



**CWL12 Vantage Data Centres, Newport**

## **Arboricultural Method Statement**

**CWL12-SOLB-ZZ-SI-RP-L-900003**

---

| Rev: | Status: | Amendments: | Author: | Issue Date: | Checked By: |
|------|---------|-------------|---------|-------------|-------------|
| C01  | S5      | First Issue | SA      | 01-07-25    | SM          |
|      |         |             |         |             |             |
|      |         |             |         |             |             |
|      |         |             |         |             |             |
|      |         |             |         |             |             |
|      |         |             |         |             |             |

## Arboricultural Method Statement

in accordance with  
BS 5837:2012 (Item 6.1)

At  
**CWL12**  
**Data Vantage Centre**

Dated: June 2025

On the instructions of  
Soltysbrewster Ltd

Reported by Mr. S J Ambler Cert.Arb.(RFS), Tec.Arbor.A., Dip.Arb.(RFS), F.ARBOR.A.

Of  
Steve Ambler & Sons Tree Specialists Ltd  
Email - [Vaughan@steveamblertrees.com](mailto:Vaughan@steveamblertrees.com) Web – [www.steveamblertrees.com](http://www.steveamblertrees.com)

|                       |                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------|
| Signed - Steve Ambler |  |
| Date                  | 26 <sup>th</sup> June 2025                                                          |

## CONTENTS

|                                                                                           |    |
|-------------------------------------------------------------------------------------------|----|
| 1.0 INTRODUCTION, SCOPE AND BACKGROUND .....                                              | 3  |
| 2.0 TREE PROTECTION PLAN .....                                                            | 5  |
| PLANNING POLICY WALES 12 .....                                                            | 6  |
| 3.0 ARBORICULTURAL METHOD STATEMENT - SITE SPECIFIC MATTERS .....                         | 9  |
| 4.0 TREE FELLING AND SURGERY .....                                                        | 9  |
| 5.0 BARRIER FENCING .....                                                                 | 11 |
| 6.0 REMOVAL OF EXISTING STRUCTURES AND HARD SURFACES .....                                | 13 |
| 7.0 INSTALLATION OF TEMPORARY GROUND AND STEM PROTECTION .....                            | 13 |
| 8.0 EXCAVATIONS .....                                                                     | 15 |
| Arboricultural Method Statement for Entering and excavations within the RPA of t016 ..... | 20 |
| 9.0 INSTALLATION OF NEW HARD SURFACING – MATERIALS AND DESIGN CONSTRAINTS .....           | 21 |
| 10.0 SPECIALIST FOUNDATIONS .....                                                         | 21 |
| 11.0 BOUNDARY TREATMENTS FENCING .....                                                    | 21 |
| 12.0 PREPARATORY WORKS FOR NEW LANDSCAPING .....                                          | 21 |
| 13.0 GENERAL MATTERS .....                                                                | 23 |
| 14.0 AUDITABLE SYSTEM OF ARBORICULTURAL SITE MONITORING .....                             | 24 |
| 14.1 Schedule of Watching Brief Visits .....                                              | 25 |
| 15.0 SITE SPECIFIC ARBORICULTURAL EVENTS .....                                            | 26 |
| 15.1 Communications List .....                                                            | 27 |
| 16.0 LEGAL CONSTRAINTS .....                                                              | 28 |
| 17.0 LIMITATIONS OF THIS REPORT .....                                                     | 29 |
| 18.0 GLOSSARY OF TERMS .....                                                              | 29 |
| 19.0 REFERENCES .....                                                                     | 30 |
| APPENDIX A - DEFAULT SPECIFICATION FOR PROTECTIVE BARRIER .....                           | 31 |
| APPENDIX B - FIGURE 1 THE DESIGN AND CONSTRUCTION PROCESS AND TREE CARE .....             | 32 |
| APPENDIX C - TREE RETENTION, REMOVAL AND PROTECTION PLAN .....                            | 33 |

## 1.0 INTRODUCTION, SCOPE AND BACKGROUND

I am instructed by Soltys Brewster Ltd to undertake an Arboricultural Method Statement for a proposed development on land at the Vantage Data Centre, Newport. This statement is a requirement imposed by the Local Planning Authority (LPA) as part of the planning process.

This assessment takes account of the previous Tree Survey<sup>1</sup>,

A connection is required into an existing data chamber, which currently sits within the RPA of a retained Oak (*Quercus robur*) tree identified as T016 and TPO 5 of 2019 on the various plan extracts that occur within this Report. In order to facilitate a connection into this pit, work as outlined on the two drawing extracts below.

The Oak tree is identified on the Tree Retention, Removal and Protection Plan (rear of document) as T016 and is protected by a Tree Preservation Order (TPO 5 of 2019). This TPO provides the tree with a level of legal protection. Refer to Legal Constraints – Item 16.

This Arboricultural Method Statement looks at the potential risk of injury to this tree from construction activities and advises on techniques and physical barriers to help protect it and their immediate environment. Its purpose is aimed at protecting this tree of importance from construction damage and is prepared along the guidelines set out in the relevant British Standard<sup>2</sup>,

NOTE - The level of detail available is often a limiting factor when developing an AMS, so while a preliminary AMS may be prepared for planning, it is often post-planning when detailed design occurs. Unforeseen issues may arise and therefore, following the iterative approach, further design may be required.

Important notes are highlighted with a grey background and all Method Statements occur with a light blue background for ease of reference.

NOTE - The most important element in delivering a successful scheme is the engagement of a Project Arborist for the duration of the construction phase and to oversee areas of specific concern. This engagement also maintains a line of communications between all parties and particularly the Local Planning Authority.

Where necessary, recommendations are provided on employing tree friendly construction techniques using acceptable arboricultural practices.

The following drawings were provided.

- CWL12-SOLB\_Landscape\_Masterplan\_with\_Levels\_Overlay
- CWL12-SOLB\_Landscape\_Masterplan\_with\_TPF\_Overlay
- CWL12-SOLB\_Retained\_Oak\_Section
- CWL12-SOLB-ZZ-SI-DR-L-900101-Tree and Vegetation Protection and Removal-S5-C05
- 23-042 Tree Constraints Plan Next Gen Data, Celtic Way, Newport (AMBLER-SJ)
- HYD drawing C-500100 (Snip only)

<sup>1</sup> Tree Survey, Categorisation and Constraints Report 2023 (Ambler SJ)

<sup>2</sup> British Standard 5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations

- CWL12-HYDR-SW-00-DR-C-500100\_COORDINATED BELOW GROUND SERVICES LAYOUT\_S5\_C10
- CWL12-HYDR-SW-XX-DR-C-900150\_Overall Drainage General Arrangement Plan\_S5\_C11

The following documents were not provided.

- φ Copy of a Tree Preservation Order TPO 5 of 2019
- φ Copy of planning conditions relating to the scheme.

This Statement is produced by Steve Ambler & Sons Tree Specialists Ltd., Cert.Arb.(RFS), Tech.Arb.A., Dip.Arb.(RFS), F.ARBOR.A., a professional Arboriculturist and Fellow of the Arboricultural Association having over 45 years' experience within the industry and 19 years of which being served in Local Government as a principal arboricultural and woodlands officer.

This Consultancy Practice was established in 1999 and expanded in 2006 with the launch of a specialist 'Tree Management Unit' under the revised name - Steve Ambler & Sons Tree Specialists Ltd. Steve Ambler holds the relevant qualifications: -

- a) Certificate in Arboriculture (Royal Forestry Society)
- b) Professional Technician in Arboriculture (Arboricultural Association)
- c) Professional Diploma in Arboriculture (Royal Forestry Society)
- d) Fellow Member of the Arboricultural Association.
- e) Lantra Award, "Bats and Arboriculture – A Guide for Practitioners" developed by The Bat Conservation Trust.

#### NOTES.

1. Any alternative construction methods provided here are based on known alternative solutions for tree friendly construction. However, they are suggestions only which should be fully assessed and approved by the Clients Engineer and other appropriate specialists.
2. The reference numbers of the surveyed trees are included in the survey schedule and shown on the Tree Constraints Plan (TCP) in the Appendix which should be read in accordance with this Report.
3. In all cases where tree positions distances may be critical (e.g., in accurately determining clearances between a tree and a proposed structure) all dimensions should be checked on site.
4. The provision and acceptance of this Report are subject to the general terms and conditions of Steve Ambler & Sons Tree Specialists Ltd

## 2.0 TREE PROTECTION PLAN

The below ground constraints of any retained tree are equal to its required Root Protection Area (RPA) and this distance for each tree or group is provided within the Tables in both the Tree Constraints Plan and Tree Survey <sup>3</sup> and reproduced below as Table 1. The distance given for the Root Protection Area is a radial measurement in metres and is provided in the column highlighted yellow. This radial distance must be measured from the centre of the tree's stem.

Table 1.

| Tree Number | Species       | Height (m) | Retention Category | Root Protection Radius (m) |
|-------------|---------------|------------|--------------------|----------------------------|
| T001        | TurkeyOak     | 10         | C2                 | 2.6                        |
| T002        | Birch         | 12         | C2                 | 3.4                        |
| G003        | Goat willow   | to 13      | C2                 | 4.3                        |
| T004        | CommonOak     | 9          | B2                 | 2.2                        |
| G005        | A Group       | 10 ave     | C2                 | 2                          |
| T006        | Scots Pine    | 10         | B2                 | 5.8                        |
| T007        | Birch         | 16         | B2                 | 4.1                        |
| G008        | Birch         | 10         | B2                 | 3.1                        |
| G009        | A Group       | 11 ave     | C2                 | 3.6                        |
| T010        | SweetChestnut | 12         | B2                 | 3.7                        |
| T011        | Goat willow   | 12         | B2                 | 6.4                        |
| G012        | A Group       | 11 ave     | C2                 | 3.6                        |
| G013        | Whitebeam     | 9          | C2                 | 3.4                        |
| G014        | Scots Pine    | 11         | B2                 | 3.6                        |
| T015        | Birch         | 13         | B2                 | 3.8                        |
| T016        | CommonOak     | 19         | A2                 | 11.9                       |
| T017        | Hawthorn      | 10         | C2                 | 3.6                        |
| G018        | Goat willow   | 8          | C2                 | 4.2                        |
| G019        | A Group       | 5          | C2                 | 0.8                        |

(Please check all RPA's on site.)

A Tree Protection Plan is provided in Appendix D which is an essential tool providing information for protecting retained trees from injury and damage during construction works – it provides...

- φ The Root Protection Area (RPA) shown as a solid orange line. The radial distance provided is taken from the centre of the tree's main tree.
- φ The correct positioning for installing suitably robust barrier fencing.
- φ A suitable and robust barrier fencing detail as recommended in the British Standard<sup>3</sup>.

All trees are drawn using a coloured solid line per their retention category -

- φ U - Dark red dashed line,
- φ A - Light green
- φ B - Mid blue
- φ C - Grey

<sup>3</sup> 23-042 - Tree Constraints Plan Next Gen Data, Celtic Way, Newport (Steve Ambler & Sons Tree Specialists Ltd)

Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, the RPA will be drawn as a polygon. Such modifications to the shape of the RPA will reflect a soundly based arboricultural assessment of root distribution.

Proposed new planting is also marked on the plan as a 'constraint', and soil should be protected from compaction with the use of barrier fencing where this is to occur.

#### **PLANNING POLICY WALES 12**

-includes the following key paragraphs in relation to trees: -

#### **Green Infrastructure Assessments**

6.2.5 Green Infrastructure Assessments provide key evidence to support the preparation of development plans. Such Green Infrastructure Assessments should use existing datasets, and the best available information, to develop an integrated map-based evidence resource for biodiversity, ecosystem resilience.

