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STRATA STIRLING BARNSLEY WEST

BARNSLEY WEST

ARBORICULTURAL IMPACT ASSESSMENT

NOVEMBER 2023

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ARBORICULTURAL IMPACT ASSESSMENT

NOVEMBER 2023

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CONTENTS

APPENDICES

DRAWINGS	**TITLE**	**SCALE**
LD10361-030 Rev. A	Tree Protection Plan Sheets 1 & 2	1:1250@A0

1 INTRODUCTION

1.1 Brief

1.1.1 Wardell Armstrong LLP (WA) was commissioned by Strata Sterling Barnsley West to undertake a tree survey in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* (BS 5837) on the site and to assess and report on the impacts on the trees and hedgerows in connection with the commercial and residential development to the west of Barnsley (Estimated centre of site Ordnance Survey grid reference SE 31697 07127). For the purpose of this report this will be referred to as the 'Site' hereafter.

1.1.2 The purpose of this report is to provide an Arboricultural Impact Assessment (AIA), in order to evaluate the direct and indirect effects of the proposed development layout design on the trees and hedgerows surveyed. These include trees and hedgerows identified within the Site, as well as those located off-Site but within influencing distance of the Site. Where there are impacts from the proposed development, this report recommends, where feasible, mitigation measures to be taken to ensure that important trees and hedgerows are adequately considered during the design and construction process. Where trees and hedgerows must be removed to enable the development, potential compensation measures are proposed, where feasible.

1.1.3 The BS5837 tree survey was undertaken by Mark Levitt with Wardell Armstrong on 22-25/05/2023; 06/06/2023; 26-29/06/2023**;** and Alan Reid on 11/07/2023. This, in combination with the proposed layout, supporting documents/drawing and any liaison we have had with the design team and the LPA, forms the basis of our assessment.

1.1.4 If planning permission is granted for the development assessed in this report, it is usual for the Local Planning Authority (LPA) to condition an Arboricultural Method Statement (AMS). An AMS would set out the specifications and methodologies for the implementation of tree protection measures and would also provide a methodology for any proposed works that either encroach within the Root Protection Areas (RPAs) of retained trees and/ or that have the potential to result in loss or damage to those trees.

1.1.5 This AIA report and attached Tree Protection Plan (TPP) accords with the methodologies and guidance set out in British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (The British Standards Institution, 2012).

1.2 Site Context

1.2.1 The Site is located to the west of Barnsley. The Site is comprised of agricultural land bordered with hedgerows.

1.2.2 There are existing agricultural buildings within the Site. The Site is bordered by residential estates to the east and west. To the north of the Site, beyond the A635, is the Claycliffe Business Park. The M1 motorway lies along the south-western edge of the Site.

1.2.3 A Woodland lies within the Site close to the to the north-eastern edge of the Site boundary, with this on the banks of a stream. Ecological surveying has revealed that this woodland is likely to Ancient due to the number of Ancient Woodland indicator species present.

1.3 Development Proposal

1.3.1 Planning permission is sought for the development of residential and commercial areas, with this being a hybrid application.

1.3.2 **Hybrid planning application for residential development for up to 1560 dwellings.**

Full planning consent is sought for:

- Earthworks to create development platforms;
- Strategic drainage ponds/dry detention basins and associated drainage infrastructure;
- Construction of a new link road;
- Location of strategic landscaping and ecological areas;
- Demolition of existing buildings;
- Works to Hermit Lane and;
- Erection of Phase 1(a) residential development comprising 216 dwellings.

Outline planning consent is sought for:

- Residential development comprising up to 1,344 dwellings;
- New primary school;
- Small shops and community facilities and;
- Associated infrastructure works.

1.3.3 **Hybrid planning application for employment development.**

Full planning consent is sought for:

- Earthworks to create development platforms;
- Drainage features, including dry detention basin, embankments, bunds;
- Strategic landscaping, ecological areas and
- Access

Outline planning consent is sought for:

- employment (Use Classes E,B2 and B8 with ancillary office) and;
- associated servicing and infrastructure works including car parking, vehicle, pedestrian and cycle circulation, plot landscaping, noise mitigation, drainage features and all associated infrastructure.

1.3.4 In order to assess the impacts of the proposed developments the following plans have been utilised for the survey and assessing impacts and/or overlaid to produce the Tree Protection Plan:

- Strategic Landscape Masterplan Ref. P11754-00-001-GIL-0100-09, dated11.10.2023 by Gillespie's;
- Main Infrastructure Drainage Strategy Ref. QD2088-00-400 TO 402, dated by 05.06.2023 by Queensberry Design;
- FW Drainage Strategy Plan Commercial Development Zone Ref. 4848-JPG-ZZ-ZZ-M2-D-1452-S4-P02, dated 05.10.23 by JPG;
- SW Drainage Strategy Plan Commercial Development Zone Ref.4848-JPG-ZZ-ZZ-M2-D-1453-S4-P02, 05.10.23 by JPG
- Land Drainage Strategy Plan Commercial Development Zone Ref. 4848-JPG-ZZ-ZZ-M2-D-1454-S4-P02, dated 05.10.23 by JPG; Proposed Earthworks Cut & Fill Analysis Ref. 4848-JPG-ZZ-ZZ-DR-C-1201 S2 Rev. P04, dated 04/10/2023, by JPG;
- Masterplan Cut/Fill Depths to Existing Ground Level Sheet 1 Ref. QD2088-00-302, Dated 25/09/2023, by Queensbury Design;
- Masterplan Cut/Fill Depths to Existing Ground Level Sheet 1 Ref. QD2088-00-303, Dated 25/09/2023, by Queensbury Design.

1.4 Trees and the Planning Process

1.4.1 Under s197 of the Town & Country Planning Act 1990, LPAs have a legal duty to consider the protection of trees and the planting of new trees on development sites when granting planning permission. LPAs must also consider the potential effects, whether detrimental or positive, that proposed developments will have on retained trees, and the effect that these trees will have on the users of the development.

1.4.2 The Site is located within the administrative boundaries of the Local Planning Authority, Barnsley Metropolitan Borough Council (BMBC). BMBC's Local Plan which was adopted in 2019 includes the following relevant planning policies and text:

Barnsley Local Plan (Adopted January 2019)

Policy GD1 General Development

'Proposals for development will be approved if:

Existing trees that are to remain on site are considered in the layout in order to avoid overshadowing'.

Policy HE4 Developments affecting Historic Areas or Landscapes

'Proposals that are within or likely to affect the setting and the heritage significance of a Registered Park and Garden will be expected to:

Take account of and respect important landscape elements including topographic features or trees that contribute to the significance of the area where harm might prejudice future restoration'.

Policy BIO1 Biodiversity and Geodiversity

'Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

- *Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.*
- *Protecting ancient and veteran trees where identified.*

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

17.35 Woodlands, Protected Trees and Hedgerows

'17.36 Significant ecological value exists in the borough's Ancient Semi-Natural Woodlands (ASNW) and Plantations on Ancient Woodland Sites (PAWS), and in hedgerows which meet the Hedgerow Regulations criteria and trees covered by a Tree Preservation Order / Conservation Area. Ancient and veteran trees outside of woodland areas would normally be expected to be retained within any development proposals. Allocation as a ASNW/PAWS site does not necessarily rule out any development on these sites, however their special nature needs to be taken into account. If development is felt to be appropriate it could be allowed subject to any adverse impacts on the ecological interests being mitigated'.

1.4.3 The Council's Supplementary Planning Document 'Trees and Hedgerows' provides further details on the requirements of the LPA for development where trees are present.

Barnsley Local Plan – Supplementary Planning Document – Trees and Hedgerows – Adopted May 2019

'4.2 It is generally expected that trees protected by a TPO are retained and remain unaffected by any proposed development.

5.1 The Council considers that trees and hedgerows enhance the quality of the environment, including that of new developments, and should be retained and protected wherever possible.

5.3 Where trees and hedgerows are situated in close proximity to a proposed development a full Tree Survey to British Standard BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations will be required.

5.4 The tree constraints plan submitted with the survey must show the position and crown spread of all trees and hedgerows on and adjoining the site and the Root Protection Area (RPA) of each tree. The site plan submitted with the application must also clearly indicate which trees it is proposed to retain and which to remove. The site plan must also show the proposed layout of the site with the existing contour of the ground and any proposed alterations in ground level.

5.5 Where there are impacts on trees you may be requested to provide an Arboricultural Impact Assessment (AIA) in addition to the above information detailing all the potential impacts on the trees and how they can be dealt with in a manner which means that the tree can be safely retained.

5.8 Proposals to fell trees or hedgerows within a designated nature conservation site, including ancient and semi-natural woodlands, will not normally be approved unless they comply with a management plan drawn up with regards to the reasons for designation. Ancient or veteran trees should also be retained in all but exceptional circumstances which should be justified by a suitably-qualified ecologist.

5.10 Pockets of woodland may be relict ancient woodland even if no ecological designation is in place. In this case other ecological groups such as birds, invertebrates, fungi, woodland wildflowers and micro-organisms indicative of antiquity may be present. If such habitat appears as if it may exist on the application site then the importance of the habitat as a whole should be evaluated within ecology reports and planning permission may not be given for its removal.

5.11 Planning applications will be expected to commit to not cover trees, hedgerows or other habitats with netting etc, prior to construction in order to exclude birds from nesting, etc.

6.1 The Tree Survey information should inform the layout and design of the development and should ensure that, in particular, the higher retention category trees and hedgerows are retained, both in the short and long term. Plans which show the retention of high value trees or hedgerows which are too close to buildings, roads, or drainage systems or will be affected by alterations in ground level will not be approved.

6.2 Generally, no buildings or works will be allowed within the RPA of any tree which it is proposed to retain because works within the key rooting area of the tree could lead to lasting damage being caused. The laying of impervious surfaces to areas previously covered with grass or gravel within or in close proximity to the RPA can lead to lack of water for trees. This means care must be taken with the provision of roads and parking areas.

6.3 Intervening distances must be adequate to ensure that future residents will not feel unduly threatened in high winds and to ensure that falling branches are not likely to cause damage to property or danger to residents. This may require that in some cases buildings, garages and parking areas are located substantially beyond the canopy spreads of large trees.

7.1 Not only must care be taken with the layout and design of development, but also with construction work once plans have been approved. Adequate protective fencing to the standards set out in BS5837:2012 for trees and hedgerows which are to be retained on or adjoining the site must be erected.

7.2 When part of a tree's RPA cannot be fully fenced off and as such are affected by the development through hard surfacing or the construction of foundations etc. you will be asked to provide an Arboricultural Method Statement (AMS). The AMS will specify the works within the RPA which are to be undertaken to ensure the trees remain unaffected by the construction works'.

1.4.4 National Planning Policy in England is detailed in the National Planning Policy Framework (NPPF). The last revised version of the NPPF (September 2023) includes the following three paragraphs on trees and development, with paragraph 131 giving weight to the retention and planting of trees on development site and paragraph 180 giving specific protection to Ancient Woodland, Veteran and Ancient trees:

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

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

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

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

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'

1.4.5 Table B.1 taken from British Standard BS 5837:2012 gives guidance on the level of information required by LPAs in order to make an informed decision on the impact of development on trees. The production of an Arboricultural Constraints Report and Plan is the first stage of assessment in the context of the planning process.

1.4.6 Even though we have not produced a standalone Arboricultural Constraints Report and Plan, WA have undertaken a tree survey in accordance with BS5837:2012, with this data and plan being supplied to the client to enable them to consider the arboricultural constraints for the Site. We have plotted the trees on the proposed development layout for the elements of the scheme subject to the Full Application so that the specific impacts on the trees can be assessed, with this informing this report and the associated TPP, which fulfils the requirement to present the impacts of the proposed layout on the trees that are located on and immediately adjacent to the Site.

1.4.7 If the proposed scheme is approved, it is common for the LPA to condition the protection of the retained trees and hedgerows on Site during the proposed development. This will usually take the form of an AMS and an updated TPP. These will show how the trees and hedgerows will be protected and will provide a methodology for any works within the RPAs of retained vegetation. These steps accord with the recommendations in BS 5837:2012 as detailed in Table B.1 as shown in Figure 1.

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

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

Figure 1: BS 5837:2012 Table B. 1

1.5 Statutory Legal Protection

1.5.1 The two main sources of protection afforded to trees are i) Conservation Area (CA) control and ii) Tree Preservation Orders (TPO).

1.5.2 Trees within Conservation Areas are protected under the Town & Country Planning Act 1990 (as amended), which affords blanket[1] protection to trees with a stem diameter of 75 mm and above when measured at 1.5 m from ground level.

1.5.3 Trees may also be protected by a TPO under the Town & Country Planning Act 1990 (as amended) and The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

1.5.4 It is a criminal offence to carry out any unauthorised works to trees that are either protected by a TPO or located within a CA, including:

- Cutting down, uprooting or wilfully destroying a tree, or wilfully damaging, topping or lopping a tree in such a manner as to be likely to destroy it;
- Any works that contravene the provisions of a TPO; and/or
- Any works in contravention to the regulations.

1.5.5 Penalties for non-compliance of a TPO and/or CA can be unlimited, if tried in a County Court or Magistrates Court. Note, if the Local Planning Authority decides to also prosecute under the Proceeds of Crime Act 2002 in addition to prosecuting under the Town and Country Planning Act 1990, the fine can be unlimited.

1.5.6 It should be noted that the felling of trees prior to receiving full planning permission may also require a felling licence under the Forestry Act 1967. This requires that any persons wishing to fell 5m³ of trees within any three-month period (i.e. Calendar Quarters:- January to March, April to June, July to September and October to December) apply for a felling licence from the Forestry Commission. There are a number of exemptions to this requirement, with some of the more relevant exemptions including:

- Pruning trees;
- Felling fruit trees or trees growing in a garden, orchard, churchyard or designated public open space;
- Felling trees that, when measured at a height of 1.3 m from the ground, have a diameter of 8 cm or less;
- Felling trees immediately required for the purpose of carrying out development authorised by full planning permission;

[1] Protection is similar to that afforded to trees protected by TPO.

- Felling necessary for the prevention of danger or the prevention or abatement of a nuisance[2] (e.g. threat/danger to a third party); and
- Felling necessary to prevent the spread of a quarantine pest or disease.

1.5.7 Other legislation that affords a lesser or indirect level of protection to trees includes the following:

- The Wildlife & Countryside Act 1981 (as amended);
- Conservation of Habitats and Species (amendment) Regulations 2019; and
- Hedgerow Regulations (1997).

1.5.8 All of the above provide for the identification and safeguarding of flora and fauna that may be found in association with trees and woodlands.

1.6 Protected Species

1.6.1 Trees can contain features such as cavities, cracks, splits and loose bark which can offer potential habitat to species such as bats. Bats and their roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) as well as the Conservation of Habitats and Species Regulations 2019 (as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006.

1.6.2 Trees provide potential nesting habitat for birds and all wild UK birds and their active nests are protected under the Wildlife and Countryside Act 1981. For bird species listed on Schedule ZA1 of The Act it is an offence to take, damage or destroy their nest(s), whether active or not.

[2] NB - This only applies when a real and/or immediate danger is present.

2 THE SURVEY

2.1 Desk Study – Legal Constraints

2.1.1 WA checked BMBC's online mapping[3] for TPO and CA constraints, which revealed that an area of woodland is protected by TPO within the Site. This woodland is referenced on the Council's website as Reference 1; Tree Reference W1, with the WA reference for this woodland being W1b. No further details for this TPO are included on the Council's website.

2.1.2 WA contacted BMBC by email on the 5th October and again on the 25th October to ascertain further details of this TPO and how to obtain a copy. A reply was received from the Council on the 25th October stating that to receive copies of TPOs a fee would have to be paid to the Council. W1b until Full Planning Permission has been gained which includes those works. Until that time, we will update the client as soon as we receive further details on the TPO from the LPA.

2.1.3 WA also conducted a search using the Woodland Trust's Ancient Tree Inventory[4] and DEFRA's Magic Map Application[5] on 27th September 2023 to ascertain whether any recorded ancient trees and veteran or ancient trees and also ancient woodland, traditional orchard, and woodpasture and parkland priority habitats are located within the Site and also outside the Site boundary but within influencing distance of the Site.

2.1.4 The Ancient Tree Inventory does not currently contain any records of veteran or ancient trees within the Site, or outside the Site boundary but within influencing distance of the Site. However, the Ancient Tree Inventory is a record of trees found by professionals and enthusiasts and submitted to the Woodland Trust for inclusion on the database and therefore is not a complete record and cannot be used to rule out the presence of veteran trees outside Site boundaries. The absence of ancient and veteran trees within the Site and also outside the Site boundary, but within influencing distance of the Site was confirmed by the Site survey.

2.1.5 DEFRA's Magic Map listed no ancient woodlands within the Site; however, there is a designated Traditional Orchard located immediately to the north of the Site in an adjoining property, on Barugh Green Road. Although the Magic mapping does not show designated Ancient Woodlands on the site, the Wardell Armstrong Ecological Appraisal Report October 2023, has found that Craven Wood (WA Ref. W1a and W1b) as ancient due to the presence of 15 flora indicator species and cartographic evidence

[3] https://www.barnsley.gov.uk/services/parks-and-open-spaces/tree-preservation-orders/
[4] https://ati.woodlandtrust.org.uk/
[5] https://magic.defra.gov.uk/magicmap.aspx

dating back to 1821. Therefore, we have included the statutory 15m buffer zone from the woodland canopy edge.

2.2 Field Survey

2.2.1 The arboricultural survey was undertaken by Mark Levitt on 22-25/05/2023; 06/06/2023; 26-29/06/2023; and by Alan Reid on 11/07/2023 using the methodology set out in BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (see Appendices 2 and 3).

2.2.2 Weather conditions during the survey were sunny with cloud and rain at times.

2.2.3 The trees were surveyed in accordance with the methodology outlined in Appendix 2.

2.2.4 Each individual surveyed tree (T), tree group (G), woodland (W) and hedgerow (H) was given a sequential reference number.

2.2.5 The trees were then classified in accordance with the BS5837:2012 tree quality assessment categories 'A', 'B', 'C' and 'U' (see category criteria and grading within Appendix 3). 'A' and 'B' category trees are considered as 'high' and 'moderate' quality, respectively, and are considered as a constraint to development. As such, these trees should be retained and afforded appropriate protection during development. 'C' category trees are considered to be of 'lower' quality due to their condition or 'lower' amenity value and are, therefore not usually considered a constraint to development. 'U' category trees are those in such a 'poor' condition that they cannot usually be retained within the current Site context for longer than ten years. It should be noted that in some cases, category 'U' trees may have valuable habitat/ecological value despite being in poor arboricultural condition. In such cases, where it is safe to do so, these trees may be recommended for retention and/or pruning works. Where relevant, we will bring such trees to the attention of the client. Where trees are located outside of the red line Site boundaries, irrespective of their BS 5837 categorisation, these should be considered as a constraint during the Site layout design process and protected during construction, as such trees are not within the control of the Site owner.

2.2.6 Root Protection Areas (RPAs) are calculated for individual trees utilising the methodology set out in BS 5837:2012, which is calculated by multiplying the stem diameter (measured at 1.5 m from ground level) by 12 for single-stemmed trees and a variant on this for multi-stemmed trees. For surveys in England (and outside England where it is a Local Planning Policy requirement), individual veteran trees are given a standard BS 5837 RPA and also a secondary veteran tree RPA, to accord with government's standing advice 'Ancient woodland, ancient trees and veteran trees:

advice for making planning decisions' [6] and local planning policy, which is based on a calculation of fifteen times the stem diameter or five metres beyond the crown spread, whichever is greater.

2.2.7 For tree groups, woodlands and hedgerows, the calculated RPAs are based on a set distance from the canopy edge of the tree groups, woodlands and hedgerows. This calculation is based on the largest stem diameter of the trees on the edge of the tree groups and woodlands and the crown spread measurement for these edge trees. A variant of the tree group and woodland RPA calculation is used to calculate hedgerow RPAs, with the calculation based on the largest stem diameter of the hedgerow woody plants and the hedgerow width.

2.2.8 Further details for each tree, and the groups of trees surveyed are set out in the Arboricultural Survey Schedule (see Appendix 1) and on the Tree Protection Plan Sheets 1 & 2 Ref. LD10361-030 Rev. A.

[6] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions?trk=public_post_comment-text

3 SURVEY RESULTS AND EVALUATION

3.1 Tree Population

3.1.1 One-hundred and twenty-six individual trees, one hundred and two tree groups, two woodlands and ninety-three hedgerows which were located on and immediately adjacent to the Site were assessed and surveyed.

3.1.2 The survey revealed that, 5% of the individual tree population was classified as category 'A' quality, 28% as category 'B' quality, 63% as category 'C' quality and 4% as category 'U' quality.

3.1.3 In term s of the woodland and tree groups, 5% were classified as 'A' quality, 30% as 'B' quality, 63% as 'C' quality and 2% as 'U' quality.

3.1.4 A detailed description of all trees and groups of trees surveyed and recommended works can be found in the Tree Survey Schedule in Appendix 1. Tables 1 and 2 below summarises the BS 5837 quality grading of the trees found on Site, with these figures represented in graph format in Figures 2 and 3.

Table 1: Individual Trees Quality Assessment Summary

Tree Quality	A	B	C	U
Individual Trees, Identification	T22, T25, T45, T49, T55, T111, T126	T12, T20, T21, T24, T27, T28, T31, T33, T47, T48, T54, T58, T60, T61, T68, T71, T80, T83, T84, T85, T87, T90, T91, T92, T95, T96, T97, T101, T102, T105, T106, T109, T110, T122, T125	T1, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T23, T26, T30, T32, T34, T35, T36, T38, T39, T40, T41, T42, T43, T46, T50, T51, T52, T53, T56, T59, T62, T63, T64, T65, T66, T67, T69, T70, T72, T73, T74, T75, T76, T77, T78, T79, T81, T82, T86, T88, T89, T93, T94, T98, T99, T100, T103, T104, T107, T108, T112, T113, T114, T115, T116, T117, T118, T119, T120, T121, T123, T124	T2, T29, T37, T44, T57
Total	**7**	**35**	**79**	**5**

Table 2: Tree Groups & Woodland Quality Assessment Summary				
Tree Quality	**A**	**B**	**C**	**U**
Tree Groups & Woodland Identification	G9, G10, G102, W1a, W1b	G12, G14, G16, G17, G18, G19, G20, G26, G40, G42, G43, G44, G53, G57, G58, G62, G65, G66, G67, G69, G72, G73, G75, G76, G77, G78, G80, G84, G99, G100, G101	G1, G2, G3, G4, G5, G6, G7, G8, G11, G13, G15, G21, G22, G23, G24, G25, G27, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G41, G45, G46, G47, G48, G49, G50, G51, G52, G54, G55, G56, G59, G60, G61, G63, G64, G68, G70, G71, G74, G79, G82, G83, G85, G86, G87, G88, G89, G90, G91, G92, G93, G94, G95, G96, G97, G98	G28, G81
Total	**5**	**31**	**66**	**2**

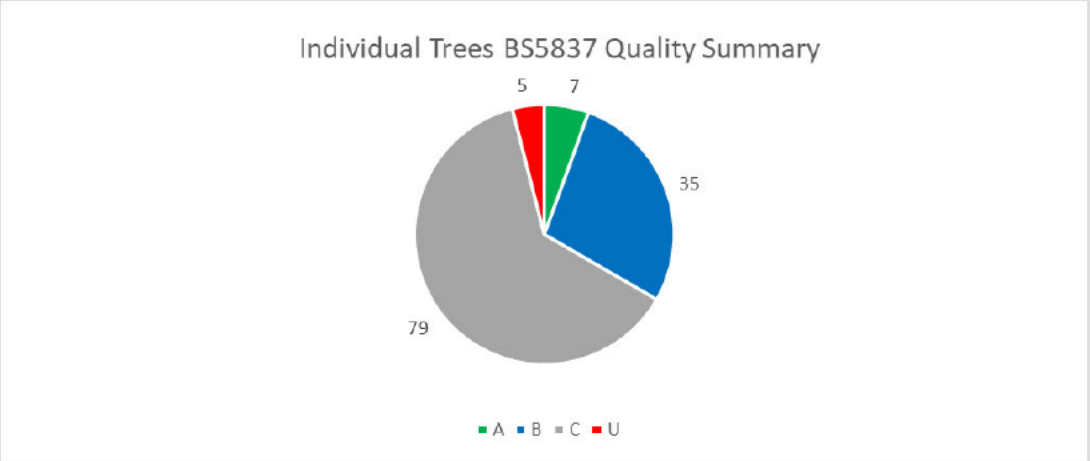


Figure 2: Overview of the BS 5837 quality of individual trees found on Site

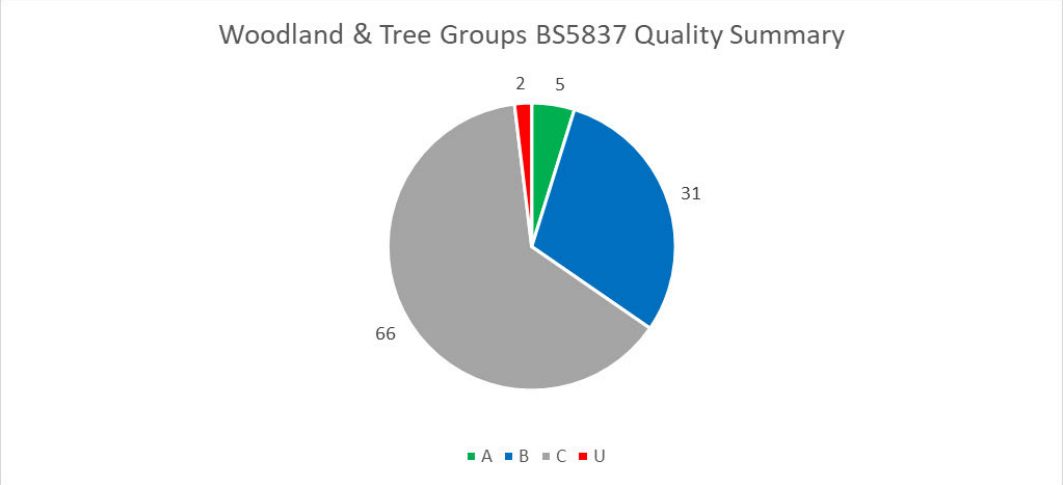


Figure 3: Overview of the BS 5837 quality of tree groups found on Site

3.1.5 The surveyed hedgerows were not allocated a quality category, as BS 5837 does not include a methodology for the categorisation of hedgerows. However, the extent of the canopy spread and RPAs for hedges is shown on the Tree Protection Plan Sheets 1 & 2 LD10361-030 Rev. A.

