

Alleston Solar Farm, Pembrokeshire

Arboricultural Impact Assessment

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Alleston Solar Farm

Arboricultural Impact Assessment

On behalf of **Alleston Clean Energy Limited**

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Contents

1	Executive Summary	1
2	Introduction	2
	2.2 Design Proposals	2
	2.3 Site Description	3
	2.4 Scope of the report	4
	2.5 Limitations	4
	2.6 Legal constraints	4
	2.7 Wildlife constraints.....	5
	2.8 Ancient and Veteran Trees.....	5
3	Tree Survey Methodology	7
	3.1 Tree ID Number.....	7
	3.2 Species.....	7
	3.3 Height	7
	3.4 Stem Diameter.....	7
	3.5 Branch Spread.....	7
	3.6 Existing Height Above Ground Level.....	7
	3.7 Life Stage	7
	3.8 General Observations	8
	3.9 Preliminary Management Recommendations	8
	3.10 Estimated Remaining Contribution.....	8
	3.11 Tree Category Grading.....	8
	3.12 Root Protection Area (RPA)	9
4	Tree Survey Results.....	10
	4.1 Tree Quality Assessment Summary.....	10
5	Impact appraisal and recommendations for tree protection	11
	5.1 Tree Removals	11
	5.2 Mitigation planting.....	11
	5.3 Works taking place within RPAs of retained trees	11
	A/C cabling	11
	Installation of permanent site fencing.....	11
	New tracks.....	12
6	Proposed Tree Protection	13
	6.1 Tree Protection Fencing	13
7	Other Considerations.....	15
	7.1 Storage of Fuels and Chemicals	15
	7.2 Storage of Materials	15
	7.3 Level changes	15
	7.4 Construction vehicle access.....	15
	7.5 Utility installations.....	15
8	Conclusions.....	16

9	References	17
Appendix A	Site Location Plan	18
Appendix B	Tree Survey Schedule	19
Appendix C	Tree Constraints Plan	20
Appendix D	Tree Protection Plan	21

1 Executive Summary

- 1.1.1 This assessment describes the known arboricultural features and potential impacts upon them at and around the location of a proposed new asset, comprising construction of a solar farm on Land at Alleston Farm, Lower Lamphey Road, Lamphey, Pembrokeshire (the Site).
- 1.1.2 The UK planning framework, including guidance given by Planning Policy Wales, requires that arboricultural assets which may be affected by these proposals are considered. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The effects of proposed development on trees are therefore a material consideration in dealing with planning applications, and this is normally reflected in local development planning policies. Planning should recognise the intrinsic beauty of the countryside, and the wider benefits from natural capital and ecosystem services, including the economic and other benefits of trees and woodland. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads, and National Landscapes (formerly Areas of Outstanding Natural Beauty). Development resulting in the loss 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.
- 1.1.3 There is an area of woodland in the centre of the Site that is identified in the Natural Resources Wales Ancient Woodland Inventory as 'Ancient or Semi Natural Woodland'. This includes trees T21, T22, T63, T64, T88, G6, G19, W1, W2. A search of the Woodland Trust Ancient Tree Inventory showed one individual veteran tree within the site boundary; however, the survey identified no trees in the exact location. The survey did identify one unregistered ancient specimen on the site (T87).
- 1.1.4 In line with the requirements of BS5837: Trees in Relation to Design, Demolition and Construction (2012), Alleston Clean Energy Limited commissioned Stantec to provide arboricultural advice in relation to the Scheme. A full arboricultural survey of the site was conducted between 11th and 15th December 2023, with an additional survey carried out between 31st January and 2nd February 2024.
- 1.1.5 The tree survey identified a total of 255 tree features including 162 individual trees, 45 groups of trees, 43 hedges and five woodlands which have the potential to be impacted by the development proposals. Each tree was awarded a quality rating from A – U in accordance with the recommendations contained within Table 1 of BS5837: Trees in Relation to Design, Demolition and Construction (2012). Thirteen tree features were categorised as high A grade, 97 tree features were categorised as moderate B grade, and 128 were categorised as low C grade. Seventeen tree features were categorised as very low quality U grade and should not be considered a constraint to any development proposals.
- 1.1.6 Three small sections of hedgerow (H7, H8 and H16) and two small sections of tree groups (G8 and G11) will require removal to facilitate the Development. H28 & H31 will be trimmed back due to widening of a gate to facilitate a proposed road. Most trees will not be directly impacted by the proposals, however, to ensure the retained trees remain protected throughout the course of works, a range of mitigation measures are recommended including installation of tree protection fencing for those trees potentially affected, facilitation pruning, and manual excavations. The full extent of required tree protection measures can only be confirmed once a final site layout is produced.
- 1.1.7 Pembrokeshire County Council confirmed that several trees at the Site are protected by TPO. These include A grade trees T21, T63, T64, T87, T88, T90, G19, W1; B grade trees T6, T8-T13, T15, T16, T22, G6, W2; and C grade trees T89, G10, G13, G17, H15. In addition, Pembrokeshire Coast National Park TPO map identified A grade tree T149 and B grade tree T147 along Lower Lamphey Road as protected by TPO. The site is not within a Conservation Area.

2 Introduction

- 2.1.1 This report has been prepared by Stantec on instruction from Alleston Clean Energy Limited to provide a tree survey, arboricultural impact assessment and tree protection plan in accordance with BS5837: Trees in Relation to Design, Demolition and Construction (2012) on Land at Alleston Farm, Lower Lamphey Road, Lamphey, Pembrokeshire.
- 2.1.2 The purpose of this report is to clearly identify the significant trees and hedges that may be impacted by the development, the quality and value of the vegetation, the effect that the stages of the development could have on existing vegetation, the significance of such impact in landscape terms, and to suggest appropriate methods to be adopted in order to mitigate any potentially negative impacts on existing trees and hedges.
- 2.1.3 The survey was carried out between 11th and 15th December 2023, with an additional survey carried out between 31st January and 2nd February 2024. The results are provided in the Tree Survey Schedule in Appendix B.

2.2 Design Proposals

- 2.2.1 A Development of National Significance (DNS) application is proposed for the construction, temporary operation, and decommissioning of a solar farm and associated equipment such as inverters, transformer stations, substation, fencing, CCTV, weather monitoring stations and cabling. The solar farm will connect to the grid via a 132kV overhead wooden pole, located within the site. The solar farm Development will have an operational lifespan of 40 years from the date of first export of electricity, after which it will be decommissioned.
- 2.2.2 The solar photovoltaic (PV) panels will have an anti-reflective coating. They will be ground mounted to a piled frame made of galvanized steel or aluminium. The PV panels will be crystalline silicon. Either monofacial or bifacial modules will be used.
- 2.2.3 The PV modules will be installed on a fixed tilt structure, facing south. Key features of the installation which should be noted, and which arise from the topography of the Site. Attention is drawn to the following key points:
- The fixed tilt range is 10-25 degrees from the horizontal.
 - The spacing between the rows will range from 2.5-5 metres.
 - The lowest part of the structure will be about 0.8 metres above ground level.
 - The highest point of the structure will range from about 3 metres to a maximum of 3.4 metres above ground level. However, at topographical high points within the Site the highest point of the structure will not be more than 3 metres above ground level.
- The variations just described will not be noticeable to viewers looking into the Site.
- 2.2.4 The mounting posts for the support structure are pile driven into the ground at a depth of 0.5–4.5 metres below ground level, depending on the ground condition, the optimum pile depth will be determined by a survey to be carried out prior to construction.
- 2.2.5 CCTV cameras will be mounted on posts 5m tall, and positioned at appropriate intervals to ensure that the entire perimeter fence is monitored. Up to 3 weather stations will be installed to measure performance and these will be up to 5m in height.
- 2.2.6 The perimeter fencing for the development will consist of deer type fencing and gates of up to 2m in height. The fence will be offset by 100mm from the ground to allow passage of small animals and will include mammal gates at appropriate intervals.
- 2.2.7 Internal tracks to allow vehicular access between fields will be constructed of compacted crushed stone, utilising existing internal gateways/gaps where possible. For single tracks, the width typically ranges between 3.5-4 metres whereas a 2-way track would be up to 6 metres wide.

2.2.8 Substation/HV Compound

An HV substation compound will be located in the centre (~51.665852, 4.890311) of the Site and will provide the infrastructure to connect the solar farm to the electrical grid via a 132kV overhead line within the Site area. The substation/HV compound, will be surrounded by a palisade fence with an electric fence and additional stock fence. Furthermore, a communication mast is potentially required to service the substation. The mast would not be a prominent feature and details can be provided prior to development commencing, if necessary.

2.2.9 MV Switchgear Room/Edge of Park Switchgear Station

The MV switchgear room accommodates the switchgear panels to protect the equipment and allow safe isolation of the MV electrical circuits.

2.2.10 Monitoring / Control Building

A monitoring cabin/building will be located next to the HV Compound. The cabin will house the telecommunications/control/SCADA and security system equipment (CCTV), to enable 24-hour remote monitoring of the Site to identify any faults and to relay CCTV footage to an external security company.

2.2.11 Temporary construction compound

A construction compound, providing an area for temporary storage, unloading of trucks and the necessary parking and welfare facilities for the workers on site will be installed and subsequently removed once the construction has been completed.

2.2.12 The road layout would allow sufficient room for deliver vehicles to manoeuvre, unload their cargoes and exit in a forward gear. The compound would provide parking for light vehicles and HGVs undertaking deliveries to unload. A temporary permeable stone surface will be used for the compound.

2.2.13 Storage containers

Two 40ft shipping containers will be installed to provide storage space for the solar farm.

2.2.14 Grid connection

Onsite grid connection into 132kV overhead line (OHL). Alleston Farm will connect to the Pembroke GSP via a tee-in arrangement at or near pole 82 of the Pembroke to Golden Hill 132kV circuit located within the site. A new 132kV circuit, underground cable (UGC), will be constructed between this point of connection and Alleston Farm.

2.3 **Site Description**

2.3.1 The Site encompasses approximately 96 hectares (ha) and comprises primarily of numerous agricultural fields with separated by rows of mature hedgerows.

2.3.2 Alleston Farmhouse, a Grade II Listed building, together with its associated buildings is located within the centre of the Site and is accessed from the north along Lower Lamphey Road and the west along Watery Lane, both unnamed tracks. It is proposed to use the existing northern access from Lower Lamphey Road as the access to the Site. Some of the eastern fields within the Site are currently used for equestrian activities, which will continue throughout the lifespan of the solar farm. An area of mature trees and vegetation are located within the south-western region of the Site and run into the central region of the Site, this collection of trees is known as Alleston Wood, there are no plans to remove any of these trees. In terms of topography, the Site slopes from highpoints in south and west towards the north and east. Two unnamed watercourses are located in the north of the Site, as well as a watercourse running alongside the southwestern boundary.

2.3.3 There are two Public Right of Ways (PRoW) which cross and meet in the centre of the Site. The first PRoW (SP32/52) runs to the western boundary of the Site and is accessible via Watery Lane. This PRoW connects to a bridleway (SP32/68) which borders the west of the Site and runs in a north-south direction, on Watery Lane. The second PRoW (SP32/51) runs in a north-south direction across the northern and southern area of the Site. This PRoW will be diverted to

the southwestern edge of the farm's boundary via a Secondary Consent submitted alongside the main application.

- 2.3.4 There are overhead 132 kilovolt (kV) powerlines crossing the Site within the north-western region of the Site. The overhead powerlines are approximately 45m in height. The Site comprises Alleston Farm, which is located in Pembrokeshire. The residential dwellings of Pembroke are 190m north-west of the Site whilst the village of Lamphey is located in 370m to the north-eastern corner of the Site. The current land use is agricultural and the undulating land creates streams and wetlands in the lower areas resulting in the presence of a variety of native species.
- 2.3.5 A small woodland in the centre of the Site is designated as "Ancient semi natural" on the Natural Resources Wales Ancient Woodland Inventory. The majority of the specimens on the Site are ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), and elm (*Ulmus procera*).
- 2.3.6 One veteran tree was identified during the survey (T87).

2.4 Scope of the report

- 2.4.1 This report is only concerned with trees in relation to design, demolition and construction. It includes an assessment based on the site visit and documents provided, namely the proposed layout plan SKUKX-ALLES-000-PVL-102K (20240823) External Release Drawing. This report is not a full hazard or risk assessment of trees and should not be used as such.
- 2.4.2 Aerial tree inspection, invasive procedures, sub-soil investigations and detailed soil analysis are outside the scope of this report.
- 2.4.3 All trees directly affected by the development have been considered, even where they are situated outside of the development boundary.

2.5 Limitations

- 2.5.1 The Tree Protection Plan (TPP) contained in Appendix C has been developed from the tree survey information and the tree locations identified using GPS and an aerial topographical survey. The accuracy of tree positions cannot be guaranteed; therefore it is strongly advised that where any potential conflict exists, the locations and RPA extents of trees are confirmed on the Site prior to commencement of works.
- 2.5.2 The recommendations made in this report are only relevant to the layout shown on the TPP. The level of arboricultural impact may increase or decrease depending on the final site layout.
- 2.5.3 Trees are living organisms and as such their condition will vary over time. This report and recommendations are limited to observations made on the date of inspection. The report and survey information are valid for a maximum period of two years.

2.6 Legal constraints

- 2.6.1 Local Planning Authorities (LPAs) have the power to preserve selected trees and woodlands through the making of Tree Preservation Orders (TPOs). Similarly, special provision is provided to trees located within Conservation Areas (CAs) which are not the subject of a TPO. The LPAs powers to do this are provided by the following Act of Parliament and its associated regulations:
- Town and Country Planning Act 1990
 - The Town and Country Planning (Trees) Regulations 1999 (as amended by The Town and Country Planning (Trees) (Amendment) (Wales) Regulations 2017)

- 2.6.2 The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without first obtaining the consent of the relevant Local Authority.
- 2.6.3 Where works to trees within a CA are proposed, six weeks notification must first be given to the relevant Local Authority.
- 2.6.4 Breach of a TPO is an offence carrying a fine of up to £20,000, or an unlimited fine in very serious cases. Local planning authorities can also seek injunctions to stop work if there is a threat of contravention of a TPO.
- 2.6.5 Pembrokeshire County Council have confirmed that several TPOs affect trees within the survey boundary. These are A grade trees T21, T63, T64, T87, T88, T90, G19, W1; B grade trees T6, T8-T13, T15, T16, T22, G6, W2; and C grade trees T89, G10, G13, G17, H15. In addition, Pembrokeshire Coast National Park TPO map identified A grade tree T149 and B grade tree T147 along Lower Lamphey Road as protected by TPO. The Site is not within a Conservation Area.