6.2.6 Green Infrastructure Assessments should also draw from the evidence base provided by NRW's Area Statements and Nature Network Maps, Wellbeing Assessments and locally and regionally collected green infrastructure data and mapping.

6.2.8 The need for ecosystems, habitats, and species to adapt to climate change and other pressures should be considered as part of the Green Infrastructure Assessment. This must include identifying ways to avoid or reverse the fragmentation of habitats, and to improve habitat connectivity where appropriate, through the promotion of wildlife corridors, protection of riverine corridors and identifying opportunities for land rehabilitation, reducing pollution, landscape management and habitat restoration, creation, and nature recovery.

6.2.9 Planning authorities must encourage the appropriate management of features of the landscape which are of major importance for wild flora and fauna to complement and improve the ecological coherence of the National Site Network, formally known as the Natura 2000 network.

6.2.11 The quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design.

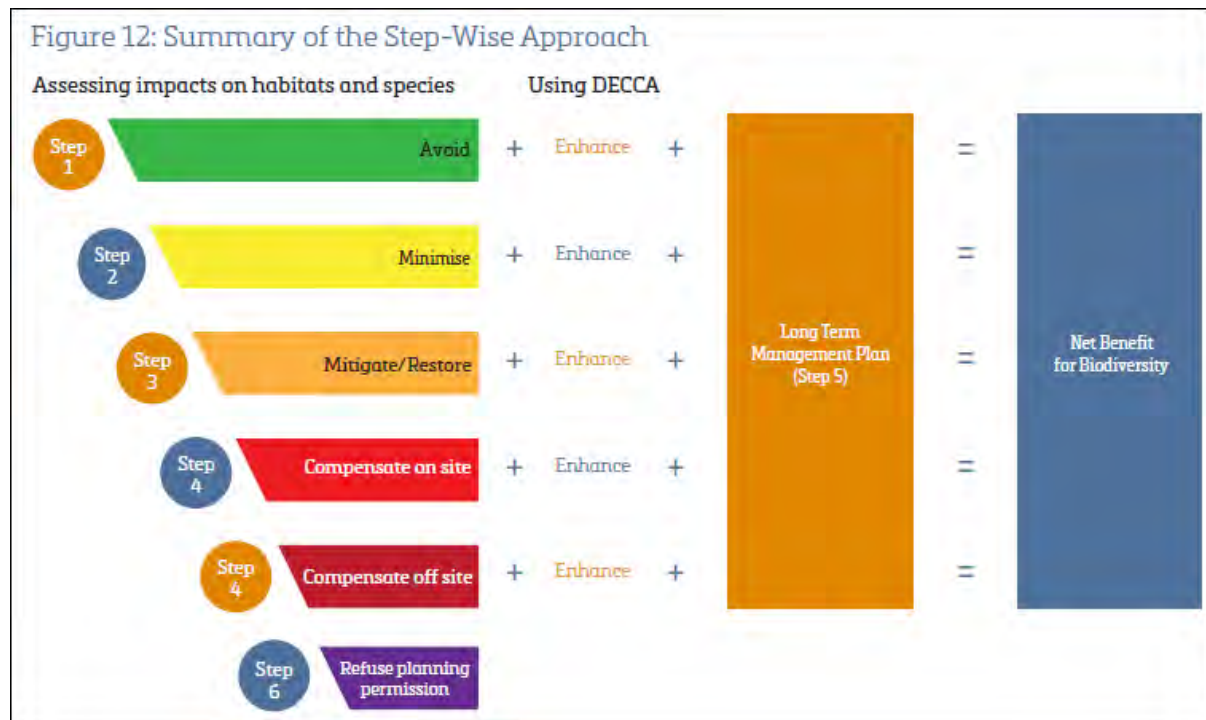
6.2.14 Development proposals should be informed by the priorities identified in green infrastructure assessments and locally based planning guidance. The Building with Nature standards represents good practice and are an effective prompt for developers to improve the quality of their schemes and demonstrate the sustainable management of natural resources.

#### **The Step-Wise Approach**

The first priority for planning authorities is to avoid damage to biodiversity in its widest sense (i.e. the variety of species and habitats and their abundance) and ecosystem functioning.

6.4.16 The following factors will affect the implementation of the above stepwise approach: Preapplication surveys, research and data searches by developers will be necessary to establish the baseline state of biodiversity and ecosystem

resilience on site taking into account the site's contribution to resilient ecological networks through its diversity, extent, connectivity and condition and the provision of ecosystem services.



6.4.20 Statutorily designated sites must be protected from damage and deterioration, with their important features conserved and enhanced by appropriate management.

6.4.22 It should be recognised that all designated sites will have a unique and important role as part of ensuring resilient ecological networks and this contribution may be equally as important in a local context as its designation status. Distinctive & Natural Places Planning Policy Wales | Edition 12.

6.4.23 Planning authorities should consider opportunities to restore networks of habitats to a healthy condition identified as a result of undertaking the Green Infrastructure Assessment and the identification of appropriate interventions to secure delivery against the attributes of resilience, namely, diversity, extent, connectivity, condition and adaptability.

6.4.24 SSSIs are of national importance. The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, places a duty on all public bodies, including planning authorities, to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of the features by reason of which a SSSI is of special interest.

6.4.25 Development in a SSSI which is not necessary for the management of the site must be avoided. This is a matter of principle to ensure that these sites can continue to fulfil their role at the heart of resilient ecological networks.

6.4.31 Sites of Importance for Nature Conservation, Local Wildlife Sites, Local Nature Reserves, and Regionally Importance Geodiversity Sites make a vital contribution to delivering an ecological network for biodiversity and resilient ecosystems, and they should be given protection in development plans and the development management process.

6.4.35 The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration.

6.4.36 Developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site.

### **Trees, Hedgerows and Woodlands**

6.4.37 Trees, hedgerows, groups of trees and areas of woodland are of great importance for biodiversity. They are important connecting habitats for resilient ecological networks and make an essential wider contribution to landscape character, culture, heritage and sense of place, air quality, recreation, and local climate moderation. They also play a vital role in tackling the climate emergency by locking up carbon, and can provide shade, shelter and foraging opportunities, wider landscape benefits such as air and diffuse pollution interception, natural flood management, and building materials. The importance of trees, in particular urban trees, in creating distinctive and natural places which deliver health and wellbeing benefits to communities, now and in the future should be promoted as part of plan making and decision taking.

6.4.38 Welsh native tree and hedge species, characteristic of the local area, provide a strong ecosystem resilience function, and they provide resources for local wildlife, particularly other native plants, and species. Native tree and hedge species can also complement opportunities for natural regeneration. Alongside broader woodland habitat types, such as wood pasture, parkland and traditional orchards, native tree and hedge species help to define our cultural heritage and landscape, creating a strong sense of place and connection to the past.

6.4.39 Planning authorities must protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function.

6.4.40 Where trees, woodland and hedgerows are present, their retention, protection and integration should be identified within planning applications. Where surveys identify trees, hedgerows, groups of trees and areas of woodland capable of making a significant contribution to the area, these trees should be retained and protected. The provision of services and utilities infrastructure to the application site should also avoid the loss of trees, woodlands or hedges and must be considered as part of the development proposal; where such trees are lost, they will be subject to the replacement planting ratios set out below.

6.4.41 Whilst most focus within the planning system is targeted at urban trees, planning authorities should recognise the importance of trees within the countryside, either as woodlands, within hedgerows and hedge banks, or freestanding trees in fields, or as wood pasture.

6.4.42 Permanent removal of trees, woodland and hedgerows will only be permitted where it would achieve significant and clearly defined public benefits. Where individual or groups of trees and hedgerows are removed as part of a proposed scheme, planning authorities must first follow the stepwise approach.

Replacement planting shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost, and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of at least 3 trees of a similar type and compensatory size planted for every 1 lost. Where a woodland or a shelterbelt area is lost as part of a proposed scheme, the compensation planting must be at a scale, design and species mix reflective of that area lost. In

such circumstances, the planting rate must be at a minimum of 1600 trees per hectare for broadleaves, and 2500 trees per hectare for conifers.

6.4.15. Where loss is unavoidable developers will be required to provide compensatory planting (which is proportionate to the proposed loss as identified through an assessment of green infrastructure).

6.4.43 Ancient woodland, seminatural woodlands, individual ancient, veteran and heritage trees and ancient hedgerows are irreplaceable natural resources, and have significant landscape, biodiversity, and cultural value. Such trees, woodlands and hedgerows are to be afforded protection from development which would result in their loss or deterioration unless very exceptionally there are significant and clearly defined public benefits; this protection must prevent potentially damaging operations and their unnecessary loss.

6.4.44 The protection and planting of trees and hedgerows should be delivered, where appropriate, through locally specific strategies and policies, through imposing conditions when granting planning permission, and/or by making Tree Preservation Orders (TPOs).

### 3.0 ARBORICULTURAL METHOD STATEMENT - SITE SPECIFIC MATTERS

The British Standard promotes the Arboricultural Method Statement (AMS) should be appropriate to the proposals and might typically address some or all the following mentioned below, however this list is by no means exhaustive and additional comments are found.

- a. Tree Felling
- b. Specification for the barrier fencing to enclose the RPA of retained trees.
- c. Location of the barrier fencing to enclose the RPA.
- d. Installation of temporary ground protection.
- e. Demolition of existing structures.
- f. Excavations and the requirement for specialised trenchless techniques.
- g. Installation of new hard surfacing - materials, design constraints and implications for levels.
- h. Specialist foundations - installation techniques and effect on finished floor levels and overall height.
- i. Retaining structures to facilitate changes in ground levels.
- j. Preparatory works for new landscaping.
- k. Auditable/audited system of arboricultural site monitoring, including a schedule of specific site events requiring input or supervision.
- l. Include a list of contact details for the relevant parties.

### 4.0 TREE FELLING AND SURGERY

The trees for retention and those lost (drawn in red) to this proposal are shown on the Tree, Removal, Retention, & Protection Plan found at the rear of this Report.

Recommended safety work is also given in Table 1 within the 'Preliminary Management Recommendations' , column.

The following trees are to be removed from site to allow development –

- |      |            |
|------|------------|
| T001 | C Category |
| T002 | C Category |
| T004 | B Category |
| T006 | B Category |

|      |                                      |
|------|--------------------------------------|
| T007 | B Category                           |
| T015 | C Category                           |
| G003 | C Category                           |
| G008 | B Category                           |
| G009 | C Category                           |
| G012 | C Category (G012 A, B and D, (not C) |
| G014 | B Category                           |
| G018 | C Category                           |
| G019 | C Category                           |

#### Method Statement for Tree Surgery and Felling

1. Engage a Project Arborist (PA) for the duration of works to monitor and advise as necessary under a Watching Brief Scheme.
2. All trees approved for felling (shown on the 'approved' Tree Removal, Retention & Protection Plan) should be clearly marked by the Project Arborist beforehand.
3. PA to provide a toolbox talk to the approved tree contractors.
4. PA to supervise tree felling and scrub clearance works and ensure they are in accordance with the approved plans.
5. Development footprint to be marked out clearly on site if required by the Project Arborist.
6. PA to assess the relationship in respect of retained trees and consider any required surgery or felling. Any access facilitation pruning necessary for Enabling Works to prevent injurious contact between plant machinery and the tree(s) should be listed and presented to the LPA for approval. In some cases, working space may be provided by temporarily tying back tree branches. Pruning or tying should be undertaken in accordance with a specification prepared by an arboriculturist.
7. Tree surgery and felling works must follow an approved Tree Works Schedule that is approved by the Local Planning Authority (LPA).
8. All approved tree works should only be undertaken by a competent arboricultural contractor who shall be made known to the LPA in writing 5 days prior to commencement for their approval.
9. Tree felling and surgery should be undertaken with caution to prevent damage to retained trees and particularly their roots underground. Crush injuries will occur to roots of retained trees if felled within their RPA. In such instances, crash-mats should be used.
10. Legal issues relating to tree felling should be observed (Refer to section LEGAL CONSTRAINTS)
11. Under normal circumstances, the 'approved' tree surgery and/or felling works should be completed prior to the erection of the Tree Protective Barrier Fencing although must come within the Watching Brief element under the supervision of the Project Arborist. (Refer to Section 14.0).
12. No vehicles are permitted within the RPA of any retained tree, without the use of load spreading material.
13. Contractors should be made aware of planning conditions relating to trees within and adjacent to the site and of any Tree Preservation Order or other site designation which may be relevant, through providing 'toolbox talks'.