3.1.6 An assessment of the age class of the individual tree population on Site, reveals that the population is predominantly made up of early-mature trees, with these accounting for 60% of the population. The remaining individual tree population is made of mature trees, accounting for 33% of the population, semi-mature trees, accounting for 6% of the population and young trees accounting for 1% of the population. No late-mature or veteran individual trees were found during the survey. A summary of the age class assessment for individual trees is shown in the graph in Figure 4.

Figure 4: Individual trees age class assessment summary.

4 DEVELOPMENT IMPACT TO RETAINED TREES

4.1.1 Implementation of the proposed Full Application aspects of the proposed development will necessitate the removal of twenty-seven individual trees, twenty-five tree groups and partial removals from a further thirteen tree groups, Twenty hedgerows are proposed for removal in their entirety and a further 15 hedgerows are to be partially removed. All proposed removals and other impacts are detailed in full in Table 3.

4.1.2 In assessing the impacts of the proposed development on the trees on and adjacent to the Site and in proposing mitigation for non-removal impacts and compensation for removal impacts for these impacts, the planning application for development of the Site accords with the requirements of British Standard 5837:2012 and Local and National planning policies for trees and development.

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation

Tree/ Group No.	Proposed Works	Impact	Mitigation/Compensation	BS 5837 Quality Categorisation
T14, T17, T18 T20, T31, T37, T38, T39, T49, T60, T61, T81, T86, T87, T89, T90, T91, T95, T96, T97, T110, T111, T112, T113, T121, T125, T126, G6 – partial, G10 – partial, G12 – partial, G14 - partial, G15, G16, G17, G18, G19, G20, G21, G30, G31, G32, G33, G34, G35, G36, G37 - partial, G40 – partial, G44 - partial, G46, G53 – partial, G54 – partial, G55 – partial, G72, G73, G74, G75, G78, G80 - partial, G81, G83, G85, G91, G93, G96 – partial, G97, G102 – partial, H1 – partial, H3 – partial, H4, H9, H11 – partial, H13, H15 - partial, H17, H24 – partial, H25 – partial, H28 – partial, H51 – partial, H52, H53, H55, H56, H57, H60, H61, H62, H63, H64, H65, H66, H67, H68, H69 - partial, H70, H71, H74 – partial,	The removal of trees and hedgerows to facilitate the proposed development	<u>High Impact</u> In order to facilitate the proposed scheme, a number of trees and hedgerows will require removal. These proposed removals include twenty-seven individual trees, twenty-five tree groups and partial removals from a further thirteen tree groups, Twenty hedgerows are proposed for removal in their entirety and a further 15 hedgerows are to be partially removed. Removals for drainage directionally drilled receptor sites and for footways with the Ancient Woodland are indicative at this stage. Details of the proposed removals can be found below. The proposed removals will have a high impact on local amenity. T14 (C Grade): To be removed to enable SuDS basin to be excavated; T17 (C Grade): To be removed to enable new landscaping; T18 (C Grade): To be removed to enable a new footway to be constructed; T20 (B Grade): To be removed due to proposed significant ground level raising within the tree's RPA; T31 (B Grade): Removed because of extensive ground level changes within the southern 50% of the tree's RPA and also to enable new footways to be constructed;	NEW TREE PLANTING: Extensive new tree planting forms part of the proposals and this will help to compensate for the losses of trees to development. Please refer to Landscape Master Plan. FOOTWAY & DRAINAGE INSTALLATION WITHIN THE ANCIENT WOODLAND: The Tree Protection Plan illustrates sections of the woodland to be removed to facilitate the installation of footways proposed within the woodland. These removals within the footprints of the proposed footways are indicative at this stage, as the woodlands have not been surveyed in detail. A survey of the Ancient Woodland trees potentially impacted by the proposed footway within the Ancient Woodland will be required to inform the exact footway footprints to minimise tree losses and to inform the methods of construction. Further survey work will also be required to determine the least damaging directional drilling receptor areas within the woodland. The results of the surveys and specification and methodology for footways and drainage within the Ancient Woodland can be included in an Arboricultural Method Statement and on and updated Tree Protection Plan, which can be conditioned as a pre-commencement condition. DRAINAGE: Trees T60, T61 and tree groupsG54, G55 are located on the northern perimeter of the Site adjacent to a neighbouring property where Defra lists a Traditional Orchard Priority Habitat being present. Disruption	**A, B, C, U**

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation

Tree/ Group No.	Proposed Works	Impact	Mitigation/Compensation	BS 5837 Quality Categorisation
H75 - partial, H76 - partial, H77, H78, H79, H81, H82 partial, H85, H86 – partial, H88, H90 - Partial, H91, H92, H93, W1a - partial, W1b - partial		T37 (U Grade): Removed due to significant proposed ground level changes; T38 (C Grade): Removed due to significant proposed ground level changes; T39 (C Grade): Removed due to significant proposed ground level changes; T49 (A Grade): Removed due to proposed ground level changes. Additionally, drainage is also proposed within the tree's northern RPA; T60 (B Grade): Removed due to ground levels to be reduced within RPA by up to 2m for SuDS basin. Note, as this tree is located on the site boundary, it may not be legal to remove if under shared ownership. Advise retention, further details in mitigation/ compensation column section; T61: (B Grade): Removed due to ground levels to be reduced within RPA by up to 2m for SuDS basin. Note, as this tree is located on the site boundary, it may not be legal to remove if under shared ownership. Advise retention, further details in mitigation/ compensation column section; T81 (U Grade): Removed due to substantial ground level reduction proposed within the tree's RPA; T87 (B Grade): Removed due substantial ground level reduction proposed within the tree's RPA;	from the removal of perimeter trees should therefore be minimised if feasible to avoid impacting the priority habitat. Trees T60 and T61 are moderate quality mature oaks which provide good amenity value along with the associated tree groups G54 & G55. Retention under the current scheme is not feasible due to ground levels being proposed to be reduced within their RPAs to create the SuDS basin within their RPAs. We recommend the SuDS footprint be moved out of the RPA of these trees, if feasible to enable their retention. Note, as these trees are close to the boundary of the Site, the trees may be under shared ownership with the property/ land to the north and removal may be dependent on the gaining permission from the adjacent property/ landowner. If permission is not gained, then the two oak trees may not be able to be removed and thus the SuDS basin may need to be moved to the south so that ground levels are not reduced within these two trees RPAs. LEVEL CHANGES: Individual trees T49, T125, T126 and tree group G44 and the majority of tree group G102- require removal due to the proposed ground level changes and proposed drainage and footways. These are high-quality trees which provide a close habitat link from the Ancient Woodland to the north. If feasible we recommend that the proposed ground level changes and drainage proposals be amended in this area to enable these trees to be retained. We have shown individual trees T20 and T27 as being retained, as it may be feasible to enable proposed ground level within these trees	

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		T89 (C Grade): Removed due substantial ground level reduction proposed within the tree's RPA; T90 (B Grade): Removed due substantial ground level reduction proposed within the tree's RPA; T91 (B Grade): Removed due substantial ground level reduction and car parking proposed within the tree's RPA; T97 (B Grade): Removed due substantial ground level reduction and car parking proposed within the tree's RPA; T96 (B Grade): Removed due substantial ground level reduction and car parking proposed within the tree's RPA; T95 (B Grade): Removed due substantial ground level reduction and car parking proposed within the tree's RPA; T110 (B Grade): Tree to be removed because of significant ground level reduction in the western part of its RPA and proposed drainage within its RPA; T111 (A Grade): Tree to be removed because of significant ground level reduction in its entire RPA; T112 (C Grade): Removed due to the proposed substantial ground level reduction and for drainage scheme; T113 (C Grade): To be removed to enable a footway to be constructed;	RPAs with ground built-up using three-dimensional geogrids charged with clean angular stone, topped with a geotextile then a thin layer of topsoil due to proposed ground levels changes. These are 'B' quality trees located close to the adjacent Ancient Woodland, thus providing value for wildlife. However, the successful retention of these trees is dependent on whether the ground level increases can be achieved and also how their retention effects the Reserved Matters development design. It may be the case that these two trees may have to be removed. If they can be retained, the proposed ground level changes specification and installation methodology will be included in an Arboricultural Method Statement, which can be conditioned by the LPA.	

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		T121 (C Grade): To be removed to enable ground level changes and proposed drainage; G6: Approximately 35m² to be removed to enable footways to be constructed; T125 (B Grade): To be removed to due to substantial proposed ground level changes and car parking; T126 (A Grade): Required to be removed to enable substantial ground level reductions. Drainage and footways also proposed with the tree's RPA; G10 (A Grade): Approximately 45.7m² to be removed to enable ground changes required to construct a SuDS basin. The removed section is 7.1% of the group's total canopy area of 641.6m²; G12 (B Grade): Approximately 98.3m² to be removed to enable ground changes required to construct a SuDS basin and also to enable a footway to be constructed. The removed section is 21.5% of the group's total canopy area of 457m²; G14 (B Grade): Approximately 279m² of this group is to be removed because of extensive ground level changes proposed within its southern footprint. Additionally, a footway is also proposed within the southern section. The removal is 28% of the group's total canopy area		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		of 997m²; G15 (C Grade): To be removed to accommodate extensive ground level changes proposed within its footprint. Additionally, a footway is also proposed within its footprint; G16 (B Grade): To be removed because of extensive ground level changes proposed within its footprint. Additionally, a footway is also proposed within its footprint; G17 (B Grade): To be removed because of extensive ground level changes proposed within its footprint. Additionally, a footway is also proposed within its footprint; G18 (B Grade): To be removed because of extensive ground level changes proposed within its footprint. Additionally, footways are also proposed within its footprint; G19 (B Grade): To be removed due to proposed footways partially within canopy area and RPAs; G20 (B Grade): To be removed because of substantial ground level reduction proposed within southern part of RPA and canopy area; G21 (C Grade): Removed for a new footway; G30 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G31 (C Grade): Removed in its entirety due to substantial proposed ground level changes		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		within the group's canopy spread and RPA; G32 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G33 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G34 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G35 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G36 (C Grade): Removed in its entirety due to substantial proposed ground level changes within the group's canopy spread and RPA; G37 (C Grade): Partial removal of approximately 49m² because of significant ground level changes within footprint of the group. The removal is 58% of the total canopy area of 84.5m²; G40 B Grade):Approximately 10.2m² to be removed for a road and footway, which is 3% of the total canopy area of 340m²; G44 (B Grade): Approximately 366.6m² to be removed due to substantial proposed ground level changes, footways and drainage. The removed section is 41% of the group's total canopy area of 894.9m²;		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		G53 (B Grade): Approximately 9.6m² to be removed for a proposed footway link, which is approximately 5.6% of the group's total canopy area of 172.3m²; G54 (C Grade): Partial removal due to ground levels to be reduced within RPA by up to 2m for SuDS basin. Note, as on the site boundary the trees may be under shared ownership and therefore may not be removed unless the agreed with the other landowner. Advise retention, see compensation/ mitigation column section for further details ; G55 (C Grade): Partial removal due to ground levels to be reduced within RPA by up to 2m for SuDS basin. Note, as on the site boundary the trees may be under shared ownership and therefore may not be removed unless the agreed with the other landowner. Advise retention, see compensation/ mitigation column section for further details; G74 (C Grade): Removed due substantial ground level reduction proposed within the group's RPA; G75 (B Grade): Removed due substantial ground level reduction proposed within the group's RPA; G78 (B Grade): Removed due substantial ground level reduction proposed within the group's RPA; G80 (B Grade): Approximately 124m² to be removed from the group, which is 15.7% of the		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		group's total area of 791.5m². The removal is required because of substantial ground level reductions and to enable proposed car parking within it canopy and RPA footprint; G81 (U Grade) To be removed in its entirety due to due to the proposed ground level reductions and to enable car parking to be constructed; G82 (Grade): G83 (C Grade): To be removed due to the proposed ground level reductions and to enable car parking to be constructed; G85 (C Grade): To be removed due to the proposed ground level reductions and to enable car parking construction; G91 (C Grade): Proposed for removal due to proposed ground level reductions and to enable car parking; G93 (C Grade): Removed in its entirety to enable a footway to be constructed; G96 (C Grade): Approximately 18.6m² is to be removed from north-western part of this group to enable a footway to be constructed. The removals are 1.1% of the total group's canopy area of 1,635m²; G97 (C Grade): Tree group to be removed to enable a footway to be constructed; G102 (A Grade): Approximately 739.5m² to be removed due to substantial proposed ground		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		level changes, footways and drainage. The removed section is 78.5% of the group's total canopy area of 942.4m²; W1a & W1b (A Grade): Footways are proposed through this ancient woodland. Trees may be required to be removed to enable the construction of these footways, however as the woodlands haven't been surveyed in detail, it's unclear whether tree removals area required. Therefore the impact of the proposed footways cannot be ascertained until the woodlands are fully surveyed. Once surveyed the impacts can be minimised by routing the footway so that it avoids trees, so that the trees can be retained. The detrimental impacts of routing public footways whether hard surfaced or not through ancient woodland, needs to be balanced against the benefits of people having access to woodlands from a mental health perspective and for providing useable links to the area's wider footway network. From an ecological perspective, it is better that access is discouraged, however from public benefits perspective access to woodlands, whether ancient or not can be beneficial for the public. This benefit/ dis-benefit calculation needs to be undertaken by the LPA, rather than arboriculturists. In addition to potential removals		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		for footways within W1b, surface water drainage will need to connect to the stream within the woodland. Currently the drainage is proposed to be directionally drilled within the footprint of the ancient woodland and its buffer zone, however there may be a requirement to remove trees to enable the receptor area for the directionally drilling. As with the footway footprints, further survey work will be required to be undertaken to determine the least damaging position for the receptor area; H1: Removal of approximately 88m to be removed due to proposed ground level changes and for a road, which is 47.3% of the total length of hedgerow length of 186m; H4: Removed in total (Approximately 137m) due to ground level changes (decrease of 1m) and for development layout; H3: Partial removal of approximately 4.5m to enable a new footway, which is 4.5% of the total hedgerow length of 100m; H4: To be removed in its entirety (Approximately 140m) to enable roads, footways and due to proposed ground level changes; H9: Removed in total (Approximately 127.3m)to accommodate proposed ground level changes; H11: Partial removal of approximately 67m to enable new road, footway and drainage , which is		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		27% of the total hedgerow length of 246m; H13: Removed in total (Approximately 62m) due to ground level changes (increase of 1m and also decrease of up to 1m) and to enable roads, footways and dwellings to be constructed; H15: Effectively removed in total (Approximately 193m) due to ground level changes (increase of 1m) and for development layout, with only 4.5m retained outside the site boundary; H17: Removed in total (Approximately 134m) due to ground level changes (increase of 1m) and for development layout; H24: Approximately 1.3m length of this hedgerow is to be removed to enable a footway to be constructed, which is 6.7% of the total hedgerow length of 19.3m; H25: A small section (approximately 8.5m^2) is to be removed from this hedgerow for SuDS basin to the north of the hedgerow. This will have a low impact on the hedgerow as a whole; H28: Partial removal of approximately 30.4m to enable new road, levels increase and drainage, which is 77% of the total hedgerow length of 39.5m; H51: Partial removal of approximately 119m to enable development to proceed, which is 22.2% of the total hedgerow length of 536m; H53: Removed in its entirety (Approximately		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		127m) due to proposed ground level reductions and to enable a road and footways; H55: Removed in its entirety (Approximately 50.4m) due to proposed ground level reductions; H56: Removed in its entirety (Approximately 182m) due to proposed ground level reductions and proposed car parking; H57: Removed in total (Approximately 12m) due to proposed ground level reductions; H60: Removed in its entirety (Approximately 258m) due to proposed significant ground level reductions; H61: Removed in its entirety (Approximately 89m) due to proposed significant ground level reductions; H62: Removed in its entirety (Approximately 67m) due to proposed significant ground level reductions; H63: Partial removal of approximately 76m, which is 65% of the total hedgerow length of 116.8m. Removal due to proposed ground level changes; H64: H62: Removed in its entirety (Approximately 164.6m) due to proposed significant ground level reductions; H65: To be removed in its entirety (Approximately 207m) due to proposed significant ground level reductions;		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		H66: To be removed in its entirety (Approximately 233m) due to proposed significant ground level reductions and car parking; H67: Tio be removed in its entirety (Approximately 42m) due to change in ground levels and to enable drainage to be constructed; H68: To be removed in its entirety (Approximately 18.1m) due to change in ground levels; H69: Partial removal of approximately 13m to enable new road to be constructed, which is 16.3% of the total hedgerow length of 79.8m; H70: To be removed in its entirety (Approximately 36.5m) due to proposed ground level changes ; H71: To be removed in its entirety (Approximately 161.4m) due to proposed significant ground level reductions; H75: 106m to be removed due to proposed ground level changes, road and footways, which is 94.1% of the hedgerow's total length of 112.6m; H74: Partial removal of approximately 10.5m for footway connections, which is approximately 3.4% of the hedgerow's total length of 306.2m; H76: Partial removal of approximately 198.8m for roundabout, roads, footways and proposed		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		ground level changes which is approximately 89.9% of the hedgerow's total length of 221.1m; H77: Removed in total (Approximately 231m) due to ground level changes (increase of 1m) and for development layout; H78: Removed in total (Approximately 156m) due to ground level changes (increase of 1m and also decrease of up to 1m) and for development layout; H79: Removed in total (Approximately 168m) due to ground level changes (increase of 1m and also decrease of up to 1m) and for development layout; H82: Approximately 12m of this hedgerow is proposed for removal to enable a footway and drainage to be constructed. The removal is approximately 8% of the total hedgerow length of 144m; H85: Removal in its entirety (Approximately 93.3m) due to significant ground level reductions proposed; H86: Two small sections to be removed to enable a footway to be constructed; H88: Removal of approximately 11.9m of this hedgerow, which is 83.4% of the total hedgerow length of 133.3m. Removal required to enable ground level changes and a footway to be constructed;		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		H89: : Removal of approximately 86.6m of this hedgerow, which is 80.3% of the total hedgerow length of 107.9m; H90: Removal of approximately 21.8m of this hedgerow, which is 59.9% of the total hedgerow length of 36.4m; H91: Removed in its entirety (Approximately 52.3m) due to proposed significant ground level reductions; H92: Removed in its entirety (Approximately 190.6m) due to proposed significant ground level reductions; H93: To be removed in its entirety (Approximately 94m) due to proposed ground level changes; PREVIOUSLY APPROVED DEVELOPMENT: Vegetation to the north and south-western site access points are within the red line boundaries for the following approved planning application Ref's: Northern Access Ref. 2020/0027 Southern Access Ref. 2020/0028 Removal of the following vegetation is approved within those applications: T86, G46, G72, G73, H52, H79 – partial (Approximately 43m), H81 (Approximately 74m).		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation

Tree/ Group No.	Proposed Works	Impact	Mitigation/Compensation	BS 5837 Quality Categorisation
T12, T21; T22; T25; T27; T44; T45; T80; T102; T109; T114; T115; T116; T117; T118; T119; G9; G94; G95; G96: G98; H40; H41; H50; H83; H87; W1a; W1b.	New permanent hard surfaces proposed within retained trees RPAs and ancient woodland buffer zones	<u>Low/ High Impact</u> As part of the proposed scheme, new hard surfacing, primarily new footways, are proposed within the RPAs of the following trees and hedgerows: T12: A proposed footway encroaches within this tree's RPA by approximately 2.4m², which is 8% of the tree's total RPA of 30m². The footway will be constructed as no-dig footway, as its also within the ancient woodland buffer zone, therefore the impact on the tree will be negligible; T21: Hermit lane runs along the southern edge of this tree's RPA and this may require resurfacing. Additionally a new footway is proposed within the tree's RPA to the east of the stem, with this covering approximately 18.4m², which is 33.5% of the tree's total RPA of 55m². The new footway will have to be constructed as a no-dig footway to enable the tree to be retained, which if done this way will have a low-moderate impact on the tree. Resurfacing of the road to the south, shouldn't affect the tree provided that only the wearing course is to be replaced;	Move footways out of retained trees RPAs where feasible. Where the moving of footways out of RPAs is not feasible, the footways shall be constructed using a specified no-dig materials and construction methodology under the supervision of the Project Arboriculturist. This can be conditioned to be included in an Arboricultural Method Statement, which can be conditioned as a pre-commencement condition by the LPA. Where existing hard surfaces are within RPAs and are to be resurfaced, the existing sub-base will be retained and only the wearing course removed then re-surfaced: This will act to minimise damage to any roots growing in the underlying soil. Where indicated on the Tree Protection Plan Ref. LD10361-030 Rev. A, it is proposed to utilise specialist materials to enable a no-dig method of construction for the hard surfaced footways within the affected trees and hedgerows RPAs. This will prevent any damage to roots and the underlying soil. Details of specific areas and specified requirements will be provided in an Arboricultural Method Statement and updated Tree Protection Plan, which can be conditioned as a pre-commencement condition. A survey of the Ancient Woodland trees potentially impacted by the proposed footway within the ancient woodland will be required to inform the exact footway footprints, in order to inform the method of construction. This can be included in an Arboricultural Method Statement and on an updated Tree Protection Plan, which can be conditioned as a pre-commencement condition by the LPA.	**A, B, C**

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		T22: As with T21, the road to the south of the tree may require resurfacing. If it is only the wearing course being replaced, this will have a low impact on the tree. A footway covering approximately 54.3m² of the tree's western RPA is proposed, with this accounting for 14.8% of the tree's total RPA of 366m². This will need to be constructed as a no-dig footway, which if done, will have a low impact on the tree; T25: Resurfacing of the existing road may be required to the south of this tree's RPA. Provided that the road's sub-base isn't to be replaced, then the impact on this tree is likely to be low; T27: A hard surfaced footway is proposed, which encroaches within this tree's RPA by approximately 21m², which is 4.6% of the tree's total RPA of 452m². It is considered that if the footway is constructed using no-dig materials and specification, the impact on the tree will be low; T44: A proposed footway encroaches within the RPA of this tree by approximately 37.7m², which is 6.4% of its RPA of 588m². Advise moving the footway outside of its RPA. If not feasible the footway shall be constructed as a no-dig footway within the tree's RPA, with the impact on the tree from this considered to be low;	The Arboricultural Method Statement will include hard-surfaced and bark mulch footway construction and installation methods within the Ancient Woodlands. No-dig construction methods shall be used throughout the Ancient Woodland and Ancient Woodland Buffer Zone. There shall be no ground level changes or soil compaction under the bark mulch footways. Arboricultural supervision will be required for proposed footway installations within retained trees and hedgerow RPAs in accordance with an agreed methodology. This can be included in an Arboricultural Method Statement and updated Tree Protection Plan, which can be conditioned as a pre-commencement condition.	

