

# Dean Moor Solar Farm

# Environmental Statement: Appendix 7.8 – Arboricultural Impact Assessment

on behalf of FVS Dean Moor Limited

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# DEAN MOOR SOLAR FARM ENVIRONMENTAL STATEMENT APPENDIX 7.8 – ARBORICULTURAL IMPACT ASSESSMENT PREPARED ON BEHALF OF FVS DEAN MOOR LIMITED

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# 1. Introduction

- 1.1.1. This Arboricultural Impact Assessment ('AIA') has been prepared on behalf of FVS Dean Moor Ltd ('the Applicant') to support the application for development consent for the Dean Moor Solar Farm ('the Proposed Development') on approximately 276.5ha of land located between the villages of Gilgarran and Branthwaite in West Cumbria (the 'Site'), which is situated within the administrative area of Cumberland Council ('the Council'). The Proposed Development will be within the 'Order Limits' (the land shown on the Work Plans) [**REF: 2.3**] within which the Proposed Development can be carried out. For the purpose of this AIA, the terms 'Order Limits' and 'Site' are used interchangeably.
- 1.1.2. This AIA reflects the outcomes of a tree survey and provides a Tree Constraints Plan ('TCP') (Appendix B) detailing trees and other woody vegetation on the Site along with an indicative Tree Protection Plan ('TPP') for the construction phase of the Proposed Development, in accordance with 'BS5837: Trees in Relation to Design, Demolition and Construction (2012)<sup>1</sup> based on the Parameter Plan for the Proposed Development (ES Figure 3.4) [REF: 6.2], which reflects the Works Plans within the DCO.
- 1.1.3. The tree survey that provides the foundation of this AIA was carried out on4 and 5 April 2023 and the results are provided in the Tree SurveySchedule ('TSS') in Appendix A.
- 1.1.4. The purpose of this AIA is to clearly identify the significant trees and hedges that may be impacted by the Proposed Development, the quality and value of the vegetation, the effect that the stages of the Proposed 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.

<sup>&</sup>lt;sup>1</sup> BS 5837:2012. Trees in relation to design, demolition and construction. Recommendations, April 2012. ISBN 978 0 580 69917 7



1.1.5. This AIA has been relied on to inform the arboricultural mitigation measures within the Outline Construction Environmental Management Plan ('OCEMP') (ES Appendix 5.1) [REF: 6.3], which will be updated and secured as a DCO Requirement, based on the detailed design of the Proposed Development, also secured by a DCO Requirement.

### **1.2.** The Proposed Development and Site

- 1.2.1. The Proposed Development comprises the construction, operation, and decommissioning of a solar photovoltaic ('PV') energy generating station with a total capacity exceeding 50 Megawatts ('MW') comprising solar PV arrays, grid connection infrastructure, associated infrastructure, and green infrastructure.
- 1.2.2. The Proposed Development will include the following key elements of infrastructure:
  - Solar PV panels;
  - Solar PV array mounting structures;
  - Power Conversion System ('PCS') Units in the form of Inverters and Transformers;
  - Grid Connection Infrastructure comprising Customer and DNO Substation Buildings and external electrical equipment and ancillary infrastructure within a Security Fence;
  - Perimeter Fencing, Gates, CCTV cameras, electrical cabling, and other associated infrastructure;
  - Access from the highway and internal access tracks; and
  - Green infrastructure including landscaping and ecological enhancements.
- 1.2.3. The Site (ES Figure 1.1) [**REF: 6.2**] extends to approximately 276.5ha and is located approximately 1.1km east of the Lillyhall Industrial Estate, 600m east of the small village of Gilgarran, approximately 900m west of Branthwaite, and approximately 5km southeast of Workington town centre on the west Cumbrian coast. The hamlet of Branthwaite Edge is directly adjacent to the east of the Site.
- 1.2.4. For ease of reference, the Site is divided primarily into four areas referred to as Area's 'A', 'B', 'C', and 'D' as shown on ES Figure 3.1 [**REF: 6.2**].



- Area A Land south of Branthwaite Road (approximately 40.2ha);
- Area B Land south of Branthwaite Road and north of Gilgarran Road (approximately 19.9ha);
- Area C Land south of Gilgarran Road and north of Dean Cross Road (approximately 203ha);
- Area D Land connecting Areas A and B, including Potato Pot Wind Farm (the 'Wind Farm'), Gilgarran Road between Areas B and C, and Branthwaite Edge Road (approximately 13.4ha).

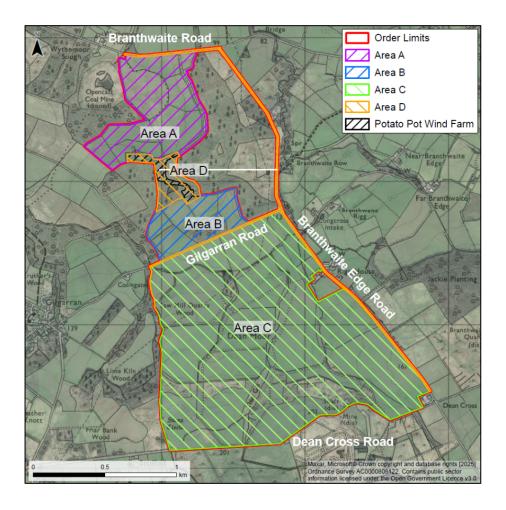


Figure 1.1: Solar Farm Area Plan (Extract of ES Figure 3.1)

- Further information on the Proposed Development and Site context is provided in ES Chapter 3 – Site and Proposed Development Description [REF: 6.1].
- 1.2.6. With respect to trees, there are larger areas of relatively immature woodland adjacent to Areas A, B, and D of the Site which were planted in association with the land's restoration from mining use. Where this woodland is directly adjoining the fields that would contain Proposed Development infrastructure an approximate 10m buffer strip of this



woodland has been included in the Order Limits following a recommendation by the Council, to secure the retention of a screening woodland band as part of the development consent. Other notable areas of woodland surrounding the Site include the replanted ancient woodland along much of the eastern boundary of Area C. The Proposed Development parameters include a minimum 15m development buffer to this important habitat.

1.2.7. Within the Site woodland is less common although there are several blocks of plantation woodland found in Area C. The nature of these woodlands as habitats, and the intentions for their management are provided more fully in ES Chapter 8 – Biodiversity [REF: 6.1] and via the Outline Landscape Ecological Management Plan ('OLEMP') (ES Appendix 7.7) [REF: 6.3].

#### 1.3. Scope

- 1.3.1. This AIA is only concerned with trees in relation to design (i.e., the Parameter Plan) and construction. The AIA includes an assessment based on the Site visit and documents provided, namely the Work Plans [REF 2.3], upon which the Parameter Plan is based upon (ES Figure 3.4). This report is not a full hazard or risk assessment of trees and should not be relied on as such.
- 1.3.2. Aerial tree inspection, invasive procedures, sub-soil investigations and detailed soil analysis are outside the scope of this report.
- 1.3.3. All trees surveyed to have potential to be directly affected by the Proposed Development have been considered assessed herein, even where they are situated outside of the Site.

### 1.4. Limitations

1.4.1. The TPP (Appendix C) has been developed from the tree survey information and the tree locations identified via topographical survey, the Work Plans and the Parameter Plan. GPS locations to mark the location of trees can have inaccuracies. Therefore, where any potential conflict exists, the TPP based on the final layout, to be undertaken as part of the CEMP



will identify the locations and RPA extents of trees are confirmed on-Site prior to commencement of works.

- 1.4.2. The recommendations made in this report are only relevant to the Parameter Plan (ES Figure 3.4), which is based on the Work Plans [REF 2.3], as incorporated into the TPP. The level of arboricultural impact may increase or decrease depending on the final design of the Proposed Development, secured by a DCO Requirement.
- 1.4.3. 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.
- 1.4.4. For construction an updated TPP will be required based on an updated condition survey undertaken in the pre-commencement period and reflecting the final design. The OCEMP (ES Appendix 5.1), which with the CEMP will have to be substantially in accordance with, includes a commitment to undertake the updating assessment and incorporate adequate protections into the design and/or CEMP.

## 1.5. Legal Constraints

- 1.5.1. Local Planning Authorities ('LPAs') have the power to preserve selected trees and woodlands through the making of Tree Preservation Orders ('TPOs')<sup>2</sup>. Similarly, special provision is provided to trees located within Conservation Areas which are not the subject of a TPO. These powers are provided to LPAs by the following Act of Parliament and their associated regulations:
  - Town and Country Planning Act 1990<sup>3</sup>;
  - Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008<sup>4</sup>; and

<sup>&</sup>lt;sup>2</sup> HMG Ministry of Housing, Communities & Local Government 2019. Policy Paper: The National Planning Policy Framework (NPPF) updated December 2024.

<sup>&</sup>lt;sup>3</sup> Town and Country Planning Act 1990 (as amended).

<sup>&</sup>lt;sup>4</sup> HM Government (2008). The Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008 No. 595.



- Town and Country Planning (Tree Preservation) (England) Regulations 2012<sup>5</sup>.
- 1.5.2. 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 LPA.
- 1.5.3. A search of the Council's online planning constraints information<sup>6</sup> confirmed that no trees located either adjacent to or in the Site are the subject of a TPO or located in a CA.

### **1.6.** Wildlife Constraints

- 1.6.1. In England and Wales various habitats and species of plant, bird, and animal are afforded statutory protection by legislation including the following:
  - Wildlife and Countryside Act 1981 (as amended)<sup>7</sup>;
  - Natural Environment and Rural Communities Act 2006 (NERC Act)<sup>8</sup>;
  - Conservation of Habitats and Species Regulations 2017 (as amended)<sup>9</sup>; and
  - The Hedgerows Regulations 1997<sup>10</sup>.
- 1.6.2. The above list is non-exhaustive and protected species must be considered prior to any tree or development works being carried out. Tree work and the timing of tree works within the Site will be carefully considered and managed in accordance with the Proposed Development's CEMP and LEMP.

## 1.7. Ancient and Veteran Trees

1.7.1. 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

<sup>&</sup>lt;sup>5</sup> Town and Country Planning (Tree Preservation) (England) Regulations 2012.

<sup>&</sup>lt;sup>6</sup> Cumberland Council. Trees and Hedges. Available at: <u>https://www.allerdale.gov.uk/en/planning-building-control/planning-policy/conservation-natural-historic-environment/trees-hedges/</u> Accessed February 2025

<sup>&</sup>lt;sup>7</sup> HM Government (1981). Wildlife and Countryside Act 1981 c. 69.

<sup>&</sup>lt;sup>8</sup> HM Government (2000). Countryside and Rights of Way Act 2000 c. 37.

<sup>&</sup>lt;sup>9</sup> HM Government (2017). The Conservation of Habitats and Species Regulations 2017 No. 1012.

<sup>&</sup>lt;sup>10</sup> HM Government (1997). The Hedgerows Regulations 1997 No. 1160.



value that has developed some of the features found on an ancient tree, not necessarily because of time, but of its life or environment.

- 1.7.2. A search of the DEFRA Multi-Agency Geographic Information for the Countryside ('MAGIC') map<sup>11</sup> found that one woodland adjacent to the western boundary of Area C is recorded as replanted ancient woodland, an area that has been wooded continuously since at least 1600 AD but where the former native tree cover has been felled and replaced by planted trees. This is known as the 'Lime Kiln Wood' which is recorded as W17 on the TSS. A search of the Woodland Trust Ancient Tree Inventory<sup>12</sup> found no trees designated as either ancient or veteran, however T70 within Area C was identified as veteran during the survey as recorded on the TSS.
- 1.7.3. Natural England and the Forestry Commission provide 'standing advice' for ancient woodland, ancient trees and veteran trees and this advice is incorporated into the recommendations for Nationally Significant Infrastructure Projects ('NSIPs'). It is separate to the advice and guidance provided in BS5837:2012.
- 1.7.4. At paragraph 5.3.14 the Overarching National Policy Statement for Energy (EN-1)<sup>13</sup> states that:

'Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why'.

<sup>12</sup> Woodland Trust. Ancient Tree Inventory (2025). Available at:

<sup>&</sup>lt;sup>11</sup> DEFRA Multi-Agency Geographic Information for the Countryside ('MAGIC') map. Available at: https://magic.defra.gov.uk/ Accessed January 2025

Accessed February 2025 <sup>13</sup> HM Government (2024). The Department for Energy Security and Net Zero (DESNZ). National Policy Statement for Renewable Energy Infrastructure (EN-1).



 1.7.5. Further discussion is provided in the National Policy Statement for Renewable Energy Infrastructure (EN-3)<sup>14</sup> at paragraph 5.4.15 which states:

'Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Keepers of Time, the government's policy for ancient and native trees and woodlands in England sets out the government's commitment to maintain and enhance the existing area of ancient woodland, maintain and enhance the existing resource of known ancient and veteran trees, excluding natural losses from disease and death, and to increase the percentage of ancient woodland in active. Ancient and veteran trees found outside ancient woodland are also particularly valuable'.

- 1.7.6. For ancient woodlands, including replanted ancient woodland, development should have a buffer zone of at least 15m from the boundary of the woodland to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a proposal is likely to need a larger buffer zone.
- 1.7.7. For ancient or veteran trees (including those on the woodland boundary), the buffer zone should be at least 15 times larger than the diameter of the tree, or 5m from the edge of the tree's canopy, whichever is greater. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be needed.
- 1.7.8. 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.
- 1.7.9. The Natural England buffer zone for those trees identified as ancient or veteran is shown in the Tree Survey Schedule in Appendix A, the TCP in Appendix B, and the TPP in Appendix C.

<sup>&</sup>lt;sup>14</sup> HM Government (2024). The Department for Energy Security and Net Zero (DESNZ). National Policy Statement for Renewable Energy Infrastructure (EN-3).



# 2. Tree Survey Methodology

2.1.1. This section sets out the tree survey methodology as reflected in the results reported in the Tree Survey Schedule (TSS). Details are provided for what each header within the TSS table means and how this relates to the tree survey methodology and its outcomes. The TSS is found at Appendix A and provides the details of the trees surveyed for this AIA in accordance with this methodology.

#### **Tree Identification (ID) Number**

2.1.2. Tree ID number relevant to plans and drawings included in this report.

#### **Species**

2.1.3. This identifies the species of tree as identified via the tree survey. For species, the English common name is used, accompanied by the scientific species name where this is deemed necessary for clarification. In some cases, if there is uncertainty as to the exact species the abbreviation 'sp' is used where only the genus is known.

#### Height

2.1.4. Height is the 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.

#### **Stem Diameter**

2.1.5. Stem diameter is the diameter of tree at breast height (1.5m) for singlestemmed 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. Off-Site or otherwise inaccessible trees where accurate measurements cannot be obtained have been given estimated diameters.



#### **Branch Spread**

2.1.6. Branch spread is measured at four ordinal points (N, E, S, W) to determine canopy shape. Measurements are rounded up to the nearest metre or half metre as appropriate. Canopy dimensions may impact on-Site layout design or recommended routes for vehicles and are therefore accurately represented on the TCP and TPP.

#### Existing Height Above Ground Level

- 2.1.7. The existing height above ground level (agl) is the height at the time of the survey and provides:
  - Height in metres of the first significant branch, and the direction of growth.
  - Height in metres of lowest part of crown.

#### Life Stage

2.1.8. The life stage is an estimation based on outward physical appearance. It has relevance to calculating safe useful life expectancy and may be relevant to an assessment of current ecological or amenity value. The life stages reflected in this AIA include:

#### Young (Y)

2.1.9. This signifies Young (Y) trees typically within the first 10 years of growth that can be easily transplanted but are currently of limited significance in the landscape.

#### Semi-mature (SM)

2.1.10. Semi-mature (SM) trees are those which are well established trees with significant growth but not yet mature. Trees in the SM category will typically have reached less than 1/3 of their life expectancy.

#### Early-mature (EM)

2.1.11. Early-mature (EM) trees are trees in the early stages of maturity with high growth potential. EM trees will typically have reached 1/3 - 2/3 of their life expectancy.



#### Mature (M)

2.1.12. Mature (M) trees are those which are 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.

#### **Over-mature (OM)**

2.1.13. Over-mature (OM) trees are 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.

#### **General Observations**

2.1.14. General observations recorded on the TSS include any relevant observations of the arboricultural assessor with particular reference to structural and/or physiological condition.

#### **Preliminary Management Recommendations**

2.1.15. Preliminary management recommendations within the TSS include any specific recommendations made where management work is required for reasons of health and safety or sound arboricultural management. Further information on this topic is set out at section 5.

#### **Estimated Remaining Contribution**

2.1.16. This is determined by expected lifespan of the species, current life stage, and 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.</p>

#### **Tree Category Grading**

- 2.1.17. The tree category grading reflects assessment that conforms to BS5837:2012 Trees in Relation to Design, Demolition and Construction guidance as outlined below. Trees are also subcategorised as having mainly:
  - Arboricultural value;



- Landscape value;
- Cultural; or
- Conservation value.
- 2.1.18. Tree categorisation is based on tree condition at the time of assessment and does not consider future management proposals. Details of each category type are set out below.

#### Category A

2.1.19. Category A trees are trees of high quality and value. They are 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. The design of the Proposed Development has incorporated trees in this category, ensuring sufficient space is given to provide minimal potential for conflict during construction and operational use of the Site.

#### Category B

2.1.20. Category B trees are trees of moderate quality and value. They are 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.

#### Category C

2.1.21. Category C trees are those 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.

#### Category U

2.1.22. Category U Trees are those 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 would not be considered a constraint to the Proposed Development.



#### Root Protection Area (RPA)

- 2.1.23. The RPA is the minimum area in m<sup>2</sup> which must be left undisturbed around each tree in order to avoid risk of significant damage to the root system and to ensure its survival. For ease of understanding within the TSS, the equivalent radius, which should be measured from the centre of the tree, is provided.
- 2.1.24. RPAs are capped at 707m<sup>2</sup> which is equivalent to a circle with a radius of 15m in accordance with BS5837: Trees in Relation to Design, Demolition and Construction (2012).
- 2.1.25. For single stem trees, the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter.
- 2.1.26. For trees with 2-5 stems the combined stem diameter is calculated as follows:

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

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

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

2.1.28. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area is produced.



# 3. Tree Survey Results

## **3.1.** Tree Quality Assessment Summary

- 3.1.1. This section provides a summary of the tree survey results as reported in the TSS and following the methodology described above. It should be noted that discussions herein are confined to tree survey outcomes in accordance with BS5837. References herein to the value of trees and whether their removal could be considered as part of the Proposed Development are observations limited to the BS5837. They have not accounted for any landscape value (e.g. screening, character) these features may have, nor has it considered the ecological interest in these trees as habitats.
- 3.1.2. Four individual trees on Site, T70, T71, T72 and T79 were recorded asCategory A trees. Their high quality and value mean their retention should be secured in the design and construction of the Proposed Development.
- 3.1.3. An area of off-Site woodland located to the west of Area C, W17 (the Lime Kiln Wood) is also recorded as Category A due to its designation as replanted ancient woodland designation. Ensuring no aspect of the Proposed Development would undermine the retention of this off-Site woodland will also be considered imperative to the design, construction the Proposed Development.
- 3.1.4. Twenty-five individual trees, five groups, four hedgerows and five woodlands were recorded as B Category trees. Their moderate quality and value mean reasonable effort should be made to retain these trees where possible.
- 3.1.5. One hundred and thirty-four individual trees, 25 groups of trees, 41 hedgerows, and 11 woodlands were recorded as C Category. Where retention of these lower quality and value features would cause undue restraint to the Proposed Development, it could be reasonable to consider their removal them as part of the Proposed Development. Category C W10 is situated off-Site but is included in the survey due to its close proximity and potential to be impacted by works.



- 3.1.6. Five individual trees, T60, T61, T155, T162 and T164 were recorded as very low quality and value U category trees with less than ten years remaining life expectancy. These should not be considered a constraint to the Proposed Development.
- 3.1.7. The locations of these trees are shown in the TCP (Appendix B).

	BS5837 Tree (	Quality Assessr	ment Category		Totals
type	А	В	С	U	
Individual trees	T70T70 T71 T72 T79	25 total (see survey schedule for tree reference numbers)	134 total (see survey schedule for tree reference numbers)	T60 T61 T155 T162 T164	168
Groups of trees	G8G8 G14 G19 G23 G24	25 total (see survey schedule for tree reference numbers)	None		30
Hedgerows	None	H1 H3 H27 H43	41 total (see survey schedule for tree reference numbers)	None	45
Woodlands	W2, W, W6 W9 W13 W14	W1, W3, W4, W5, W7, W8, W10, W11, W12, W15, W16	None		17
Totals	5	39	211	5	260

#### Table 3.1: Tree quality assessment summary



# 4. Impact Appraisal and Recommendations for Tree Protection

### 4.1. Tree Removals

- 4.1.1. The initial assessment has identified it unlikely that the Proposed Development will require the removal of tree features. The parameters of the Proposed Development have been established with regard for the RPA of trees and hedges as per the TCP. If there is overlap between parameters and RPA this will be where it is expected that mitigation can be achieved, and this is discussed further at section 4.3. Although, no tree removals are expected to be required, the extent of tree removals may change depending on the updating tree survey undertaken in precommencement and the detailed design of the Proposed Development. Any proposals to remove trees would need to have regard for the TSS (or its future update) in relation to tree quality.
- 4.1.2. The protection of existing established hedgerows is secured by the Works Plans, with access between field parcels bordered by hedgerows to be taken through existing hedgerow gaps. It is understood that some gaps may require widening but that no new severance would be created, and with the methodology for works to hedges controlled by the CEMP.
- 4.1.3. Should any works to trees be required all tree work operations will be carried out in accordance with BS3998:2010 *'Recommendations for Tree Work'*<sup>15</sup>; current arboricultural industry guidelines and best practice; and all relevant Health & Safety standards. Tree work is a specialist task that requires operatives to be appropriately qualified, skilled, and adequately insured.
- 4.1.4. Woodlands W12 W16, are currently managed as forestry plantations to produce timber or wood fuel, with their locations shown on the TCP at Appendix B. It is anticipated that these woodlands may be clear felled and replanted on a cyclical rotation subject to details to be provided by the LEMP or future iterations of that document. Plantation woodland are likely

<sup>&</sup>lt;sup>15</sup> British Standard Institute (BSI) (2010). BS 3998:2010 Recommendation for Tree Works. BSI, London.



to continue to be managed for this purpose across the for the operational lifespan of the Proposed Development.

### 4.2. New Planting and Existing Retained Features

- 4.2.1. The Proposed Development will benefit from new and improved planting across the Site. This includes new trees (individual trees and woodland blocks), hedgerows, and scrub as well as enhancements to existing linear features and blocks to make them more robust and species rich. An indicative visual representation of these measures is provided by the Landscape Strategy Plan ('LSP') (ES Figure 7.6.1-7.6.5) [REF: 6.2], with a final Landscape and Ecology Plan ('LEP') secured by a DCO Requirement to sit alongside the detailed design for the generating station and associated infrastructure also to be provided through a Requirement. Should the final layout entail the loss of trees or hedgerows (as opposed to widening of gaps) the LEP must provide additional planting to compensate for loss.
- 4.2.2. The LEP will include a detailed planting plan reflecting locations, numbers, species, and spacing of features to be provided. Proposals for new or replacement planting will consider the space available to allow trees to grow to their maximum mature height and spread without competing with existing trees or other new features.
- 4.2.3. New tree planting will be in accordance with BS 8545:2014 'Trees: from nursery to independence in the landscape Recommendations' and should be in-keeping with the local landscape character<sup>16</sup>. Consideration will be given to the areas of tree planting to ensure that all existing trees to be retained will be protected or remediated if damaged during the construction phase (via the CEMP).