2.7 Wildlife constraints

- 2.7.1 Various habitats and species of plant, bird and animal in England and Wales are afforded legal protection by the following pieces of legislation:
- Wildlife and Countryside Act 1981 (as amended)
 - Natural Environment and Rural Communities Act 2006 (NERC Act)
 - Conservation of Habitats and Species Regulations 2017 (as amended)
 - Protection of Badgers Act 1992
 - The Hedgerows Regulations 1997
- 2.7.2 Protected animal species include, but are not limited to great crested newt, reptiles (all species), wild birds (all species), bats (all species), red squirrel, hazel dormouse, water vole, badger and otter.
- 2.7.3 For birds it is an offence to take or harm them, their nests (whilst in use or being built) or their eggs.
- 2.7.4 Protected species must be considered prior to any tree or development works being carried out. Tree work and the timing of tree work should be carefully considered.

2.8 Ancient and Veteran Trees

- 2.8.1 An ancient tree is a tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. Ancient trees have reached a great age in comparison with others of the same species. A veteran tree is one with exceptional biodiversity, cultural and heritage value that has developed some of the features found on an ancient tree, not necessarily as a consequence of time, but of its life or environment (Woodland Trust, 2008).
- 2.8.2 Natural Resources Wales and the Forestry Commission provide 'standing advice' for ancient woodland, ancient trees and veteran trees in addition to the advice and guidance provided in BS5837:2 The BS 5837 Tree Survey, PEA and/or EclA assessments should be used to inform the stand-off or protection zone for each individual woodland and veteran and ancient trees.

Some zones may only require a root protection area to prevent negative impacts on individual trees or groups of trees, and others are likely to extend further.

- 2.8.3 Where possible, a stand-off or protection zone should contribute to wider ecological networks and be part of the green infrastructure of the area. It should consist of retained semi-natural habitats such as woodland and/or a mix of native scrub, grassland, heathland and wetland. Developers should consider if public access is appropriate and only allow access on foot to stand-off or protection zones if the habitat is not harmed by trampling.
- 2.8.4 Development resulting in the loss of irreplaceable habitat such as Ancient and Veteran trees should be refused unless there are exceptional reasons and a suitable compensation strategy exists.
- 2.8.1 There is an area of woodland in the centre of the Site that is identified in the Natural Resources Wales Ancient Woodland Inventory as 'Ancient or Semi Natural Woodland'. This includes trees T21, T22, T63, T64, T88, G6, G19, W1, W2. A search of the Woodland Trust Ancient Tree Inventory showed one individual veteran tree within the Site boundary, however the survey identified no trees in the location. The survey did identify one unregistered ancient specimen on the Site (T87).

3 Tree Survey Methodology

3.1 Tree ID Number

3.1.1 Tree identification numbers are relevant to plans and drawings included in this report.

3.2 Species

3.2.1 Species of tree as identified on the Site. The English common name is used, accompanied by the scientific species name where this is deemed necessary for clarification. In some cases it can be difficult to identify the exact species. The abbreviation 'sp.' is used where only the genus is known.

3.3 Height

3.3.1 Total height of tree measured to the nearest metre (or half metre for trees below 10m height) using a laser measurer or estimated where necessary.

3.4 Stem Diameter

3.4.1 Diameter of tree at breast height (1.5m) for single-stemmed trees. For multi-stemmed trees with 2-5 stems, each stem is measured at 1.5m above ground level and recorded, whilst for trees with 6 or more stems, an average stem diameter is recorded. Measured in mm, this figure allows calculation of the root protection area (RPA) as described in Section 3.12 of this report. Off-site or otherwise inaccessible trees where accurate measurements cannot be obtained have been given estimated diameters.

3.5 Branch Spread

3.5.1 Measured at 4 points (N, E, S, W) to determine shape of canopy. Measurements are rounded up to the nearest metre or half metre as appropriate. Canopy dimensions may impact on site layout or recommended routes for site vehicles and are therefore accurately represented on the accompanying plans.

3.6 Existing Height Above Ground Level

3.6.1 (1). Height in metres of the first significant branch, and the direction of growth.

(2). Height in metres of lowest part of crown.

3.7 Life Stage

3.7.1 Life stage is an estimation based on outward physical appearance. It has relevance to calculating safe useful life expectancy and current ecological or amenity value.

3.7.2 Young (Y)

Young trees typically within the first 10 years of growth that can be easily transplanted, but as yet of limited significance in the landscape.

3.7.3 Semi-mature (SM)

Well established trees with significant growth but not yet mature. Trees in this category will typically have reached less than 1/3 of their life expectancy.

3.7.4 Early-mature (EM)

Trees in the early stages of maturity with high growth potential. These trees will typically have reached 1/3 - 2/3 of their life expectancy.

3.7.5 **Mature (M)**

Trees likely to have reached, or almost reached the maximum height and spread for the species and growing conditions. Growth rates for mature trees are generally much lower than those of younger trees.

3.7.6 **Over-mature (OM)**

Trees that have passed maturity and are either in or liable to decline. Growth is slower or crown retrenchment may be occurring. Trees in this category may have high environmental or cultural value.

3.8 **General Observations**

3.8.1 Any relevant observations are recorded, with particular reference to structural and/or physiological condition.

3.9 **Preliminary Management Recommendations**

3.9.1 Recommendations are made where management work is required for reasons of health and safety or sound arboricultural management.

3.10 **Estimated Remaining Contribution**

3.10.1 This is determined by expected lifespan of the species, current life stage, structural and physiological condition. The information is used for tree categorisation and quality assessment and is recorded in bands of either <10 years, 10+ years, 20+ years or 40+ years.

3.11 **Tree Category Grading**

3.11.1 The assessment conforms to BS5837: Trees in Relation to Design, Demolition and Construction (2012) guidance as outlined below. Trees are also subcategorised as having mainly arboricultural value (1), landscape value (2), or cultural or conservation value (3).

3.11.2 Tree categorisation is based on tree condition at the time of assessment and does not consider future management proposals.

3.11.3 **Category A**

Trees of high quality and value. In such condition as to be able to make a substantial contribution to the Site for a minimum of 40 years, or those with high cultural or conservation value. Site layout should be designed to incorporate trees in this category, ensuring sufficient space is given to provide minimal conflict during construction and final development use.

3.11.4 **Category B**

Trees of moderate quality and value. In such condition as to make a significant contribution to the Site, normally for a minimum of 20 years. It is highly recommended that trees in this category are retained.

3.11.5 **Category C**

Trees of low quality and value but in adequate condition to provide contribution to the Site for more than 10 years. Includes young trees with a stem diameter below 150mm. It is preferable but not essential to retain trees in this category. Young trees should be transplanted to suit site layout where practical.

3.11.6 **Category U**

Trees with serious structural defects, dead, dying, seriously diseased or in very poor condition with a likely remaining life span of less than 10 years. Trees in this category should not be considered a constraint to any development proposals.

3.12 Root Protection Area (RPA)

3.12.1 The RPA is the minimum area in m² which must be left undisturbed around each tree in order to avoid significant damage to the root system and ensure its survival. For ease, the equivalent radius, which should be measured from the centre of the tree, is provided.

3.12.2 RPAs are capped at 707m² which is equivalent to a circle with a radius of 15m in accordance with BS5837: Trees in Relation to Design, Demolition and Construction (2012).

3.12.3 For single stem trees, the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

3.12.4 For trees with 2-5 stems the combined stem diameter is calculated as follows:

$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$$

3.12.5 For trees with 6 or more stems the combined stem diameter is calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

3.12.6 Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area is produced. Any modifications to the shape of RPAs are highlighted in accompanying reports and plans.

3.12.7 The full tree survey is included as Appendix B.

4 Tree Survey Results

4.1 Tree Quality Assessment Summary

- 4.1.1 Nine individual trees, three groups and one woodland were recorded as high A category. Their retention should be considered imperative to the design and construction of the scheme.
- 4.1.2 Seventy seven individual trees, ten groups of trees, seven hedges and three woodlands were recorded as moderate B category. Reasonable effort should be made to retain these trees where possible. The area of deciduous woodland located off-site to the east of the existing main access road was recorded collectively as category B. Reasonable effort should be made to retain these trees where possible.
- 4.1.3 Sixty-one individual trees, 30 groups of trees, 36 hedges and one woodland were recorded as low C category. Where retention of these trees would cause undue restraint to the development, it would be reasonable to remove them as part of the development proposals.

Table 1: Tree quality assessment summary

Tree feature type	BS5837 Tree Quality Assessment Category				Totals
	A	B	C	U	
Individual trees	T21, T63, T64, T71, T87, T88, T90, T94, T149	77 total (see Appendix B for details)	61 total (see Appendix B for details)	15 total (see Appendix B for details)	162
Groups of trees	G19, G23, G32	G5, G6, G18, G21, G28, G29, G31, G36, G42, G43	30 total (see Appendix B for details)	G14, G41	45
Hedgerows	None	H4, H7, H18, H20, H26, H42, H43	36 total (see Appendix B for details)	None	43
Woodlands	W1	W2, W4, W5	W3	None	5
Totals	13	97	128	17	255

5 Impact appraisal and recommendations for tree protection

5.1 Tree Removals

- 5.1.1 No tree features will be removed in full to facilitate the Development.
- 5.1.2 Three small sections of hedgerow (H7, H8 and H16), and two small sections of tree groups (G8 and G11) will require removal to facilitate the Development.

5.2 Mitigation planting

- 5.2.1 A comprehensive landscape strategy is proposed which includes planting of new woodlands and hedgerows. It is anticipated that this high level of planting will adequately compensate for the loss of parts of a small number of existing tree features.

5.3 Works taking place within RPAs of retained trees

- 5.3.1 Permanent site fencing, A/C cabling, and new tracks will be required within the RPA of retained trees. Affected trees are shown in Table 2 below. No trees impacted are protected by TPO.

Table 2: Works taking place within RPAs of retained trees

Works taking place within RPA	BS5837 Tree Quality Assessment Category				Totals
	A	B	C	U	
A/C cabling	None	None	H28, H31	None	3
Permanent site fencing	None	None	G27, H27, H28, H31	None	4
New tracks	None	None	H28	None	1

A/C cabling

- 5.3.2 Open cut excavations will take place within the RPA of C grade tree features H28 and H31 Tree features with less than 10% of the RPA affected by excavations will be retained, however, excavations will be undertaken under arboricultural watching brief. While there is no scope to retain any roots encountered, the watching brief will identify whether any of the affected trees will require removal as a result of root damage.
- 5.3.3 To avoid tearing out roots and causing more damage than necessary, excavation works inside the RPA of affected trees should proceed by supervised manual excavation, removing a few centimetres depth at a time. Any roots encountered should be pruned back to the edge of the excavated trench using a pruning saw or secateurs, leaving a clean-cut surface and to a lateral root where possible. No roots should be left exposed for a period of over 24 hours.

Installation of permanent site fencing

- 5.3.4 New permanent site fencing is currently proposed within the RPA of C grade tree features G27, H27, H28 and H31.

- 5.3.5 Within the RPA of affected tree features the following precautions must be followed. Posts and footings will be kept as small as possible and located to avoid structural roots. Excavations required for installation of the post and footings must be carried out using hand tools such as spades or forks. All hand digging within RPAs must be undertaken with great care, requiring closer supervision than normal operations to enable the identification and protection of structural roots (roots with diameters equal to or greater than 25mm). These roots must not be severed at any time without first consulting the appointed Arboricultural Consultant or Local Authority Tree Officer. Any non-structural roots (roots with diameters below 25mm) may be pruned back if required, to a lateral root where possible, using a pruning saw or secateurs, leaving a clean-cut surface.
- 5.3.6 If concrete or any other phyto-toxic material is to be used to secure the posts below ground, a protective barrier should be used to prevent leaching into the soil.

New tracks

- 5.3.7 New tracks are currently proposed within the RPA of C grade tree feature H28.
- 5.3.8 The level of incursion by the development footprint into the RPA of H28 is 0.4%. The percentage of incursions into this RPA is low and does not have the potential to affect the physiological and structural health of the tree feature. However, facilitation trimming will be required.

6 Proposed Tree Protection

6.1 Tree Protection Fencing

- 6.1.1 Fencing will be required to protect all retained trees on site. This fencing should be fit for the purpose of excluding construction activity and provide adequate protection to the trees. Permanent site security fencing is proposed which is anticipated to act as adequate protection to the trees if installed prior to any other works taking place. Additional temporary tree protection fencing is proposed in locations where permanent security fencing would not exclude trees from the works area. If permanent security fencing cannot be installed prior to other works taking place additional temporary fencing will be required.
- 6.1.2 The precise location and construction of site fencing will be agreed on site between the site supervisor and the appointed Arboricultural Consultant before any site works commence.
- 6.1.3 In line with Section 6.2.2 of BS 5837:2012, which requires that the tree protection barriers be fit for the purpose of excluding construction activity and that they provide adequate protection to the trees, hedgerows and woodland, fencing should consist of 2m tall, welded mesh panels (Heras fencing or similar) fixed to the ground via vertical tubes driven into the ground until secure. These tubes should be spaced at a maximum interval of 3m. Each panel will be secured to its neighbour with a minimum of 2 anti-tamper couplers. Where space allows, the panels should be supported on the inner side by stabilizer struts which are attached to a base plate and secured with ground pins. An example of this type of barrier is shown in Figure 1 below.
- 6.1.4 To clearly identify the purpose of protective fencing on site, all-weather notices will be attached to the barriers similar to the example shown in Figure 2 below.
- 6.1.5 Inside the protective fencing there will be no excavations; no storage of machinery, building materials, fuels, chemicals, or spoil; no fires; no vehicular or pedestrian access; no alteration to existing ground levels. The barriers will not be moved or temporarily dismantled unless agreed with the appointed Arboricultural Consultant.
- 6.1.6 Tree protection fencing will be installed before any materials or machinery are brought onto site and before site works commence. It will be removed only once all site works in the location are complete.