## 5.0 BARRIER FENCING

All trees to be retained must be protected using robust physical barriers (as shown in the Tree Protection Plan in the Appendix (Ambler) which indicates the correct type of fencing and the location for the positioning of the Tree Protection Barriers. This must be erected before any materials or machinery are brought onto site, demolition, stripping of soil or development of any kind commences, apart from approved<sup>4</sup> tree works mentioned above.

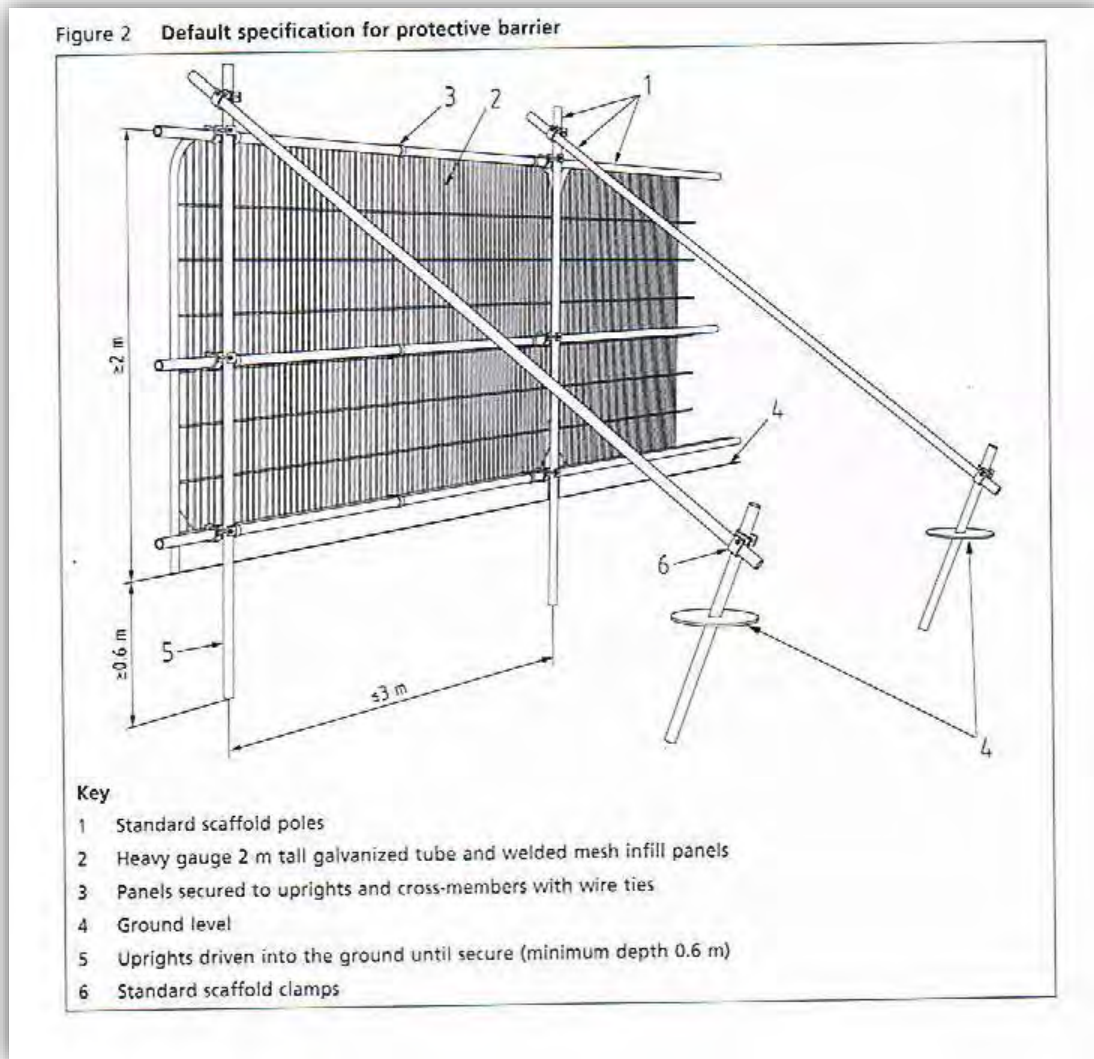
### Tree Protective Barrier Fencing Method Statement

1. The developer must ensure all Tree Protective Barrier Fencing is installed prior to any occupation of the site and prior to plant, machinery, equipment, site offices or materials etc being located.
2. Engage a Project Arborist for the duration of works to monitor and advise as necessary under a Watching Brief Scheme.
3. Where required, pre-development approved tree work may be undertaken prior to the installation of tree protection measures which must be under the guidance of the PA and with the agreement of the Local Planning Authority. However, no vehicles will be permitted within any unprotected RPA of retained trees and works must be carried out with due consideration and without causing injury to any retained tree. Trees permitted for felling will only be those approved on the Tree, Removal, Retention, & Protection Plan which must be identified on site clearly by the PA.
4. All approved tree felling, and surgery works must be undertaken under the supervision of the PA and ideally completed prior to erection of the tree protective barrier fencing.
5. The PA must identify by marking out the RPA for each tree or group on site, using road pins or fluorescent marker paint.
6. Once the Protective Barrier Fencing is in place, it must protect the Root Protection Area or crown spread whichever the greater and be approved and signed off by the PA prior to any demolition, movement of plant and equipment or any site occupancy.
7. The PA will assess if any trimming or tying back of branches is required to prevent contact injury from plant. The PA will seek approval from the LPA of any Works Schedule created, identifying all necessary works.
8. Barriers should be monitored and maintained throughout the construction phase to ensure they remain rigid, complete, and fit for purpose.
9. Any works occurring within any RPA **must** be covered by an 'Approved' Arboricultural Method Statement and may only proceed under the supervision of the Project Arborist.
10. This protective barrier may only be repositioned or moved where covered by an Approved Method Statement and under the supervision of the PA.
11. It should be confirmed by the PA that the barriers and any necessary ground protection are installed correctly prior to the commencement of any other operation and the LPA informed who may wish to attend site and view it first-hand. A method statement is provided later in this report for installing ground protection measures which must be followed.
12. Prior to any construction activity and where due to site constraints construction activity cannot be fully or permanently excluded from all or part of a tree's RPA, appropriate ground, tree stem, and low crown protection must be installed (see section 6.2.3 – BS 5837), under the guidance of the PA.
13. The default tree protection fencing specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated in Figure 2 (Appendix B). The vertical tubes should be spaced at a maximum interval of 3 metres and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the

<sup>4</sup> Approved by the Local Planning Authority

bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

**Figure 2 – Default Specification for Protective Fencing**



**NOTES.**

1. All-weather notices (Example below) must be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE - NO ACCESS". Refer to example notice below.

### Example of Warning Sign



## 6.0 REMOVAL OF EXISTING STRUCTURES AND HARD SURFACES

- No demolition is required.

## 7.0 INSTALLATION OF TEMPORARY GROUND AND STEM PROTECTION

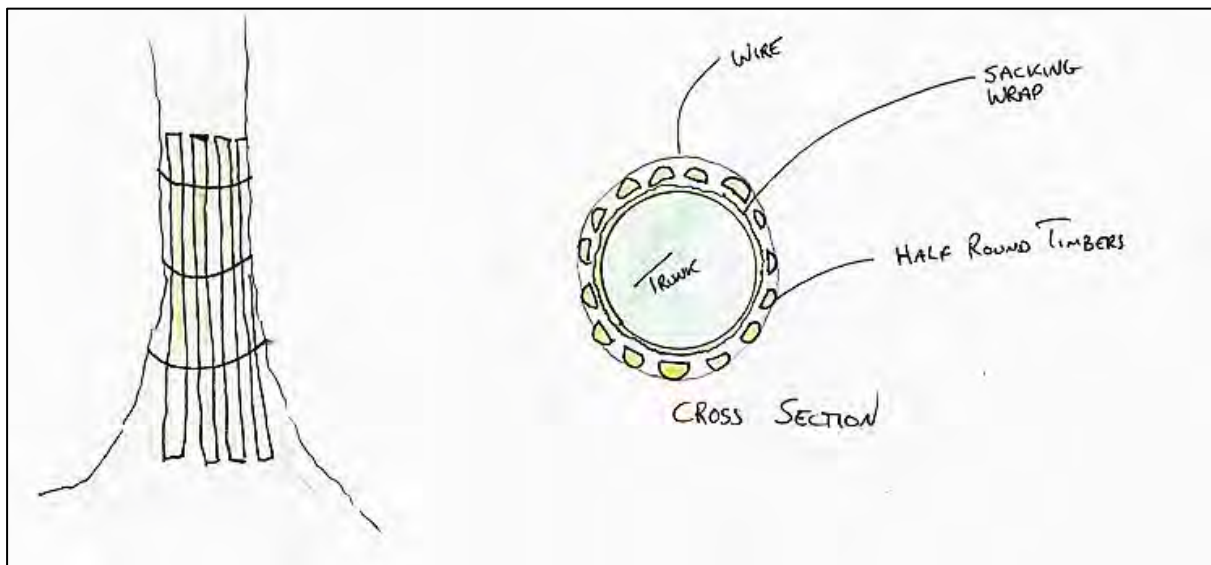
- Ground protection is required to the outside of the excavation footprint for the batters. In all cases, the objective should be to avoid compaction of the soil and crushing injuries to the roots which can arise from even a single passage of a heavy vehicle, especially in wet conditions.

### Method Statement Ground and Stem Protection

1. A site meeting should be arranged between the Site Manager and the PA to discuss the requirement.
2. Temporary ground protection is to act as a load spreader to avoid soil compaction and compressive root injury.
3. The load spreaders intended for use must be adequate for the loads intended and agreed with the PA in writing prior to commencement of works.
4. Where construction works or temporary access is justified within the RPA, and is highlighted within an approved AMS, this should be facilitated by a set-back in the alignment of the barrier fencing.
5. The Tree Protective Barrier Fencing may be set back the minimum amount required for the duration of the works and to the satisfaction of the PA.
6. Temporary ground protection must be installed over the exposed Root Protection Area (RPA), to act as a load spreader to avoid soil compaction and compressive root injury.
7. Laying the ground protection material over the exposed RPA should be carried out immediately after the set back in the barrier fencing is completed and prior to the onset of any works and preferably during dry weather.

