Field boundary group. Prolific ivy.	-	-	1972-001	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
137	G	Oak, ash, hornbeam	700	M	B	Woodland edge with mature oaks and younger ash. hornbeam and beech. Prolific ivy. Standing dead. Major deadwood. Fractures. Canopy/stem cavities. Managed.	-	-	1972-001	Part remove	-
138	G	Oak, ash, sweet chestnut	650	EM	B	Some stems with ivy. Restricted access. Minor deadwood.	-	-	-	Retain	-
139	G	Scots pine, Norway maple	500	EM	B	Minor deadwood.	-	-	-	Remove	-
140	G	White willow	580	EM	B	Prolific ivy and deadwood in mid-canopy.	-	-	-	Retain	-
141	G	Norway maple	470	EM	B	Minor deadwood.	-	-	-	Part remove	-
142	G	Norway maple, Scots pine	490	EM	B	Minor deadwood.	-	-	-	Part remove	-
144	G	Silver birch, Norway maple	530	EM	B	Minor deadwood.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
146	G	Oak, sweet chestnut, silver birch, sycamore, spruce, ash	1300	OM	A	Unmanaged woodland with large trees containing deadwood. Leaning trees with stem failure.	-	-	-	Remove	-
150	G	Willow, alder	350	SM	C	-	-	-	-	Retain	-
160	G	Sweet chestnut, silver birch, oak, willow	350	SM	C	Understorey and natural regeneration.	-	-	1972-001	Retain	-
173	G	Sweet chestnut	460	EM	B	Occasional dead stem.	-	-	-	Retain	-
177	G	Sweet chestnut	750	M	B	Upper crown dieback. Bat roost features.	-	-	-	Retain	-
178	G	Sweet chestnut	800	M	B	Historic storm damage. Bat roost features.	-	-	-	Retain	-
185	G	Hornbeam, hazel, oak, silver birch	970	M	A	Mainly hornbeam woodland with mature and early mature trees.	-	-	1972-001	Part remove	-
186	G	Oak, silver birch, hornbeam	320	EM	B	Minor deadwood. Group extends to fence line.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
187	G	Oak, hornbeam, silver birch, sweet chestnut	280	SM	B	Unmanaged roadside planting.	-	-	-	Remove	-
188	G	Hornbeam, silver birch, oak, sweet chestnut, hawthorn	380	EM	B	Roadside trees. Previously thinned with minor deadwood.	-	-	-	Part remove	-
189	G	Oak, ash, field maple, silver birch, hawthorn	550	EM	B	Viewed from distance.	-	-	-	Remove	-
190	G	Ash, hawthorn, hazel, silver birch, oak, field maple	700	EM	B	Viewed from distance.	-	-	-	Remove	-
191	G	Ash, oak, hornbeam	120	Y	B	Highways planting.	-	-	-	Part remove	-
192	G	Sweet chestnut, oak, silver birch	940	M	B	Mainly chestnut coppice of 230mm diameter with large chestnut and oak.	-	-	-	Retain	-
194	G	Sweet chestnut, oak, silver birch	750	M	B	AW area of sweet chestnut coppice and silver birch with average DBH of 250mm. Standing mature sweet chestnut. ash and oak.	-	-	-	Part remove	-
204	G	Ash field maple	200	SM	C	-	-	-	-	Remove	-
205	G	Cherry ash silver birch field maple	200	SM	C	-	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
206	G	Cherry ash	300	SM	C	-	-	-	-	Retain	-
209	G	Ash	120	Y	C	-	-	-	-	Retain	-
210	G	Field maple, ash, silver birch, cherry,	210	SM	C	-	-	-	-	Remove	-
211	G	Ash	350	SM	B	-	-	-	-	Remove	-
213	G	Ash, silver birch	150	SM	C	-	-	-	-	Remove	-
214	G	Cherry	260	EM	B	-	-	-	-	Remove	-
236	G	Oak, sweet chestnut	200	SM	C	-	-	-	-	Retain	-
239	G	Hybrid black poplar	500	EM	C	-	-	-	-	Retain	-
240	G	Leyland cypress	250	SM	C	Offsite.	-	-	-	Retain	-
247	G	Sweet chestnut, cherry, field maple	200	SM	C	-	-	-	-	Retain	-
248	G	Sweet chestnut, ash	450	EM	B	-	-	-	-	Retain	-
249	G	Oak	200	SM	C	Crowns reduced beneath cables.	-	-	-	Retain	-
251	G	Oak, beech	1000	M	B	-	-	-	-	Retain	-
252	G	Hawthorn, oak, elder	300	EM	B	Gaps at southern end.	-	-	-	Retain	-
253	G	Leyland cypress, oak, hawthorn	350	SM	B	-	-	-	-	Retain	-
273	G	Lime, Swedish whitebeam	180	SM	C	-	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
274	G	Cherry, hazel, ash, hawthorn, Scots pine, field maple, oak, holly, blackthorn, silver birch, poplar	200	SM	B	-	-	-	-	Retain	-
275	G	Oak, sweet chestnut, beech, hawthorn, elder	400	EM	B	-	-	-	-	Retain	-
276	G	Ash	600	EM	B	Minor deadwood and bark damage wounds.	-	-	-	Part remove	-
277	G	Oak, holly, field maple, silver birch, hawthorn, ash, goat willow, hazel, sweet chestnut	220	SM	B	Amenity planting between footpath and field.	-	-	-	Part remove	-
278	G	Oak, holly, field maple, silver birch, hawthorn, ash, goat willow, hazel	220	SM	B	Screen planting on roadside bank.	-	-	-	Part remove	-
279	G	Oak, birch, ash, goat willow, hawthorn, hazel, sycamore	380	SM	B	Highways planting block. No access.	-	-	-	Part remove	-
280	G	Ash, oak, birch, hawthorn, hazel	250	SM	B	Highways planting.	-	-	-	Part remove	-
281	G	Oak, ash, hawthorn, hazel, field maple	230	SM	B	Highways planting plot.	-	-	-	Part remove	-
282	G	Silver birch, ash, oak, sycamore, hawthorn, holly, field maple	230	SM	B	Highways planting block.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
283	G	Goat willow, sycamore, birch, ash, hazel, hawthorn, oak, field maple	220	SM	B	No access. Highways planting.	-	-	-	Part remove	-
284	G	Hawthorn, elm	180	EM	C	Flailed field boundary. Prolific ivy. Some gaps.	-	-	-	Part remove	-
285	G	Ash	650	M	C	Next to metal fence. Occluding around fence. Dieback over the track. Moderate deadwood. Tree to east has prolific water shoots throughout crown. Large stem cavity to south with advanced decay and bulging.	-	-	-	Retain	-
286	G	Oak, hawthorn, ash	510	EM	B	Two mature hawthorn with EM oak and ash. Minor deadwood. Stem cavities.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
287	G	Mulberry	320	EM	C	Next to access track. Multi-stemmed larger tree to west (six stems average 210mm).	-	-	1972-001	Retain	-
295	G	Oak	810	M	B	Two trees within marsh like depression separate from woodland edge. Oak to north largest with squat form and congested crown break at 1.5m. Minor deadwood. Water shoots.	-	-	-	Retain	-
296	G	Oak, sweet chestnut	320	EM	C	Field edge group.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
299	G	Sweet chestnut, ash, hazel, field maple, elm, cherry	670	EM	B	Mostly lapsed coppice of chestnut and ash. Fallen stems. Stem cavities. Major deadwood. Occasional mature oak standards and mature ash coppice. Elm regeneration present at western end interspersed with shrub planting.	-	-	1972-001	Retain	-
300	G	Field maple, haw, ash, cherry	350	EM	B	Mostly hawthorn and field maple. Some oak and ash at 450mm diameter. Mature field maple present and cherry at western end.	-	-	1972-001	Retain	-
302	G	Hazel, hawthorn, oak, field maple,	350	EM	B	Mostly hazel coppice. Prolific ivy.	-	-	1972-001	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
304	G	Sweet chestnut, oak, hazel, ash, cherry, birch,	450	M	B	Sweet chestnut coppice. With older sweet chestnut and oak to southern end. Some mature stools. Occasional hazel coppice and wild cherry.	-	-	1972-001	Retain	-
305	G	Field maple, hazel, oak, ash, hawthorn,	550	M	B	Linear roadside group. Mostly field maple. On cutting face. Basal decay. Exposed roots.	-	-	1972-001	Retain	-
306	G	Ash, hazel, ash, elm, cherry,	650	EM	B	Mostly lapsed ash coppice at eastern end. Fallen stems. Dieback. Standing dead. Ash canker. Prolific ivy. Stem and canopy cavities. Basal decay.	-	-	1972-001	Retain	-
307	G	Lombardy poplar, oak, sweet chestnut, field maple, birch, hazel, hawthorn, elm	430	M	B	Linear boundary trees on cutting face. Exposed roots. Basal decay. Prolific ivy. Moderate deadwood.	-	-	1972-001	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
308	G	Hybrid poplar	700	M	B	Linear group of poplar along edge of woodland on top of cutting. Some leaning stems. Ivy present.	-	-	1972-001	Retain	-