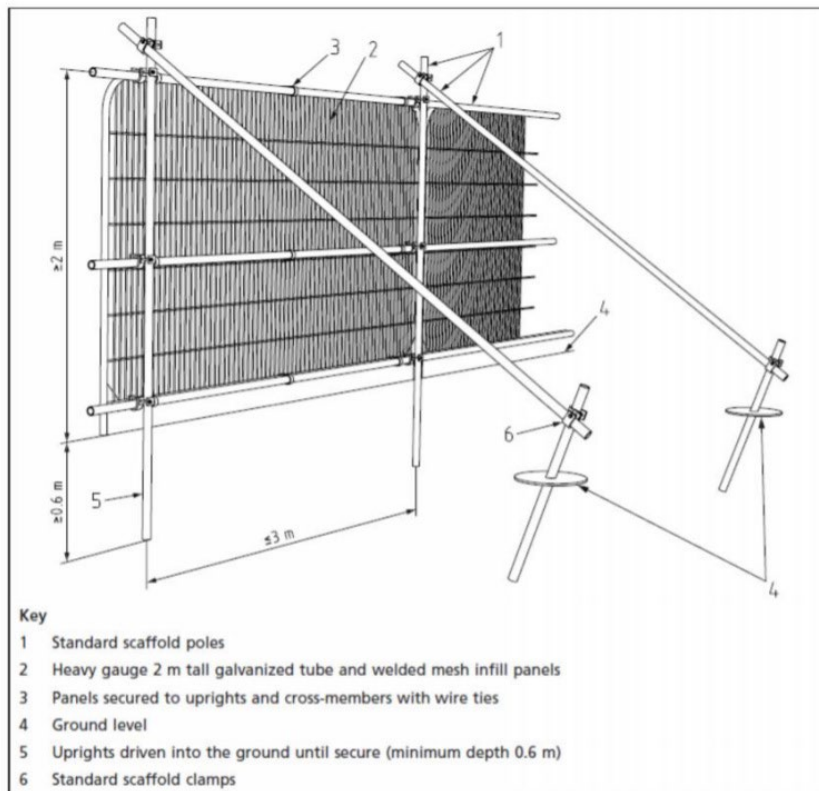


Figure 1: Tree protection fencing example



Figure 2: All-weather notice example

7 Other Considerations

7.1 Storage of Fuels and Chemicals

- 7.1.1 To reduce the risk of soil contamination and subsequent damage to tree roots, fuel and other harmful or toxic materials should be stored either off-site, in bunded units, or on drip trays.

7.2 Storage of Materials

- 7.2.1 Materials will be stored either outside the RPA of retained trees or on existing hard surfacing.

7.3 Level changes

- 7.3.1 Ground level decreases including topsoil stripping must not take place within the RPA of retained trees. Level increases up to 200mm depth will have negligible impact on the health of retained trees. If ground levels must be raised within the RPA of retained trees to accommodate dips and changes in the existing ground levels, this should be achieved using a granular material which does not inhibit vertical gaseous diffusion. Examples of suitable granular materials include, no-fines gravel, washed aggregate, or cobbles. Localised depressions may be filled with sharp sand.
- 7.3.2 Should level increases greater than 200mm be required, these will be achieved through the layering of a cellular confinement system filled with no-fines gravel, washed aggregate, or cobbles. A permeable membrane should be placed on top of this to prevent any fines filtering down into the cellular confinement system. Once the required levels are achieved, a permeable surface layer should be installed.

7.4 Construction vehicle access

- 7.4.1 Construction vehicles will not be driven onto unsurfaced areas of ground within the RPA of any retained trees.

7.5 Utility installations

- 7.5.1 Stantec have not been made aware of the locations of any proposed underground utility connections.
- 7.5.2 In order to avoid damage to retained trees, any additional underground services will avoid the RPAs, including Foul and surface water drains; Land drains; Soakaways; Gas; Oil; Electricity; Telephone; Lighting; Signage.
- 7.5.3 If additional services must unavoidably be installed within the RPAs of retained trees, the locations of these will be chosen in consultation with the retained Arboricultural Consultant and will be agreed in writing with the local planning authority.
- 7.5.4 Where possible the works will be carried out using trenchless techniques such as moling, laser guided boring, or through continuous trenching under strict arboricultural supervision.

8 Conclusions

- 8.1.1 The tree survey undertaken between 11th and 15th December 2023, and 31st January and 2nd February 2024, identified a total of 255 tree features including 162 individual trees, 45 groups of trees, 43 hedges and five woodlands. Thirteen tree features were categorised as high A grade, 97 tree features were categorised as moderate B grade, and 128 were categorised as low C grade. Seventeen tree features were categorised as very low quality U grade with less than 10 years safe useful life expectancy and should not be considered a constraint to any development proposals.
- 8.1.2 Three small sections of hedgerow (H7, H8 and H16) and two small sections of tree groups (G8 and G11) will require removal to facilitate the Development. H28 & H31 will be trimmed back due to widening of a gate to facilitate a proposed road.
- 8.1.1 A comprehensive landscape strategy is proposed which includes planting of new woodlands and hedgerows. It is anticipated that this high level of planting will adequately compensate for the loss of a small number of existing hedges.
- 8.1.2 Permanent or temporary fencing will be required to protect retained trees on site which may be affected by construction activities. This fencing should be fit for the purpose for excluding construction activity and provide adequate protection to the trees.
- 8.1.3 Arboricultural supervision should take place whenever construction or development activity is to take place within RPAs of retained trees. Key timings for supervision include: following installation of tree protection barriers; before commencement of works, to inspect tree protection against approved plans; for the duration of any site works (e.g. excavations, construction) taking place within the RPA of retained trees and periodic visits, with a minimum of one supervisory visit every month to ensure tree protection remains correctly installed and is fit for purpose throughout the duration of works.
- 8.1.4 In light of these considerations and taking account of the numbers, sizes and locations of trees to be retained, the minor impacts identified will represent only a minor alteration to the main arboricultural features of the Site and surrounding area.

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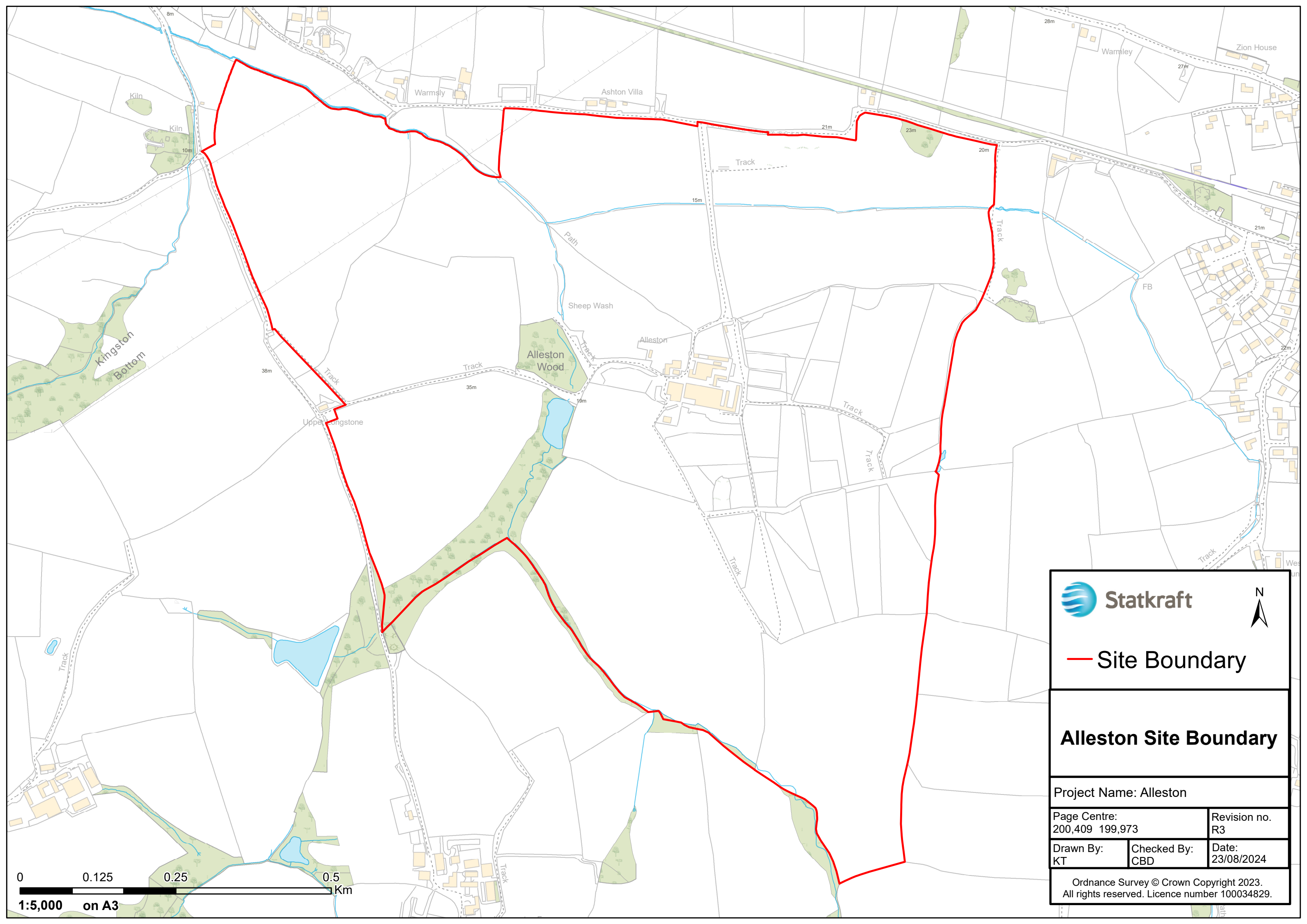
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Appendix A Site Location Plan



— Site Boundary

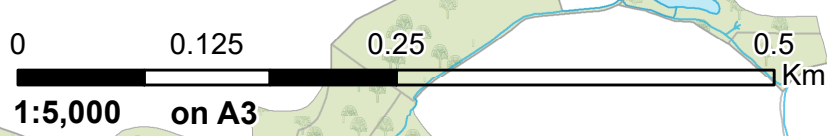
Alleston Site Boundary

Project Name: Alleston

Page Centre: 200,409 199,973	Revision no. R3
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Drawn By: KT	Checked By: CBD	Date: 23/08/2024
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Appendix B Tree Survey Schedule

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T1	English elm	S	8	300						1	6.5							7	7	1
T2	English elm	S	12	400						5	5	5	5	6	S	6	Mature	Heavily ivy clad specimen, only large tree in its immediate surrounding along Hazel hedgerow, growing adjacent to ditch and road	None	20+	C	1	72.4	4.8
T3	Common ash	S	6	160						4	3	3	3	1	S	1	Young	Insignificant young specimen growing within hedge. Windswept north.	None	20+	C	2	11.6	1.9
T4	Common ash	S	8	300						2	5	2	2	3	E	4	Semi-mature	Insignificant specimen windswept east, ivy dominated.	None	20+	C	2	40.7	3.6
T5	Common ash	S	16	300						5	5	5	5	3	E	4	Mature	River side specimen sharing crown with adjacent tree	None	20+	C	1	40.7	3.6
T6	Common ash	S	17	600						5	5	5	5	4	W	5	Mature	Large, ivy clad specimen, signs of dieback, Slightly windswept in a Westward direction	None	20+	B	1	162.9	7.2
T7	Common ash	S	17	860						10	10	9	9	3.5	S	3.5	Mature	Ivy dominated, separating 4m. Multiple failures and cavities throughout crown. Minimal signs of ash dieback. Dominant specimen.	None	10+	B	2	334.6	10.3
T8	Common ash	M(a)	17	530	360					5	5	5	5	4	N	4.5	Early-mature	Rubble/debris left at base with understory Hawthorne. Separating into two co-dominant stems at 0.5m with area of exposed heartwood north facing. Ivy among stems. Moderate deadwood content, dense crown.	None	20+	B	2	185.7	7.7
T9	Common ash	S	17	800						5	5	5	5	3	W	7	Mature	Large ivy clad specimen, showing preliminary signs of dieback small quantity of Deadwood in the canopy	None	20+	B	1	289.5	9.6
T10	Common ash	S	13	490						5	5	5	5	4	N	5	Mature	Specimen of good health, with a moderate amount of retained Deadwood in the canopy and large Northward protruding buttress roots, Sharing canopy with adjacent specimen	None	20+	B	1	108.6	5.9

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T11	Common ash	S	17	910						11	5							7	7	3
T12	Common ash	S	15	610						5	4	8	8	2.5	N	3	Early-mature	Sturdy trunk separating at 2.5m into windswept crown facing predominantly south. Stress growth throughout indicating early signs of ADB.	None	20+	B	2	168.3	7.3
T13	Common ash	S	13	490						5	3	5	5	3	N	5	Mature	Slightly suppressed specimen with basil shoots, and lots of low-level growth canopy biased to the west due to the east side of being suppressed by eastern specimen	None	20+	B	1	108.6	5.9
T14	Common ash	S	18	800						9	9	9	9	3	N	5	Mature	Large specimen, growing within hedge row with a broad, spreading crown, separating into three main leaders at 4m showing signs of ash die back	None	20+	B	1	289.5	9.6
T15	Common ash	S	20	1100						10	10	10	10	4	E	7	Mature	Buttress roots, growing within hedge. Ivy among main stem separating at 7m into a large crown with moderate levels of stress growth. Insignificant failures throughout. Sharing a canopy with adjacent tree.	None	20+	B	2	547.4	13.2
T16	Common ash	S	19	800						8	8	8	8	6	SW	5	Mature	Ivy clad specimen up to 10m. Separating into two main stems at 4m. Large globular canopy not showing signs of ash dieback yet	None	20+	B	1	289.5	9.6
T17	Common ash	S	16	860						9	8	8	8	3	W	2	Early-mature	Healthy root flare, naturally separating at 2.5m into two co-dominant stems. Multiple well healed wounds throughout crown. Dense, minimal stress growth.	None	20+	B	2	334.6	10.3
T18	Common ash	S	12	750						2	5	8	8	1.5	S	5	Mature	Ivy clad up to 5m Southward biased canopy showing resilience to Ash dieback. Barbed wire fused in the trunk at 1 m	None	20+	B	1	254.5	9.0
T19	Common ash	S	6	500						3	3	3	3	1.5	S	5	Early-mature	Scruffy, ivy clad, specimen, suppressed by two adjacent specimens	None	20+	C	1	113.1	6.0
T20	Common ash	S	18	1050						9	11	8	8	4	E	2	Mature	Healthy buttress root flare, naturally separating at 4m into two co-dominant stems. Multiple well healed wounds throughout crown. Dense, minimal stress growth.	None	20+	B	2	498.8	12.6
T21	Common beech	S	12	800						7.5	8	9	9	1	S	5	Mature	Tree covered in lichen with unique deadwood features within the canopy. Large stem separates at 1m into two main stems naturally spreading into a broad crown.	None	40+	A	1, 3	289.5	9.6
T22	Common beech	S	8	680						3	4	5	5	1	W	1	Early-mature	Growing west of stream bank with an eastern lean. Understory brambles. Ivy clad among main stem, predominantly east facing crown.	None	20+	B	2	209.2	8.2