8. Take care not to damage any part of the tree stem or branches. Select plant or equipment that is of a suitable height to prevent the necessity for pruning. Where conflict still exists, tie back branches in preference to pruning where possible or prune in accordance with an approved <sup>3</sup> tree surgery schedule.
9. Install stem protection where necessary in accordance with Figure 1. PA to assess and advise.
10. In all cases, the objective should be to avoid compaction of the soil and crushing injuries to the roots which can arise from even a single passage of a heavy vehicle, plant or equipment, especially in wet conditions.
11. A product such as Trackmats or a similar product should be used which must be agreed with the Project Arborist. The ground protection might comprise of one of the following: -
  - ✓ For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, to form a suspended walkway, or on top of a compression-resistant layer (e.g., 100 mm depth of woodchip), laid onto a geotextile membrane.
  - ✓ For pedestrian-operated plant up to a gross weight of 2-ton gross weight, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g., 150 mm depth of woodchip), laid onto a geotextile membrane.
  - ✓ For wheeled or tracked construction traffic exceeding 2-ton gross weight, an alternative system (e.g., proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with an engineer and Arboriculturist, to accommodate the likely loading to which it will be subjected.
12. Laying the ground protection layers should be done in a forward working fashion to avoid compaction so any vehicle involved in the process will always be situated on top of the ground protection.
13. Removal of the ground protection at the end of the construction phase should also be done in a reverse working fashion.
14. Stem protection should be removed carefully avoiding damage to the bark.
15. Such a set-back in the alignment of fencing must be reinstalled immediately following completion of the works in accordance with the Tree Protection Plan and under the guidance of the PA.
16. PA to sign off the activity with the LPA.

Figure 1



### GAS

- No gas services are proposed within the RPA of T016

### ELECTRICITY

- No electricity services are proposed within the RPA of T016

### WATER MAINS

- No water mains services are proposed within the RPA of T016

### DRAINAGE, SUDS and SWALES

- No drainage, suds or swales are proposed within the RPA of T016

### SEWER

- No sewer is proposed within the RPA of T016

### SIGNAGE AND CCTV

- No signage or CCTV services are proposed within the RPA of T016

### VISION SPLAYS

- No sewer is proposed within the RPA of T016

### TOILETS AND SITE ACCOMMODATION

- No toilets or site accommodation are to be sited within the RPA of T016

### CONTRACTORS CARPARKING

- No carparking is proposed within the RPA of T016

### SECURE SITE STORAGE

- No site storage is to be sited within the RPA of T016

### STORAGE FOR SITE MATERIALS

- No site materials are to be stored within the RPA of T016

## 8.0 EXCAVATIONS

Excavations are required for the underground connection of ducts into an existing chamber. These excavations conflict with the RPA of tree T016. I am given to understand there is no alternative available to the development proposal as the connection required is to an existing underground structure, present within the RPA of tree T016. The excavations for the connections also require batters to be formed. Here, an overview of the potential impact on the root system is considered.

The tree diameter when measured at 1.5 metres above ground level is 1000-mm. Therefore, the RPA for this tree is calculated at 12.0 metres radius when measured from the trees main stem. From this measurement, we can also determine the mechanical effective root plate radius (critical area of structural roots) based on work conducted by Claus Mattheck<sup>5</sup>, which is set at 4 metres radius. This is shown as a red dashed line overlay in Figure 2 below. The excavations footprint (See Figure 3 below) proposed are set at 7 metres away from the main stem. Therefore, the excavations proposed are highly unlikely to affect the stability of the tree under normal wind load conditions.

Figure 2 – Mattheck windthrow diagram.

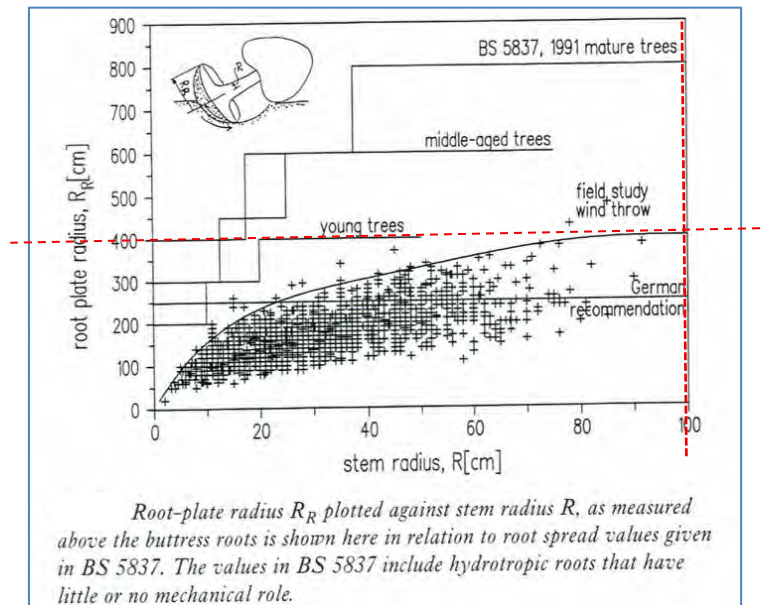
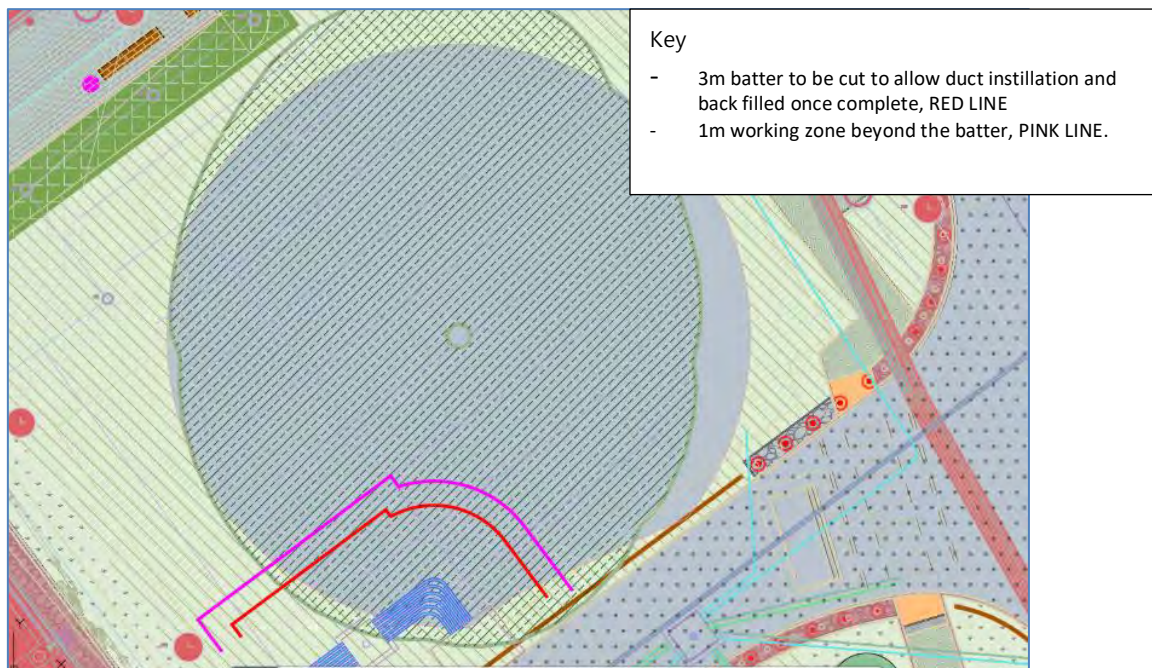


Figure 3 - Batters are required to the construction which are represented in Figure 2 below.



<sup>5</sup> Mattheck and Breloer - The Body Language of Trees (A Handbook for Failure Analysis)

Within the current **British Standard 5837 Recommendations 2012** - Trees in Relation to Design, Demolition and Construction, it states that where there are exceptional circumstances and that corresponding distances can be awarded to the RPA in other directions, it is deemed acceptable to compromise an RPA on one side by up to 20%. Here, the RPA is affected by 10.5% as shown in the sum below and therefore the current proposal is acceptable on arboricultural grounds. The Tree Protection Plan now shows the additional area required.

### Sum

The total area within the RPA affected by the ducts and battering is approximately 33 m<sup>2</sup>.

The total area of the RPA is approximately 445 m<sup>2</sup>.

Therefore around 7.5% of the RPA is affected by the ducts and the battering.

If the working area is also included the affected area is approximately 46 m<sup>2</sup>.

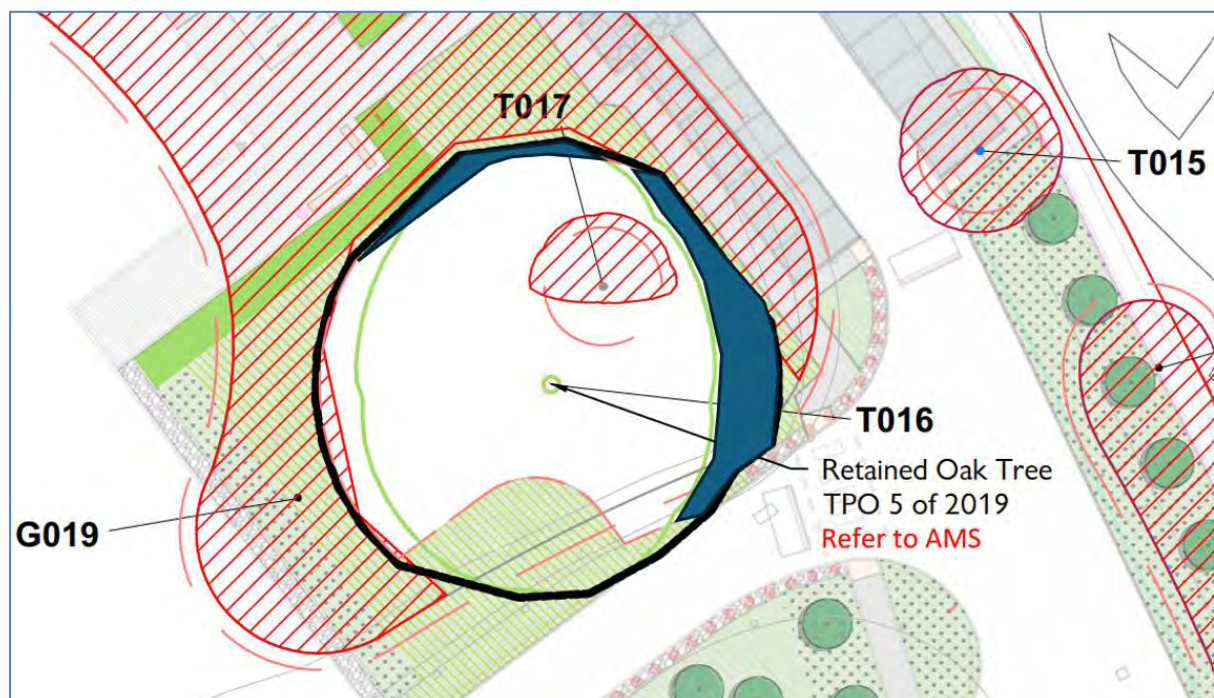
This would mean around 10.5% of the RPA would be affected by the ducts, batter and working area.

### Compromise

The additional area to the RPA is awarded and represented in Figure 4 below as a green hatched area with a red border.

This additional area will compromise for the loss of rooting within the construction zone.

Figure 4 - additional area of RPA awarded.