309	G	Oak	360	EM	B	Along field boundary. Minor deadwood.	-	-	1972-001	Part remove	-
312	G	Oak	1200	M	A	Viewed from distance. Access needed to verify.	Veteran (potential)	-	-	Retain	18.0
318	G	Oak	680	EM	B	One stem with ivy. Minor deadwood and phone line through canopies.	-	-	-	Retain	-
325	G	Hybrid poplar, oak	800	M	B	Some ivy with multi-stemmed trees and minor deadwood.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
326	G	Ash, hawthorn, hazel, oak	800	M	B	Field boundary line of mature ash with hawthorn and elder understory. Trees also to north on bank of watercourse. Prolific ivy. Major deadwood. Standing dead stems. Management evident and power lie clearance. Stem and canopy cavities. Fungi present.	-	-	28/1991	Part remove	-
327	G	Crack willow	1200	M	B	Line of willow. Leaning stems. Moderate deadwood. Ivy-clad stems. On bank. No safe access. Stem and canopy cavities.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
328	G	Crack willow, oak	1200	OM	B	Line of trees along water course. Multi-stemmed willow. Moderate deadwood. Stem cavities. Oak with dieback in canopy. Snap out.	-	-	-	Remove	-
329	G	Poplar, crack willow, ash, oak	1080	OM	B	Copse of poplar and ash. Some standing dead. Collapsed stems. Stem cavities. Canopy cavities. <i>Inonotus</i> present by ash.	-	-	-	Remove	-
332	G	Oak , field maple , hawthorn, elm	450	EM	C	Dead and dying elms at northern end.	-	-	-	Retain	-
333	G	Elm, field maple, oak, hazel	470	EM	C	Mostly elm regeneration with dieback and standing dead. SM hazel and elm with one EM oak.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
334	G	Elm, hawthorn	230	SM	U	Mostly dead or severely declining SM elm. Some functioning hawthorn within group. Ivy throughout.	-	-	-	Remove	-
335	G	Elm	150	SM	U	Declining elms on lane bank.	-	-	-	Part remove	-
336	G	Elm, elder, crack willow	200	SM	C	Clump of trees in waterlogged depression. Dead elm. Prolific ivy. Thick bramble. No access.	-	-	-	Remove	-
337	G	Elm, elder	180	SM	U	Prolific ivy. Mostly dead elm.	-	-	07/1990	Remove	-
338	G	Elm, oak	150	SM	U	Overgrown. No access. Dead and declining elms. Ivy throughout. One functioning oak SM.	-	-	-	Remove	-
339	G	Oak, elm	200	SM	U	Elm regeneration. Prolific ivy. Dead and declining elms.	-	-	07/1990	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
343	G	Field maple, oak, elm, hawthorn	640	M	B	Located on bank and young plantation area near quarry.	-	-	07/1990	Remove	-
344	G	Oak, field maple, hawthorn, hazel	600	M	B	Located on embankment with stem cavities and minor deadwood.	-	-	-	Remove	-
345	G	Weeping ash, lime, yew, laurel, cherry	1100	OM	B	Restricted access. Large <i>Ganoderma</i> brackets observed on trunk of lime tree near road. Minor deadwood.	-	-	12/2010	Retain	-
349	G	Oak, sycamore	550	EM	B	Group bisected by fairway and northern section part-felled to clear pylons.	-	-	-	Retain	-
350	G	Oak, hawthorn	380	EM	B	-	-	-	-	Retain	-
351	G	Oak, cherry	700	EM	B	Group dominated by oak with a few cherry. Stem bleeds observed on one oak.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
352	G	Oak	660	EM	B	Potentially low branches over track for high-sided vehicles or plant.	-	-	-	Retain	-
353	G	Ash, oak, field maple	570	EM	B	Scattered linear group. Historic storm damage. Bat roost features.	-	-	07/1990	Retain	-
354	G	Oak, ash, cherry, blackthorn, hawthorn, sycamore, elm hornbeam, field maple.	550	M	B	Mature hornbeam coppice and cherry. EM oak standards with younger in fill planting. Pheasant pen present. Fallen stems. Major deadwood.	-	-	-	Remove	-
359	G	White willow	800	M	B	Limb failures. Storm damage. Dieback in canopy. Large stem cavities. Moderate deadwood.	-	-	-	Remove	-
365	G	Oak, hawthorn	650	EM	B	No access. Even aged woodland plot. Hawthorn edge.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
369	G	Hawthorn	280	SM	C	Flailed. Moderate deadwood.	-	-	-	Remove	-
371	G	Field maple, hawthorn, oak	390	SM	C	Flailed to 4m. Minor deadwood.	-	-	-	Remove	-
374	G	Hawthorn	210	SM	C	Flailed. Dieback. Stem cavities.	-	-	-	Remove	-
375	G	Hawthorn	120	SM	C	Prolific ivy. Flailed to west. One oak by pond.	-	-	-	Remove	-
376	G	Hawthorn, oak	650	EM	B	Minor deadwood. Some trees within standing water. Prolific ivy in hawthorns.	-	-	-	Remove	-
377	G	Hawthorn, oak	250	SM	C	Sporadic flailed hedge. Prolific ivy. Dead stems. Dieback.	-	-	-	Retain	-
378	G	Ash, field maple, hawthorn, elder	150	SM	C	Part maintained hedge with scattered trees.	-	-	-	Remove	-
379	G	Field maple, ash, oak	520	SM	C	Some multi-stemmed. Field boundary remnant.	-	-	-	Remove	-
380	G	Oak	350	EM	C	Unable to fully inspect due to ivy.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
381	G	Lombardy poplar, hybrid black poplar	551	EM	C	Occasional branch fracture: historic storm damage.	-	-	-	Remove	-
382	G	Elm, field maple, hawthorn	100	EM	C	Maintained hedge.	-	-	-	Remove	-
383	G	Leyland cypress, yew, maple, holly, elm	430	EM	B	Screening for property.	-	-	-	Remove	-
384	G	Silver birch, Leyland cypress	450	EM	B	-.	-	-	-	Retain	-
386	G	Elm	140	Y	C	Field boundary. Dieback and dead present.	-	-	-	Remove	-
388	G	Ash	360	EM	C	Historically pollarded at 1.5m with secondary reduction points at 4m.	-	-	-	Retain	-
390	G	Sycamore	460	EM	C	Central two trees affected by sooty bark disease. Of which the southern tree is dead. With <i>Ganoderma</i> fruiting bodies at base.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
391	G	Sycamore, field maple,	300	EM	C	Scattered sycamore with field maple understorey. Occasional one left to grow on. One sycamore in centre with old bark wounds and fungal fruiting bodies. Possibly <i>Flammulina velutipes</i> .	-	-	-	Remove	-
392	G	Elm	120	SM	U	Dead. Dutch elm disease.	-	-	-	Remove	-
393	G	Elm	150	SM	U	Dead. Dutch elm disease.	-	-	-	Remove	-
394	G	Lime	520	EM	B	Avenue planting. Some replacements. Viewed from distance.	-	-	-	Part remove	-
395	G	Lime	500	EM	B	Avenue planting. Some replacements. Viewed from distance.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
397	G	Elm	120	SM	U	Flailed hedge remnant. Dutch elm disease.	-	-	-	Remove	-
398	G	Elm, sycamore	110	SM	C	Previously topped. Flailed.	-	-	-	Retain	-
399	G	Elm	150	Y	C	Field boundary.	-	-	-	Part remove	-
400	G	Elm, elder, sycamore, hybrid poplar	230	SM	C	Field boundary. Some dead elm. Larger poplar. Ivy-clad stems.	-	-	-	Part remove	-
401	G	Elm, elder	130	Y	C	-	-	-	-	Remove	-
402	G	Silver birch	170	SM	B	No access.	-	-	-	Remove	-
404	G	Eucalyptus, pine	580	EM	B	Viewed from road. Some multi-stemmed.	-	-	-	Remove	-
406	G	Elm	100	M	C	Maintained hedge.	-	-	-	Remove	-
407	G	Elm	120	M	U	Dead/dying elms from Dutch elm disease.	-	-	-	Remove	-
408	G	Elm	120	M	U	Dead/dying elms from Dutch elm disease.	-	-	-	Remove	-
409	G	Oak, elm, hawthorn, Scots pine, field maple	250	SM	C	Scrubby linear highways mix.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
410	G	Elm, hawthorn, elder	120	M	U	Dominated by dead/dying elm. Dutch elm disease.	-	-	-	Remove	-
414	G	Damson	130	EM	B	Screening for property. Prolific ivy.	-	-	-	Remove	-
415	G	Leyland cypress	230	SM	B	No access. Viewed from distance. Screening for property.	-	-	-	Remove	-
416	G	Cherry	350	M	B	No access. Mature cherry with numerous suckers from root system. One other EM cherry.	-	-	-	Remove	-
417	G	Leyland cypress	320	EM	B	Screening for property. Viewed from distance.	-	-	-	Remove	-
