

Llandyfaelog Substation Arboricultural Impact Assessment

On behalf of **National Grid**
nationalgrid

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1 Executive Summary

- 1.1.1 This assessment describes the known arboricultural features and potential impacts upon them at and around the location of a proposed new asset, comprising construction of a new 400kV substation including drainage proposals at land east of Uplands Arms (A484), Llandyfaelog, Carmarthenshire, Wales, SA32 8EA.
- 1.1.2 The UK planning framework, including guidance given by the National Planning Policy Framework 2024 and Planning Policy Wales (PPW) (Edition 12, 2024), requires that arboricultural assets which may be affected by these proposals are considered and seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural wellbeing of Wales. PPW contains specific policies in relation to the importance and protection of trees, woodlands and hedgerows and tree replacement requirements. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The effects of proposed development on trees are therefore a material consideration in dealing with planning applications, and this is normally reflected in local development planning policies. Planning should recognise the intrinsic beauty of the countryside, and the wider benefits from natural capital and ecosystem services, including the economic and other benefits of trees and woodland. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads, and National Landscapes (formerly Areas of Outstanding Natural Beauty). Development resulting in the loss of irreplaceable habitats such as ancient woodland and ancient or veteran trees should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists.
- 1.1.3 The Site is located approximately 6km south of Carmarthen, South Wales. The site is located approximately 900m north of the village of Llandyfaelog and 700m northeast of the village of Upland Arms. There are three areas of broadleaved woodlands abutting the east (located 50m to the east of hedgerow H23), west (woodland W1) and south (woodlands W2, W3, W4) of the site as identified in the MAGIC interactive map. A search of the Woodland Trust Ancient Tree Inventory showed that there are no ancient or veteran trees within or adjacent to the site, however a single veteran tree (T34) was identified south of the proposed site bordering the broadleaved woodland to the west.
- 1.1.4 In line with the requirements of BS5837: Trees in Relation to Design, Demolition and Construction (2012), National Grid commissioned Stantec to provide arboricultural advice in relation to the Scheme. A full arboricultural survey of the site was conducted between 19th November and 13th December 2024.
- 1.1.5 The tree survey identified a total of 119 tree features including 50 individual trees, 25 groups of trees, 39 hedgerows and five woodlands which have the potential to be impacted by the development proposals. Each tree was awarded a quality rating from A – U in accordance with the recommendations contained within *Table 1 of BS5837: Trees in Relation to Design, Demolition and Construction (2012)*. Four tree features were categorised as high A grade, 50 tree features were categorised as moderate B grade, and 63 were categorised as low C grade. Two trees were categorised as very low-quality U grade and should not be considered a constraint to any development proposals.
- 1.1.6 Of the 50 individual trees, eleven individual trees would need to be removed in full for the proposed excavation works, including one B grade tree T15 and ten C grade trees T14, T17, T18, T19, T21, T22, T23, T24, T25 and T26. Three tree groups and two hedgerows would also need to be removed in full to facilitate the development proposals. In addition, five groups of trees and twelve hedgerows would need to be partially removed to accommodate the proposed construction works.

- 1.1.7 One category B tree T10 and one category C tree group G10 will be directly impacted by excavation works to accommodate the proposed hard standing area and swale.
- 1.1.8 To ensure retained trees remain protected throughout the course of works, a range of mitigation measures are recommended including installation of tree protection fencing, ground protection and site supervision.
- 1.1.9 A search of the Carmarthenshire County Council online search maps confirmed that no trees located either adjacent to or in the proposed development site are the subject of a Tree Preservation Order or located in a Conservation Area.

2 Introduction

- 2.1.1 This report has been prepared by Stantec on instruction from National Grid to provide a tree survey, arboricultural impact assessment and tree protection measures in accordance with BS5837: Trees in Relation to Design, Demolition and Construction (2012).
- 2.1.2 The purpose of this report is to clearly identify the significant trees and hedges that may be impacted by the development; the quality and value of the vegetation; the effect that the stages of the development could have on existing vegetation; the significance of such impact in landscape terms, and to suggest appropriate methods to be adopted in order to mitigate any potentially negative impacts on existing trees and hedges.
- 2.1.3 The survey was carried out between 19th November and 13th December 2024 and the results are provided in the Tree Survey Schedule in Appendix B.

2.2 Design Proposals

- 2.2.1 The Llandyfaelog Project is comprised of the following principal elements:
- Construction of a single level platform (260 metres by 640 metres) on which an Air Insulated Substation (AIS) is sited measuring 155 metres by 602 metres
 - Bellmouth access to the A484 with an operational access road to connect the platform to the A484
 - Modification works to the existing 400kV Overhead Line (OHL) to connect the substation to the existing OHL involving the installation of two new towers (pylons) and one replacement tower (pylon) circa 18 metres and 62 metres
 - Associated drainage, and hard and soft landscaping

2.3 Site Description

- 2.3.1 The Site is located approximately 6km south of Carmarthen, South Wales, 900m north of the village of Llandyfaelog and 700m northeast of the village of Upland Arms. To its west is a 16 hectares broadleaved woodland, designated in the National Forest Inventory (NFI). The site comprises two NFI designated broadleaved woodlands located within the southern part of site and abutting to the western boundary, which are referenced as W1, W2, W3 and W4 in the survey schedule (Appendix B).
- 2.3.2 Tree species on and adjacent to the site are predominantly mixed broadleaf specimens of mainly Pedunculate oak (*Quercus robur*) and ash (*Fraxinus excelsior*). A broadleaved woodland located off site to the east is also designated in the NFI.

2.4 Scope of the report

- 2.4.1 This report is only concerned with trees in relation to design, demolition and construction. It includes an assessment based on the site visit and documents provided, namely the proposed layout plans 331201448-STN-16-XX-LAY-SC-001 and 331201448-STN-20-XX-LAY-ZZ-904 (Stantec/National Grid 2025). This report is not a full hazard or risk assessment of trees and should not be used as such.
- 2.4.2 Aerial tree inspection, invasive procedures, sub-soil investigations and detailed soil analysis are outside the scope of this report.
- 2.4.3 All trees directly affected by the development have been considered, even where they are situated outside of the development boundary.

2.5 Limitations

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

2.6 Legal constraints

- 2.6.1 Local Planning Authorities (LPAs) have the power to preserve selected trees and woodlands through the making of Tree Preservation Orders (TPOs). Similarly, special provision is provided to trees located within Conservation Areas (CAs) which are not the subject of a TPO. The LPAs powers to do this are provided by the following Act of Parliament and its associated regulations:
- Town and Country Planning Act 1990;
 - Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008; and
 - Town and Country Planning (Tree Preservation) (England) Regulations 2012.
- 2.6.2 The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without first obtaining the consent of the relevant Local Authority.
- 2.6.3 Where works to trees within a CA are proposed, six weeks notification must first be given to the relevant Local Authority.
- 2.6.4 Unauthorised works to trees either protected by a TPO or those that are located within a CA, could result in a fine of up to £20,000 per tree in cases heard in a Magistrates Court, or unlimited fines in cases taken to Crown Court.
- 2.6.5 A search of the Carmarthenshire County Council online search maps confirmed that no trees located either adjacent to or in the proposed development site were the subject of a Tree Preservation Order or were located in a Conservation Area.

2.7 Wildlife constraints

- 2.7.1 Various habitats and species of plant, bird and animal in England and Wales are afforded legal protection by the following pieces of legislation:
- Wildlife and Countryside Act 1981 (as amended);
 - Natural Environment and Rural Communities Act 2006 (NERC Act);
 - Environment (Wales) Act 2016;
 - Conservation of Habitats and Species Regulations 2017 (as amended);
 - Protection of Badgers Act 1992; and

- The Hedgerows Regulations 1997.
- 2.7.2 Protected animal species include, but are not limited to Great Crested Newt, reptiles (all species), wild birds (all species), bats (all species), Red Squirrel, Hazel Dormouse, Water Vole, Badger and Otter.
- 2.7.3 For birds it is an offence to take or harm them, their nests (whilst in use or being built) or their eggs.
- 2.7.4 Protected species must be considered prior to any tree or development works being carried out. Tree work and the timing of tree work should be carefully considered.

3 Tree Survey Methodology

3.1 Tree ID Number

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

3.2 Species

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

3.3 Height

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

3.4 Stem Diameter

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

3.5 Branch Spread

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

3.6 Existing Height Above Ground Level

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

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

3.7 Life Stage

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

3.7.2 Young (Y)

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

3.7.3 Semi-mature (SM)

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

3.7.4 Early-mature (EM)

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

3.7.5 **Mature (M)**

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

3.7.6 **Over-mature (OM)**

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

3.8 **General Observations**

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

3.9 **Preliminary Management Recommendations**

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

3.10 **Estimated Remaining Contribution**

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

3.11 **Tree Category Grading**

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

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

3.11.3 **Category A**

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

3.11.4 **Category B**

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

3.11.5 **Category C**

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

3.11.6 **Category U**

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

3.12 Root Protection Area (RPA)

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

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

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

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

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

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

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

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

3.12.7 The full tree survey schedule is included in Appendix B.

4 Tree Survey Results

4.1 Tree Quality Assessment Summary

- 4.1.1 Four individual trees, i.e., T9, T34, T40, and T43 were recorded as high A category. Their retention should be considered imperative to the design and construction of the scheme.
- 4.1.2 Twenty-two individual trees, one group and twenty-seven hedgerows were recorded as moderate B category. Reasonable effort should be made to retain these trees where possible.
- 4.1.3 Twenty-two individual trees, twenty-four groups of trees, twelve hedgerows and five woodlands were recorded as low C category. Where retention of these trees would cause undue restraint to the development, it would be reasonable to remove them as part of the development proposals.
- 4.1.4 Two individual trees i.e. T7 and T13 were recorded as very low U category with less than 10 years safe useful life expectancy and should not be considered a constraint to any development proposals.

Table 1: Tree quality assessment summary

Tree feature type	BS5837 Tree Quality Assessment Category				Totals
	A	B	C	U	
Individual trees	4	22	22	2	50
Groups of trees	0	1	24	0	25
Hedgerows	0	27	12	0	39
Woodlands	0	0	5	0	5
Totals	4	50	63	2	119

5 Impact appraisal and recommendations for tree protection

5.1 Tree Removals

5.1.1 Of the 50 individual trees, 25 groups, 39 hedgerows and five woodlands surveyed, 11 individual trees, three groups of trees and two hedgerows would need to be removed in full in order to accommodate the proposed scheme (Table 2).