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		T45: A proposed footway encroaches within the RPA of this tree by approximately 23.6m², which is 3.6% of its RPA of 651m². Advise moving the footway outside of its RPA. If not feasible the footway shall be constructed as a no-dig footway within the tree's RPA. The impact on the tree from this is considered to be low; T80: A proposed hard surfaced footway encroaches within this tree's RPA by approximately 28m², which is 12.4% of the tree's total RPA. This tree is located outside the Site's red line boundary, thus not within the control of the Site owner. The footway lines up with the tree's stem located outside the site, thus either the tree would have to be removed or the footprint of the footpath moved. If the footprint of the footpath can be moved, it would be expedient to move it outside the tree's RPA and crown spread so that pruning of the tree and the construction of the footway using a no-dig specification wouldn't be required. If the footway footprint is not moved it is likely to result in the tree having to be removed; T102: A hard surfaced footway is proposed within this tree's RPA, with the footway coming within 1m of the tree's stem centre, which is well within the tree's rooting zone of rapid taper. It is unlikely that the footway can be		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		moved entirely outside of the tree's RPA, however it should be moved further away from the tree's stem and will need to be constructed as a no-dig footway. If the footprint of the footway is not moved further from the tree's stem, the impact on the tree is likely to be high; T109: A proposed footway runs through the part of the footprint and RPA for this tree, As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; T114: A proposed footway runs through the footprint of this tree. As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; T115: A proposed footway runs through the footprint of this tree. As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		within the tree's RPA, it will need to be constructed as a no-dig footway; T116: A proposed footway runs through the footprint of this tree. As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; T117: A proposed footway runs through the footprint of this tree. As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; T118: A proposed footway runs through the footprint of this tree. As the tree may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; T119: A proposed footway runs through the footprint of this tree. As the tree may be under		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the trees crown and RPA. If the footway extends within the tree's RPA, it will need to be constructed as a no-dig footway; G9: A footway and small sections of a proposed road encroaches into this tree group's southern RPA. Where this is the case for the footway, no-dig construction will be required, with the impact of this on the trees within the group being likely to be low. The proposed road encroaches within the group's RPA by approximately 40.3m², which is 2.2% of the total RPA area of 1,831m². This impact is likely to have a very low impact on the trees. However, arboricultural supervision will be required when the road edge nearest the trees is excavated to ensure that if any roots are found that these are pruned cleanly. To the north of the group, the existing road may require resurfacing. If this is to be undertaken, the impact on the trees is likely to be low, if only the wearing course is replaced; G94: A proposed footway is within the RPA of this group. The footway will either need to be moved further to the south so that its footprint is outside of the RPA or the RPA will have to be constructed using a no-dig specification and		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		materials. There appears room to move the footway out of the RPA; G95: A proposed footway is within the RPA of this group. The footway will either need to be moved further to the south so that its footprint is outside of the RPA or the RPA will have to be constructed using a no-dig specification and materials. There appears room to move the footway out of the RPA; G96: A proposed footway is within the western edge of this group. Advise moving footway slightly further to the west. If not feasible, the footway within the group's RPA will have to be constructed as a no-dig footway; G98: A proposed footway runs through the footprint of this tree group. As the group may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the tree groups canopy and RPA. If the footway extends within the group's RPA, it will need to be constructed as a no-dig footway; W1a & W1b: New hard surfaced footways are proposed within the southern and northern buffer zones and within the footprints of these ancient woodlands. Provided the footways are constructed using no-dig materials and specification and that protective fencing is		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		utilised, then the impact on the two ancient woodlands from the installation of footways is likely to be low. The impact of introducing footways into ancient woodlands from an ecology and biodiversity is covered in the removal impact section; H40: A small section of a proposed footway will be located within the RPA of this hedgerow. The footway will need to be constructed as a no-dig footway within the RPA; H41: A small section of a proposed footway will be located within the RPA of this hedgerow. The footway will need to be constructed as a no-dig footway within the RPA; H50: A proposed footway runs through the footprint of this site boundary hedge. As the hedge may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the hedge footprint and RPA. If the hedge s retained and the footway encroaches within its RPA, then the footway will need to be constructed as a no-dig footway; H83: A proposed footway is located within the western part of this hedgerow's RPA. If feasible, it is advised the at the footway is moved slightly to the west to remove it from the hedgerow's RPA. If the footway cannot be moved, then the		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		section within the RPA will have to be constricted as no-dig footway; H87: A proposed footway runs through the footprint of this site boundary hedge. As the hedge may be under shared ownership with the adjacent landowner, it is recommended that the footway is moved slightly to the west so that footway is outside of the hedge footprint and RPA. If the hedge s retained and the footway encroaches within its RPA, then the footway will need to be constructed as a no-dig footway; The proposed new hard surfacing if constructed using no-dig materials and to a methodology that minimises impacts on the trees and hedgerows, will have a low impact on the affected trees ad hedgerows. However, if the hard surfacing is constructed using traditional construction methods and materials i.e. digging down to install the subbase, the impact on the affected trees and hedgerows is likely to be high as it is likely to involve root damage and/ or severance.		
T80, T019, T114, T115, T116, T117, T118, T119, G94, G95, G96; G98, H40, H82, H83, H87, H89,	Proposed pruning of trees and hedgerows	<u>Low Impact</u> In order to facilitate the proposed scheme, pruning will be required to be undertaken to a number of trees and hedgerows, as detailed below:	All pruning works are to be undertaken by a suitably qualified and insured tree work contractor, working in accordance with BS 3998:2010 – *Tree work. Recommendations* and industry best practice.	B,C

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		T80: This tree's crown is above a proposed hard surfaced footway. The crown of the tree will require raising to achieve a clearance above the footway of 2.5m; T109: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T114: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T115: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T116: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T117: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T118: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; T119: If the proposed footway isn't moved outside of the tree's crown spread, the crown will need to be raised to achieve 2.5m clearance; G94: Crown raising and/ or side pruning required to provide 2.5m headroom clearance over the new footway and to provide a minimum of 0.3m		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		clearance from the edge of the footway; G95: Crown raising and/ or side pruning required to provide 2.5m headroom clearance over the new footway and to provide a minimum of 0.3m clearance from the edge of the footway; G96: Crown raise to a height of 2.5m above the proposed footway's height; G98: If the proposed footway isn't moved outside of the group's crown spread, the crown will need to be raised to achieve 2.5m clearance; H40: Pruning required to enable new hard surfacing to be constructed. Prune back to provide 0.3m minimum clearance from edge of proposed new footway; H82: Side pruning of a small section of the western edge of this hedgerow by up to 1.4m lateral length to enable protection fencing to be erected and SuDS basin ground works to take place; H83: Western edge of tis hedge will need to be pruned back to achieve 0.3-0.5m clearance from the edge of the proposed footway; H87: If required prune back hedgerows to provide a minimum of 0.3m clearance from the footway edge; H89: Hedgerow on site boundary will require its western side to be pruned back to enable a proposed footway to be constructed and to		

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		provide clearance from the footway. As the hedge is currently well trimmed, pruning required is expected to be minimal; The pruning works will have a low impact on the amenity value of affected trees and hedgerows and should not be excessively detrimental to their long-term physiological functioning.		
T21, T22, T23, T24, T26, T25, H25, H26,H27, G9	Demolition activities in proximity to trees	<u>No Impact</u> Demolition of the existing farm buildings at Hermit House Farm is proposed in proximity to trees and hedgerows proposed for retention. Providing the specified protection measures are in installed prior to the demolition works standard, the impact on affected trees and hedgerows will be low.	Tree Protective Fencing installed in accordance with BS 5837:2012 and as detailed on the Tree Protection Plan Ref. LD10361-030 Rev. A prior to demolition works commencing and retained throughout the demolition and also construction phases. Specific actions such as the hosing down of foliage covered by demolition dust, to be included in an Arboricultural Method Statement, which can be conditioned by the LPA as a pre-commencement condition.	**A, B**
W1b	Proposed drainage within Ancient Woodland buffer zone	<u>No/ Low Impact</u> Foul water drainage is proposed within the western part of the Ancient Woodland buffer zone. If the drainage can't be moved further to the west, outside of the buffer zone, then the drainage will need to be either directionally drilled or installed in accordance with NJUG 4 standards and the remainder of the buffer zone fenced off, protecting the buffer zone from the drainage works. If the drainage is moved out of the buffer zone or	Recommend moving foul water drainage out of the ancient woodland buffer zone. If not feasible, consider directional drilling the drainage with the launch and receptor sites located outside of the buffer zone. If directional drilling not feasible, then the drainage will need to be installed in accordance with best practice principles set out in NJUG 'Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees' Volume 4 (NJUG 4 (See Appendix 8). These drainage works can be fully specified in an Arboricultural Method Statement and updated Tree Protection Plan, which can be conditioned as a pre-commencement condition by the LPA.	**A**

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		installed by directional drilling with the launch and receptor sites outside of the buffer zone, then there will be no impact. However if the drainage run is kept within the buffer zone, the drainage will need to be installed in accordance with NJUG 4 guidelines. The impact of this on the buffer zone would be considered to be low, if undertaken in accordance with the NJUG guidance.		
W1a, W1b	Directional drilling for drainage scheme within ancient woodland footprint	<u>Low/ High Impact</u> Directional drilling for the proposed drainage installation is proposed within the RPA and Ancient Woodland buffer zone to the south-west of the Ancient Woodland W1b. Tree removals may be required for the directional drilling receptor site within the Ancient Woodland. Further survey work is required within the woodland to determine the least damaging location for the receptor area. Without undertaking further BS 5837 survey work within the woodland to determine the optimal location for the receptor area, the potential for damage to the Ancient Woodland is high. However, if a survey is undertaken and the receptor area planned to minimise the impact, with the works specified and detailed in an Arboricultural Method Statement (AMS) and updated TPP, the impact of the proposed directionally drilled	Undertake survey work within the Ancient Woodland to determine the least damaging location for the directional drilling receptor site. A specification/ methodology for directional drilling to be included in an Arboricultural Method Statement, which can be conditioned by the LPA, as pre-commencement condition.	**A**

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation

Tree/ Group No.	Proposed Works	Impact	Mitigation/Compensation	BS 5837 Quality Categorisation
		drainage could be low.		
T13, T15, T16, T21, T27, T32, T33, T34, T35, T36, T40, T41, T42, T43, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, T76, T77, , T78, T79, T81, T82, T83, T84, T85, T88, T92, T93, T94, T98, T99, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T114, T115, T116, T117, T118, T119, T120, T122, T123, T124, G7, G8, G22, G23, G24, G25, G26, G27, G28, G29, G37 – part, G38, G40 – part, G41, G42, G47, G49, G50, G51, G52, G53, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G76, G77, G79, G82, G84, G86, G87, G88, G89, G90, G94, G95, G96, G98, G99, G100, G101, H1 –	Ground level changes within retained trees and hedgerows RPAs	<u>None -Low/ Potential High Impact</u> T21: Ground level changes may be required within the western part of this tree's RPA, with ground levels potentially increasing by up to 1m. It is advised that to enable this tree to be retained that the ground level increase, if required, is undertaken using a three-dimensional geogrid topped with a thin layer of topsoil; Trees T13, T32, T33, T34, T35, T36, T40, T41, T42, T43, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, T76, T77, T78, T79, T81, T82, T83, T84, T85, T88, T92, T93, T94, T98, T99, T100, T101, T101, T102, T103, T104, T105, T106, T107, T108, T109, T114, T115, T116, T117, T118, T119, T120, T122, T123, T124, G7, G8, G22, G23,G24, G25, G26, G27, G28, G29, G-37 Part, G38, G40 – part, G41, G42, G47, G49, G50, G51, G52, G53, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G76, G77, G79, G82, G84, G86, G87, G88, G89, G90, G94, G95, G96, G98, G99, G100, G101 and hedgerows H5, H6, H7, H8, H10, H12, H14, H16, H18, H20, H21, H22, H23, H30, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H42, H43,	Amend design so no ground level changes within the RPAs of T13, T15, T16, T32, T33, T34, T35, T36, T40, T41, T42, T43, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T71, T62, T63,T64, T65, T66, T67, T68, T69, T70, T72, T73, T74, T75, T76, T77, T78, T79, T81, T82,T83, T84, T85, T88, T92, T93, T94, T98, T99, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T114, T115, T116, T117, T118, T119, T120, T122, T123, T124, G7, G8, G22, G23, G24, G25, G26, G27, G28, G29, G37 – Part, G38, G40 – part, G41, G42, G47, G49, G50, G51, G52, G53, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G76, G77, G79, G82, G84, G86, G87, G88, G89, G90, G94, G95, G98, G99, G100, G101, H1 – part, H5, H6, H7, H8, H10, H12, H14, H16, H18, H20, H21, H22, H23, H30, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H43, H43, H44, H45, H46, H47, H48, H49, H50, H51 – part, H54, H58, H59, H72, H73, H75, H82, H83, H84, H86, H87, H89, H90. Where level changes within any of these trees and hedgerows RPAs or crown/ canopy footprints are unavoidable, these trees and hedgerows may have to be removed and thus the Tree Protection Plan would have to be updated. Note, if the trees and/ or hedgerows that are to be removed, legal consent will have to be agreed with the tree/ hedgerow owners. This is outside the remit of the Planning system. For trees T21 and T27 amend level increases so that they are outside of the trees' RPAs. If that is not feasible, design level increases with the use of three-dimensional geogrid with a tree well to protect the trees' stems, to enable their retention. The specification/ methodology for this can be included in an Arboricultural Method Statement, which can be conditioned as pre-commencement condition by the LPA. If	**A, B, C, U**

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
part, H5, H6, H7, H8, H10, H12, H14, H16, H18, H20, H21, H22, H23, H30, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H42, H45, H46, H47, H48, H49, H50, H51 – part, H54, H58, H59, H72, H73, H74, H75, H83, H84, H86, H87, H89, H90,		H44, H45, H46, H47, H48, H49, H50, H51 – part, H54, H58, H59, H72, H73, H82, H83, H84, H86, H87, H89, H90 : Ground level changes may be proposed within the RPAs of these trees and hedgerows. These will need to be retained as their stems are located outside of and/ or on the Site's redline boundary, therefore they are likely to be either be under the ownership of adjacent landowners or will be under shared legal ownership between the adjacent land holders and the Site owner; T27: The ground level is proposed to be increased by up to 1m within the RPA of this tree. If the design can be changed so that there are no level changes within this tree's RPA then there would no impact on the tree and the tree can be retained. If levels have to be increased, it is feasible to do so by the use of three-dimensional geogrids such as Cellweb to increase levels within the RPA without significantly impacting on the tree's gas diffusion process and the levels of rainfall reaching the tree's roots. This would also prevent excessive compaction of the underlying soil, thus enabling the tree to be retained. Levels wouldn't be able to be increased right up the tree's stem, however with the use of a tree well and Cellweb it if feasible to retain this tree and increase ground levels. If this was the case, the	engineered ground level changes undertaken with the use of three-dimensional geogrids and the possible use of a tree wells, is not feasible, then these two trees would have to be removed and the Tree Protection Plan updated accordingly.	

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		impact on the tree would be considered to be low whilst levels are increased by the use of three-dimensional geogrid and the use of a tree well. If ground level changes, whether it is an increase or decrease, the impact on the affected trees and hedgerows is likely to be very high, causing the failure or loss of the trees and/ or hedgerows. However, if the levels don't change within their RPAs, there will be no impact. If a level increase is achieved within the RPAs of trees by the use of stacked three-dimensional geogrids charged with clean angular 20—40mm aggregate, topped with a geotextile and then topsoil, then the impact on the trees should be low.		
T62, T63, T68, T70, T71, G58, G61, G62, H32, H33, H34, H37, H38, H39, H41,	Boundary treatments within retained trees and hedgerows RPAs	<u>Low/ High Impact</u> Fences and/ or walls are proposed within the RPAs of a number of trees. If walls are constructed within RPAs, the potential impact of this would be very high due to foundations required. However, if the fences, subject to a being installed in accordance with a methodology detailed in an Arboricultural Method Statement, then the impact on the trees and hedgerows would be low.	Boundary walls shall not to be installed within retained trees and hedgerows RPAs. If unavoidable, the trees may have to be removed to enable the walls to be built. If fencing is to be installed within retained tress and hedgerows RPAs, the installation will have to accord with an Arboricultural Method Statement methodology. An Arboricultural Method Statement can be conditioned as a pre-commencement condition by the LPA.	**B**, C
W1a, W1b	Development in proximity to Ancient Woodland	<u>Low-Moderate Impact</u> The Outline part of the application is approved, a Reserved Matter application for residential	Recommend planting up buffer zone with scrub and occasional trees to provide a noise and lighting screen between residential areas and the Ancient Woodland, where feasible. This planted buffer zone, if planted	

Table 3: Overview of Arboricultural Impacts and Proposed Mitigation				
Tree/ Group No.	**Proposed Works**	**Impact**	**Mitigation/Compensation**	**BS 5837 Quality Categorisation**
		development will be submitted to the LPA in due course. Part of the land allocated for residential development is located to the west and south of the Ancient Woodland. A 15m buffer zone required by the Governments Standing Advice '*Ancient woodland, ancient trees and veteran trees: advice for making planning decisions*' has been applied to the Ancient Woodland Ref W1a and W1b. This buffer zone is applied from the actual canopy edge of the woodland and not any on the ground features that may demarcate the Ancient Woodland boundary. Doing this actually is likely to increase the width of the buffer zone from the standard required 15m width. The impact of providing footway links through the Ancient Woodland, has to be tempered against the need to provide green pedestrian links and the actual wellbeing benefits of people having access to woodlands. This is beyond the scope of BS 5837 based AIA report. Thus the pros and cons of the footways within the Ancient Woodland need to be considered by the LPA.	with thorny shrubs and trees will also help deter persons from entering the Ancient Woodland, apart from where footways, whether informal bark covered paths or hard surfaced paths traverse through the woodland. Planting can be conditioned by the LPA.	

5 SUMMARY AND RECOMMENDATIONS

5.1.1 The requirements of BS 5837:2012 have been complied with during the initial tree survey and subsequently in assessing the arboricultural impacts arising from the proposed commercial and residential development in this report.

5.1.2 There are no veteran or ancient trees on or immediately adjacent to the Site listed on the Ancient Tree Inventory, which was confirmed by the Site survey. Some of the older trees may become veterans over time.

5.1.3 According to the Council's website, woodland W1b (WA Ref.) appears to be protected by TPO. This woodland and also woodland W1a are considered to be Ancient Woodland due to the presence of sufficient indicator species, despite not being listed on the Ancient Woodland Inventory. Both W1a and W1b are to be retained and are afforded a buffer zone of at least 15m as required by Government guidance. Footways and surface water drainage connections to a stream within the Ancient Woodland are proposed. Mitigation measures are proposed to minimise the impact on both Ancient Woodlands.

5.1.4 The proposed development will have a high impact on local amenity due to the number of trees and hedgerows required to be removed to enable the development to proceed. Therefore, adequate compensatory tree and hedgerow planting will be required. We have recommended design changes to enable more trees and hedgerows to be retained, however enabling more tree retention and hedgerow retention may not be feasible due to technical matters. The table in section 3 of the report describes all potential arboricultural impacts and proposes potential design change recommendations, mitigation measures to be taken and compensation for trees and hedgerows lost to the development. If the development layout is amended or even if not amended and the application subsequently receives consent, it is recommended that that an Arboricultural Method Statement and updated Tree Protection Plan are conditioned as a pre-commencement condition to enable any changes to be accommodated on the Tree Protection Plan and to ensure that proposed mitigation works are fully specified.

5.1.5 The trees and hedgerows that are to be retained on the Site will be protected during the proposed works with tree protection fencing. Unless otherwise stated in an Arboricultural Method Statement (AMS), the protective fencing will comprise the default Heras fence as described in BS 5837:2012. An example of this is included at Appendix 6, with the location of the protective barrier shown on the Tree Protection Plan LD10361-030 Rev. A. Signage on the fencing will also be required and an example of this is included in Appendix 7.

5.1.6 Given the scale of the proposed development and the tree stock present an Arboricultural Method Statement and an updated Tree Protection Plan are likely to be required by the LPA prior to commencement of the proposed development, to ensure tree and hedgerow protection measures are fully specified and implemented. This can be conditioned by the LPA, if required.

6 REFERENCES

- British Standard, BS 3998:2010 Tree work. Recommendations. (The British Standards Institution, 2010).
- British Standard, BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. (The British Standards Institution, 2012).
- NJUG Volume 4 - Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (Issue 2:16th November 2007).
- Quantified Tree Risk Assessment User Manual, (QTRA User_Manual_V5.1.4_ 2015_01). (Incorporating extracts).
- Ministry of Housing, Communities and Local Government (2014) Tree Preservation Orders and Trees in Conservation Areas. https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas
- Forestry Commission (2007) Tree Felling – Getting Permission.
- Claus Mattheck (2007) Updated field guide for Visual Tree Assessment.
- Forestry Commission & Natural England (Updated 14th January 2022) Ancient Woodland and Veteran Trees: Protecting them from Development – Guidance. https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences#veteran-trees

Appendix 1

Tree Survey Schedule

Location: Barnsley West **(Job. No.** LD10361**)**

Estimated Stem Diameters & Other Measurements highlighted in this colour

Surveyor: Mark Levitt**,** Alan Reid

Weather: Sunny with cloud and rain at times.