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)
				T23	Common ash	S	19	850					9	9	9							9	5
T24	Common ash	S	11	420					2	5	5	5	7	SE	4	Mature	Ivy dominated, crown suppressed by adjacent specimen to the north, specimen of insignificance	None	20+	C	1, 3	79.8	5.0
T25	Common ash	S	9	400					7	7	4	4	1	W	3	Early-mature	Growing north of stream with young ivy among main stem. Spacious crown with stress growth within.	None	20+	C	2	72.4	4.8
T26	Common ash	M(a)	12	350	350				2	5	5	5	5	W	2	Mature	Codominant, specimen, showing early signs of dieback	None	10+	C	1	110.8	5.9
T27	Common ash	S	12	350					6	5	3	3	5	W	2	Mature	Slender, specimen, crown has completely succumbed, die back with minimal epicormic growth in the upper canopy	None	<10	U		55.4	4.2
T28	Common ash	S	9	400					7	5	5	5	1	E	4	Early-mature	Growing north of stream with young ivy among main stem. Dense crown with stress growth within. Tree in retrenchment with significant levels of major deadwood	None	<10	C	2	72.4	4.8
T29	Common hawthorn	M(b)	6	237.17					4	2	2	2	1	E	2	Early-mature	Wind blown specimen bias to north with dense crown.	None	20+	C	2	8.9	1.7
T30	Common ash	S	11	350					6	5	3	3	5	W	2	Mature	Crown Spreading west specimen, beginning to succumb to Die back	None	10+	C	1	55.4	4.2
T31	Common ash	S	11	350					6	5	3	3	5	W	2	Mature	Heavy eastern lean beginning to succumb to Die back	None	10+	C	1	55.4	4.2
T32	Common ash	S	11	350					6	5	3	3	5	W	2	Mature	Ivy clad specimen, beginning to succumb to Die back	None	10+	C	1	55.4	4.2
T33	Common ash	S	12	350					6	5	3	3	5	W	2	Mature	Slender, specimen, beginning to succumb to Die back	None	10+	C	1	55.4	4.2
T34	Common hawthorn	M(b)	6	237.17					4	2	2	2	1	E	2	Early-mature	Wind blown specimen bias to north with dense crown.	None	20+	C	2	8.9	1.7
T35	Common beech	S	11	300					6	7	5	5	5	W	2	Mature	Heavy Eastern lean , canopy shared with adjacent specimen	None	40+	B	1	40.7	3.6

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T36	Common ash	S	16	910						5	8							7	7	3
T37	Common ash	S	16	610						5	3	7	7	3	S	4	Mature	Growing within hedge, Ivy dominated stem. Significant levels of minor deadwood and stress growth indicating early signs of ADB.	None	20+	B	2	168.3	7.3
T38	Common ash	S	13	410						5	3	5	5	3	S	4	Mature	Growing within hedge, Ivy dominated stem. Significant levels stress growth indicating early signs of ADB.	None	20+	C	2	76.0	4.9
T39	Common ash	S	13	410						5	9	5	5	3	S	4	Mature	Growing within hedge, Ivy dominated stem. Significant levels stress growth indicating early signs of ADB. Large limb failure NW. sharing a canopy with adjacent tree.	None	20+	C	2	76.0	4.9
T40	Common ash	S	7	200						4	4	4	4	2	W	2	Young	Insignificant specimen growing within hedge.	None	20+	C	2	18.1	2.4
T41	Common ash	S	16	700						6	6	5	5	4	SW	5	Mature	Slight eastern lean and ivy dominated. Daldinia concentrica present with moderate levels of deadwood.	None	10+	C	2	221.7	8.4
T42	Common ash	S	16	500						1	6	2	2	5	E	5	Early-mature	Ivy dominated specimen of poor quality. Crown bias to east. Significant stress growth.	None	10+	C	2	113.1	6.0
T43	Common ash	S	14	620						9	9	9	9	3	SW	4	Early-mature	Within a grouped feature of 4 similar specimens in a line. Healthy root flare, separating at 4m into a crown of moderate health with historic failures and deadwood within.	None	20+	B	2	173.9	7.4
T44	Common ash	S	14	770						4	3	8	8	3.5	NW	5.5	Mature	heavily affected by dieback, daldinia concentrica fungal operating bodies over the entirety of the crown	None	<10	U		268.2	9.2
T45	Common ash	S	12	500						5	5	8	8	3	SW	4	Early-mature	within a grouped feature of 4 similar specimens in a line. Ivy dominated specimen. Healthy root flare, separating at 4m into a crown of moderate health with historic failures and deadwood within.	None	20+	C	2	113.1	6.0
T46	Common ash	S	14	620						5	5	8	8	3	SW	4	Early-mature	Within a grouped feature of 4 similar specimens in a line. Healthy root flare, separating at 4m into a crown of moderate health with historic failures, cavities and deadwood within.	None	20+	B	2	173.9	7.4

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T47	Common ash	S	20	1100						9	9							8	8	2
T48	Common ash	S	19	830						9	9	8	8	2	SW	3	Mature	Growing within hedge row with Ivy clad stems. Separating at 4m into a large crown. Minimal stress growth within, little minor deadwood and general good health. Daldinia concentrica present.	None	20+	B	2	311.7	10.0
T49	Common ash	S	8	470						3	2	1	1	5	W	5	Early-mature	Few live buds, ivy dominated, Daldinia concentrica. Tree in serious decline.	None	<10	U		99.9	5.6
T50	Common ash	S	15	430						5	5	5	5	3	E	4	Early-mature	Barbed wire within trunk taper. separating at 3.5m into crown of general bad health. Stress growth, deadwood and Daldinia concentrica common within crown.	None	10+	C	2	83.6	5.2
T51	Common ash	S	7	500						2	1	1	1	1.5	N	1.5	Early-mature	Heavily potted specimen within hedge row large cavity in the main trunk, more habitat value than arboricultural value	None	10+	C	3	113.1	6.0
T52	Common ash	M(a)	8	470	370					6	7	3	3	3	NE	4	Early-mature	Growing within hedge, ivy among stems. Fungi bracket present, peeling of bark and exposed heartwood throughout. Daldinia concentrica among stems, moderate levels of minor deadwood.	None	20+	C	2	161.9	7.2
T53	Common ash	S	10	400						4	4	4	4	2	S	3	Early-mature	Minimal live buds, tree in serious decline. Daldinia concentrica present.	None	<10	U		72.4	4.8
T54	Common ash	S	7	500						2	1	1	1	1.5	N	1.5	Early-mature	Heavily potted specimen within hedge row large cavity in the main trunk, more habitat value than arboricultural value	None	10+	C	3	113.1	6.0
T55	Common ash	S	17	620						6	6	6	6	4	W	4	Early-mature	Buttress roots and ivy dominating, separating at 2m into two co-dominant stems forming a crown of symmetrical shape and general good condition.	None	20+	B	2	173.9	7.4
T56	Common ash	M(b)	7	264.58						2	1	1	1	1.5	N	1.5	Early-mature	Heavily potted specimen within hedge row large cavity in the main trunk, more habitat value than arboricultural value	None	10+	C	3	10.8	1.9
T57	Common ash	M(a)	15	400	300	200				9	9	5	5	5	N	5	Mature	Large specimen, starting to succumb to die back most of the upper canopy is deceased	None	10+	C	1	131.3	6.5
T58	Common ash	S	8	280						4	2	4	4	3	S	3	Semi-mature	Tree in serious decline.	None	<10	U		35.5	3.4

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T59	Common ash	S	12	400						5	5							3	3	4
T60	Common ash	S	10	200						3	3	4	4	5	N	5	Early-mature	Specimen, heavily affected by dieback	None	<10	U		18.1	2.4
T61	Common ash	S	10	200						3	3	4	4	5	N	5	Early-mature	Specimen, heavily affected by dieback	None	<10	U		18.1	2.4
T62	Common ash	S	10	200						3	3	4	4	5	N	5	Early-mature	Specimen less affected by dieback	None	10+	C	1	18.1	2.4
T63	Common beech	S	14	600						5	7	9	9	3	S	3	Mature	Part of the nation, Woodland taken for RPA	None	40+	A	1	162.9	7.2
T64	Common beech	S	14	1100						5	7	9	9	3	S	3	Mature	Part of the nation, Woodland taken for RPA	None	40+	A	1	547.4	13.2
T65	Sycamore	S	8	460						6	6	5	5	2	S	4	Early-mature	Buttress roots, initial northern lean realigning near vertical at 2.5m. Ivy dominated stem, crown of good form and general health.	None	40+	B	2	95.7	5.5
T66	Sycamore	S	9	340						5	5	5	5	2	NE	2	Early-mature	Growing south of stream with initial northern lean realigning vertical at 2m. Understorey Hawthorne. Crown of good general health.	None	40+	B	2	52.3	4.1
T67	Sycamore	M(a)	9	250	200					5	3	5	5	2	SW	2	Early-mature	Growing south of stream, separating into two co-dominant stems at 1m. Understorey hazel. Crown of good general health.	None	40+	B	2	46.4	3.8
T68	Sycamore	S	16	490						6	6	6	6	3	S	3	Early-mature	Growing south of stream, ivy dominated stem naturally separating at 2.5m into two stems - bias to east. Large dense crown of general good health.	None	40+	B	2	108.6	5.9
T69	Common ash	S	15	800						8	8	8	8	7	N	2	Mature	Large specimen, hard survey due to inaccessible base. Large limbs snapped out into field. Ivy clad up to 13m.	None	20+	B	1	289.5	9.6
T70	Common ash	S	10	550						6	8	6	6	7	N	2	Mature	Largest specimen within Woodland with majority of the canopy protruding east over the field	None	20+	B	1	136.8	6.6

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)
				T71	Sycamore	M(a)	18	800	480				7	7	8							8	2.5
T72	Common ash	S	10	350					1	3	8	8	1	S	2	Mature	Base inaccessible, so dimensions estimated. ivy clad specimen, with main leader, previously snapped out	None	10+	C	1	55.4	4.2
T73	Common ash	S	17	500					6	6	6	6	6	W	6	Mature	Base inaccessible so dimensions estimated. Relatively healthy specimen, ivy cover up to 10 m	None	20+	B	1	113.1	6.0
T74	Common ash	S	12	400					4	6	7	7	6	S	4	Mature	Base inaccessible, so dimensions estimated. ivy clad, specimen up to 6m, Sharon Crown, with two adjacent specimens	None	20+	B	1	72.4	4.8
T75	Common ash	S	17	900					8	8	8	8	4	S	4	Mature	Surveyed from afar. Buttress roots growing on hedge bank, large burrs on trunk with areas of exposed heartwood. Ivy dominated stem crown of good general health	None	40+	B	2	366.4	10.8
T76	Common ash	S	12	340					7	6	3	3	3	E	4	Mature	Base inaccessible, so dimensions estimated. ivy clad, specimen up to 6m, Sharing Crown, with two adjacent specimens	None	20+	B	1	52.3	4.1
T77	Common hazel	M(b)	5	290.47					5	5	4	4	0	N	2.5	Mature	Old Hazel growing on hedge bank Maintained up to 3m at the field	None	40+	B	3	13.6	2.1
T78	Common ash	M(a)	18	510	130				6	6	3	3	2	E	4	Mature	Single ash within a line of sycamores. Daldinia concentrica found at 2m east. Crown bias to east, stress growth throughout.	None	20+	B	2	125.3	6.3
T79	Common hazel	M(b)	6	290.47					5	4	4	4	0	N	2.5	Mature	Old Hazel growing on hedge bank Maintained up to 3m at the field	None	40+	B	3	13.5	2.1
T80	Common hazel	M(b)	7	290.47					5	4	4	4	0	N	2.5	Mature	Old Hazel growing on hedge bank Maintained up to 3m at the field	None	40+	B	3	13.5	2.1
T81	Common ash	S	10	400					6	5	6	6	3.5	W	3.5	Mature	Tree heavily affected by die back, small amounts of shock growth, canopy completely dead	None	<10	U		72.4	4.8
T82	Common ash	S	4	90					3	1	2	2	1	E	1.5	Young	Young specimen of insignificance heavily maintained to field boundary.	None	20+	C	2	3.7	1.1

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T83	Common ash	S	12	450						6	12							6	6	2
T84	Common ash	S	11	780						8	8	6	6	1	SW	2	Mature	Surveyed from afar. Located 4m from field boundary, vision impaired by dense understory vegetation. Multiple limb failures throughout sporadic crown with moderate levels of stress growth.	None	20+	B	2	275.2	9.4
T85	Common ash	S	12	450						11	11	6	6	4	S	2	Mature	Ivy clad stem so dimensions estimated. Tree showing early signs of die back.	None	10+	C	1	91.6	5.4
T86	Common ash	S	8	600						4	4	4	4	1	W	3	Early-mature	Surveyed from afar, vision impaired with dense understory vegetation. Ivy dominated specimen with limited live buds and significant levels of dress	None	10+	C	2	162.9	7.2
T87	Common beech	S	18	1440						15	12	13	13	4	W	4	Veteran	Huge specimen with spreading crown. 300 mm diameter limb snapped out on the north side and Ganoderma bracket going on north side of the trunk	None	40+	A	3	706.9	15.0
T88	Common ash	S	18	1300						11	10	12	12	2	S	5	Veteran	Fence growing through bark, buttress roots on eastern side. Ivy dominated specimens with spreading crown bias to north. Crown of general good health, plentiful live buds.	None	20+	A	2	706.9	15.0
T89	Common ash	S	16	400						4	7	6	6	3	E	4	Mature	Ivy clad specimen with small sparse crown	None	20+	C	1	72.4	4.8
T90	Common ash	M(a)	22	680	500	580				8	8	8	8	5	W	5	Mature	Surveyed from afar. Three co-dominant stems competing for apical dominance sharing an ivy dominated canopy with moderate levels of stress growth. Tree in beginning stages of retrenchment, minor and major deadwood throughout.	None	20+	A	2	474.5	12.3
T91	Common ash	S	16	330						3	4	3	3	5	E	3	Early-mature	Growing on a steep decline from field boundary towards stream. Ivy dominated stem, crown bias to east. Stress growth throughout.	None	20+	C	2	49.3	4.0
T92	Common ash	S	16	300						5	5	5	5	3	E	4	Mature	River side specimen sharing crown with adjacent tree	None	20+	C	1	40.7	3.6
T93	Common ash	M(a)	20	400	300	200				7	10	6	6	5	W	4	Mature	Large spreading multi stem specimen, growing adjacent to river, high quantities of deadwood throughout crown up to 200 mm diameter	None	10+	C	1	131.3	6.5