### Key

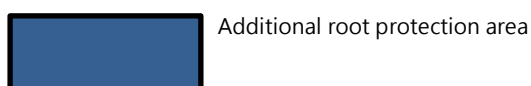


Figure 5 -details of Ducts

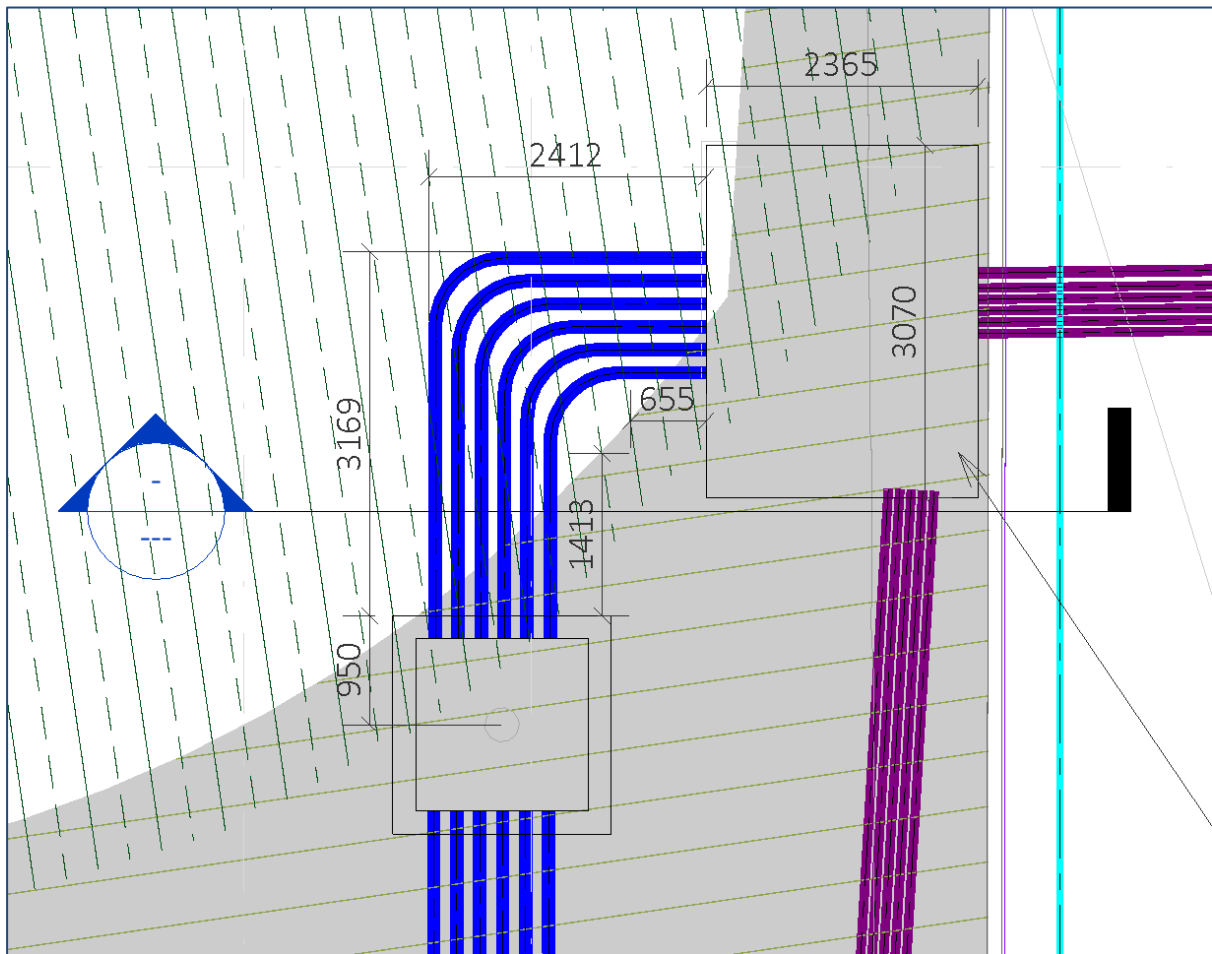


Figure 6 – drawing section showing ducts

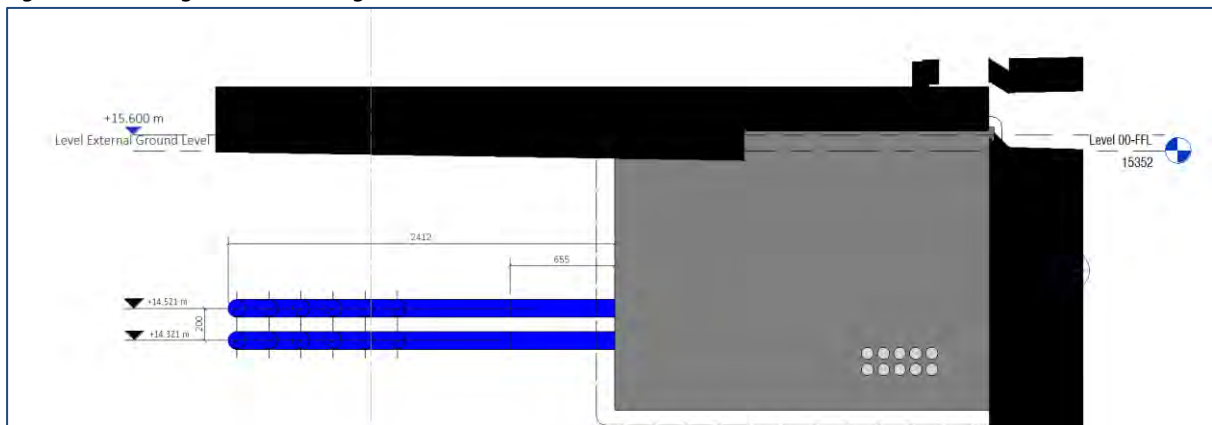


Figure 7 – extract from the Tree Protection Plan

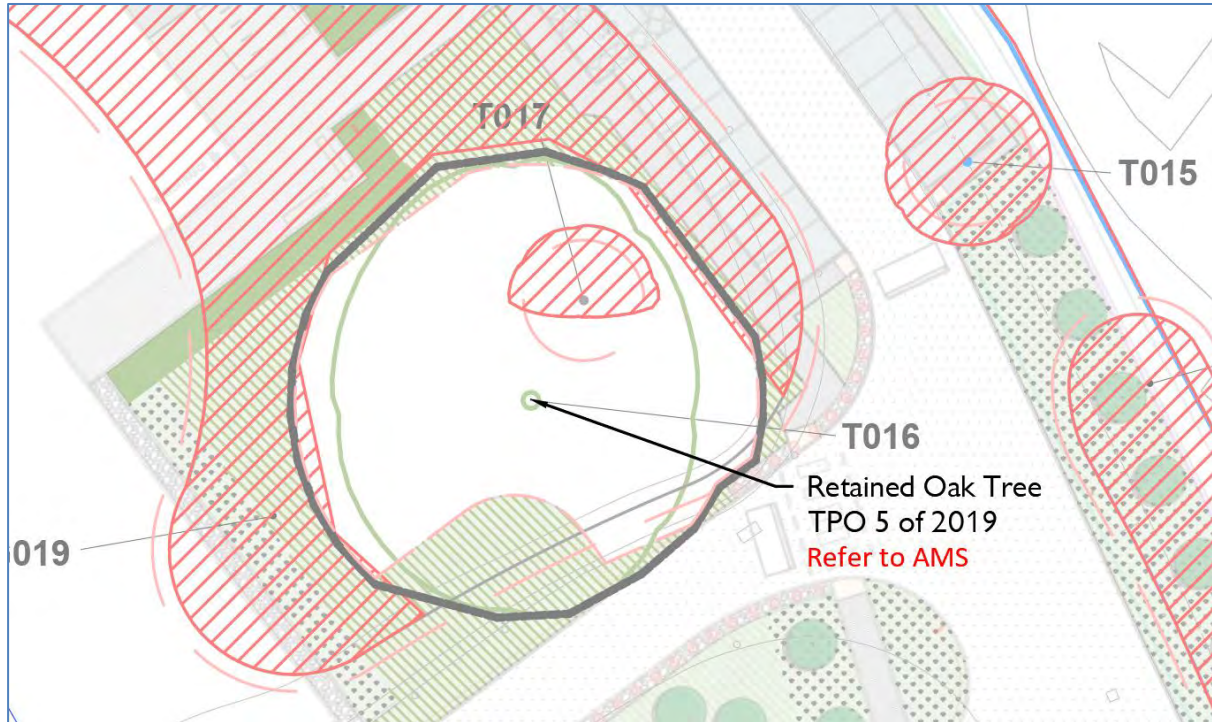
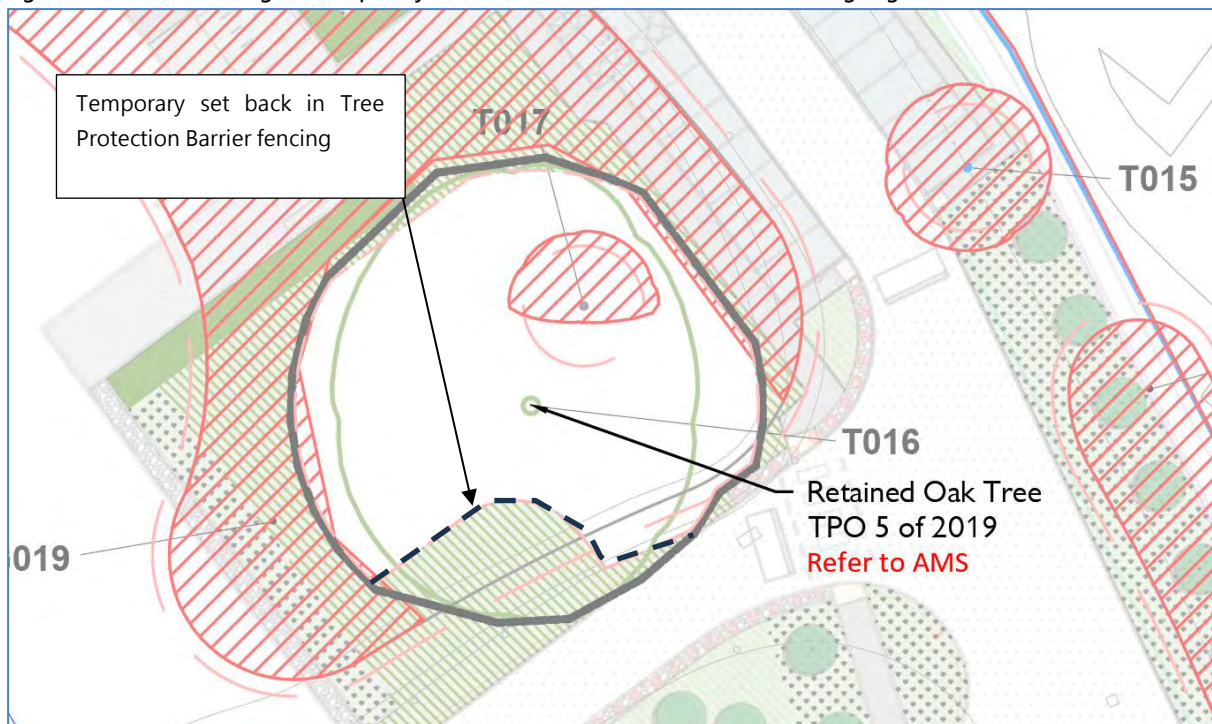


Figure 8 – Extract showing the temporary setback in Tree Protective Barrier Fencing alignment

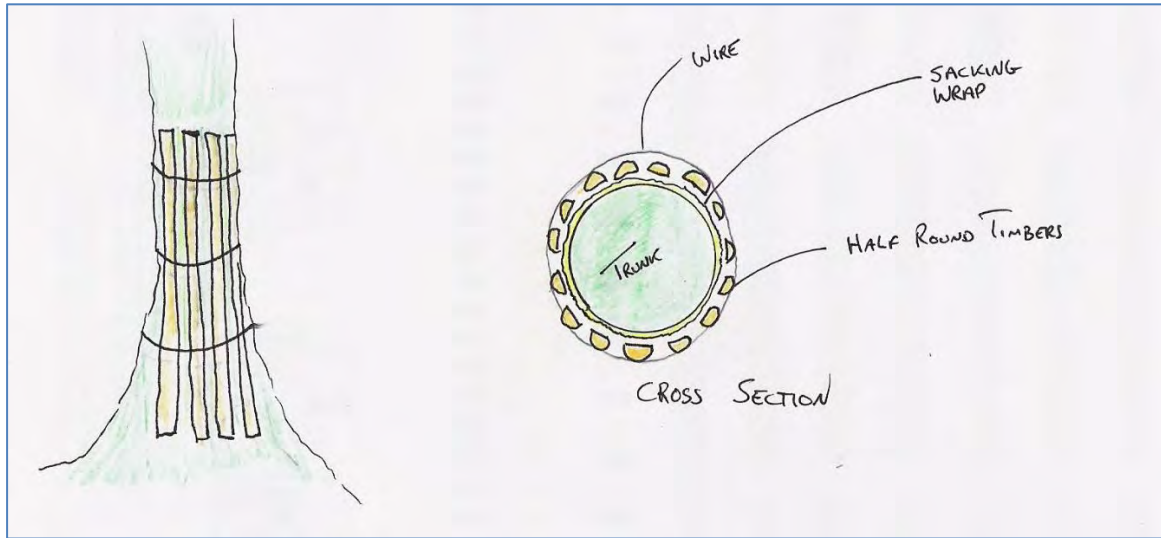


This infringement as illustrated whilst not ideal is acceptable within the limitations of the **British Standard 5837 Recommendations 2012 - Trees in Relation to Design, Demolition and Construction**. Therefore, a Arboricultural Method Statement is provided below for entering and working within the RPA of T016 –