Survey Date: 22-25.05.2023; 06.06.2023; 26-29.06.2023; 11.07.2023 (Alan Reid)

					Crown Spread (m)												Condition						
Item type: T (tree), **G** (group), **H** (hedge), **W** (woodland)	**Tree/ Group Ref. No.**	**Common Name**	**Height(m)**	**Crown Clearance (m) & compass direction**	**North**	**East**	**South**	**West**	**Stem Diameter @ 1.5m (mm)**					**Number of stems**	**Age Class: Y** (Young), **SM** (Semi-Mature), **EM** (Early-Mature), **M** (Mature), **LM** (Late-mature), **V** (Veteran)	**Physiological Condition: G** (Good), **F** (Fair), **P** (Poor), **D** (Dead)	**Structural Condition: G** (Good), **F** (Fair), **P** (Poor)	**Estimated Remaining Contribution: (<10, 10+, 20+, 40+)**	**BS5837 Categorisation Grading**	**Sub Category**	**Comments**	**Preliminary management recommendations/ further works**	**Bat potential: L (Likely) U (Unlikely)**	**BS 5837 Root Protection Area (m²)**	**BS 5837 Root Protection Radius (m)**	**Veteran Tree Root Protection Radius (m)**
T	1	Common Hawthorn	3.3	0 W	2.2	1 5	2	1.7	100	90				2	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted due to low canopy around tree and scrub at east, limiting detailed measurements.	None required.	U	8.2	1.6	N/A
T	2	Common Alder	2.9	0.7 E	1.6	2	1.1	1.8	150					1	EM	P	F	<10	U		Very poor physiological condition, dead branches, some regrowth up main stem. Access restricted due to location within scrub, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	3	Common Hawthorn	3	0 E	2.4	2	2	1.3	90	50	50			3	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Rooted directly adjacent west of barbed wire fence. Access restricted, limiting detailed measurements.	None required.	U	5.9	1.4	N/A
T	4	Common Hawthorn	2.6	0 W	1.5	1 8	1.8	1.7	70					6	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	13	2.1	N/A
T	5	Common Hawthorn	3	1.2 W	1.4	1 5	1.2	2.2	120					1	SM	G	F	40+	C	1	Dog rose growing up around tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	6.5	1.4	N/A
T	6	Common Hawthorn	2.9	0 W	2	1 3	1.8	1.5	150					1	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	7	Common Hawthorn	2	0.1 W	1.7	1.1	1.6	0.9	75					1	SM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	2.5	0.9	N/A
T	8	Common Hawthorn	3.7	0.1 E	2.2	1.7	1.9	1.2	90	80	70	70		4	SM	G	F	40+	C	1	Small, multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	11	1.9	N/A
T	9	Common Ash	5.5	1 NE	1.8	2.1	2.1	2.1	130					1	Y	G	G	20+	C	1	Very minor dieback, likely caused by ash dieback disease. Small, single-stemmed tree. Access restricted, limiting detailed measurements.	None required.	U	7.6	1.6	N/A
T	10	Common Hawthorn	2.9	0.1 W	2.2	2 5	2	2.5	50	60	50	40	60	5	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	6.2	1.4	N/A
T	11	Sycamore	6.1	0.5 N	2.6	5 3	7	4.9	300					1	SM	G	F	40+	C	1	Excellent vitality. Stem obscured by vegetation and scrub mass. Access restricted, limiting detailed measurements.	None required.	U	41	3.6	N/A
T	12	Common Hawthorn	5.5	0.5 NW	2.5	1 9	2.5	2	120	110	130	150		4	M	G	F	40+	B	1,3	Multi-stemmed upright, medium-sized specimen. Excellent vitality. Between stile and access track, directly adjacent to west of barbed wire fence and track entrance gate post. Access restricted, limiting detailed measurements.	None required.	U	30	3.1	N/A
T	13	Common Hawthorn	2.8	0.2 S	2.5	2.4	2.1	3	100					6	EM	G	F	40+	C	1	Third party small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	27	2.9	N/A
T	14	Common Hawthorn	2.6	0 N	1.9	2.1	1.9	1.9	95	100				2	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	8.6	1.7	N/A
T	15	Common Hawthorn	1.9	0 E	2.1	2 2	1.7	1.4	80					6	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. On field boundary line adjacent to east of boundary fencing. Access restricted, limiting detailed measurements.	None required.	U	17	2.4	N/A
T	16	Common Hawthorn	2.4	0 NW	1.6	1.6	1.6	1.3	70	85				2	EM	G	F	40+	C	1	Small multi-stemmed tree. Access restricted, limiting detailed measurements.	None required.	U	5.5	1.3	N/A

T	17	Common Hawthorn	3	0 NW	1.3	1 3	1.3	0.9	95	80				2	EM	G	F	40+	C	1	Small multi-stemmed tree. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	7.0	1.5	N/A
T	18	Common Oak	5.8	2.3 NW	3.3	3 8	4	3.5	300					1	EM	F	F	40+	C	1,2	Hedgerow tree, minor dieback otherwise healthy. Ivy dense on stem and into lower part of crown. Brash deposited at base on field side, likely some weight due to large earth clods and fence posts also deposited within brash pile, therefore likely some underlying soil compaction within rooting zone. Access restricted, limiting detailed measurements.	None required to tree. Remove deposited brash, earth and fence posts etc. from rooting zone within 12 months, to prevent any further ground compaction.	U	41	3.6	N/A
T	19	Sycamore	6	0 N	3.5	3 2	3.2	3.5	350					1	EM	F	F	20+	C	1,2	Roadside hedgerow tree. Access restricted, limiting detailed measurements.	None required.	U	55	4.2	N/A
T	20	Common Oak	11.8	1.5 N	7.4	7 3	5.5	6.8	1000					1	M	F	F	20+	B	2,3	Roadside tree. Dieback evident in crown. Small cavity at east at approx. 8 to 9m on main stem /leader, also decaying lost branch wound on branch just below and to north of this - bat potential. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within one year.	L	452	12 0	N/A
T	21	Common Oak	6	1.7 N	6.3	3.6	3.7	5.5	350					1	EM	G	G	40+	B	1,2	Single-stemmed hedgerow tree, field boundary location overhanging road at south. Minor dieback, good vitality otherwise. Access restricted, limiting detailed measurements.	None required.	U	55	4.2	N/A
T	22	Common Oak	12.6	2.6 E	6.6	7	5.8	6.7	900					1	M	G	G	40+	A	1,3	Large mature specimen, with a wide spreading canopy. Overhanging road at south but not to building. Excellent vitality. Minor dieback, shaded out deadwood in lower canopy. Decaying torn out small branch stubs at south at approx. 3m, water pocket above this, other cavities within lost branch sockets potentially. Wound in underside of branch over road, large vehicle damage likely. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within one year.	L	366	10 8	N/A
T	23	Common Hawthorn	3.9	1.8 NW	2.1	1 3	1.7	1.7	200					1	EM	P	F	10+	C	1	Small garden tree. Dieback extensive. Access restricted, limiting detailed measurements.	None required.	U	18	2.4	N/A
T	24	Hybrid Black Poplar	10.6	1.5 NW	4	3.1	4.2	3.8	320					1	EM	G	G	40+	B	1	Upright, single-stemmed tree. Good vitality, minor dieback noted. Ivy on stem. Access restricted, limiting detailed measurements.	None required.	U	46	3.8	N/A
T	25	Common Oak	15.3	1 2 NE	7	8 2	9	8.5	1000					1	M	G	G	40+	A	1,2,3	Field boundary tree. Large, mature specimen, with rounded canopy weighted north over road forming arch with group at south, excellent vitality. Decaying c. 1.5m long branch stub, previously reduced, at north, at approx. 3m from ground level. Access restricted, limiting detailed measurements.	None required.	L	452	12 0	N/A
T	26	Common Ash	4.1	1 E	1.5	2.1	1.8	2	220					1	EM	F	F	10+	C	1	Small upright tree within concrete blocks and wooden palettes. Failed leader, regrowth and foliage on lower branches mostly healthy, some dieback evident likely indicative of Ash Dieback Disease. Access restricted, limiting detailed measurements.	None required.	U	22	2.6	N/A
T	27	Common Oak	11.1	1.8 SE	6.1	6 2	6.5	6.5	1000					1	M	F	F	40+	B	3	Open grown field tree. Browsing damage and wounding on stem. Deadwood, decay cavities in crown, habitat value and bat roosting potential. Canopy some dieback but overall fairly healthy. Access restricted, limiting detailed measurements.	If land use intensifies within falling distance of tree re-inspect for safety/risk management purposes prior to intensification.	L	452	12 0	N/A
T	28	Sycamore	10.5	1.5 W	4.5	4 5	4.5	4.5	300	400				2	EM	G	F	40+	B	1	Field tree close to woodland edge. Good vitality, growing in bank at least partly rooted within waterlogged area. Access restricted, limiting detailed measurements.	None required.	U	113	6.0	N/A
T	29	Common or Black Elder	3.5	0.5 N	2	2	2	2	250					1	EM	P	P	<10	U		Multi-stemmed, small tree. Dieback extensive. Access restricted, limiting detailed measurements.	None required, as low risk due to small size.	U	28	3.0	N/A

T	30	Common Hawthorn	4	0 E	2.5	2 5	2.5	2.5	250					1	EM	F	F	40+	C	1	Small multi-stemmed tree, good vitality, minor dieback. Access restricted, limiting detailed measurements.	None required.	U	28	3.0	N/A
T	31	Common Ash	15.2	1.7 S	7.9	8 5	8	5.9	750					1	M	F	F	20+	B	2	Dieback evident, extensive at branch tips, canopy overall less than 30% estimated dieback. Former hedgerow tree. Access restricted, limiting detailed measurements.	Re-inspect for deterioration due to Ash Dieback Disease within 2 years. Note, inspections for Ash Dieback Disease are to be carried out during the summer months when the tree is in leaf.	L	254	9.0	N/A
T	32	Bay Laurel	3.6	1.7 SW	1.5	1 5	1.5	1.5	300					1	M	G	F	40+	C	1	Mature, garden specimen. Excellent vitality. Access restricted, limiting detailed measurements.	None required.	U	41	3.6	N/A
T	33	Sycamore	9.3	2.2 W	4	4 5	4.6	4.6	400					1	EM	G	F	40+	B	1	Third party garden tree, overhanging site at west. Good form, health and vigour. Access restricted, limiting detailed measurements.	None required.	U	72	4.8	N/A
T	34	Sycamore	4.1	1.8 W	1.5	2 5	1.3	2.6	150					1	EM	G	G	40+	C	1	Small boundary tree, site side of garden fencing. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	35	Sycamore	5.7	3 2	1.1	1 5	1.6	2	150					1	EM	G	G	40+	C	1	Small boundary tree. Site side of garden boundary fencing. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	36	Common Hawthorn	2.4	1 SW	0.5	0 5	2.3	1.7	95					1	SM	G	F	40+	C	1	Small boundary tree. Site side of garden boundary fence. Lean to south. Access restricted, limiting detailed measurements.	None required.	U	4.1	1.1	N/A
T	37	Common Ash	2.6	0 W	0.8	2.1	2	0.6	80	70	60			3	EM	F	P	<10	U		Small ash with failed stems and dieback. Access restricted, limiting detailed measurements.	None required, as low risk due to small size.	U	6.7	1.5	N/A
T	38	Common Hawthorn	2	0 SW	1.1	2	1.5	1	75					1	SM	G	F	40+	C	1	Very small tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	2.5	0.9	N/A
T	39	Common Hawthorn	2.7	0 N	2.2	2 5	2.1	2	200					1	EM	G	G	40+	C	1	Small hawthorn, low canopy, estimated to be single stemmed to above breast height. Access restricted, limiting detailed measurements.	None required.	U	18	2.4	N/A
T	40	Norway Spruce	5.3	1.6 W	3.6	3	2.5	3	400					1	EM	G	G	40+	C	1	Third party garden tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	72	4.8	N/A
T	41	Wild Cherry	3.8	0.3 W	1.8	1 5	3.6	2.3	150					1	EM	F	F	10+	C	1	Flailed on site side, remaining branches with healthy foliage, also fruiting. On boundary, likely third party tree. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	42	Common or Black Elder	2.9	0.2 NW	1.8	2 9	3	2.7	110					7	M	G	F	20+	C	1	Garden boundary, multi-stemmed tree. Access restricted, limiting detailed measurements.	None required.	U	38	3.5	N/A
T	43	Common Hawthorn	4.5	0 N	2.8	3	3	2.3	130					6	M	G	F	40+	C	1	Third party garden tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	46	3.8	N/A
T	44	Common Beech	1.1	0 SW	0.5	0 8	8	1.2	1200					1	M	D	P	N/A	U		Fallen stem. Lying on side. Reduced to c. 8m. Large stem offcut adjacent exposed root flare. Access restricted, limiting detailed measurements.	Retain if possible for habitat value.	U	651	14.4	N/A

T	45	Common Beech	20.1	1.5 W	7.6	8	12	8.5	1140					1	M	G	G	40+	A	1,2,3	Large mature specimen. Ground compacted around base but good vitality . To south failed fallen stem of tree with stem diameter similar size, roots may have rotted due to poor rooting conditions (compaction likely a factor). Small wound in main stem at west at approx. 1m - small decay cavity developed, wound partially occluded. Could be cavities in high crown, possible bat potential due to age and size. Clear stem to approx. 9m at southeast, canopy around tree on all other sides. Growing on sloping ground at edge of field containing Shetland ponies. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within one year due to proximity to public footpath to southwest of tree. As part of inspection, undertake airspade excavation of soil around the rooting area to assess the condition of the buttress roots and to decompact the surrounding compacted soil	L	588	13.7	N/A
T	46	Common Hawthorn	4.1	0.1 E	2.2	2	1.7	1.7	60	60	60			3	EM	G	F	40+	C	1	Small multi-stemmed tree, good vitality. Access restricted, limiting detailed measurements.	None required.	U	4.9	1.2	N/A
T	47	Common Hawthorn	8.5	1.5 W	3.8	4	2.8	4.8	200					6	M	G	F	40+	B	3	Mature, characterful specimen. Habitat value. On compacted slope. Access restricted, limiting detailed measurements.	None required.	U	109	5.9	N/A
T	48	Common Beech	15	1.2 W	8.5	8	5	5.8	1200					1	M	G	F	40+	B	2,3	Large, mature specimen. Large cavity at base at east from ground to c. 2.5m with two openings. Also at c 5-9m up eastern side of main stem which curves over to west. Bat potential, although likely open to rain at least higher section. Habitat value. Several public footpaths are within falling distance to the west of the tree. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within 6 months to assess the level of risk to footpath users.	L	651	14.4	N/A
T	49	Common Oak	15.2	0.5 SE	8	9	13.4	9	960					1	M	G	F	40+	A	1,2,3	Large, mature specimen. Good vitality. Twin-stemmed from approx. 2.2m. Stem wound with decay in main stem at base at west, likely as a result of browsing damage. Rounded, wide-spreading crown. PRoW located within falling distance of tree. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within one year to assess the level of risk to footpath users.	L	417	11 5	N/A
T	50	Common Hawthorn	3.2	1.1 W	2.3	2 5	2.1	2.3	70					10	EM	G	F	40+	C	1	Small multi-stemmed tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	22	2.7	N/A
T	51	Common Hawthorn	3.9	0.5 W	3	3	2.4	2.7	100					10	EM	G	F	40+	C	1	Small multi-stemmed tree. Good vitality. Access restricted, limiting detailed measurements.Topo symbol location not accurate - tree straddles boundary fence line, plotted using Geode sub metre GPS onsite during survey.	None required.	U	45	3.8	N/A
T	52	Common Hawthorn	3.5	0.3 W	1.5	2	1.5	1.1	100	95	80	75		4	EM	G	F	40+	C	1	Small multi-stemmed tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	14	2.1	N/A
T	53	Common Hawthorn	5.2	1.2 W	3	3	1.5	2	95					6	M	G	F	40+	C	1	Upright, multi-stemmed quite tall specimen for the species, on boundary. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	24	2.8	N/A
T	54	Crab Apple	8.7	1.1 SW	6.5	7	7	6.3	240	590				2	M	F	F	40+	B	3	Mature, twin-stemmed tree. Fruiting. Minor dieback. Shade deadwood. Browsing damage around base. Access restricted, limiting detailed measurements.	None required.	U	184	7.6	N/A

T	55	Common Ash	16	4 SW	9	7	8.7	6.4	650	450				2	M	G	F	40+	A	1,2,3	Third party, large tree. Very good condition, showing only very minor signs of dieback. Some shade deadwood over gardens and site. Access restricted, limiting detailed measurements. Plotted using sub metre GPS, beyond boundary fencing on site.	Re-inspect for deterioration due to Ash Dieback Disease if land use intensifies near tree. Note, inspections for Ash Dieback Disease are to be carried out during the summer months when the tree is in leaf. Inspection will be required to be carried out from within the site.	L	283	9.5	N/A
T	56	Common Ash	9.6	1.4 SE	6	6	2.6	3	180	190	250	250	250	5	EM	G	F	10+	C	1	Regrowth from large previously reduced stem or stems. Slender leaning stems to north over gardens. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within one year due to location and leaning stems over gardens.	U	116	6.1	N/A
T	57	Apple	5.5	1.1	5	2 8	1.6	0.7	300					1	EM	D	P	N/A	U		Standing dead tree. Leaning north over garden. Access restricted, limiting detailed measurements.	If tree is within site, remove within 3 months. If outside boundary, advise notifying tree owner that the tree is a potential hazard.	U	41	3.6	N/A
T	58	Common Oak	7.4	1.5 S	7	6 5	6.5	4.2	550					1	EM	G	G	40+	B	1	Third party, medium-sized tree. Previously reduced. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	137	6.6	N/A
T	59	Common Elder	5.9	0 SE	2	2	2	2	95					6	M	G	F	40+	C	1	Large, mature specimen. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	24	2.8	N/A
T	60	Common Oak	7.2	1.1	7	5 2	4.6	5.1	500					1	EM	G	G	40+	B	1,2	Boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	113	6.0	N/A
T	61	Common Oak	8.2	2.5 W	8	6 3	7.9	6.4	650					1	EM	G	G	40+	B	1,2	Boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	191	7.8	N/A
T	62	Common Hawthorn	5	0.2 E	2	2 5	1.8	1.5	95	80	85			3	EM	F	F	40+	C	1	Boundary tree. Multi-stemmed. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	63	Common Hazel	3.5	0.8 E	2.1	2.1	1.5	1.5	80	75	90	75	80	5	EM	G	F	40+	C	1	Third party. Small multi-stemmed tree overhanging site by approx. 1.5m. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	15	2.2	N/A
T	64	Unknown	4.4	0 8 NE	2.8	3	2.8	3	250	150	200	90	100	5	EM	G	F	40+	C	1	Third party. Garden tree overhanging site by approx. 1 5m. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	65	4.5	N/A
T	65	Wild Cherry	6.1	0 3 NE	2.7	2.6	2.1	2.5	150					1	EM	G	F	40+	C	1	Small boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	66	Wild Cherry	2.9	1 E	2.5	2 2	2	2.3	95	95				2	EM	G	F	40+	C	1	Small boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	8.2	1.6	N/A
T	67	Common Hawthorn	3.1	0.5 E	2	2	2	2.5	95					6	EM	G	F	40+	C	1	Third party. Small multi-stemmed tree. Access restricted, limiting detailed measurements.	None required.	U	24	2.8	N/A
T	68	Sycamore	5.7	1.7	2	3	2.1	3	320					1	EM	G	G	40+	B	1	Third party garden tree. Access restricted, limiting detailed measurements.	None required.	U	46	3.8	N/A

T	69	Apple	2.9	1.4 E	1.5	1 5	1.4	1.5	75					6	EM	G	F	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	15	2.2	N/A
T	70	Spruce	4	0.4 E	0.9	1 5	0.9	1.4	200					1	EM	G	G	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	18	2.4	N/A
T	71	Goat Willow	8.7	0.6 E	5	4 5	5	5.5	300	400				2	EM	G	F	40+	B	2	Third party garden boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	113	6.0	N/A
T	72	Crab Apple	4.7	1.4 E	2.2	2 5	2.6	2.5	150	200	100	150		4	EM	G	F	40+	C	1	Third party garden tree. Access restricted, limiting detailed measurements.	None required.	U	43	3.7	N/A
T	73	Purple Maple	5.1	2.3 E	2.5	2 5	3.1	3.5	250					1	EM	G	F	40+	C	1	Third party garden tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	28	3.0	N/A
T	74	Apple	3.2	1 5	1.9	1 9	1.9	2	100	150	150			3	EM	G	F	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	25	2.8	N/A
T	75	Silver Birch	8.5	2 E	4.2	3 3	3.9	4	290					1	EM	G	F	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	38	3.5	N/A
T	76	Grey Willow	6.8	2.2 E	3.1	3.7	3	3.5	300					1	EM	P	F	10+	C	1	Third party small garden boundary tree. Dieback of majority of crown. Access restricted, limiting detailed measurements.	N/A as outside site boundary	U	41	3.6	N/A
T	77	Common Horse Chestnut	6.2	1.5 E	3.1	2.6	2.8	3	250					1	EM	G	G	40+	C	1	Third party garden boundary. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	28	3.0	N/A
T	78	Common Hawthorn	4.1	0.4 E	2.4	2 2	2.4	2.5	108	150	130			3	EM	G	F	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	23	2.7	N/A
T	79	Common Horse Chestnut	4.8	1.5 E	4	2	1.6	4	150					1	EM	G	G	40+	C	1	Third party garden boundary tree. Access restricted, limiting detailed measurements.	None required.	U	10	1.8	N/A
T	80	Goat Willow	9.1	0.2 E	6.5	6	4.8	6	300	300	400	400		4	M	G	F	40+	B	2	Rounded, multi-stemmed form. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	226	8.5	N/A
T	81	Plum	2.3	0 SE	2	2 3	1.9	1.3	140					1	EM	G	F	40+	C	1	Small multi-stemmed tree. Access restricted, limiting detailed measurements.	None required.	U	8.9	1.7	N/A
T	82	Mountain Ash	3.5	2 E	1.8	2 2	1.5	1	120	100	100			3	EM	G	F	20+	C	1	Small multi-stemmed boundary tree. Access restricted, limiting detailed measurements.	None required.	U	16	2.2	N/A
T	83	Common Hawthorn	6	0 E	2.2	2 5	2.2	2.5	300	250				2	EM	G	F	40+	B	2	Boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	69	4.7	N/A
T	84	Common Hawthorn	7.5	1.1 E	4.2	4 3	3.7	4.5	100					6	M	G	F	40+	B	2	Garden boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	27	2.9	N/A
T	85	Common Ash	13	3.5 E	7.3	12.8	8.6	8.3	600	600				2	M	F	F	20+	B	3	Large mature specimen. Dead limb at northwest over third party land. Majority of canopy good vitality. Twin stemmed, leaning stems. Access restricted, limiting detailed measurements.	If tree is within site boundary, remove dead limb over third party land within 12 months. Note permission to access third party land may be required to undertake the work.	L	326	10 2	N/A
T	86	Sycamore	2.2	0 W	1.5	1	1.5	1.5	50	50	50			3	EM	G	F	40+	C	1	Third party. Small field boundary tree. Access restricted, limiting detailed measurements.	None required.	U	3.4	1.0	N/A
T	87	Common Hawthorn	9.1	0 W	4.3	4	2.9	4	400	300				2	M	G	F	40+	B	3	Field boundary tree, good vitality. Access restricted, limiting detailed measurements.	None required.	U	113	6.0	N/A
T	88	Common Ash	9	0.3 E	4.5	4	4.5	4.5	110					6	EM	G	F	20+	C	1	Third party field boundary tree. Minor dieback. Access restricted, limiting detailed measurements.	None required.	U	33	3.2	N/A

T	89	Common Ash	10.2	0.2 W	4.22	4.7	4.62	4.4	420					1	EM	F	F	40+	C	1	Field boundary, likely outgrown former hedgerow tree. Dieback, likely due to Ash Dieback Disease, evident across outer crown, however less than 25% overall. Access to stem restricted by low branches limiting detailed measurement.	Re-inspect for deterioration due to Ash Dieback Disease if land use intensifies near the tree, prior to land use intensification. Note, inspections for Ash Dieback Disease are to be carried out during the summer months when the tree is in leaf.	U	80	5.0	N/A
T	90	Common Ash	13.4	2.9 SW	5.9	7 9	7.8	6.8	820					1	M	F	F	20+	B	3;2	Large, mature specimen. Cavities developing at base and in stems and branches - bat potential likely. Orange fungal fruiting body on stem at north at approx. 5m - likely to be Inonotus hispidus, a decay fungus. Dieback evident in crown, particularly at north - overall approx. 25%. View of stem base partially obscured by small multi-stemmed elder.	If land use intensifies near the tree, undertake decay detection to quantify decay and thus to determine the tree's risk of failure, to be done prior to land use intensification.	L	304	9.8	N/A
T	91	Common Ash	12.8	1.7 N	7.6	7 8	6.9	7.4	550	600				2	M	F	F	20+	B	1,2,3	Large prominent, field boundary tree. Minor dieback evident. Canopy thinning at north. Inonotus fungal fruiting body bracket under eastern stem near to the ground. This indicates decay within the stem and resulting reduced structural integrity. Evidence of decay on the stem visible from the bracket upwards for approx. 1.5-2m, with remains of other brackets visible on this discoloured area. There is also a dead branch up and to the east, attached to this stem overhanging the hedge at approx. 2 to 2.5m from the ground. Bat roosting potential . Access restricted limiting detailed measurements.	Re-inspect for safety/risk management purposes prior to land use intensification within falling distance of tree.	L	300	9.8	N/A
T	92	Common Ash	13.7	0 SE	3.9	5.22	4.7	5.5	280					1	EM	F	F	20+	B	2	Prominent tree between site and motorway, canopy touching motorway sign. Dieback evident, particularly at south and in lower canopy. Access restricted, limiting detailed measurements.	Inspect for progression of Aah Dieback Disease, prior to land use intensification near the tree,	U	35	3.4	N/A
T	93	Common Ash	9.2	1.5 W	3.9	5	5.8	5.5	300	220	90			3	EM	F	F	10+	C	1	Third party field boundary tree, between site and motorway. Dieback evident, estimated at 20% of canopy. Access restricted, limiting detailed measurements.	Inspect for progression of Aah Dieback Disease, prior to land use intensification near the tree,	U	66	4.6	N/A
T	94	Common Ash	8.3	0.2 SE	4	5 8	5.3	5.5	350					1	EM	F	F	20+	C	1	Third party tree between site and motorway. Dieback (25%) evident throughout crown on eastern side.Access restricted, limiting detailed measurements.	Inspect for progression of Aah Dieback Disease, prior to land use intensification near the tree,	U	55	4.2	N/A

