

## Feeder Pipe Bridge

### General Arboricultural Method Statement

#### Report for Baker Hicks

|                   |                        |                    |             |
|-------------------|------------------------|--------------------|-------------|
| <b>Job Number</b> | 7028                   |                    |             |
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| <b>Version</b>    | <b>Checked by</b>      | <b>Approved by</b> | <b>Date</b> |
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# Executive Summary

Temple Ltd has been commissioned by Baker Hicks to produce a Generic Arboricultural Method Statement relevant the construction of an access track to the Feeder Bridge over the river Taff, CF4 4SA. The Bridge requires replacement and construction works associated with such replacement will involve both proximity to existing tree cover and access into an area designated Ancient Woodland on the [Welsh Government's Mapping Service](#). Data and conclusions provided within this report are based upon Tree Survey work conducted by arboricultural consultant Matthew Wilcox on 20<sup>th</sup> March 2023. A qualitative assessment of individual trees (where appropriate), grouped cover and woodland, has been carried out according to British Standard BS 5837:2012, Trees in Relation to Design, Demolition and Construction – Recommendations, focusing on arboricultural values (categories A1, B1, C1)<sup>1</sup>, landscape values (categories A2, B2, C2) and cultural values (A3, B3, C3)<sup>2</sup>.

The main findings of the survey are as follows:

- There were 20 individual trees and 6 group<sup>3</sup> in and adjacent to the proposed access track and bridge, each described in Appendix 1 of this report. A proportion of these were covered by the Ancient Woodland designation (please see Appendix 1: Schedule of Trees for details).
- Of the trees surveyed, and in terms of BS 5837 assessment criteria, five individuals and 2 groups were attributed Category B status, 13 individuals and 3 groups were attributed Category C status and 1 individual and 1 group was attributed Category U status (please see Table 2: Tree Quality Definitions below for further information).
- A tree constraints check was carried out with Rhondda Cynon Taf County Borough Council to identify any Tree Preservation Orders which may apply. As of the date of this report, an email response is still awaited.
- It has been confirmed using the Welsh Government website mapping service that a large part of the site is scheduled as Ancient Woodland. UK government guidance regarding the protection of Ancient Woodland where development is proposed is as

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<sup>1</sup> Categorisation grading in accordance with BS 5837 2012. Trees suitable for retention: - 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 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 of very low quality normally with a life expectancy of less than 10 years or requiring immediate removal due to health and safety concerns.

<sup>2</sup> British Standard BS 5837 2012 recommends that these categories may be further broken down into sub categories A1 A2 A3 pertaining to Arboricultural, Landscape or Cultural values respectively.

<sup>3</sup> The term "group" is intended to identify trees that form cohesive arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally, including for biodiversity (e.g. parkland or wood pasture).

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

- It is possible that a small number of trees inside G3 will require removal to facilitate construction of the access road. An application for Planning Consent (handled by others) is understood to be in development. This will include an Arboricultural Impact Assessment (AIA) and a Tree Protection Plan (TPP). The TPP will have been generated by overlaying a detailed design layout onto the tree constraints at the location to highlight the need for any construction-related tree removals. The authors of this report have not had access to a detailed design layout and cannot therefore identify potential tree removals. An assumption has been made that, due to the Ancient Woodland designation, construction methods will be based on by-hand operations, temporary ground cover solutions (in order to protect tree roots) and sufficient arboricultural supervision and reporting to ensure successful retention of the overwhelming majority of the tree cover.

# 1 Introduction

## BACKGROUND

- 1.1 Temple Ltd was commissioned on 13 March 2023 by Baker Hicks to produce a Generic AMS in relation to the proposed Feeder Bridge replacement over the river Taff (CF4 4SA), along with construction of the project's proposed access.

## SCOPE OF REPORT

- 1.2 This report has been produced in accordance with British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (hereafter referred to as BS 5837:2012). Based on tree survey data obtained during site visit on 20<sup>th</sup> March 2023 and a plan of the proposed access to the site of the bridge replacement (please see Appendix 4 photo 1) this report details special engineering methods that may be required to mitigate impact of the development on retained trees.