### 4.3. Works Taking Place within RPAs of Retained Trees

4.3.1. Works taking place within RPAs of retained trees may include works such as the upgrading of existing access points into the Site, the

<sup>&</sup>lt;sup>16</sup> British Standard Institute (BSI) (2014). BS 8545:2014 Trees: from nursery to independence in the landscape - Recommendations. BSI, London.



implementation of permanent perimeter fencing or temporary barriers, and landscaping works Table 4.1 below details tree numbers potentially affected by the different components within the Work Plans **[REF 2.3]** and the Parameter Plan (ES Figure 3.4). These impacts may increase or decrease depending on the detailed design of the Proposed Development.

4.3.2. It is of paramount importance that the ancient replanted woodland (Lime Kiln Wood) adjoining the western boundary of Area C is protected from effects from the Proposed Development. This is secured via the Work Plans and Parameter Plan which include a minimum 15m buffer for this woodland asset. Access routes and works areas required for construction will avoid the 15m buffer zone, and permanent Site fencing will also be situated outside of the buffer zone.

Works taking place	BS5837 Tree Quality Assessment Category													
within RPA	Α	В	C	U										
Construction	None	T75, G14	None	None										
Landscaping	T70	None	W12, W15	None										

#### Table 4.1: Works taking place within RPAs of retained trees

#### **New Access Road Construction**

- 4.3.3. No details are provided for the exact layout of the internal access track network within the Site, though wherever possible the application commits that existing tracks will be utilised and that new tracks would follow informal existing routes without creating new hedgerow severances. T75 and G14 have RPAs that extend into the area of the existing track network. In preparing the final design for these routes the design will be responsive to the locations of trees and hedges and where proximity is unavoidable appropriate mitigation will be designed-in for these parts of the track network.
- 4.3.4. To prevent damage to the roots of these trees, where the access track is constructed on unsurfaced ground within RPAs, it will be constructed using no-dig methodology. All tracks will be of a permeable construction (MOT Type 3 or similar) and in RPA it is likely to be necessary to incorporate a load suspension system similar to the 3D cellular



confinement system outlined in Appendix D. Design measures will be fully detailed and implemented via the CEMP, the outline version of which (the OCEMP) is available as ES Appendix 5.1.

- 4.3.5. To allow installation of the cellular confinement system, the prepared surface must be reasonably even. 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. The area must not be rolled or consolidated.
- 4.3.6. A layer of geotextile fabric will be installed across the area. It may be necessary to lightly pin the geotextile in place until the overlying layers are installed.
- 4.3.7. The cellular confinement system should then be placed over the geotextile fabric layer and fixed in place using steel pins. During this process tree root damage and soil compaction must be avoided. To adequately support access for vehicles up to aa 30t gross weight, the cellular confinement system should be a minimum of 150mm height. For construction vehicles up to 60t gross weight, the cellular confinement system must be increased to 200mm height. The cellular confinement system may be layered to obtain the desired levels for the access track.
- 4.3.8. The cells must be filled with clean, open graded angular aggregate, normally in the particle size range of 5mm 45mm. Single sized or rounded aggregate must not be used. The project engineer may determine alternative fill materials such as clean 4/20 or 4/40 stone. It is not acceptable to use a standard DoT Type 1 Sub-base within the cells for tree root protection due to small particle content (<5mm). The surface must not be rolled, and the filled cells must not be contaminated with site debris, soil or mud.</p>



#### Installation of perimeter fencing

- 4.3.9. The following precautions must be followed for works occurring inside RPAs:
  - Fence 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) or massed fibrous roots.
  - These roots must not be severed at any time without first consulting the appointed Project Arboriculturist (also known as the Arboricultural Clerk of Works ('ACoW')), and/or the Council's 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, subject to strict arboricultural monitoring and supervision.
  - 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.
- 4.3.10. Further information on perimeter fencing is available from the OCEMP at ES Appendix 5.1. Mitigation measures outlined here will be secured and implemented through the CEMP.

#### New landscaping

- 4.3.11. The following precautions will apply for the installation of new soft landscaping undertaken inside RPA and measures herein are included in section 6.4 of the OCEMP:
  - Excavations for new planting will be as small as possible while being adequate to accommodate the roots of each plant.
  - Any excavations will be carried out using hand tools only.
  - Structural roots (roots greater than 25mm diameter) must not be severed during planting or landscaping works.
  - Should structural roots be discovered within the location of proposed planting, the planting location shall be altered to avoid such roots.
  - The Applicant and their landscaping contractor will be responsible for ensuring that these recommendations are followed. It is not recommended that an arboricultural consultant is needed to supervise these works.



- 4.3.12. Any trees to be planted will be of an appropriate height, spread, form and habit in relation to the Proposed Development.
- 4.3.13. Tree planting will be in accordance with BS 8545:2014 *'Trees: from nursery to independence in the landscape: Recommendations'* and will be in-keeping with the local landscape character<sup>17</sup>. Consideration to the areas of tree planting will be given to ensure that all planted trees will be protected or remediated if damaged during construction.

<sup>&</sup>lt;sup>17</sup> British Standard Institute (BSI) (2014). BS 8545:2014 Trees: from nursery to independence in the landscape - Recommendations. BSI, London.



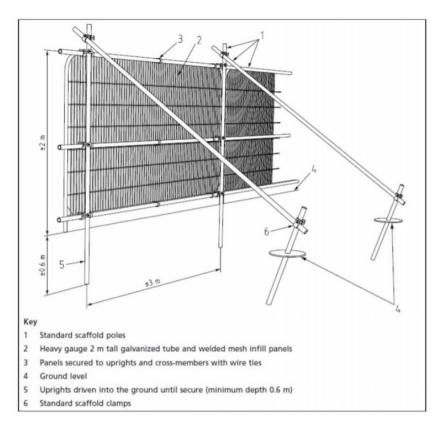
# 5. **Proposed Tree and Ground Protection**

### 5.1. Tree Protection Fencing

- 5.1.1. Temporary barriers will be required to protect all retained trees on-Site during construction where barriers are not provided by the permanent Site perimeter fencing. These barriers will be fit for the purpose of excluding construction activity and provide adequate protection to the trees.
- 5.1.2. The precise location and details of the nature of protective barriers to protect retained trees will be provided in the CEMP based on the TCP and TPP that reflect updating surveys and the final layout. The CEMP shall also require that that the ACoW be present to sign-off the precise locations and be satisfied that the barriers have been erected before any further work being undertaken in that part of the Site. Temporary barriers will be monitored by the ACoW on a regular basis and shall not be removed until works in that part of the Site have ceased and the ACoW has signed off an acceptance of the removal.
- 5.1.3. Section 6.2.2 of BS 5837:2012 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. It is recommended that this 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 stabiliser struts which are attached to a base plate and secured with ground pins. An example of this type of barrier is shown in Figure 5.1 below. Barriers of any type other than this may be acceptable subject to ACoW advice, but otherwise the CEMP will provide for fencing that aligns with BS 5837:2012 recommendations.
- 5.1.4. To clearly identify the purpose of protective fencing on-Site, all-weather notices will be attached to the barriers like the example shown in Figure 5.2 below.



- 5.1.5. 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 by the ACoW.
- 5.1.6. Tree protection fencing will be installed before any materials or machinery are brought onto that part of the Site and before construction works commence in a location with the potential for risks to trees. It will be removed only once all construction works with potential for effects on trees or hedges in that part of the Site are complete.



#### Figure 5.1: Tree protection fencing example



#### Figure 5.2: All-weather notice example



### 5.2. Ground Protection

- 5.2.1. To reduce the requirement for tree protection fencing and improve access for construction, ground protection, agreed and approved by the ACoW, will be installed within the RPA of T75 and G14 which overlap with the access track network.
- 5.2.2. Ground protection is required to avoid compaction of the surrounding soil to such a degree that tree roots are no longer able to penetrate the soil, and air and moisture are no longer able to enter and move through the soil. In accordance with Section 6.2.3 of BS 5837:2012 ground protection will need to be fit for the purpose of supporting any traffic entering the RPA without causing compaction of the soil below. This will help to maintain a growing environment which is able to support the long-term growth of the retained trees.
- 5.2.3. Ground protection should be placed on top of existing ground levels. and should be installed before any materials or machinery are brought onto Site and before Site works commence. It would be removed only once all Site works are complete.
- 5.2.4. Ground protection will incorporate Eve Trakway K-Trakpanel, GroundGuards Multitrack mat or similar, as appropriate for the weight of vehicles to be used including loads (see Appendix E). Ground protection will be



installed in accordance with the manufacturer's specification. Under no circumstances will topsoil stripping or any other excavation take place to install ground protection within the RPA of retained trees.

- 5.2.5. 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 by the use of 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. The area must not be rolled or consolidated.
- 5.2.6. Ground protection will be installed before any materials or machinery are brought onto the part of the Site where such protections are necessary to accommodate the activities, and before such works commence. It will be removed only once all construction works with potential to effect trees and hedges in that part of the Site are complete.



# 6. Other Considerations

6.1.1. All measures outlined below should also be included in the OCEMP (ES Appendix 5.1) and implemented via the CEMP which must be substantially in accordance with the OCEMP.

#### **Storage of Fuels and Chemicals**

6.1.2. 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.

#### **Storage of Materials**

6.1.3. Materials will be stored either outside the RPA of retained trees, on existing hard surfacing, or on ground protection as described in section 5.2 above.

#### Level Changes

- 6.1.4. Ground level decreases 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.
- 6.1.5. 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.
- 6.1.6. Under no circumstances will topsoil stripping take place within the RPA of retained trees or within the buffer zone of veteran trees or ancient woodland.



#### **Construction Vehicle Access**

6.1.7. Construction vehicles will not be driven onto unsurfaced areas of ground within the RPA or buffer zone of any retained trees. If access is required for construction vehicles on unsurfaced areas of ground within the RPA or buffer zone of retained trees, ground protection will be installed as described in section 5.2 above.

#### **Utility Installations**

6.1.8. To avoid damage to retained trees, any additional underground services will avoid the RPAs, including any underground cabling or drainage services. If additional services must unavoidably be installed within the RPAs of retained trees, the locations of these and a methodology for the works will be determined in consultation with the ACoW and will be agreed in writing with the Council. Where possible the works will be carried out using trenchless techniques such as moling, laser guided boring, or through continuous trenching under strict ACoW supervision.

#### Site Monitoring and Watching Brief

- 6.1.9. At paragraph 6.3 BS 5837:2012 states that wherever trees on or adjacent to a site have been identified as requiring protection, there should be an auditable system of arboricultural site monitoring. This should include arboricultural supervision whenever construction or development activity is to take place within RPAs of retained trees. These best practice recommendations will be incorporated into the CEMP. Following each Site visit a monitoring report will be issued by the ACoW. Copies of these reports should be retained and made available to the Council on request.
- 6.1.10. Key timings for supervision include:
  - Following installation of tree protection barriers and ground protection, before commencement of works, to inspect tree and ground protection against approved plans.
  - For the duration of any Site works (e.g., excavations, construction) taking place within the RPA of retained trees.
  - Periodically, 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 construction phase.



# 7. Conclusions

- 7.1.1. This AIA forms Appendix 7.8 **[REF: 6.3]** of the Landscape and Visual ES Chapter **[REF: 6.1]** and includes mitigation for the Proposed Development's impact on the arboricultural resource. The arboricultural impact of the Proposed Development will depend on the final layout, but for the purpose of this AIA a 'worst case' has been assessed based on parameters of the Proposed Development.
- 7.1.2. This AIA describes the current arboricultural features and potential impacts upon them arising from the Parameter Plan of the Proposed Development. In line with the requirements of BS5837: *Trees in Relation to Design, Demolition and Construction (2012)'*, the Applicant commissioned arboricultural advice in relation to the Proposed Development. A full tree survey of the Site was conducted on 4<sup>th</sup> and 5<sup>th</sup> April 2023.
- 7.1.3. The tree survey as reported in this AIA has identified a total of 260 tree features including 168 individual trees, 30 groups of trees, 45 hedgerows, and 17 woodlands which have the potential to be impacted by the Proposed Development. Of these, W10 and W17 are outside of the Site but are considered in this AIA due to their proximity to the Site and the potential for works on the Site to impact on these features.
- 7.1.4. As per the methodology described in section 2 of this AIA, each tree was awarded a quality rating from Category A Category U in accordance with the recommendations contained within Table 1 of BS5837. Five features were categorised as Category A, 39 features were categorised as Category B, and 211 were categorised as Category C. A further five trees were categorised as very low-quality Category U and are not considered to be a constraint to the Proposed Development.
- 7.1.5. Several areas of woodland within the Site are currently managed as forestry plantations to produce timber or wood fuel. It is anticipated that these woodlands may be clear felled and replanted on a cyclical rotation



over the Proposed Development's operational life. If so, details of this management will be reflected in the LEMP.

- 7.1.6. The initial assessment has identified it is likely that the Proposed Development is unlikely to require the removal of tree features.
- 7.1.7. To ensure retained trees remain protected throughout the course of works, a range of mitigation measures may be required including installation of tree protection fencing and ground protection. The full extent of required tree protection measures can only be confirmed once a final layout is produced as a DCO Requirement.
- 7.1.8. Tree protection measures are described within section 6 of the OCEMP (ES Appendix 5.1). The CEMP will be secured and implemented across the Proposed Development's construction phase. The CEMP will reflect a final layout that accounts for an updated TCP and TPP along with mitigation details including methodologies and monitoring measures.
- 7.1.9. Taking into account of the numbers, sizes, and locations of trees to be retained, including those that are off-Site, the minor impact potential identified will represent only a minor alteration to the main arboricultural features of the Site and surrounding area. Furthermore, there is scope to substantially improve the arboricultural value of the Site through new landscaping as set out in the LEMP.



# Appendix A Tree Survey Schedule

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	Spread		Ex	sting Height /	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio	Quality Category	Quality Sub category	Root Prote	ection Area
		(S or M)	(m)	S1	S2	(n S3	nm) S4	S5	S6	N	(i	n) S	w	(1)	(m) (2)	(3)			dations	n (years)			(m²)	(radius in m)
T1	Silver birch	M(a)	5	120	120	120				2	4	0.5	2	0.5	E	0.5	Semi- mature	Growing beneath power lines and significantly reduced. Low quality.	None	10+	с	1	19.5	2.5
Т2	Goat willow	M(a)	5	367.42						2	4	2	4	0	E	2	Semi- mature	Partially collapsed multi-Stemmed tree growing behind wire fence. Low amenity value	None	10+	с	1	61.1	4.4
тз	Goat willow	M(a)	4	260	140					3	3	3	3	2	N	1	Young	Tree located within hedge row just outside Barbwire boundary. Tree maintained on both east and west side the first 2 m with a dense crown and plenty of live buds.	None	40+	с	2	39.4	3.5
Т4	Common ash	S	4	80						1	0.5	0.5	0.5	2	E	1	Young	Young tree in very bad condition evidence of ash die back and high Deadwood content. Tree located within the hedge between two Barbwire fences	None	<10	с	2	2.9	1.0
Т5	Pedunculate oak	M(a)	4	150	70					3	1	2	1	1	N	1	Young	Located within a hedge between two Barbwire fences with wasp Goebels attached throughout. Historically maintained on Both east and west side.	None	40+	С	2	12.4	2.0
Т6	Common ash	M(a)	6	367.42						2	2.5	2	2	0	w	1	Semi- mature	Low value as individual tree. Crossing and compressed branches.	None	10+	с	1	61.1	4.4
т7	Goat willow	M(a)	3	160	60					3	2	1	2	1	N	1	Young	Tree located within the hedge growing up against a barbed wire fence with the Barbwire included in the park. Dominant stand going through the barbed wire with a heavy North lean with poor maintenance yet a dense Crown.	None	40+	с	2	13.2	2.1
Т8	Goat willow	S	3	150						2	2	1	2	1	N	1	Young	Located within hedgerow between two barbed wire fences almost touching. High Deadwood content in lower canopy with minimal live buds.	None	40+	с	2	10.2	1.8
Т9	Field maple	S	4	150						4	2	0	2	2	E	2	Young	Tree located within the hedgerow close to a bordering Barbwire fence. Slight North lean with the north east facing crown, sharing a canopy with Hedgerow	None	40+	с	2	10.2	1.8
T10	Goat willow	M(a)	4	100	110	90				2	3	2	2	0.5	w	1	Semi- mature	Low value tree growing in hedgerow	None	10+	с	1	13.7	2.1
T11	Goat willow	S	3	140						3	2	1	2	1	N	1	Young	Tree located between two Barbwire fence border in the field. But while growing in to main trunk with an initial Northwest mean. Previous maintenance works done on both east and west side of tree.	None	40+	с	2	8.9	1.7
T12	Goat willow	M(a)	3	80	150	60				3	2	2	3	1	N	1	Young	Located between two Barbwire fences within a hedge row with maintenance done on both Western Eastside wait for me to pruning. Dense crown throughout with many live buds	None	40+	с	2	14.7	2.2
T13	Goat willow	s	4	100						2	2.5	1.5	2	1	w	1	Semi- mature	Low value tree growing in hedgerow. Lower branches split at union	None	10+	С	1	4.5	1.2

#	Species	Single or Multiple Stem	Height			Stem D	liameter				Branch Spread		Ex	isting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemer t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prot	ection Area	
		(S or M)	(m)	S1	S2	(m S3	nm) S4	S5	S6	N	( E	n) S	w	(1)	(m) (2)	(3)			dations	(years)			(m²)	(radius in m)
T14	Goat willow	S	4	110						2	2	2	1	1	w	1	Semi- mature	Low value tree growing in hedgerow.	None	10+	С	1	5.5	1.3
T15	Goat willow	M(a)	5	158.75						3	3	3	3	1	NE	1	Young	Tree located within a hedge row between two Barbwire fences. Very dense crown.	None	40+	С	2	11.4	1.9
T16	Goat willow	S	4	150						2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Slight north-eastern Lane realigning at 1 m. Dense crown.	None	40+	С	2	10.2	1.8
T17	Goat willow	S	4	150						2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Slight north-eastern Lane realigning at 1 m. Dense crown.	None	40+	С	2	10.2	1.8
T18	Goat willow	S	4	150						2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Slight north-eastern Lane realigning at 1 m. Dense crown.	None	40+	C	2	10.2	1.8
T19	Goat willow	S	4	150						2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Dense crown.	None	40+	С	2	10.2	1.8
T20	Goat willow	s	4	150						2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Dense crown.	None	40+	С	2	10.2	1.8
T21	Goat willow	M(a)	4	150	170	220				3	3	3	3	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Dense crown.	None	40+	С	2	45.1	3.8
T22	Common hawthorn	M(a)	4	150	140	110				2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Dense crown.	None	40+	С	2	24.5	2.8
T23	Goat willow	M(a)	4	150	140	110				2	2	2	2	1	N	1	Young	Tree located between two Barbwire fences within a hedge row. Dense crown.	None	40+	С	2	24.5	2.8
T24	Goat willow	M(a)	4	200	260	270	260			3	4	3	1	1	N		Early- mature	Tree located between Two Barbwire fences with branches heavily leaning over barbed wire into the field.	None	40+	С	2	112.2	6.0
T25	Goat willow	M(a)	3	146.97						3	2	1	2	1	NE	2	Young	Tree located between two Barbwire fences young specimen with dense crown	None	40+	С	2	9.8	1.8
T26	Goat willow	M(a)	6	200	200	200				3	3	3	3	1	s	1.5	Early- mature	Low value tree growing across ditch, South of hedgerow and North of boundary fence	None	10+	С	1	54.3	4.2
T27	Goat willow	M(a)	4	150	50					3	3	1	2	1	NE	2	Young	Tree located between two Barbwire fences young specimen with dense crown	None	40+	С	2	11.3	1.9
T28	Goat willow	M(a)	4	150	50					3	3	1	2	1	NE	2	Young	Tree located between two Barbwire fences young specimen with dense crown	None	40+	С	2	11.3	1.9

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	Spread		Ex	sting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemer t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub- category	Root Prot	ection Area
		(0 M)	(m)	64	S2	(n S3	nm) S4	S5	<u></u>	N	(I	n) S	w	(1)	(m) (2)	(3)			dations	(years)			(m²)	(radius in
T29	Goat willow	(S or M) M(a)	5	180	310	53	54	55	50	3	3	3	2	(1)	(2) N	1	Early- mature	Tree located between two Barbwire fences with historical arbs works on boundry sides	None	40+	с	2	58.1	m) 4.3
Т30	Common ash	M(a)	7	100	90	90				1	2.5	2.5	2	1.5	s	2.5	Young	Low value tree growing in highway verge.	None	10+	с	1	11.9	1.9
T31	Goat willow	M(a)	6	300						4	4	4	4	1	E	1	Semi- mature	Located on bank of river with very dense crown throughout.	None	40+	В	2	40.7	3.6
T32	Pedunculate oak	S	3	120						2	2	2	2	1.5	s	1.5	Young	Young low value tree	None	10+	с	1	6.5	1.4
Т33	Goat willow	M(a)	7	424.26						4	4	4	3	0	N	1	Mature	Large tree with stems leaning northeast	None	20+	с	1	81.4	5.1
Т34	Pedunculate oak	s	5	100						1	1	1	1	1	NE	1	Young	Located 0.5 m from Barbwire fence with epicormic growth.	None	40+	с	2	4.5	1.2
Т35	Goat willow	S	4	130						2	2	2	2	2	s	2	Young	Growing a half a meter from barbwire fence with epicormic growth, growing within a hedge. Dense crown plenty of live buds throughout	None	40+	с	2	7.6	1.6
Т36	Goat willow	M(a)	7	291.03						3	3	3	3	0	N	1	Semi- mature	Growing approximately 1m from boundary fence. Low value tree	None	10+	с	1	38.3	3.5
Т37	Goat willow	S	4	240						3	3	3	3	1	E	2	Young	Located between to barbwire fences bordering fields. Located within a hedge naturally forking at 1m, dense crown throughout	None	40+	с	2	26.1	2.9
Т38	Goat willow	S	4	150	140					3	3	3	3	1	NE	1	Young	Located between two barbed wire fences within a hedge row of Hawthorne. Dense crown	None	40+	С	2	10.2	1.8
Т39	Goat willow	S	4	150	140					2	2	2	2	1	NE	1	Young	Located between two barbed wire fences within a hedge row of Hawthorne. Dense crown	None	40+	с	2	10.2	1.8
T40	Goat willow	s	3	100						2	2	2	2	0.5	s	1	Young	Low value tree growing in hedgerow	None	10+	с	1	4.5	1.2
T41	Common alder	S	8	250						3	3	3	3	0	s	0	Semi- mature	Growing adjacent to track. Some broken branches and stem damage. Slight lean to north.	None	10+	с	1	28.3	3.0
T42	Goat willow	M(a)	3	171.46						2	2	2	2	1	E	1	Young	Located adjacent to a hardwire fence with multiple stems in a sporadic manner. Saplings surrounding it.	None	40+	С	2	13.3	2.1