T	95	Common Ash	10.9	2.3 W	5.2	6 5	6.4	6	600					1	M	F	F	40+	B	1,2,3	Large spreading canopy. Dieback at east. Shade deadwood. Access restricted, limiting detailed measurements.	Inspect for progression of Aah Dieback Disease, prior to land use intensification near the tree,	L	163	7.2	N/A
T	96	Common Hawthorn	8.5	2 NE	3.82	4.32	5.02	2.62	290					1	M	G	F	40+	B	3	Single stemmed, browsing and rubbing damage (horse hairs visible). Wounds at west of main stem small cavities developing. Habitat and conservation value. Western end tree of outgrown hedgerow.	None required.	L	38	3.5	N/A
T	97	Common Hawthorn	7.2	0.5 N	3.8	4.21	4	3.5	150					6	M	G	F	40+	B	3	Mature, multi-stemmed specimen, browsing damage on stems. Habitat and conservation value.Access restricted, limiting detailed measurements.	None required.	U	61	4.4	N/A
T	98	Common Hawthorn	2.6	0.5 N	1.1	1.6	1.2	1.6	60	70	75			3	EM	G	G	40+	C	1	Small multi-stemmed tree. Access to stems restricted by low canopy, limiting detailed measurements.	None required.	U	6.4	1.4	N/A
T	99	Common Hawthorn	3	0.5 N	1.5	2	2	1.5	80					6	EM	F	F	20+	C	1	Third party boundary tree. Access restricted, limiting detailed measurements.	None required.	U	17	2.4	N/A
T	100	Common Hawthorn	4.6	0 N	2.3	2	2.5	2.5	90	95				2	EM	G	F	40+	C	1	Third party boundary tree. Access restricted, limiting detailed measurements.	None required.	U	7.7	1.6	N/A
T	101	Sessile Oak	8.2	2 3	5	4.6	5	4.4	190	300	290			3	EM	G	F	40+	B	1,2	Third party boundary tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	95	5.5	N/A
T	102	Common Ash	15.2	3.7 SE	10	10	8	5.7	1500					1	M	F	F	20+	B	2,3	Large, prominent tree. Twin stems topped at approx. 5-6m, union at approx. 3.5m. Wound below this at west with decay pocket, partially occluded. Regrowth from topping points created new canopy - wide spreading, generally good vitality, minor dieback visible. Habitat value, due to age and size possible bat potential. Access restricted, limiting detailed measurements.	Re-inspect for safety/risk management purposes within 2 years, inspecting structural integrity of pollard points.	L	707	15 0	N/A
T	103	Apple	3	1.4 W	2	2	2	1.7	90	90				2	EM	G	G	40+	C	1	Third party small ornamental tree.Access restricted limiting detailed measurements.	None required.	U	7.3	1.5	N/A
T	104	Sargent Cherry	4.7	2 S	2.5	2 5	2.5	1	95	90	90			3	EM	F	F	20+	C	1	Third party small ornamental tree. Access restricted limiting detailed measurements.	None required.	U	11	1.9	N/A
T	105	Purple Maple	5.7	0.7 W	3.6	3 5	3.9	3.7	300					1	EM	G	G	40+	B	1,2	Third party garden tree. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	41	3.6	N/A
T	106	Mountain Ash	8.9	1.7 N	4	6	3.3	3.5	100					10	M	G	F	40+	B	2	Third party large multi-stemmed specimen. Good vitality. Access restricted, limiting detailed measurements.	None required.	U	45	3.8	N/A
T	107	Common Hawthorn	2.5	1.7 W	2.2	3 5	3.3	3.3	150	120				2	M	G	G	40+	C	1	Third party small multi-stemmed garden tree. Access restricted limiting detailed measurements.	None required.	U	17	2.3	N/A
T	108	Common Holly	4.1	0.6 W	2.8	3	3	3.5	250					1	M	G	F	40+	C	1	Third party small garden tree. Access restricted limiting detailed measurements.	None required.	U	28	3.0	N/A
T	109	Tibetan Cherry	6.4	2.8 W	4.1	3 5	3.6	2.8	300					1	M	G	F	20+	B	1	Tree with good vitality located in neighbouring residential property. Previously topped at approximately 4m from ground level with regrown crown. Tree does not appear on topographical survey plan, plotted using GPS.	None required.	No	41	3.6	N/A

T	110	Common Oak	12.5	1.8 N	9.3	9.1	9.3	7.9	760					1	M	F	F	40+	B	1,3	Hedgerow tree with average form and vitality. Large cavity in lower stem, open to south up to 2m from ground level. Significant amounts of medium sized deadwood up to 120mm diameter in centre of crown. Several small cavities and split bark in upper crown that may be suitable for bat roosting.	If land use intensifies within canopy area of tree, shorten deadwood to approximately 1m in length, prior to intensification.	Yes	261	9.1	N/A
T	111	Sessile Oak	11.8	2.3 S	7.4	8.4	9	9.1	690					1	M	G	G	40+	A	1	Hedgerow tree with good form and vitality. Deadwood up to 100mm diameter and 3m length in lower crown. Minor browsing damage to bark on lower stem.	If land use intensifies within crown spread, shorten deadwood to approximately 1m in length, prior to intensification.	No	215	8.3	N/A
T	112	Common Hawthorn	5.6	1.5 W	2.6	2 9	2.9	2.5	180	200	130			3	M	F	G	40+	C	1	Hedgerow remnant tree, separate from rest of current hedge. Minor dieback in upper crown. Dog rose colonising south of crown, restricting growth.	None required.	No	40	3.6	N/A
T	113	Elder	4.1	2.5 S	2	1.6	1.3	1.5	180					1	EM	G	F	20+	C	1	Tree immediately adjacent to site boundary. Crown previously raised to provide clearance from adjacent gate. Good vitality in upper crown. Ivy covering stem to 2.5m from ground level.	None required.	No	15	2.2	N/A
T	114	Common Hawthorn	3.3	1.6 N	3.2	1 5	1.2	1.5	120	120	200			3	EM	F	F	20+	C	1	Tree located in neighbouring residential property with ivy significantly colonising crown, restricting growth. Previously topped at approximately 3m from ground level with minor regrowth visible.	None required.	No	31	3.1	N/A
T	115	Sycamore	3.9	1.4 W	2.1	2 5	2.1	2.6	450					1	M	F	F	20+	C	1	Tree located in adjacent residential property, previously topped at approximately 2.5m from ground level. Dense regrowth.	None required.	No	92	5.4	N/A
T	116	Common Hawthorn	3.8	1.6 W	2.1	2	1.7	2	130					6	EM	F	F	20+	C	1	Multi stemmed tree located in neighbouring residential property. Previously topped at approximately 3m from ground level with significant regrowth. Ivy covering stem to 2m from ground level.	None required.	No	46	3.8	N/A
T	117	Common Hawthorn	4.8	1.4 W	2.3	3	2.9	3.1	300					1	M	G	F	40+	C	1	Tree with good vitality immediately adjacent to site boundary fence. Previously topped, regrowth is dense and extensive.	None required.	No	41	3.6	N/A
T	118	Common Hawthorn	5.3	1.3 W	2.1	2 5	2.8	3.2	280					1	M	G	F	40+	C	1	Tree with good vitality immediately adjacent to site boundary fence. Previously topped, regrowth is dense and extensive.	None required.	No	35	3.4	N/A
T	119	Apple	4.8	0.8 W	3.6	2	2.4	2.2	140	100				2	EM	G	G	40+	C	1	Tree located in neighbouring residential property. Good form, vitality and fruit production.	None required.	No	13	2.1	N/A
T	120	Common Ash	5.7	2.1 N	2.3	2	2.1	1.9	90	90				2	SM	G	G	40+	C	1	Small twin stemmed tree with good vitality located within hedge at site boundary.	None required.	No	7.3	1.5	N/A
T	121	Common Ash	9.5	2.8 S	7.6	3 5	4.7	5.4	300	240				2	EM	P	F	10+	C	1	Hedgerow tree with extensive dieback in upper crown, consistent with Ash Dieback Disease. Approximately 75% live crown remaining.	If land use intensifies within falling distance of tree, reduce tree to height of hedge (5m), prior to intensification.	No	67	4.6	N/A

T	122	Whitebeam	9	2.7 N	4.6	4 3	4	4.7	150					8	M	G	F	40+	B	1	Multi stemmed tree with good vitality located immediately adjacent to site boundary fence. Lower branches previously pruned to north for clearance from crop field. Foliage to ground level. Several tight unions observed but no incipient failure observed.	If land use intensifies within falling distance of tree, re-inspect for safety/risk management purposes, prior to intensification.	No	81	5.1	N/A
T	123	Common Hawthorn	4.2	2.9 N	2.8	3 3	2.5	3.2	110	100	70	70	70	5	M	F	F	20+	C	1	Multi stemmed tree on motorway embankment adjacent to site boundary fence. Lower branches previously pruned to north for clearance from newly installed fence. Average vitality in crown.	None required.	No	17	2.3	N/A
T	124	Common Ash	6.1	2.1 E	2.6	2 2	2	2.4	140					1	SM	F	F	20+	C	1	Unremarkable tree located off site on motorway embankment.	None required.	No	8.9	1.7	N/A
T	125	Common Hawthorn	7.4	2.1 E	34	4	3.9	3.7	400					1	M	G	G	40+	B	1	Tree within hedgerow significantly larger than rest of hedge. Good vitality in upper crown. Stem bifurcates at 1.6m from ground level with tight union , but equal sized stems so risk of failure appears low.	None required.	No	72	4.8	N/A
T	126	Sessile Oak	14.3	2.3 N	10.2	10.1	6.7	10	670	550				2	M	G	G	40+	A	1,2	Large twin stemmed tree adjacent to post and wire fence. Good form and vitality throughout crown. Medium deadwood in centre of crown up to 120mm diameter and 1.5m in length. Drainage channel approximately 2m to east of stem with surface roots along its course. Good example of species.	None required.	No	340	10.4	N/A
G	1	Ash	3.7	1 W	Plotted using GPS				75	90	100			3	EM	F	F	10+	C	2	Varying degrees of dieback from minimal to less than 25%. Small, single and multi-stemmed tree group between woodland blocks. Access restricted by ground vegetation, limiting detailed measurements.	None required.	U	RPA to edge of canopy.		N/A
G	2	Hawthorn, ash	4	0 W	Plotted using GPS				95					6	SM-EM	G	F	40+	C	2	Multi-stemmed hawthorn, excellent vitality. Small single-stemmed ash growing up through and adjacent north, minor dieback except at very north east. Access restricted due to low canopy, limiting detailed measurements.	None required.	U	RPA to edge of canopy.		N/A
G	3	Ash, hawthorn.	3	0 W	Plotted using GPS				70					6	Y-EM	G	F	40+	C	2	Small multi-stemmed trees. Hawthorn excellent vitality, ash minor dieback. Access restricted due to low canopy, limiting detailed measurements.	None required.	U	RPA to edge of canopy.		N/A
G	4	Hawthorn.	2.3	0 W	Plotted using GPS				100					1	EM	G	F	40+	C	2	Small trees. Excellent vitality. Stem diameter estimated due to low canopy.	None required.	U	RPA to edge of canopy.		N/A
G	5	Hawthorn	2.5	0 W	Plotted using GPS				150					1	EM	G	F	40+	C	2	Small hawthorns. Stem diameter estimated due to low canopies.	None required.	U	RPA to edge of canopy.		N/A
G	6	Sycamore, hawthorn.	7.3	0 S	Plotted using GPS				100	200	130	130		4	SM-EM	G	F	40+	C	1,2	Outgrown multi-stemmed former hedgerow trees. Excellent vitality. Adjacent and overhanging busy road at south of group. Stem diameter estimated due to location and low canopy.	None required.	U	RPA to edge of canopy.		N/A
G	7	Hawthorn	2.2	0 W	Plotted using GPS				150					1	EM	G	F	40+	C	1	Dome shaped canopy, multi-stemmed. Excellent vitality. Stem diameter estimated due to low canopy.	None required.	U	RPA to edge of canopy.		N/A
G	8	Hawthorn, ash	4.1	0 S	Plotted using GPS				95					6	SM	G	F	40+	C	2;1	Small multi-stemmed trees. Hawthorn excellent vitality, ash also appears very healthy, ash set back from boundary and not overhanging site. Stem diameters estimated due to low canopy.	None required.	U	RPA to edge of canopy.		N/A
G	9	Sycamore, hawthorn, elder, hazel, oak, ash.	19.9	1.5 S	Plotted using topographical plan and GPS				850					1	EM-M	G	F	40+	A	2,3	Field boundary group. Good vitality. Medium to large trees, ivy on several stems, smaller hawthorn between larger oak and sycamore. Some elder and hazel at eastern end and holly at western end. Likely at least partly made up of outgrown former hedgerow trees. Group canopies form tunnel over road together with group G10 on northern side. Habitat, conservation, connectivity, shade and screening value. Ash at western extent - dieback evident, less than 25%. Flailed on roadside from near eastern extent to western extent to c. 3m. Access to trees restricted due to location on banking adjacent road, vegetation and field boundary fencing limiting detailed measurements.	Re-inspect for safety/risk management purposes when trees are in full leaf within 18 months of this survey.	L	RPA 5.3m from edge of canopy, except to edge of road.		N/A
G	10	Oak, sycamore, hawthorn, hazel,.	12.4	1.5 N	Plotted using topographical plan and GPS				950					1	EM-M	G	F	40+	A	2,3	Field boundary group. Good vitality. Forming tunnel over road together with G9 canopies at south. Bluebells on banking on roadside at east. Access to trees restricted due to location and vegetation, limiting some detailed measurements.	None required.	L	RPA 3.1m from edge of canopy, except to edge of road.		N/A

G	11	Hawthorn, elder.	3	0 S	Plotted using GPS	200					1	EM	G	F	40+	C	2	Small group on field boundary, good vitality. Multi-stemmed. Access restricted by low canopy, limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	12	Oak	15	0 W	Plotted using GPS	800					1	M	F	F	40+	B	3;2	Two oak trees. Eastern large limb failure, mature 800mm stem diameter. Western stem 630mm diameter, wound in stem at east at approx. 0.5 to 1.5m. Both on slope adjacent to woodland.	If land use intensifies within falling distance of the two trees, Re-inspect for safety/risk management purposes prior to land use intensification.	L	RPA 1.3m from edge of canopy.	N/A
G	13	Ash	7	1 N	Plotted using GPS	120					1	SM-EM	F	F	10+	C	2	Two upright, single-stemmed ash, dieback evident but minor. Ash Dieback Disease lesions potentially on larger tree at south stem at approx. 1.7m.	If land use intensifies within falling distance of trees, Re-inspect for safety/risk management purposes within prior to land use intensification at same time as adjacent trees being assessed.	U	RPA to edge of canopy.	N/A
G	14	Hawthorn, ash, elder, blackthorn.	6.5	0 W	Plotted using topographical plan and GPS	400					1	EM-M	G	F	40+	B	2,3	Linear boundary group. Likely outgrown former hedgerow. Medium-sized to large multi-stemmed mature hawthorn trees. Smaller multi-stemmed elder. Excellent vitality. Failed stem towards northern end into field at south where canopy juts out, live canopy over dead failed stem from adjacent tree at north. Access restricted limiting detailed measurements. Crown spread 6.3m.	Re-inspect for safety/risk management purposes within 12 months of the trees adjacent to the school grounds.	L	RPA to edge of canopy.	N/A
G	15	Hawthorn, elder	6	0 E	Plotted using topographical plan and GPS	350					1	EM-M	F	F	40+	C	2	Field boundary group. Access restricted limiting detailed measurements.	None required.	U	RPA 0.8m from edge of canopy.	N/A
G	16	Hawthorn.	5.4	0.3 S	Plotted using topographical plan and GPS	240					1	M	F	P	20+	B	3	Two, likely outgrown former hedgerow trees, on boundary. Both with significant lean to east. Eastern tree good vitality. Western tree taller, leaning over eastern tree, significantly decayed - cracks and splits evident on northern side, extensive dieback in crown.	If land use intensifies within falling distance of trees, Re-inspect for safety/risk management purposes prior to land use intensification	L	RPA to edge of canopy.	N/A
G	17	Hawthorn, elder.	5.8	0.2 S	Plotted using topographical plan and GPS	410					1	SM-M	F	F	20+	B	2,3	Hawthorn with dieback and decay in stem at northeast, decay at base beginning to form cavity. Adjacent multi-stemmed small elder with good vitality.	If land use intensifies within falling distance of trees, Re-inspect for safety/risk management purposes prior to land use intensification	L	RPA 0.5m from edge of canopy.	N/A

G	18	Hawthorn, elder.	6.5	0 N	Plotted using topographical plan and GPS	500					1	M	F	F	40+	B	2,3	Linear boundary group. Likely outgrown former hedgerow trees. Good vitality. Multi-stemmed. Elder at western extent of group. Stem diameter estimated due to location and low canopy.	None required.	L	RPA 2.8m from edge of canopy.	N/A
G	19	Hawthorn, elder.	5	0 SW	Plotted using topographical plan and GPS	100	200	200	250	100	5	Y-M	G	F	40+	B	3;2	Mature hawthorn with split at base and smaller young trees surrounding base. One is an elder at west. Excellent vitality. Outgrown former hedgerow tree likely. Stem diameters estimated due to low canopy and crossing fused stems.	If land use intensifies within falling distance of trees, Re-inspect for safety/risk management purposes prior to land use intensification	U	RPA 0.8m from edge of canopy.	N/A
G	20	Hawthorn, elder.	4.5	0 S	Plotted using topographical plan and GPS	450					1	SM-M	G	F	20+	B	2,3	Likely outgrown former hedgerow tree. Excellent vitality. Split and decay in kinked main stem at base at north. Small elder within canopy at southwest. Stem diameter estimated due to low canopy and fence.	If land use intensifies within falling distance of trees, Re-inspect for safety/risk management purposes prior to land use intensification	L	RPA 2.6m from edge of canopy.	N/A
G	21	Elder, ash, hawthorn.	4.1	0 S	Plotted using GPS and aerial photography for northern extent	75					6	EM	G	F	40+	C	2	Boundary group. Likely outgrown former hedgerow. Small multi-stemmed trees. Access restricted due to location, boundary fencing and low canopies, limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	22	Hawthorn, ash.	5.2	0 S	Plotted using GPS and aerial photography for northern extent	90					6	SM-M	G	F	40+	C	2	Short boundary group, likely outgrown former hedgerow. Multi-stemmed small trees. Ash minimal dieback. Access restricted due to low canopies and location on boundary, limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	23	Hawthorn, ash.	6.3	0 S	Plotted using GPS and aerial photography for northern extent	100	120	130			3	EM-M	G	F	40+	C		Short boundary group, likely outgrown former hedgerow. Multi-stemmed trees. Ash minimal dieback. Hawthorn good vitality. Dog rose within and at south. Access restricted due to location on boundary and low canopies.	None required.	U	RPA to edge of canopy.	N/A
G	24	Cherry, birch, buddleia, Portuguese laurel.	9.8	0 S	Plotted using GPS, topographical survey plan and aerial photography for northern and western extent	280	180	170	220	100	5	EM-M	G	F	40+	C	2	Boundary group. Multi-stemmed. One laurel - small, shrubby multi-stemmed garden tree - on third party land, behind garden fence but overhanging site, at eastern extent of group. Access restricted due to location on boundary and low canopies. 5.8m extent into site from estimated largest stem.	None required.	U	RPA 1.8m from edge of canopy.	N/A
G	25	Guelder rose, rowan, cypress, cotoneaster, pink hawthorn.	3.5	0 S	Plotted using GPS and aerial photography for northern extent	50					6	EM-M	G	F	40+	C	2	Small garden trees and shrubs but within site, forming low group. Columnar cypress and shrubs within adjacent back garden. Access restricted due to low canopies and boundary fencing.	None required.	U	RPA to edge of canopy.	N/A
G	26	Willow, ash, sycamore, birch.	12.2	0 S	Plotted using GPS, topographical survey plan and aerial photography for northern and eastern extent	350	490				2	EM	G	F	40+	B	2	Boundary group. Mostly single-stemmed, medium-sized trees. Dieback evident on ash - less than 25%. Access restricted due to location on boundary, low canopies and vegetation, limiting detailed canopy measurements. 7.6m.	Re-inspect for presence of Ash Dieback Disease within 2 years. Note, inspections for Ash Dieback Disease are to be carried out during the summer months when the trees are in leaf.	U	RPA 1.6m from edge of canopy.	N/A

G	27	Cypress, Japanese maple.	2.9	0.5 W	Plotted using GPS and aerial photography for eastern extent	75					6	EM-M	F	F	40+	C	2	Third party garden small tree and shrubs. Access restricted by low canopy and garden boundary fencing, limiting detailed measurements. 2m canopy from stem	None required.	U	RPA to edge of canopy.	N/A
G	28	Honey locust, variegated holly.	5.1	0 W	Plotted using GPS and aerial photography for eastern extent	180					1	EM-M	P	P	<10	U		Third party. Small tree with extensive dieback, small holly bush multi-stemmed. Access restricted due to location within garden, boundary wall and low holly canopy, limiting detailed measurements.	N/A, as outside site boundary.	U	RPA to edge of canopy.	N/A
G	29	Photinia	1.6	0 W	Plotted using GPS and aerial photography for eastern extent	80					1	SM	F	F	10+	C		Small unremarkable garden shrubs on neighbouring residential property.	None required.	U	RPA to edge of canopy.	N/A
G	30	Hawthorn	2.8	0 SE	Plotted using GPS	180					1	EM-M	G	F	40+	C	2	Small multi-stemmed trees. Good vitality. Access restricted by low canopies, limiting detailed measurements.	None required.	U	RPA 0.2m from edge of canopy.	N/A
G	31	Hawthorn, ash, cherry.	5.5	0 NW	Plotted using GPS	100	120	130	90		4	EM-M	F	F	20+	C	2	Field boundary group, likely outgrown former hedgerow trees. Ash dieback less than 25%. Hawthorn and cherry healthy. Access restricted limiting detailed measurements.	If land use intensifies near the ash , inspect for Ash Dieback Disease prior to land use intensification when in leaf.	U	RPA to edge of canopy.	N/A
G	32	Hawthorn, ash, elder.	7.4	0 SW	Plotted using GPS	350	400				2	EM-M	F	F	40+	C	2	Linear field boundary group, likely outgrown former hedgerow trees. Ash with extensive dieback, hawthorn excellent vitality. Access restricted limiting detailed measurements.	If land use intensifies near the ash , inspect for Ash Dieback Disease prior to land use intensification when in leaf.	U	RPA 2.4m from edge of canopy.	N/A
G	33	Hawthorn	5.1	0 SW	Plotted using GPS	100					6	EM-M	G	F	40+	C	2	Likely outgrown former hedgerow trees. Excellent vitality. Access restricted by low canopies limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	34	Hawthorn.	4.2	0 W	Plotted using GPS	95					6	EM	G	F	40+	C	2	Likely outgrown former hedgerow trees, good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of canopy.	N/A
G	35	Goat willow, hawthorn.	7	2.5 SW	Plotted using GPS	190					1	EM-M	G	F	40+	C	2	Likely outgrown former hedgerow trees, one larger willow and one smaller hawthorn. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	36	Sycamore, hawthorn.	9.2	1.9 W	Plotted using GPS	95	250	300	250	130	5	EM-M	G	F	40+	C	2	Likely outgrown former hedgerow trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 2.4m from edge of canopy.	N/A
G	37	Hawthorn.	5.3	0 W	Plotted using GPS	150					1	EM	G	F	40+	C	2	Three multi-stemmed trees close to garden boundaries. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	38	Beech, ash	7.2	0 W	Plotted using GPS	150	150				2	EM	F	F	20+	C	2	Third party garden boundary trees. Ash with dieback evident at tips of canopy, less than 25% overall. Beech healthy. Access restricted limiting detailed measurements.	Re-inspect for deterioration due to Ash Dieback Disease prior to land use intensification on site.	U	RPA 0.5m from edge of canopy.	N/A