418	G	Apple, oak	210	SM	C	Highways. Ivy on apple.	-	-	-	Remove	-
419	G	Oak, Scots pine, hawthorn	250	SM	C	Planted linear belt.	-	-	-	Remove	-
421	G	Elm, hawthorn, goat willow, laburnum	170	SM	C	Highways. Heavy undergrowth. Dieback in elm.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
422	G	Cherry, Norway maple	310	SM	C	Planted line. Epicormic growth on stems.	-	-	-	Remove	-
423	G	Scots pine, hawthorn, cherry, field maple	270	SM	C	Scattered browning foliage in pines.	-	-	-	Remove	-
425	G	Leyland cypress	430	EM	B	Garden screen pruning.	-	-	-	Remove	-
426	G	Leyland cypress	400	EM	B	Garden screening.	-	-	-	Remove	-
427	G	Hawthorn, elm, ash	180	SM	C	Scrub like vegetation.	-	-	-	Remove	-
428	G	Oak, ash, field maple, cherry	200	SM	C	Established highways mix.	-	-	-	Remove	-
429	G	Field maple, oak, cherry	200	SM	C	Established highways mix.	-	-	-	Remove	-
430	G	Hawthorn, field maple	160	SM	C	Highways trees.	-	-	-	Remove	-
432	G	Oak, ash, field maple, cherry	300	SM	B	Established planting on highways embankment.	-	-	-	Remove	-
433	G	Scots pine, silver birch, oak, ash, field maple, cherry, hawthorn	350	SM	B	Established linear highways mix. Several open areas in centre.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
436	G	Sycamore	500	EM	C	Some multi-stemmed. Minor dead wood.	-	-	-	Remove	-
438	G	Elm, elder	100	M	U	Dutch elm disease. Dead/dying elms throughout group.	-	-	-	Remove	-
439	G	Elm	100	M	U	Dutch elm disease. Dead/dying elms throughout.	-	-	-	Retain	-
440	G	Field maple, hawthorn	300	SM	C	Gappy linear group.	-	-	-	Remove	-
441	G	Elm, field maple	150	SM	U	Dutch elm disease. Dead/dying elms throughout group. Gappy towards western end.	-	-	-	Remove	-
442	G	Hawthorn	180	M	C	Maintained hedge.	-	-	-	Remove	-
443	G	Elm	150	M	U	Dutch elm disease. Scattered dead/dying trees throughout group. Some fallen trees. Flail damage.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
445	G	Elm	150	M	U	Dutch elm disease. Dead/dying elms throughout group.	-	-	-	Remove	-
446	G	Elm, goat willow	150	EM	U	Susceptible to Dutch elm disease. Dominated by elm with isolated small group of willow within.	-	-	-	Remove	-
447	G	Elm	120	EM	U	Susceptible to Dutch elm disease.	-	-	-	Remove	-
449	G	Oak	630	EM	B	Minor deadwood.	-	-	-	Retain	-
455	G	Ash, field maple, hawthorn, oak, elm	210	SM	C	Some flail management. Sporadic in parts with standing dead elm.	-	-	-	Retain	-
458	G	Hawthorn, elm	120	EM	C	Flailed hedge dominated by hawthorn. Occasional dead elm. Dutch elm disease.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
459	G	Oak, field maple, ash, hawthorn, silver birch, sycamore	200	SM	B	Linear highways mix. Dominated by oak. Isolated larger trees within group.	-	-	-	Remove	-
463	G	Norway maple, field maple, cherry, oak	300	SM	C	Established highways planting	-	-	-	Remove	-
464	G	Hybrid black pine	270	SM	C	-	-	-	-	Remove	-
465	G	Scots pine, oak, cherry, field maple	300	SM	B	Established highways mix.	-	-	-	Retain	-
466	G	Oak, ash, field maple, black pine	350	SM	C	No access. Viewed from distance. Highways.	-	-	-	Remove	-
467	G	Blackthorn, cherry, ash, oak, hawthorn	300	SM	C	Highways screening. Sporadic and lower density. On embankment. No access.	-	-	-	Remove	-
468	G	Elm, field maple	200	SM	C	Mostly elm to west with standing dead trees. Dutch elm disease. No clear view of trees to east.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
469	G	Unknown	220	SM	C	Viewed from distance. No access.	-	-	-	Remove	-
473	G	Blackthorn, hawthorn, oak	400	EM	C	Drive-by survey. Larger oak at east end. Prolific ivy. Mostly SM blackthorn.	-	-	-	Remove	-
474	G	Hybrid black poplar	750	M	B	Drive-by survey. Moderate deadwood.	-	-	-	Part remove	-
475	G	Blackthorn, corkscrew willow, laurel, hawthorn, field maple	180	SM	B	Drive-by survey. Prolific ivy. Flaied.	-	-	-	Remove	-
476	G	Leyland cypress	350	SM	B	Line of screen conifers. Flaied on field side.	-	-	-	Remove	-
477	G	Blackthorn, field maple, hawthorn, hazel, Scots pine	250	EM	C	Two lines of screen planting. Younger field maple below power lines. Flaied on field side.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
479	G	Hawthorn, field maple	300	SM	C	Behind fence. Flaied on roadside. Ivy present. Minor deadwood.	-	-	-	Remove	-
480	G	Leyland cypress	250	SM	B	Boundary trees providing screening for property. Flaied on roadside up to 3m. Previously topped.	-	-	-	Remove	-
481	G	Willow	380	SM	B	No access. Blackthorn hedge preventing view.	-	-	-	Remove	-
482	G	Lawsons cypress	400	EM	B	No access. Viewed from distance.	-	-	-	Remove	-
484	G	Elm	260	M	U	Three dead trees: Dutch elm disease.	-	-	-	Remove	-
485	G	Elm	460	M	U	Two easternmost trees dead: Dutch elm disease. Largest stem diameter recorded.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
492	G	White willow	500	EM	C	Growing from ditch. Minor dead wood. Basal wound on easternmost tree. Partial occlusion. Stem pruning wounds.	-	-	-	Remove	-
493	G	Oak	450	SM	B	-	-	-	-	Remove	-
494	G	Oak, field maple	420	SM	B	-	-	-	-	Remove	-
496	G	Oak	350	SM	C	Southernmost tree coppiced with twisting stems.	-	-	-	Remove	-
500	G	Hawthorn, field maple, ash, elm	300	SM	C	Maintained sections of hawthorn and elm with occasional larger trees. Some elm dieback: Dutch elm disease.	-	-	-	Remove	-
501	G	Oak	750	EM	B	Unable to fully inspect due to ivy. Largest stem diameter recorded.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
504	G	Ash	360	SM	C	Westernmost tree with large basal wound and associated decay on northern side.	-	-	-	Remove	-
507	G	Field maple, hornbeam, cherry plum, hawthorn	310	SM	C	Flail damage on southern side.	-	-	-	Remove	-
510	G	Hawthorn, field maple, oak, hornbeam	250	SM	C	Unable to fully inspect due to ivy.	-	-	-	Remove	-
511	G	Oak, ash, hornbeam	220	SM	C	Planted line.	-	-	-	Remove	-
512	G	White willow	390	EM	C	-	-	-	-	Remove	-
513	G	White willow	530	EM	C	Upper crown dieback in central tree. Minor dead wood in others. Epicormic growth on stems from pruning.	-	-	-	Remove	-
519	G	Elm	200	M	U	Taller trees dead: Dutch elm disease.	-	-	-	Remove	-
520	G	Cricket bat willow	170	SM	C	-	-	-	-	Remove	-
522	G	Cricket bat willow, ash, oak	130	SM	C	Line of planted willows with self-set other species.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
523	G	Orchard apple	250	EM	C	Unable to fully inspect due to fence. Probable orchard remnant. Stem wounds.	-	-	-	Retain	-
524	G	Oak	600	EM	B	One dead oak at northern end.	-	-	-	Retain	-
528	G	Blackthorn	100	SM	C	Suckering group on sloping dyke bank.	-	-	-	Retain	-
529	G	Oak, apple, field maple, poplar	270	SM	B	Linear plantation viewed from opposite bank. Section pollarded beneath electricity pylons.	-	-	-	Part remove	-
530	G	Goat willow, hawthorn	200	SM	C	-	-	-	-	Retain	-
533	G	Goat willow	300	EM	C	Stems submerged in dyke.	-	-	-	Remove	-
534	G	Goat willow	250	SM	C	Stems submerged in dyke.	-	-	-	Remove	-
535	G	Hawthorn, goat willow, ash, field maple	150	SM	C	-	-	-	-	Retain	-
536	G	Oak, ash, field maple	250	SM	B	Linear plantation viewed from opposite bank.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
537	G	Ash, field maple, oak	300	SM	B	Linear plantation viewed from opposite bank.	-	-	-	Part remove	-
538	G	Ash, field maple, oak, white willow, white poplar	400	SM	B	Linear plantation viewed from opposite bank.	-	-	-	Remove	-
540	G	Hawthorn	350	EM	C	-	-	-	-	Retain	-