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	n Spread		Ex	isting Height.	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemer t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub- category	Root Prote	ection Area
		(S or M)	(m)	S1	S2	(n S3	nm) S4	S5	S6	N	( E	m) S	w	(1)	(m) (2)	(3)			dations	(years)			(m²)	(radius in m)
Т43	Common beech	S	5	280						3	3	2	2	3	w	2	Semi- mature	Overgrown beach located within a beech hedge with epicormic growth	None	40+	с	2	35.5	3.4
T44	Common beech	S	5	280						3	3	2	2	3	w	2	Semi- mature	Overgrown beach located within a beech hedge with epicormic growth	None	40+	с	2	35.5	3.4
T45	Common beech	S	5	280						3	3	2	2	3	w	2	Semi- mature	Overgrown beach located within a beech hedge with epicormic growth	None	40+	с	2	35.5	3.4
T46	Common beech	S	5	280						3	3	2	2	3	w	2	Semi- mature	Overgrown beach located within a beech hedge with epicormic growth	None	40+	с	2	35.5	3.4
T47	Goat willow	S	4	260						4	3	3	3	1	NE	1	Semi- mature	Overgrown dominant tree within the hedge	None	40+	с	2	30.6	3.1
T48	Field maple	S	5	360						4	4	3	4	3	s	3	Early- mature	Overgrown dominant tree within hedge row located half a metre from barbed wire fence. Minimal Deadwood throughout crown yet few dead buds	None	40+	с	3	58.6	4.3
T49	Goat willow	M(a)	4	200	280	250				4	4	4	2	1	s	1	Early- mature	Located within a hedge between two barbed wire fences. Southern lean growing into fence. Predominantly east, facing crown	None	40+	с	2	81.8	5.1
Т50	Goat willow	S	5	480						4	3	3	4	1	s	2	Early- mature	Growing within the hedge between two barbed wire fences. Tree of significant size compared to neighbouring trees with little Deadwood content and multiple live buds.	None	40+	В	2	104.2	5.8
T51	Goat willow	M(a)	4	230	100					2	3	2	2	1	E	1	Early- mature	Located within the hedge with windblown eastern lean and facing canopy	None	40+	с	2	28.5	3.0
T52	Goat willow	M(a)	3	230	100					2	3	2	2	1	E	1	Early- mature	Located within the hedge with windblown eastern lean and facing canopy	None	40+	с	2	28.5	3.0
Т53	Goat willow	M(a)	4	230	100					2	3	2	2	1	E	1	Early- mature	Located within the hedge with windblown eastern lean and facing canopy	None	40+	с	2	28.5	3.0
T54	Goat willow	M(a)	4	230	100					2	3	2	2	1	E	1	Early- mature	Located within the hedge with a symmetrical canopy with early buds	None	40+	С	2	28.5	3.0
Т55	Goat willow	M(a)	3	210						3	3	3	3	1	E	1	Early- mature	Located 1 m from barbed wire fence with understory saplings of specimens. Poor structural damage with split included unions, exposing Heartwood and cracks throughout stems. Dense crown.	None	20+	с	2	20.0	2.5
T56	Goat willow	M(a)	4	171.146						2	3	1	3	1	N	1	Semi- mature	Located within a hedge growing predominantly north into field by 2 m. Dense crown throughout, north facing	None	40+	с	2	13.3	2.1

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	n Spread		Ex	isting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemer t	Estimated Remaining Contributio	Quality Category	Quality Sub- category	Root Prote	ction Area
		(S or M)	(m)	S1	S2	(n S3	nm) S4	85	S6	N	(I	m) S	w	(1)	(m) (2)	(3)	4		Recommen dations	n (years)			(m <sup>2</sup> )	(radius in m)
T57	Goat willow	S	3	100	02					2	2	2	2	0.5	S	1	Young	Low value tree growing in hedgerow	None	10+	С	1	4.5	1.2
T58	Goat willow	M(a)	5	120	120	120				3	3	2	2	0.5	N	1.5	Young	Low value tree growing in hedgerow	None	10+	С	1	19.5	2.5
T59	Goat willow	S	8	250						3	3	3	3	0	s	3	Semi- mature	Low value tree	None	10+	С	1	28.3	3.0
Т60	Goat willow	M(a)	6	200	200					4	4	4	4	0.5	w	0	Semi- mature	Stems separating at base. Branches to north also separating at union. Likely to collapse in near future.	None	<10	U		36.2	3.4
T61	Common ash	S	10	250						4	3	2	2	3	w	3	Semi- mature	Dead tree in hedgerow.	None	<10	U		28.3	3.0
T62	Goat willow	M(a)	6	367.42						5	5	5	5	0	E	0	Mature	Large goat willow growing approximately 3m from wire fence.	None	20+	В	1	61.1	4.4
Т63	Goat willow	M(a)	6	367.42						5	5	5	5	0	E	0	Mature	Large goat willow growing approximately 3m from wire fence.	None	20+	В	1	61.1	4.4
T64	Goat willow	M(a)	6	367.42						5	5	5	5	0	E	0	Mature	Large goat willow growing approximately 3m from wire fence.	None	20+	В	1	61.1	4.4
T65	Blackthorn	S	4	200						3	2	2	2	0	s	0	Semi- mature	Growing at edge of ravine.	None	10+	С	1	18.1	2.4
T66	Common hawthorn	S	2	75						0.5	0	0.5	1	0	E	0	Young	Young tree, stunted. Growing in highway verge.	None	10+	C	1	2.5	0.9
T67	Common hawthorn	S	2	150						1	1	1	0.5	0	E	0	Young	Young tree, stunted. Growing in highway verge.	None	10+	C	1	10.2	1.8
Т68	Rowan	M(a)	3	290.47						2	4	2	4	1	E	1	Semi- mature	Growing out Over brick wall 1 m from barbed wire fence just outside the field boundary. Tree is covered in moss with minimal live buds and multiple stems	None	20+	C	2	38.2	3.5
Т69	Common hawthorn	M(a)	5	270	250	260				2	2	2	2	1	E	1	Early- mature	Phone 1 m outside the border fence. Healthy root flare and epicormic growth. Dense crown	None	20+	C	2	91.8	5.4
Т70	Copper beech	S	5	790						11	8	6	1	1	E	1	Veteran	Heavily wind blown tree over boarded stone with vetern characteristics such as loadout limbs and tracks wind blowing to the east.	None	40+	A	1, 3	282.3	9.5
T71	Pedunculate oak	S	15	550						8	6	7	6	2	s	1	Mature	Positioned at bottom of steep ravine. Surveyed from afar. All measurements estimated	None	40+	A	2	136.8	6.6

#	Species	Single or Multiple Stem	Height			Stem D	liameter				Branch	n Spread		Ex	sting Height .	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemer t	Estimated Remaining Contributio	Quality Category	Quality Sub- category	Root Prote	ection Area
		(S or M)	(m)	S1	S2	,	1 <b>m)</b> S4	0.5	56	N	(I	m) S	w	(1)	(m) (2)	(3)			Recommen dations	n (years)			(m <sup>2</sup> )	(radius in
Т72	Pedunculate oak	(S or M) S	16	800	52	S3	54	55	56	8	8	9	8	2	5	(3)	Mature	Located on a steep bank 4 m from the stream. Naturally forks at 2 m with healthy elephant ears. Healthy root flair. Plenty of live buds throughout large dense canopy. High amenity value.	None	40+	A	1, 2	289.5	m) 9.6
т73	Wild cherry	M(a)	14	300	250					6	6	6	6	2	E	2	Early- mature	Located on a steep bank on the west side the healthy canopy.	None	40+	В	2	69.0	4.7
Т74	Wild cherry	M(a)	10	300	250					4	4	4	4	2	E	2	Early- mature	Located on a steep bank on the west side the healthy canopy.	None	40+	В	2	69.0	4.7
Т75	Common beech	M(a)	7	330	400	310				5	5	3	4	1	E	1		Located adjacent to barbed wire fence on roadside. Buttress roots with three main ascending stems. Understory Willow species and epicormic growth. Limb failures and exposed Hartwood throughout but minimal Deadwood content. Plenty live buds. Notable qualities potential	None	40+	В	2	165.1	7.2
⊤76	Common ash	M(a)	14	200	300	150				3	6	6	4	0	E	2	Mature	Growing to western edge of tree line adjacent to highway. North of stream and wire fence.	None	20+	В	1	69.0	4.7
Т77	Common beech	S	11	670						5	5	3	4	1	NE	1	Mature	Located adjacent to barbed wire fence with buttress roots. Forks naturally at 2 m to 2 co-dominance stands creating a healthy crown sharing a canopy with adjacent trees	None	40+	В	2	203.1	8.0
Т78	Common beech	S	14	600						4	8	4	4	3	s	5	Mature	Mature tree growing on ridge between two ditches. Upper limbs snapped out and canopy unbalanced due to wind loading	None	20+	В	2	162.9	7.2
Т79	Common beech	M(a)	7	200	190	300	620			4	5	3	3	1	E	1	Mature	Large buttress roots with Barbwire growing within. Epicormic growth growing from small bank growing within. Potential veteran properties. Windblown to the East.	None	40+	A	2, 3	249.0	8.9
T81	Common beech	M(a)	7	200	190	300	420			4	7	3	3	1	w	1	Mature	Large buttress roots with Barbwire growing within. Epicormic growth growing from small bank growing within. Potential veteran properties. Windblown to the East.	None	40+	В	2, 3	154.9	7.0
T82	Common alder	S	11	300						4	4	3	5	2.5	S	2	Mature	Growing behind wire fence west of ditch. Split hanging branch to south. Canopy has good vitality	None	20+	В	1	40.7	3.6
т83	Goat willow	M(a)	7	685.05						4	6	3	6	1	E	1	Early- mature	Located in a ditch outside field Boundry adjacent to barbed wire fence. Minimal Deadwood content. Multiple stems creating one large canopy predominantly East to West.	None	40+	В	2	212.3	8.2
T84	Common alder	S	11	200						2	2	4	3	2.5	s	2	Mature	Growing behind wire fence west of ditch. Split hanging branch to south. Canopy has good vitality	None	20+	В	1	18.1	2.4
Т85	Common alder	S	11	200						4	1	2	4	2.5	s	2	Mature	Growing behind wire fence west of ditch. Split hanging branch to south. Canopy has good vitality	None	20+	В	1	18.1	2.4

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	n Spread		Ex	sting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	Estimated Remaining Contributio	Quality Category	Quality Sub- category	Root Prote	ection Area
			(m)			(r 53	nm) S4	lor.	S6			m)			(m)	(0)			Recommen dations	n (years)			(m <sup>2</sup> )	(radius in
Т86	Common alder	(S or M) S	11	290	S2	53	54	55	56	N 4	Е 2	s 1	<b>w</b> 4	(1) 2.5	(2) S	(3)	Mature	Growing behind wire fence west of ditch. Split hanging branch to south. Canopy has good vitality	None	20+	В	1	38.0	m) 3.5
Т87	Common ash	S	8	430						4	4	3	3	4	E	4	Early- mature	Located within a Hawthorn hedge adjacent to a barbed wire fence. An initial north eastern live realigning vertical at 4 m where it naturally fall into a small healthy crown.	None	40+	С	2	83.6	5.2
T88	Common ash	S	7	290						4	4	3	3	3	S	3	Early- mature	Located within a hedge on a mound 1 m from barbed wire fence. Exposed heartwood on South Western side at 1 m. Forks naturally at 3 m into a small yet dense crown	None	40+	с	2	38.0	3.5
т89	Common ash	S	7	290						4	4	3	3	3	s	3	Early- mature	Located within a hedge on a mound 1 m from barbed wire fence. Exposed Hartwood on South Western side at 1 m. Forks naturally at 3 m into a small yet dense crown Sharing a canopy with adjacent tree	None	40+	с	2	38.0	3.5
Т90	Common ash	S	5	300						4	4	4	2	3	N	4	Early- mature	Located within a hedge with an initial Easton Lane realigning at 3 m into poor quality crown. Stress growth throughout with minimal live buds	None	10+	с	2	40.7	3.6
T91	Common hawthorn	M(a)	6	317.49						2	2	2	2	1	w	1	Mature	Growing to edge of stream. Slight lean to south.	None	10+	С	1	45.6	3.8
T92	Common hawthorn	M(a)	6	317.49						2	2	2	2	1	w	1	Mature	Growing to edge of stream. Slight lean to south.	None	10+	с	1	45.6	3.8
Т93	Common ash	S	14	400						7	7	4	7	3	E	3	Mature	Growing south of stream. Large surface roots visible along bank. Good vitality	None	20+	В	2	72.4	4.8
Т94	Common ash	S	5	300						3	2	2	2	3	N	4	Early- mature	Located within a hedge with an initial Easton Lane realigning at 3 m into poor quality crown. Stress growth throughout with minimal live buds	None	10+	С	2	40.7	3.6
Т95	Common ash	S	5	300						2	2	2	2	3	N	4	Early- mature	Located within a hedge with an initial Easton Lane realigning at 3 m into poor quality crown. Stress growth throughout with minimal live buds	None	10+	с	2	40.7	3.6
Т96	Common ash	S	5	300						2	2	2	2	3	N	4	Early- mature	Located within a hedge with an initial Easton Lane realigning at 3 m into poor quality crown. Stress growth throughout with minimal live buds	None	10+	с	2	40.7	3.6
Т97	Common ash	M(a)	14	350	350					7	7	4	7	3	E	3	Mature	Growing north of stream. Large surface roots visible along bank. Good vitality	None	20+	В	2	110.8	5.9
Т98	Common ash	S	7	350						4	2	1	2	3	N	4	Early- mature	Located within a hedge with an initial Easton Lane realigning at 3 m into poor quality crown. Stress growth throughout with minimal live buds	None	10+	С	2	55.4	4.2
Т99	Common hawthorn	M(a)	4	244.95						2	2	2	2	0.5	w	1.5	Mature	Growing north of stream	None	10+	с	1	27.1	2.9

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	n Spread		Exi	sting Height /	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	Estimated Remaining Contributio	Quality Category	Quality Sub- category	Root Prot	tection Area
		(S or M)	(m)	S1	S2	(n S3	nm) S4	85	S6	N	( E	m) S	w	(1)	(m) (2)	(3)			Recommen dations	n (years)			(m <sup>2</sup> )	(radius in m)
T100	Common ash	S	7	370						4	3	4	3	3	N	4	Early- mature	Located within a hedge on a mound 1 m from ordered barred wire fence on the outside. Naturally forks at 3 m with little stressed growth throughout crown with the north western dominant facing crown	None	20+	С	2	61.9	4.4
T101	Common hawthorn	M(a)	4	244.95						2	2	2	2	0.5	w	1.5	Mature	Growing north of stream	None	10+	C	1	27.1	2.9
T102	Common hawthorn	M(a)	4	244.95						2	2	2	2	0.5	w	1.5	Mature	Growing north of stream	None	10+	С	1	27.1	2.9
T103	Common ash	S	6	250						3	0.5	0.5	4	0	s	1.5	Mature	Growing north of stream	None	10+	С	1	28.3	3.0
T104	Common ash	S	10	280						4	4	0.5	3	5	N	5	Early- mature	Growing on bank east of field. Low vitality. Minor deadwood.	None	10+	С	2	35.5	3.4
T105	Common ash	S	10	280						3	3	3	3	4	N	5	Early- mature	Growing on bank east of field. Low vitality. Minor deadwood.	None	10+	С	2	35.5	3.4
T106	Common hawthorn	S	3	150						3	1	1	1	1	N	1	Young	Located 1 m from small stream with a law lean and sparkles crown. High deadwood content	None	40+	С	2	10.2	1.8
T107	Common hawthorn	M(a)	4	300	220	100	70			4	4	3	4	1	S	1	Mature	Located on streambanks with included union at base opening up into crown with plenty live buds throughout	None	20+	с	2	69.4	4.7
T108	Common ash	s	8	250						2	3	2	2	3	s	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	с	1	28.3	3.0
T109	Common ash	S	8	250						2	3	2	2	3	s	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	C	1	28.3	3.0
T110	Common ash	S	8	250						2	3	2	2	3	s	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	C	1	28.3	3.0
T111	Common ash	S	8	250						2	3	2	2	3	s	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	С	1	28.3	3.0
T112	Goat willow	M(a)	3	200	200					6	3	1	3	1	N	1	Early- mature	Located on stream bank. Uprooted and very heavily meaning to the north read included union at 1 m, plenty of live buds	None	40+	С	2	36.2	3.4
T113	Common ash	S	8	250						2	3	2	2	3	S	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	С	1	28.3	3.0

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	Spread		Ex	isting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	Estimated Remaining Contributio	Quality Category	Quality Sub- category	Root Prote	ction Area
			(m)			,	nm)					m)			(m)				Recommen dations	n (			(m <sup>2</sup> )	(radius in
T114	Common ash	(S or M) S	8	s1 250	S2	S3	S4	S5	S6	N 2	Е 3	<b>s</b> 2	w 2	(1)	(2) S	(3)	Semi- mature	Growing in hedgerow. Low quality tree	None	(years) 10+	C	1	(m ) 28.3	m) 3.0
T115	Field maple	S	8	250						2	3	2	2	3	s	3	Semi- mature	Growing in hedgerow. Low quality tree	None	10+	С	1	28.3	3.0
T116	Common hawthorn	M(a)	3	150	100	90				2	1	1	2	1	w	1	Young	Located on streambank leaning over stream and dense crown throughout	None	20+	C	2	18.4	2.4
T117	Goat willow	s	5	250						4	3	0	2	1	N	0	Semi- mature	Tree leans heavily to northeast across stream	None	10+	C	1	28.3	3.0
T118	Common hawthorn	M(a)	4	250	250	320				7	5	4	3	1	NE	1	Early- mature	Located on the eastern side of riverbank with heavily in the north-east and dense crown throughout	None	40+	C	2	102.9	5.7
T119	Goat willow	M(a)	5	120	120					4	4	4	4	2	N	0	Mature	Tree leans heavily to east across stream	None	10+	С	1	13.0	2.0
T120	Common hawthorn	M(a)	5	250	250					4	4	4	4	1	s	0	Mature	Tree leans heavily to east across stream	None	10+	С	1	56.5	4.2
T121	Common hawthorn	s	5	250						5	3	0	2	1	s	0	Mature	Tree leans heavily to north	None	10+	C	1	28.3	3.0
T122	Common hawthorn	s	5	250						5	3	0	2	1	s	0	Mature	Tree leans heavily to north	None	10+	C	1	28.3	3.0
T123	Common hawthorn	M(a)	4	150	150					2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	C	2	20.4	2.5
T124	Common hawthorn	s	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	С	2	28.3	3.0
T125	Common hawthorn	s	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	С	2	28.3	3.0
T126	Common hawthorn	s	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	C	2	28.3	3.0
T127	Common hawthorn	s	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	С	2	28.3	3.0
T128	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	С	2	28.3	3.0

#	Species	Single or Multiple Stem	Height			Stem I	Diameter				Branch	n Spread		Ex	sting Height	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	Estimated Remaining Contributio	Quality Category	Quality Sub category	Root Prote	ction Area
			(m)	S1	S2	(n S3	nm) 54	85	S6	N		m) S	w		(m)				Recommen dations	n (years)			(m <sup>2</sup> )	(radius in
T129	Common hawthorn	(S or M) S	4	250	52	53	54	55	50	2	Е 2	2	2	(1) 0	(2) E	(3) 0.5	Mature	Low value roadside tree	None	10+	с	2	28.3	m) 3.0
T130	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	с	2	28.3	3.0
T131	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	с	2	28.3	3.0
T132	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	с	2	28.3	3.0
T133	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	с	2	28.3	3.0
T134	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	c	2	28.3	3.0
T135	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	C	2	28.3	3.0
T136	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	C	2	28.3	3.0
T137	Common hawthorn	S	4	250						2	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	c	2	28.3	3.0
T138	Goat willow	S	4	250						3	2	2	2	0	E	0.5	Mature	Low value roadside tree	None	10+	C	2	28.3	3.0
T139	Common ash	M(a)	14	300	120	280				6	6	4	5	0.5	w	6	Mature	Significant dieback. Poor condition. Low value. Multi-stemmed at 0.5m height	None	10+	c	2	82.7	5.1
T140	Common ash	M(a)	8	120	110	120	110			3	5	4	2	0	S	3	Semi- mature	Growing north of stone wall	None	10+	с	1	24.0	2.8
T141	Common ash	M(a)	15	300	200					6	6	5	5	3	S	6	Mature	Growing north of stone wall in Hawthorn hedgerow. Some dieback. Moderate amenity.	None	20+	В	2	58.8	4.3
T142	Common ash	S	12	280						3	4	3	3	2	S	4		Growing north of stone wall. Moderate amenity value	None	10+	с	1	35.5	3.4
T143	Common ash	S	12	280						4	3	3	5	2	S	4		Growing north of stone wall. Moderate amenity value	None	10+	с	1	35.5	3.4

#	Species	Single or Multiple Stem	Height			Stem D	liameter				Branch	n Spread		Exi	isting Height /	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	/ Estimated n Remaining Contributio	Quality Category	Quality Sub category	Root Prote	ection Area
		(S or M)	(m)	S1	S2	(m S3	1 <b>m)</b> S4	S5	S6	N	(i E	m) S	w	(1)	(m) (2)	(3)	-		Recommen dations	n n (years)			(m²)	(radius in m)
T144	Common hawthorn	S	4	250						2	2	2	2	0	s	0.5	Mature	Low value tree growing in highway verge	None	10+	С	1	28.3	3.0
T145	Goat willow	S	4	250						2	2	2	2	0	s	0.5	Mature	Low value tree growing in highway verge	None	10+	с	1	28.3	3.0
T146	Goat willow	s	4	150						2	2	2	2	0	s	0.5	Semi- mature	Low value tree growing in highway verge	None	10+	с	1	10.2	1.8
T147	Sycamore	S	10	150						2	2	2	2	0	s	0.5	Young	Low value tree growing in highway verge	None	10+	с	1	10.2	1.8
T148	Goat willow	M(a)	6	380	150	220				4	3	3	4	2	E	1	Mature	Located 1 m from stream naturally forking at 1 m into a dense and healthy crown	None	40+	В	2	97.4	5.6
T149	Sycamore	M(a)	6	100	100	110				2	2	2	2	0	s	0.5	Young	Low value tree growing in highway verge	None	10+	с	1	14.5	2.1
T150	Common ash	M(a)	8	120	120	100	100			2	2	2	2	0	s	0.5	Semi- mature	Low value tree growing in highway verge	None	10+	с	1	22.1	2.7
T151	Pedunculate oak	S	5	250						2	3	2	1	0	s	0.5	Semi- mature	Low value tree growing in highway verge	None	10+	С	1	28.3	3.0
T152	Sycamore	M(a)	8	300	390					6	4	6	4	1	N	1	Mature	Tree growing out of stream bank edge with buttress roots. Two co-dominance stems creating a large healthy canopy.	None	40+	В	1, 2	109.5	5.9
T153	Common ash	M(a)	5	110	110	100				2.5	2.5	2	1.5	0	S	0.5	Young	Low value tree growing in highway verge. Dead stem to east	None	10+	с	1	15.5	2.2
T154	Common hawthorn	M(a)	3	200	120	110				2	1	2	3	1	w	1	Early- mature	Growing out of stream bank to the west where the dense healthy crown	None	40+	с	2	30.1	3.1
T155	Common ash	S	5	290						3	3	3	3		w		Early- mature	90% dead.	None	<10	U		38.0	3.5
T156	Sycamore	S	5	350						3	3	3	3	2	E	3	Early- mature	Located within hedge with cavity on base and epicormic growth. Naturally forks at 2 m to a healthy and dense crown. Minimal Deadwood	None	40+	с	2	55.4	4.2
T157	Common ash	S	7	460						5	5	5	5	4	SE	4	Early- mature	Located within hedge on outer boundary. Possible ash die back present, ivy clad throughout, sparse crown	None	20+	с	2	95.7	5.5