## ARBORICULTURAL METHOD STATEMENT FOR ENTERING AND EXCAVATIONS WITHIN THE RPA OF T016

1. Watching Briefs must be scheduled for supervision by the Project Arborist (PA) to cover this work.
2. All works within the RPA must be agreed by the LPA and under the full supervision of the PA.
3. Tree Protective Barrier Fencing must be erected in accordance with the Tree Protection Plan (Soltys Brewster).
4. PA must attend a site meeting with the Site Manager or other representative to agree the amount of RPA to be exposed prior to the works. This should be marked out clearly using flu marker paint or similar.
5. The Tree Protection Fencing may be offset immediately prior to the works and must be reinstated immediately on completion of the works. Refer to Figure 8 above and the Tree Retention, Removal and Protection Plan (Soltys Brewster). This must be under the supervision of the PA.
6. Any additional working area, if agreed, must be protected by ground plates and must be suitable to support the full load of the plant and equipment used. The Developer must provide evidence to the PA of the load spreaders being used and supply the technical information in respect of loads it will support for approval prior to commencement of the works.
7. The offset Tree Barrier Fencing must remain in place for the full duration of the works and be inspected regularly by the PA.
8. The excavation machinery should operate from outside the RPA if possible.
9. The work must proceed without causing soil compaction with full protection of the underlying roots from compressive injury to the RPA. Stem or branch injury must be avoided.
10. Consider the choice of plant and equipment, its working height and clearance with overhanging branches, to avoid damaging tree branches. This must be discussed and agreed with the PA prior to commencement.
11. PA to assess the height of the lowest branches above ground level and where they do impinge on the proposed operations, an arboriculturally sound solution is available e.g., light pruning or tying back of branches. Any necessary facilitation pruning should be approved by the LPA prior to works commencing. Such works must be under the supervision of the PA and to their full satisfaction.
12. Any contractors required to perform tree surgery operations must be nominated and approved first by the LPA.
13. Stage by stage photograph evidence must be collated throughout the duration of the works and included within the watching Brief Report/s to the LPA.
14. Any tree works shall be in accordance with the British Standard Recommendations for Tree Works BS 3998: 2010 and industry best practice.
15. Care must be taken to protect the stem of the tree/s. If required by the PA, tree stems must be protected using as shown in the Figure 3 below.
16. Take precautions to prevent soil contamination, which may involve using a non-permeable sheet below the ground protection during its operation to prevent leaking fuel and hydraulic oil entering the soil.
17. Spill kits should be carried and in the event of any contamination, it shall be collected immediately and disposed of in a proper manner and the Arboriculturalist and Site Manager informed.
18. The excavations should be performed using a grading bucket (not a toothed bucket) in a scoop like working fashion to sever the roots as cleanly as possible and without pulling. Any exposed broken roots must be pruned back cleanly and immediately, using a pruning saw. This entire working operation must be supervised by the PA.
19. On completion of the works, the soil levels should be restored to the original levels using the excavated soil if possible and compacting very lightly. If unsuitable, then a free draining sandy loam should be used and to be agreed with the PA.
20. Upon completion of these works, the Tree Barrier Fencing must be reinstated immediately to its original position to protect the rooting medium (fill) from compaction and contamination, assessed and signed off by the PA.

Figure 3 – Stem Protection Detail



## 9.0 INSTALLATION OF NEW HARD SURFACING – MATERIALS AND DESIGN CONSTRAINTS

- Non required within the RPA of the retained tree.

## 10.0 SPECIALIST FOUNDATIONS

- No special engineered foundations are required within the RPA

## 11.0 BOUNDARY TREATMENTS FENCING

- Boundary treatments do not affect the retained tree.

## 12.0 PREPARATORY WORKS FOR NEW LANDSCAPING

- I am provided with the landscape details for the current proposal in drawing number – CWL12-SOLB\_Landscape\_Masterplan\_with\_TPF\_Overlay. There are no conflicts shown with tree T016

### Soil Volumes for Trees

As a general rule the following loamy soil volumes should be provided for newly planted trees. Multiple factors need consideration including climate, size, species, proposed management and soil type.

- Small sized tree (Mature size with a stem diameter of <150mm) = >10m<sup>3</sup>
- Medium sized tree (Mature size with stem diameter <300mm) = >20m<sup>3</sup>
- Large sized tree (Mature size with stem diameter >450mm) = >30m<sup>3</sup>

**NOTE** - Soft landscape finishes, including mulch and cultivated beds, will generally provide more favourable conditions for young tree establishment than most hard surfaces or grass. The use of ground-cover shrubs with an appropriate organic mulch is particularly beneficial: this treatment suppresses weeds, reduces maintenance, discourages intrusion, and maintains a permeable open soil structure.

### Soil Compaction and Remediation Measures.

Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites. Compacted soil will adversely affect drainage, gas exchange, nutrient uptake, and organic content, and will seriously impede or restrict root growth. The risk of soil compaction is greatest in soils with significant clay content and in wet conditions. It can result from temporary or short-term loadings, such as the passage of a single vehicle, or from longer-term construction activities, including materials storage.

Soil compaction should be avoided in RPAs and areas where new planting or seeding is proposed which contain suitable ground conditions (fertile soil). Where soil compaction has occurred in RPAs or proposed planting areas, arboricultural advice should be taken before carrying out any remedial works. Remedial works may include sub-soil aeration using compressed air, and the addition of other materials, preferably of a bulky, organic nature (but excluding peat), to improve structure.

### Use of Mulch.

Open soil and shrub planting areas around newly planted trees should be mulched to inhibit weed growth, reduce groundwater evaporation, resist, and mitigate soil compaction and reduce maintenance requirements, whilst allowing gas exchange and water penetration to roots. The mulch material should be weed-free, easy to apply, containable within the area of application and readily available. The choice of material will be informed by local availability of materials, site characteristics and aesthetic requirements. The mulch should be periodically replenished as it decomposes so that it does not become depleted, and ideally when the soil is warm and moist.

The materials that may be used for mulching include coarsely divided plant matter, such as well-composted wood chip, pulverized bark, leaf mould or green waste conforming to PAS 100, and these may be combined with well-rotted animal manure. If the sole intention is to conserve moisture, a layer of gravel or well-secured sheets of material such as permeable geotextile fabric may be used and may be covered for cosmetic purposes. Any such sheets should be maintained to avoid damage to the tree (e.g., by clogging, weed growth, restriction of air movement or constriction of the stem).

The mulched area should extend over as much of the root system as can be allowed by other site-usage requirements. The depth of organic mulch should not be so much as to inhibit aeration of the root system (normally no more than 100

mm). The area around the tree should be well-watered prior to the application of mulching material and the mulch should be periodically replenished as it decomposes, so that it does not become depleted.

Mulches should be kept away from direct contact with the bark of the stem, or of major roots since this might encourage infection by pathogens by maintaining wet conditions.

#### NOTES.

1. Mulches that retain water encourage the development of roots near the soil surface and within the mulch itself. This can become a disadvantage owing to desiccation if the mulch is removed or not replenished.
2. Although, by improving the soil texture and acting as a buffer for rainfall, mulches generally help to prevent extremes of soil wetness and dryness, they can prolong waterlogging on sites where drainage is seriously impeded. This in turn can harm tree roots and make them more susceptible to certain pathogens such as *Phytophthora* spp.
3. Further guidance on mulching is given in BS 3998:2010.

### 13.0 GENERAL MATTERS

To prevent damage to the trees, including their roots, within the fenced area (RPA) there must be no...

- φ Alteration of ground levels, including soil stripping.
- φ Installation of drainage or services using conventional open trenching methods which would not be in accordance with BS:5837. (Any works should be in accordance with the National Joint Utilities NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees Volume 4)
- φ Excavation of any kind.
- φ Storage of any materials or equipment, even on a temporary basis.
- φ Storage of oil, bitumen, cement, or other harmful materials, mixed or discharged within 12-m of the trunk of any retained tree and making further allowances for any slope of the ground so prevent running contamination. Phytotoxic materials would include any mineral oil, fuels, cement mortar washings concrete washings, mortar.
- φ Fires must not be lit beneath or within 12-m of any tree canopies.
- φ Site operations such as deliveries, site machines, crane jibs etc should be organised to avoid damaging the trunk or crown of trees. Where this conflict is unavoidable then facilitation pruning should be carried out in advance, rather than after damage has occurred. This may also be required to allow demolition operations.
- φ Mechanical cultivation of the soil as part of landscaping operations.

Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs, and counterweights (including drilling rigs), in order that they can operate without encountering the RPA, trunks stems or branches of any retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any movement of plant or machinery in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is always maintained. Access facilitation pruning should be undertaken where necessary to maintain this clearance if in accordance with good arboricultural practice (see note 2 below).

#### NOTES.

1. In most instances, local planning authority consent for pruning will be required.
2. Fires on sites must be avoided.
3. Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of the RPAs.

#### **14.0 AUDITABLE SYSTEM OF ARBORICULTURAL SITE MONITORING**

**Including a schedule of specific site events requiring input or supervision.**

Successfully retaining trees during development depends on several controls being in place. A determination and willingness by all parties is required but primarily the Site Manager will have overall responsibility to ensure that control measures are observed. Communication early in the procedure between the Client, Site Manager, Arborist and Local Authority Tree Officer or other appointed staff is fundamental in maintaining a level of care.

The engagement of a Project Arborist is the single most essential component towards ensuring success. This should involve regular 'drop-in' visits by an appointed Arborist who will be responsible for monitoring tree protection measures and offer advice when needed.

A line of communications must be in place between Project Arboriculturist, Site Manager, and Local Planning Authority Tree Officer as a minimum requirement. Details are provided below. Should any queries arise in relation to the protection of trees on this development site then please contact the Arborist on call, during normal office hours.

Such visits must be recorded to form an auditable trail and regular Reports submitted to the Local Planning Authority. The number of visits will be dependent on the type and density of the development and the matters requiring arboricultural input. The number of visits required may also be stated or altered by the LPA at any time during the permitted development.

The Site Manager (SM) must make themselves available for a meeting with the PA during the first Watching Brief (WB) visit. The SM must have read the document prior to the meeting and prepare any questions. During this initial meeting, the PA will point out the Arboricultural Watching Brief system and the site-specific Arb related works section that require specific supervision by the PA, along with the Tree Protection Plan. The SM will be required to sign and date a hard copy of the Arboricultural Method Statement with a dual signature page stating they have fully read, understood, and will implement the recommendations of the document. A copy will be appended to the first Arboricultural Watching Brief report and stay there for future reports, the SM will retain a signed copy on site.