5.1.2 Also, five groups of trees and twelve hedgerows would be partially removed. Details are provided in Table 3 below. All tree work operations should be carried out in accordance with *BS3998:2010 'Recommendations for Tree Work'*; 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. All tree works should be undertaken prior to the commencement of any works on site and prior to the erection of protective fencing. It should be the responsibility of the site manager and tree contractor to ensure that all necessary consents and licenses including the requirement for a felling license has been obtained and that no tree works are carried out without the necessary prior written consents of the Local Planning Authority in respect to TPO and Conservation Area regulations and without the prior written consent of the tree owner.

5.1.3 No trees proposed for full or partial removal are considered ancient or veteran.

Table 2: Trees to be removed in full

Tree feature type	BS5837 Tree Quality Assessment Category				Totals
	A	B	C	U	
Trees	None	T15	T14, T17, T18, T19, T21, T22, T23, T24, T25, T26	None	11
Groups of trees	None	None	G17, G18, G19	None	3
Hedgerows	None	H12, H17	None	None	2
Woodlands	None	None	None	None	0
Totals	0	3	13	0	16

Table 3: Trees to be partially removed

Tree feature type	BS5837 Tree Quality Assessment Category				Totals
	A	B	C	U	
Groups of trees	None	None	G5, G6, G10, G14, G23	None	5
Hedgerows	None	H8, H9, H11, H15, H18, H19, H20, H22, H32, H33	H16, H37	None	12
Woodlands	None	None	None	None	0
Totals	0	10	7	0	17

5.2 Mitigation planting

- 5.2.1 At the time of writing details of a mitigation tree planting scheme had not been fully developed, however future proposals for replacement tree planting should consider the space available to allow trees to grow to their maximum mature height and spread without competing with existing trees or other new tree planting. Species selection should also consider future site conditions as well as their overall contribution to ecological value of the site.

5.3 Works taking place within Root Protection Areas (RPAs) of retained trees

- 5.3.1 Excavation within the RPAs of tree features T10 and G10 will be necessary in order to accommodate the footprint of the platform, swale and associated access road.
- 5.3.2 The level of incursion by the development footprint into the RPAs of tree features T10 and G10 was calculated to be 8.9% and 2.5% respectively. The percentage of incursions into these RPAs is considered to be low, however as a precaution, specialist root protection measures have been recommended in Section 5 of this report.
- 5.3.3 Subject to the implementation of specialist root protection measures and strict arboricultural supervision, the impact can potentially be mitigated and any disturbance to tree roots and tree rooting environment reduced.
- 5.3.4 To minimise potential impacts on tree roots, excavation works inside the RPAs of T10 and G10 should proceed using hand tools, compressed air and soil vacuum excavation techniques. Any hand digging within the RPA of any trees must be undertaken with great care requiring closer supervision than normal operations to protect the epidermis of structural roots (roots of 25mm diameter and greater). These roots must not be severed at any time without first consulting the appointed arboriculturist. Any roots encountered less than 25mm diameter can potentially be pruned back, if required, by the appointed arboriculturist using a pruning saw or secateurs, leaving a clean-cut surface and to a lateral root where possible. Any roots left exposed for a period of time would be wrapped in dry hessian sacking. No roots would be left exposed for a period of over 24 hours. If any roots measuring 25mm diameter and greater are encountered, works should stop and the suitability for root pruning will be determined by the appointed arboriculturist.
- 5.3.5 Excavated spoil will be stored alongside the trench on existing hard surfacing or on ground protection as described in Section 6.2 of this report.
- 5.3.6 Where possible any services will be fed beneath any exposed structural roots.
- 5.3.7 Where there is sufficient space to do so, a mini excavator will be used to remove the excavated spoil.
- 5.3.8 Backfill should, where possible, contain originally excavated material, and should include the placement of an inert granular material mixed with topsoil or sharp sand (not builder's sand) around roots. This will allow the soil to be compacted for resurfacing without damage to the roots securing a local aerated zone enabling the root to survive in the longer term.
- 5.3.9 Any machinery used will be as small as possible and will work from adequate ground protection or outside the RPA of retained trees. Where the work is below the crowns of retained trees, consideration will also be given to required working space for any machinery.
- 5.3.10 All excavations taking place within the RPA of retained trees should be supervised by a suitably qualified arboriculturist.

5.4 Provision of adequate working space

- 5.4.1 Subject to the erection of protective fencing in the locations shown within the tree protection plan (Appendix D), workspace requirements for the construction of the platform and associated access road will not impact upon the RPAs of existing trees.

- 5.4.2 Protective Heras rail fencing will allow a maximum 1m buffer between the extent of proposed excavation works and RPAs of tree features nos. T10, T35, G5-G8, G10-G14, G20, G23, H6-H11, H14-H16, H18, H20, H22, H27, H30-H33, H37 and H38. If an extended working area is necessary, in consultation and agreement with the project arboriculturist, protective fencing should be adjusted to the new location and ground protection measures put in place in accordance with recommendations set out in Section 6 of this report.

6 Proposed Tree and Ground Protection

6.1 Tree Protection Fencing

- 6.1.1 Fencing will be required to protect all retained trees on site. This fencing should be fit for the purpose of excluding construction activity and provide adequate protection to the trees.
- 6.1.2 The precise location and construction of site fencing will be agreed on site between the site supervisor and the appointed arboriculturist before any site works commence.
- 6.1.3 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. Fencing should consist of 2m tall, welded mesh panels (Heras fencing or similar) fixed to the ground via vertical tubes driven into the ground until secure. These tubes should be spaced at a maximum interval of 3m. Each panel will be secured to its neighbour with a minimum of 2 anti-tamper couplers. Where space allows, the panels should be supported on the inner side by stabilizer struts which are attached to a base plate and secured with ground pins. An example of this type of barrier is shown in Figure 6 below.
- 6.1.4 To clearly identify the purpose of protective fencing on site, all-weather notices will be attached to the barriers similar to the example shown in Figure 7 below.
- 6.1.5 Inside the protective fencing there will be no excavations; no storage of machinery, building materials, fuels, chemicals, or spoil; no fires; no vehicular or pedestrian access; no alteration to existing ground levels. The barriers will not be moved or temporarily dismantled unless agreed with the appointed arboriculturist.
- 6.1.6 Tree protection fencing will be installed before any materials or machinery are brought onto site and before site works commence. It will be removed only once all site works in the location are complete.

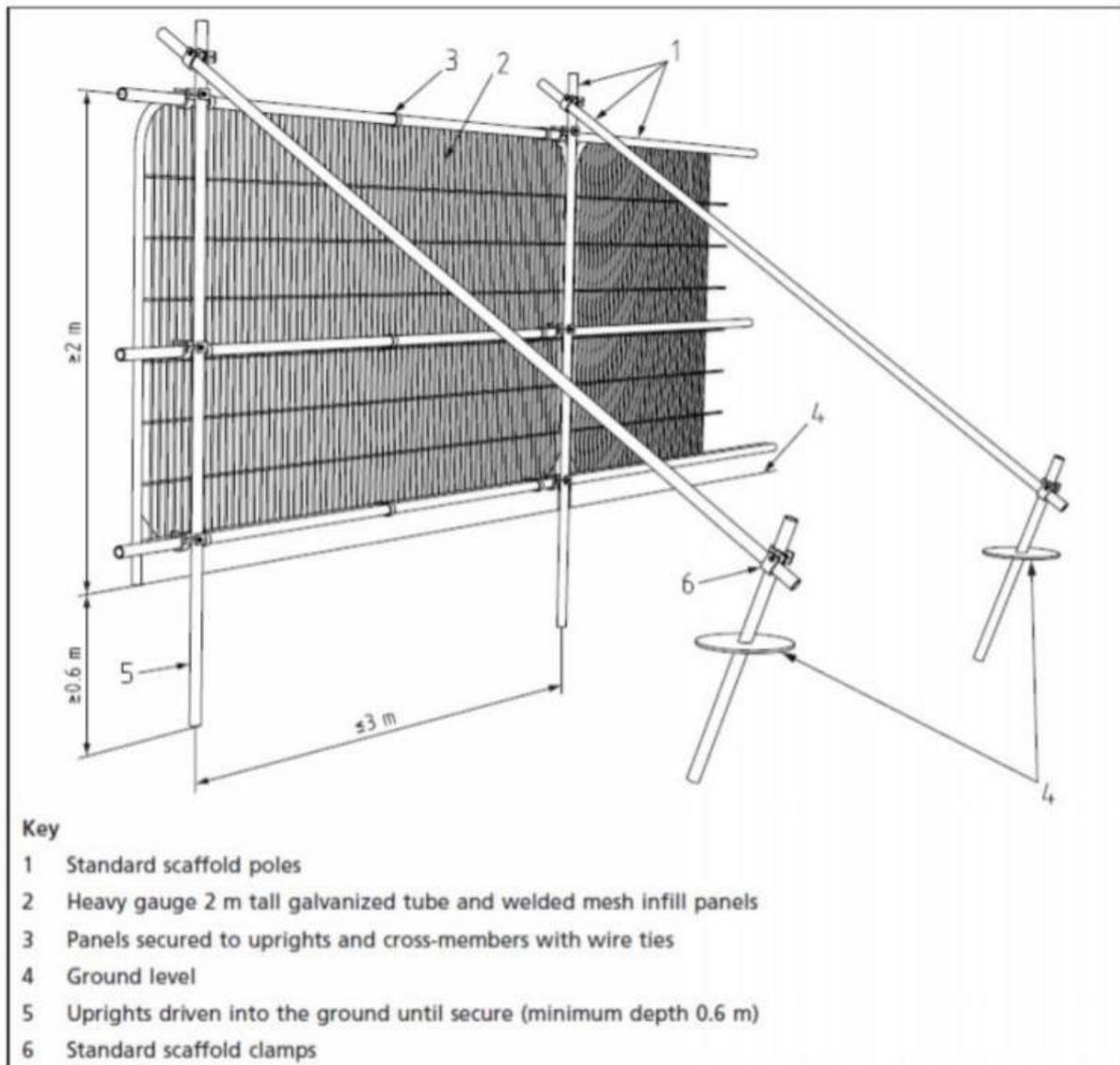


Figure 6: Tree protection fencing example



Figure 7: All-weather notice example

6.2 Ground Protection

- 6.2.1 The root protection areas of all surveyed trees apart from group G10 will be within the construction exclusion zones created by the proposed line of the protective fencing. However, in some instances a wider working area may be necessary. In which instance and in consultation with the project arboriculturist, an amended location for the protective fencing should be agreed and ground protection mitigation measures put in place as described below.
- 6.2.2 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 BS5837:2012 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.
- 6.2.3 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 should be removed only once all site works are complete.
- 6.2.4 For vehicular access up to a gross weight of 2 tonnes, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer such as 150mm depth of woodchip or sharp sand on a geotextile membrane should be adequate. Vehicles or machinery exceeding 2 tonnes should not be used within the RPA of retained trees, however if this is unavoidable, an alternative system of ground protection in accordance with an engineered solution and in conjunction with arboricultural advice should be used.