G	39	Lilac, cherry laurel	3.9	1.3 W	Plotted using GPS, topographical survey plan and aerial photography for northern extent	95					6	EM-M	G	F	20+	C	2	Third party garden boundary, multi-stemmed shrubs. Access and view restricted by wooden boundary fencing, limiting detailed measurements. Overhanging site at north by 0.8m	None required.	U	RPA to edge of canopy.	N/A
G	40	Elder, hawthorn, elm.	7.7	0 E	Plotted using GPS and topographical survey plan	400					1	EM-M	F	F	40+	B	2	Field boundary group. Mostly multi-stemmed, likely outgrown former hedgerow trees. Mostly good vitality, Minor crown dieback in places. Access restricted limiting detailed measurements.	None required.	L	RPA 1.8m from edge of canopy.	N/A
G	41	Hawthorn.	5.8	0 E	Plotted using GPS and topographical survey plan	95					6	EM-M	G	F	40+	C	2	Short linear field boundary group, likely outgrown former hedgerow section. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	42	Hawthorn, oak, gorse, elder, ash.	8	0 E	Plotted using GPS and topographical survey plan	100					6	EM-M	F	F	40+	B	2,3	Field boundary group. Scrub on eastern field side in several places, on western field side at south. Honeysuckle and dog rose within some canopies. Access restricted limiting detailed measurements.	None required.	L	RPA to edge of canopy.	N/A
G	43	Hawthorn, elder, ash.	9	0 E	Plotted using GPS and topographical survey plan	300					1	EM-M	F	F	40+	B	2	Field boundary group. Access restricted limiting detailed measurements.	None required.	L	RPA to edge of canopy.	N/A
G	44	Sycamore, silver birch, hawthorn, ash	13	0.5 SW	Plotted using GPS and topographical survey plan	640					1	EM-M	F	F	40+	B	2,3	Outgrown multi-stemmed former hedgerow mature hawthorns, with one ash and one sycamore at west, browsing damage on stems, dieback evident on ash, estimated at less than 50%, high canopy. Large oak in centre recorded as individual. Birch trees at east. Adjacent public footpath. Access restricted by low canopies, detailed measurements limited.	Re-inspect ash for deterioration due to ash dieback disease within 18 months. Note, inspections for Ash Dieback Disease are to be carried out during the summer months when the trees are in leaf.	U	RPA 0.8m from edge of canopy.	N/A
G	45	Cherry laurel, hawthorn.	3.5	0.5 W	Plotted using aerial photography	250					1	EM	G	F	40+	C	2	Third party, garden boundary trees. Excellent vitality. Stem diameter estimated due to location on other side of fence but with canopies extending into site.	None required.	U	RPA to edge of canopy.	N/A
G	46	Ash, hawthorn	9.1	0 S	Plotted using GPS and topographical survey plan	250	300	350			3	EM-M	F-G	F	10+	C	2;1	Field boundary group, roadside multi-stemmed trees. Good vitality, apart from ash with minor dieback. Stem diameters estimated due to location.	None required.	U	RPA 0.7m from edge of canopy. Northern extent to road edge.	N/A
G	47	Hawthorn.	4.4	0.6 W	Plotted using GPS and aerial photography to east	100					6	EM	G	F	40+	C	2	Small multi-stemmed trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	48	Hawthorn, elder.	7.2	1 3	Plotted using GPS and topographical survey plan	200	200	200			3	EM-M	F	F	40+	C	2	Small multi-stemmed elder on boundary and third party multi-stemmed hawthorns in row running away from boundary - not overhanging site but roots likely extend into site. Access restricted limiting detailed measurements.	None required.	U	RPA 0.9m from edge of canopy.	N/A
G	49	Common Hawthorn	5.1	0.5 W	Plotted using GPS	200	150				2	EM	G	F	40+	C	2	Small multi-stemmed trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	50	Blackthorn.	6.4	0 S	Plotted using GPS, topographical survey plan and aerial photography to north	95	100				2	EM-M	F	F	40+	C	2	Outgrown multi-stemmed blackthorn and low clipped blackthorn in field side. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	51	Hawthorn, elder.	4.5	0 S	Plotted using GPS and topographical survey plan	70					10	EM-M	G	F	40+	C	2	Third party multi-stemmed trees. Boundary group. Dog rose coming through canopies in places. Access restricted limiting detailed measurements.	None required.	U	RPA 0.2m from edge of canopy.	N/A
G	52	Hawthorn	3.7	0 S	Plotted using GPS and topographical survey plan	80					6	EM	G	F	40+	C	2	Boundary group. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A

G	53	Hawthorn, elder.	7.6	0.5 S	Plotted using GPS and topographical survey plan	350					1	EM-M	F	F	40+	B	2	Third party, mostly multi-stemmed trees. Field boundary group. Ivy obscuring stems, access restricted limiting detailed measurements.	None required.	U	RPA 0.7m from edge of canopy.	N/A
G	54	Blackthorn.	3.7	0 SE	Plotted using GPS, topographical survey plan and aerial photography to north	150	120				2	M	F	F	40+	C	2	Outgrown blackthorn hedge. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	55	Hazel, hawthorn, blackthorn.	5.1	0 S	Plotted using GPS, topographical survey plan and aerial photography to north	75					6	EM-M	G-D	G-D	40+	C	2	Boundary group. Varied condition from good to dead. Access restricted limiting detailed measurements.	If land use intensifies near the dead trees and these are within the site boundary, fell prior to land use intensification.	U	RPA to edge of canopy.	N/A
G	56	Elder, hawthorn.	3.7	1 9	Plotted using GPS and aerial photography	230	250				2	EM-M	F	F	40+	C	2	Third party group of two multi-stemmed trees. Elder closest to site, overhanging site by approx. 3m. Dieback evident on elder, minor dieback on hawthorn. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	57	Hawthorn, elder.	7.7	0.2 SE	Plotted using GPS and aerial photography	250	250				2	EM-M	G	F	40+	B	1,2	Third party trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	58	Goat willow, cypress.	8	1.6	Plotted using GPS and aerial photography	300					1	EM	G	G	40+	B	2	Third party garden trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	59	Dogwood	3.6	1 S	Plotted using GPS and aerial photography	60					10	EM	F	F	40+	C	2	Third party large shrubs along boundary. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	60	Blackthorn.	4.2	0 E	Plotted using GPS and aerial photography	95					6	M	G	F	40+	C	2	Outgrown blackthorn boundary group. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	61	Willow, pear, snowberry.	8.8	0.7 E	Plotted using GPS and aerial photography	200	250	250	250		4	EM	F-G	F	40+	C	2	Third party garden boundary trees. One small tree in decline otherwise good vitality. Access restricted limiting detailed measurements. Canopy overhanging site by c. 3.1m	None required.	U	RPA 0.7m from edge of canopy.	N/A
G	62	Pine, sycamore.	5.7	1.7 N	Plotted using GPS and aerial photography	500					1	EM-M	G	F	40+	B	2	Third party trees. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 2.2m from edge of canopy.	N/A
G	63	Purple maple, horse chestnut.	5.3	1.3 E	Plotted using GPS and aerial photography	150					1	EM	G	F	40+	C	2	Third party garden trees. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	64	Crack willow	9.2	0 E	Plotted using GPS and aerial photography	100					10	EM	G	F	40+	C	2	Multi-stemmed boundary trees. Good vitality and vigour. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	65	Hawthorn, ash, apple, elder, beech.	6	0 NE	Plotted using GPS and aerial photography	250	200				2	EM-M	P-G	F	40+	B	2	Field boundary group. Dieback on beech specimens and ash tree at eastern extent - less than 25% dieback, though. Hawthorn good vitality. Screening and habitat connectivity value. Access restricted limiting detailed measurements.	If within the site boundary, re-inspect for safety/risk management purposes within 2 years when trees are in full leaf.	U	RPA to edge of canopy.	N/A

G	66	Sycamore, ash, hawthorn, rowan.	10.8	0.4 E	Plotted using GPS and aerial photography	500					1	EM	F	F	40+	B	2	Boundary group. Good vitality except ash with dieback - less than 25%. Access restricted by boundary fencing in places and dense vegetation, limiting detailed measurements. Viewed from accessible parts of site.	If within the site boundary, re-inspect ash trees for deterioration due to Ash Dieback Disease within 2 years. Note, inspections for Ash Dieback Disease should be carried out during the summer months when the trees are in leaf.	U	RPA 2.5m from edge of canopy.	N/A
G	67	Pine, sycamore, hawthorn, birch, ash, rowan.	10.1	0 E	Plotted using GPS and aerial photography	350	250	250			3	EM-M	G	F	40+	B	2	Boundary group. Good vitality, even ash. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of canopy.	N/A
G	68	Hawthorn, ash.	4	0 E	Plotted using GPS and aerial photography	75					6	EM	G	F	40+	C	2	Small multi-stemmed trees. Good vitality, even ash. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	69	Sycamore, hawthorn, elder, cherry laurel, ash.	10.1	0 E	Plotted using GPS and aerial photography	500					1	EM-M	G	F	40+	B	2	Boundary group. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	70	Hawthorn.	3.9	0 S	Plotted using GPS and aerial photography	70					6	EM	G	F	40+	C	2	Field boundary trees, grown out due to location adjacent telephone poles. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of canopy.	N/A
G	71	Hawthorn.	3.1	0 E	Plotted using GPS and aerial photography	90	80	75	80	90	5	EM	G	F	40+	C	2	Multi-stemmed hawthorn, outgrown adjacent pole. Access restricted limiting detailed measurements.	None required.	U	RPA 0.7m from edge of canopy.	N/A
G	72	Sycamore, blackthorn, hawthorn, field maple, elder, ash.	6.2	0 E	Plotted using GPS and topographical survey plan	350					1	EM-M	F-G	F	40+	B	2	Boundary trees around bus turning area. Good vitality, even ash with only minor dieback. Access restricted limiting detailed measurements.	Monitor ash trees for Ash Dieback Disease and re-inspect within 2 years when the ash trees are in leaf.	U	RPA 0.4m from edge of canopy.	N/A
G	73	Ash, sycamore, field maple, elder, hawthorn, hazel.	11.2	0 E	Plotted using GPS and topographical survey plan	500					1	EM-M	G	F	40+	B	2	Boundary group along field side and highway. Good vitality, even ash with only minor dieback. Access restricted limiting detailed measurements.	Monitor ash trees for Ash Dieback Disease and re-inspect within 2 years when the ash trees are in leaf.	U	RPA 2m from edge of canopy.	N/A
G	74	Oak, ash.	6.2	0.3 E	Plotted using GPS	160					1	SM	G	G	40+	C	2	Field boundary group. Two small trees, ash smallest at east - minor dieback. 2.7m canopy extents from largest stem.	None required.	U	RPA to edge of canopy.	N/A
G	75	Hawthorn.	4.7	0 W	Plotted using GPS	120					6	EM	G	F	40+	B	2	Likely outgrown former hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A

G	76	Ash, goat willow, sycamore, hawthorn.	7.8	0 E	Plotted using GPS, topographical survey plan and aerial photography to north	300	350	350			3	EM	F	F	40+	B	2	Boundary screening group. Good vitality except for Ash trees which have signs of dieback but less than 25% on any individual tree. Access restricted limiting detailed measurements.	Monitor ash trees for Ash Dieback Disease and re-inspect within 2 years when the ash trees are in leaf.	U	RPA to edge of canopy.	N/A
G	77	Oak, ash, cherry.	6.5	0 N	Plotted using GPS, topographical survey plan and aerial photography	500	200	150	200		4	EM	G	F	40+	B	2	Field boundary group, edge of motorway. One medium sized oak, ash at west by road - only minor dieback visible except for one small standing dead tree at southwest. Access restricted limiting detailed measurements.	Monitor ash trees for Ash Dieback Disease and re-inspect within 2 years when the ash trees are in leaf.	U	RPA to edge of canopy.	N/A
G	78	Ash, oak.	8	0.2 W	Plotted using GPS and topographical survey plan	450	350	150	110		4	EM-M	G	F	40+	B	2	Multi-stemmed likely outgrown former hedgerow trees, oak and ash. Ash with dieback evident, less than 25%, overall canopy foliage in good health. Access restricted limiting detailed measurements.	Monitor ash trees for Ash Dieback Disease and re-inspect within 2 years when the ash trees are in leaf, if land use intensifies near the ash.	U	RPA 1.1m from edge of canopy.	N/A
G	79	Oak, hawthorn.	4.8	0 W	Plotted using GPS, topographical survey plan and aerial photography	230					1	SM-EM	G	F	40+	C	2	Field boundary group between site and motorway. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	80	Ash, hawthorn.	10.4	0 W	Plotted using GPS, topographical survey plan and aerial photography	400					1	EM	G	F	40+	B	2	Field boundary group, likely outgrown former hedgerow. Ash good condition, some dieback on some hawthorns - two standing dead trees noted, one partially failed leaning on adjacent stems. Access restricted limiting detailed measurements.	Prior to land use intensification near the trees, remove partially failed leaning tree.	U	RPA 1.3m from edge of canopy.	N/A
G	81	Hawthorn.	3.9	0.8 SW	Plotted using GPS and topographical survey plan	200					1	M	P	P	<10	U		Extensively dieback of trees within hedge line. Access restricted limiting detailed measurements.	Prior to land use intensification near the trees, remove.	U	RPA to edge of canopy.	N/A
G	82	Hawthorn.	6.6	0 W	Plotted using GPS, topographical survey plan and aerial photography	200					1	EM-M	F	F	20+	C	2	Field boundary group- outgrown hedgerow section. Dieback on several hawthorn. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of canopy.	N/A
G	83	Hawthorn.	4.5	0.3 NW	Plotted using topographical survey plan	180	180				2	EM	G	F	40+	C	2	Third party boundary group. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 1m from edge of canopy.	N/A
G	84	Hawthorn, ash, elder.	6.5	0 S	Plotted using GPS, topographical survey plan and aerial photography	390					1	EM-M	G	F	40+	B	2	Field boundary group - outgrown hedgerow section. Ash very minor dieback visible. Access restricted limiting detailed measurements.	None required.	U	RPA 2.2m from edge of canopy.	N/A
G	85	Ash, hawthorn.	11.4	0 N	Plotted using topographical survey plan	250	300	250			3	EM	F	F	20+	C	2	Boundary group. Ash with minor dieback, medium-sized tree. Access restricted limiting detailed measurements.	Prior to land use intensification near the trees, re-inspect ash for progression of Ash Dieback Disease.	U	RPA to edge of canopy.	N/A
G	86	Hawthorn.	6	0.3 N	Plotted using GPS, topographical survey plan and aerial photography	250					1	M	G	F	40+	C	2	Third party trees on boundary.. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A

G	87	Hawthorn.	5	0.6 N	Plotted using GPS and aerial photography	110					6	M	G	F	40+	C	2	Third party trees on boundary.. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	88	Hawthorn.	5.6	0.3 N	Plotted using GPS, topographical survey plan and aerial photography	120	150	200			3	M	G	F	40+	C	2	Third party trees on boundary.. Access restricted limiting detailed measurements.	None required.	U	RPA 0.1m from edge of canopy.	N/A
G	89	Hawthorn.	4.9	0.2 N	Plotted using GPS, topographical survey plan and aerial photography	120	150				2	M	G	F	40+	C	2	Boundary group. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	90	Hawthorn, whitebeam.	5.7	0.1 N	Plotted using GPS, topographical survey plan and aerial photography	100	120	120			3	EM-M	G	F	40+	C	2	Third party. Boundary group. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	91	Hawthorn.	4	0.6 S	Plotted using GPS, topographical survey plan and aerial photography	300					1	M	G	F	40+	C	2	Outgrown former hedgerow, small trees developing. Good vitality with some dieback and dead and failed stems in places. Browsing and horse rubbing damage. Clear stems to approx. 1.5m along length of group/outgrown hedge. Access restricted limiting detailed measurements.	Advise fencing to prevent further damage from grazing animals.	U	RPA 1.4m from edge of canopy.	N/A
G	92	Cherry, hawthorn, ash.	4.3	1.5 N	Plotted using GPS and aerial photography	120	120				2	SM-EM	G	F	40+	C	2	Mostly third party group, one cherry within site, one larger cherry just overhanging site. Ash with minor dieback. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of canopy.	N/A
G	93	Ash, hawthorn, elder.	11	0 S	Plotted using GPS, topographical survey plan and aerial photography	350					1	SM-EM	F	F	10+	C	2	Linear boundary group. Ash with dieback - less than 25%. Access restricted limiting detailed measurements.	Re-inspect for safety/risk management purposes , including assessing for Ash Dieback Disease within two year when the trees are in full leaf due to proximity to neighbouring properties.	U	RPA 0.9m from edge of canopy.	N/A
G	94	Hawthorn, elder.	5.5	0 S	Plotted using GPS and aerial photography	350					1	EM-M	F-G	F	40+	C	2	Boundary group adjacent to car park. Elder with dieback. Access restricted limiting detailed measurements.	None required.	U	RPA 1.2m from edge of canopy.	N/A
G	95	Cypress	2.5	0 S	Plotted using GPS and aerial photography	200					1	EM	G	F	40+	C	2	Small garden trees, eastern larger tree almost completely covered in climbing plant Access restricted limiting detailed measurements.	None required.	U	RPA 1.1m from edge of canopy.	N/A
G	96	Leyland cypress, Elder, Hawthorn, Ash, Goat willow, Sycamore	9.3	0	Plotted using GPS, topographical survey plan and aerial photography	230					1	SM-EM	G-D	F	40+	C	2	Mixed species group of trees at site boundary adjacent to fence. Gate in centre of group. Dead tree within group as shown on TPP. Good vitality throughout remaining group. RPA 0.6m from canopy edge.	If within the site boundary and if land use intensifies near to the trees, fell dead trees prior to land use intensification.	U	RPA 0.6m from edge of canopy.	N/A
G	97	Common oak	3.6	1.7 W	Plotted using GPS, topographical survey plan and aerial photography	100	120	90			3	SM	F	F	20+	C	2	Group of small trees located at site boundary. Poor form due to topping and pruning. RPA to canopy edge.	If to be retained, undertake formative pruning to encourage improved form within the next 3 years.	U	RPA to edge of canopy.	N/A
G	98	Holly, Ash, Sycamore, Field maple	4.6	0	Plotted using GPS and aerial photography	120					1	Y-EM	G	G	40+	C	2	Small, dense group of unremarkable trees. Self seeded saplings at group edge. RPA to canopy edge.	None required.	U	RPA to edge of canopy.	N/A

G	99	Wild cherry, Ash	12.1	2.1 N	Plotted using GPS and aerial photography	230					1	EM	G	G	40+	B	2	Group of trees with good vitality located on motorway embankment adjacent to site boundary. Trees provide good screening function. No significant structural defects observed. RPA to canopy edge.	None required.	U	RPA to edge of canopy.	N/A
G	100	Hawthorn, Field maple, Whitebeam, Common lime, Oak, Cherry plum, Guelder rose, Beech	6.4	0	Plotted using GPS and aerial photography	250					1	SM-EM	G	G	40+	B	2	Group of trees with good form and vitality located on motorway embankment adjacent to site boundary. Trees provide good screening function. RPA to canopy edge.	None required.	U	RPA to edge of canopy.	N/A
G	101	Field maple, Common lime, Hawthorn	6.9	2.8 N	Plotted using GPS and aerial photography	260					1	EM	G	F	40+	B	2	Group of trees with good vitality on motorway embankment. Previously pruned to north for clearance from newly installed fence.,RPA 1.3m from canopy edge.	None required.	U	RPA 1.3m from edge of canopy.	N/A
G	102	Ash, Sycamore, Silver birch, Hawthorn, Goat willow	15.2	2 W	Plotted using GPS, topographical survey plan and aerial photography	770					1	EM-M	G	G	40+	A	1,2	Group of trees adjacent to stream. Good vitality throughout group despite browsing of lower crowns. No significant structural defects observed. Hawthorn runs length of group as remnant hedgerow. RPA 1.6m from canopy edge.	None required.	L	RPA 1.6m from edge of canopy.	N/A
H	1	Hawthorn.	2	N/A	Plotted using GPS and topographical survey plan	100					1	M	G	F	40+	N/A		Well managed field boundary hedge. Two gaps near southern extent. Dead stems at north of northern gap, otherwise good vitality. Access restricted by low canopy, detailed measurements limited.	If retained, remove dead stems and plant up gaps with native local provenance hedging species.	U	RPA to edge of hedge.	N/A
H	2	Hawthorn	4.5	N/A	Plotted using GPS and topographical survey plan	300					1	M	G	F	40+	N/A		Tall, managed, field boundary hedge. Good vitality. Access restricted due to location, traffic and low canopies.	None required.	U	RPA 2m from edge of hedge, except to edge of road.	N/A
H	3	Hawthorn	5	N/A	Plotted using GPS and topographical survey plan	350					1	M	G	F	40+	N/A		Tall, managed, field boundary hedge. Good vitality. Access restricted due to location, traffic and low canopies, limiting detailed measurements.	None required.	U	RPA 2.1m from edge of hedge, except to edge of road.	N/A
H	4	Hawthorn.	4	N/A	Plotted using GPS and topographical survey plan	300					1	M	F	F	40+	N/A		Outgrown in places hedgerow. Access restricted due to location and low canopies, limiting detailed measurements.		U	RPA 2m from edge of hedge.	N/A
H	5	Cypress, euonymus, garden privet, box, smoke bush.	2.6	N/A	Plotted using GPS and aerial photography	95					1	EM	G	F	40+	N/A		Third party garden boundary hedge. Coming through fencing into site in places, up to approx. 30cm max, except dog rose stems to approx. 60cm. Access and view restricted by boundary wooden fencing, limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	6	Lawson cypress	2		Plotted using GPS and aerial photography	60					6	M	G	F	40+	N/A		Garden boundary hedge, clipped, except where protruding into site which is not recently cut. Access restricted, limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	7	Hawthorn	1.8	N/A	Plotted using GPS and topographical survey plan	80					1	EM	G	F	40+	N/A		Outgrown informal garden boundary hedge. Brambles and small elder within. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	8	Hawthorn	2	N/A	Plotted using GPS and topographical survey plan	70					2	M	G	F	40+	N/A		Garden boundary hedge, not recently cut. Varying height. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	9	Hawthorn, elder,	1.9	0 5	Plotted using GPS and topographical survey plan	250					1	M	F	F	40+	N/A		Managed field boundary hedge. Canopy not to ground, stems visible to approx. 0.5 to 1m. Some sections with dieback. Access restricted, limiting measurements.	None required.	U	RPA 2m from edge of hedge.	N/A