#	Species	Single or Multiple Stem	Height			Stem [	Diameter				Branch	Spread		Exi	sting Height /	AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t	Remaining Contributio	Quality Category	Quality Sub category	Root Prote	ction Area
			(m)				ım)				(1	n)			(m)				Recommen dations	n n				(radius in
		(S or M)		S1	S2	S3	S4	S5	S6	N	E	S	w	(1)	(2)	(3)				(years)			(m²)	m)
T158	Common ash	S	8	110	150	250				5	2	1	5	0.5	S	5		Low value tree growing in highway verge. Dead stem to south	None	10+	С	1	5.5	1.3
T159	Common ash	S	6	350						3	3	3	4	2	E	3	Early- mature	Ash dieback present. Very sparse crown	None	<10	с	2	55.4	4.2
T160	Wild cherry	S	5	200						1	1	1	1	2	s	3	Young	Low value tree growing in verge	None	10+	C	1	18.1	2.4
T161	Wild cherry	S	5	200						1	1	1	1	2	s	3	Young	Low value tree growing in verge	None	10+	C	1	18.1	2.4
T162	Common ash	S	8	250						4	5	3	3	3	w	5		Low value tree growing in verge. Very poor quality with significant dieback	None	<10	U		28.3	3.0
T163	Common ash	s	6	410						3	4	4	4	2	E	3		Buttress roots with stress growth throughout. Ash die back present	None	20+	С	2	76.0	4.9
T164	Common ash	S	8	250						4	2	1	3	3	w	5	Semi- mature	Low value tree growing in verge. Very poor quality with significant dieback	None	<10	U		28.3	3.0
T165	Common ash	S	8	310						5	4	4	5	2.5	w	5	Semi- mature	Growing in field immediately southeast of drainage channel. Good vitality and moderate amenity value	None	20+	В	1	43.5	3.7
T166	Sycamore	S	12	420						6	6	6	6	2.5	s	6	Mature	Moderate quality tree growing in highway verge	None	20+	В	1	79.8	5.0
T167	Sycamore	s	7	410						3	3	3	3	2	E	2	Early- mature	Located within a stone wall and edge with buttress roots naturally 14 add 2 m failed names on the north west side with expose heartwood. Dense Crown	None	40+	C	2	76.0	4.9
T168	Sycamore	S	12	320						6	5	5	3	4	S	6	Mature	Moderate quality tree growing in highway verge	None	20+	В	1	46.3	3.8
T169	Sycamore	S	5	240						2	2	2	2	2	E	3	Early- mature	Growing out of stone wall within edge. The sparse crown with minimal Deadwood content	None	40+	С	2	26.1	2.9



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prote	ection Area
		(m)	<b>(mm)</b> S1	(m) (1)			dations	(years)			(m²)	(radius in m)
G1	Goat willow	4	200	1	Young	All of good health located within a hedge row with existing arboriculture works on the north and south side along the side of the fence row. Treat of moderate to good health and dense throughout.	None	40+	С	2	18.1	2.4
G2	Common hawthorn, Common ash, Goat willow	8	175	1	Semi- mature	Ash trees growing along highway boundary, Goat willow along watercourse. Individual young oak and Hawthorn scattered throughout	None	10+	С	1	13.9	2.1
G3	Goat willow	7	112.5	0	Semi- mature	Some dead trees in group	None	10+	С	1	5.7	1.4
G4	Goat willow	4	142.5	1	Young	Young specimens barbed wire fences within poorly maintained hedge row	None	40+	С	2	9.2	1.7
G5	Goat willow	5	295	1	Early- mature	Located within the Headrow growing towards barbed wire fence in a harming matter. Heavily leaning over towards field to the east	None	40+	С	2	39.4	3.5
G6	Silver birch	3	70	1	Young	Newly planted specimens. Few that are alive out of many have failed throughout entire field animal damage.	None	40+	С	2	2.2	0.8
G7	Common alder	12	85	5	Young	Group of young Alder growing along track. Small diameter branches overhang track at approximately 5m height. Low value due to small stem diameter.	None	10+	С	1	3.3	1.0



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prote	ection Area
		(m)	(mm)	(m)			dations				. 2.	(radius in
			S1	(1)				(years)			(m²)	m)
G8	Common beech	3	300	0	Mature	Mature coppice forming part of hedgerow.	None	20+	В	2	40.7	3.6
G9	Common hawthorn	4	150	1	Early- mature	Trees growing along highway boundary adjacent to fence. Leaning to south.	None	10+	С	2	10.2	1.8
G10	Norway spruce	18	300	0.5	Mature	Plantation woodland. Single row of trees. Low value.	None	10+	С	2	40.7	3.6
G11	Common alder, Norway spruce	16	275	1	Early- mature	Growing in linear row. Sparse low value	None	10+	С	2	34.2	3.3
G12	Common hawthorn, Common beech	6	155	1	Early- mature	Patchy a group of Hawthorne and Beech located outside the Boundry of the field. Windblown primarily to the east.	None	40+	С	2	10.9	1.9
G13	Common hawthorn, Crab apple, Willow species	6	165	0	Early-	Heavily spread out and sporadic with specimens growing over 5 to a fence into field boundary. Growing within a ditch and specimens predominantly windblown East.	None	40+	С	2	12.3	2.0
G14	Common alder, Common hawthorn, Common beech, Common ash	14	400	3	Moturo	Mature trees lining highway, south of ditch and north of wire fence. Some broken branches and leaning stems. Beech trees to centre of group are hollow and decayed with poor form. Overall moderate amenity value and effective screen.	None	20+	В	2	72.4	4.8



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations P (structural / physiological condition) M R		Remaining Contributio	Quality Category	Quality Sub category	Root Prote	ection Area
		(m)	<b>(mm)</b> S1	<b>(m)</b> (1)			dations	(years)			(m²)	(radius in m)
G15	Common hawthorn	5	255	1	Mature	Specimen is located either side of stream sharing a large dense canopy. Cracks and heartwood exposed throughout	None	40+	С	2	29.4	3.1
G16	Common hawthorn	5	250	0.5	Mature	Group of trees lining road. Effective screen	None	10+	С	2	28.3	3.0
G17	Common hawthorn	4	150	0	Semi- mature	Group of Hawthorn growing in ditch. Good vitality	None	10+	С	2	10.2	1.8
G19	Silver birch, Norway spruce, Scots pine, Goat willow	15	175	4	Semi- mature	Mixed conifers and broadleaves on boundary of commercial buildings. Separated from site by deep ditch to west.	None	20+	В	2	13.9	2.1
G20	Common beech, Norway spruce, Douglas fir, Willow species	4	130	1	Young	New and young plantation of primarily Norway spruce, multiple saplings throughout.	None	40+	С	2	7.6	1.6
G21	Common ash	12	120	3	Semi- mature	Group of Ash stems growing north of stone wall	None	10+	С	2	6.5	1.4
G22	Common ash	9	160	1.5	Semi- mature	Low value trees growing in highway verge	None	10+	С	1	11.6	1.9



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Category	Quality Sub category	Root Prote	ection Area
		(m)	(mm)	(m)			dations	(110,000)			(2)	(radius in
			S1	(1)				(years)			(m²)	m)
G23	Common hawthorn	5	320	1	Semi- mature	Located on streambank these three hawthorns are in good health with dense crowns sharing a canopy.	None	40+	В	2	46.3	3.8
G24	Common hawthorn, Common ash, Pedunculate oak	12	187.5	2.5	Mature	Combination of young and mature trees growing in highway verge. Largest trees are Ash towards centre of group.	None	20+	В	2	15.9	2.3
G25	Common hawthorn, Common ash	5	87.5	0.5	Young	Low value trees growing in highway verge	None	10+	С	1	3.5	1.1
G26	Common hawthorn, Common ash, Goat willow	10	167.5	0.5	Mature	Low value trees growing in highway verge	None	10+	С	1	12.7	2.0

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#	Species	Height	Average Stem Diameter		He		Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prote	ection Area	
		(m)	(mm)		(m) N E S W		(m)			dations	(			(m²)	(radius in	
H1	Common beech	2.5	s1 175	N 2.0	Е 2.0	<b>s</b> 2.0	2.0	(1)	Semi-	Mature/semi mature beach hedge located outside Boundry barbed wire and well	None	(years) 40+	В	2	(m <sup>-</sup> )	m) 2.1
		2.0		2.0	2.0	2.0	2.0		mature	maintained. This is an established hedge of good quality.				-	13.5	
H2	Common hawthorn, Spindle	2.5	65	1.0	1.0	1.0	1.0	0	Semi- mature	Small Poorly maintained hedge sporadic and moderate quality	None	40+	С	2	1.9	0.8
НЗ	Common hawthorn, Common beech	5	97.5	2.0	2.0	2.0	2.0	0	Mature	Managed hedgerow. Most stems topped at 2m height but Beech to western end are occasionally 5m height. Good screen and moderate amenity value. Branches do not overhang fence to south	None	20+	В	2	4.3	1.2
H4	Common hawthorn, Blackthorn	2.5	75	1.0	1.0	1.0	1.0	0	Semi- mature	Sparse and gappy hedgerow becoming thinner to east	None	10+	С	2	2.5	0.9
Н5	Common hawthorn, Blackthorn	2.5	75	1.0	1.0	1.0	1.0	0	Semi- mature	Sparse and gappy hedgerow becoming thinner to east	None	10+	С	2	2.5	0.9
H6	Common hawthorn, Blackthorn	2	75	1.0	1.0	1.0	1.0	0	Semi- mature	Low hedgerow with small diameter stems growing between barbed wire fences	None	10+	С	2	2.5	0.9
H7	Common hawthorn, Spindle, Blackthorn	2.5	75	1.0	1.0	1.0	1.0	0	Semi- mature	Low hedgerow with small diameter stems growing between barbed wire fences. 150mm diameter oak growing to southern end	None	10+	С	2	2.5	0.9
Н8	Common hawthorn, Spindle, Blackthorn	2.5	75	1.0	1.0	1.0	1.0	1	Semi- mature	Low boundary hedgerow. Unmanaged. Thin. Contains Gorse	None	10+	С	2	2.5	0.9
Н9	Common hawthorn	1	15	1.0	1.0	1.0	1.0	0	Young	Very young Hawthorne hedge surrounded by barbed wire and Wooden fence	None	40+	С	2	0.1	0.2

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#	Species	Height	Average Stem Diameter		Branch	Spread		Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prot	ection Area
		(m)	(mm)		(r	n)		(m)			dations					(radius in
			S1	N	E	S	w	(1)				(years)			(m²)	m)
H10	Common hawthorn, Common beech, Spindle, Blackthorn,	5	97.5	1.5	1.5	1.5	1.5	1.5	Young	Young hedgerow. Unmanaged.	None	10+	с	2	4.3	1.2
H11	Common hawthorn, Spindle, Blackthorn	3	87.5	2.0	2.0	2.0	2.0	1	Young	Young hedgerow. Unmanaged. Low value	None	10+	С	2	3.5	1.1
H12	Common hawthorn, Spindle, Blackthorn	3	87.5	2.0	2.0	2.0	2.0	1	Young	Young hedgerow. Unmanaged. Low value	None	10+	с	2	3.5	1.1
H13	Silver birch, Common hawthorn	3	55	1.0	1.0	1.0	1.0	1	Young	Poorly maintained hedge of young specimens growing outside barbed wire fence border	None	40+	С	2	1.4	0.7
H14	Common hawthorn, Common ash, Pedunculate oak	4	80	1.0	1.0	1.0	1.0	1	Young	Hedge of mixed species with a few young trees within located on the outside of bordered barred wire fence. And poorly maintained throughout.	None	40+	с	2	2.9	1.0
H15	Common hawthorn, Blackthorn, Pedunculate oak	4	112.5	2.0	2.0	2.0	2.0	0	Semi- mature	Unmanaged hedgerow with several young dead trees. Low value.	None	10+	с	2	5.7	1.4
H16	Common hawthorn, Spindle, Goat willow	3	80	1.0	1.0	1.0	1.0	1	Semi- mature	Sparse hedgerow specimens between hardware and fences. Poorly maintained	None	40+	с	2	2.9	1.0
H17	Common hawthorn, Blackthorn, Goat willow	2.5	75	2.0	2.0	2.0	2.0	0	Semi- mature	Narrow low hedgerow. Southern end is approx 2.5m height with vigorous growth. North end is approximately 1.5m height with low vitality.	None	10+	с	2	2.5	0.9
H18	Common hawthorn, Spindle, Goat willow	2	55	1.0	1.0	1.0	1.0	1	Young	Poorly maintained sparse hedge located between two barbed wire fences	None	40+	с	2	1.4	0.7
H19	Common hawthorn, Common ash	4	95	1.0	1.0	1.0	1.0	1	Semi- mature	Located between two barbed wire fences with ash dieback present. Poorly maintained.	None	40+	с	2	4.1	1.1

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#	Species	Height	Average Stem Diameter		Branch	Spread		Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prot	ection Area
		(m)	(mm)		(m)		(m)			dations					(radius in	
			S1	N	E	S	w	(1)				(years)			(m²)	m)
H20	Common hawthorn, Common ash, Pedunculate oak, Goat willow	4	85	1.0	1.0	1.0	1.0	1	Young	Ash dieback present. Hedge located between barbed wire fences, poorly maintained with a few trees of insignificance throughout.	None	40+	С	2	3.3	1.0
H21	Common hawthorn, Common ash, Pedunculate oak, Goat willow	4	85	1.0	1.0	1.0	1.0	1	Young	Ash dieback present. Hedge located between barbed wire fences, poorly maintained with a few trees of insignificance throughout.	None	40+	С	2	3.3	1.0
H22	Field maple, Common hawthorn, Common ash, Goat willow	5	185	1.0	1.0	1.0	1.0	0	Young	Located between two barbed wire fences, dominantly Hawthorn with ash dieback present.	None	40+	С	2	15.5	2.2
H23	Sycamore, Common hawthorn, Common beech, Common holly,	5	137.5	2.0	2.0	2.0	2.0	0	Mature	Short section of hedgerow to west well managed. Some stems towards centre of hedgerow have been allowed to grow taller. More varied species mix to east.	None	10+	С	2	8.6	1.7
H24	Common hawthorn, Blackthorn	2	75	2.0	2.0	2.0	2.0	0	Young	Growing east of wire fence.	None	10+	С	2	2.5	0.9
H25	Common hawthorn, Spindle	2	75	2.0	2.0	2.0	2.0	0	Mature	Managed Hawthorn hedgerow. Low value.	None	10+	С	2	2.5	0.9
H26	Common hawthorn, Blackthorn, Elder	1	85	1.0	1.0	1.0	1.0	0	Young	Located between two barbed wire fences on a mound. Young specimens throughout and patchy at moments. Surrounded by uneven ground	None	40+	С	2	3.3	1.0
H27	Common hawthorn	4	100	2.0	2.0	2.0	2.0	2	Mature	Tall Hawthorn hedgerow growing north of wire fence. Does not overhang field.	None	20+	В	2	4.5	1.2
H28	Common hawthorn	2	45	1.0	1.0	1.0	1.0	0	Young	Patchy hedge of Hawthorn located on top of a mound adjacent to barbed wire fence. Well maintained at 1 m throughout most of hedge	None	40+	С	2	0.9	0.5
H29	Common hawthorn	2	40	1.0	1.0	1.0	1.0	0	Early- mature	Healthy throughout but patchy at the moment. Acting as a boundary adjacent to barbed wire fence located within a mound	None	40+	С	2	0.7	0.5

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#	Species	Height	Average Stem Diameter		Ci Heig		Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prot	ection Area	
		(m)	(mm)		(m) N E S W		(m)			dations	(years)			(m <sup>2</sup> )	(radius in	
H30	Common hawthorn	2	S1 40	N 1.0	Е 1.0	s 1.0	1.0	(1) 0	Early- mature	Gorse included. Healthy throughout but patchy at the moment. Acting as a boundary adjacent to barbed wire fence located within a mound	None	(years) 40+	С	2	0.7	m) 0.5
H31	Common hawthorn	2	40	1.0	1.0	1.0	1.0	0	Early- mature	Gorse included. Healthy throughout but patchy at the moment. Acting as a boundary adjacent to barbed wire fence located within a mound	None	40+	С	2	0.7	0.5
H32	Field maple, Common hawthorn	1	55	1.0	1.0	1.0	1.0	0	Young	Patchy hedge located on a mound between two barbed wire fences	None	20+	С	2	1.4	0.7
Н33	Common hawthorn	1	50	1.0	1.0	1.0	1.0	0	Young	Healthy well maintained young and young mature hedge with barbed wire either side.	None	40+	С	2	1.1	0.6
H34	Norway spruce	2	120	1.5	1.5	1.5	1.5	0	Mature	Managed hedgerow. Low value.	None	10+	С	2	6.5	1.4
H35	Common hawthorn	1	40	1.0	1.0	1.0	1.0	0	Young	Very young newly planted hedge located between barbed wire fences	None	40+	С	2	0.7	0.5
H36	Common hawthorn	1	40	1.0	1.0	1.0	1.0	0	Young	Very young newly planted hedge located between barbed wire fences	None	40+	С	2	0.7	0.5
H37	Common hawthorn	1	40	1.0	1.0	1.0	1.0	0	Young	Young newly planted hedge well maintained between barbed wire fences.	None	40+	С	2	0.7	0.5
H38	Common hawthorn	2	75	2.0	2.0	2.0	2.0	0	Mature	Dense hedgerow growing along highway boundary	None	10+	С	2	2.5	0.9
Н39	Common hawthorn	1	40	1.0	1.0	1.0	1.0	0	Young	Young newly planted hedge well maintained between barbed wire fences. Not established	None	40+	С	2	0.7	0.5

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#	Species	Height	Average Stem Diameter		Branch	Spread		Existing Canopy Height AGL	Life Stage		Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Category	Quality Sub category	Root Prote	ection Area
		(m)	(mm)	N	(r E	n) S	w	(m)			dations	(years)			(m <sup>2</sup> )	(radius in m)
H40	Common hawthorn	1	s1 40	N 1.0	1.0	1.0	1.0	(1) 0	Young	Young newly planted hedge well maintained between barbed wire fences. Not established	None	40+	С	2	0.7	0.5
H41	Common hawthorn	1	45	1.0	1.0	1.0	1.0	0	Young	Well maintained with lots of gaps located outside the bounary border.	None	40+	С	2	0.9	0.5
H42	Sycamore, Common hawthorn, Common ash, Common holly	1	55	1.0	1.0	1.0	1.0	0		Located outside Boundry adjacent to barbed wire fence. Mixed species and mixed quality.	None	40+	С	2	1.4	0.7
H43	Common hawthorn	2	97.5	2.0	2.0	2.0	2.0	0	Mature	Mature Hawthorn stems to west. Young stems to east	None	20+	В	2	4.3	1.2



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	(structural / physiological condition) Man		Contributio	Quality Category	Quality Sub category	Root Prote	ection Area
		(m)	<b>(mm)</b> S1	(m) (1)			dations	(years)			(m <sup>2</sup> )	(radius in m)
W1	Silver birch, Common ash, Goat willow	10	175	2	Young	Young woodland. Most trees growing 10m from fence line. Occasional young stems approximately 75mm diameter growing approximately 1m from fence line	None	10+	С	1	13.9	2.1
W2	Common hawthorn, Pedunculate oak, Goat willow	7	155	1	Semi- mature	Riparian Woodland of mixed species growing outside the barbed wire fence border sporadically. Multiple limbs hanging over barbed wire fence in to field.	None	40+	В	2	10.9	1.9
W3	Silver birch, Common hawthorn, Goat willow	7	200	1	Semi- mature	Dominantly young species dense woodland. Potential with a few large tree scattered throughout	None	40+	С	2	18.1	2.4
W4	Silver birch, Scots pine, Goat willow	8	155	1	Young	Mixed young specimens in a newly planted woodland of good health. 3m from field boundry	None	40+	С	2	10.9	1.9
W5	Silver birch, Common ash, Pedunculate oak, Goat willow	8	155	1	Young	Newly planted woodland of mixed species and mixed age with multiple saplings planted very recently. Dents throughout with few Ash trees affected with Ash dieback	None	40+	С	2	10.9	1.9
W6	Common alder, Silver birch, Common beech, Pedunculate oak, Goat willow	12	195	0	Semi- mature	Young and semi-mature mixed species woodland. Trees of good quality although small in size.	None	20+	В	2	17.2	2.3
W7	Silver birch, Goat willow	9	155	1	Young	Very young specimens surrounding a pond Creating a riparian woodland. Trees built up densely.	None	40+	С	2	10.9	1.9



#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen		Quality Category	Quality Sub category		
		(m)	<b>(mm)</b> S1	<b>(m)</b> (1)			dations	(years)			(m²)	(radius in m)
W8	Silver maple, Pedunculate oak, Goat willow	8	205	1		Predominantly very young specimens with trackway going through one side to the other. Dense throughout	None	40+	С	2	19.0	2.5
W9	Common alder, Silver birch, Common beech, Pedunculate oak, Goat willow	12	195	0	Semi- mature	Young and semi-mature mixed species woodland. Trees of good quality although small in size. Tree stems growing approximately 3m from edge of existing track.	None	20+	В	2	17.2	2.3
W10	Common alder, Larch, Scots pine	15	210	0.5	Semi- mature	Tree stems growing approximately 3m from edge of track. Reasonable condition.	None	10+	С	2	20.0	2.5
W11	Silver birch, Common ash, Scots pine, Goat willow	11	150	0	Young	Young trees growing approximately 5m from fence line. Young Goat willow scrub to northeast corner has stems against fence line.	None	10+	С	1	10.2	1.8
W12	Common alder, Silver birch, Common hazel, Sitka spruce, Willow species	4	82.5	0.5	Young	Young spruce plantation with broadleaves to north end	None	10+	С	1	3.1	1.0
W13	Common alder, Sitka spruce	14	300	1	Mature	Plantation woodland. Some collapsed stems. Stream runs through centre	None	20+	В	2	40.7	3.6
W14	Sitka spruce	16	300	0.5	Early- mature	Plantation woodland	None	20+	В	1	40.7	3.6

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#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Managemen t Recommen	Estimated Remaining Contributio n	Quality Category	Quality Sub category	Root Prote	ection Area
		(m)	<b>(mm)</b> S1	<b>(m)</b> (1)			dations	(years)			(m²)	(radius in m)
W15	Common beech, Sitka spruce, Willow species	4	150	1	Young	Young plantation of mixed species primarily Sitka spruce	None	40+	С	2	10.2	1.8
W16	Common beech, Sitka spruce, Willow species	6	200	1	Young	New and young plantation of primarily Sitka spruce located on a large hill with multiple sap things throughout. More dominant on the east side.	None	40+	С	2	18.1	2.4
W17	Field maple, Downy birch, Hornbeam, Common hazel, Common hawthorn, Common beech, Common ash	18	600	3	Mature	Lime Kiln Wood replanted ancient woodland. High amenity value. Used regularly for recreational purposes.	None	40+	A	3	162.9	7.2



# Appendix B Tree Constraints Plan



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

## 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 m<sup>2</sup> 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 Dean Moor - Topo v2 (27.04.23). Where tree locations have not been recorded on the topographical survey their locations have been obtained through GPS readings and their accuracy cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

#### REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY



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Date: 15/03/2024

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Figure: [Number] Sheet 0 of 22 Rev: A





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

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

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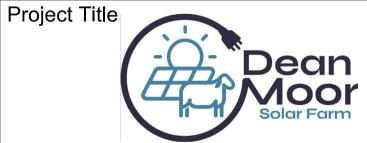
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Figure: [Number] Sheet 3 of 22 Rev: A