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T94	Pedunculate oak	S	17	500						9	9							9	9	1
T95	Common ash	S	15	790						9	8	8	8	3	S	4	Mature	DBH predicted, thick bramble understory. Ivy dominated stem separating at 4m to a spreading crown of moderate levels of minor deadwood add stress growth. Only dominant tree north of stream of significance 20m either side.	None	20+	B	2	282.3	9.5
T96	Pedunculate oak	S	17	500						9	9	9	9	1	SE	2	Mature	Growing on the south side of a river with squat, spreading form. Large Cavity in the base	None	40+	B	1	113.1	6.0
T97	Common ash	S	15	660						6	7	6	6	3	S	4	Mature	DBH estimated, thick bramble understory. Ivy dominated stem separating at 4m to a spreading crown of moderate levels of minor deadwood add stress growth. Only dominant tree north of stream of significance 20m either side.	None	20+	B	2	197.1	7.9
T98	Common ash	S	15	600						7	7	7	7	3	NW	3	Mature	Tree in serious decline, high levels of deadwood throughout, minimal live buds.	None	<10	U		162.9	7.2
T99	Common ash	S	15	600						7	7	7	7	3	NW	3	Mature	Growing south of stream. Tree in serious decline, high levels of deadwood throughout, minimal live buds.	None	<10	U		162.9	7.2
T100	Common ash	S	15	600						7	7	7	7	3	NW	3	Mature	Growing south of stream. Tree in serious decline, high levels of deadwood throughout, minimal live buds.	None	<10	U		162.9	7.2
T101	Sycamore	M(a)	4	110	90					2	2	2	2	1	E	2	Young	Insignificant specimen growing within hedge row	None	40+	C	1	9.1	1.7
T102	Common ash	S	14	400						6	7	4	4	3	NE	3	Early-mature	Growing south of stream with understory Hawthorn. Slender form separating at 2.5m, crown bias to north, frequent live buds.	None	20+	B	2	72.4	4.8
T103	Common ash	S	7	300						2	6	2	2	3	E	4	Early-mature	How many left ivy dominated. The main stand showing early signs of die back	None	20+	C	1	40.7	3.6

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)
				T104	Common ash	S	13	380					6	6	5							5	3
T105	Common ash	S	21	450					10	10	10	10	1	W	3	Mature	Specimen of good form with large, spreading lower limbs, moss covered and ivy clad up to 16m growing on bank of stream.	None	20+	B	1	91.6	5.4
T106	Common ash	S	12	700					5	5	5	5	1	W	2.5	Early-mature	Like ash specimen, understory shrub, Separates at 2m into multiple codominant stems forming a crown bias to west of good general health.	None	20+	B	2	221.7	8.4
T107	Sitka spruce	S	17	690					6	6	3	6	3	NE	3	Mature	Most northern specimen growing within a single line parallel to brick wall located in private property. Most dominant specimen, largest trunk, stress growth throughout main stem, crown bias to north.	None	40+	B	2	215.4	8.3
T108	Wild cherry	S	6	350					3	3	2	2	3	E	2	Mature	Situated on private property so dimensions estimated. Ornamental specimen protruding over pavement from private property, domed canopy, moderate amenity value.	None	40+	B	1	55.4	4.2
T109	Sitka spruce	S	12	350					3	3	3	3	3	NE	1	Early-mature	Situated on private property so dimensions estimated. Part of row of uniform specimens planted within garden. Tree provides privacy and moderate amenity value to its surroundings	None	40+	B	1, 2	55.4	4.2
T110	Sitka spruce	S	12	400					3	3	3	3	3	NE	1	Early-mature	Situated on private property so dimensions estimated. Largest in row of uniform specimens planted within garden. Tree provides privacy and moderate amenity value to its surroundings	None	40+	B	1, 2	72.4	4.8
T111	Sitka spruce	S	10	300					3	3	3	3	3	NE	1	Early-mature	Situated on private property so dimensions estimated. Part of row of uniform specimens planted within garden. Tree provides privacy and moderate amenity value to its surroundings	None	40+	B	1, 2	40.7	3.6
T112	Sitka spruce	S	12	350					3	3	3	3	3	NE	1	Early-mature	Situated on private property so dimensions estimated. Part of row of uniform specimens planted within garden. Tree provides privacy and moderate amenity value to its surroundings	None	40+	B	1, 2	55.4	4.2

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T113	Sitka spruce	S	12	350						3	3							3	3	3
T114	Sitka spruce	S	10	350						3	3	3	3	3	NE	1	Early-mature	Situated on private property so dimensions estimated. Part of row of uniform specimens planted within garden. Tree provides privacy and moderate amenity value to its surroundings, smaller than adjacent specimens, top historically snapped	None	40+	B	1, 2	55.4	4.2
T115	Common ash	M(b)	13	370	520					5	5	5	5	6	E	3	Semi-mature	Growing on steep bank of 45 degree angle with dominant stem on southside. Ivy dominated specimen with understory shrubs. High bud ratio.	None	20+	C	2	91.6	5.4
T116	Scots pine	S	11	460						4	4	1	3	4	N	5	Semi-mature	Growing on 45 degree angle slope with understory Holly and Blackthorn. Ivy dominated specimen with moderate levels of Deadwood up until 6 m. Crown bias to North	None	40+	B	2	95.7	5.5
T117	Common ash	S	6	300						1	3	5	3	1.5	S	1.5	Early-mature	Smaller specimen, with a dense crown biased to the south side, due to competition from a much larger specimen to the north, showing small preliminary signs of dieback.	None	20+	C	2	40.7	3.6
T118	Common ash	M(b)	12	500	350					2	6	8	6	4	N	4	Early-mature	Growing within the hedgerow with understory, Blackthorn and bramble. Ivy dominated specimen. Two co-dominant stems forming a large Crown bias to West with significant stress growth throughout. Sharing a canopy with adjacent trees.	None	10+	C	2	83.3	5.1
T119	Common ash	S	11	500						6	7.5	7.5	7.5	3	W	2	Mature	Trunk, inaccessible, therefore dimensions estimated. Larger specimen at 4 m into four, main stems, healthy, globular, crown and bud, distribution shock growth, covering large portions of primary and tertiary branches, suggesting onset of dieback	None	20+	C	2	113.1	6.0
T120	Common ash	S	9	260						1	2	2	2	3	S	3	Young	Insignificant specimen, growing within Hedge row with understory Blackthorn	None	10+	C	2	30.6	3.1
T121	Common ash	S	14	850						8	8	8	8	3	N	3	Mature	Growing within hedge row bordering field. IV dominated with understory, Hawthorn and Blackthorn. Naturally separating at 3 m into a large crown with areas of sparsity. Healthy throughout with minimal signs of ash dieback. Minimal deadwood	None	40+	B	2	326.9	10.2

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)
				T122	Common ash	M(b)	11	400	300				7.5	6	5							6	4
T123	Common ash	S	11	400					3	5	4	2	2	E	3	Semi-mature	Surveyed from a far growing within the hedge with understory Blackthorn and bramble. Ivy dominated specimen wind swept east, with significant amounts of stress growth throughout. Dense crown sharing a canopy with adjacent similar specimen.	None	10+	C	2	72.4	4.8
T124	Common ash	S	11	400					4	4	2	3	2	E	3	Semi-mature	Surveyed from a far growing within the hedge with understory Blackthorn and bramble. Ivy dominated specimen wind swept east, with significant amounts of stress growth throughout. Dense crown sharing a canopy with adjacent similar specimen.	None	10+	C	2	72.4	4.8
T125	Common hawthorn	M(b)	5	100	100	100			3	2	2	2	1	N	1	Early-mature	Stem inaccessible, so dimensions estimated. Specimen growing within hedge row outcompeted by adjacent ash	None	40+	C	2	8.4	1.6
T126	Common hawthorn	S	7	400					4	4	4	4	2	SE	3	Mature	Overgrown specimen, growing within hedgerow. Understory Blackthorn and bramble. Splitting into three co dominance stands at 1.5 m into a large crown of good health and ivy throughout.	None	40+	C	2	72.4	4.8
T127	Common ash	S	9	500					5	5	6.5	5	3	S	4	Mature	Specimen, severely affected by dieback	None	<10	U		113.1	6.0
T128	Common ash	M(b)	16	125	370				2	5	5	5	4	SE	3	Semi-mature	1m from road growing within hedge row and ivy dominated to 4 m. Insignificant stem, growing south east overhanging road at 3.5 m. King Alfreds cakes present with minimal Deadwood. Stress growing within hedge row and IV dominated to 4 m. Insignificant stem, growing south east overhanging road at 3.5 m. King Alfreds cakes present with minimal Deadwood. Stress growth throughout. Predominantly south west facing crown, bare north side.	None	20+	C	2	28.5	3.0
T129	Common ash	S	13	500					5	7	6	5	7	S	4.5	Mature	Roadside specimen, growing within hedge row, ivy clad stem, healthy, globular crown, small quantities of shock growth in canopy, suggesting early onset of dieback	None	20+	B	1	113.1	6.0
T130	Common ash	S	13	500					5	7	6	5	7	S	4.5	Mature	Roadside specimen, growing within hedge row, ivy clad stem, healthy, globular, crown, small quantities of shock growth in canopy, suggesting early onset of dieback	None	20+	B	1	113.1	6.0

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T131	Common ash	S	12	500						5	5							5	5	5
T132	Sycamore	M(b)	14	310	190	420				5	5	3	4	3	E	5	Semi-mature	Throwing a top a stone wall. Included union at base to form three co dominance stems growing in a Geo trophic manor. Healthy crown sharing a canopy with tree	None	40+	B	2	78.3	5.0
T133	Common hawthorn	S	3	100						2	2	1	1	1	NW	2	Semi-mature	Insignificant specimen, growing atop a stone wall. Barbed wire through main stem.	None	10+	C	2	4.5	1.2
T134	English elm	S	13	530						9	5	5	7	2.5	S	4.5	Mature	Largest specimen within group, healthy trunk, taper separating at 5 m into a globular, crown, healthy blood density throughout low levels of deadwood	None	40+	B	1	127.1	6.4
T135	Common ash	S	5	110						4	3	1	1	1	W	1	Young	Insignificant young specimen with stress growth throughout and failed limbs	None	10+	C	2	5.5	1.3
T136	Sycamore	S	15	620						6	7	6	6	3	W	4.5	Mature	Growing a top, a stone ball with an initial eastern lean realigning at 1 m. Ivy dominated stem separates at 5 m into multiple stems of good general health, forming a large crown sharing a canopy with adjacent trees. Minimal stress grows throughout.	None	20+	B	2	173.9	7.4
T137	Common hawthorn	M(b)	5	150	150					1	2	2	2	2	W	2	Early-mature	Small specimen maintained to highway edge, growing adjacent to wall, small compact canopy of good health	None	40+	C	1	10.4	1.8
T138	English elm	S	13	500						2.5	7	6	7	4	W	6	Mature	Slender, specimen with crown on roadside cleared up to 8 m evidence of wound up base, revealing exposed, sapwood, healthy Canopy with good density	None	40+	B	1	113.1	6.0
T139	Sycamore	M(b)	15	734.85						1	6	6	6	4	E	5	Early-mature	Growing a top a stone wall directly adjacent to hardstanding Road. Most northern Stem, historically felled with multiple shoots arising. Five co-dominance stems forming a crown bias to South of good health	None	20+	B	2	83.0	5.1
T140	Common hawthorn	S	5	100						0	2	1	1	1	S	3	Semi-mature	Insignificant specimen	None	20+	C	1	4.5	1.2
T141	Sycamore	M(b)	15	280	100	120	300			1	3	5	5	2	E	5	Early-mature	Growing a top a stone wall directly adjacent to hardstanding Road. co-dominant stems forming a crown bias to South of good health. Stems growing geotropically	None	20+	B	2	48.7	3.9

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
				T142	Common hawthorn	M(b)	7	300	75	75				1	3							3	3	1
T143	Common ash	S	13	400						2	4	5	4	4	W	3	Early-mature	Barbed wire fused with main stem at 1.5 m can be biased to southside, Minimal canopy spread on roadside, daldinia concentrica on lower branches.	None	20+	C	1	72.4	4.8
T144	Sycamore	S	13	270						2	2	5	2	4	E	4	Semi-mature	Growing directly adjacent to road with exposed roots. historically felled Co dominant stem east at 1.5 m. Main stand slender form, predominantly north east facing crown.	None	20+	B	2	33.0	3.2
T145	Common ash	S	12	260						2	6	5	2	4	E	4	Early-mature	Smallest specimen with slender form and healthy, but roots separating at 2 m into two main stems, minimal canopy, overhanging the road, healthy crown	None	40+	C	1	30.6	3.1
T146	Sycamore	S	14	290						2	2	2	2	6	E	7	Early-mature	Growing north of the brick wall, tree of slender form separating between six and 8 m into a small crown, sharing a canopy with adjacent trees	None	20+	B	2	38.0	3.5
T147	Sycamore	S	14	800						8	8	8	8	3	W	6	Mature	Large specimen, growing adjacent to the road separates at 4 m into three main stems for a healthy canopy with moderate levels of deadwood in the lower canopy	None	40+	B	1	289.5	9.6
T148	Sycamore	M(b)	15	410	320	290				4	5	8	4	3	E	5	Early-mature	Specimen growing directly north of stone wall. Naturally, separating into 3 dominant stems at 1 m forming a large crown, predominantly south, facing with moderate levels of minor Deadwood. Sharing a canopy with adjacent trees.	None	40+	B	2	95.8	5.5
T149	Sycamore	S	14	1000						10	11	10	8	5	W	5	Mature	Large specimen, with good form and healthy, Buttress roots separating at 4 m into two large main stems for approximately 800 mm diameter. Large globular crown, branches, covered in moss and lichen	None	40+	A	1	452.4	12.0
T150	Sycamore	S	15	480						5	5	5	5	3.5	E	5	Early-mature	Growing directly adjacent north of Stonewall. Epicormic growth coming from base. Slate Southern Lane realigning at 3 m vertical. Separating at 7 m into a small crown of good general health. Historically crown raised on southside	None	20+	B	2	104.2	5.8
T151	Sycamore	S	13	610						2	6	6	4	2	S	7	Early-mature	Growing a top a stone wall, epicormic growth growing from base and failed stems times three Northside felled at 0.5 m. Naturally separating at four . five metres into three co dominance stands, forming a small crown bias to South.	None	20+	B	2	168.3	7.3
T152	Sycamore	S	12	700						6	8.5	7	7.5	5	E	5	Mature	Independent specimen on filled margin, Basil shoots up to 5m, Separates at 5 m into a broad global canopy, with dense, healthy bud distribution	None	40+	B	1	221.7	8.4