H	10	Beech	2	N/A	Plotted using GPS and topographical survey plan	75					1	M	G	G	40+	N/A	Garden boundary hedge. Good vitality. Managed previously but not recently cut. Small self set single cherry adjacent hedge on site side. Access and view of stems restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	11	Hawthorn, elder, sycamore.	1	N/A	Plotted using GPS and topographical survey plan	100					1	M	G	G	40+	N/A	Field boundary and roadside, well managed, low hedge. Excellent vitality. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 0.2m from edge of hedge.	N/A
H	12	Lawson cypress, Leyland cypress, elder	2.5	N/A	Plotted using GPS and topographical survey plan	20					6	EM-M	G	F	40+	N/A	Garden boundary hedge sections. Northern cypress section with elder in places. Managed, recently cut. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	13	Hawthorn, dog rose.	3	N/A	Plotted using GPS and topographical survey plan	200					1	M	F	F	40+	N/A	Field boundary hedgerow, becoming outgrown. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	14	Hawthorn	4	N/A	Plotted using GPS and topographical survey plan	75					1	EM	G	F	40+	N/A	Garden boundary hedge. Varying height. Good vitality. Not recently cut. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	15	Hawthorn, elder.	3.2	N/A	Plotted using GPS and topographical survey plan	200					1	M	G	F	40+	N/A	Field boundary hedgerow. Becoming outgrown. Access restricted limiting detailed measurements.	None required.	U	RPA 0.9m from edge of hedge.	N/A
H	16	Cherry laurel, dog rose.	3.5	N/A	Plotted using GPS and topographical survey plan	60					1	M	G	F	40+	N/A	Garden boundary hedge. Managed by flailing on field (site side). Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	17	Hawthorn.	2	N/A	Plotted to topographical survey plan	200					1	M	F	F	40+	N/A	Field boundary hedgerow. Becoming outgrown. Access restricted limiting detailed measurements.	None required.	U	RPA 0.9m from edge of hedge.	N/A
H	18	Cypress	4.2	N/A	Plotted using GPS and topographical survey plan	85					1	M	G	F	40+	N/A	Garden boundary hedge. Managed but not recently cut. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	19	Cypress	2.3	N/A	Plotted using GPS and topographical survey plan	100					1	M	G	G	40+	N/A	Garden boundary hedge, not recently cut on site side. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	20	Cherry laurel	2	N/A	Plotted using GPS and topographical survey plan	50					6	M	G	F	40+	N/A	Third party, garden boundary hedge. Good vitality. Access restricted due to location along boundary, boundary fence and low canopies, limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	21	Leyland cypress.	2.1	N/A	Plotted using topographical survey plan and aerial photography	90					1	M	G	F	40+	N/A	Field boundary hedgerow. Managed but not recently cut. Access restricted due to location on boundary and low canopies, limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	22	Leyland cypress.	2.2	N/A	Plotted using topographical survey plan and aerial photography	90					1	EM	G	G	40+	N/A	Short section of field boundary hedge. Managed but not recently cut. Access restricted due to location on boundary and low canopy.	None required.	U	RPA to edge of hedge.	N/A
H	23	Hawthorn, privet, dog rose, ash.	4	N/A	Plotted using topographical survey plan and aerial photography	100					1	EM-M	G	F	40+	N/A	Short section of boundary hedgerow. Access restricted by low canopies and location on boundary, limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	24	Hawthorn, elder.	1.7	N/A	Plotted using GPS and topographical survey plan	75					1	M	G	F	40+	N/A	Two sections of managed field boundary hedge on north of roadside. Access restricted due to low canopies preventing taking of some detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	25	Oak, hawthorn, ash, wild privet, sycamore.	2	N/A	Plotted using GPS and topographical survey plan	95					1	EM-M	G	F	40+	N/A	Managed field boundary hedge. Good vitality. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA to edge of hedge.	N/A

H	26	Holly, hazel.	1.6	N/A	Plotted to topographical survey plan	100					1	M	G	G	40+	N/A	Well managed garden boundary hedge. Excellent vitality. Ivy encroaching. Access to stems restricted by low canopy, detailed measurements limited.	None required.	U	RPA to edge of hedge.	N/A
H	27	Oak, hawthorn.	1.8	N/A	Plotted using GPS	75					1	SM-M	G	G	40+	N/A	Recently planted and established older hedgerow short section. Good vitality. Access restricted by hay bales at north, oak stem at west and low canopies, detailed measurements limited.	None required.	U	RPA to edge of hedge.	N/A
H	28	Hawthorn, elder, oak.	1.7	N/A	Plotted using GPS and topographical survey plan	100					1	M	G	G	40+	N/A	Well managed field boundary hedge. Excellent vitality. Access restricted due to low canopy, detailed measurements limited.	None required.	U	RPA to edge of hedge.	N/A
H	29	Hawthorn, dog rose, oak.	2.5	N/A	Plotted using GPS and topographical survey plan	150					1	M	G	F	40+	N/A	Roadside, field boundary hedgerow. Access restricted due to low canopy, detailed measurements limited.	None required.	U	RPA 0.5m from edge of hedge.	N/A
H	30	Blackthorn.	1.9	N/A	Plotted using GPS and topographical survey plan	75					1	M	G	F	40+	N/A	Boundary blackthorn hedgerow remnants. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	31	Hawthorn, dog rose.	1.9	N/A	Plotted to topographical survey plan	110					1	M	G	F	40+	N/A	Field boundary hedgerow. Good vitality. Regularly managed. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	32	Beech.	2	N/A	Plotted using GPS and aerial photography	100					1	EM	G	G	40+	N/A	Third party garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.8m from edge of hedge.	N/A
H	33	Hawthorn.	1.9	N/A	Plotted using GPS and topographical survey plan	90					1	EM	G	F	40+	N/A	Boundary hedge. Regularly managed. Access to garden side not possible, low canopy limiting detailed measurements.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	34	Cypress	2	N/A	Plotted using topographical survey plan and aerial photography	90					1	M	G	G	40+	N/A	Garden boundary hedge. Excellent vitality. Regularly managed. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	35	Cherry laurel	1.9	N/A	Plotted using GPS and aerial photography	75					1	EM	G	G	40+	N/A	Third party boundary hedge. Excellent vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.2m from edge of hedge.	N/A
H	36	Hawthorn, cotoneaster.	2	N/A	Plotted using GPS and aerial photography	120					1	M	G	F	40+	N/A	Garden boundary hedge. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	37	Cotoneaster, garden privet, ash.	2.8	N/A	Plotted using GPS and aerial photography	75					1	M	G	F	40+	N/A	Boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.1m from edge of hedge.	N/A
H	38	Cypress	2.7	N/A	Plotted using topographical survey plan, GPS and aerial photography	110					1	M	G	G	40+	N/A	Boundary hedge. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	39	Hawthorn.	2.5	N/A	Plotted using GPS and aerial photography	95					1	M	G	G	40+	N/A	Boundary hedge. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.1m from edge of hedge.	N/A
H	40	Berberis	1.8	N/A	Plotted using GPS and aerial photography	75					1	M	F	F	40+	N/A	Third party, clipped garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.5m from edge of hedge.	N/A
H	41	Cypress, privet, pyracantha.	3.6	N/A	Plotted using GPS and aerial photography	95					1	M	G	F	40+	N/A	Garden boundary hedge. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	42	Cypress.	2.1	N/A	Plotted using GPS and aerial photography	100					1	M	G	G	40+	N/A	Boundary hedge. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.7m from edge of hedge.	N/A
H	43	Garden privet, lilac.	2.4	N/A	Plotted using GPS and topographical survey plan	100					1	EM	G	F	40+	N/A	Garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.2m from edge of hedge.	N/A

H	44	Hawthorn, cherry laurel.	3	N/A	Plotted using topographical survey plan, GPS and aerial photography	150					1	M	G	F	40+	N/A	Garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.7m from edge of hedge.	N/A
H	45	Cypress, pyracantha.	3.8	N/A	Plotted using GPS and aerial photography	100					1	M	G	F	40+	N/A	Garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	46	Cherry laurel, hawthorn.	2.3	N/A	Plotted using GPS and aerial photography	90					1	EM-M	G	F	40+	N/A	Third party garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	47	Cherry laurel.	1.6	N/A	Plotted using GPS and aerial photography	95					1	M	G	F	40+	N/A	Third party garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	48	Cypress.	1.9	N/A	Plotted using GPS and aerial photography	100					1	M	G	F	40+	N/A	Third party garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	49	Cypress.	1.6	N/A	Plotted using topographical survey plan, GPS and aerial photography	100					1	M	G	G	40+	N/A	Third party garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	50	Beech	1.6	N/A	Plotted using topographical survey plan and GPS	120					1	M	G	F	40+	N/A	Broad boundary beech hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.1m from edge of hedge.	N/A
H	51	Hawthorn., elder.	1.9	N/A	Plotted using topographical survey plan and GPS	80					1	M	G	F	40+	N/A	Field boundary hedgerow. Brambles extensive throughout. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	52	Hawthorn.	2.5	N/A	Plotted using GPS	120					1	M	G	F	40+	N/A	Field boundary hedgerow within group, merging into group at south. Access restricted limiting detailed measurements.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	53	Hawthorn.	1.7	N/A	Plotted using topographical survey plan and GPS	100					1	M	G	F	40+	N/A	Field boundary hedgerow. Gappy with herbaceous vegetation infilling in places at the south. Access restricted limiting detailed measurements.	If retained, consider planting up gaps with native local provenance hedging species.	U	RPA 0.3m from edge of hedge.	N/A
H	54	Hawthorn.	2	N/A	Plotted using GPS and manual plotting	130					1	M	G	F	40+	N/A	Field boundary hedgerow sections along fence line and under group canopy for majority of field boundary at north of group G76. Access restricted limiting detailed measurements.	None required.	U	RPA to edge of hedge.	N/A
H	55	Hawthorn, elder, elm.	3.5	N/A	Plotted using topographical survey plan	110					1	M	G	F	40+	N/A	Field boundary hedgerow. Becoming outgrown at east. Elm dead sections noted between trees T89 and T90. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	56	Hawthorn, ash, oak.	7	N/A	Plotted using topographical survey plan and GPS	150					1	EM-M	F	F	40+	N/A	Field boundary hedgerow. Becoming outgrown. Access restricted limiting detailed measurements.	None required.	U	RPA 0.5m from edge of hedge.	N/A
H	57	Hawthorn.	1.8	N/A	Plotted using GPS	95					1	M	G	F	40+	N/A	Field boundary hedge section. Good vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 0.2m from edge of hedge.	N/A
H	58	Ash.	2	N/A	Plotted using GPS and manual plotting	250					1	M	G	F	40+	N/A	Third party field boundary hedge section. Excellent vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 1m from edge of hedge.	N/A
H	59	Hawthorn.	2	N/A	Plotted using GPS and manual plotting	200					1	M	G	F	40+	N/A	Short section of third party field boundary hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 1.2m from edge of hedge.	N/A

H	60	Hawthorn, elder.	6.7	N/A	Plotted using topographical survey plan and GPS	300					1	M	G	F	40+	N/A	Field boundary hedgerow. Become outgrown but still functioning as a hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 2.1m from edge of hedge.	N/A
H	61	Hawthorn, elder.	1.9	N/A	Plotted using topographical survey plan	110					1	M	G	F	40+	N/A	Field boundary hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 0.5m from edge of hedge.	N/A
H	62	Hawthorn.	1.7	N/A	Plotted using topographical survey plan	100					1	M	G	F	40+	N/A	Field boundary hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 0.4m from edge of hedge.	N/A
H	63	Hawthorn	4	N/A	Plotted using topographical survey plan and GPS	250					1	M				N/A	Field boundary hedgerow. Becoming outgrown. Some dieback and dead stems in places. Access restricted limiting detailed measurements.	If retained, consider removal of dead sections and replanting with local provenance native hedging species.	U	RPA 1m from edge of hedge.	N/A
H	64	Hawthorn, elder, ash.	7	N/A	Plotted using topographical survey plan and GPS	350					1	M	G	F	40+	N/A	Field boundary hedgerow. Becoming outgrown, small trees developing. Access restricted limiting detailed measurements.	None required.	U	RPA 2.7m from edge of hedge.	N/A
H	65	Hawthorn, elder.	5.5	N/A	Plotted using topographical survey plan	350					1	M	G	F	40+	N/A	Field boundary hedgerow. Becoming outgrown, small multi-stemmed trees developing. Access restricted limiting detailed measurements.	None required.	U	RPA 2.7m from edge of hedge.	N/A
H	66	Hawthorn, elder.	1.8	N/A	Plotted using topographical survey plan and GPS	150					1	M	G	F	40+	N/A	Field boundary hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 1m from edge of hedge.	N/A
H	67	Hawthorn	3	N/A	Plotted using topographical survey plan and GPS	200					1	M	G	F	40+	N/A	Field boundary hedgerow sections, becoming outgrown at sides. Access restricted limiting detailed measurements.	None required.	U	RPA 1.1m from edge of hedge.	N/A
H	68	Hawthorn.	2	0.7	Plotted using topographical survey plan and GPS	220					1	M	G	F	40+	N/A	Field boundary hedgerow section remnants. Canopy generally c. 0.5 to 0.7 above ground, exposed stems beneath, browsing damage. Access restricted limiting detailed measurements.	None required.	U	RPA 1.8m from edge of hedge.	N/A
H	69	Elder, hawthorn.	2.2	N/A	Plotted using topographical survey plan and GPS	200					1	M	F	F	40+	N/A	Field boundary hedgerow. Gaps and dieback on outgrowing specimens at north. Access restricted limiting detailed measurements.	If retained, consider planting gaps with local provenance native hedging species.	U	RPA 1.8m from edge of hedge.	N/A
H	70	Hawthorn, elder.	3	N/A	Plotted using topographical survey plan and GPS	250					1	M	G	F	40+	N/A	Field boundary hedgerow. Access restricted limiting detailed measurements.	None required.	U	RPA 2.4m from edge of hedge.	N/A
H	71	Hawthorn.	4.5	N/A	Plotted using topographical survey plan	300					1	M	G	F	40+	N/A	Field boundary hedgerow, becoming outgrown, small multi-stemmed trees developing, particularly at south. Access restricted limiting detailed measurements.	None required.	U	RPA 2.2m from edge of hedge.	N/A
H	72	Cherry laurel.	1.7	N/A	Plotted using GPS	200					1	M	G	F	40+	N/A	Garden boundary hedge. Excellent vitality. Access restricted limiting detailed measurements.	None required.	U	RPA 1.5m from edge of hedge.	N/A
H	73	Hawthorn.	1.5	N/A	Plotted using topographical survey plan and GPS	120					1	M	F	F	40+	N/A	Recently cut, managed garden boundary hedge. Access restricted limiting detailed measurements.	None required.	U	RPA 0.9m from edge of hedge.	N/A
H	74	Hawthorn	5	N/A	Plotted using topographical survey plan	200					1	M	F	F	40+	N/A	Field boundary, unmanaged hawthorn hedgerow. Some dieback in places. Stem diameter estimated due to low canopy.	None required.	U	RPA 0.7m from edge of hedge.	N/A
H	75	Hawthorn.	4.8	N/A	Plotted using topographical survey plan and GPS	250					1	M	G	F	40+	N/A	Field boundary unmanaged hedgerow. Multi-stemmed small trees. Generally good vitality. Stem diameter estimated due to low canopy.	None required.	U	RPA 1.7m from edge of hedge.	N/A

H	76	Hawthorn	3.6	N/A	Plotted using topographical survey plan	300					1	M	F	F	40+	N/A	Linear, unmanaged field boundary hedgerow. Some dieback, otherwise reasonably good vitality. Access restricted by low canopies, detailed measurements limited.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	77	Hawthorn, dog rose.	4	N/A	Plotted using topographical survey plan	250					1	M	F	F	40+	N/A	Linear field boundary unmanaged hedgerow trees. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 0.2m from edge of hedge.	N/A
H	78	Hawthorn, dog rose.	3.6	N/A	Plotted using topographical survey plan and GPS	250					1	EM-M	G	F	40+	N/A	Linear field boundary unmanaged hedgerow. Good vitality. Access restricted by low canopy, limited detailed measurements.	None required.	U	RPA 0.7m from edge of hedge.	N/A
H	79	Hawthorn, dog rose.	3.5	N/A	Plotted using topographical survey plan and GPS	300					1	EM-M	F	F	40+	N/A	Field boundary unmanaged hedgerow. Good vitality generally, some dieback in places. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	80	Hawthorn.	4.9	N/A	Plotted using GPS	250					1	M	G	F	40+	N/A	Unmanaged hedgerow. Good vitality. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 1.2m from edge of hedge.	N/A
H	81	Hawthorn, dog rose.	6.6	N/A	Plotted using topographical survey plan and GPS	350					1	M	G	F	40+	N/A	Linear field boundary and roadside hedgerow. Multi-stemmed, unmanaged hedgerow trees. Good vitality. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA 0.7m from edge of hedge, except to the north to edge of pavement	N/A
H	82	Hawthorn, dog rose.	2.5	N/A	Plotted using topographical survey plan and GPS	250					1	M	G	F	40+	N/A	Linear field boundary unmanaged hedgerow. Good vitality. Access restricted by low canopy, detailed measurements limited.	None required.	U	RPA to edge of hedge.	N/A
H	83	Elder, Hawthorn	3.2	N/A	Plotted using topographical survey plan and aerial photography for eastern edge	130					1	EM	G	G	40+	N/A	Unmanaged hedgerow at site boundary. Good vitality throughout hedge.	None required.	U	RPA to edge of hedge.	N/A
H	84	Hawthorn	2.2	N/A	Plotted using topographical survey plan	140					1	EM	G	G	40+	N/A	Managed hedgerow at site boundary adjacent to neighbouring residential property. Good structure and vitality.	None required.	U	RPA 0.9m from edge of hedge.	N/A
H	85	Hawthorn, Elder	6.2	N/A	Plotted using topographical survey plan	300	240				2	M	G	G	40+	N/A	Unmanaged hedgerow of mature hawthorn with dog rose and ivy throughout. Hedge is broken into six distinct parts of similar attributes. Generally good vitality, except where ivy has restricted crown growth.	If retained, consider planting up gaps with native local provenance hedging species.	U	RPA 1.1m from edge of hedge.	N/A
H	86	Hawthorn, Elder, Hazel	1.9	N/A	Plotted using topographical survey plan and GPS	150					1	EM	G	F	40+	N/A	Hedgerow adjacent to boundary fence, partially managed. Good vitality throughout hedge.	None required.	U	RPA to edge of hedge.	N/A
H	87	Holly, Hawthorn, Sycamore	2.3	N/A	Plotted using topographical survey plan	90					1	SM	G	F	40+	N/A	Hedgerow adjacent to site boundary previously managed at approximately 1 8m in height. Good vitality in regrowth throughout hedge.	None required.	U	RPA 0.1m from edge of hedge.	N/A
H	88	Hawthorn, Wild cherry, Elder, Blackthorn	7.2	N/A	Plotted using topographical survey plan and GPS	230	160				2	EM-M	G	F	40+	N/A	Unmanaged hedgerow between fields. Browsing evident in lower part of hedge. Good vitality in upper.	None required.	U	RPA to edge of hedge.	N/A
H	89	Hawthorn, Elder, Forsythia, Cherry laurel	2.2	N/A	Plotted using topographical survey plan	140					1	EM	G	G	40+	N/A	Managed hedgerow with good vitality throughout adjacent to site boundary.	None required.	U	RPA 0.5m from edge of hedge.	N/A
H	90	Hawthorn	2.1	N/A	Plotted using topographical survey plan	130					1	EM	G	G	40+	N/A	Managed hedgerow adjacent to field. Good density throughout hedge.	None required.	U	RPA 0.3m from edge of hedge.	N/A
H	91	Hawthorn	6.8	N/A	Plotted using topographical survey plan	170	140				2	EM	G	G	40+	N/A	Hedgerow between fields with unmanaged height but pruned on east and west sides. Generally good vitality but end trees in poor physiological condition.	None required.	U	RPA 0.6m from edge of hedge.	N/A
H	92	Hawthorn, Elder, Ash	9.5	N/A	Plotted using topographical survey plan	220	280				2	EM	G	G	40+	N/A	Unmanaged hedgerow between fields. Good vitality throughout hedge. Evidence of browsing by horses.	None required.	U	RPA 1.1m from edge of hedge.	N/A
H	93	Hawthorn	6.8	N/A	Plotted using topographical survey plan and GPS	180					1	EM	G	G	40+	N/A	Unmanaged hedgerow between fields with evidence of browsing on both sides. Good vitality throughout upper hedge.	None required.	U	RPA 0.2m from edge of hedge.	N/A

W	1a	Ash, whitebeam, oak, elm, hazel, sycamore, hawthorn.	20	0 W	Plotted using GPS and aerial imagery	700					1	Y-M	F	F	40+	A	2,3	Small parcel of woodland, located directly adjacent north of Hermit Lane. Comprises small to large single and multi-stemmed trees. Understorey saplings present, comprising whitebeam, oak, sycamore, ash and elm - Stem diameters c. 5mm to 100mm. Ivy on most stems over c.50mm. Standing dead elm tree at south centre overhang layby, with other standing dead trees, inaccessible - likely also elm, to west of this - estimated at 3no - running as small row through from roadside to field at west. Some dieback on ash - sparse canopies along roadside at south of parcel, otherwise woodland parcel trees have generally have good vitality. Stem wounds on some trees visible, one tree noted as developing a cavity near base as a result of decay within a basal wound. Bat potential likely due to age and size of larger trees, decay wounds and at least one cavity visible from ground level, as well as standing dead trees at southwest and dieback on medium-sized ash trees. Stream running through western side of parcel, ground rises from this steeply to field at west and more gradually towards road and field at east. There is an oak tree at southeast near road with a severely leaning stem to north, which has self-corrected as it reached adjacent oak. This has resulted in two stems closely growing upwards. Ivy carpeting majority of ground within woodland parcel except where there are informal paths. Bluebells flowering during time of survey, with dog violet, cow parsley, docks, brambles, wood avens and cleavers. Some parts within woodland parcel and its canopy were inaccessible due to vegetation, ditches/watercourse at north, livestock in field at north and east, boundary fencing, and the busy road (Hermit Lane) at south. Canopy was plotted using GPS for majority of its length but where inaccessible completed using aerial imagery.	Fell dead elms adjacent to road within 6 months of survey. Re-inspect for safety/risk management purposes, particularly of trees along roadside, within 12 months. Consider management options to control ivy from a woodland management and arboricultural perspective.	L	RPA 0.3m from edge of canopy.	N/A
W	1b	Hazel, sycamore, hawthorn, ash, oak, field maple, alder, elm, horse chestnut, whitebeam.	15	0 E	Plotted using topographical survey plan, GPS and aerial imagery	1000					1	Y-M	G	F	40+	A	3;2	Ancient woodland along stream line. Small to medium-sized trees. Generally good vitality. Ash with some dieback. Oak with dieback at east. Dog rose, brambles along western edge under canopy edge along majority of perimeter. Brambles, dog rose, small ash, hawthorn and alder trees along western edge fence line beyond canopy surveyed separately. Alder on western edge of woodland, particularly adjacent wet waterlogged zones with dieback extensive, alder leaf beetle defoliation / leaf mining noted also on trees beyond canopy. Pond or wet area with reeds near south of western part, alder surrounding this on west, wet areas viewed from outside, not accessed. Canopy where not accessible estimated. Not all canopy extents and internal areas accessible due to stream, topography, barbed wire fencing, livestock, topography and vegetation, limiting detailed measurements.	Recommend al safety/risk management survey of the trees within falling distance of publicly accessible areas, within 12 months of survey.	L	RPA 3.6m from edge of canopy.	N/A

Appendix 2
Survey Methodology

Appendix 2
Survey Methodology

The following process has been followed and the features of each tree, group of trees or woodland have been recorded in the Arboricultural Data Sheets (See Appendix 1):

- Each individual surveyed tree (T), tree group (G), woodland (W) and hedgerow (H) was given a sequential reference number.
- Where a number of surveyed trees formed a cohesive feature, such as groups, woodland compartments or whole woodlands, they were recorded, assessed and plotted as groups (G) or as woodland (W). Whilst not every tree within groups are surveyed, a representative sample of the largest edge trees were measured in order to be able to plot the group or woodlands crown spreads and RPAs. Where detailed plans show development proposed within a group or woodland, all trees within influencing distance of the development proposals are usually recorded, plotted and assessed.
- The surveyed trees and hedgerows were then identified by their common and/or Latin name.
- Tree height measured in metres from the stem base using a TruPulse 200L laser. Where the ground has a significant slope, the higher ground is selected. This informs crown/stem ratio and shading.
- Crown height/ height of lowest branches is measured in metres above ground level using a TruPulse 200L laser and is an indication of the average height at which the main crown begins.
- Stem diameter is measured in millimetres at 1.5m above the adjacent ground level (upslope on sloping ground) with a standard diameter measuring tape to enable RPAs to be calculated.
- Crown spread is measured in metres using a TruPulse 200L laser and taken at the four-cardinal compass points to derive an accurate representation of the crown to be plotted on the TPP.
- Age class of the tree is described as:
    - Young – Newly planted trees and self-seeded trees;
    - Semi-mature – Large nursery stock that can be newly planted or self-seeded trees still in the early stages of establishment;

  - Early mature – Trees in the first third of their life cycle which is characterised by their quickness of growth and subsequently significant increase in size;
  - Mature – Trees in the second third of their life cycle, characterised by reaching their ultimate size and slowing of annual incremental growth;
  - Late mature – Trees in the final third of their life cycle, often characterised by showing signs of decline; and
  - Veteran – Trees that show ancient tree characteristics irrespective of their age, such as crown retrenchment and decaying wood habitat.