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

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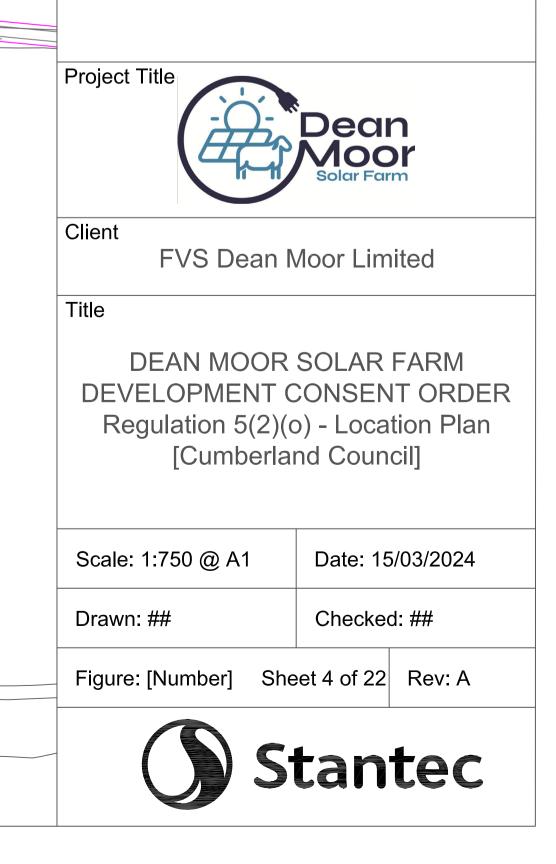
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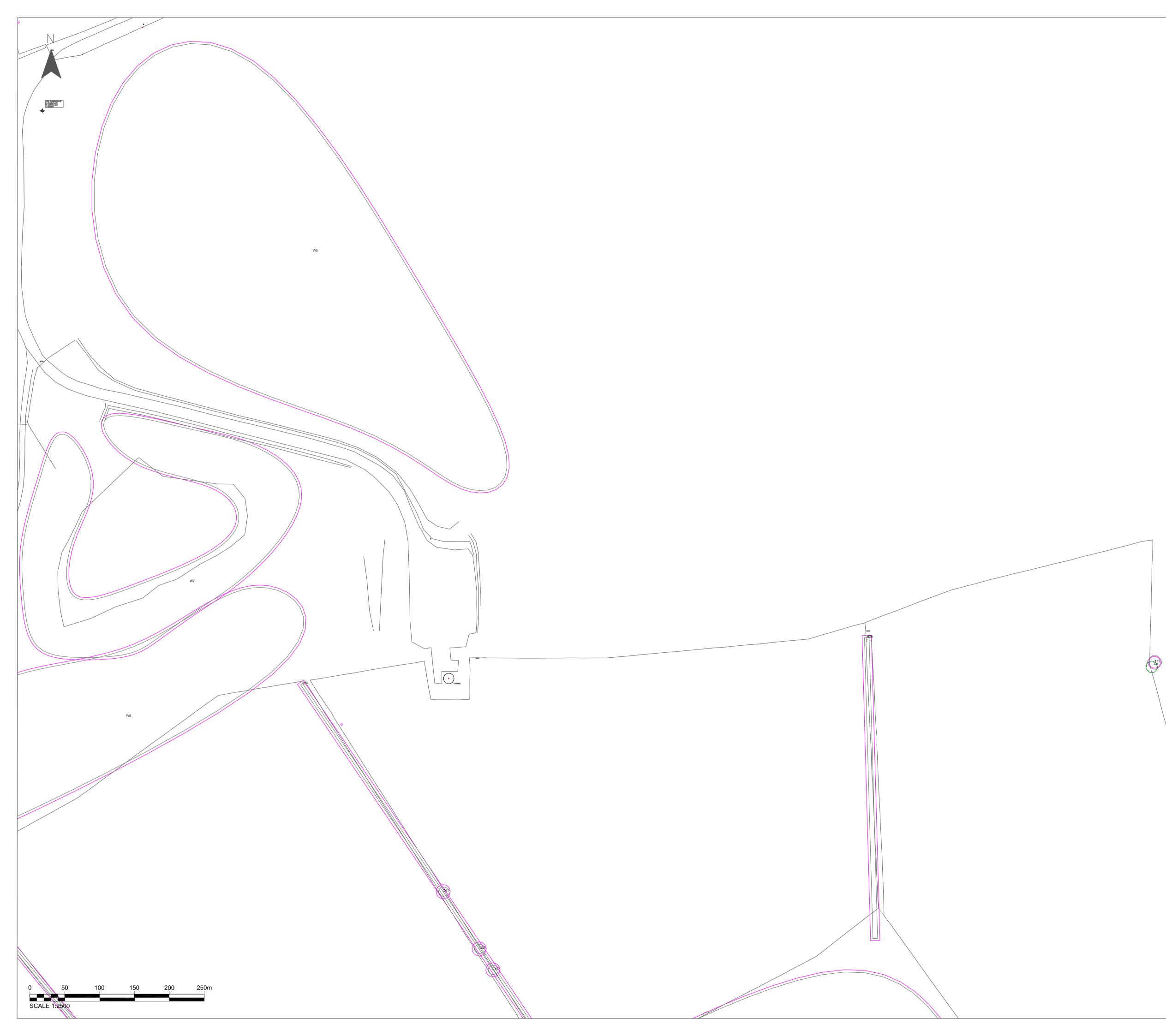
#### REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY





	Legend					
		Canopies of category A trees		Canopies of category B trees		
		Canopies of category C trees		Canopies of category U trees		
		Veteran tree buffer zone		Root protection areas (RPAs)		
		Tree stems	#	Tree locations not based on topographical survey		
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number				
	BS 5837:2012 'Trees in and shown in the Leger remaining life expectan estimated remaining life with an estimated rema	ured in accordance with relation to design, dem nd below. Category 'A' - cy of at least 40 years. e expectancy of at least ining life expectancy of . Category 'U' - Trees in	olition and constructio Trees of high quality v Category 'B' - Trees of 20 years. Category 'C at least 10 years, or ye o such condition that th	n - Recommendations' vith an estimated moderate quality with an - Trees of low quality oung trees with a stem ey cannot realistically be		
	ROOT PROTECTION AREAS This is a minimum area in m <sup>2</sup> 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.					
W7	ACCURACY OF	TREE LOCATIC	NS			
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	REFERENCES export_json2cad_1681	394336 STANTE	C BS5837 TREE SUP	RVEY		
	Project Title		Dear Moo Solar Farm	<b>)</b>		
	Client F	VS Dean I	Moor Limi	ted		
	Title					
	DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]					
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	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C		category U
	trees		trees
	Veteran tree		Root
	buffer zone		protection
			areas (RPAs)
	<b>•</b>		Tree locations not
	Cree stems	#	based on topographical survey
	Prefix denoting tree,		
T/G/H/W	group, hedgerow or woodland reference		
	number		

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#### REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY





Client

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Date: 15/03/2024

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

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Project Title



Client

FVS Dean Moor Limited

## Title

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Scale: 1:750 @ A1 Date: 15/03/2024 Drawn: ##

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Figure: [Number] Sheet 7 of 22 Rev: A





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

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Project Title



# Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

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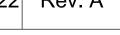
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Figure: [Number] Sheet 8 of 22 Rev: A

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	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C		category U
	trees		trees
	Veteran tree buffer zone		Root
			protection
			areas (RPAs)
	Thee stems	#	Tree locations not based on topographical survey
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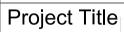
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DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 9 of 22 Rev: A





	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C		category U
	trees		trees
	Veteran tree buffer zone		Root
			protection
			areas (RPAs)
	Thee stems	#	Tree locations not based on topographical survey
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Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 10 of 22 Rev: A





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

## 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 m<sup>2</sup> 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 Dean Moor - Topo v2 (27.04.23). Where tree locations have not been recorded on the topographical survey their locations have been obtained through GPS readings and their accuracy cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

#### REFERENCES

#### export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY

Project Title



## Client

FVS Dean Moor Limited

## Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

Drawn: ##

Checked: ##



Figure: [Number] Sheet 11 of 22 Rev: A





	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C	c	category U
	trees		trees
	Veteran tree		Root
	buffer zone		protection
			areas (RPAs)
			Tree locations not
	Cree stems	#	based on topographical survey
	Prefix denoting tree,		
T/G/H/W	group, hedgerow or woodland reference		
	number		

#### TREE CATEGORIES

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#### ROOT PROTECTION AREAS

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## ACCURACY OF TREE LOCATIONS

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#### REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY

Project Title



Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

Drawn: ##

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Figure: [Number] Sheet 12 of 22 Rev: A





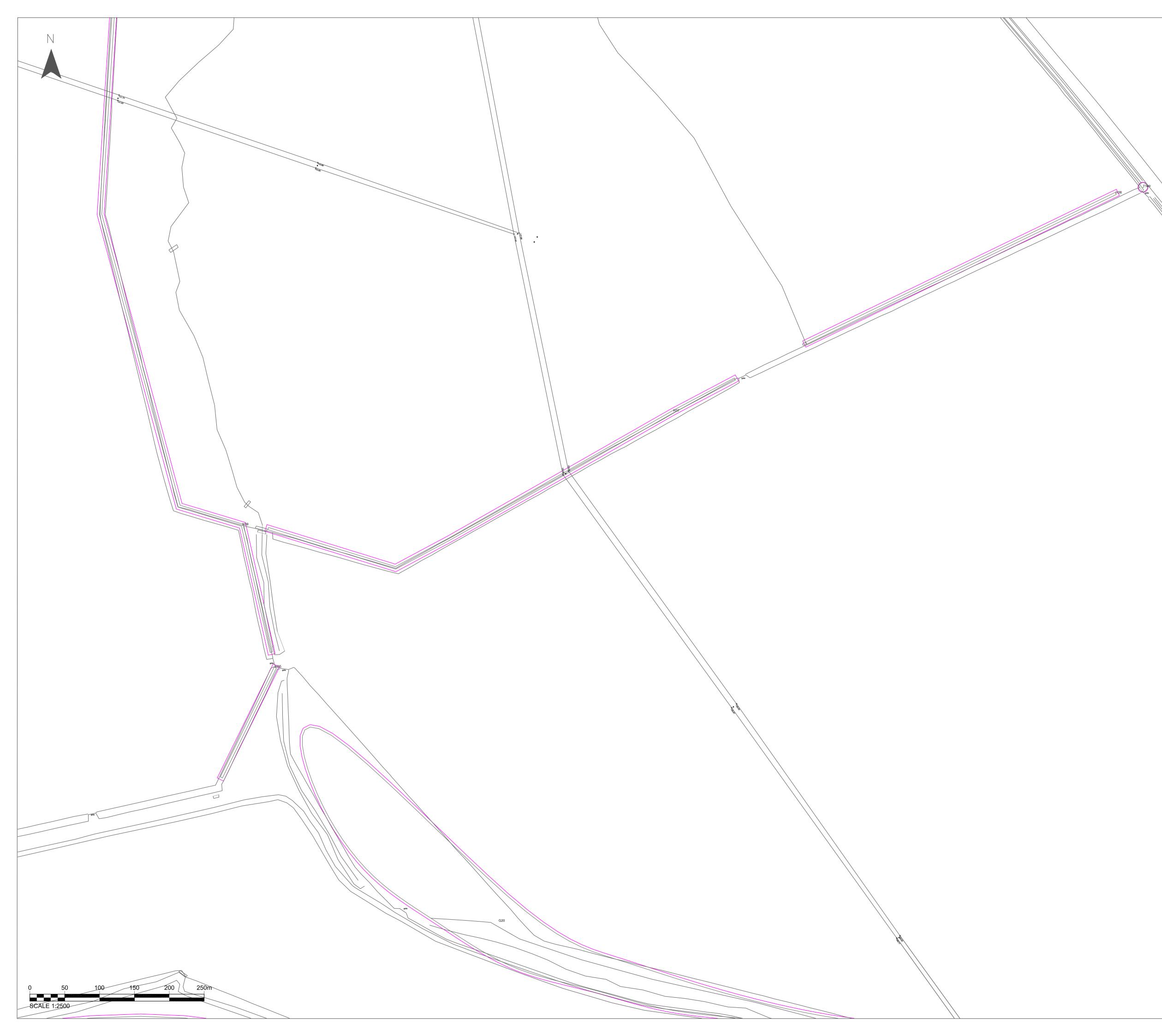
	Legend				
		Canopies of category A trees		Canopies of category B trees	
		Canopies of category C trees		Canopies of category U trees	
		Veteran tree buffer zone		Root protection areas (RPAs)	
		Thee stems	#	Tree locations not based on topographical survey	
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number			
THE					
	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 m <sup>2</sup> 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 locations based o locations have not beer obtained through GPS	TREE LOCATIO n topographical survey I n recorded on the topogr readings and their accur be confirmed on site prio	Dean Moor - Topo v2 ( aphical survey their lo acy cannot be guaran	cations have been teed. Locations of trees	
	REFERENCES export_json2cad_1681		C BS5837 TREE SUF		
	Project Title		Dean Moo Solar Farm	r	
	Client F	VS Dean N	Noor Limit	ted	
·	Title				
	DEVELC Regula	AN MOOR OPMENT ( ation 5(2)( [Cumberla	CONSENT b) - Locati	ORDER on Plan	
	Scale: 1:75	50 @ A1	Date: 15/	03/2024	

Figure: [Number] Sheet 13 of 22 Rev: A

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

# | TREE CATEGORIES

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# ROOT PROTECTION AREAS

This is a minimum area in m<sup>2</sup> 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 Dean Moor - Topo v2 (27.04.23). Where tree locations have not been recorded on the topographical survey their locations have been obtained through GPS readings and their accuracy cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY

Project Title



Client

FVS Dean Moor Limited

# Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

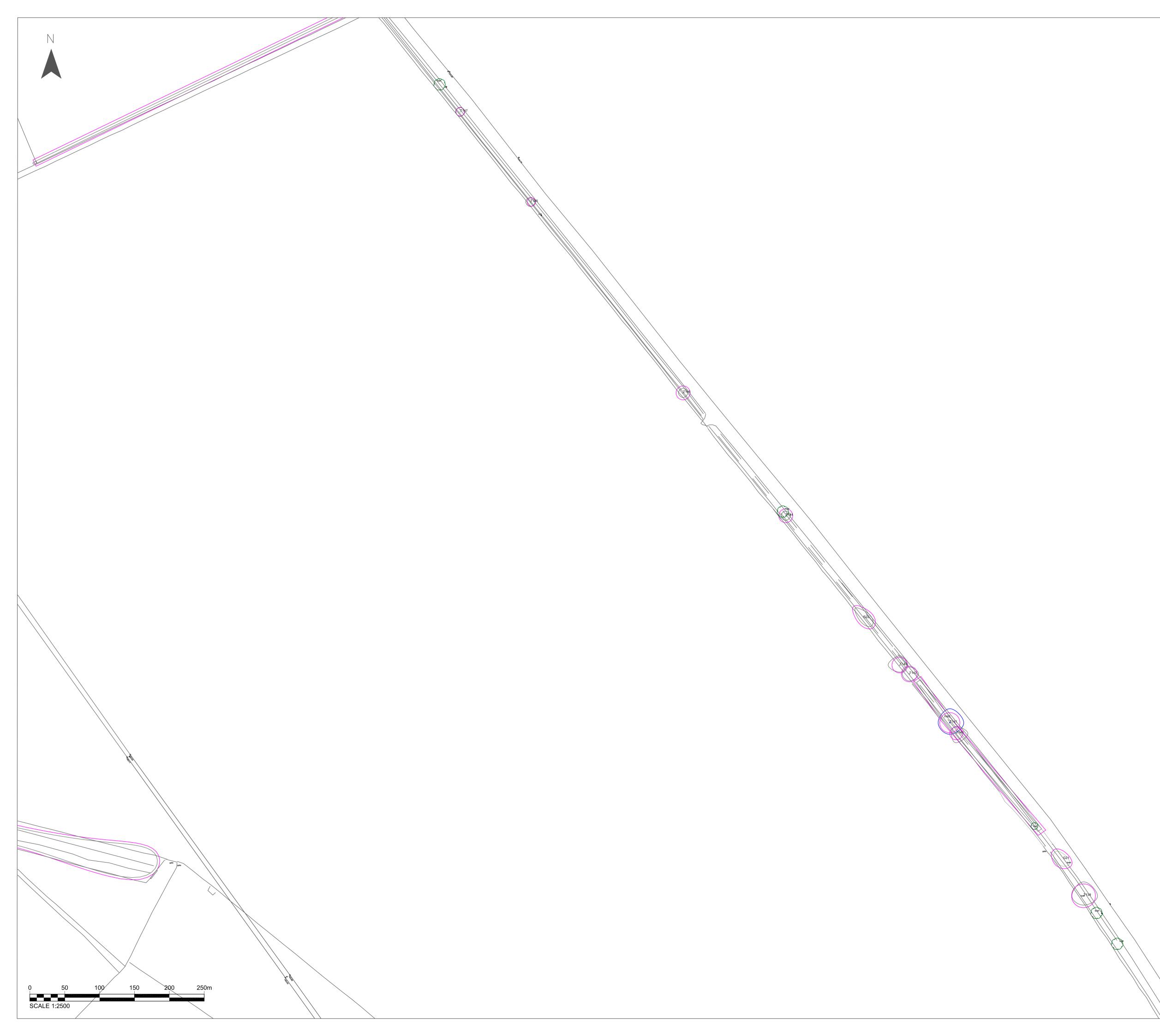
Scale: 1:750 @ A1 Date: 15/03/2024

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Figure: [Number] Sheet 14 of 22 Rev: A





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

# 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

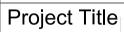
This is a minimum area in m<sup>2</sup> which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations.

# ACCURACY OF TREE LOCATIONS

Tree locations based on topographical survey Dean Moor - Topo v2 (27.04.23). Where tree locations have not been recorded on the topographical survey their locations have been obtained through GPS readings and their accuracy cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY





Client

FVS Dean Moor Limited

# Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 15 of 22 Rev: A





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

# TREE CATEGORIES

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# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY





Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 16 of 22 Rev: A





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

# TREE CATEGORIES

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# ROOT PROTECTION AREAS

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# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY



Client

FVS Dean Moor Limited

Title

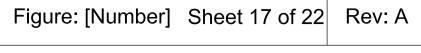
DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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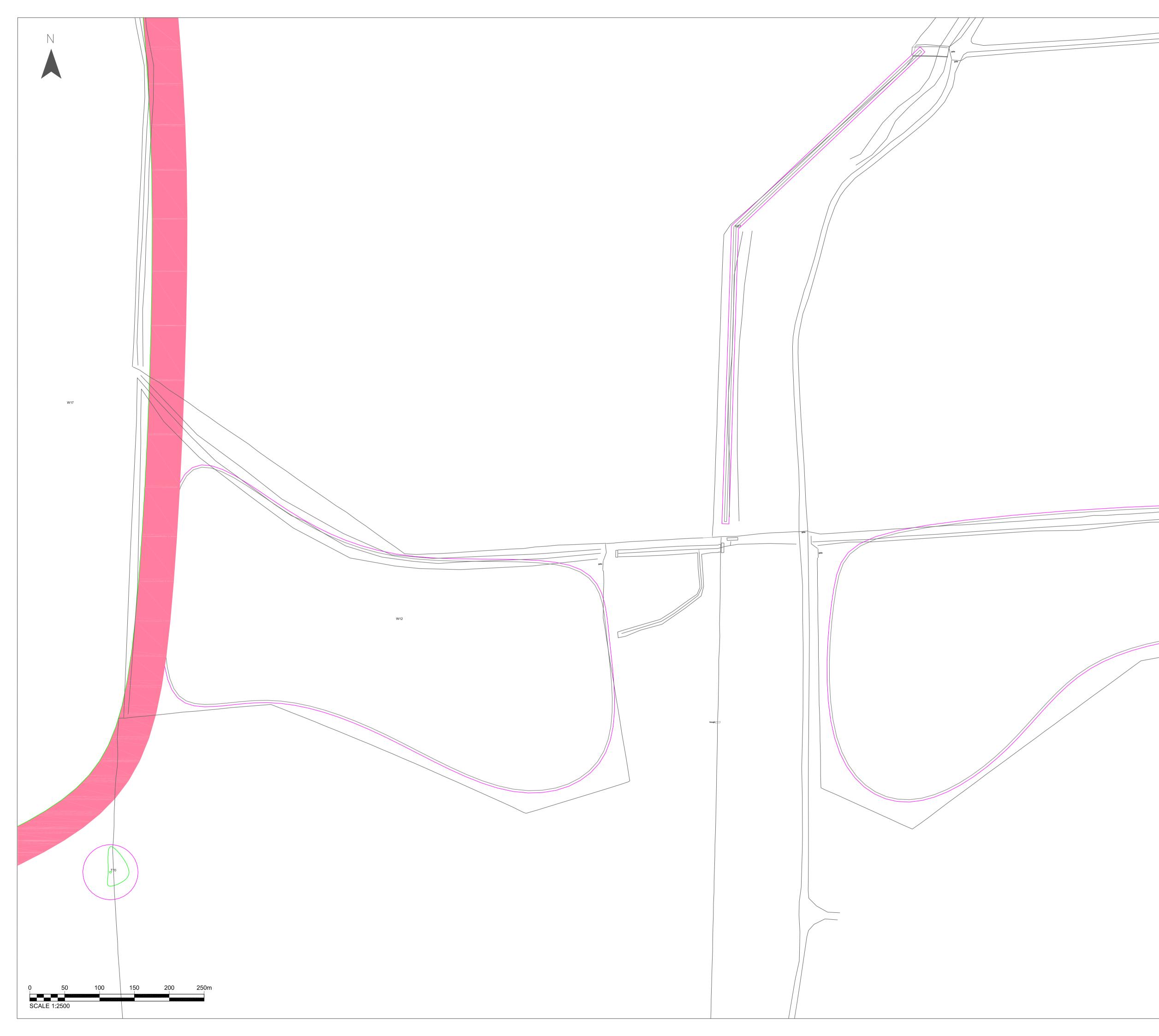


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-				
	Canopies of category A trees		Canopies of category B trees	
	Canopies of category C trees		Canopies of category U trees	
	Veteran tree buffer zone		Root protection areas (RPAs)	
	Tree stems	#	Tree locations not based on topographical survey	
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number			
BS 5837:2012 'Trees in and shown in the Leger remaining life expectan estimated remaining life with an estimated rema diameter below 150mm	ured in accordance with relation to design, dem nd below. Category 'A' - cy of at least 40 years. ( e expectancy of at least ining life expectancy of	olition and construct Trees of high quality Category 'B' - Trees 20 years. Category ' at least 10 years, or such condition that	of moderate quality with an C' - Trees of low quality young trees with a stem they cannot realistically be	
ROOT PROTEC This is a minimum area RPA is calculated using demolition and construct	in m <sup>2</sup> which should be I the British Standard BS	5837:2012 'Trees ii	nd each retained tree. The n relation to design,	
ACCURACY OF TREE LOCATIONS Tree locations based on topographical survey Dean Moor - Topo v2 (27.04.23). Where tree locations have not been recorded on the topographical survey their locations have been obtained through GPS readings and their accuracy cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.				
REFERENCES         export_json2cad_1681394336         STANTEC BS5837 TREE SURVEY				
Project Title				
Client F	VS Dean I	Moor Lim	ited	
Title DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]				
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	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C		category U
	trees		trees
	Veteran tree		Root
	buffer zone		protection
			areas (RPAs)
	Cree stems	#	Tree locations not based on
		П	topographical survey
	Prefix denoting tree,		
T/G/H/W	group, hedgerow or woodland reference		
	number		

# 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

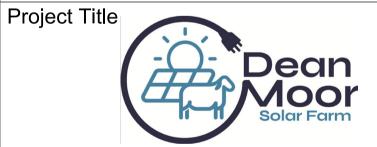
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# ACCURACY OF TREE LOCATIONS

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# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE\_SURVEY