7 Other Considerations

7.1 Storage of Fuels and Chemicals

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

7.2 Storage of Materials

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

7.3 Level changes

- 7.3.1 Ground level decreases must not take place within the RPA of retained trees.
- 7.3.2 In some instances and in consultation with the project arboriculturist very minor increases in levels inside the RPA may be considered acceptable. If ground levels must be raised within the RPA of retained trees to accommodate dips and changes in the existing ground levels, this should be achieved using a granular material which does not inhibit vertical gaseous diffusion. Examples of suitable granular materials include, no-fines gravel, washed aggregate, or cobbles. Localised depressions may be filled with sharp sand.
- 7.3.3 Should more significant level increases be required, these will be achieved through the layering of a cellular confinement system filled with no-fines gravel, washed aggregate, or cobbles. A permeable membrane should be placed on top of this to prevent any fines filtering down into the cellular confinement system. Once the required levels are achieved, a permeable surface layer should be installed.

7.4 Construction vehicle access

- 7.4.1 Construction vehicles will not be driven onto unsurfaced areas of ground within the RPA of any retained trees. If access is required for construction vehicles on unsurfaced areas of ground within the RPA of retained trees, ground protection will be installed as described in Section 6.2 above.

7.5 Utility installations

- 7.5.1 Stantec have not been made aware of the locations of any proposed underground utility connections, however all future works should ensure that they are compliant BS 5837:2012 and Volume 4: NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.
- 7.5.2 In order to avoid damage to retained trees, any additional underground services will avoid the RPAs, including Foul and surface water drains; Land drains; Soakaways; Gas; Oil; Electricity; Telephone; Lighting; Signage.
- 7.5.3 If additional services must unavoidably be installed within the RPAs of retained trees, the locations of these will be chosen in consultation with the appointed arboriculturist and will be agreed in writing with Carmarthenshire County Council.
- 7.5.4 Where possible the works will be carried out using trenchless techniques such as moling, laser guided boring, or through continuous trenching under strict arboricultural supervision.

7.6 Site monitoring and watching brief

- 7.6.1 BS 5837:2012 states at paragraph 6.3 - 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. Following each site visit a

site monitoring report should be issued to the project manager. Copies of these reports should be kept and made available to the local authority on request.

7.6.2 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 works

8 Conclusions

- 8.1.1 The tree survey undertaken between 19th November and 13th December 2024, identified a total of 119 tree features including 50 individual trees, 25 groups of trees, 39 hedgerows and five woodlands. Four tree features were categorised as high A grade, 50 tree features were categorised as moderate B grade, and 63 were categorised as low C grade. Two tree features were categorised as very low-quality U grade trees.
- 8.1.2 One B grade tree (T15), 10 C grade trees (T14, T17, T18, T19, T21, T22, T23, T24, T25, T26), three C grade tree groups (G17, G18, G19) and two B grade hedgerows (H12, H17) will require removal in full in order to facilitate the development proposals. The partial removal of five C grade tree groups, 10 B grade hedgerows and two C grade hedgerows will also be required.
- 8.1.3 One category B tree T10 and one category C tree group G10 will be directly impacted by the construction of the proposed hardstanding areas and swale. Subject to the implementation of specialist root protection measures and strict arboricultural supervision, the impact can potentially be mitigated and any disturbance to tree roots and tree rooting environment reduced.
- 8.1.4 Temporary fencing will be required to protect all retained trees on site. This fencing should be fit for the purpose for excluding construction activity and provide adequate protection to the trees.
- 8.1.5 Arboricultural supervision should take place whenever construction or development activity is to take place within RPAs of retained trees. Key timings for supervision include: following installation of tree protection barriers 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 and periodic visits, with a minimum of one supervisory visit every month to ensure tree protection remains correctly installed and is fit for purpose throughout the duration of works.
- 8.1.6 In light of these considerations and taking account of the numbers, sizes and locations of trees to be retained, the medium impacts identified will represent a moderate alteration to the main arboricultural features of the site and surrounding area.

9 References

British Standard Institute (BSI) (2012). *BS 5837:2012 Trees in Relation to Design Demolition and Construction-Recommendations*. BSI, London.

British Standard Institute (BSI) (2010). *BS 3998:2010 Recommendation for Tree Works*. BSI, London.

British Standard Institute (BSI) (2014). *BS 8545:2014 Trees: from nursery to independence in the landscape - Recommendations*. BSI, London.

Conservation of Habitats and Species Regulations 2017 (as amended). Available at:
<https://www.legislation.gov.uk/uksi/2017/1012/contents>

Department for Communities and Local Government (2014). *Planning Practice Guidance on Tree Preservation Orders and trees in conservation areas*.

Department for Environment, Food and Rural Affairs (DEFRA). *Multi-Agency Geographic Information for the Countryside (MAGIC)*. Available at: <https://magic.defra.gov.uk/magicmap.aspx>

Environment (Wales) Act 2016. Available at: <https://www.legislation.gov.uk/anaw/2016/3/contents>

HMG Ministry of Housing, Communities & Local Government 2019. Policy Paper: The National Planning Policy Framework (NPPF), updated 12 December 2024.

Lonsdale, D. (1999). *Research for Amenity Trees No.7: Principles of Tree Hazard Assessment and Management*. HMSO

Mattheck and Beloer (1994). HMSO London. Research for Amenity Trees No 4; *The Body Language of Trees*.

Natural Environment and Rural Communities Act 2006 (NERC Act). Available at:
<https://www.legislation.gov.uk/ukpga/2006/16/contents>

Planning Policy Wales (PPW) (Edition 12, 2024).

Protection of Badgers Act 1992. Available at: <https://www.legislation.gov.uk/ukpga/1992/51/contents>

The Hedgerows Regulations 1997. Available at:
<https://www.legislation.gov.uk/uksi/1997/1160/contents>

Town and Country Planning Act 1990 (as amended).

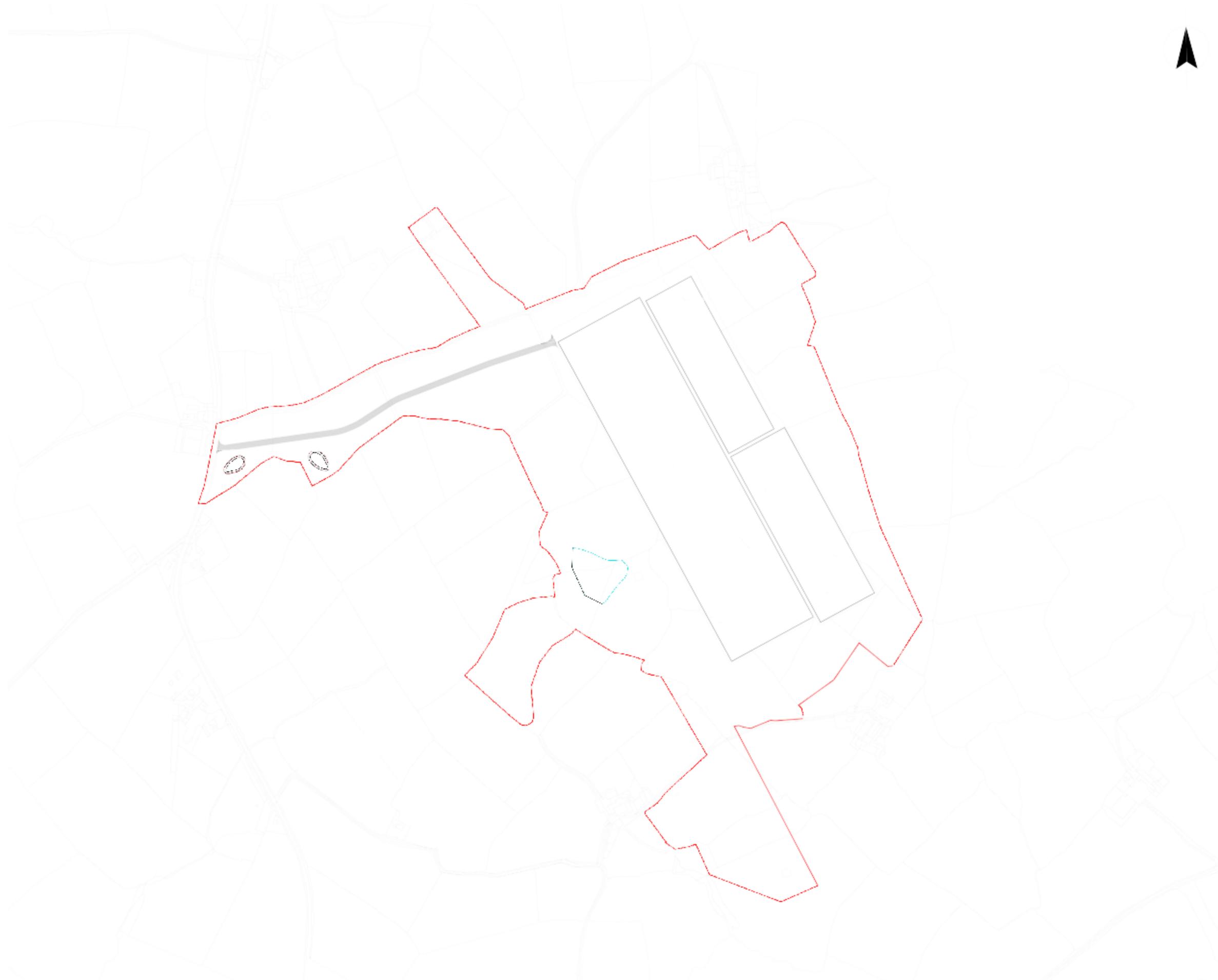
Town and Country Planning (Trees) (Amendment) (Wales) Regulations 2017.