548	G	Hawthorn, blackthorn	200	EM	C	Maintained hedges along both sides of deep ditch. Flail damage. Western end of hedge recorded.	-	-	-	Retain	-
549	G	Ash, field maple, oak, crack willow	350	SM	B	Linear plantation viewed from opposite bank.	-	-	-	Retain	-
550	G	Hawthorn	120	SM	C	-	-	-	-	Retain	-
551	G	Blackthorn, hawthorn	100	SM	C	-	-	-	-	Retain	-
552	G	Field maple, oak, white poplar, ash	300	SM	B	Linear plantation viewed from opposite bank.	-	-	-	Retain	-
556	G	Oak, field maple, hawthorn, white willow	350	EM	B	-	-	-	-	Retain	-
580	G	Corsican pine	830	M	B	Largest stem diameter recorded.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
587	G	Oak, hazel, ash, field maple, hawthorn, small-leaved lime	180	SM	C	Thames Chase plantation.	-	-	-	Remove	-
588	G	Oak, field maple, hawthorn, yew	150	SM	B	-	-	-	-	Remove	-
589	G	Oak, field maple, yew, willow	200	SM	B	-	-	-	-	Part remove	-
590	G	Small-leaved lime, oak, wild cherry, sweet chestnut, yew, hazel, ash	300	SM	B	Plantation dominated by lime.	-	-	-	Remove	-
591	G	Hazel, oak, wild cherry	270	SM	B	Plantation	-	-	-	Remove	-
592	G	Pear	210	SM	C	-	-	-	-	Remove	-
593	G	Apple	100	SM	C	Scattered orchard.	-	-	-	Remove	-
594	G	Oak, ash, hornbeam, Scots pine, hazel, hawthorn, field maple	150	SM	B	Plantation.	-	-	-	Remove	-
596	G	Oak, beech, larch, hawthorn, blackthorn, ash, yew	120	SM	C	Dense plantation. Scrubby in areas.	-	-	-	Part remove	-
597	G	Oak, ash, beech, goat willow, hawthorn, blackthorn	120	SM	C	Dense plantation.	-	-	-	Part remove	-
598	G	Oak, ash, field maple, willow	200	SM	C	Plantation adjacent pylon route.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
599	G	Oak, ash, crack willow, hawthorn, blackthorn, goat willow, larch, Scots pine	150	SM	C	Dense plantation.	-	-	-	Part remove	-
600	G	Silver birch, Scots pine, larch, hornbeam, common alder, hawthorn, osier	130	SM	C	Plantation.	-	-	-	Remove	-
601	G	Oak, ash, goat willow, Scots pine, hawthorn	120	SM	C	-	-	-	-	Remove	-
603	G	Ash, silver birch, oak, alder, hawthorn, white willow, Scots pine, grey poplar	250	SM	C	Planted group.	-	-	-	Part remove	-
604	G	Scots pine, larch, silver birch, field maple, oak, hawthorn, hornbeam, common alder, goat willow, wild cherry	190	SM	B	Plantation. Pines concentrated at northern and southern ends.	-	-	-	Remove	-
607	G	Ash, crack willow	230	SM	C	Average stem diameter recorded.	-	-	12-92	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
615	G	Oak, ash, elm, hawthorn	350	EM	B	Linear belt of trees overhanging track. Compacted surface and shallow ditch on western side between trees and track.	-	-	16-07	Retain	-
620	G	Oak, ash, hornbeam	550	EM	B	Unable to fully inspect due to fence. Linear belt dominated by oak.	-	-	-	Part remove	-
621	G	Wild cherry, field maple, oak	300	SM	C	Dense highways mix.	-	-	-	Part remove	-
626	G	Oak	1190	M	A	Largest stem diameter recorded (southernmost tree). Tree with largest stem diameter exhibits some veteran features.	Veteran (potential)	-	20-81	Retain	17.9
643	G	Goat willow, cherry, hawthorn, blackthorn	145	SM	C	Area of thorny scrub with occasional trees.	-	-	-	Remove	-
644	G	Hawthorn, blackthorn, pear, cherry	125	SM	C	Area of thorny scrub with occasional trees.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
645	G	Silver birch, Scots pine, spruce, sweet chestnut, field maple, oak, ash	270	SM	B	Established planting.	-	-	-	Part remove	-
648	G	Ash, field maple, hawthorn, goat willow, cherry plum	160	SM	B	Dense planting and natural regeneration. Ivy.	-	-	-	Remove	-
651	G	Cherry	280	SM	B	Linear group. Maximum stem diameter recorded.	-	-	-	Retain	-
654	G	Elm	190	SM	B	-	-	-	-	Retain	-
656	G	Alder, London plane	470	SM	B	Linear group. Dominated by alder with one London plane. Maximum stem diameter recorded.	-	-	-	Remove	-
657	G	Field maple, cherry plum, ash, silver birch, yew, oak, Norway maple, alder, cherry, poplar	350	SM	B	Previous tree nursery. Trees left to grow on with spaces forming woodland glades.	-	-	-	Remove	-
660	G	Silver birch, oak, false acacia, poplar	380	SM	B	Maximum stem diameter recorded. Historical canopy lift.	-	-	-	Retain	-
661	G	Elm	180	SM	U	Extensive dieback caused by Dutch elm disease.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
662	G	Elm	180	SM	U	Gappy linear group with dieback caused by Dutch elm disease.	-	-	-	Part remove	-
663	G	Elm	150	SM	U	Gappy linear group infected with Dutch elm disease. Reduced beneath cables.	-	-	-	Remove	-
664	G	Ash, elm, apple	200	SM	C	Group dominated by ash.	-	-	-	Remove	-
665	G	Elm, ash, cherry	170	SM	U	Group dominated by elm dying from Dutch elm disease.	-	-	-	Remove	-
666	G	Elm	150	SM	U	Dead and dying from Dutch elm disease.	-	-	-	Part remove	-
667	G	Poplar	150	SM	C	Self-set.	-	-	-	Remove	-
668	G	Elm	130	SM	U	Scattered upper crown dieback. In terminal decline from Dutch elm disease.	-	-	-	Remove	-
669	G	Crack willow	265	EM	C	Scattered branch dieback.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
670	G	Blackthorn, elm, field maple	150	SM	C	Dense group dominated by blackthorn. Good habitat value.	-	-	-	Retain	-
671	G	Blackthorn	100	SM	C	-	-	-	-	Remove	-
672	G	Elm	120	SM	U	Occasional tree dead from Dutch elm disease.	-	-	-	Retain	-
673	G	Scots pine	280	SM	B	Maximum stem diameter recorded.	-	-	-	Retain	-
674	G	Scots pine, silver birch, poplar	250	SM	B	Maximum stem diameter recorded.	-	-	-	Retain	-
675	G	Poplar, silver birch, hawthorn, ash, cherry plum, alder, Scots pine	320	SM	B	Maximum stem diameter recorded. Trees topped beneath cables.	-	-	-	Remove	-
676	G	White poplar	380	EM	B	Maximum stem diameters recorded.	-	-	-	Remove	-
677	G	Oak, ash, alder, silver birch, hawthorn, Scots pine, white poplar	350	SM	B	Maximum stem diameter recorded.	-	-	-	Remove	-
678	G	Oak, ash, hawthorn, silver birch, field maple, Scots pine	350	SM	B	Maximum dimensions recorded. Scattered self-set trees.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
679	G	Elm, field maple, hawthorn	180	SM	C	Maximum stem diameter recorded. Elms dead and dying from Dutch elm disease.	-	-	-	Remove	-
680	G	Elm, field maple	170	SM	C	Maximum stem diameter recorded. Elms dead and dying from Dutch elm disease.	-	-	-	Remove	-
681	G	Silver birch	340	EM	B	Maximum stem diameter recorded.	-	-	-	Remove	-
682	G	Elm	150	SM	U	Maximum stem diameter recorded. Trees dead and dying from Dutch elm disease.	-	-	-	Remove	-
683	G	Elm, field maple, ash	200	SM	C	Maximum stem diameter recorded. Elms dead and dying from Dutch elm disease.	-	-	-	Remove	-
684	G	Elm	150	SM	U	Maximum stem diameter recorded. Scattered trees along both sides of road dead and dying from Dutch elm disease.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
685	G	Leyland cypress	200	SM	C	Sparse foliage in upper crown.	-	-	-	Remove	-
686	G	Leyland cypress	220	SM	U	Crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
687	G	Leyland cypress	220	SM	U	Crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
688	G	Leyland cypress	250	SM	U	Crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
689	G	Leyland cypress	250	SM	U	Crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
690	G	Elm, elder	150	-	C	Some elms dying from Dutch elm disease.	-	-	-	Remove	-
691	G	Ash, hawthorn	250	SM	C	Maximum stem diameter recorded. Hedge remnant.	-	-	-	Remove	-
692	G	Cherry plum, cherry laurel, cherry	150	SM	C	Maximum stem diameter recorded.	-	-	-	Remove	-