Tree Survey Schedule

#	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)
				T153	Common ash	S	21	800					7	10	8							6	5
T154	Common ash	S	13	310					5	3	4	5	3	W	5	Semi-mature	Located 0.5 m from Road directly adjacent to Stonewall North of specimen. Slender from historic arboriculture works to Crown lift five meters over Road. Large healthy, crown, sharing a canopy with adjacent tree, high live bud ratio, minimal signs of ash dieback.	None	20+	B	2	43.5	3.7
T155	Sycamore	M(b)	12	310	370				5	6	4	3	2	E	5	Semi-mature	Healthy root flair naturally separating at 1.5 m into two co-dominant stems, forming a large crown of good health with historic works to Crown lift five meters over Road. Sharing a canopy with adjacent Tree.	None	40+	B	2	54.0	4.1
T156	English elm	S	18	455					2	5	7	5	4	N	5	Mature	Part of Woodland taken for RPA	None	40+	B	1	93.7	5.5
T157	Common ash	S	13	730					1	5	6	8	2	W	5	Semi-mature	Growing a top a stone wall, multiple failed limbs, ash die back clearly present, extreme amounts of stress growth and minor dead wood. Predominantly south facing crown.	None	<10	U		241.1	8.8
T158	Common ash	M(b)	15	480	380				6	5	6	8	2	W	5	Semi-mature	Growing a top a stone wall, multiple failed limbs, ash die back clearly present, extreme amounts of stress growth and minor dead wood. Predominantly south facing crown.	None	10+	C	2	85.8	5.2
T159	English elm	S	18	360					2	3	6	3	4	N	5	Mature	Part of Woodland taken for RPA	None	40+	B	1	58.6	4.3
T160	English elm	S	18	460					2	3	7.5	4.5	4	W	5	Mature	Part of Woodland taken for RPA	None	40+	B	1	95.7	5.5
T161	Common ash	M(b)	17	510	540				7	6	7	7	2.5	NW	6	Mature	Located on top of a stone wall separating into two dominant stems at 0.5 m. Ivy dominated main stem separates at 6 m into a large crown heavily affected by ash dieback. Significant stress growth throughout crown. Moderate levels of deadwood.	None	10+	C	2	127.8	6.4
T162	Common ash	S	17	700					6	8	8	8	6	SW	5	Mature	Specimen, exhibiting, signs of dieback with dead wood throughout canopy and sparse bud distribution	None	<10	U		221.7	8.4

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Subcategory	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G1	English elm	10	300	4	Early-mature	Group of relatively uniform specimens crown lifted to 4 m with scruffy basal growth, creating a screen for caravan park	None	20+	C	1	40.7	3.6
G2	English elm	6	102.5	1	Young	Group of relatively uniform specimens lightly self seeded within hedge row	None	20+	C	1	4.8	1.2
G3	Common hawthorn, Common ash	5	87.5	0	Young	Young shrub growth	None	40+	C	1	3.5	1.1
G4	Common hawthorn, Common ash	7	137.5	0	Semi-mature	Young shrub growth, hedge like group	None	40+	C	1	8.6	1.7
G5	Common ash	8	475	4	Mature	Group of Ash, specimens almost forming a hedge bank growing in a hedgerow between two fields	None	20+	B	1	102.1	5.7

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G6	Common hawthorn, Common beech, Ash species, Pedunculate oak	14	462.5	1	Early-mature	Specimens growing either side of stream with understory bramble and Hawthorn. ADB assumed present. Bracket fungi found on beech. Trees sharing a cohesive canopy.	None	40+	B	2	96.8	5.6
G7	Common hawthorn	3.5	87.5	1	Young	Insignificant specimens on boundary line between two fields	None	40+	C	1	3.5	1.1
G8	Common hawthorn, Common ash, Grey willow	6	137.5	0	Semi-mature	Dense group of shrub species with one ash in the middle, forming an untidy unkept hedge like group feature	None	40+	C	1	8.6	1.7
G9	Common hawthorn, Common ash, English elm	7	175	0	Semi-mature	Group feature within hedgerow many of the specimens, likely to succumb to dieback or Dutch elm disease	None	20+	C	1	13.9	2.1
G10	Common beech, Common ash	18	490	4	Early-mature	Predominantly ash in general bad condition, assumed ADB. understory blackthorn and Hawthorn. Water stream east.	None	20+	C	2	108.6	5.9

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Subcategory	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
G11	Common ash	6.5	425	1	Mature	Old pollard, hedgerow specimens with young growth on the top and older growth at the base	None	10+	C	1	81.7	5.1
G12	Sycamore, Common hawthorn, Blackthorn	7	115	1	Young	Insignificant specimens growing within hedgerow.	None	20+	C	2	6.0	1.4
G13	Common ash	15	400	4	Mature	Some specimens showing resilience to die back, largest specimens heavily ivy clad	None	10+	C	1	72.4	4.8
G14	Common ash	7	120	3	Semi-mature	Dead specimens.	None	<10	U	2	6.5	1.4
G15	Sycamore, Willow species	6	230	3	Semi-mature	Insignificant specimens growing within hedgerow.	None	20+	C	2	23.9	2.8
G16	Common hawthorn, Willow species	5	230	2	Semi-mature	Growing both north and south of stream of general poor quality. Multiple limb failures throughout. Heavy pruning back to field boundary.	None	20+	C	2	23.9	2.8

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G17	Common hawthorn, Common ash	4	87.5	0	Young	Group acting as a hedgerow, specimens of insignificance	None	40+	C	1	3.5	1.1
G18	Willow species	8	270	2	Early-mature	Growing south of stream forming a tight canopy with little stress growth throughout.	None	40+	B	2	33.0	3.2
G19	Common ash, Pedunculate oak	18	500	6	Mature	Surveyed from afar so dimensions estimated. Oak specimens have good form and full crowns. Ash specimen showing resilience to dieback	None	40+	A	1	113.1	6.0
G20	Willow species	4.5	135	0	Young	Insignificant specimens growing south of stream.	None	20+	C	2	8.2	1.6
G21	Sycamore	17	420	4	Early-mature	Multiple similar specimens growing south of stream, ivy dominated, consistent with quality and dense crowns, sharing a cohesive canopy.	None	40+	B	2	79.8	5.0

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Subcategory	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G22	Common ash, Blackthorn	5	35	0	Young	Dense vegetation of insignificance growing on uneven land.	None	20+	C	2	0.6	0.4
G23	Sycamore	19	625	4	Mature	Growing among a hedge bank 3m from field boundary. Spaced 3.5m apart sharing a cohesive canopy of good health. Little historic limb failures. Buds plentiful and dense throughout.	None	40+	A	2	176.7	7.5
G24	Common hawthorn, Common ash, Blackthorn, Willow species	5	55	0	Semi-mature	Insignificant specimens potentially historic overgrown hedge. Dense throughout maintained to field edge.	None	20+	C	2	1.4	0.7
G25	Gorse	2	87.5	0	Semi-mature	Gorse growing on bank up to field	None	40+	C	1	3.5	1.1
G26	Common hawthorn	2	87.5	0	Young	shrub area of hawthorn, creating boundary between woodland in the south-east, and the field in the north-west	None	40+	C	1	3.5	1.1

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G27	English elm	8	137.5	2	Semi-mature	Group feature at the intersection between fields, likely an overgrown hedgerow	None	20+	C	1	8.6	1.7
G28	Common hazel, Common hawthorn, Common ash, Common holly, Pedunculate oak, Grey willow	16	187.5	0	Early-mature	Group of dense trees and foliage growing, either side of a stream, good mixture of native specimens, good habitat for lichen and fungi	None	40+	B	3	15.9	2.3
G29	Common ash	17	325	2	Early-mature	Growing on a steep decline from field either side of stream. Understory bramble and fern. Tightly spaced together forming a cohesive canopy, moderate levels of minor deadwood.	None	20+	B	2	47.8	3.9
G30	Common hazel, Common hawthorn, Common ash, Common holly, Pedunculate oak, Grey willow	16	187.5	0	Early-mature	Group of dense trees and foliage growing, either side of a stream, good mixture of native specimens, good habitat for lichen and fungi	None	40+	C	3	15.9	2.3
G31	Common ash, Common holly	15	260	2	Early-mature	Specimens surrounding stream of moderate significance. Tightly spaced sharing a cohesive canopy, healthy annual growth.	None	20+	B	2	30.6	3.1

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G32	Common ash, Pedunculate oak	20	375	6	Mature	Old group of oaks, creating a shared canopy, all individual trees have excellent form and spacious crowns	None	40+	A	1	63.6	4.5
G33	Common hawthorn, Common ash, Pedunculate oak	20	225	0	Mature	Group of ivy dominated specimens, growing on the bank of the stream	None	40+	C	1	22.9	2.7
G34	Common ash	19	350	2	Early-mature	Growing on a steep decline from field either side of stream. Understory bramble and fern. Tightly spaced together forming a cohesive canopy, moderate levels of minor deadwood.	None	20+	C	2	55.4	4.2
G35	Common hazel, Common hawthorn, Common ash, Common holly, Pedunculate oak, Grey willow	16	187.5	0	Early-mature	Group of dense trees and foliage growing, either side of a stream, good mixture of native specimens, good habitat for lichen and fungi	None	40+	C	3	15.9	2.3
G36	Common ash	17	475	4	Early-mature	Specimens growing south of stream assumed not to be a constraint. Sporadic limbs sharing a cohesive canopy.	None	20+	B	2	102.1	5.7
G37	Common hazel, Pedunculate oak, Grey willow	5	100	1	Young	Growing south of stream assumed no constraint. Dense throughout.	None	20+	C	2	4.5	1.2

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Subcategory	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
G38	Wild privet	2	77.5	0	Early-mature	Situated on private property so dimensions estimated. Understory privet beneath cherry specimen, provides privacy to property on which it is planted.	None	40+	C	2	2.7	0.9
G39	Blackthorn, Bramble	2	45	0	Young	Insignificant specimens over growing.	None	20+	C	2	0.9	0.5
G40	Common ash	11	575	2	Early-mature	Specimens growing within border hedgerow with understory Blackthorn and bramble. Specimens dominated with ivy and significant stress growth throughout. Ash dieback potentially present. Sharing a cohesive canopy.	None	10+	C	2	149.6	6.9
G41	Common ash	5	275	1	Semi-mature	Insignificant specimens heavily affected by ash die back. Understory, bramble, and Blackthorn.	None	<10	U	2	34.2	3.3
G42	English elm, Caucasian elm	15	275	4	Mature	Row of ash specimens showing resilience to dieback, bordering field and car parking area, low ivy coverage on stems.	None	20+	B	1	34.2	3.3
G43	English elm	16	300	5	Early-mature	Row of roadside specimens within old stone wall, good form and healthy bud density.	None	40+	B	2	40.7	3.6

Tree Survey Schedule

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			(mm)	(m)							(m ²)	(radius in m)
G44	English elm	12	365	5	Early-mature	Row of roadside specimens bordering field, good form, healthy, cohesive canopy, good bud density.	None	40+	C	2	60.3	4.4
G45	Sycamore, Common hawthorn, Common ash, Bramble, Willow species	6	250	4	Semi-mature	Insignificant specimens 1 m from Road. Ash, die back present. Dominant tree singled out	None	20+	C	2	28.3	3.0

Tree Survey Schedule

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			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
H1	Common hawthorn, Blackthorn, Common lime, English elm	1.6	55	0	Semi-mature	Insignificant specimens forming a dense hedge, ivy within.	None	20+	C	2	1.4	0.7
H2	Common hawthorn, Blackthorn, Common lime	3	55	0	Semi-mature	Insignificant specimens forming a dense hedge with areas of flooding/potential stream.	None	20+	C	2	1.4	0.7
H3	Common hawthorn, Blackthorn, Common lime	3	55	0	Semi-mature	Insignificant specimens forming a dense hedge with areas of flooding/potential stream.	None	20+	C	2	1.4	0.7
H4	Common hawthorn, Elder, English elm	5	162.5	0	Semi-mature	Majority, Hawthorn hedge with understory rosehip, and Bramble roughly maintained, creating a separation between two fields	None	40+	B	2	11.9	2.0
H5	Common hawthorn, English elm	3	42.5	0	Semi-mature	Insignificant specimens, forming a dense hedge	None	20+	C	2	0.8	0.5
H6	Common hawthorn, Common ash, English elm	3	42.5	0	Semi-mature	Insignificant specimens, forming a dense hedge. Multiple felled ash trees within.	None	20+	C	2	0.8	0.5

Tree Survey Schedule

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			(mm)	(m)							(m ²)	(radius in m)
H7	Common hawthorn, Common ash, English elm	4	55	0	Semi-mature	Dense throughout, areas of potential hedge bank. Maintained to field edge.	None	20+	B	2	1.4	0.7
H8	Common hawthorn, Common ash	5	87.5	0	Semi-mature	Roughly maintained hedge creating margin between two fields	None	40+	C	2	3.5	1.1
H9	Common hazel, Common hawthorn	3	87.5	0	Semi-mature	Fairly maintained hedge row containing Bramble and rosehip running adjacent to access road and agricultural field	None	40+	C	2	3.5	1.1
H10	Common hazel, Common hawthorn	3	87.5	0	Semi-mature	Fairly maintained hedge row containing Bramble and rosehip running between two agricultural fields	None	40+	C	2	3.5	1.1
H11	Common hazel, Common hawthorn, Common ash	3	87.5	0	Semi-mature	Fairly maintained hedge row containing Bramble and rosehip running adjacent to access road and agricultural field	None	40+	C	2	3.5	1.1
H12	Common hawthorn, Elder	3	87.5	0	Semi-mature	Relatively dense hedge sparse in areas separating two fields with understory bramble	None	40+	C	2	3.5	1.1
H13	Common hawthorn, Grey willow	3	87.5	0	Semi-mature	Relatively dense hedge, sparse in areas, separating two fields with understory bramble	None	40+	C	2	3.5	1.1
H14	Common hawthorn, Common ash, Grey willow	5	137.5	0	Semi-mature	Untidy hedge, adjacent To stream separating to agricultural fields	None	40+	C	2	8.6	1.7