Volume 4: NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2)

Wildlife and Countryside Act 1981 (as amended). Available at:
<https://www.legislation.gov.uk/ukpga/1981/69/contents/1991-02-01>

Woodland Trust. *Ancient Tree Inventory*. Available at: <https://ati.woodlandtrust.org.uk/tree-search/>

Appendix A Site Location Plan



NOTES

1. ALL NOTES SHOWN IN YELLOW OR RED ARE TO BE REVIEWED BY THE CLIENT.
2. THIS DRAWING IS FOR INFORMATION ONLY.

SFESG

1. THIS DRAWING IS FOR INFORMATION ONLY.



LEGEND

- EASEMENT
- PROPERTY BOUNDARY

BASE INFORMATION FROM RECORDS

REFERENCE DRAWINGS



DRAFT



PROJECT NO.	331201448	DATE	2024-08-01
CLIENT	STANTEC	PROJECT NAME	PROPOSED SUBSTATION NEW
DATE	2024-08-01	PROJECT NO.	331201448
PROJECT NAME	PROPOSED SUBSTATION NEW	DATE	2024-08-01
PROJECT NO.	331201448	PROJECT NAME	PROPOSED SUBSTATION NEW
DATE	2024-08-01	PROJECT NO.	331201448
PROJECT NAME	PROPOSED SUBSTATION NEW	DATE	2024-08-01

331201448-STN-20-XX-LAY-ZZ-004

DATE	2024-08-01
PROJECT NO.	331201448
PROJECT NAME	PROPOSED SUBSTATION NEW
DATE	2024-08-01
PROJECT NO.	331201448
PROJECT NAME	PROPOSED SUBSTATION NEW

Appendix B Tree Survey Schedule

#	Species	Single or Multiple Stem	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub-category	Root Protection Area		
				S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)	(3)							(m ²)	(radius in m)	
																								(S or M)
T1	Pedunculate oak	S	12	500						6	5	7	4	NE	4	3	Mature	Moderate specimen exhibiting stress growth throughout main stem. Moss and epiphytic plants throughout.	None	40+	B	2	113.1	6.0
T2	Sycamore	S	13	500						6	7	5	5	NE	3	3	Mature	Moderate specimen covered with moss and ivy. Basal stress growth.	None	40+	B	2	113.1	6.0
T3	Sycamore	S	16	890						3.5	5	5	8.5	N	1	2	Mature	Growing within hedge bank. Buttress roots, included union healthy, elephant ears 1m central west. Dead limb north, growing directly adjacent to dead ash. Crown of good heath sharing a canopy with adjacent trees.	None	40+	B	2	358.3	10.7
T4	Common beech	S	10	650						6	4	6	6	N	2.5	2	Early-mature	Healthy specimen separating at 2m into six main stems crown lifted on the roadside for access.	None	40+	B	1	191.1	7.8
T5	Common beech	S	8	500						6	8	2	4	N	2	4	Early-mature	Healthy specimen being suppressed on southside by adjacent willow.	None	40+	B	2	113.1	6.0
T6	Pedunculate oak	S	10	450						5	5	5	5	NW	3	4	Early-mature	Healthy specimen exhibiting some stress growth with ivy and upper crown.	None	20+	B	2	91.6	5.4
T7	Common ash	S	12	400						4	4	4	4	S	3	4	Mature	Dead tree. Daldinia concentrica throughout.	None	<10	U		72.4	4.8
T8	Pedunculate oak	S	11	400						6	6	7	6	S	4	4	Early-mature	Healthy specimen over all but with stress growth throughout.	None	20+	B	2	72.4	4.8
T9	Pedunculate oak	S	12	900						7	7	5	7	E	2	3	Mature	Healthy specimen separating at 2m into two large main stems. Tree exhibits potential for future veteran status, however stem diameter and features do not currently qualify it.	None	40+	A	1, 2, 3	366.4	10.8
T10	Pedunculate oak	S	9	600						5	5	5	5	W	2	3	Early-mature	Healthy specimen separating at 2m into three main stems sharing cohesive canopy with adjacent trees.	None	40+	B	2	162.9	7.2
T11	Common ash	S	14	410						4	3	1	6	W	2	4	Early-mature	Stress growth in abundance, ADB present.	None	10+	C	2	76.0	4.9
T12	Pedunculate oak	S	9	420						5	5	5	5	SE	2	3	Early-mature	Healthy specimen ivy dominated.	None	20+	B	2	79.8	5.0
T13	Common ash	S	12	410						1	1	1	1	W	7	4	Semi-mature	Dead tree.	None	<10	U	2	76.0	4.9

#	Species	Single or Multiple Stem	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub-category	Root Protection Area		
				(S or M)	S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)							(3)	(m ²)	(radius in m)
T14	Pedunculate oak	S	5	390						2	3	4	2	S	2	4	Semi-mature	Growing within hedge bank, ivy dominated, crown bias to west sharing a canopy with adjacent holly.	None	20+	C	2	68.8	4.7
T15	Common holly	S	6	300						4	4	4	4	W	2.5	2	Early-mature	Healthy specimen exhibiting good form with a domed crown.	None	20+	B	1	40.7	3.6
T16	Common holly	S	6	300						3	3	3	2	E	2	2	Semi-mature	Typical specimen growing within hedge bank.	None	20+	C	2	40.7	3.6
T17	Common ash	S	12	700						5	4	2	4	N	2	3	Mature	Old pollard with large base.	None	10+	C	2	221.7	8.4
T18	Common holly	S	6	300						3	1	1	1	E	2	2	Semi-mature	Typical wind blown specimen growing within hedge bank.	None	20+	C	2	40.7	3.6
T19	Pedunculate oak	S	6	280						3	2.5	2.5	2.5	S	2.5	3	Semi-mature	Small specimen of good form.	None	20+	C	1	35.5	3.4
T20	Pedunculate oak	S	9	320						6	5	4	5	N	3	2	Early-mature	Healthy specimen of good form separating at 3 m into a domed crown with a northern bias.	None	40+	B	1	46.3	3.8
T21	Pedunculate oak	S	7	160						3	3	3	3	W	4	5	Semi-mature	Slender form, 1x significant deadwood, small crown.	None	20+	C	2	11.6	1.9
T22	Goat willow	M(a)	6	150	150	150	170	100		6	5	3	5	E	0	2	Early-mature	Small specimen at intersection between two hedgerows.	None	20+	C	2	48.1	3.9
T23	Pedunculate oak	S	6	230						4	3	2	3	E	2.5	3	Semi-mature	Small specimen.	None	10+	C	1	23.9	2.8
T24	Common ash	S	11	730						5	6	6	7	E	3	2	Early-mature	Growing within hedge bank, significant stress growth, ADB assumed.	None	10+	C	2	241.1	8.8
T25	Common hawthorn	S	5	200						2	2	2	2	W	1	1	Early-mature	Small understorey feature.	None	10+	C	1	18.1	2.4
T26	Common holly	S	5	220						2	2	3	3	E	1	0	Semi-mature	Dense understorey to ash.	None	20+	C	2	21.9	2.6
T27	Pedunculate oak	S	5	340						5	3	2	3	N	1	3	Semi-mature	Widower tree with understorey holly. High foliage content, dense crown bias to north.	None	20+	C	2	52.3	4.1

#	Species	Single or Multiple Stem	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub-category	Root Protection Area		
				(S or M)	S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)							(3)	(m ²)	(radius in m)
T28	Goat willow	S	4	360						4	3	4	2	S	1	1.5	Semi-mature	Buttress roots growing in hedge bank, typical specimen.	None	20+	C	2	58.6	4.3
T29	Pedunculate oak	S	4	170						2	2	2	2	E	1	2	Young	Typical specimen growing in hedge bank.	None	20+	C	2	13.1	2.0
T30	Pedunculate oak	M(a)	8	400	400	270				6	6	6	4	S	2	3	Early-mature	Moderate specimen, growing beneath power lines limiting potential.	None	20+	C	2	177.7	7.5
T31	Goat willow	S	5	400						0.5	4	6	4	S	2	2	Early-mature	Historically pollarded specimen heavily leaning south.	None	20+	C	2	72.4	4.8
T32	Goat willow	S	6	250						2	7	2	1	E	2	0	Semi-mature	Partially fallen but exhibiting good vitality.	None	10+	C	2	28.3	3.0
T33	Pedunculate oak	S	8	420						4	4	5	5	N	4	4	Semi-mature	Dominant tree in grouped feature, good form, healthy crown.	None	40+	C	2	79.8	5.0
T34	Common ash	S	14	2100						8	6	7	4	NW	6	2	Veteran	Ancient tree. Huge hollow trunk, ivy dominated and large parts of the canopy historically destroyed. Features include: extensive hollowing, major storm damage, senescence.	None	20+	A	3	3117.2	31.5
T35	Common ash	M(b)	13	734.85						6	6	6	6	E	1	3.5	Early-mature	Growing on cliff edge, dense understory vegetation, ADB assumed present with stress growth throughout.	None	10+	C	2	244.3	8.8
T36	Pedunculate oak	S	4	280						3	6	3	2	E	1	1	Semi-mature	Healthy specimen growing beneath powerlines.	None	20+	C	2	35.5	3.4
T37	Common alder	S	7	250						3	3	1	1	N	4	4	Semi-mature	Small specimen, ivy clad, growing beneath powerlines.	None	20+	C	2	28.3	3.0
T38	Common alder	M(b)	17	808.33						6	7	6	5	SE	4	4	Early-mature	Moss dominated stems, cavities at base. Dominant tree growing within woodland, widespread crown of good central health. Stem failure at base, holly understory.	None	20+	B	2	295.6	9.7
T39	Common hazel	M(b)	8	424.26						4	7	7	7	S	2	2	Mature	Healthy specimen with large diameter stems relative to its species.	None	20+	B	2	81.4	5.1
T40	Pedunculate oak	S	12	1050						7.5	6	6	5.5	E	2.5	7	Mature	Healthy specimen with epicormic growth on the main stem, moss and epiphytic ferns throughout. Healthy crown displays good bud density.	None	40+	A	2	498.8	12.6