693	G	Cherry plum	200	EM	C	Maximum stem diameter recorded.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
694	G	Elm, field maple, hawthorn, cherry plum, ash	200	SM	C	Maximum stem diameter recorded. Scattered linear group flailed over track.	-	-	-	Remove	-
695	G	Field maple, hawthorn, goat willow, oak, cherry plum	150	SM	C	Scattered linear group flailed over track. Maximum stem diameter recorded.	-	-	-	Remove	-
696	G	Sycamore, buddleia, cherry laurel, goat willow, cherry plum, hawthorn, pear, apple, oak, Lawson cypress	320	SM	C	Maximum dimensions recorded. Some trees planted in abandoned nursery. Other trees self-set.	-	-	-	Remove	-
697	G	Yew, cherry	100	SM	C	Maximum stem diameter recorded.	-	-	-	Remove	-
698	G	Cherry, apple	250	EM	C	Maximum stem diameter recorded.	-	-	-	Remove	-
699	G	Monterey cypress, silver birch, hawthorn	300	EM	C	Group dominated by Monterey cypress with upper crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
700	G	Holly, ash	175	SM	C	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
701	G	Monterey cypress, Scots pine, apple	300	SM	C	-	-	-	-	Remove	-
702	G	Monterey cypress, cherry	300	SM	C	-	-	-	-	Remove	-
704	G	Lawson cypress	270	SM	C	Maximum stem diameter recorded.	-	-	-	Remove	-
705	G	Ash, elm	130	Y	C	-	-	-	-	Remove	-
706	G	Holly, laburnum	175	SM	C	-	-	-	-	Remove	-
707	G	Ash, hawthorn, field maple, oak	150	SM	C	Planted group on highway embankment. Maximum stem diameter recorded.	-	-	-	Remove	-
708	G	Scots pine, oak, cherry, field maple	300	SM	B	-	-	-	-	Retain	-
709	G	Monterey cypress	480	EM	U	Crown dieback: <i>Coryneum</i> canker present. Maximum stem diameter recorded.	-	-	-	Retain	-
710	G	Monterey cypress	500	EM	U	Dying trees from <i>Coryneum</i> canker present. Maximum stem diameter recorded.	-	-	-	Retain	-
711	G	Monterey cypress	250	EM	C	Topped. Maximum stem diameter recorded.	-	-	-	Part remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
712	G	Oak, apple, field maple, poplar	280	SM	B	Surveyed from opposite bank. Maximum stem diameter estimated.	-	-	-	Part remove	-
714	G	Lombardy poplar	400	SM	B	-	-	-	-	Remove	-
29	T	Sweet chestnut	1600	OM	A	Multiple tear outs. Storm damage. Rot holes. Decay tracts. Moderate deadwood. Stem/canopy cavities.	Veteran (verified)	28289	-	Retain	24.0
35	T	Oak	530	EM	B	No access. Minor deadwood.	-	-	-	Remove	-
37	T	Sweet chestnut	1100	M	B	Possible lapsed pollard. Stem cavities. Moderate dead wood. Secondary canopy.	-	-	1960001	Retain	-
38	T	Oak	1030	M	B	Cavities. Moderate deadwood. Storm damage.	-	-	1960001	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
41	T	Sweet chestnut	1400	OM	A	Severe dieback in upper canopy. Major deadwood. Managed. Early leaf loss. Overgrown around base. Lower canopy alive although dieback present.	Veteran (potential)	-	-	Remove	21.0
42	T	Sweet chestnut	1050	M	B	In decline. Upper canopy dieback. Stem and canopy cavities. Moderate deadwood.	-	-	-	Remove	-
47	T	Sweet chestnut	1210	OM	B	In decline. Storm damage. Managed. Basal decay. Moderate deadwood.	-	-	-	Remove	-
50	T	Beech	1200	OM	A	No access. Maiden high-quality specimen. Viewed from distance.	-	-	-	Remove	-
51	T	Oak	650	M	B	-	-	-	-	Remove	-
52	T	Oak	650	M	B	Viewed from distance. No access.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
53	T	Oak	650	M	B	Minor deadwood. Viewed from distance.	-	-	-	Remove	-
54	T	Oak	850	M	B	Moderate deadwood. Minor bark damage around basal area.	-	-	-	Remove	-
59	T	Beech	1200	M	B	Group grown. Suppressed to south. Large stem cavities. Tear outs. Minor deadwood.	-	-	-	Retain	-
64	T	Ash	800	M	B	Moderate deadwood. Dieback upper crown to south. Limb to south with woodpecker hole and <i>Inonotus</i> bracket. Snap outs.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
65	T	Sweet chestnut	1130	M	C	Stem diameter estimated. Extensive bark damage around base. Canopy dieback in upper section. Moderate deadwood. Fungi by root flare. Codominant union with included bark.	-	-	-	Retain	-
66	T	Sweet chestnut	1420	M	B	Field grown. Basal damage from livestock (paddock). Snap ours. Moderate deadwood. Canopy cavities.	-	-	-	Retain	-
68	T	Oak	1070	M	B	Moderate deadwood. Bulge on stem to south.	-	-	-	Retain	-
70	T	Sweet chestnut	1300	OM	A	Severe dieback in upper canopy. Major deadwood. Prolific basal growth browsed. Retrenching canopy with functioning lower section.	Veteran (potential)	-	-	Retain	19.5

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
71	T	Oak	610	EM	B	Moderate deadwood. Normal for species.	-	-	-	Retain	-
81	T	Oak	650	EM	C	No access. Viewed from distance. Prolific ivy. Moderate deadwood.	-	-	-	Remove	-
86	T	False acacia	420	EM	B	Minor deadwood.	-	-	-	Remove	-
87	T	Eucalyptus	1220	OM	U	Large tri-stemmed tree with large <i>Ganoderma</i> bracket at base to south-west side.	-	-	-	Remove	-
88	T	Holly	225	SM	B	Garden tree. Viewed from distance.	-	-	-	Remove	-
89	T	Sycamore	380	EM	C	Garden tree.	-	-	-	Remove	-
110	T	Field maple	200	SM	B	-	-	-	-	Remove	-
114	T	Hybrid poplar	850	M	B	Three stems at 1m with basal cavity and mid-canopy deadwood.	-	-	-	Retain	-
115	T	Beech	940	M	B	Limited access. Tree in front garden of Cobham Lodge.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
129	T	Sweet chestnut	1020	M	B	Large scar of dysfunctional wood probably due to lightning strike. Other canopy deadwood.	-	-	-	Remove	-
131	T	Oak	1100	M	B	No access due to bramble. Major deadwood. Large stem cavities. Dieback in upper canopy. Canopy cavities. Tear outs.	-	-	-	Remove	-
132	T	Oak	1130	M	B	Field grown oak. Major deadwood. Numerous snap outs and limb fractures. Large stem cavities with advanced decay. No signs of retrenchment.	-	-	-	Remove	-
133	T	Oak	1020	M	A	Stem fractures tree with functioning and developing lower canopy. Internal heartwood decay on stem. Stem cavities.	Veteran (potential)	-	-	Remove	15.3

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
136	T	Oak	890	M	B	Large spreading oak. Large tear outs to north. Moderate deadwood. Limb fractures. Canopy cavities.	-	-	-	Remove	-
143	T	Indian bean tree	430	EM	B	Previously pollarded at 3.5m.	-	-	-	Remove	-
145	T	Oak	850	OM	A	Large stem cavity with exposed brown rot and new canopy formation.	Veteran (potential)	-	-	Remove	12.8
147	T	Oak	1720	OM	A	Dual stem at 1.5m with old scaffold limb cavities and minor deadwood.	-	-	-	Remove	-
157	T	Sweet chestnut	800	M	B	Upper crown dieback. Bat roost features.	-	-	-	Retain	-
158	T	Alder	450	EM	B	-	-	-	-	Retain	-
159	T	Oak	800	M	B	-	-	-	-	Retain	-
161	T	Oak	570	EM	B	-	-	-	-	Retain	-
162	T	Oak	550	EM	B	Suppressed form.	-	-	-	Retain	-
163	T	Oak	720	M	B	-	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
164	T	Oak	780	M	B	Historic storm damage: branch tear out. Bat roost features.	-	-	-	Retain	-
165	T	Alder	580	EM	B	Suppressed form.	-	-	-	Retain	-
166	T	Oak	870	M	B	-	-	-	-	Retain	-
167	T	Sweet chestnut	980	M	B	-	-	-	-	Retain	-
168	T	Oak	700	EM	B	-	-	-	-	Retain	-
169	T	Oak	790	M	B	Stem wound.	-	-	-	Retain	-
170	T	Oak	770	EM	B	-	-	-	-	Retain	-
171	T	Oak	790	M	A	-	-	-	-	Retain	-
172	T	Oak	940	M	A	-	-	-	-	Retain	-
174	T	Oak	710	M	B	Historic crown reduction.	-	-	-	Retain	-
175	T	Oak	620	EM	B	-	-	-	-	Retain	-
183	T	Hornbeam	880	OM	A	Stem cavity. Crown cavities and deadwood.	Veteran (verified)	139009	1972-001	Retain	13.2
184	T	Hornbeam	390	OM	A	Half the tree stem is decayed. New canopy from 3m.	Veteran (potential)	-	1972-001	Retain	5.9