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			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
H15	Common hazel, Common ash, Blackthorn, English elm	4	55	0	Semi-mature	Dense hedgerow poorly maintained and overgrown. Gaps throughout, few trees singled out within.	None	20+	C	2	1.4	0.7
H16	Common hawthorn, Common ash	3	112.5	0	Semi-mature	Roughly maintained hedge separating to fields With Ash scattered throughout and understory, Bramble	None	40+	C	2	5.7	1.4
H17	Common hazel, Blackthorn, Willow species	6	55	0	Early-mature	Insignificant specimens growing along south side of stream. Areas of potential historic hedge bank.	None	20+	C	2	1.4	0.7
H18	Common hawthorn, Blackthorn	1.5	87.5	0	Semi-mature	Well maintained uniform hedgebank separating agricultural field from road	None	40+	B	2	3.5	1.1
H19	Common hazel, Common hawthorn, Common ash	2	87.5	0	Semi-mature	Well maintained hedge of various species separating agricultural field from road	None	40+	C	2	3.5	1.1
H20	Sycamore, Common hazel, Common hawthorn, Common ash, Blackthorn	7	155	0	Semi-mature	Hedge bank of good quality with overgrown specimens growing within. Dense throughout. Maintained poorly to field boundary.	None	40+	B	2	10.9	1.9
H21	Common hawthorn, Common ash, Blackthorn, Grey willow	4	55	0	Early-mature	Hedgerow with species of insignificance and dense throughout.	None	20+	C	2	1.4	0.7

Tree Survey Schedule

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			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
H22	Common hawthorn, Blackthorn, English elm	4	90	0	Early-mature	Hedgerow with species of insignificance and dense throughout.	None	20+	C	2	3.7	1.1
H23	Common hazel, Common hawthorn, Blackthorn, Elder	4	90	0	Early-mature	Hedgerow with species of insignificance and dense throughout.	None	20+	C	2	3.7	1.1
H24	Bramble	1.5	20	0	Young	Bramble hedge	None	40+	C	2	0.2	0.2
H25	Bramble	3.5	20	0	Mature	Bramble hedge	None	40+	C	2	0.2	0.2
H26	Common hazel, Common hawthorn, Blackthorn, Elder	4	90	0	Early-mature	Hedge bank with species of insignificance and dense throughout.	None	20+	B	2	3.7	1.1
H27	Common hazel, Common hawthorn, Grey sallow, Elder, English elm	6	87.5	0	Early-mature	Relatively unkept hedge with potential to form a hedge bank in the future	None	40+	C	2	3.5	1.1
H28	Common hawthorn, Common holly, Blackthorn, Bramble, Goat willow, English elm	4	82.5	0	Semi-mature	Majority Blackthorne with understory Bramble, separating two fields	None	40+	C	2	3.1	1.0

Tree Survey Schedule

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			(mm)	(m)							(m ²)	(radius in m)
H29	Common hazel, Common hawthorn, Blackthorn, Bramble, Goat willow, English elm	4	82.5	0	Semi-mature	Majority Blackthorne with understory Bramble, separating two fields	None	40+	C	2	3.1	1.0
H30	Common hazel, Common hawthorn, Blackthorn, Bramble, Goat willow, English elm	4	82.5	0	Semi-mature	Majority Blackthorne with understory Bramble, separating two fields	None	40+	C	2	3.1	1.0
H31	Common hawthorn, Common holly, Blackthorn, Bramble, Goat willow, English elm	4	82.5	0	Semi-mature	Majority Blackthorne with understory Bramble, separating two fields	None	40+	C	2	3.1	1.0
H32	Bramble	2	20	0	Early-mature	Hedge of insignificance.	None	10+	C	2	0.2	0.2
H33	Box honeysuckle	2.5	40	0	Early-mature	Moderately maintained to path, sporadic throughout, bordering private property.	None	20+	C	2	0.7	0.5

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			(mm)	(m)							(m ²)	(radius in m)
H34	Wild privet	4	110	0	Mature	Well maintained specimen growing within private property. 1m over brick wall, dense throughout.	None	20+	C	2	5.5	1.3
H35	Wild privet, Box honeysuckle	2	110	0	Mature	Well maintained specimen growing within private property, dense throughout.	None	20+	C	2	5.5	1.3
H36	Lawson cypress	5	650	1	Mature	Poorly maintained, high levels of major deadwood, growing on ground level unlikely to affect works on road side.	None	20+	C	2	191.1	7.8
H37	Sycamore, Common hawthorn, Apple species	4	112.5	0	Early-mature	Mixed species hedgerow, varied amenity value	None	40+	C	2	5.7	1.4
H38	Common hazel, Common hawthorn, Blackthorn, Bramble	4	85	0	Early-mature	Insignificant overgrown specimens historically maintained to 1.5 m. Potential hedge bank. Barbed wire running through hedge row. Dense throughout with patchy areas of bramble.	None	20+	C	2	3.3	1.0
H39	Common hawthorn, Common ash, Blackthorn, Bramble, Goat willow, Elder	4	162.5	0	Mature	Healthy mixed hedgerow, with consistent density	None	40+	C	2	11.9	2.0

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			(mm)	(m)							(m ²)	(radius in m)
H40	Common hawthorn, Common ash, Blackthorn, Bramble, Willow species	6	155	0	Semi-mature	Specimen is predominantly overgrown and dense throughout bordering field with barbed wire either side. Potential hedge bank. Poorly maintained.	None	20+	C	2	10.9	1.9
H41	Sycamore, Common dogwood, Common ash, Common ivy	2.5	137.5	0	Early-mature	Heavily maintained hedge, bordering field and road, most sitting on top of a 1 m wall	None	40+	C	2	8.6	1.7
H42	Common olive	4	85	1	Semi-mature	Well maintained Hedgerow located within private property. Concrete wall north of hedge. Over growing wall by 1m.	None	20+	B	2	3.3	1.0
H43	Common beech	3	70	1	Early-mature	Well maintained hedge row located within private property directly adjacent to stone wall.	None	40+	B	2	2.2	0.8

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			(mm)	(m)							(m ²)	(radius in m)
W1	Common beech, Common ash	22	550	1	Over-mature	Designated ancient woodland, dense undergrowth and ivy dominated. Trees spaced 5m apart.	None	40+	A	2	136.8	6.6
W2	Common hawthorn, Common ash, Pedunculate oak	20	387.5	5	Mature	Old woodland with a variety of native species, much lower elevation than the field to the north making it a potential wetland.	None	40+	B	3	67.9	4.7
W3	Common ash	15	375	5	Semi-mature	Younger Ivy clad specimens, relatively insignificant	None	40+	C	2	63.6	4.5
W4	Common hawthorn, Common ash, Blackthorn, Bramble	17	430	1	Early-mature	Woodland belt with stream, dense throughout, predominantly ash with understory blackthorne and dense bramble vegetation.	None	20+	B	2	83.6	5.2
W5	Common hazel, Common ash, English elm	20	350	5	Mature	Small woodland, majority elm maintained to the Road on the south side, dense foliage throughout, ivy, clad stems	None	40+	B	2	55.4	4.2

Appendix C Tree Constraints Plan



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
 Tree canopies are coloured in accordance with their quality category as set out in Table 1 of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

ROOT PROTECTION AREAS
 This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

ACCURACY OF TREE LOCATIONS
 Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES
 export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

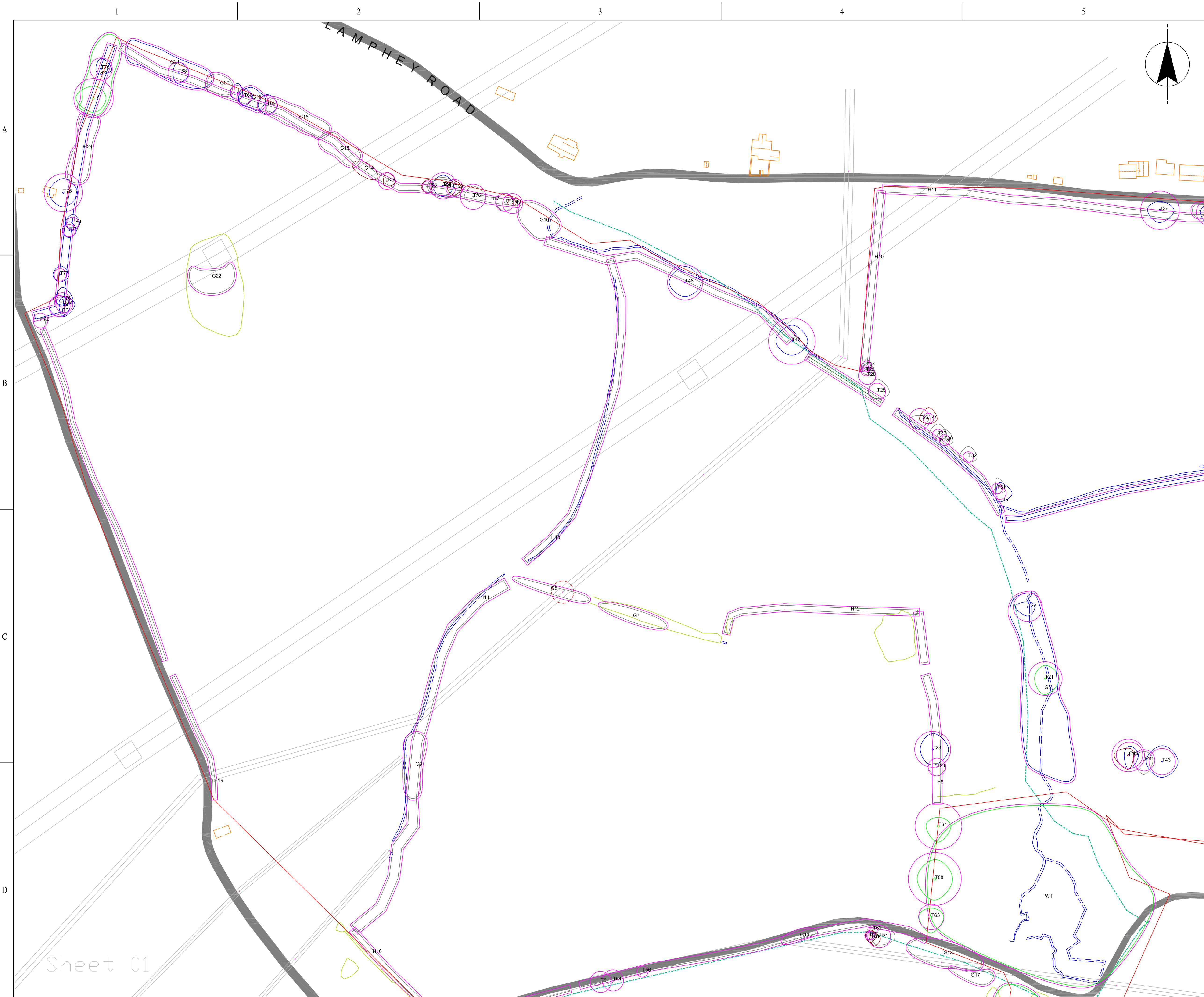
	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems	T/G/H/W	Paths denoting tree grass, hedgerow or woodland reference number.	#	Trees locations not based on topographical survey

NOT FOR CONSTRUCTION

Revision	Status	Sanability	Description	Author	Checked	Reviewed	Date
P01						AA	05/02/2024



Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembroke		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:3000	Sheet Size: A1	Status:
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001	Revision: P01	



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
 Tree canopies are coloured in accordance with their quality category as set out in Table 1 of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

ROOT PROTECTION AREAS
 This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

ACCURACY OF TREE LOCATIONS
 Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES
 export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems		T/G/H/W		Points denoting tree (grass, hedgerow or woodland) reference number.
							Tree locations not based on topographical survey