Tree Survey Schedule

#	Species	Single or Multiple Stem	Height (m)	Stem Diameter (mm)					Branch Spread (m)				Existing Height AGL (m)			Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub-category	Root Protection Area		
				(S or M)	S1	S2	S3	S4	S5	N	E	S	W	(1)	(2)							(3)	(m ²)	(radius in m)
T41	Pedunculate oak	S	10	500						4	6	7	5	S	6	5	Early-mature	Healthy specimen of moderate form.	None	20+	B	2	113.1	6.0
T42	Pedunculate oak	S	10	500						4	5	6	5	E	5	5	Early-mature	Healthy specimen of moderate form.	None	20+	B	2	113.1	6.0
T43	Pedunculate oak	S	13	1030						8	9	8	8	S	2	4	Mature	Healthy specimen covered in moss and epiphytic ferns. Small diameter deadwood in canopy.	None	40+	A	2	479.9	12.4
T44	Sycamore	S	15	780						8.5	7	7	7	E	4	5	Early-mature	Growing on sloped decline south 1m from border fence. Buttress roots, Ivy dominated stem. Major deadwood in lower crown, dense throughout, specimen of good general health.	None	40+	B	2	275.2	9.4
T45	Pedunculate oak	S	18	890						9	10	8	10	S	3	6	Mature	Growing within hedge bank, historic limb failures south, ivy dominant stems, major deadwood west in lower crown, healthy dense crown.	None	40+	B	2	358.3	10.7
T46	Pedunculate oak	S	17	1000						6	4	5	6	W	4	4	Mature	Broad specimen of good health separating at 2m into two main stems large diameter deadwood in lower canopy. Epiphytic ferns and moss throughout.	None	40+	B	2	452.4	12.0
T47	Pedunculate oak	S	15	1010						11	12	8	9	N	4	3	Mature	Healthy specimen of widespread form. Moderate deadwood content.	None	40+	B	2	461.5	12.1
T48	Pedunculate oak	S	10	500						4	6	7	5	S	6	5	Early-mature	Healthy specimen of moderate form.	None	20+	B	2	113.1	6.0
T49	Common beech	S	12	800						7	7	6	7	NE	1.5	3	Early-mature	Healthy specimen of good form.	None	40+	B	2	289.5	9.6
T50	Pedunculate oak	S	10	500						6	6	6	6	S	3.5	3.5	Early-mature	Healthy specimen of good form.	None	20+	B	2	113.1	6.0

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
G1	Common hazel, Pedunculate oak	8	285	3	Semi-mature	Heavily maintained to field edge growing within hedge bank. Dense cohesive canopy.	None	20+	C	2	36.7	3.4
G2	Sycamore, Common beech, Pedunculate oak, Goat willow	13	185	4	Semi-mature	Small diameter features growing along roadside higher quality specimens surveyed individually.	None	10+	C	2	15.5	2.2
G3	Sycamore, Common ash, Common holly, Pedunculate oak	16	630	3	Early-mature	Specimens growing along hedge bank, evenly spaced 4m apart. ADB present, specimens of sporadic form, dead tree within, sharing a cohesive canopy.	None	20+	C	2	179.6	7.6
G4	Pedunculate oak	7.5	475	2	Early-mature	Healthy specimens sharing cohesive canopy with understorey Holly and goat Willow.	None	20+	B	2	102.1	5.7
G5	Common ash, Common holly, Pedunculate oak	10	350	3.5	Semi-mature	Specimens growing primarily on southwestern field border. Dense understory vegetation. Evenly spaced, ADB assumed present.	None	20+	C	2	55.4	4.2
G6	Common ash, Pedunculate oak	9	250	3	Semi-mature	Primarily oak, tightly spaced sharing a cohesive canopy of good general condition. ADB assumed present. Dense understory vegetation.	None	20+	C	2	28.3	3.0
G7	Pedunculate oak, Goat willow	9	250	3	Semi-mature	Primarily oak, tightly spaced sharing a cohesive canopy of good general condition. Dense understory vegetation.	None	20+	C	2	28.3	3.0

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
G8	Pedunculate oak	9	250	3	Semi-mature	Tightly spaced sharing a cohesive canopy of good general condition. Dense understory vegetation. Growing close proximity to power lines. Multi stems within.	None	20+	C	2	28.3	3.0
G9	Pedunculate oak, Goat willow	8	135	2	Semi-mature	Overgrown hedge specimens, near power line vicinity zone.	None	10+	C	2	8.2	1.6
G10	Common hazel, Goat willow	5	175	0	Semi-mature	Small tree line growing within hedge bank.	None	20+	C	2	13.9	2.1
G11	Common ash	13	750	3	Mature	Heavily affected with ADB.	None	10+	C	2	254.5	9.0
G12	Pedunculate oak, Goat willow	7	300	2	Semi-mature	Tree line with no features of major significance.	None	20+	C	2	40.7	3.6
G13	Pedunculate oak, Goat willow	7	300	2	Semi-mature	Tree line with no features of major significance.	None	20+	C	2	40.7	3.6
G14	Common beech, Pedunculate oak, Goat willow	8	310	4	Semi-mature	Specimens growing along a hedge bank of good general health sharing a cohesive canopy.	None	20+	C	2	43.5	3.7
G15	Goat willow	8	275	1	Semi-mature	Specimens of poor form creating barrier between two fields.	None	20+	C	2	34.2	3.3
G16	Common beech, Common ash, Pedunculate oak	9	200	2	Semi-mature	Small specimens of poor form.	None	10+	C	2	18.1	2.4
G17	Common holly, Pedunculate oak, Goat willow	8	205	3	Semi-mature	Specimens growing along a hedge bank of good general health sharing a cohesive canopy.	None	20+	C	2	19.0	2.5
G18	Common ash, Pedunculate oak, Goat willow	8	205	3	Semi-mature	Specimens growing along a hedge bank ADB assumed present, sharing a cohesive canopy.	None	20+	C	2	19.0	2.5
G19	Common ash, Pedunculate oak, Goat willow	8	205	3	Semi-mature	Specimens growing along a hedge bank ADB assumed present, sharing a cohesive canopy.	None	20+	C	2	19.0	2.5
G20	Goat willow	7	350	2	Early-mature	Healthy group of co-dominant trees, forming single cohesive feature.	None	20+	C	1, 2	55.4	4.2

Tree Survey Schedule

#	Species	Height (m)	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			(mm)	(m)							(m ²)	(radius in m)
			S1	(1)								
G21	Common hawthorn, Common holly, Pedunculate oak, Goat willow	5	110	0	Semi-mature	Specimens of poor form.	None	10+	C	2	5.5	1.3
G22	Common hawthorn, Blackthorn	7	135	0	Semi-mature	Overgrown hedge features.	None	10+	C	2	8.2	1.6
G23	Common ash, Pedunculate oak	8	185	3	Semi-mature	Line of semi mature native species.	None	10+	C	2	15.5	2.2
G24	Common hazel, Common beech, Common ash, Pedunculate oak	7	185	3	Semi-mature	Specimens growing within hedge bank meshing canopies.	None	20+	C	2	15.5	2.2
G25	Common hazel, Common beech, Common ash, Pedunculate oak	7	185	3	Semi-mature	Specimens growing within hedge bank sharing a canopy.	None	20+	C	2	15.5	2.2

Tree Survey Schedule

#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution	Quality Category	Quality Sub-category	Root Protection Area	
		(m)	(mm)	(m)				(years)			(m ²)	(radius in m)
			S1	(1)								
H1	Common hazel	3	285	0	Mature	Well maintained, dense throughout.	None	20+	C	2	36.7	3.4
H2	Sycamore, Common hazel	2	85	0	Semi-mature	Hedgerow inundated with bramble and Rosehip.	None	10+	C	2	3.3	1.0
H3	Common hazel, Common holly, Crack willow	2.5	150	0	Early-mature	Growing among hedge bank, patchy, sparse.	None	20+	C	2	10.2	1.8
H4	Common hazel, Blackthorn	1.5	90	0	Early-mature	Well maintained and dense throughout.	None	20+	C	2	3.7	1.1
H5	Common hazel, Blackthorn	1.5	90	0	Early-mature	Well maintained and dense throughout. Hedge bank formed.	None	20+	B	2	3.7	1.1
H6	Common hazel, Blackthorn, Goat willow	1.5	90	0	Early-mature	Overgrown and dense throughout.	None	20+	C	2	3.7	1.1
H7	Common hazel, Blackthorn, Goat willow	1.5	90	0	Early-mature	Overgrown and dense throughout.	None	20+	C	2	3.7	1.1
H8	Common hazel, Blackthorn	2	200	0	Mature	Hedge bank, high habitat value, dense throughout, well maintained.	None	20+	B	2	18.1	2.4
H9	Common hazel, Blackthorn	2	200	0	Mature	Hedge bank, high habitat value, dense throughout, well maintained.	None	20+	B	2	18.1	2.4
H10	Common hazel, Blackthorn	2	200	0	Mature	Hedge bank, high habitat value, dense throughout, well maintained.	None	20+	B	2	18.1	2.4
H11	Common hazel, Blackthorn	2	200	0	Mature	Hedge bank, high habitat value, sparse in places, well maintained.	None	20+	B	2	18.1	2.4
H12	Common hazel, Blackthorn	2	200	0	Mature	Hedge bank, high habitat value, sparse in places, well maintained.	None	20+	B	2	18.1	2.4
H13	Common hazel, Blackthorn	1.5	90	0	Early-mature	Well maintained and dense throughout. Hedge bank formed.	None	20+	B	2	3.7	1.1