#### 14.1 Schedule of Watching Brief Visits

1. At the very start of the site set up, and prior to the commencement of any construction or movement on site, the Project Arborist (PA) will attend site and provide the Site Manager with a toolbox talk on the Arboricultural Method Statement (AMS), will outline the role of the PA, identify all the key moments and specific arboricultural events within the AMS, and explain the mandatory reporting process to the Local Planning Authority (LPA). Should the Site Manager be replaced or temporarily substituted, then the process must be repeated, and it is the duty of the client to inform the PA when Site Managers change.
2. The PA should attend site and mark out the Tree Protective Barrier Fencing in accordance with the Tree Protection Plan.
3. The PA should attend site and assess the Tree Protective Barrier Fencing is fit for purpose and sign-off with the LPA.
4. The PA should attend site and assess the ground protection is fit for purpose and sign-off with the LPA.
5. The Project Arborist should attend site and perform a watching brief visit on a weekly basis for the first two months and then fortnightly thereafter unless specified differently by the LPA.
6. The PA at each visit will assess the retained trees and its protection for compliance with the Tree Protection Plan.
7. The PA must approve the ground and stem protection of T016 prior to any works commencing within the RPA.
8. The PA must supervise all works that occur within or close to any RPA. In this case – T016
9. The suitability of the root protection fencing, ground and stem protection will be assessed at each visit.
10. Additional visits will occur at scheduled specific events and the PA MUST receive 7 days' notice in writing of these events so they can be calendared into the PAs diary.
11. Watching Brief Reports will be submitted to the LPA at the end of each month detailing the date of the visit, list concerns, recommended remedial action, sign off remedial action where complete and will include photographic evidence.
12. The Watching Brief Report will relay, communicate, and update the LPA of the standard and success of arboricultural care on site.
13. Additional visits should occur at scheduled specific events as mentioned in Item 15.0 below.

### 15.0 SITE SPECIFIC ARBORICULTURAL EVENTS

1. Tree pruning and felling.
2. The marking out of the RPAs by the PA.
3. Erection of Tree Protective Barrier Fencing, PA to check for conformity and sign off with the LPA.
4. The positioning, installation, and suitability of ground and stem protection.
5. Working within the RPA to connect to ducts and form batters.
6. Restoration of the rooting medium.
7. Removal of ground and stem protection.
8. Re erection of the barrier fencing to enclose the rooting medium.

### 15.1 Communications List

**Mr. Vaughan Lewis** (Principal Arborist)  
Steve Ambler & Sons Tree Specialists Ltd  
Email - [vaughan@steveamblertrees.com](mailto:vaughan@steveamblertrees.com)  
Mobile - 07961322908

**Mrs. Shona Carle** (Woodlands Officer)  
Newport City Council  
Environment & Economy Department  
Civic Centre  
Newport  
NP20 4UR  
Email - [shona.carle@newport.gov.uk](mailto:shona.carle@newport.gov.uk)  
Telephone - 01633 232191

**Mr. Scott Ambler** (Project Arborist)  
Steve Ambler & Sons Tree Specialists Ltd  
Email - [scott@steveamblertrees.com](mailto:scott@steveamblertrees.com)  
Mobile – 0777 2998 734

**Site Manager** - To be confirmed.

## 16.0 LEGAL CONSTRAINTS

### Tree Preservation Orders and Conservation Area Status in Wales

In Wales, the law on TPOs is in Part V111 of the Town and Country Planning Act 1990 Town and Country Planning (Trees) Regulations 1999. When any tree/s are protected by a TPO or are situated within a Conservation Area, it is an offence (1) cut down (2) uproot (3) top (4) lop (5) wilfully damage or (6) wilfully destruct a tree without the express written permission from the Local Planning Authority (LPA), there are exceptions. An LPA may grant permission, if considered reasonable following the submission of an application for consent to undertake the works, or where in accordance with an Approved Planning Application or under the exemptions within the Town and Country Planning Act 1990 of dead, dying, or dangerous. It is advisable to consult the LPA and an Arborist prior to conducting any tree works under these exemptions.

### Felling License

A Felling Licence may be required in certain felling operations, and these are administered by the Forestry Commission where more than five cubic metres of wood are felled in one calendar quarter and when selling more than two cubic metres. There are exceptions and these are in the Forestry Act 1967 and Regulations made under this Act. Contravention of the felling licence controls can incur substantial penalties. Tree felling forming part of a Local Authority Planning Approval is exempt.

The Wildlife and Countryside Act 1981 protects nesting birds and to disturb nesting birds can be a criminal offence. Therefore, caution must be aired if tree works are programmed during the nesting season, between March and August. Should nesting birds be present then all but essential works will be postponed. If in undertaking essential works a nest or nests are found to be present, then further advice will be sought from the Countryside Council for Wales.

### Bats...Summary of Current Relevant Legislation

There are some 17 species of bat which are known to breed in the British Isles, all are insectivorous and depend to some extent on habitat in which trees are a significant element. Bats are a protected species and are in decline both globally and nationally. Therefore, they are to be fully considered before any tree work commences and particularly if the trees are mature. If a bat roost is known to be in any tree that is to be removed or worked on, a license must be obtained from the Welsh Assembly Government beforehand.

The European Habitats Directive (passed in 1992) provides the principal legal protection for bats in the UK, and this is currently enacted into British legislation through the Conservation of Habitats and Species Regulations 2010 in England and Wales: The Conservation (Natural Habitats &c) Amendment (No. 2) (Scotland) Regulations 2009 in Scotland: and the Conservation (Natural Habitats &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland. These regulations relate to all animals which are identified as European Protected Species (EPS) which includes all bat species.

The different countries of the UK have domestic legislation which also provides protection (by varying degrees) to bats however, this has been superseded by the Regulations specified above.

Under the Regulations it is illegal to:

- kill, injure or capture a bat
- disturb bats
- damage or destroy a bat's breeding site or resting place (roost)
- possess a bat (live or dead) or offer one for sale or exchange.

This is a simplified summary of the legal position relating to bats and is intended for guidance purposes only. If further assistance is required, the primary legislation should be referred to or legal advice sought.

The legislation makes it an offence to intentionally or recklessly damage, destroy or obstruct access to a site used by bats whether bats are present at the time or not. This can include work on trees whether it is surgery, felling, the covering, or filling of cavities or the installation of rod braces and flexible cable braces, where a bat roost is present.

Where there is a risk bat roosts may be present, it is incumbent upon the owner or manager to commission a specialist bat survey to identify bat roosts before instructing tree surgery to commence. Failure to do so and in the event of disturbing a roost site or injuring any bats is an offence. Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/ 1991 (i.e., £5000 in April 2001) per roost or bat disturbed or killed, or to both.

### Statute and Common Law.

A landowner or land manager should be aware that both statute and common law dictates regular inspections of trees on land in their control are necessary where such trees could cause injury or damage in the event they should fall or shed any parts. A person suitably qualified in arboriculture should undertake such routine inspections and any remedial tree works recommended should be carried out within the time constraints specified, to prevent injury or damage occurring. A landowner should retain records of all inspections and any remedial tree works that have resulted from such inspections. Arboricultural Association, the Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire, GL10 3DL. Telephone 01242 522152. [www.trees.org.uk](http://www.trees.org.uk) are able to provide advice on suitably qualified persons or indeed suitable qualifications a person should hold to undertake qualified inspections.

## 17.0 LIMITATIONS OF THIS REPORT

It must be stressed that this report is a desktop, pre-development assessment and not a risk assessment or a detailed report on the health and condition of the trees. Tree/s should be subject to regular tree condition inspections, and a full tree condition inspection and appropriate management appraisal is strongly recommended and particularly on completion of any development.

The effect this new development may have on localised wind turbulence has not been assessed during this inspection. As trees grow, they respond and mechanically adapt to their surroundings and exposure limits. With the erection of dwellings in close proximity to existing trees, new turbulence is created. The author accepts no liabilities to any failure subsequent upon such new imposed, artificial conditions.

Unless stated in writing, the inspection shall not include any underground parts of the tree. It does not consider **indirect** damage resulting from the extraction of moisture from shrinkable clay soils by tree roots causing **subsidence** or by **heave** occurring through soil rewetting following removal of trees on this site. Such problems are almost entirely restricted to areas of shrinkable clay soils and as I have **not** considered a soil analysis as part of my present brief, this aspect is **not** addressed at this time.

Unless otherwise stated in writing and in the absence of altered circumstances, a report on the health and safety of a tree or trees cannot be relied on after a period of 12 months. Following such a period, a further inspection is required.

Further and more general report limitations are set out in the author's Terms and Conditions and copies are available upon request.

## 18.0 GLOSSARY OF TERMS

**Anchorage:** in trees, the holding of the root system within the soil, involving the flow of forces from the stem through the branches of the root system to the cohesive root/soil interface.

**Assessment:** in relation to tree hazards, the process of estimating the risk which a tree or group of trees poses to persons or property (THIS INVOLVES A VISUAL INSPECTION FOR DEFECTS AND CONTRIBUTORY SITE FACTORS, AND SOMETIMES ALSO A DETAILED INVESTIGATION OF SUSPECTED DEFECTS)

**Assym:** This abbreviation means...asymmetric...and refers to the tree having an asymmetric or unbalanced crown. This is usually preceded by a measurement in metres which provides the extent of crown asymmetry and is measured from the centre of the trunk. It may also have a correlation to the lever arm.

**Arboriculturist:** person who has, through relevant education, training, and experience, gained recognised qualifications and expertise in the management of trees generally and in relation to construction.

**Architecture:** in a tree, a term describing the pattern of branching of the crown or root system.

**Arboricultural Implication Assessment (AIA)** study, undertaken by an Arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impact on existing trees that may arise as a result of the implementation of the site layout.

**Arboricultural Method Statement:** methodology for the implementation of any aspects of development that has the potential to result in loss of or damage to a tree.

**Assessment:** in relation to tree hazards, the process of estimating the risk which a tree or group of trees poses to persons or property (THIS INVOLVES A VISUAL INSPECTION FOR DEFECTS AND CONTRIBUTORY SITE FACTORS, AND SOMETIMES ALSO A DETAILED INVESTIGATION OF SUSPECTED DEFECTS)

**Bole (trunk):** the main stem of a tree below its first major branch

**Branch:** a limb extending from the main stem or parent branch of a tree

**Canopy:** the topmost layer of twigs and foliage in a woodland, tree, or group of trees

**Construction Exclusion Zone:** area based on the RPA (meters as a radial measurement and sometimes a m<sup>2</sup>), identified by an Arboriculturist, to be protected during development, including demolition and construction work, by use of barriers and/or ground protection fit for the purpose to ensure the successful long-term retention of a tree.

**Crown:** in arboriculture the main foliage-bearing portion of a tree containing the leaves and branches

**Heave:** in relation to a shrinkable clay soil, expansion due to re-wetting, sometimes after the felling or root severance of a tree which was previously extracting moisture from the deeper layers: also, in relation to root growth, the lifting of pavements and other structures by radial expansion: also, in relation to tree stability, the lifting of one side of a wind-rocked root plate.

**Pruning:** the removal or cutting back of twigs, branches, or roots: in some contexts, applying only to twigs or small branches only, but more often used to describe all kinds of work involving cutting.

**Retained Tree:** a tree that has been considered suitable by an Arborist for retention and which during the design stage is selected for retention and incorporated within the development.

**Risk:** the likelihood of the potential harm from a particular hazard becoming actual harm.

**Root Protection Area (RPA):** layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m<sup>2</sup>

**Soil heave:** see heave.

**Subsidence:** in relation to soil or structures resting in or on soil, a sinking due to shrinkage when clay soils dry out, sometimes due to extraction of moisture by tree roots.