NOT FOR CONSTRUCTION

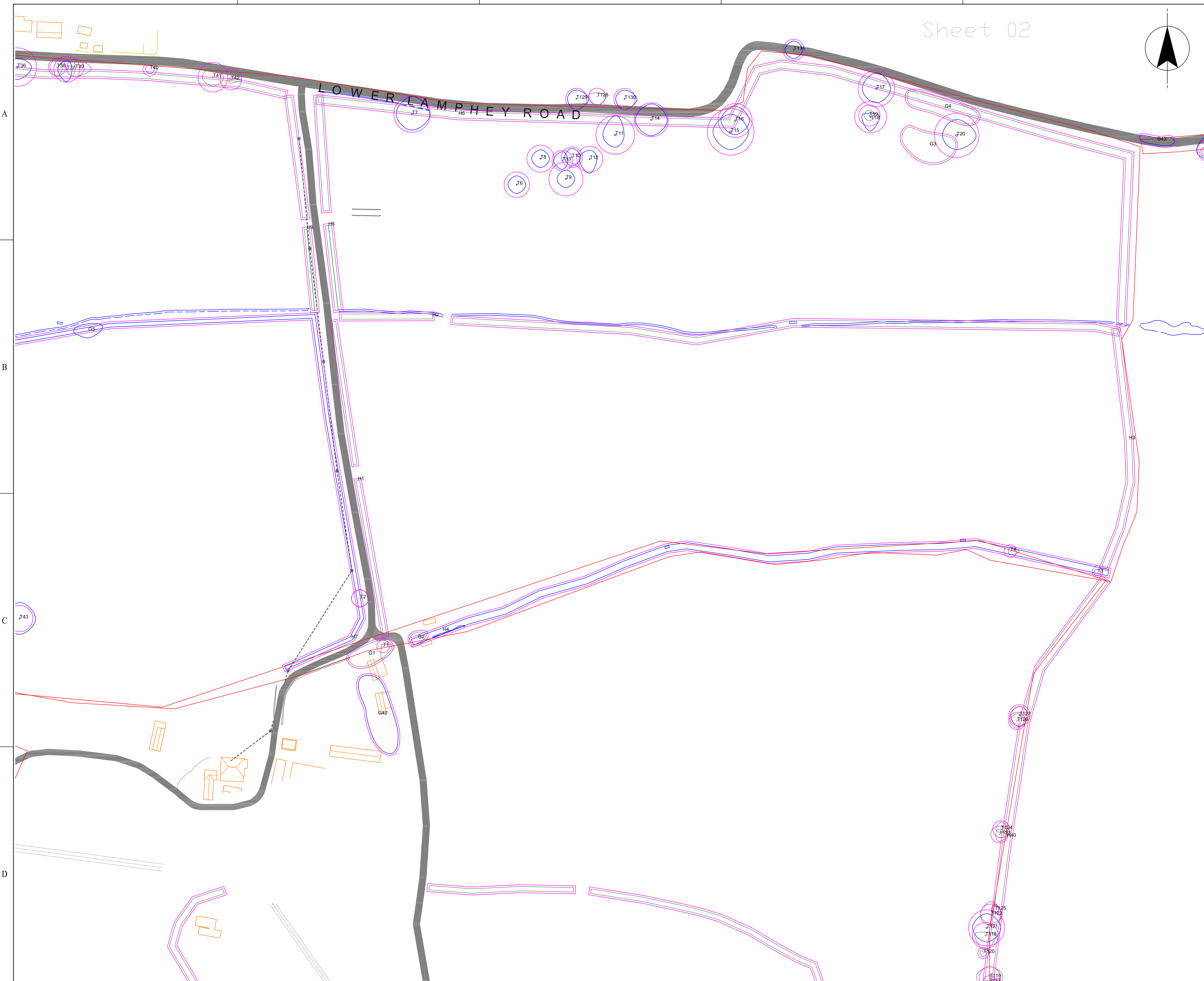
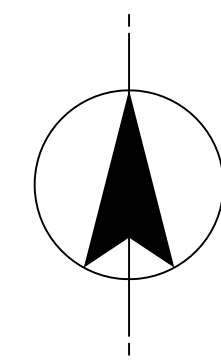
Revision	Status	Sanitability Description	Author	Checked	Reviewed	Date
P01			AA			05/02/2024



Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembroke		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:1000	Sheet Size: A1	Status:
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001		Revision: P01

Sheet 01

200mm
150
100
50



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES

Tree canopies are coloured in accordance with their quality category as set out in Table 1 of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

ROOT PROTECTION AREAS

This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

ACCURACY OF TREE LOCATIONS

Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES

export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems		T/G/H/W		Tree locations not based on topographical survey

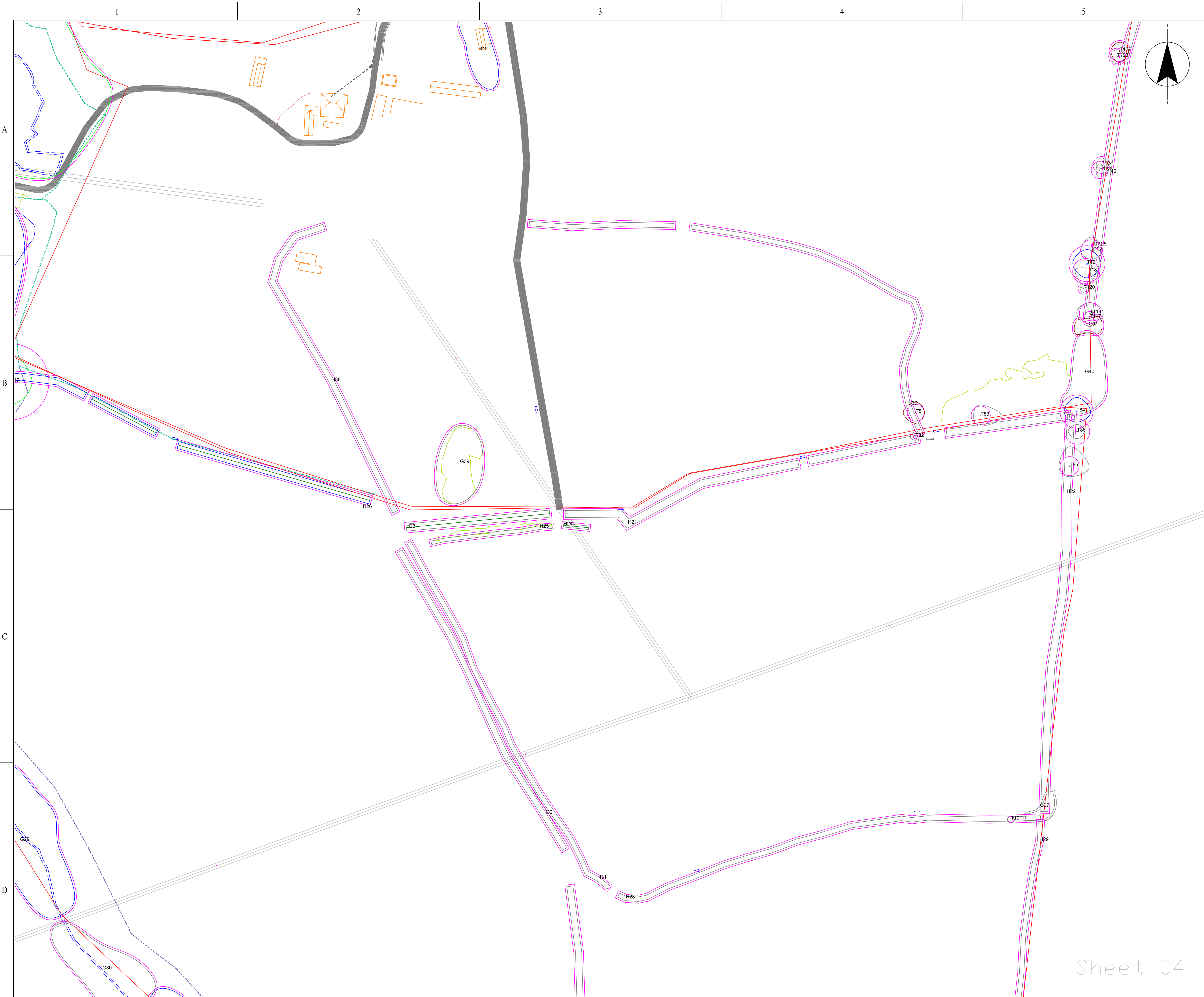
NOT FOR CONSTRUCTION

Revision	Status	Sanability Description	Author	Checked	Reviewed	Date
P01			AA			05/02/2024



Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembroke		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:1000	Sheet Size: A1	Status: P01
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001		Revision: P01





DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
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ROOT PROTECTION AREAS
 This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

ACCURACY OF TREE LOCATIONS
 Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES
 export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems		T/G/H/W		Tree locations not based on topographical survey

NOT FOR CONSTRUCTION

Revision	Status	Sanability Description	Author	Checked	Reviewed	Date
P01					AA	05/02/2024



Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembroke		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:1000	Sheet Size: A1	Status:
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001	Revision: P01	

Sheet 04



Sheet 05

DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
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ROOT PROTECTION AREAS
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ACCURACY OF TREE LOCATIONS
 Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES
 export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems	T/G/H/W		#	Tree locations not based on topographical survey

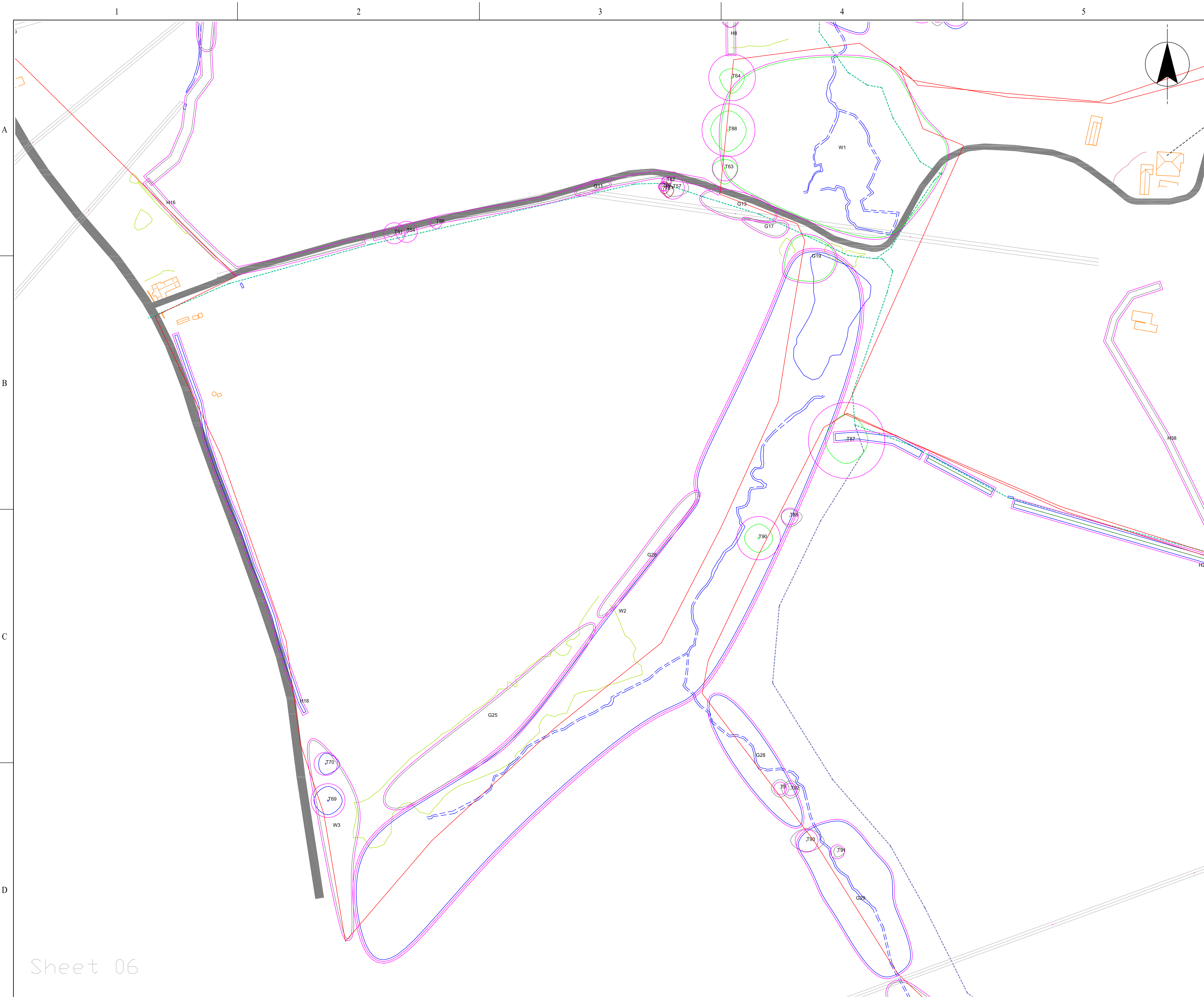
NOT FOR CONSTRUCTION

Revision	Status	Sanability Description	Author	Checked	Reviewed	Date
P01						05/02/2024



Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembroke		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:1000	Sheet Size: A1	Status:
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001	Revision: P01	





DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
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ROOT PROTECTION AREAS
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ACCURACY OF TREE LOCATIONS
 Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW OR Tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place

REFERENCES
 export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-100 (240105) PV Layout - PROPOSED LAYOUT
 External Release

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems	T/G/H/W	Paths denoting tree growth, hedgerow or woodland reference number.	#	Tree locations not based on topographical survey

NOT FOR CONSTRUCTION

Revision	Status	Sanability Description	Author	Checked	Reviewed	Date
P01						05/02/2024



Location Code: SA71 4AA OS Reference: SN 00463 00110 Security Reference:
 Project Group: 333100437 Sub Process: 700
 Location/Town: Pembroke
 Site Name: Alleston
 Project Name: Alleston solar farm
 Drawing Title: TREE CONSTRAINTS PLAN

Scale: 1:1000 Sheet Size: A1 Status:
 Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-001 Revision: P01

Sheet 06

200mm
150
100
50

Appendix D Tree Protection Plan



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES

Tree canopies are coloured in accordance with their quality category as set out in Table 1 of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

ROOT PROTECTION AREAS

This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree protection barriers should be positioned in accordance with the adjacent tree protection plan, be fit for the purpose of excluding construction activity, and appropriate to the degree and proximity of work taking place around the retained trees. It is essential that the barriers are installed prior to any construction taking place, be maintained during construction, and only removed once all construction has been completed and associated equipment and materials have been removed from site. It is recommended that the barrier configuration shown and described in the plan opposite should be used on this site. Inside the barriers it is also essential that the following prohibitions are complied with, unless an appropriate methodology has been formally agreed. (Where planning is required, formal agreement will be required from the Local Planning Authority):

No excavations, including by hand. No storage of machinery. No storage or handling of building materials, fuel, chemicals, or spoil. No fires. No vehicular access. No pedestrian access. No alteration, increase or decrease, to existing ground levels. No excavation or installation of services

ACCURACY OF TREE LOCATIONS

Tree locations based on topographical survey SDS 208175.02 VINING LODSWORTH WSW

ACCOMPANYING REPORT

Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Swalecliffe SSO which contains details of all trees surveyed and a description of recommended tree protection methods

REFERENCES

export_json2cad_1707142962 STANTEC BS5837 TREE SURVEY
 SKUKX-ALLES-000-PVL-102K (20240823) External PROPOSED LAYOUT
 Release Drawing

LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree stems		T/G/H/W		Tree locations not based on topographical survey
	Tree to be removed		Tree (pinch/height) partially removed		Tree protection seeding		

NOT FOR CONSTRUCTION

P04	Layout updated	AA	CS	02/09/2024
P03	Layout updated	CS	MC	05/06/2024
P02	Layout updated	CS	AA	11/04/2024
P01	For information	AA	CS	06/02/2024

Revision	Status	Sanability	Description	Author	Checked	Reviewed	Date
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Location Code: SA71 4AA	OS Reference: SN 00463 00110	Security Reference:
Project Group: 333100437	Sub Process: 700	
Location/Town: Pembrock		
Site Name: Alleston		
Project Name: Alleston solar farm		
Drawing Title: TREE PROTECTION PLAN		
Scale: 1:3000	Sheet Size: A1	Status:
Drawing Number: 333100437.700-STN-VES-ZZ-DR-EN-002	Revision: P01	