Tree Survey Schedule

#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution	Quality Category	Quality Sub-category	Root Protection Area	
		(m)	(mm)	(m)				(years)			(m ²)	(radius in m)
			S1	(1)								
H14	Common hazel, Blackthorn	1.5	90	0	Early-mature	Well maintained and dense throughout. Hedge bank formed.	None	20+	B	2	3.7	1.1
H15	Common hazel, Blackthorn	1.5	90	0	Early-mature	Well maintained and dense throughout. Hedge bank formed.	None	20+	B	2	3.7	1.1
H16	Common hazel, Blackthorn	3	110	0	Semi-mature	Roughly maintained hedgerow.	None	20+	C	2	5.5	1.3
H17	Common hazel, Common ash, Blackthorn	3	370	0	Mature	Multiple mature specimens forming a dense hedgerow agriculturally pruned. High habitat value.	None	20+	B	2	61.9	4.4
H18	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9
H19	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9
H20	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9
H21	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9
H22	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9
H23	Common hazel, Blackthorn, Goat willow	3	160	0	Semi-mature	Typical hedge bank, dense.	None	20+	C	2	11.6	1.9
H24	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0
H25	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0

Tree Survey Schedule

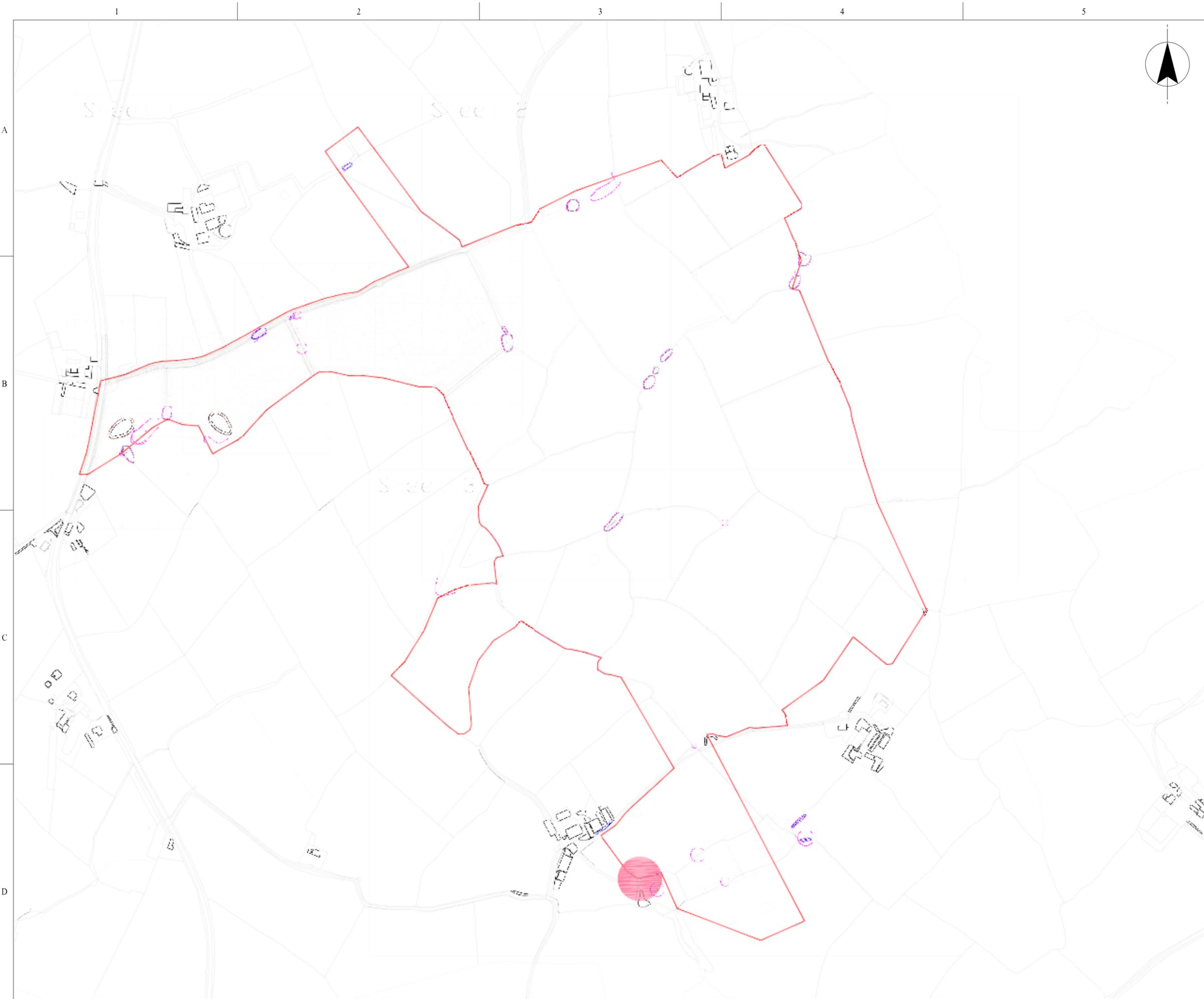
#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution	Quality Category	Quality Sub-category	Root Protection Area	
		(m)	(mm)	(m)				(years)			(m ²)	(radius in m)
			S1	(1)								
H26	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0
H27	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0
H28	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0
H29	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0
H30	Common hawthorn, Blackthorn	2	90	0	Semi-mature	Dense, well maintained hedge layer atop a small cliff.	None	20+	C	2	3.7	1.1
H31	Common hazel, Common hawthorn, Common holly, Blackthorn, Pedunculate oak	2	85	0	Early-mature	Healthy hedge bank exhibiting a variety of native species.	None	20+	B	2	3.3	1.0

Tree Survey Schedule

#	Species	Height	Average Stem Diameter	Existing Canopy Height AGL	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution	Quality Category	Quality Sub-category	Root Protection Area	
		(m)	(mm)	(m)				(years)			(m ²)	(radius in m)
			S1	(1)								
H32	Common hazel, Common ash, Pedunculate oak, Goat willow	1.5	185	0	Mature	Historic hedge bank, dense throughout, multi species.	None	40+	B	2	15.5	2.2
H33	Common hazel, Common ash, Pedunculate oak, Goat willow	1.5	185	0	Mature	Historic hedge bank, dense throughout, multi species.	None	40+	B	2	15.5	2.2
H34	Common hazel, Common holly, Blackthorn	1.5	120	0	Early-mature	Mixed species, dense hedge bank. Well maintained.	None	20+	B	2	6.5	1.4
H35	Common hazel, Common holly, Blackthorn	1.5	380	0	Early-mature	Mixed species, dense hedge bank. Well maintained.	None	20+	B	2	65.3	4.6
H36	Common hazel, Blackthorn	3	85	0	Semi-mature	Standard hedgerow.	None	10+	C	2	3.3	1.0
H37	Common hazel, Blackthorn	3	110	0	Semi-mature	Roughly maintained hedgerow.	None	20+	C	2	5.5	1.3
H38	Common hazel, Blackthorn	3	110	0	Semi-mature	Roughly maintained hedgerow.	None	20+	C	2	5.5	1.3
H39	Common hazel, Blackthorn	3	160	0	Semi-mature	Typical hedge bank.	None	20+	B	2	11.6	1.9

#	Species	Height (m)	Average Stem Diameter (mm)	Existing Canopy Height AGL (m)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Quality Category	Quality Sub category	Root Protection Area	
			S1	(1)							(m ²)	(radius in m)
W1	Corylus avellana, Quercus robur, Salix caprea	8	200	0	Semi-mature	Small semi mature native woodland.	None	20+	C	2	18.1	2.4
W2	Corylus avellana, Ilex aquifolium, Salix caprea	6	170	2	Semi-mature	Specimens of younger maturity under power lines. Dense understory vegetation, tight canopy.	None	20+	C	2	13.1	2.0
W3	Corylus avellana, Fraxinus excelsior, Ilex aquifolium, Quercus robur, Salix caprea	6	550	2	Early-mature	Specimens of greater maturity. Dense understory vegetation, tight canopy. ADB present.	None	20+	C	2	136.8	6.6
W4	Alnus glutinosa, Corylus avellana, Fraxinus excelsior, Ilex aquifolium, Quercus robur, Salix caprea	6	550	2	Early-mature	Wetland specimens of higher maturity. Dense understory vegetation, tight canopy. ADB present. Water stream within.	None	20+	C	2	136.8	6.6
W5	Alnus glutinosa, Corylus avellana, Fraxinus excelsior, Ilex aquifolium, Quercus robur, Salix caprea	6	550	2	Early-mature	Specimens of higher maturity. Dense understory vegetation, tight canopy. Primarily ash, ADB present.	None	20+	C	2	136.8	6.6

Appendix C Tree Constraints Plan



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES

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

ROOT PROTECTION AREAS

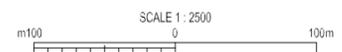
This is a minimum area in m² which should be left undisturbed around each retained tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

ACCURACY OF TREE LOCATIONS

Tree locations based on topographical survey AT2240004P0001-P0006. Some tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

REFERENCES

- export_json2cad_1734095014 STANTEC BS5837 TREE SURVEY
- 331201448-STN-20-XX-LAY-ZZ-904 RED LINE BOUNDARY
- AT2240004P0001-P0006 TOPOGRAPHICAL SURVEY