**Subsidence:** in relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight.

**Tree:** a woody plant, which typically has a single main stem and, in maturity, attains a height of at least four metres and a stem diameter at breast height of at least 75-mm.

**Tree Constraint Plan (TCP):** plan prepared by an Arboriculturist for the purpose of layout design showing the RPA and representing the effect that the mature height and spread of retained trees will have on layouts through shade dominance, etc.

**Tree Preservation Order:** in Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.

**Tree Protection Plan:** scale drawing prepared by an Arboriculturist showing the final layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

**Trunk:** the single main stem of a tree.

**Visual Tree Assessment (VTA):** in addition to the literal meaning, a system expounded by Mattheck & Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.

## 19.0 REFERENCES

**British Standards Institute Publication** 'Trees in Relation to Design, Demolition and Construction – Recommendations' 2012

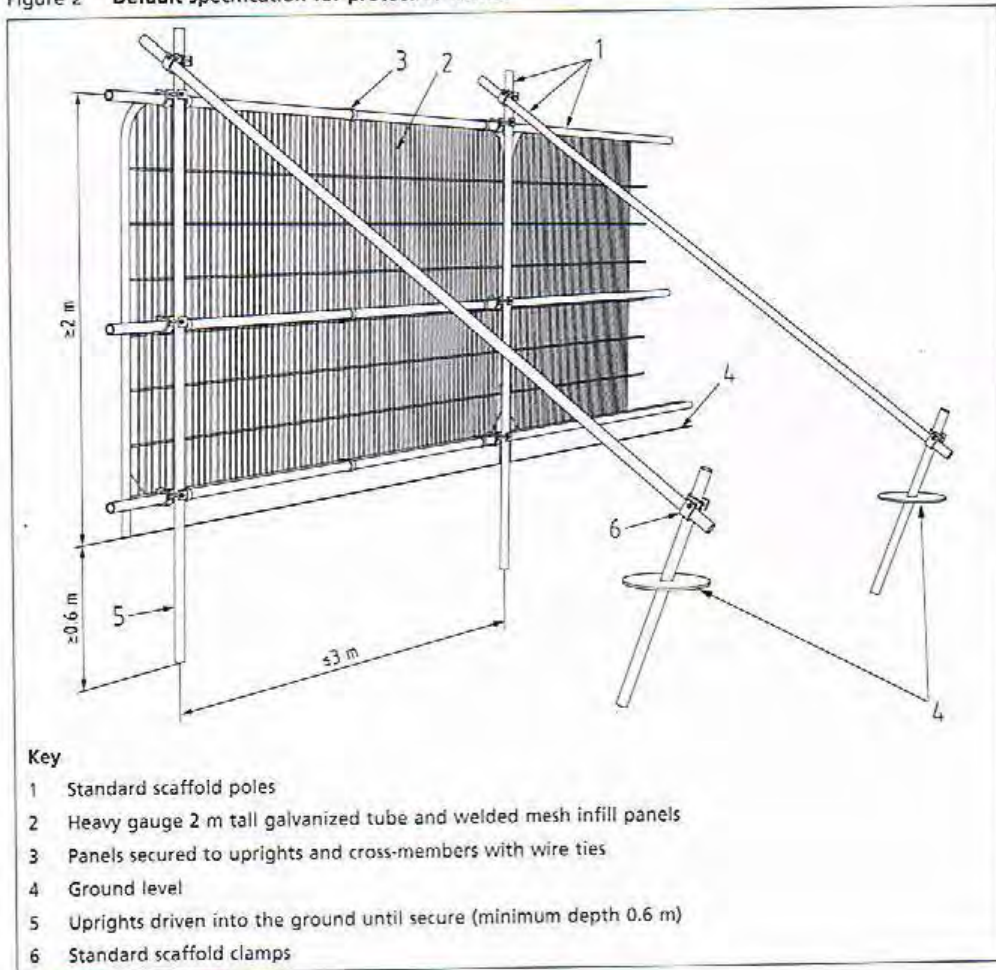
**British Standard Recommendations for Tree Work BS 3998:** 2010

Tree Survey, Categorisation and Constraints Plan (Soltys Brewster/Ambler)

Tree Protection Plan (Soltys Brewster/Ambler)

## APPENDIX A - DEFAULT SPECIFICATION FOR PROTECTIVE BARRIER

Figure 2 Default specification for protective barrier

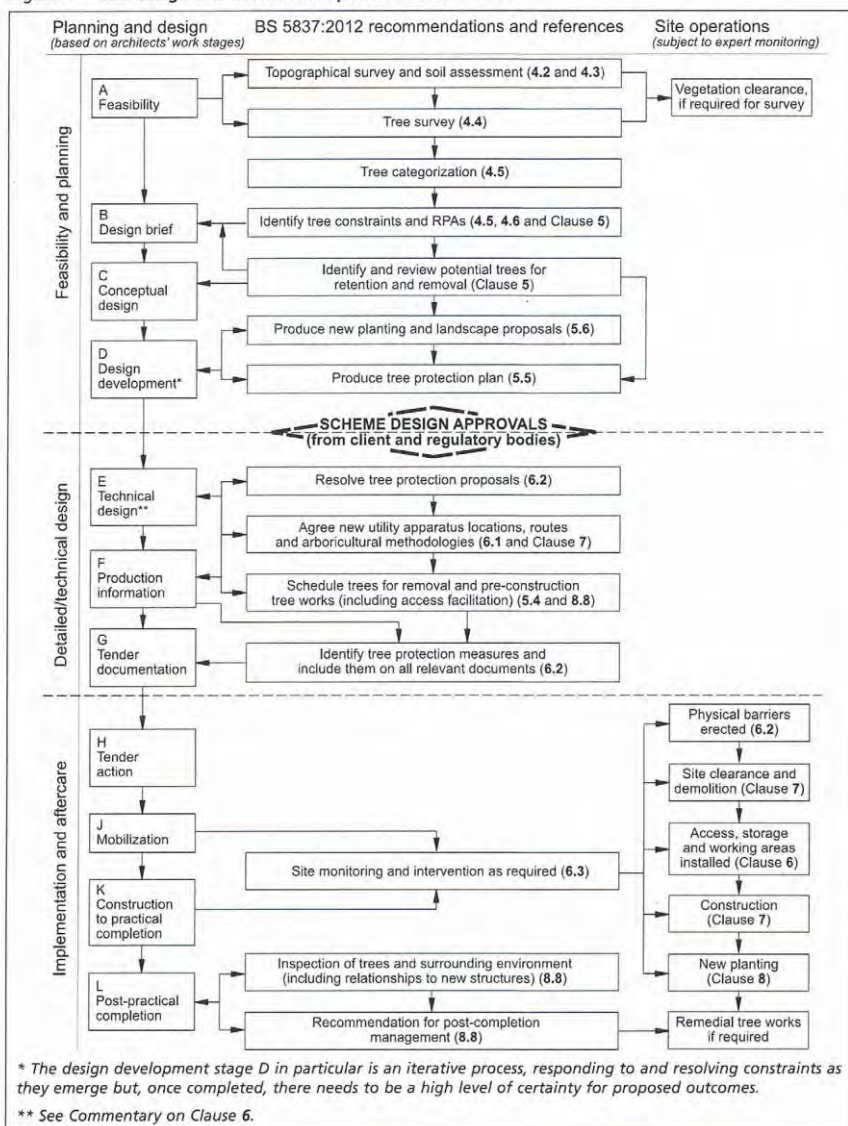


## APPENDIX B - FIGURE 1 THE DESIGN AND CONSTRUCTION PROCESS AND TREE CARE

BS 5837:2012

BRITISH STANDARD

Figure 1 The design and construction process and tree care



APPENDIX C - TREE RETENTION, REMOVAL AND PROTECTION PLAN



Steve Ambler & Sons Tree Specialists Ltd  
Tec Arbor A, Dip Arb (RF5), FARBOR A  
Tel/Fax: 01495 310 826  
Mob: 07813 310 826  
email: steve@steveamblerstrees.com

**DRAWING NOTES:**

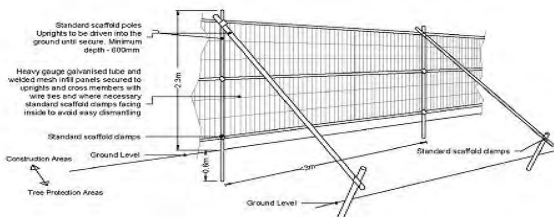
- This plan should be read in conjunction with the 23-042 Celtic Way, Newport Tree Survey & Categorisation Report June 2023 (Ambler SL)
- Indicative only. Please refer to root protection table. Do not scale from this drawing. Check all dimensions on site.
- The Original of this drawing was produced in colour. A monochrome copy should not be relied on.



- Key**
- Trees to be considered for retention.
- A - High
  - B - Moderate
  - C - Low
- Root Protection Area
- Trees unsuitable for retention.
- U - Fell
- Barrier Fencing
- Trees Lost to Development

- Tree Key**
- Crown Spread  
Measured in North, South, East and West side of tree.
- Trees Number  
(T - Individual Tree, G - Group, A - Tree area, W - Woodland, H - Hedgerow)
- Root Protection Area (RPA)  
A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

(Please check all RPA's on site.)  
(Table Author: WS Atkins.)



**NOTES:**

\* All trees being retained on site should be protected by barriers and/or ground protection before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed working under the guidance of an approved AMS and the supervision of the Project Arborist.

\* The tree protection barriers comprise a vertical and horizontal scaffold framework that is well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

\* Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arborist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

# WS5

|     |          |                                                        |    |    |
|-----|----------|--------------------------------------------------------|----|----|
| CS1 | 27.04.23 | Update to T06 RPA and Protection Fencing following AMS | RC | SH |
| CS4 | 09.04.23 | Site layout update                                     | RC | SH |
| CS2 | 24.02.23 | Site layout update                                     | RC | SH |
| CS2 | 18.11.24 | Update following C&S comments                          | RC | SH |
| PO2 | 22.11.24 | Additional trees removed following addition survey     | RC | SH |
| PO1 | 18.02.24 | VOCS issue for review                                  | RC | SH |
| Rev | 06.04.24 | First issue                                            | RC | SH |
|     |          | Comment                                                |    |    |

Approved:

Previously: CWL12-SOLB-SW-VCS-CSL-000101-Tree & Vegetation Protection & Removal S&CD

|             |          |        |        |              |
|-------------|----------|--------|--------|--------------|
| PRELIMINARY | PLANNING | DESIGN | TENDER | CONSTRUCTION |
|-------------|----------|--------|--------|--------------|

## soitysbrewster

4 Sengier House  
Sengier Road  
Newport  
NP23 5AA

Telephone: +44(0)1505 0013 0012  
email: enquiry@soitysbrewster.co.uk

Client:

Project: **CWL12 Vantage Data Centre**

Drawing title: **Tree and Vegetation Protection and Removal Plan**

|            |       |          |            |
|------------|-------|----------|------------|
| Scale      | Drawn | Approved | Date       |
| 1:500 @ A1 | SM    | RC       | April 2024 |

|                              |             |          |
|------------------------------|-------------|----------|
| Drawing no.                  | Suitability | Revision |
| CWL12-SOLB-ZZ-SH-DR-L-900101 | S5          | C05      |

Soitysbrewster Consulting is a trading name of Soitysbrewster Consulting Ltd, Registered Office: 4 Sengier House, Sengier Road, Newport, Vale of Glamorgan, NP23 5AA, Registration No. 8424312. Clients should not be misled that this drawing, any related documents, are to be used. All descriptions or queries regarding the drawing should be referred to Soitysbrewster Consulting Ltd, Soitysbrewster Consulting Ltd accepts no liability for any expenses, loss or damage of whatever nature and however arising from reliance upon this drawing or in the execution of the work to which it relates which has not been referred to them and their approval obtained.