## SITE CONTEXT AND STATUS

- 1.3 The site is situated 1 km north-east of Abercynon centre. The site is covered by unmanaged grassland and woodland and is open to the public. It is centred on Ordinance Survey Grid Reference ST 091 954.

### DESCRIPTION OF THE PROPOSALS

- 1.4 The proposal comprises the construction of an access road from the A470 to the Feeder Pipe Bridge, establishment of a site compound, and construction activities associated with removal and replacement of the bridge.

### SUPPORTING DOCUMENTS

- 1.5 Plan supplied by the Client showing proposed access route and location of bridge replacement works (please see Appendix 3 photo 1).

### PERSONNEL

- 1.6 This report was produced by Matthew Wilcox BSc (Hons) Dip Arb L4 (ABC) MArborA, who holds the Professional Tree Inspector (LANTRA) qualification.

## 2 Generic Arboricultural Method Statement

- 2.1 This General Arboricultural Method Statement details how trees to be retained must be protected during the construction phase of site development. The advice is specific to this site but must also be accompanied by a site-specific AIA and a detailed AMS (operation-specific) which will require to be produced once design layouts are finalised.

### SITE MONITORING AND SUPERVISION

- 2.2 An arboricultural consultant must be appointed to advise on tree protection implementation for the site.

### SUGGESTED SEQUENCING OF ARBORICULTURAL INPUT

- 2.3 It is recommended that the following arboricultural input regarding on site management of retained trees is required. Table 5 below will form the basis of an auditable schedule of inspection and reporting.

**Table 5:** Sequencing of arboricultural input.

| Activity                                                                                                                 | Level of arboricultural input                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-commencement site meeting with site manager and representatives from project management (if the latter is required). | Induction site meeting including review of tree protection measures.<br>Site setting out at key locations (if required).<br>Agree any improvements to tree protection measures (if required). |

**Table 5:** Sequencing of arboricultural input.

| Activity                                                                                                                                                                                                                                                                                                            | Level of arboricultural input                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tree works including removals.                                                                                                                                                                                                                                                                                      | Discuss and review works schedule with contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Erection of protective barriers and ground protection measures.                                                                                                                                                                                                                                                     | Signing off of tree protection fencing location and fitness for purpose.<br>On-going discussion and advice during installation until fencing is fixed and braced.                                                                                                                                                                                                                                                                                                                                    |
| Prior to commencement of any ground works within or encroaching RPAs and requiring realignment of tree protection fencing (including installation of any new hardstanding in proximity to trees, installation of cellular confinement and root bridge systems and/or any removal of existing surfacing within RPAs) | Pre-works on site briefing with contractor and direct on-site supervision by arboricultural consultant.<br><br>Fencing to be realigned under arboricultural supervision to permit access for ground workers (if required).<br><br>Direct supervision during construction of cellular confinement system inside the RPAs of all trees over whose RPAs the access track will run and any associated works take place.<br><br>Direct supervision during removal of any existing surface and structures. |
| Removal of protective fencing and ground protection measures after completion of construction works.                                                                                                                                                                                                                | Pre-commencement on site briefing with contractor and ongoing site supervision at agreed intervals until completion.                                                                                                                                                                                                                                                                                                                                                                                 |
| Carrying out of mitigation tree planting and soft and hard landscaping.                                                                                                                                                                                                                                             | Pre-commencement on site briefing with landscape contractor check and agree planting specification.<br><br>Site meeting with contractor following completion of works to check compliance with agreed specifications, maintenance and aftercare.                                                                                                                                                                                                                                                     |

**GENERAL PRECAUTIONS TO BE TAKEN ON SITE****2.4 The following precautions must be taken at all times:**

- All retained trees must be protected by the installation of tree protection and/or ground protection prior to the commencement of any works and such protection measures will remain in place during the entire course of the development. Where a tree protection plan has been approved by the Local Authority, any tree protection fencing and/or ground protection will be installed as per its recommendations.
- No fires can be lit within 10m of the canopies of trees to be retained.
- Where identified in the tree protection plan for the project, designated Construction Exclusion Zones (CEZ) will be suitably established and maintained to ensure that trees remain protected. Storage or stockpiling areas, temporary road access, accommodation and other facilities must be located outside of RPAs, inside

designated sites away from retained trees, and all care must be taken to prevent the leakage or spilling of harmful materials into the soil.