LEGEND

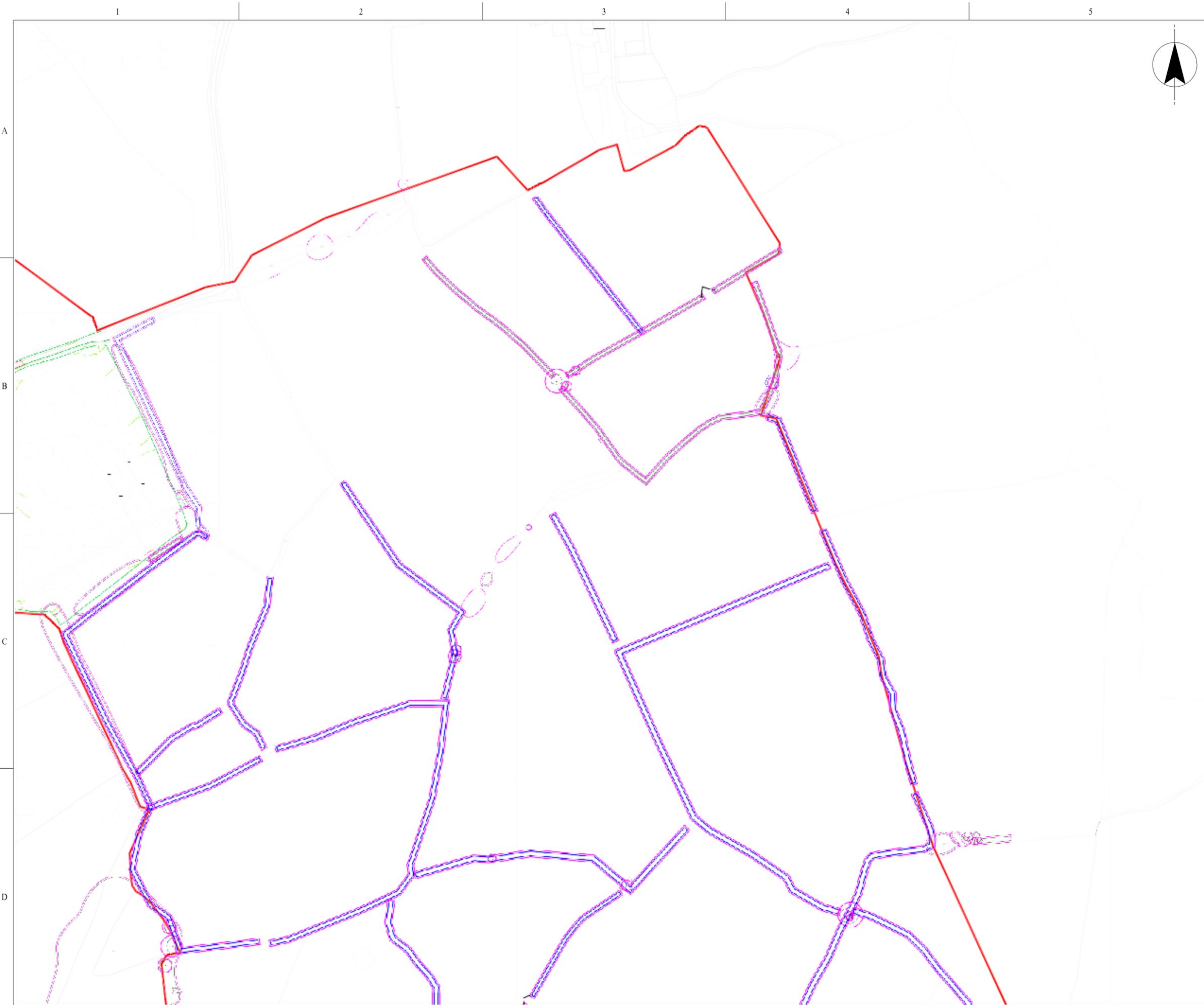
- Canopies of category A trees
- Canopies of category B trees
- Canopies of category C trees
- Canopies of category U trees
- Root protection areas (RPAs)
- Tree stems
- Ancient tree buffer zone

NOT FOR CONSTRUCTION

Revision	Number	Stability Description	Author	Checked	Reviewed	Date
P02			JC	MC	CB	22/10/2025
P01			JL	CS	MC	13/12/2024



Location Code: ZZ	OS Reference: SN 41730 13227	Security Reference:
Project Group: 331201429	Sub Process: 300	
Location/Town: Llandyfaelog		
Site Name: Llandyfaelog		
Project Name: Llandyfaelog		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:2500	Sheet Size: A1	Status:
Drawing Number: 331201429.300-STN-VES-ZZ-DR-EN-001	Revision: P02	



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES

The tree categories are defined in the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'. The tree categories are defined in the legend below. The tree categories are defined in the legend below. The tree categories are defined in the legend below.

RPA PROTECTION AREAS

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

ACCURACY OF TREE LOCATIONS

Tree locations based on topographical survey AT2240004P0001-P0006. Some tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

REFERENCES

- export_json2cad_1734095014 STANTEC BS5837 TREE SURVEY
- 331201448-STN-20-XX-LAY-ZZ-904 RED LINE BOUNDARY
- AT2240004P0001-P0006 TOPOGRAPHICAL SURVEY



LEGEND

- Tree Category 1
- Tree Category 2
- Tree Category 3
- Tree Category 4
- Tree Category 5
- Tree Category 6
- Tree Category 7
- Tree Category 8
- Tree Category 9
- Tree Category 10
- Tree Category 11
- Tree Category 12
- Tree Category 13
- Tree Category 14
- Tree Category 15
- Tree Category 16
- Tree Category 17
- Tree Category 18
- Tree Category 19
- Tree Category 20
- Tree Category 21
- Tree Category 22
- Tree Category 23
- Tree Category 24
- Tree Category 25
- Tree Category 26
- Tree Category 27
- Tree Category 28
- Tree Category 29
- Tree Category 30
- Tree Category 31
- Tree Category 32
- Tree Category 33
- Tree Category 34
- Tree Category 35
- Tree Category 36
- Tree Category 37
- Tree Category 38
- Tree Category 39
- Tree Category 40
- Tree Category 41
- Tree Category 42
- Tree Category 43
- Tree Category 44
- Tree Category 45
- Tree Category 46
- Tree Category 47
- Tree Category 48
- Tree Category 49
- Tree Category 50

NOT FOR CONSTRUCTION

Revision	Status	Submittal Description	Author	Checked	Reviewed	Date
P02			JL	MC	CB	22/10/2025
P01			JL	CS	MC	13/12/2024



Location Code: ZZ	OS Reference: SN 41730 13227	Security Reference:
Project Group: 331201429	Sub Process: 300	
Location Town: Llandyfaelog		
Site Name: Llandyfaelog		
Project Name: Llandyfaelog		
Drawing Title: TREE CONSTRAINTS PLAN		
Scale: 1:1250	Sheet Size: A1	Status:
Drawing Number: 331201429.300-STN-VES-ZZ-DR-EN-001	Revision: P02	

Appendix D Tree Protection Plan

Sheet 1

Sheet 2

Sheet 3

DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES

The 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 75mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

ROOT PROTECTION AREAS

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

Tree protection barriers should be positioned in accordance with the adjacent tree protection plan for the purpose of excluding construction activity, and appropriate to the degree and proximity of work taking place around the retained trees. It is essential that the barriers are installed prior to any construction taking place, be maintained during construction, and only removed once all construction has been completed and associated equipment and materials have been removed from site. It is recommended that the barrier configuration shown and described in the plan should be used on the site. Inside the barrier 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 vehicles or access. No pedestrian access. No alteration, increase or decrease, to existing ground levels. No excavation or installation of services.

ACCURACY OF TREE LOCATIONS

These locations based on topographical survey AT224034P0001-P0002. Some tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

ACCOMPANYING REPORT

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

REFERENCES

report_pos20ad_1734095114	STANTEC BS5837 TREE SURVEY
AT224034P0001-P0002	TOPOGRAPHICAL SURVEY
331201448-STN-25-KX-LAY-ZZ-004	RED LINE BOUNDARY
331201448-STN-16-KX-LAY-0C-001	PROPOSED LAYOUT



LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree status		TIG/100		Tree to be removed
	Tree to be removed		Tree to be retained		Tree to be retained		Tree to be retained
	Tree to be retained						
	Tree to be retained						

NOT FOR CONSTRUCTION

JVC	J	MC	CB	22/10/2024
PHI	K	ME	ED	21/01/2025
Drawn	Drawn/Checked/Revised	Drawn/Checked/Revised	Drawn/Checked/Revised	Date



Location Code: ZZ	DB Reference: SN 41730 13227	Survey Reference:
Project Code: 331201429	Site Name: 400	
Location Name: Llandyfaelog		
Site Name: Llandyfaelog		
Project Name: Llandyfaelog		
Drawing Title: TREE PROTECTION PLAN		

Scale: 1:1250	Sheet No: A1	Name:
Drawing Number: 331201429-400-STN-VES-ZZ-DR-EN-002		Revision: P02

A

B

C

D

200mm

150

100

50



DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
 Tree canopies are coloured in accordance with their quality category as set out in Table 1 of BS 5837:2012. Trees in relation to design, demolition and construction - Recommendations and shown in the legend below. Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 75mm. Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

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

Tree protection barriers should be positioned in accordance with the adjacent tree protection plan to be fit for the purpose of excluding construction activity, and appropriate to the degree and proximity of work taking place around the retained trees. It is essential that the barriers are installed prior to any construction taking place, be maintained during construction, and only removed once all construction has been completed and associated equipment and materials have been removed from site. It is recommended that the barrier configuration shown and described in the plan should be 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 vehicles or access. No pedestrian access. No alteration, increase or decrease, to existing ground levels. No excavation or installation of services.