193	T	Sweet chestnut	1140	OM	A	Crown cavities. Deadwood and basal secondary stems.	Veteran (potential)	-	-	Retain	17.1

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
196	T	Sweet chestnut	1950	OM	A	Managed with limb removed and high pollards. Minor deadwood.	Veteran (verified)	138851	-	Retain	29.3
197	T	Sweet chestnut	1200	OM	A	Dead main leader. Managed on path side.	Veteran (potential)	138853	-	Retain	18.0
198	T	Sweet chestnut	1100	OM	A	Retrenching canopy with deadwood.	Veteran (potential)	-	-	Retain	16.5
202	T	Sweet chestnut	1750	OM	A	Large tree with deadwood and previous large limb removal.	-	-	-	Retain	-
207	T	cherry	180	SM	C	-	-	-	-	Remove	-
208	T	Field maple	130	SM	C	-	-	-	-	Retain	-
212	T	Ash	210	SM	C	-	-	-	-	Remove	-
215	T	Ash	290	SM	C	Multi-stemmed from base.	-	-	-	Remove	-
216	T	Oak	830	M	A	-	-	-	-	Retain	-
217	T	Oak	850	M	A	-	-	-	-	Retain	-
218	T	Oak	580	EM	B	Low spreading canopy and minor deadwood.	-	-	-	Remove	-
219	T	Oak	880	M	A	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
220	T	Sweet chestnut	1220	M	A	Historic storm damage.	-	-	-	Retain	-
221	T	Sweet chestnut	1700	M	A	Upper crown dieback.	Veteran (potential)	-	-	Retain	25.5
222	T	Sweet chestnut	950	M	A	Woodpecker hole in branch. Historic storm damage. Bat roost features.	-	-	-	Retain	-
223	T	Sweet chestnut	1310	OM	A	Historic storm damage. Old stem wounds. Upper crown dieback.	Veteran (potential)	-	-	Retain	19.7
224	T	Sweet chestnut	1200	M	A	Historic storm damage. Bat roost features.	-	-	-	Retain	-
225	T	Sweet chestnut	1520	OM	A	Historic storm damage.	Veteran (potential)	-	-	Retain	22.8
226	T	Oak	850	M	A	Upper crown dieback.	Veteran (potential)	-	-	Retain	12.8
227	T	Oak	680	EM	A	-	-	-	-	Retain	-
228	T	Oak	1030	M	A	-	-	-	-	Retain	-
229	T	Oak	1530	M	A	-	-	-	-	Retain	-
230	T	Oak	800	M	A	-	-	-	-	Retain	-
231	T	Beech	1410	M	A	-	-	-	-	Retain	-
232	T	Oak	710	EM	A	Suppressed form.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
233	T	Oak	710	M	A	Layering branch to south.	-	-	-	Retain	-
234	T	Oak	1510	M	A	Historic storm damage.	Veteran (potential)	-	-	Retain	22.7
235	T	Sweet chestnut	520	SM	C	Multi-stemmed from base.	-	-	-	Retain	-
237	T	Sweet chestnut	1280	OM	A	Historic storm damage. Bat roost features.	Veteran (potential)	-	-	Retain	19.2
238	T	Sweet chestnut	2080	OM	A	Historic branch reductions. Bat roost features	Veteran (potential)	-	-	Retain	31.2
241	T	Oak	240	-	C	-	-	-	-	Retain	-
242	T	Sweet chestnut	1770	M	A	-	Veteran (potential)	-	-	Retain	26.6
243	T	Oak	640	EM	B	-	-	-	-	Retain	-
244	T	Sweet chestnut	1430	OM	A	Historic storm damage.	Veteran (potential)	-	-	Retain	21.5
245	T	Oak	950	-	A	Woodpecker holes. Bat roost features.	-	-	-	Retain	-
246	T	Oak	1100	OM	C	Stump from recent structural failure.	-	-	-	Retain	-
250	T	Weeping willow	800	M	C	Pruned to clear cables.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
254	T	Oak	270	SM	C	-	-	-	-	Retain	-
255	T	Oak	190	SM	C	-	-	-	-	Retain	-
256	T	Oak	210	SM	C	-	-	-	-	Retain	-
257	T	Oak	290	SM	C	-	-	-	-	Retain	-
258	T	Oak	410	EM	B	-	-	-	-	Retain	-
259	T	Oak	130	SM	C	-	-	-	-	Retain	-
260	T	Oak	180	SM	C	-	-	-	-	Retain	-
261	T	Oak	190	SM	C	-	-	-	-	Retain	-
262	T	Oak	240	SM	C	-	-	-	-	Retain	-
263	T	Oak	210	SM	C	-	-	-	-	Retain	-
264	T	Oak	130	SM	C	-	-	-	-	Retain	-
265	T	Apple	220	EM	C	-	-	-	-	Retain	-
266	T	Apple	180	EM	C	Recent crown reduction.	-	-	-	Retain	-
267	T	Swedish whitebeam	180	SM	C	-	-	-	-	Retain	-
268	T	Apple	210	EM	C	-	-	-	-	Retain	-
269	T	Snakebark maple	225	SM	C	-	-	-	-	Retain	-
270	T	Rowan	260	SM	C	-	-	-	-	Retain	-
271	T	Beech	310	SM	B	-	-	-	-	Retain	-
272	T	Cherry	270	SM	B	-	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
288	T	Oak	790	M	B	Field grown tree. Moderate deadwood. Some minor limb fractures.	-	-	-	Retain	-
289	T	Oak	1050	M	B	Moderate deadwood. Slight thinning of canopy. Limb fractures. Stem cavities. Tear outs.	-	-	-	Retain	-
290	T	Oak	1700	OM	A	Ivy on stem. Basal decay. Stem cavity. Large limb loss. Major deadwood. Major limb fractures and tear outs. Loss of canopy to south-west.	Ancient (verified)	138890	-	Retain	25.5
291	T	Oak	900	M	B	No access to stem. Thinning canopy. Dieback throughout canopy. Moderate deadwood.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
292	T	Oak	850	M	B	Minor deadwood. Decay and rot holes in leader to north also snapped out with tear.	-	-	-	Retain	-
293	T	Oak	1030	OM	B	Major deadwood. Major limb fractures and tear outs. Stem and canopy cavities. Dieback in mid-canopy to south. Signs of secondary canopy development low on stem.	-	-	-	Retain	-
294	T	Oak	960	M	B	Moderate deadwood.	-	-	-	Retain	-
301	T	Oak	620	M	B	Roadside tree on field boundary. Ivy-clad stem. Suppressed to south. Minor deadwood.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
311	T	White willow	1060	M	B	Assessed from public footpath only. Some deadwood and stem fractures.	-	-	-	Retain	-
313	T	Holm oak	620	EM	B	Lower limbs grazed by horses. Stag headed with deadwood in upper canopy. Bark damage wounds on lower stem.	-	-	-	Retain	-
314	T	Oak	710	M	A	Historical coppice tree with minor deadwood.	-	-	-	Remove	-
315	T	Oak	980	M	A	Some ivy. Wide spreading canopy and minor deadwood.	-	-	-	Remove	-
316	T	Oak	1020	M	A	Some ivy. Scaffold limbs from 3m height with minor deadwood and open spreading canopy.	-	-	-	Remove	-
317	T	Oak	1150	M	A	Prolific ivy with small basal cavity.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
330	T	Oak	1068	M	B	Twin-stemmed near base. Occluded around metal spike. Some canopy raising. Moderate deadwood. Under power lines to west. Some cracking at stem union.	-	-	-	Remove	-
331	T	Oak	1000	OM	C	Dead. Potential habitat value.	-	-	-	Retain	-
340	T	Oak	420	EM	C	Contorted stem. Suppressed. Moderate deadwood.	-	-	-	Remove	-
342	T	Elm	290	SM	U	Prolific ivy. Extensive bark necrosis.	-	-	-	Remove	-
346	T	Sycamore	1080	OM	B	Limited access to survey. Canopy dieback and ivy.	-	-	12/2010	Retain	-
347	T	Hybrid poplar	550	EM	B	Limited access to view. Minor mid-canopy deadwood.	-	-	12/2010	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
348	T	Oak	1240	M	A	Low stem division. Diameter measured at 500mm height.	-	-	-	Retain	-
355	T	Oak	790	M	B	Moderate deadwood in lower canopy.	-	-	-	Remove	-
356	T	Oak	850	M	B	Limb loss to south with decay and cavities. Upper canopy in decline. Secondary canopy forming. No deadwood.	-	-	-	Remove	-
357	T	Oak	950	M	B	Large limb loss with cavities. Hollowing out in stem. Moderate deadwood.	-	-	-	Remove	-
360	T	Oak	920	M	B	Limb removal with decay pockets in wounds. Moderate deadwood. Historic basal bark loss with exposed heartwood.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
361	T	Oak	920	M	B	Canopy raised on west side with stump cuts. Minor deadwood.	-	-	-	Remove	-
362	T	Ash	800	M	A	Upper canopy dieback. Canopy cavities. Moderate deadwood. Secondary canopy forming. Elder sapling growing from basal union. Stem cavities. Rot holes. Storm damage. Lost leader.	Veteran (potential)	-	-	Remove	12.0
363	T	Ash	720	M	A	Snapped out on stem at 4m. Hollowing out stem.	Veteran (potential)	-	-	Remove	10.8
364	T	Ash	835	M	B	On watercourse bank. Codominant stems at base. Storm damage. Lost leaders. Major deadwood. Canopy cavities. Tear outs. Rot holes.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
366	T	Oak	450	EM	C	Field boundary oak. Flaied to north.	-	-	-	Remove	-