- No excavations or soil stripping or general disturbance and compaction of the existing soil strata is permitted within the RPA of any tree to be retained.
- All scheduled tree works, including any approved tree removals, must be carried out prior to the commencement of any site works and before the erection of tree protection fencing.
- A copy of any applicable Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan (TPP) will be made available and retained on site at all times and will be included in the site induction for all contractors and visiting personnel so that they are familiar with its content and requirements.

#### PRE - COMMENCEMENT SITE MEETING

- 2.5 Prior to any site works being undertaken, a pre-commencement meeting on site between the site manager, arboricultural consultant and project management representatives (if the latter are required) will be carried out in order to understand and agree key stages for the implementation of tree protection measures and operations, and to allow any aspect of the process to be discussed.
- 2.6 Details of discussions and agreements made in the meeting will be recorded by the arboricultural consultant and backed by photos. Written reports can be supplied to project management and/or the Local Planning Authority, should this be required.

#### ERECTION OF PROTECTIVE BARRIERS

- 2.7 Appropriate Tree Protection Plans should be generated as part of the planning submission for the project. These will show the location of tree protection fencing to be erected around the RPAs prior to the commencement of works. The specification of this protection should be prepared by an arboriculturalist and, where relevant, agreed with the planning authority. Tree protection must remain in place through the entire course of the construction phase of the development and can only moved in consultation with the project's appointed arboricultural consultant.
- 2.8 Once the tree protection fencing has been positioned, fixed and braced, it cannot be removed or repositioned in any way unless consented by the arboricultural consultant to allow for supervised works to be carried out within the RPA of a tree. Tree Protection is to remain in place until the conclusion of all site construction works but may be realigned, under arboricultural supervision, to allow specific, arboriculturally supervised works to be

completed. All works within the RPAs of retained trees will be the subject of arboricultural supervision.

- 2.9 In areas where work will be undertaken in the RPAs of retained trees a combination of tree protection and temporary ground protection will be employed and in place before any materials and machinery are brought on to site and before any demolition, construction or ground works of any kind (including soil stripping) commence.

#### TEMPORARY GROUND PROTECTION

- 2.10 Where access is required inside the RPAs of retained trees, temporary ground protection must be used. This could take a number of different forms depending on the weight of vehicles requiring access.
- 2.11 Where pedestrian only access is required a single layer of scaffold boards on top of a single layer of geotextile membrane topped with a compression resistant layer eg. 100mm of wood chip can be installed in order to protect the tree roots.
- 2.12 Where pedestrian operated plant up to 2 tons is required, interlinked ground protection boards on top of geotextile membrane topped with a compression resistant layer, eg 1500mm of woodchip can be installed in order to protect the tree roots.
- 2.13 Where wheeled or tracked vehicles of over 2 tons is required (and has been approved) within the CEZ, or within the RPAs of retained trees, a no-dig cellular system must be used to prevent damage to tree roots from excavation, ground compaction or loss of ground permeability. <https://www.abg-geosynthetics.com/buildings/sustainable-porous-paving-tree-root-protection/tree-root-protection/>
- 2.14 Prior to installation of a cellular confinement system of ground protection, vegetative growth may be removed by hand, reduced using herbicide applications or carefully scraped away. Soil scraping must not exceed a depth of 75mm and, should substantial tree root presence be encountered, must be abandoned in favour of removal by hand.
- 2.15 Ground levels can only be adjusted by up-filling; that is, filling in of hollows and/or undulations with a porous material that still permits water and oxygen to reach the soil below. Examples are sharp sand (no fines), clean crushed stone (no fines), gravel chips (no fines) or a mix of any of the former with good topsoil.