ACCURACY OF TREE LOCATIONS
 These locations based on topographical survey AT224004P0001-P0002. Some tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

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

REFERENCES

report_pos2@aol_1734095114	STANTEC BS5837 TREE SURVEY
AT224004P0001-P0002	TOPOGRAPHICAL SURVEY
331201448-STN-25-KX-LAY-ZZ-004	RED LINE BOUNDARY
331201448-STN-16-KX-LAY-0C-001	PROPOSED LAYOUT



LEGEND

Green circle	Canopies of category A trees	Blue circle	Canopies of category B trees	Red circle	Canopies of category C trees	Purple circle	Canopies of category U trees
Pink circle	Root protection areas (RPAs)	Red circle with cross	Tree to be removed	Red circle with dot	Tree to be retained	Red circle with star	Tree to be retained
Red circle with cross	Tree to be removed	Red circle with dot	Tree to be retained	Red circle with star	Tree to be retained	Red circle with star	Tree to be retained
Red circle with star	Tree to be retained	Red circle with star	Tree to be retained	Red circle with star	Tree to be retained	Red circle with star	Tree to be retained
Red circle with star	Tree to be retained	Red circle with star	Tree to be retained	Red circle with star	Tree to be retained	Red circle with star	Tree to be retained

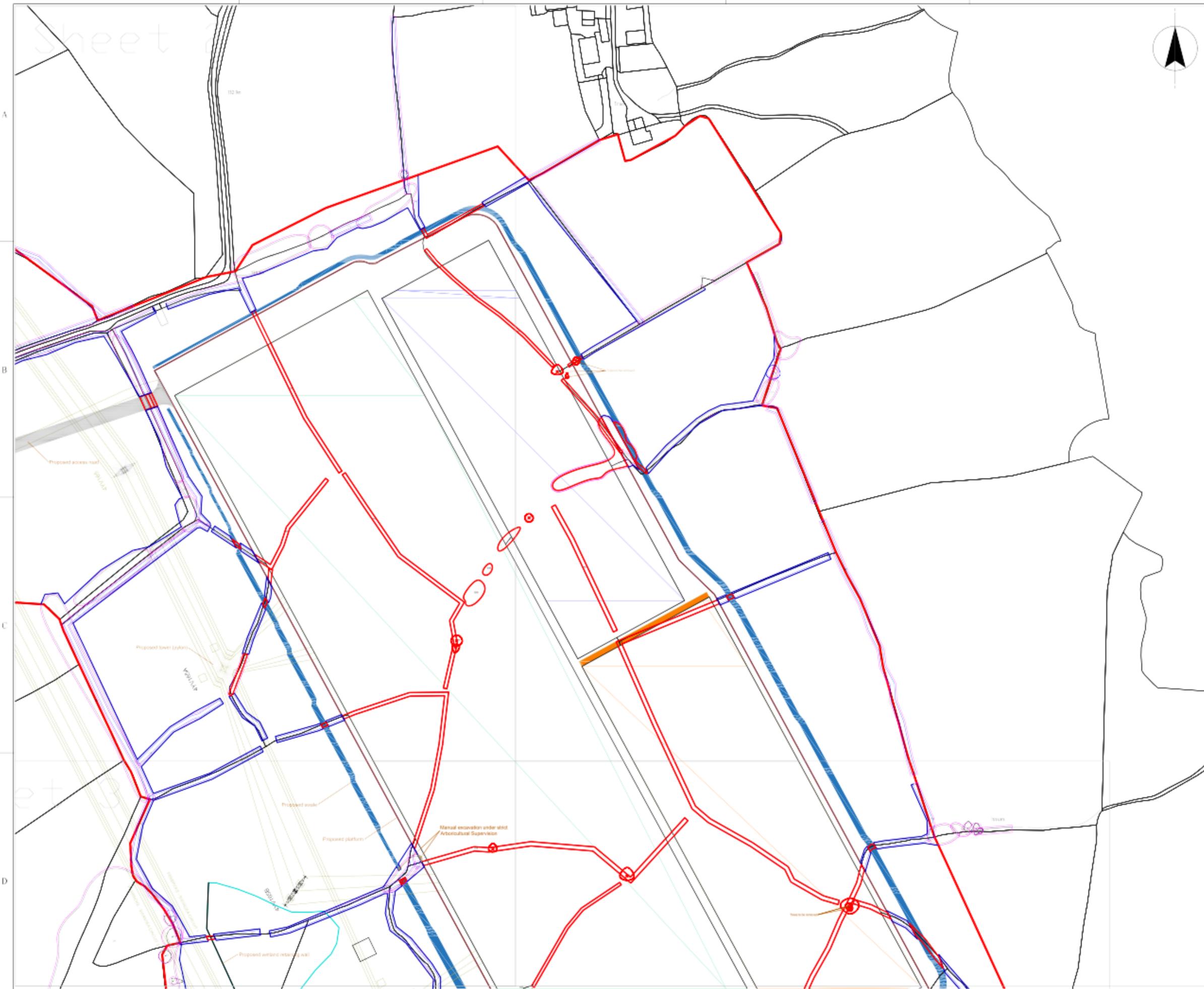
NOT FOR CONSTRUCTION

INC	J	MC	CB	22/10/2024
POI	J	MC	ED	21/01/2025
Drawn	Checked	Revised		Date



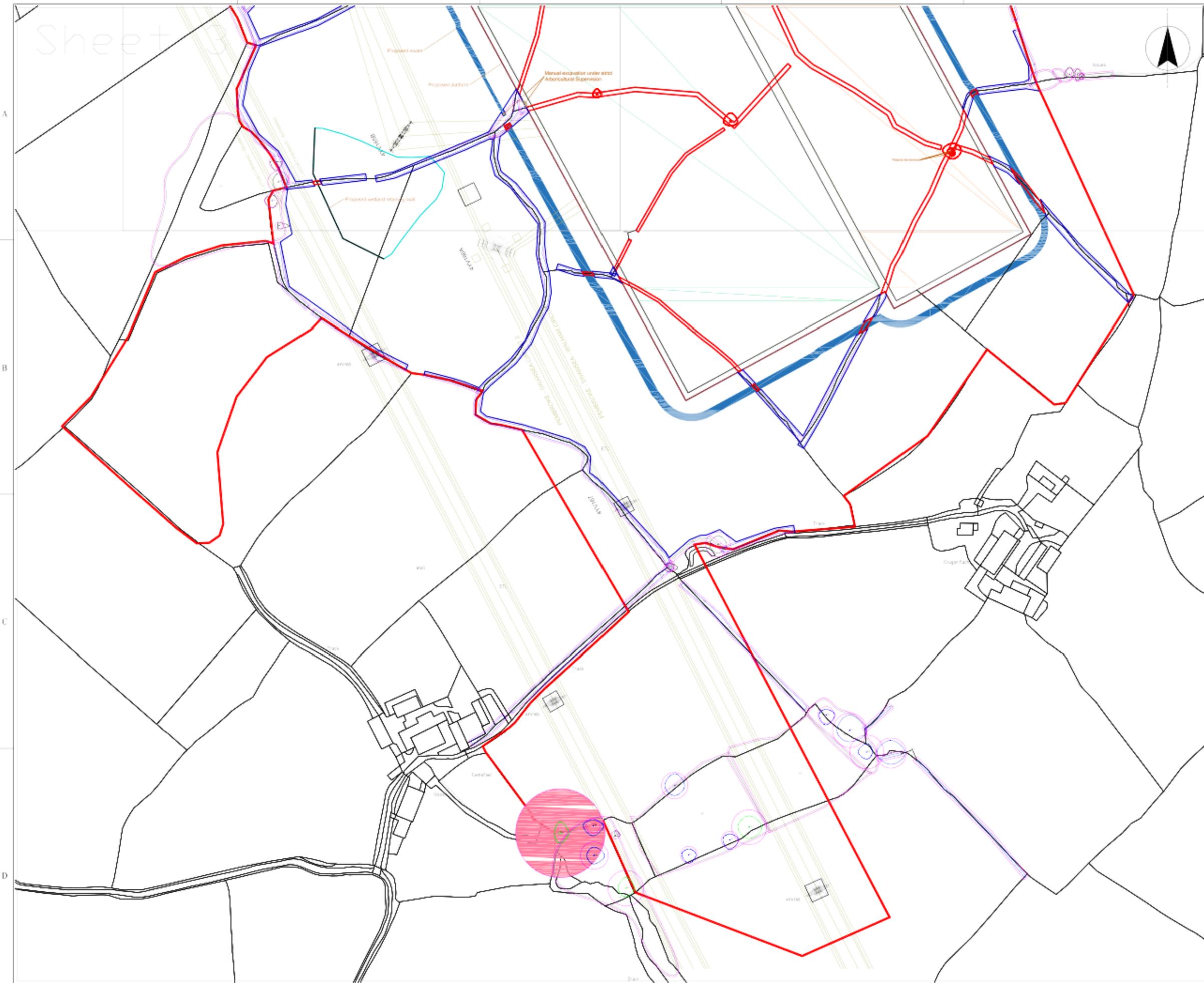
Location Code: ZZ	DB Reference: SN 41730 13227	Survey Reference:
Project Code: 331201429	Site Name: 400	
Location Name: Llandyfaelog	Site Name: Llandyfaelog	
Project Name: Llandyfaelog	Project Name: Llandyfaelog	
Drawing Title: TREE PROTECTION PLAN		

Scale: 1:1250	Sheet No: A1	Name:
Drawing Number: 331201429-400-STN-VES-ZZ-DR-EN-002	Revision: P02	



Sheet 3

DO NOT SCALE - IF IN DOUBT ASK



TREE CATEGORIES
 Tree canopies are colour-coded 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 75mm. 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 to be fit for the purpose of excluding construction activity, and appropriate to the degree and proximity of work taking place around the retained trees. It is essential that the barriers are installed prior to any construction taking place, be maintained during construction, and only removed once all construction has been completed and associated equipment and materials have been removed from site. It is recommended that the barrier configuration shown and described in the plan 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 vehicles or access. No pedestrian access. No alteration, increase or decrease, to existing ground levels. No excavation or installation of services.

ACCURACY OF TREE LOCATIONS
 These locations based on topographical survey AT224004P0001-P0000. Some tree locations not based on topographical survey. Accuracy of tree locations cannot be guaranteed. Locations of trees and RPA extents must be confirmed on site prior to works taking place.

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

REFERENCES

report_pos2@aol_1734095114	STANTEC BS5837 TREE SURVEY
AT224004P0001-P0000	TOPOGRAPHICAL SURVEY
331201448-STN-25-KK-LAY-ZZ-004	RED LINE BOUNDARY
331201448-STN-16-KK-LAY-0C-001	PROPOSED LAYOUT



LEGEND

	Canopies of category A trees		Canopies of category B trees		Canopies of category C trees		Canopies of category U trees
	Root protection areas (RPAs)		Tree status		TIGRIS		Tree to be removed
	Tree to be removed		Tree to be retained		Tree to be retained		Tree to be retained
	Tree to be retained						
	Tree to be retained						

NOT FOR CONSTRUCTION

INC	J	MC	CB	22/10/2024
POI	K	ME	ED	21/01/2025
Author	Stantec	Checked	Reviewed	Date



Location Code: ZZ	ITS Reference: SN 41730 13227	Survey Reference:
Project Group: 331201429	Site Name: 400	
Location Name: Llandyfaelog	Site Name: Llandyfaelog	
Project Name: Llandyfaelog	Project Name: Llandyfaelog	
Drawing Title: TREE PROTECTION PLAN		
Scale: 1:1250	Sheet No: A1	Name:
Drawing Number: 331201429-400-STN-VES-ZZ-DR-EN-002	Revision:	PO2