367	T	Ash	200	SM	C	Flaied.	-	-	-	Remove	-
368	T	Hawthorn	330	EM	C	Flaied to north. Minor deadwood.	-	-	-	Remove	-
370	T	Oak	485	EM	C	Flaied to 4m.	-	-	-	Remove	-
372	T	Oak	450	SM	C	Flaied to 4m.	-	-	-	Remove	-
373	T	Oak	680	EM	B	Canopy raised with stump cuts and occluding wounds. Moderate deadwood.	-	-	-	Remove	-
385	T	Lombardy poplar	540	EM	B	Viewed from distance.	-	-	-	Retain	-
387	T	Oak	450	SM	B	Good specimen.	-	-	-	Remove	-
389	T	Sycamore	400	SM	C	Unable to fully inspect due to ivy. Minor flail damage.	-	-	-	Remove	-
396	T	Sycamore	240	SM	C	Flaied on field side.	-	-	-	Remove	-
403	T	Spruce	250	SM	B	Viewed from a distance.	-	-	-	Remove	-
405	T	Cherry	270	SM	C	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
411	T	Hawthorn	150	SM	C	Grazed up to 2m. No access.	-	-	-	Remove	-
412	T	Crab apple	170	EM	C	Grazed up to 2m.	-	-	-	Retain	-
413	T	Hawthorn	220	EM	C	Highways.	-	-	-	Remove	-
420	T	Goat willow	430	EM	C	-	-	-	-	Remove	-
424	T	Cherry	420	M	C	-	-	-	-	Remove	-
431	T	Ash	120	Y	C	Only tree within highways planting that is 75mm or above.	-	-	-	Remove	-
434	T	Cherry	500	M	U	Pollarded at 2m. Decay at unions. <i>Phellinus pomaceus</i> fruiting bodies on branch.	-	-	-	Remove	-
435	T	Oak	350	SM	C	-	-	-	-	Remove	-
437	T	Oak	350	SM	C	Minor flail damage.	-	-	-	Remove	-
444	T	Oak	335	SM	C	Unable to fully inspect due to ivy. Low stem division.	-	-	-	Remove	-
450	T	Oak	820	M	B	Minor deadwood.	-	-	-	Retain	-
460	T	Oak	1240	M	A	Old stem wound and cavity with fire damage. Branch stubs. Bat roost features.	Veteran (potential)	-	-	Retain	18.6

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
461	T	Field maple	550	M	B	-	-	-	-	Retain	-
462	T	Ash	760	M	C	Larger stem codominant from 2m with vertical split down southern side.	-	-	-	Retain	-
470	T	Lombardi poplar	280	SM	C	-	-	-	-	Remove	-
471	T	Cypress	410	EM	C	Boundary tree flailed.	-	-	-	Remove	-
472	T	Weeping willow	900	M	B	Drive-by survey. No access.	-	-	-	Remove	-
478	T	Field maple	290	EM	B	On water course embankment. Exposed roots. Flailed. Stem cavities. Canopy cavities. Minor deadwood.	-	-	-	Retain	-
483	T	Ash	210	SM	C	Flail damage.	-	-	-	Remove	-
486	T	Ash	210	SM	C	Multi-stemmed from base. Hawthorn growing within crown. Flail damage.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
487	T	Oak	295	SM	C	Unable to fully inspect due to presence of hedge. Stem trifurcates at 1m with tight forks.	-	-	-	Remove	-
488	T	Oak	230	SM	C	-	-	-	-	Remove	-
489	T	Oak	330	SM	B	Flail damage.	-	-	-	Remove	-
490	T	Oak	520	SM	B	Multi-stemmed from base. Two southern stems fused at 1.7m.	-	-	-	Remove	-
491	T	Oak	300	SM	C	Codominant leaders at 2m. Eastern scaffold removed for field access. Occluded wound.	-	-	-	Remove	-
495	T	Oak	525	SM	B	Two main stems rubbing at 3m.	-	-	-	Remove	-
497	T	Oak	580	EM	B	Codominant leaders at 2m. Adaptive growth on lower stem suggests historic vertical internal crack. Stabilised.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
498	T	Oak	360	SM	B	Stem pruning wounds. Historic crown lift.	-	-	-	Remove	-
499	T	Oak	220	SM	C	Flail damage.	-	-	-	Retain	-
502	T	Oak	410	SM	C	-	-	-	-	Remove	-
503	T	Oak	780	EM	B	-	-	-	-	Remove	-
505	T	Ash	530	M	C	Historic loss of codominant leader at 7m with associated heartwood decay and woodpecker holes. <i>Inonotus hispidus</i> fruiting body scar below tear out wound. Upper crown dieback in remaining leader. Established basal suckers forming secondary stems.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
506	T	Oak	800	EM	B	Unable to fully inspect due to thorny vegetation around stem. Natural stem lean to north. Dead tree within crown to south.	-	-	-	Remove	-
508	T	Ash	780	EM	B	Minor dead wood. Stem pruning wounds and branch stubs. Established basal sucker growth forming secondary stems.	-	-	-	Remove	-
509	T	Ash	625	EM	C	Historic coppice. <i>Inonotus hispidus</i> fruiting body on one northern stem.	-	-	-	Remove	-
514	T	Ash	220	SM	C	-	-	-	-	Remove	-
515	T	Oak	230	SM	C	Stem bleeds and vertical cracks: possibly symptomatic of acute oak decline.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
516	T	Oak	400	SM	B	Unable to fully inspect due to presence of hedge. Flail damage in lower southern crown.	-	-	-	Remove	-
517	T	Oak	600	SM	B	Codominant leaders at 1.5m with tight fork. Good adaptive growth. Minor dead wood. Historic crown lift.	-	-	-	Remove	-
518	T	Oak	450	SM	B	Unable to fully inspect due to presence of fence.	-	-	-	Remove	-
521	T	White willow	520	EM	C	Possibly cricket bat willow left to grow on. Flail damage on northern side. Occasional stubs from pruning.	-	-	-	Retain	-
525	T	Oak	900	M	A	Unable to fully inspect due to ivy. Minor dead wood and storm damage.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
531	T	Crack willow	650	M	C	Stems submerged in dyke. Dimensions estimated.	-	-	-	Retain	-
532	T	Goat willow	335	SM	C	Stems submerged in dyke.	-	-	-	Retain	-
539	T	Hawthorn	310	EM	C	-	-	-	-	Retain	-
541	T	Hawthorn	400	EM	C	-	-	-	-	Retain	-
542	T	Hawthorn	410	EM	C	Two main stems historic split near base but appears to have stabilised.	-	-	-	Retain	-
543	T	Hawthorn	350	EM	C	-	-	-	-	Retain	-
544	T	Hawthorn	310	EM	C	-	-	-	-	Retain	-
545	T	Hawthorn	175	SM	C	-	-	-	-	Retain	-
546	T	Hawthorn	215	SM	C	-	-	-	-	Retain	-
547	T	Hawthorn	185	SM	C	Growing from steep ditch bank.	-	-	-	Retain	-
553	T	White poplar	500	EM	B	Observed from opposite bank.	-	-	-	Retain	-
554	T	Hawthorn	235	SM	C	-	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
555	T	Oak	900	M	A	Old large wound on southern stem base. Large dead wood in lower crown. Probably historic storm damage. Potential roost features.	Veteran (potential)	-	-	Retain	13.5
557	T	Oak	800	M	A	Lapsed pollard at 4m. Minor dead wood. Hollowing stem. Old fire damage in small basal wound on southern side. Deep ditch on northern side.	Veteran (potential)	-	-	Retain	12.0
558	T	Ash	700	M	A	Unable to fully inspect due to ivy. Form suggests historic pollard. Minor dead wood. Deep ditch to north.	Veteran (potential)	-	-	Retain	10.5
560	T	Oak	740	M	B	-	-	-	-	Retain	-
561	T	Oak	900	M	B	Historic storm damage. Potential habitat features.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
562	T	Oak	1280	-	A	Form suggests historic pollard. Lapsed management.	Veteran (potential)	-	-	Retain	19.2
563	T	Oak	700	M	A	Historic storm damage. Bat roost features.	Veteran (potential)	-	-	Retain	10.5
564	T	Oak	690	M	B	Holes in stem. Historic storm damage.	-	-	-	Retain	-
566	T	Oak	830	M	A	-	Veteran (potential)	-	-	Retain	12.5
567	T	Oak	950	M	B	Historic storm damage. Branch tear outs.	-	-	-	Retain	-
568	T	Oak	810	M	B	Selective branch reductions to clear overhead electricity cables.	-	-	-	Remove	-
570	T	Oak	1600	OM	A	Dead wood. Potential habitat features.	Veteran (potential)	-	-	Remove	24.0
571	T	Corsican pine	520	EM	B	-	-	-	4-88	Remove	-
576	T	Corsican pine	730	M	B	-	-	-	4-88	Remove	-
581	T	Corsican pine	700	M	B	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
582	T	Corsican pine	500	EM	B	Unable to fully inspect due to ivy.	-	-	-	Remove	-
583	T	Corsican pine	550	EM	B	Unable to fully inspect due to ivy.	-	-	-	Remove	-
584	T	Corsican pine	700	M	B	-	-	-	-	Remove	-
585	T	Corsican pine	800	M	B	Unable to fully inspect due to ivy.	-	-	-	Remove	-
586	T	Oak	500	SM	B	-	-	-	-	Remove	-
605	T	White willow	650	EM	C	Historic branch pruning wounds. Stubs and minor storm damage.	-	-	-	Retain	-