Client

FVS Dean Moor Limited

# Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

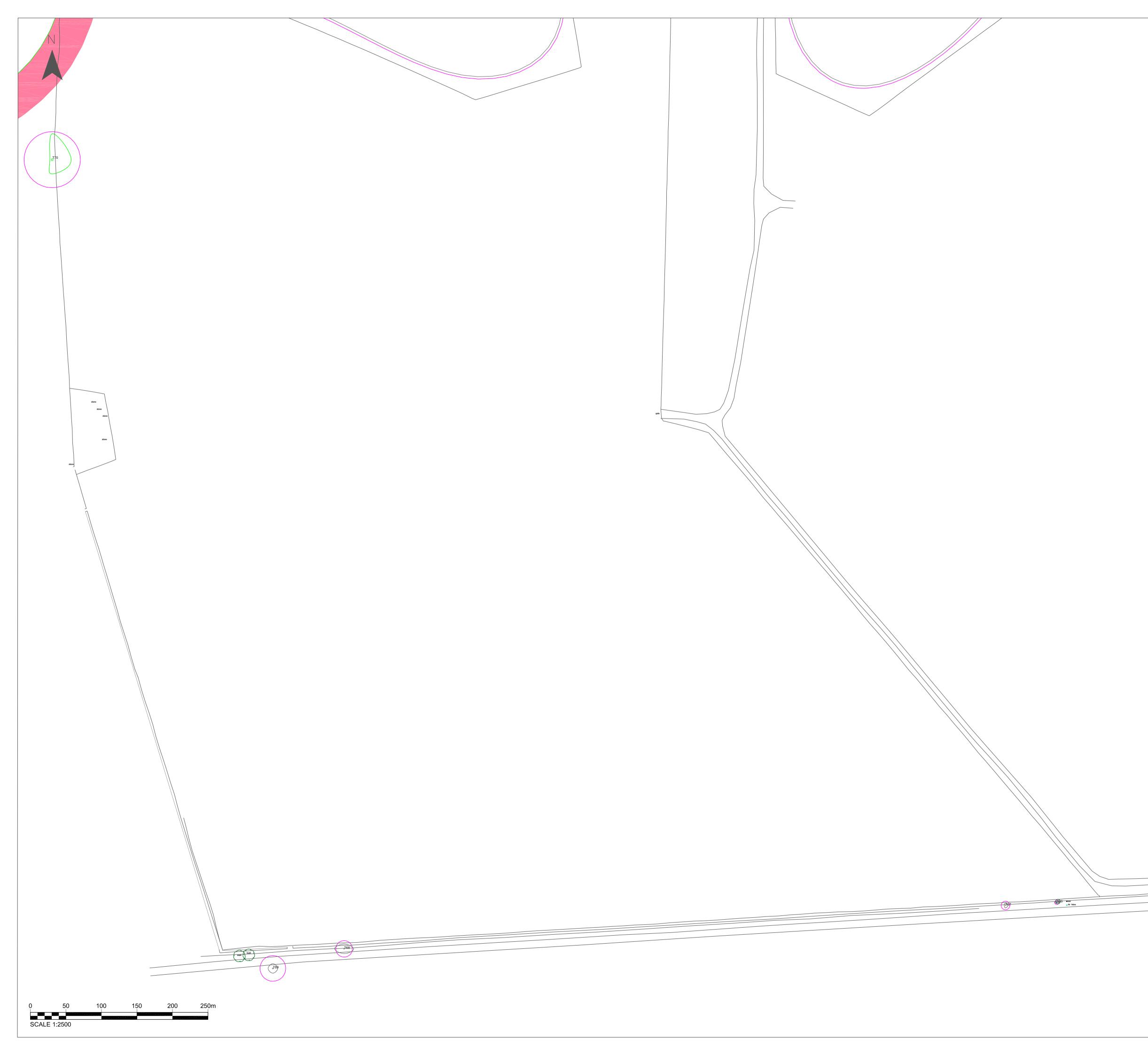
Date: 15/03/2024

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Figure: [Number] Sheet 19 of 22 Rev: A





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

# 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

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# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY

Project Title



Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

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Figure: [Number] Shee	et 20 of 22 Rev: A
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Scale: 1:750 @ A1	Date: 15/03/2024



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

# TREE CATEGORIES

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# REFERENCES

export\_json2cad\_1681394336 STANTEC BS5837 TREE SURVEY

Project Title



Client

# FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 21 of 22 Rev: A



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	Canopies of		Canopies of
	category A		category B
	trees		trees
	Canopies of		Canopies of
	category C		category U
	trees		trees
	Veteran tree		Root
	ouffer zone		protection
			areas (RPAs)
			Tree locations not
7	Cree stems	#	based on
			topographical survey
	Prefix denoting tree,		
	group, hedgerow or woodland reference		
	number		

# 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 m<sup>2</sup> 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

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Project Title



# Client

FVS Dean Moor Limited

# Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:750 @ A1

Date: 15/03/2024

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Figure: [Number] Sheet 22 of 22 Rev: A



# Appendix C Tree Protection Plan



	Legend			
~		Canopies of category A trees		Canopies of category B trees
		Canopies of category C trees		Canopies of category U trees
		Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
	0	Tree stems	#	Tree locations not based on topographical survey
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
	$(\mathbf{x})$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
		No-dig surfacing		

TRee CATEGORIES Tree canoples are coloured in accordance with their quality category as set out in Table 1 of BS 637:2012 Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category V+ Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category V- Trees of modera quality with an estimated remaining life expectancy of at least 20 years. Category V- 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 V- 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 m<sup>2</sup> 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.

ree protection barriers should be positioned in accordance with the adjacent tree protection plan The protection barriers should be positioned in accordance with the adjacent the protection plan, be fit for the purpose of excluding construction activity, and appropriate to the degree and proximit 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 fi 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 alteratic increase or decrease, to existing ground levels. No excavation or installation of services

ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:11500 @ A3	
Drawn: AA	

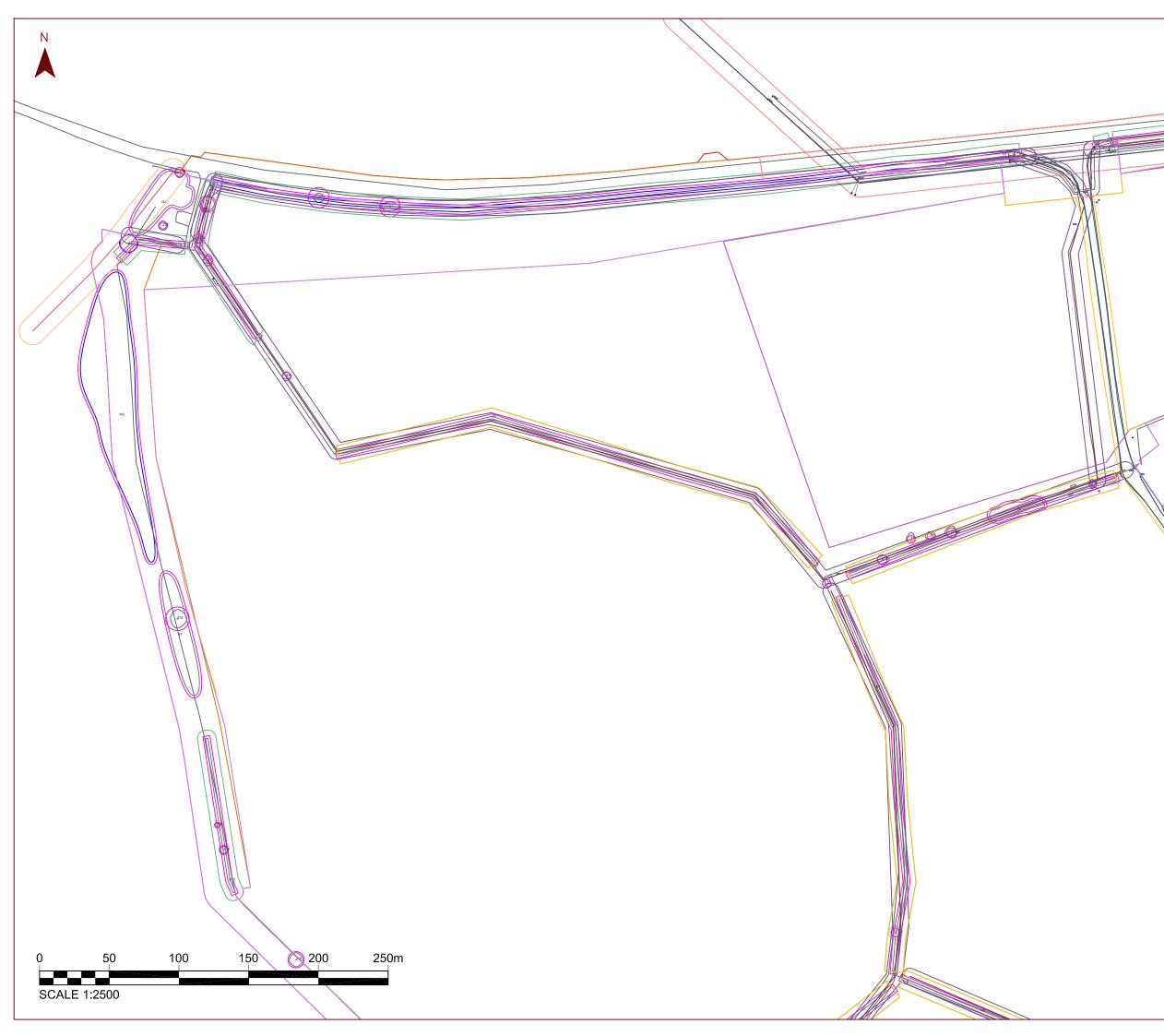
Date: 07/01/2025

Checked: MC

Figure: [Number] Sheet 0 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
×	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		
TREE CATEGORIES Tree canoples 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 m <sup>3</sup> 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 of work taking place around the retained trees. It is essential that the barriers are installed prior to any construction taking place, be amaintained during construction, and only removed once all construction has been completed and associated equipment and materials have been removed fro site. It is recommended that the barrier configuration shown and described in the plan opposite should be used on this site. Indie the barriers is das essential that the following prohibitions are complied with, unless an appropriate methodology has been formally agreed. (Where planning is equired, 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 alteratio increase or decrease, to existing ground levels. No excavation or installation of services

ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protectic nethods

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 1 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
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ACCURACY OF TREE LOCATIONS

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## ACCOMPANYING REPORT

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

## REFERENCES

export ison2cad 1681394336 Dean Moor - Topo v2 (27.04.23) STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title

WorksAreas



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 2 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
×	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

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ACCURACY OF TREE LOCATIONS

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STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

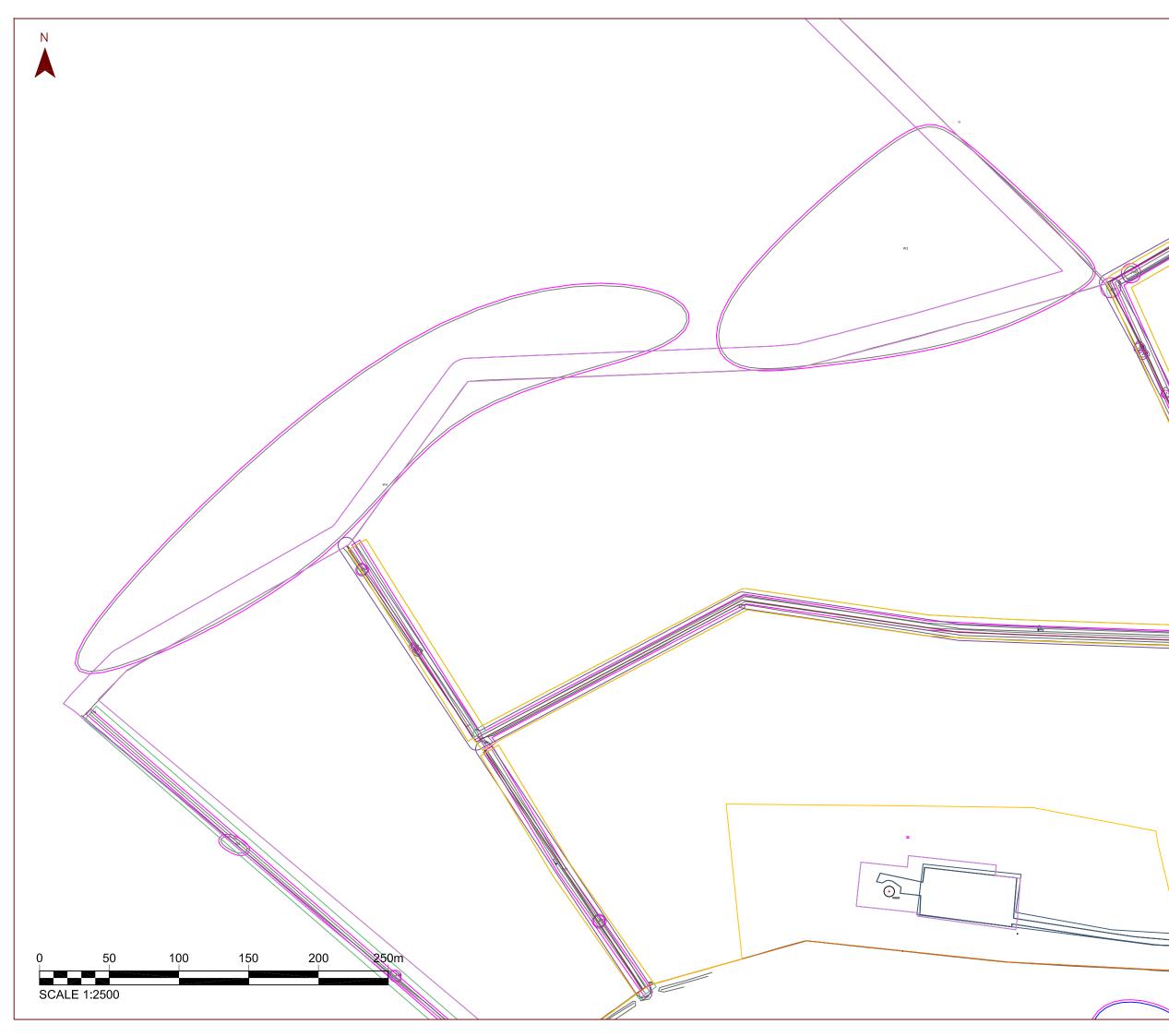
Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 3 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/V	<ul> <li>Prefix denoting tree, group, hedgerow or woodland reference number</li> </ul>		Tree protection fencing
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

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## ROOT PROTECTION AREAS

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ACCURACY OF TREE LOCATIONS

ee locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export ison2cad 1681394336

Dean Moor - Topo v2 (27.04.23)

/orksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 4 of 22 Rev: A





## Logond

Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$(\mathbf{x})$	Tree to be removed	$\mathbb{O}$	Tree group/hedgerow partially removed
	No-dig surfacing		

## TREE CATEGORIES

ree canoples are coloured in accordance with their quality category as set out in Table 1 of BS Tree canoples 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 noderate 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

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protectio ethods

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STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

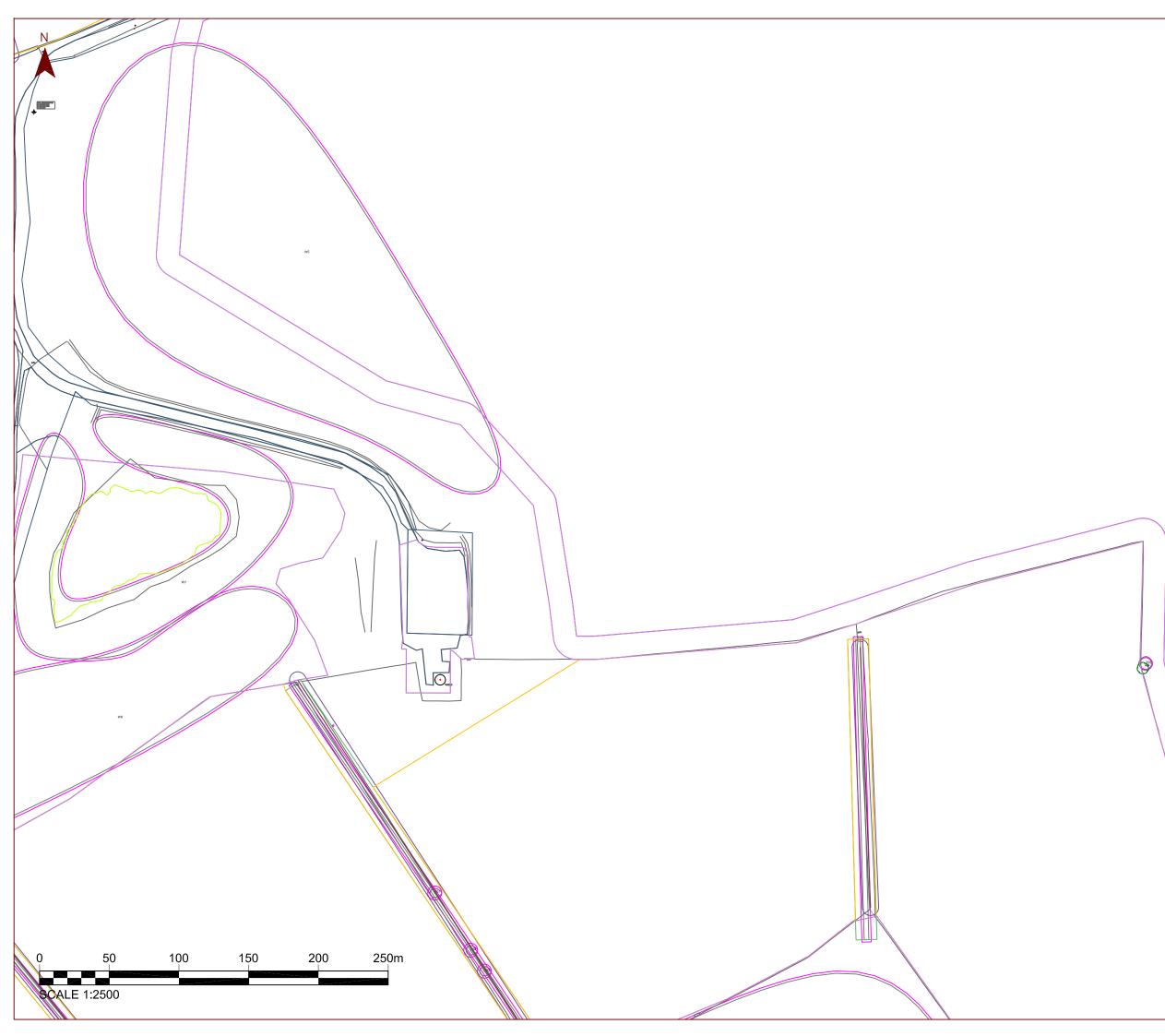
Drawn: AA

Checked: MC

Figure: [Number] Sheet 5 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

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STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



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Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

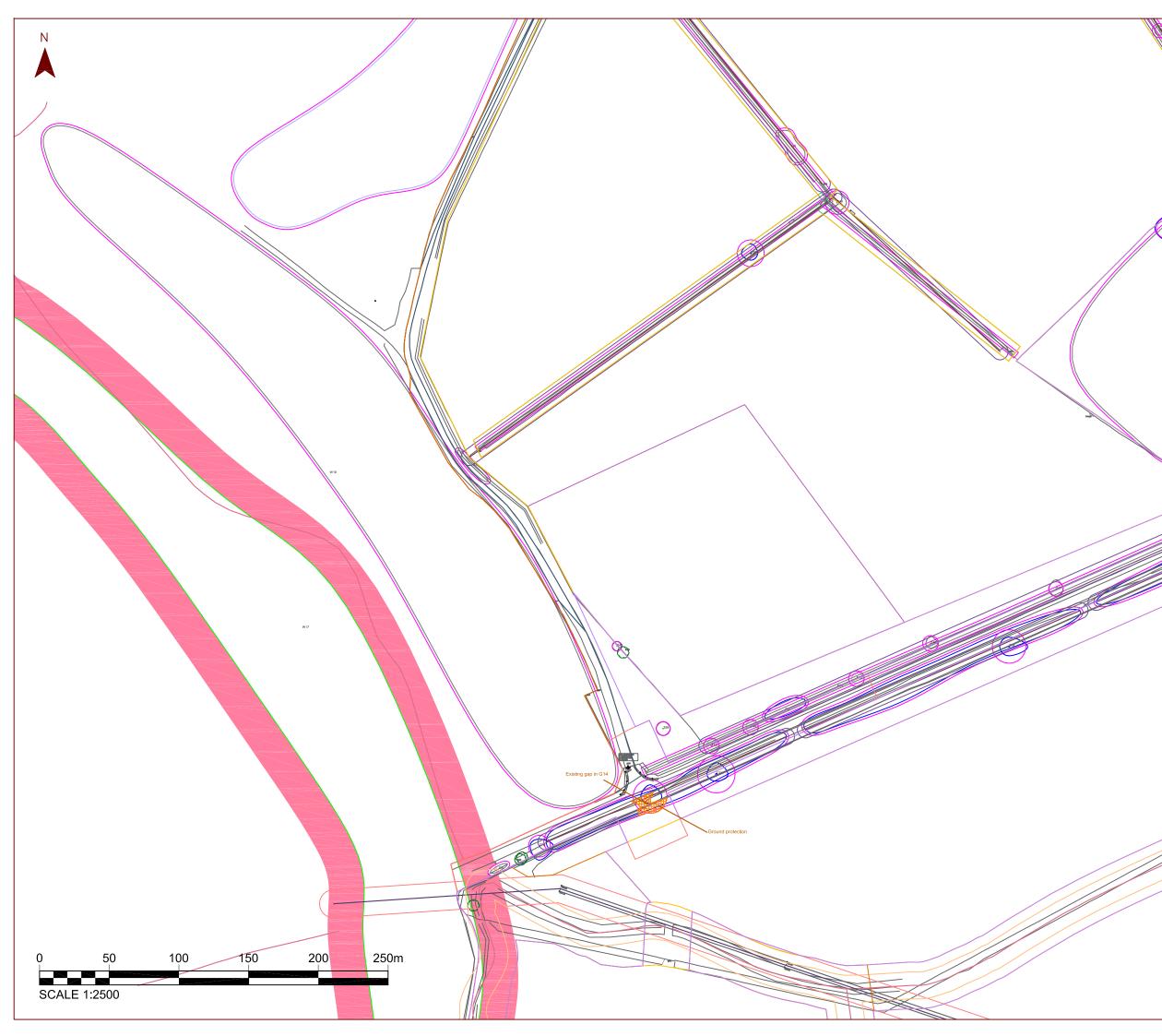
Drawn: AA

Checked: MC

Figure: [Number] Sheet 6 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
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ACCURACY OF TREE LOCATIONS

e locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protectic ethods

## REFERENCES

export ison2cad 1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

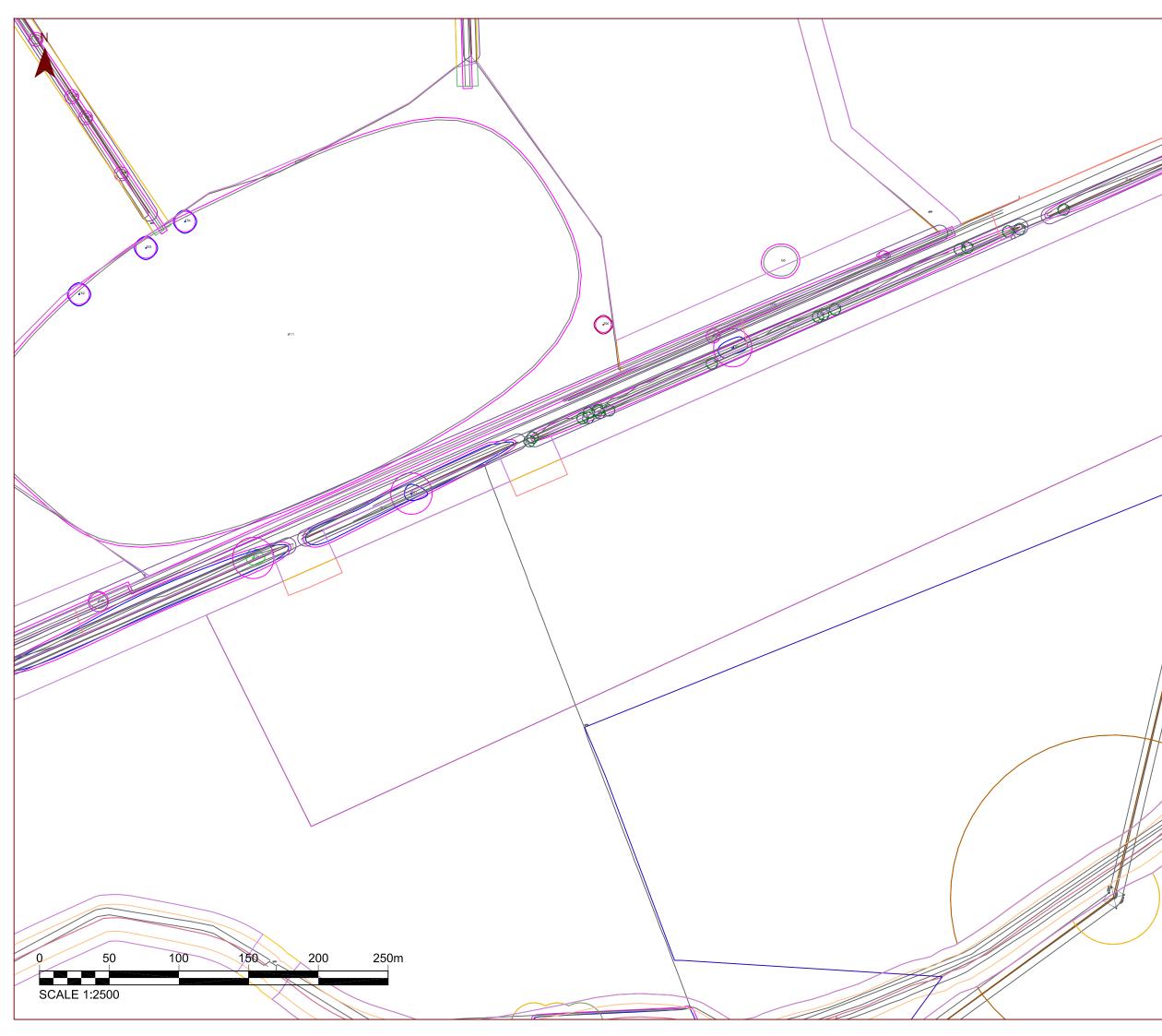
Drawn: AA

Checked: MC

Figure: [Number] Sheet 7 of 22 Rev: A







4				
	Legend			
		Canopies of category A trees		Canopies of category B trees
		Canopies of category C trees		Canopies of category U trees
Ć		Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
	0	Tree stems	#	Tree locations not based on topographical survey
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Project Title