- Physiological condition is assessed and classed as G (good), F (fair), P (poor) or D (dead). This is an indication of the health of the tree and takes into account vitality, presence of disease and dieback.
- Structural condition is assessed and classed as G (good), F (fair) or P (poor). This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.
- Life expectancy is classed as: less than 10 years (<10), at least 10 years (10+), at least twenty years (20+) or at least 40 years (40+). This is an indication of the number of years before the removal of the tree is likely to be required.
- The trees were then classified in accordance with the BS5837:2012 tree quality assessment categories ‘A’, ‘B’, ‘C’ and ‘U’ (see category criteria and grading within Appendix 3).
- Comments include a brief description of the tree with comments on the form, vitality, health and any significant defects that may be present.
- Recommendations for work are based on the existing land use.

Appendix 3
Tree Categorisation Method

Appendix 3

Tree Categorisation Method

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	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	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	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	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	Trees with no material conservation or other cultural value	See Table 2

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

Appendix 4
General Tree Constraints

Appendix 4

General Tree Constraints

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

ground protection which enables access within the RPA, without causing long-term detriment to the health of the tree/s.

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

Appendix 5
Report Limitations

Appendix 5
Report Limitations

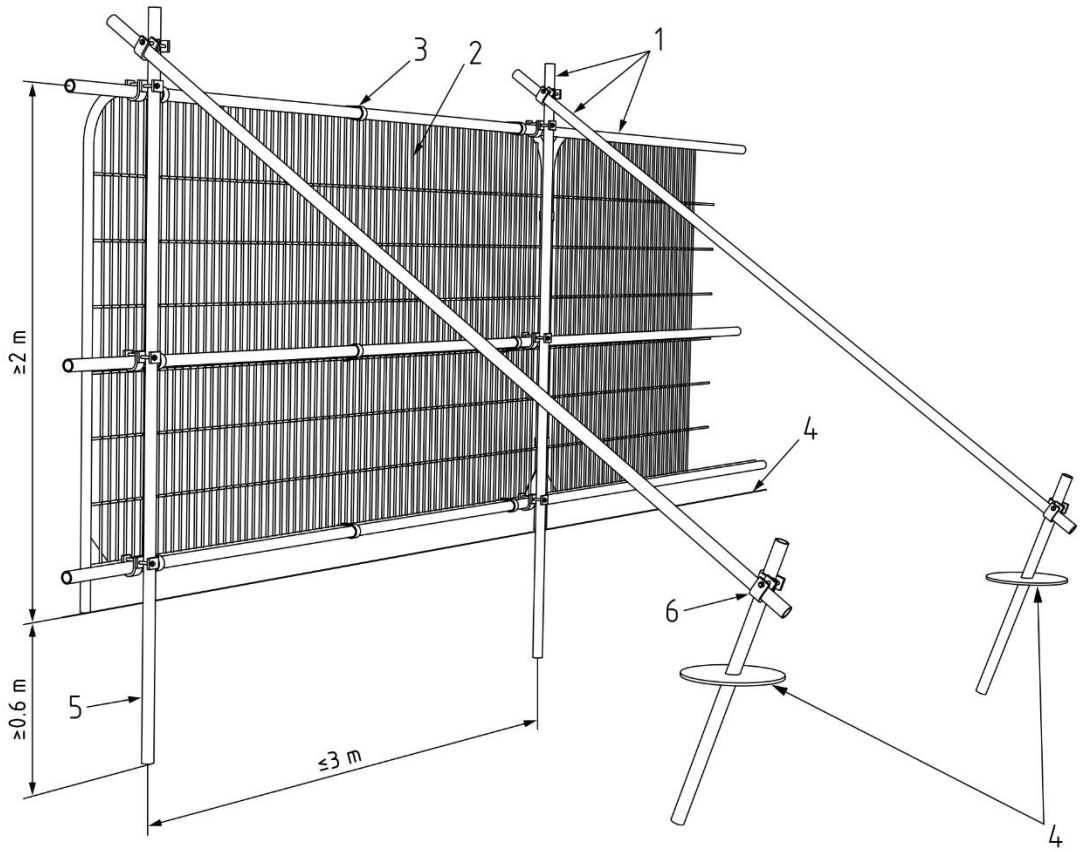
- Trees are influenced by a variety of environmental variables, which can affect the health of trees causing biomechanical and physiological changes. All comments made on tree health reflects their physical condition at the time of the survey. Due to the changeable nature of trees and other site/environmental conditions, which may influence trees, the preliminary management recommendations/ further works for the surveyed trees undertaken, which can be found in Appendix 1 of this report, are only valid for a period of 12 months from the last date of the Site survey (11/07/2023). These recommendations relate specifically to the general maintenance of tree health and safety and do not affect the implications of this Arboricultural Impact Assessment and therefore, the results of the survey remain valid beyond (11/07/2024).
- This AIA report and the associated TPP is based on a topographical survey plan supplied by the client. Where tree stem locations are not shown on the topographical survey, these are plotted using GPS plotting and/ or the utilisation of site features to manually plot the tree stem locations and canopy spreads for tree groups. Aerial photography is also utilised to plot tree group canopy spreads, where utilisation of GPS is not feasible. These methods provide a good representation of the surveyed trees; however, please note that the GPS used is not sub-metre accurate. WA cannot be held responsible for inaccurate tree locations, where we are not supplied with a topographical plan showing tree locations or where trees are not shown on the topographical survey plan supplied to us by the client.
- Although comments and recommendations on the safety of particular trees may have been made, this survey is not a Tree Risk Management Survey and thus should not be treated as such. All trees were surveyed from ground level only and in a solely visual nature. However, where trees have been identified as presenting an imminent safety risk due to structural defects, this has been brought to the attention of the client and treated as a separate matter. Should trees require further detailed assessment (decay detection, aerial inspections) and do not present an imminent safety risk, the information will be detailed within the survey schedules.
- Any management recommendations have been made in accordance with BS3998: 2010 Tree Works – Recommendations; and/or industry best practice. Works have been recommended in accordance with any statutory obligations on the landowners or occupiers.

- This survey did not include an ecological survey of vegetation or habitat areas. Any ecological issues incidentally observed during the survey are reported on in the tree schedule.
- For the purpose of this report no samples were obtained from Site for analysis or any other reason.
- The survey did not include soil sampling or assessment.

Appendix 6
Tree Protection Fencing

Appendix 6

Tree Protection Fencing



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Appendix 7

Tree Protection Signage

Appendix 7

Tree Protection Signage

Appendix 8
Glossary of Common Terms Used in Arboriculture

Appendix 8

Glossary of Common Terms Used in Arboriculture

Abscission. The shedding of a leaf or other short-lived part of a woody plant.
Abiotic. Pertaining to non-living agent's e.g. environmental factors.
Absorptive Roots. Non-woody short-lived roots, generally having a diameter less than one millimetre, the primary function of which is the uptake of water and nutrients.
Access Facilitation Pruning. One off pruning operation to provide access for development operation. Pruning that will not be detrimental to trees health or amenity.
Arboricultural Method Statement (AMS). A methodology for the implementation of development where encroachment within the RPA has the potential to cause damage or loss of retained trees.
Arboriculturist. Someone who through relevant training and experience has gained knowledge in the expertise of trees.
Adaptive Growth. The process by where wood formation rates increasing in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium.
Adaptive Roots. The adaptation of existing roots; or a production of new roots in response to damage or decay.
Adventitious Buds, Roots, Shoots. Which grow in other than primary apical control.
Anchorage. The process in which a tree uses its roots system to support itself within the soil structure.
Ancient: A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species.
Arisings. Parts of the tree that has been removed for disposal, branches, leaves, roots etc.
Canker. Area of dead cambium killed by overlying pathogenic tissues.
Cavity. A hole in the woody structure of the tree; often caused through decay.
Cleaning Out. The removal of dead, diseased crossing branches, damaged branches and alien structures.
Competent Person. Person with training and experience in accordance with the proposed matter being addressed, having an understanding of a particular matter being approached.
Condition. An indication of the physiological vitality of a tree, but not the stability of a tree.
Construction. A Site based operation that has the potential to affect retained trees.
Construction Exclusion Zone. An area based on the RPA from which construction activity is prohibited.
Coppicing. Removal of all aerial parts of the tree leaving a stump for regeneration of new shoot.
Crown/Canopy. The parts of the tree that supports the leaves.
Crown Lifting. The removal of limbs and small branches to a specified height above ground level.
Crown Thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density well balanced crown structure.
Crown Reduction/Reshaping. Removal in the height to a specified description to maintain a flowing crown structure.
Deadwood. Non-functional branches which no longer support natural growing conditions of the tree but may be beneficial for the support of habitats and species, possibly including rare saproxylic invertebrates. Thus, may also be referred to as 'Decaying Wood Habitat' or 'Dysfunctional wood'. Size ranges for deadwood referred to in this report and/or Appendix 1: - Small (<75 mm diameter), Medium (76 – 150 mm), Large (151-

300) mm and very large >301 mm. For some species such as oak etc, the risk of deadwood falling from the tree can be lesser than for other species, due to the variety of wood strengths of different tree species.
Defect. Any area of the tree that no longer has an optimal mechanical uniformity of stress. Defects may or may not affect the long-term retention of the tree(s), depending upon severity, the likelihood of the defect(s) failing and the location of the tree(s) (Target).
Dieback. Death of woody parts of the tree starting at distal ends of the tree.
Disease. Damage occurring to living organisms as a result of pathogenic micro-organisms.
Distal. Furthest distance away from the main body of the tree.
Dysfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood.
Epicormic Growth. Growth from dormant or adventitious buds, not developing from the first shoot.
Girdling Roots. A circling root which constricts the stem or roots, with the potential to cause death and the restriction of flow within the phloem.
Heartwood. Dysfunctional xylem which no longer has conductive properties, but which has become an integral structural part of the tree.
Heave. The swelling of shrinkable clay soils, often when vegetation has been removed allowing soil rehydration to develop, with the potential for listing structures (e.g. walls).
Included Bark/Acute Forks. Face to face contact of bark usually at fork unions, or branch unions.
Lopping/Topping. A term used to describe the removal of large sized branches
Monolith. Removing some or most of the trees crown and sometimes the upper stem, in order to retain as much of the tree as standing deadwood habitat for ecological reasons.
Pathogen. A micro-organism that causes disease within another organism.
Phytotoxic. Toxic to plants.
Pollarding. The removal of the tree canopy to produce knuckles where new growth develops and is removed cyclically usually performed on young trees.
Pruning. Selective removal of parts of the tree to achieve a desired outcome.
Root Protection Area (RPA). An area around a tree identified by multiplying the stem diameter at 1.5 m from ground level by 12 to produce a radial area or rooting volume around a tree to be protected Ref. BS 5837: 2012.
Service. Any above and below ground structure or apparatus for utility provision.
Size of part. Relating to risk assessments, identifying the size of the hazard, or parts of a tree which may cause harm if failure occurs.
Stem(s). The main structure from the ground up supporting the crown.
Stress. In plants, the physiological depletion as a result of environmental influences.
Structure. A manufactured object, such as building, roads, path, wall or excavated structures.
Structural Roots. The primary larger diameter roots which hold and support the aerial parts of the tree.
Subsidence. The shrinkage of soil through the absorption of water via vegetation and the sinking effects on surrounding architectural structures.
Targets. In risk assessment, persons or property at risk of harm as a result of a hazard (falling tree, branch, etc.).
Transitioning Veteran Trees: Trees with some veteran features, but not sufficient veteran features to be considered full veteran trees. They contribute to the veteran tree resource and, through the ageing process

are expected to become true veterans in time, before which they offer bridge and continuity habitat for important saproxylic invertebrates and fungi.
Tree Protection Plan (TPP). A scaled drawing informed by descriptive text where necessary, based upon finalised Site proposals, showing trees for retention and illustrating the tree and landscape protection measures.
Veteran Tree. Tree that, by recognized criteria, shows features of biological, cultural or aesthetic characteristics of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.
Windthrow. The blowing over a tree at its roots.

DRAWING

KEY

- SITE APPLICATION BOUNDARY
- HEDGE
- SCRUB
- TREES REMOVED DUE TO CONDITION AND/OR TO ENABLE DEVELOPMENT
- EXTENT OF PRUNING
- LOCATION OF TREE PROTECTION FENCING
- PROPOSED NO DIG HARD SURFACING

TREES

Quality categories based on BS5837:2012 Trees in relation to design, demolition and construction - Recommendations
RPA - Root Protection Area
Where RPA is not visible it extends to the same distance as the canopy
The original of this drawing was produced in colour - A monochrome copy should not be relied upon.

- CATEGORY A CROWN SPREAD
- CATEGORY B CROWN SPREAD
- CATEGORY C CROWN SPREAD
- CATEGORY U CROWN SPREAD
- ROOT PROTECTION AREA
- VETERAN TREE AND ANCIENT WOODLAND BUFFER ZONE
- T1/G1/W1/H1 TREE/TREE GROUP/WOODLAND/HEDGE NUMBER
- POTENTIAL DIRECT OBSTRUCTION OF SUNLIGHT

KEY - LANDSCAPE MASTERPLAN

- Drainage Easement (6m as indicated)
- Active Travel Route (multi-user path with max gradient of 1:21)
- Recreational Route (Non multi-user path)
- Bark Mulch Route (Through Ancient Woodland)
- Boardwalk / Bridge
- Steps
- Formal Play (NEAP / LEAP)
- Informal Play
- Allotments
- Community Orchards
- Existing Trees Retained
- Trees
- 15m Buffer for Ancient Woodland
- Existing Hedgerow Retained
- Proposed mixed 'Native' Hedgerow / Hedge
- Proposed Swale
- Permanent Water Body
- Wet Meadow
- Ornamental Planting
- 'Traditional' Wildflower Meadow
- Amenity Grass (Short mown)
- Species Rich Grass
- Rocky Gorse / Shrub
- Wet Scrub Planting
- Reedbeds
- Native Shrub / Scrub Planting
- Woodland Planting (Mixed deciduous & evergreen species)

KEY - MAIN INFRASTRUCTURE DRAINAGE STRATEGY

- SuDS EARTHWORK PROFILE
- PROPOSED SW DRAINAGE
- PROPOSED FW DRAINAGE
- RISING MAIN

KEY - PROPOSED SW/FW/LD COMMERCIAL DEVELOPMENT DRAINAGE

- PROPOSED SURFACE WATER PIPE
- PROPOSED SURFACE WATER MANHOLE
- PROPOSED FOUL WATER PIPE
- PROPOSED FOUL WATER MANHOLE
- PROPOSED DRAINAGE CHANNEL
- PROPOSED KERBDRAIN
- RG PROPOSED ROAD GULLY
- RWP PROPOSED RAINWATER PIPE
- SRWP PROPOSED SYPHONIC RAINWATER PIPE
- WPC PROPOSED WASTE POINT CONNECTION
- EXISTING SURFACE WATER PIPE
- EXISTING SURFACE WATER MANHOLE
- EXISTING FOUL WATER PIPE
- EXISTING FOUL WATER MANHOLE

REFERENCED DRAWING(S):

STRATEGIC LANDSCAPE MASTERPLAN, P1175A-00-021-GIL-0100-09

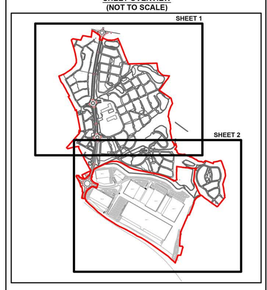
MAIN INFRASTRUCTURE DRAINAGE STRATEGY, Q020868-00-400 TO 402

FW DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1452 S4 P02

SW DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1453 S4 P02

LAND DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1454 S4 P02

SHEET OVERVIEW (NOT TO SCALE)



REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
A	FIRST ISSUE	06/11/23	SAB	MS	MS

CLIENT

STRATA STERLING BARNSLEY WEST LTD

PROJECT

BARNSLEY WEST

DRAWING TITLE

TREE PROTECTION PLAN
SHEET 1 OF 2

DRG No.	LD10361-030	REV	A
DRG SIZE	A0	SCALE	1:1250
DATE	21/07/2023		
DRAWN BY	SJB/MAB	CHECKED BY	MS
APPROVED BY	MS		

wardell armstrong

N:\2NL\210301 - BARNSLEY WEST BNG\03 - DESIGN\AUTOCAD\LD\10361-030-A TREE PROTECTION PLAN.DWG

KEY

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- HEDGE
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- ROOT PROTECTION AREA
- VETERAN TREE AND ANCIENT WOODLAND BUFFER ZONE
- T1/G1/W1/H1 TREE/TREE GROUP/WOODLAND/HEDGE NUMBER
- POTENTIAL DIRECT OBSTRUCTION OF SUNLIGHT

KEY - LANDSCAPE MASTERPLAN

- Drainage Easement (6m as indicated)
- Active Travel Route (multi-user path with max gradient of 1:21)
- Recreational Route (Non multi-user path)
- Bark Mulch Route (Through Ancient Woodland)
- Boardwalk / Bridge
- Steps
- Formal Play (NEAP / LEAP)
- Informal Play
- Allotments
- Community Orchards
- Existing Trees Retained
- Trees
- 15m Buffer for Ancient Woodland
- Existing Hedgerow Retained
- Proposed mixed 'Native' Hedgerow / Hedge
- Proposed Swale
- Permanent Water Body
- Wet Meadow
- Ornamental Planting
- 'Traditional' Wildflower Meadow
- Amenity Grass (Short mown)
- Species Rich Grass
- Rocky Gorse / Shrub
- Wet Scrub Planting
- Reedbeds
- Native Shrub / Scrub Planting
- Woodland Planting (Mixed deciduous & evergreen species)

KEY - MAIN INFRASTRUCTURE DRAINAGE STRATEGY

- SuDS EARTHWORK PROFILE
- PROPOSED SW DRAINAGE
- PROPOSED FW DRAINAGE
- RISING MAIN

KEY - PROPOSED SW/FW/LD COMMERCIAL DEVELOPMENT DRAINAGE

- PROPOSED SURFACE WATER PIPE
- PROPOSED SURFACE WATER MANHOLE
- PROPOSED FOUL WATER PIPE
- PROPOSED FOUL WATER MANHOLE
- PROPOSED DRAINAGE CHANNEL
- PROPOSED KERBDRAIN
- RG PROPOSED ROAD GULLY
- RWP PROPOSED RAINWATER PIPE
- SRWP PROPOSED SYPHONIC RAINWATER PIPE
- WPC PROPOSED WASTE POINT CONNECTION
- EXISTING SURFACE WATER PIPE
- EXISTING SURFACE WATER MANHOLE
- EXISTING FOUL WATER PIPE
- EXISTING FOUL WATER MANHOLE

REFERENCED DRAWING(S):

STRATEGIC LANDSCAPE MASTERPLAN, P11754-00-001-GIL-0100-09

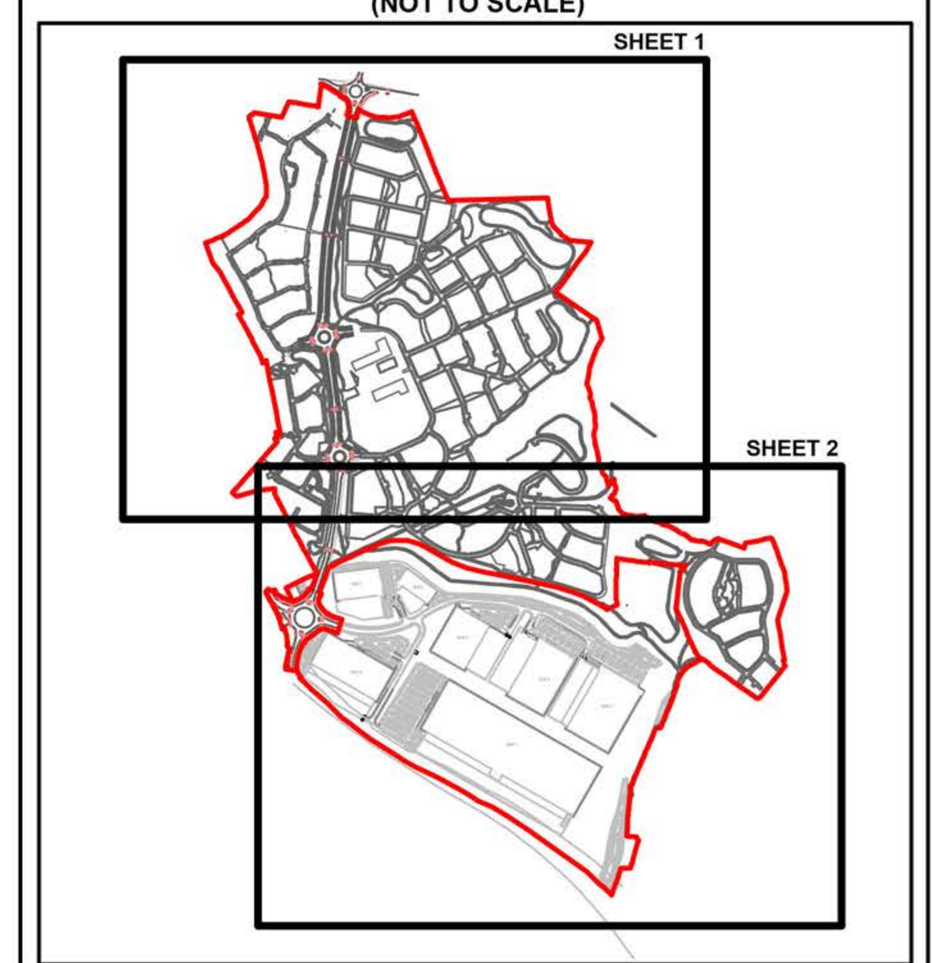
MAIN INFRASTRUCTURE DRAINAGE STRATEGY, QD2088-00-400 TO 402

FW DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1452 S4 P02

SW DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1453 S4 P02

LAND DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE, 4848-JPG-ZZ-ZZ-M2-D-1454 S4 P02

SHEET OVERVIEW (NOT TO SCALE)



REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
A	FIRST ISSUE	08/11/23	MAB	MS	MS

CLIENT

STRATA STERLING BARNSLEY WEST LTD

PROJECT

BARNSLEY WEST

DRAWING TITLE

TREE PROTECTION PLAN
SHEET 2 OF 2

DRG No. LD10361-030	REV A	SUIT. CODE
DRG SIZE A0	SCALE 1:1250	DATE 21/07/2023
DRAWN BY SJB/MAB	CHECKED BY MS	APPROVED BY MS

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