606	T	Ash	550	SM	B	Stem pruning wounds. Minor deadwood.	-	-	12-92	Remove	-
608	T	Crack willow	1200	OM	C	Situated on northern side of ditch. Historic scaffold limbs failed and fallen across ditch. Branches and layered limbs forming secondary stems on southern side of ditch.	-	-	12-92	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
609	T	Oak	1020	M	A	Historic pollard. Hole in scaffold limb and potential habitat features and minor deadwood.	Veteran (potential)	-	12-92	Retain	15.3
610	T	Crack willow	650	EM	C	Three stems. Possibly all from same parent tree but no central stump visible.	-	-	-	Remove	-
611	T	Ash	600	M	C	Historic crown reduction. Associated occasional branch dieback. Holes in central leader. Potential habitat features.	-	-	-	Remove	-
612	T	Oak	730	M	C	Occasional bleeds on lower stem. Possibly early symptom of acute oak decline.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
613	T	Oak	710	EM	B	Twin-stemmed from ground level. One stem leans naturally to the south-east. Deep ditch south of tree.	-	-	-	Remove	-
617	T	Oak	1060	M	A	Large old wound on northern side of stem up to 2.3m with heartwood decay. Minor dead wood.	Veteran (potential)	-	-	Retain	15.9
618	T	Oak	1000	OM	A	Ivy.	Veteran (potential)	-	-	Retain	15.0
623	T	Oak	850	M	C	Sparse outer crown with branch dieback on eastern side. Powdery mildew on epicormic growth.	-	-	-	Retain	-
624	T	Oak	890	M	A	Minor deadwood. Typical of age and species.	-	-	-	Retain	-
625	T	Oak	870	M	B	Low vigour.	-	-	20-81	Remove	-
627	T	Oak	910	M	B	-	-	-	-	Retain	-
629	T	Oak	980	M	B	Historic storm damage.	-	-	-	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
630	T	Oak	1800	M	A	Codominant leaders at 4m.	Veteran (potential)	185655	-	Retain	27.0
641	T	Whitebeam	410	EM	B	Historical crown lift.	-	-	-	Retain	-
642	T	Whitebeam	340	EM	B	Historical crown lift. Stem wound.	-	-	-	Retain	-
646	T	Norway maple	290	SM	B	-	-	-	-	Retain	-
649	T	Norway maple	420	EM	B	-	-	-	-	Retain	-
650	T	Lime	340	SM	B	-	-	-	-	Retain	-
652	T	Ash	280	SM	B	-	-	-	-	Retain	-
653	T	Ash	260	SM	B	-	-	-	-	Retain	-
655	T	Norway maple	320	SM	B	-	-	-	-	Retain	-
658	T	Turkey oak	930	M	B	-	-	-	-	Retain	-
659	T	Ash	615	M	B	Remaining live stems on pollard. Lapsed management. Hollow stem.	-	-	-	Retain	-
703	T	Cherry	90	Y	C	-	-	-	-	Remove	-
713	T	London plane	1000	M	B	Unable to fully inspect due to ivy.	-	-	-	Retain	-
715	T	Norway maple	470	EM	B	Minor dead wood.	-	-	-	Retain	-
716	T	Whitebeam	440	EM	B	-	-	-	-	Retain	-
717	T	Cherry	440	EM	C	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
718	T	Oak	380	SM	B	-	-	-	-	Remove	-
719	T	Oak	250	SM	B	-	-	-	-	Remove	-
720	T	Scots pine	410	EM	B	-	-	-	-	Remove	-
721	T	Scots pine	310	EM	B	-	-	-	-	Remove	-
722	T	Leyland cypress	360	SM	C	Fire damage on northern side.	-	-	-	Remove	-
723	T	Oak	280	SM	B	-	-	-	-	Remove	-
724	T	Poplar	670	EM	C	Low stem divisions with tight forks.	-	-	-	Remove	-
725	T	Crack willow	510	EM	B	-	-	-	-	Retain	-
726	T	Oak	230	SM	B	Established basal growth forming secondary stems.	-	-	-	Remove	-
727	T	Eucalyptus	290	SM	B	-	-	-	-	Remove	-
728	T	Goat willow	450	M	C	Multi-stem. Recent stem fracture.	-	-	-	Remove	-
729	T	Elder	160	SM	C	-	-	-	-	Remove	-
730	T	Weeping willow	270	SM	C	-	-	-	-	Remove	-
731	T	Weeping willow	250	SM	C	-	-	-	-	Retain	-
732	T	Hawthorn	330	EM	B	-	-	-	-	Remove	-
733	T	Rowan	200	SM	C	Flailed crown.	-	-	-	Remove	-
734	T	Goat willow	165	SM	C	Historical crown reduction.	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
735	T	Apple	270	M	C	Upper crown dieback.	-	-	-	Remove	-
736	T	Weeping willow	840	M	C	Historical crown lift and reduction. Large stem pruning wounds.	-	-	-	Remove	-
737	T	Hawthorn	240	EM	C	Historical crown lift.	-	-	-	Remove	-
738	T	Cherry	300	EM	C	Historical crown reduction to clear cables. Dead branches in lower crown.	-	-	-	Remove	-
739	T	Tree of heaven	170	SM	C	Located close to house.	-	-	-	Remove	-
740	T	Tree of heaven	160	SM	U	Topped stem with no regrowth.	-	-	-	Remove	-
741	T	Purple leafed plum	260	SM	C	-	-	-	-	Remove	-
742	T	Elder	200	SM	U	-	-	-	-	Remove	-
743	T	Cabbage palm	100	SM	C	-	-	-	-	Remove	-
744	T	Rowan	225	SM	C	-	-	-	-	Remove	-
745	T	Lime	420	SM	C	-	-	-	-	Remove	-
746	T	Lime	140	SM	C	-	-	-	-	Remove	-
747	T	Eucalyptus	490	SM	B	-	-	-	-	Remove	-
748	T	Tree of heaven	280	SM	C	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
749	T	Hawthorn	140	SM	C	Suppressed.	-	-	-	Remove	-
750	T	Hornbeam	150	SM	C	-	-	-	-	Remove	-
751	T	Leyland cypress	290	EM	C	Topped. Minor upper crown dieback.	-	-	-	Remove	-
752	T	Poplar	680	EM	C	-	-	-	-	Remove	-
753	T	Leyland cypress	360	EM	U	Topped. Crown dieback: <i>Coryneum</i> canker present.	-	-	-	Remove	-
754	T	Fig	240	SM	B	-	-	-	-	Remove	-
755	T	Cherry	120	SM	C	-	-	-	-	Remove	-
756	T	Ash	700	M	C	Historical crown reduction. Cavities and <i>Inonotus hispidus</i> fruiting bodies on both codominant leaders. Stem wound and cavity. Potential bat roost features.	-	-	-	Remove	-
757	T	Tree of heaven	385	SM	C	-	-	-	-	Remove	-
758	T	Ash	90	Y	C	-	-	-	-	Remove	-
759	T	Monterey cypress	550	SM	B	-	-	-	-	Remove	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
760	T	Weeping willow	800	M	C	Unable to fully inspect due to ivy	-	-	-	Retain	-
761	T	Sycamore	290	SM	C	Self-set	-	-	-	Retain	-
762	T	Horse chestnut	920	M	B	-	-	-	-	Retain	-
763	T	Eucalyptus	800	EM	B	-	-	-	-	Retain	-
49	W	Beech, sweet chestnut, oak, ash, birch	1600	M	A	No access. Viewed from distance. Large beech trees to western end. Large trees throughout. Large scale clearance within with mature trees retained. Denser to east. Standing dead. Major deadwood.	-	-	-	Remove	-
76	W	Oak, hazel, goat willow, larch, grand fir, aspen, Scots pine, hawthorn, blackthorn, cherry, apple.	190	SM	C	Recently planted woodland creation. Varied mostly broadleaf with hazel coppice areas	-	-	-	Part remove	-
203	W	Oak, sweet chestnut, cherry, poplar, silver birch	780	EM	A	Standards with internal areas of coppice	-	-	1981.003	Retain	-

Tree ID	Type	Species	DBH (mm)	Age class	BS 5837 category	Observations	Ancient / veteran tree	ATI ref	TPO	Impact	Buffer zone (m)
559	W	Ash, willow, elm, cherry, hawthorn, horse chestnut	450	EM	B	Open woodland dominated by ash. Most coppiced in the past. Occasional planted specimens. Little understory. One healthy early mature elm in centre. Small elms along edge with Dutch elm disease.	-	-	-	Part remove	-
614	W	Oak, silver birch, field maple, goat willow, hawthorn, cherry plum, ash, blackthorn	750	SM	B	Dense woodland. Only management appears to be periodic coppicing/felling of trees beneath electricity cables. Occasional dead tree.	-	-	-	Part remove	-

Annex F Tree survey summary schedule

- F.1.1 A schedule of all trees, tree groups and woodlands recorded during the tree survey is presented in Table E-1.
- F.1.2 The following Tree ID numbers have been deliberately excluded from the survey schedule for the reason given beneath: 7-15, 63, 67, 69, 72, 73, 75, 96, 97, 106, 107, 123, 148, 149, 151-156, 176, 179-182, 195, 199-201, 297, 298, 303, 310, 319-324, 341, 358, 448, 451-454, 456, 457, 526, 527, 565, 569, 572-575, 577-579, 595, 602, 616, 619, 622, 628 and 647. Numbers have been excluded on the basis that they relate to tree survey data which is no longer of relevance to this assessment due to changes in the Order Limits or because data has been superseded.

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