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DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

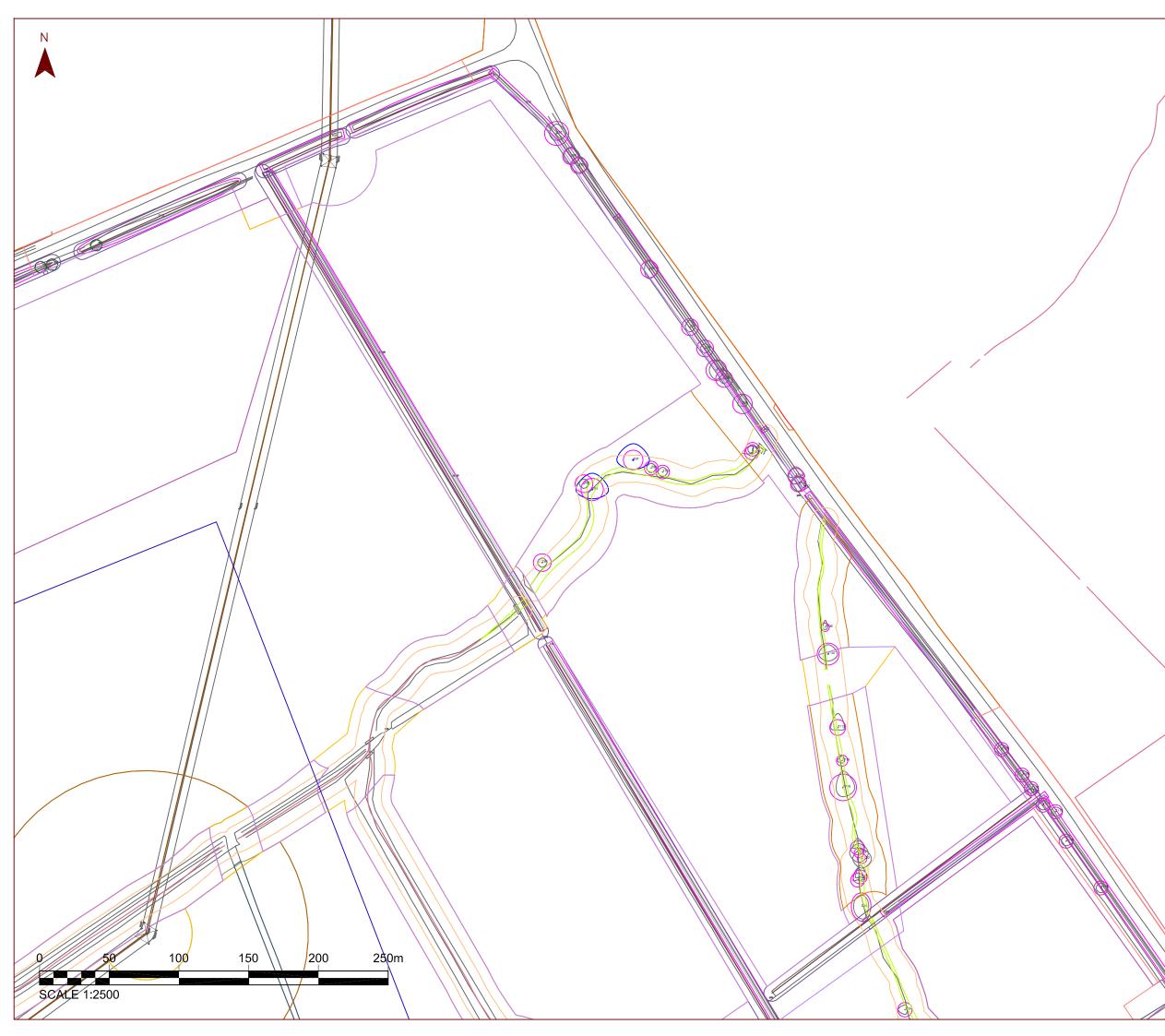
Drawn: AA

Checked: MC

Figure: [Number] Sheet 8 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
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ACCURACY OF TREE LOCATIONS

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STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 9 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$(\mathbf{x})$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

These CALESCARES Tree canoples are coloured in accordance with their quality category as set out in Table 1 of BS 537:2012 Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category /X - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'C' - Trees of moder 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 m<sup>2</sup> 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.

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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 alteratio increase or decrease, to existing ground levels. No excavation or installation of services

ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

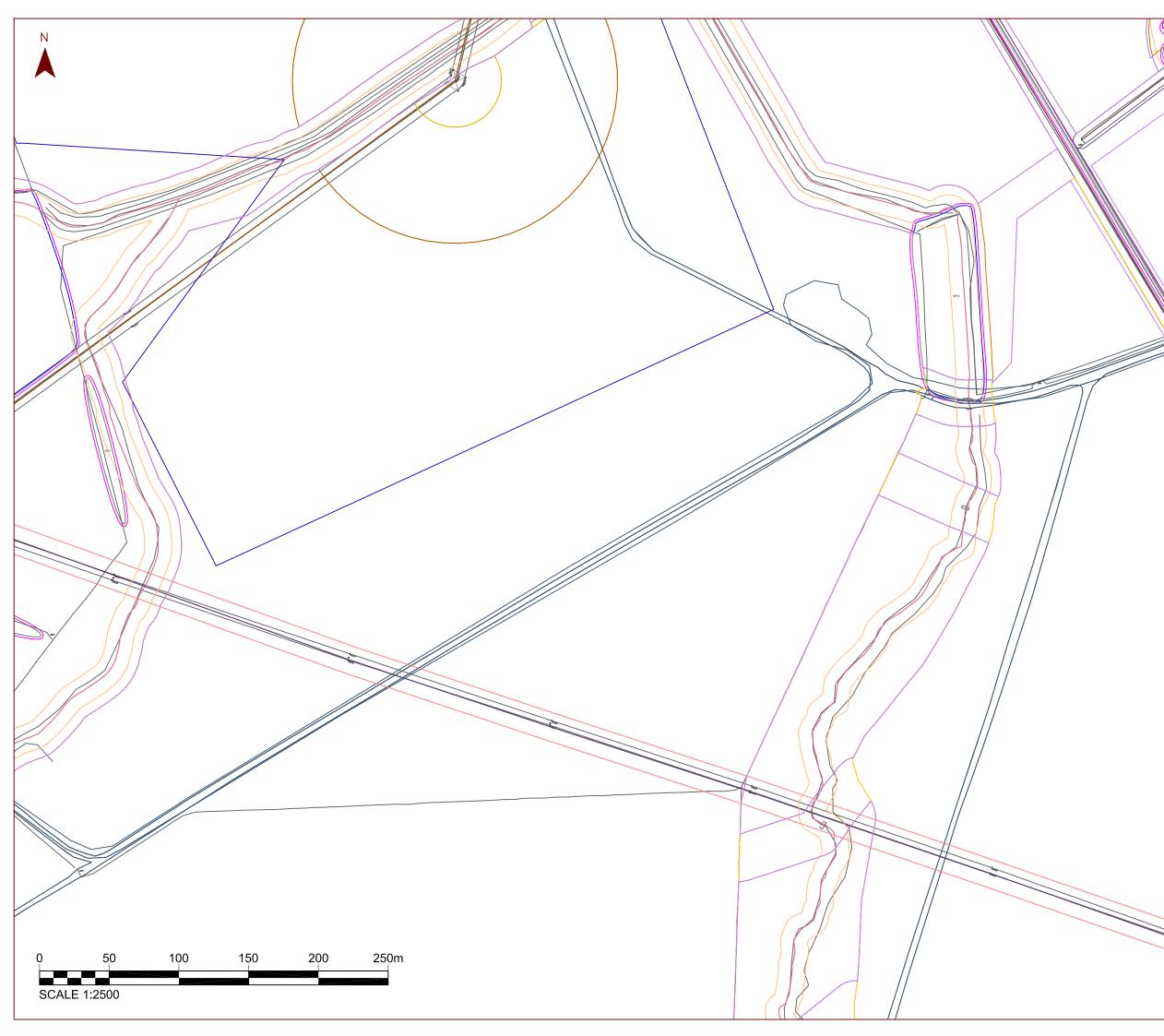
Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 10 of 22 Rev: A





## logond

Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
(×	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

## TREE CATEGORIES

TREE CATEGORIES Tree canoples 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 /X - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'C' - Trees of moder 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 m<sup>2</sup> 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 proximit 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 f 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):

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title

WorksAreas



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 11 of 22 Rev: A







Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
×	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

These canoples are coloured in accordance with their quality category as set out in Table 1 of BS 63372012 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 'C - Trees of molerate 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 'C - 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 m<sup>2</sup> 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 adiacent tree protection plan be fit for the purpose of excluding construction activity, and appropriate to the degree and proximit of work taking place around the retained trees. It is essential that the barriers are installed prior to or construction taking place, be maintained during construction, and only removed once all onstruction has been completed and associated equipment and materials have been removed f 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 equired, formal agreement will be required from the Local Planning Authority):

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protectio nethods

## REFERENCES

export ison2cad 1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

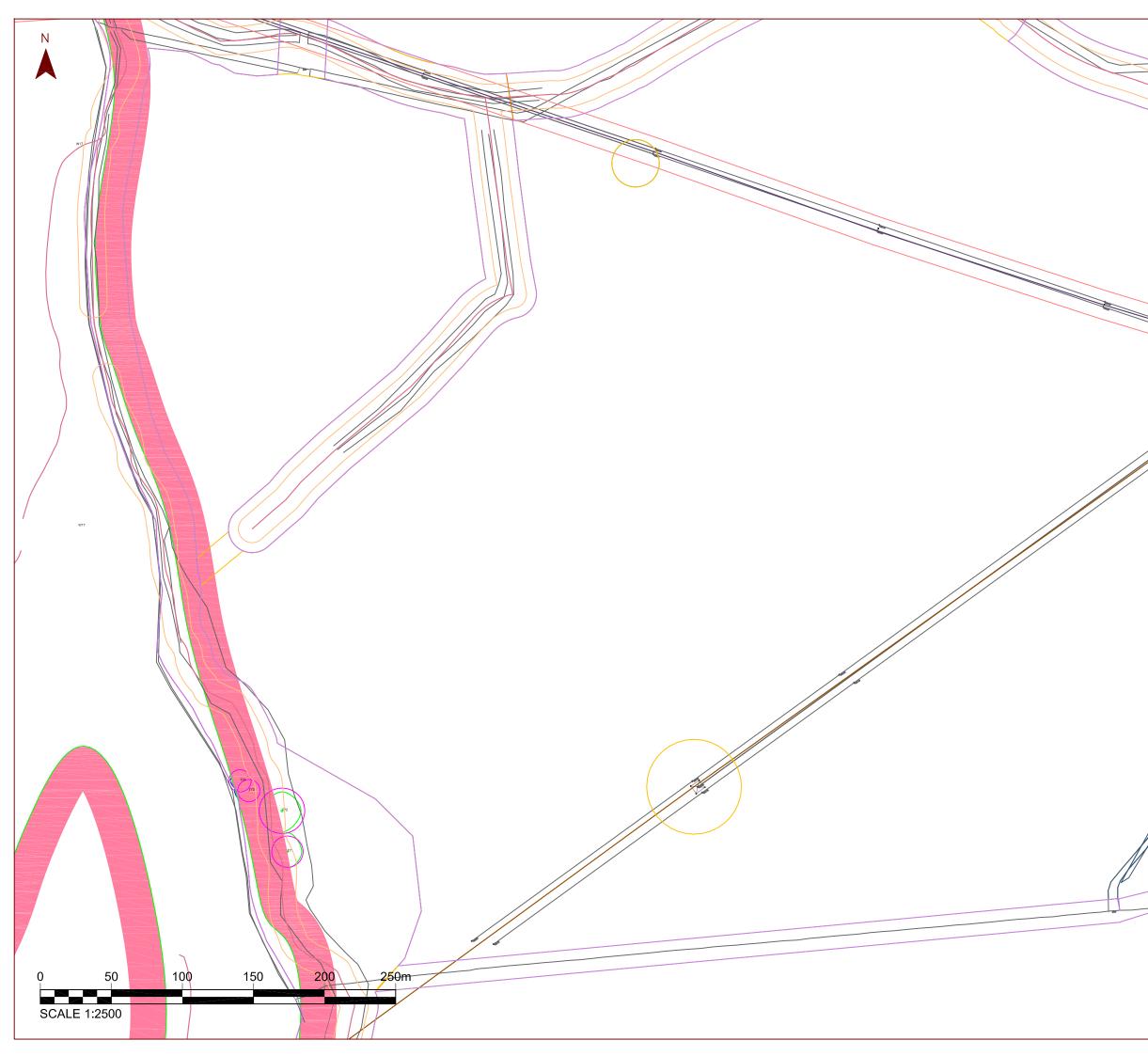
Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 12 of 22 Rev: A





	Legend				
		Canopies of category A trees		Canopies of category B trees	
		Canopies of category C trees		Canopies of category U trees	
		Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)	
	0	Tree stems	#	Tree locations not based on topographical survey	
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing	
	$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed	
		No-dig surfacing			
	5837:2012 'Trees in re shown in the Legend b expectancy of at least remaining life expectar estimated remaining lif below 150mm. Catego	ured In accordance with lation to design, demolit elow. Category 'A' - Tre 40 years. Category 'B' - ncy of at least 20 years. e expectancy of at least	ion and construction - es of high quality with Trees of moderate qua Category 'C' - Trees of t 10 years, or young tre ndition that they canno	f low quality with an es with a stem diameter t realistically be retained as	
	ROOT PROTEC		n longer trian to years		
	This is a minimum area in m <sup>2</sup> 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		d equipment and materi	als have been removed from	
	complied with, unless a		ogy has been formally ag	e following prohibitions are greed. (Where planning is thority):	
	materials, fuel, chemica	ng by hand. No storage o als, or spoil. No fires. No o existing ground levels. I	vehicular access. No ped	estrian access. No alteration	
		F TREE LOCAT		(27.04.23)	
	ACCOMPANYING REPORT Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protection methods				
	REFERENCES export json2cad 168		STANTEC	BS5837 TREE SURVEY	
	Dean Moor - Topo v2		TOPOGRA	PHICAL SURVEY	
	WorksAreas		PROPOSE	J LAYOUT	
	Project Title		Dear Moo Solar Farm	r r	
	Client F	VS Dean	Moor Limi	ted	
	Title DE/	AN MOOR	SOLAR F	ARM	
	DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]				
	Scale: 1:1	500 @ A3	Date: 07/	01/2025	
///					

Drawn: AA

Checked: MC

Figure: [Number] Sheet 13 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
∢	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

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These CALESCARES Tree canoples are coloured in accordance with their quality category as set out in Table 1 of BS 537:2012 Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category /X - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'C' - Trees of moder 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 m<sup>2</sup> 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.

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export ison2cad 1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 14 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

These CALEGORIES Tree canceles are coloured in accordance with their quality category as set out in Table 1 of BS 537:2012 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 'C' - 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 20 years, or young trees with a stem dameter 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

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export ison2cad 1681394336 Dean Moor - Topo v2 (27.04.23) STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title

WorksAreas



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

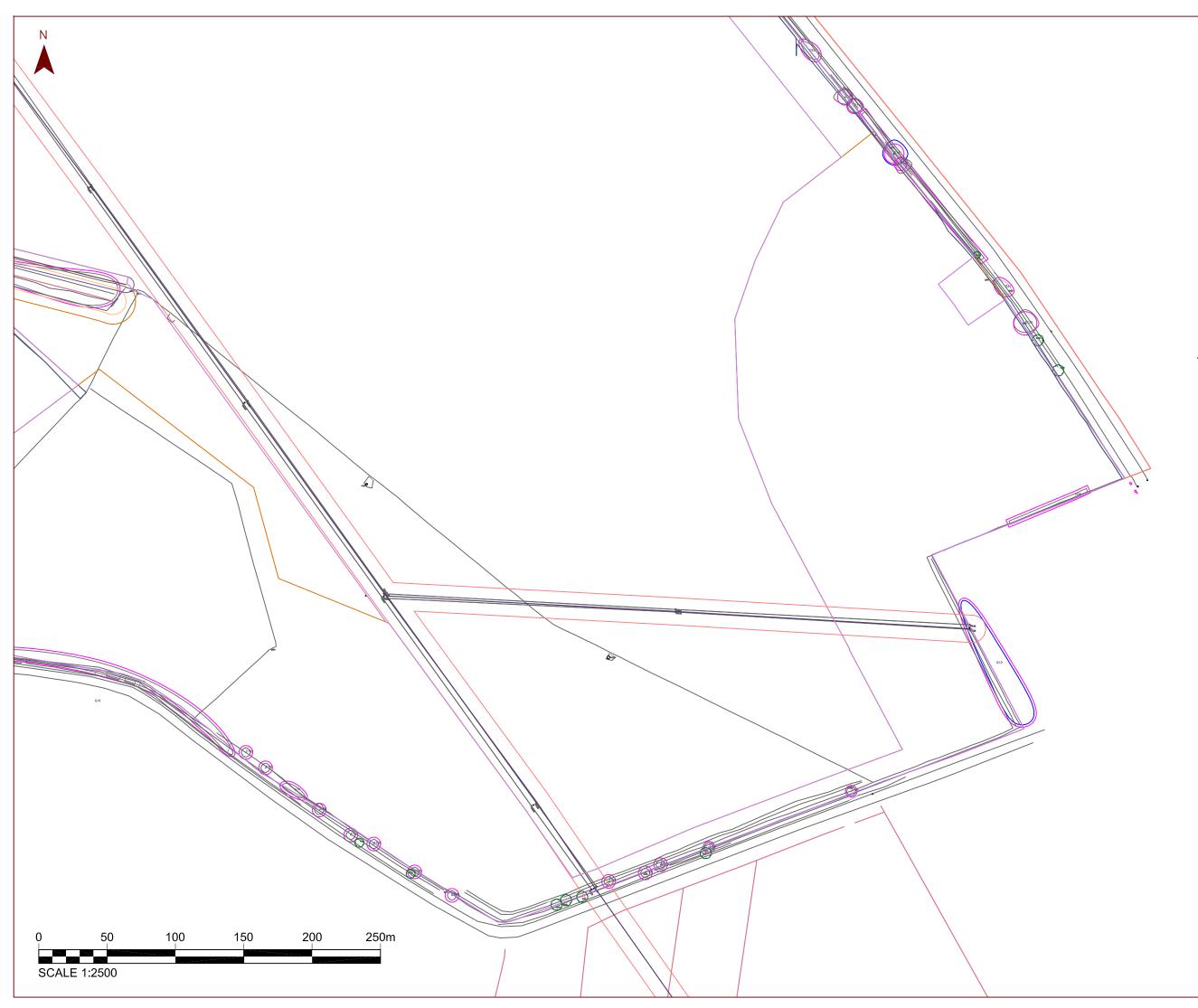
Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 15 of 22 Rev: A





Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

These CALESCARES Tree canoples are coloured in accordance with their quality category as set out in Table 1 of BS 537:2012 Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category /X - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'C' - Trees of moder 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

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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 proximit 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 f 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 equired, formal agreement will be required from the Local Planning Authority):

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title

WorksAreas



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

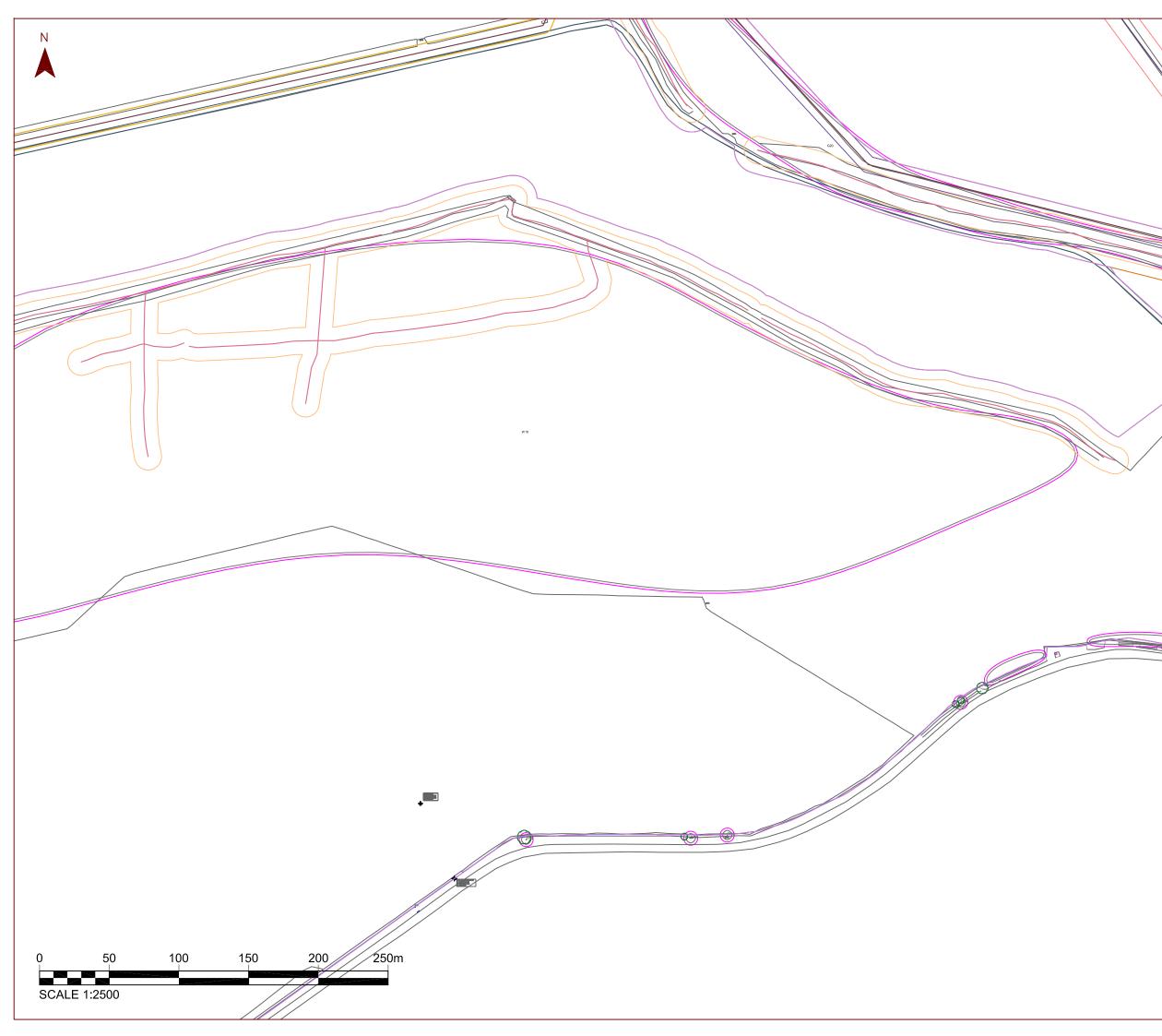
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Figure: [Number] Sheet 16 of 22 Rev: A





Legend
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Legend			
	Canopies of category A trees	$\bigcirc$	Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
×	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

Free canoples are coloured in accordance with their quality category as set out in Table 1 of BS Tree canoples 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 noderate 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 iving trees in context of the current land use for longer than 10 years.

## ROOT PROTECTION AREAS

This is a minimum area in m<sup>2</sup> 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.

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ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export ison2cad 1681394336

Dean Moor - Topo v2 (27.04.23)

orksArea

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

#### Project Title



## FVS Dean Moor Limited

Title

Client

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

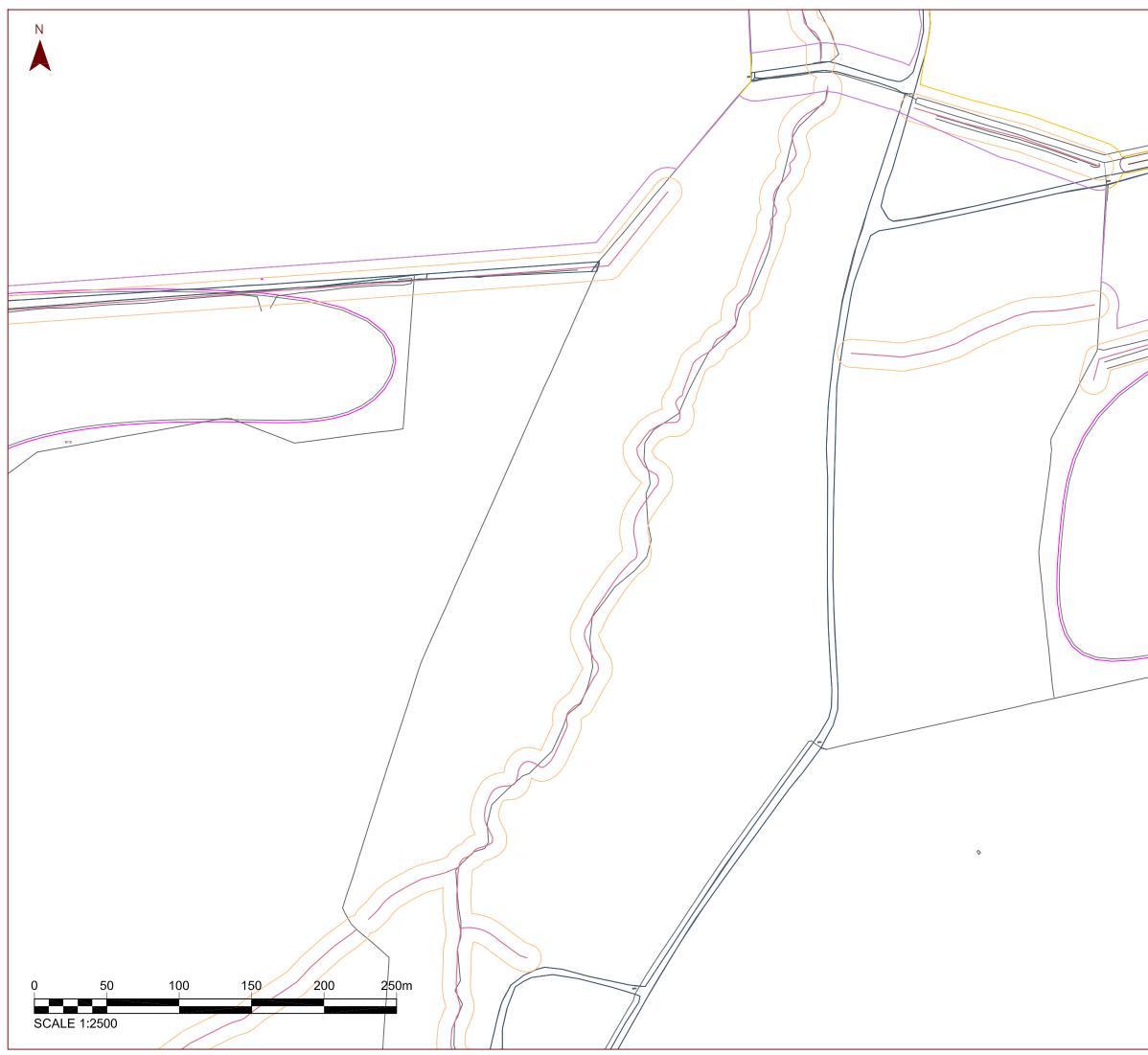
Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 17 of 22 Rev: A





	Legend				
		Canopies of category A trees	$\bigcirc$	Canopies of category B trees	
		Canopies of category C trees		Canopies of category U trees	
		Veteran tree buffer zone		Root protection areas (RPAs)	
	0	Tree stems	#	Tree locations not based on topographical survey	
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing	
	$\overline{\mathbf{x}}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed	
		No-dig surfacing	V		
		oured in accordance wit		as set out In Table 1 of BS	
	shown in the Legend b expectancy of at least	lation to design, demoli elow. Category 'A' - Tre 40 years. Category 'B' ncy of at least 20 years.	es of high quality with Trees of moderate qu		
	estimated remaining lif below 150mm. Catego	e expectancy of at leas	t 10 years, or young tre indition that they cannot	ees with a stem diameter ot realistically be retained a	
		a in m <sup>2</sup> which should be		nd each retained tree. The	
	demolition and constr	ng the British Standard I uction - Recommendations s should be positioned in	ons.	n relation to design, djacent tree protection plan,	
	be fit for the purpose of excluding construction activity, and appropriate to the degree and proximi 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 noce all construction has been completed and associated equipment and materials have been removed fro site. It is recommended that 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 execavations, including by hand. No storage of machinery. No storage or handing of building materials, fuel, chemicals, or spoil. No fires. No vehicular access. No pdestrian 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 Dean Moor - Topo v2 (27.04.23)				
	ACCOMPANYING REPORT Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protection methods				
	REFERENCES export_json2cad_168		STANTEC	BS5837 TREE SURVEY	
	Dean Moor - Topo v2 WorksAreas	2 (27.04.23)		TOPOGRAPHICAL SURVEY PROPOSED LAYOUT	
	Project Title		Dear Moo Solar Farr	<b>)</b> ()	
	Client F	VS Dean	Moor Limi	ited	
	Title				
DEAN MOOR SOLAR FAR DEVELOPMENT CONSENT OF Regulation 5(2)(o) - Location f [Cumberland Council]					
	Scale: 1:1500 @ A3 Dat		Date: 07	/01/2025	
	Drawn: AA	A	Checked	I: MC	
	Figure: [Number] Sheet 18 of 22 Rev:				
	$\mathbf{O}$	) St	ant	ec	



	Legend				
		Canopies of category A		Canopies of category B	
		trees Canopies of		trees Canopies of	
		category C trees	$\bigcirc$	category U trees	
		Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)	
	0	Tree stems	#	Tree locations not based on topographical survey	
	T/G/H/W	Prefix denoting tree group, hedgerow or woodland reference number		Tree protection fencing	
	$\bigotimes$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed	
		No-dig surfacing			
	TREE CATEGO	DRIES			
	remaining life expectar estimated remaining life below 150mm. Catego living trees in context of ROOT PROTEC This is a minimum are RPA is calculated usir demolition and constra Tree protection barrier be fit for the purpose o of work taking place ar any construction has been a site. It is recommendee should be used on this complied with, unless a required, formal agreer No excavations, includii materials, fuel, chemic increase or decrease, to ACCURACY OI Tree locations based of ACCOMPANYIP Plan to be read in cony which contains details methods	ry 'U'- Trees in such co of the current land use for CTION AREAS ta in m <sup>2</sup> which should be gin be British Standard F uction - Recommendation s should be positioned in f excluding construction ound the retained trees. place, be maintained du completed and associate that the barrier configue site. Inside the barriers to mappropriate methodol ment will be required from ng by hand. No storage o als, or spoil. No fires. No existing ground levels. I F TREE LOCATI on topographical survey NG REPORT junction with Stantec Ar of all trees surveyed ar	Category (C - Trees o 10 years, or young thr after the yearner r longer than 10 years eleft undisturbed arour s 55837:2012 'Trees in accordance with the ad activity, and appropriat th is essential that the bis s 58387:2012 'Trees in accordance with the ad activity, and appropriat th is essential that the yay has been formally ay the Local Planning Au the Local Planning Au the Local Planning Au the Astronov - Topo v2 boricultural Impact Ass	flow quality with an ese with a stem diameter trealistically be retained as the alexically be retained as the alexical by be	
W13	REFERENCES           export_json2cad_1681394336         STANTEC BS5837 TREE SURVI           Dean Moor - Topo v2 (27.04.23)         TOPOGRAPHICAL SURVEY           WorksAreas         PROPOSED LAYOUT				
	Project Title Client	VS Dean	Solar Farr	'n	
	Title				
	DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]				
	Scale: 1:1	500 @ A3	Date: 07/	01/2025	
	Drawn: AA Checked: MC Figure: [Number] Sheet 19 of 22 Rev: A				
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Legend			
	Canopies of category A trees		Canopies of category B trees
	Canopies of category C trees		Canopies of category U trees
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)
0	Tree stems	#	Tree locations not based on topographical survey
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed
	No-dig surfacing		

TRee CATEGORIES Tree canoples are coloured in accordance with their quality category as set out in Table 1 of BS 637:2012 Trees in relation to design, demolition and construction - Recommendations' and shown in the Legend below. Category V+ Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category V- Trees of modera quality with an estimated remaining life expectancy of at least 20 years. Category V- 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 V- 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 m<sup>2</sup> 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.

ree protection barriers should be positioned in accordance with the adjacent tree protection plan The protection barriers should be positioned in accordance with the adjacent the protection plan, be fit for the purpose of excluding construction activity, and appropriate to the degree and proximit 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 f 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 alteratic increase or decrease, to existing ground levels. No excavation or installation of services

ACCURACY OF TREE LOCATIONS

ree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)

## ACCOMPANYING REPORT

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

## REFERENCES

export\_json2cad\_1681394336 Dean Moor - Topo v2 (27.04.23) WorksAreas

STANTEC BS5837 TREE SURVEY TOPOGRAPHICAL SURVEY PROPOSED LAYOUT

Project Title



Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER Regulation 5(2)(o) - Location Plan [Cumberland Council]

Scale: 1:1500 @ A3

Date: 07/01/2025

Drawn: AA

Checked: MC

Figure: [Number] Sheet 20 of 22 Rev: A







Legend				
	Canopies of category A trees		Canopies of category B trees	
	Canopies of category C trees		Canopies of category U trees	
	Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)	
0	Tree stems	#	Tree locations not based on topographical survey	
T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing	
$\mathbf{x}$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed	
\$	No-dig surfacing			
5837:2012 'Trees in re shown in the Legend I expectancy of at least remaining life expecta estimated remaining li below 150mm. Catego	ation to design, demoli below. Category 'A' - Tre 40 years. Category 'B' -ncy of at least 20 years. fe expectancy of at leas ory 'U' - Trees in such cc of the current land use fe	ion and construction es of high quality with Trees of moderate qu Category 'C' - Trees ( t 10 years, or young tr ndition that they cann	of low quality with an rees with a stem diameter ot realistically be retained as	
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ACCURACY OF TREE LOC/ Tree locations based on topographical su				
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	Legend				
		Canopies of category A trees	$\bigcirc$	Canopies of category B trees	
		Canopies of category C trees		Canopies of category U trees	
		Veteran tree buffer zone	$\bigcirc$	Root protection areas (RPAs)	
	0	Tree stems	#	Tree locations not based on topographical survey	
	T/G/H/W	Prefix denoting tree, group, hedgerow or woodland reference number		Tree protection fencing	
	$\bigotimes$	Tree to be removed	$\bigcirc$	Tree group/hedgerow partially removed	
		No-dig surfacing			
	5837:2012 'Trees in re shown in the Legend b expectancy of at least remaining life expectar estimated remaining lit below 150mm. Catego	bured in accordance with lation to design, demoli lelow. Category 'A' - Tre 40 years. Category 'B' - ncy of at least 20 years. Te expectancy of at leas	ion and construction - es of high quality with Trees of moderate qu Category 'C' - Trees o t 10 years, or young tre ndition that they canno	f low quality with an ees with a stem diameter ot realistically be retained as	
-	ROOT PROTE				
	RPA is calculated usir	a in m² which should be ng the British Standard I uction - Recommendatio	3S 5837 2012 'Trees in	nd each retained tree. The n relation to design,	
	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 taking place. The maintained during construction, and only removed once all construction taking 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 venicular access. No adteration the storage of the storage of machinery. No storage of handling of building materials (the, chemicals, or spoil). No fires. No venicular access. No adteration the storage of the storage of machinery. No storage of handling of building materials (the chemicals, or spoil). No fires. No storage of handling of building materials (the chemicals).				
	Increase or decrease, to existing ground levels. No excavation or installation of services ACCURACY OF TREE LOCATIONS Tree locations based on topographical survey Dean Moor - Topo v2 (27.04.23)				
	ACCOMPANYING REPORT Plan to be read in conjunction with Stantec Arboricultural Impact Assessment - Dean Moor which contains details of all trees surveyed and a description of recommended tree protection methods				
	REFERENCES export_json2cad_168 Dean Moor - Topo v2 WorksAreas	31394336		BS5837 TREE SURVEY APHICAL SURVEY D LAYOUT	
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Appendix D Example Cellular Confinement System

# Cellweb® TRP Tree Root Protection

Cellweb<sup>®</sup> TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb<sup>®</sup> TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



# **Cellweb® TRP Key Functions**

Cellweb<sup>®</sup> is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb<sup>®</sup> is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb<sup>®</sup> spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

# The Cellweb® TRP system comprises the following three components

<u>Treetex<sup>™</sup> Geotextile.</u> Following minimal ground preparation the Treetex<sup>™</sup> is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex<sup>™</sup> performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

<u>Cellweb<sup>®</sup> 3D Cellular Confinement</u>. The Cellweb<sup>®</sup> is installed on top of the Treetex<sup>™</sup> layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

<u>4-20mm Clean Angular Stone</u>. The expanded Cellweb<sup>®</sup> is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex<sup>TM</sup> layer from becoming blocked over time.

## Which depth of Cellweb® TRP?

The Cellweb<sup>®</sup> System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website www.geosyn.co.uk.





# Appendix E Ground Protection

0 CRANES SPECIALIS

EQUIPMENT

NEEDER

# **MultiTrack**

# RAPID INSTALLATION Lay approximately 50 mats per hour.\*

# TOUGH

6.

Virtually indestructible HDPE polymer supports all vehicle types.

EASY TO HANDLE Lightweight 39kg mats easily handleable with two workers.

# **MULTI-TREAD**

Roadway, Walkway and Smooth tread options cater for various vehicular and pedestrian needs.

ENVIRONMENTALLY FRIENDLY Made from 100% recycled plastic and fully recyclable.

# **GUARANTEED UNBREAKABLE**

Lifetime guarantee against breakage by vehicles up to 120 tonnes (T&Cs apply).

\*FAST, EASY, ECONOMICAL Install approximately 50 mats per hour with a team of 3 plus forklift driver.

www.ground-guards.co.uk +44 (0) 113 267 6000 info@ground-guards.co.uk

267 6000 Ground-Guards

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	<b>И</b>	ltiTrack
	VLU	LULLL CK 简单的
industry and the second second second		AKABLE ORIGINAL
And a state of the	Material:	Special blend of HDPE recycled plastic, fully recyclable MultiTrack in action.
Constant and	Overall Size:	2435 x 1215 x 13mm (plus treads)
	Surface Area:	
MultiTrack-mats are the	Weight:	山口十五十五十五十五十五十五十五十五十五十五
	Local Street Str	39kg
	Tread Options:	Roadway, Walkway and Smooth, or a combination
	Connectors:	10 joining points.
		A choice of standard clip joiners,
Mats are easily moved using a HandiHook		low profile joiners or bolted joiners, Walkway
		pius anchor pins
	Packed in:	Stillage of 25 mats Smooth
	Stillage Pack:	Weight: 1105kg
		Dimensions: 2550 x 1260 x 900mm
Standard no-tools joiners quickly clip the mats together	Fire Rating:	UL94 HB
	Slip Testing:	BS7976 part 2
ARE A	Deflection:	Tested on varying CBR ground conditions using a 300mm diameter steel
		platen with 6 tonnes load to simulate the pressure of an HGV wheel
Sec. 5/ 6/20		Ground CBR 11.35%: Deflection 17.68mm
	1	Ground CBR 8.58%: Deflection 20.41mm
		Ground CBR 4%: Deflection 22.00mm
Low profile joiners for		
walkways plus boiled joiners	Guarantee: MultiTrack temporary ro	adway mats are guaranteed
and the second se	for life against breakage i Uniformly Distributed Lo	up to 120 Tennes UDL
	t is the user's responsibil capacity of the ground, a within the weight that th supporting. Ground-Gue whatsoever for any dama	Inty to assess the load-bearing ind to only operate vehicles se ground is capable of safely rds Ltd accepts no liability age, less or injury arising
	from the ground conditio products are used.	I GUARANIEED I
		suitable to use for bridging ed by mechanical equipment See www.ground-guards.co.uk
A REAL PROPERTY AND ADDRESS OF TAXABLE PARTY.	e.g. cuts by digger bucke	ets) or sharp protrusions covered by this guarantee.

Ground-Guards +44 (0) 113 267 6000 info@ground-guards.co.uk

# PRODUCTS-ROADWAYS

# Europes leading provider of temporary access solutions



## Trakway Systems – K Trakpanel

The K Trakpanel is the most heavy-duty temporary roadway on offer, developed from the original roll-out road system to create a more durable and stable surface.

Aluminium planks are connected to create a high capacity panel that has a corrugated surface to aid vehicle traction. By interconnecting panels in any combination of widths and layers, the heavy duty portable roadway system provides guaranteed access for any load, up to 1000 tonnes, over almost any terrain.



## Suitable for

- Heavy Duty Roadway
- Medium Duty Roadway
- Light Duty Roadway
- Walkway
- Eve Install

## The Benefits

- Stability
- Versatility
- Provides ground protection
- Suitable for high volume traffic
- Improves load capacity of existing ground



The Heavy Duty Trakpanel is the most versatile temporary roadway product currently available, offering the flexibility to create stability on otherwise impassable ground. From pebble beaches to peat bogs and tidal sands to SSSI sites, Eve Trakway has worked together with land owners, contractors and governing bodies to create a solution designed to provide maximum protection to both the load and the ground upon which it needs to work.

Technical Specifications		
Dimensions	2.5 x 3m	
Weight	315 kg	
Carrying Capacity	By using panels in a combination of widths, lengths and layers, this system is capable of taking loads in excess of 1000 tonnes.	



#### Trakway Systems – X Trakpanel

X Trakpanel is Eve's newest heavy-duty temporary access panel, developed with a hexagonal profile and a more pedestrian-friendly surface than the K panel. They provide great flexibility through their overlapping joint systems and as a result are capable of accommodating anything from pedestrians to heavy traffic and equally heavy vehicles.

The X panel provides an innovative solution to the access challenges faced onsite and their versatility allows them to easily adapt to all sites and conditions. The panel is made of less aluminium that a K panel, making it lighter so allows more to be transported at any time, therefore reducing the environmental impact.

Another great advantage to the panel is that the installation times are reduced due to improved connection methods and increased transportation volumes.

## The Benefits

- Accommodates pedestrians and heavy vehicle traffic
- Multi –directional trakpanels available to create turns
- End Ramps

Technical Specifications		
Dimensions	2.5 x 3m	
Weight	254 kg	
Carrying Capacity	A more pedestrian friendly roadway, this system is capable of taking any road going loads.	

**Head Office –** eve trakway limited Bramley Vale, Chesterfield, Derbyshire, S44 5GA Customer Services Centre: 08700 767676

Tel: 01246 858600, Fax: 08700 737373 www.evetrakway.co.uk/products/trakway-systems



# **PRODUCTS-ROADWAYS**

#### Roadways - LD20

Over 35 years of experience and knowledge went into the re-design of LD20. The light duty system is capable of taking loads up to 20 tonnes and the roll out roadway offers unrivalled speed on installation. Providing support for pedestrians and vehicles alike, the capacity to install a 50 metre roadway in under 5 minutes makes it ideal for applications where mass coverage is required.



Light Duty Trakway being rolled out.

#### The Benefits

- Roll out roadway
- Speedy installation
- Suitable for vehicles and pedestrians
- Lightweight
- Transportable by forklift truck

Technical Specifications		
Weight	1531 kg per roll	
Carrying Capacity	Maximum Capacity of 20 tonnes.	

#### **Roadways - Box Trakpanel**

Along with the original features of the Trakway box panel the new multidirectional panel incorporates an expandable corrugated surface enabling the roadway to seamlessly create turns in either direction. The panels also extend out fully allowing an exact finish when laying a variety of panel configurations.

For example with the multi-directional panel fully closed the length is 1.32m, fully open the panel length extends to 2.13m. With one side of the panel fully extended it will give you 17.5 degrees of turn as every time an individual plank is extended it gains 3.5 degrees.



**Multi-Directional Panel** 

The Multi-Directional Trakpanel has a pedestrian friendly surface ensuring a safe walking area at all times. These panels, paired with original panels can be quickly and easily laid in any configuration.

Technical Specifications	
Dimension fully closed	1.32m x 3m
Dimension fully extended	2.13m x 3m
Individual plank extension	3.5 degrees
One side fully extended	17.5 degrees

#### Roadways – Trakmats

TrakMats are a ground protection mat for moving and operating personnel and equipment over soft or sensitive ground.

TrakMats prevent environmental and ground damage, bogged down vehicles and slip hazards for staff. Unbreakable upto 60 tonnes, TrakMats are made from rugged HD polyethylene with a unique non-slip traction surface to avoid tyre slippage and mud build up, in even the worst weather.



Trakmats are widely used in various fields such as ground engineering work, construction sites, sports facilities and at events.

The TrakMats are an ideal alternative to Eve Trakway's other roadway products where ground conditions are better, the volume of traffic is lighter or there is a need to move the equipment around site.

The products are man-handleable and ideal for use where access to the site is restricted as there is no need for a vehicle to install them.

The panels are available to buy or to hire. Please contact the customer service centre on 08700 767676 for further details.

Technical Information		
Width	1130	
Length	2440	
Weight	33kg	
Material	Recycled High Density Polyethylene	
<b>Head Office -</b> eve trakway limited Bramley Vale, Chesterfield, Derbyshire, S44 5GA		
Customer Services Centre: 08700 767676		
Tel: 01246 858600, Fax: 08700 737373		

www.evetrakway.co.uk/products/trakway-systems