- 2.16 Terram or equivalent geotextile must be laid over the surface to be covered and pegged into position.
- 2.17 A Cellweb or equivalent Cellular Confinement System is then placed over the Terram, and secured as per manufacturer's instructions.
- 2.18 An aggregate sub-base material of angular stone chips, 20 to 40mm in size (no fines), is then used to fill the cells of the Cellweb (or equivalent product) to the required depth (100mm for pedestrian traffic or domestic car parking, 150mm for commercial car parking, and 200mm for frequent traffic including HGVs, or for heavy duty haul routes).
- 2.19 The sub-base can be gently compressed.
- 2.20 For permanent driveways final surfaces can be chosen from a range of options but must be porous and must be approved by the LPA. It is usually appropriate to apply final surface treatments following completion of construction operations – as a part of the landscaping works.
- 2.21 Where installation of such surfacing requires realignment or removal of tree protection, such realignment and/or removal must be agreed by the project's arboriculturist and supervised by the same.
- 2.22 It is essential, wherever possible, to work from the cellular confinement system once constructed rather than installing additional temporary ground protection.
- 2.23 All operations relating to installation of cellular confinement 'no-dig' surfacing must be supervised and recorded by the project's arboricultural consultant.

#### FINAL REMOVAL OF TREE PROTECTION AND GROUND PROTECTION MEASURES

- 2.24 Prior to the final removal of any protective fencing or ground protection, the arboricultural consultant to the project must be consulted. This ensures that tree protection is not removed prematurely, at a time when there may still be risk to trees and tree roots from construction or other activities.

## CONTACT DETAILS

2.25 This method statement is accompanied by a list of known contact details for all relevant parties and is included in Table 6.

**Table 6:** List of contact details for all relevant parties

| Contact                   | Name           | Company or Local Authority name | Contact Number | Report Issued Yes/No |
|---------------------------|----------------|---------------------------------|----------------|----------------------|
| Client                    | Nick Wood      | Baker Hicks                     | -              | Yes                  |
| Arboricultural Consultant | Matthew Wilcox | Temple Ltd                      | -              | Yes                  |

# References

Feeder Pipe – proposed Access Route (No name, No date) photo 1

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.

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

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

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

Spatial Dimensions (2021) *Topographical Survey 21144\_01*.

Town and Country Planning Act 1990 (as amended).

Town and Country Planning (Tree Preservation) (England) Regulations 2012.

## Appendix 1: Schedule of Trees

## T7028 Baker Hicks – Feeder Pipe Bridge Replacement

| No. | Species  | Ht. | S | St.<br>1.5m         | Canopy Spread |   |   |   | Cr.<br>CI | Ls | SC   | PC   | Comments<br>/Observation                                                                                  | Preliminary<br>Management<br>Advice | LE           | Cat<br>** | RPA<br>r |
|-----|----------|-----|---|---------------------|---------------|---|---|---|-----------|----|------|------|-----------------------------------------------------------------------------------------------------------|-------------------------------------|--------------|-----------|----------|
|     |          |     |   |                     | N             | S | E | W |           |    |      |      |                                                                                                           |                                     |              |           |          |
| T1  | Alder    | 11  | 1 | 300                 | 4             | 2 | 4 | 4 | 0         | EM | Fair | Fair | Unable to access,<br>grown from cliff, lean<br>heavily towards river,<br>suppressed by<br>adjacent trees. |                                     | 20+<br>years | C2        | 3.6      |
| T2  | Hazel    | 4   | 1 | 300                 | 3             | 1 | 1 | 1 | 0         | EM | Fair | Fair | Growing from edge of<br>bank, leaning heavily<br>towards river. Unable<br>to access.                      |                                     | <10<br>years | U         | 4.2      |
| T3  | Oak      | 16  | 1 | 600                 | 5             | 5 | 4 | 5 | 4         | M  | Fair | Fair | On bank edge,<br>Riverside, unable to<br>access.                                                          |                                     | 20+<br>years | B2        | 7.2      |
| T4  | Beech    | 17  | 1 | 600                 | 5             | 8 | 5 | 5 | 2         | M  | Fair | Fair | Banks side, edge of<br>river, unable to access.<br>leans towards river.                                   |                                     | 20+<br>years | B2        | 7.2      |
| T5  | Alder    | 8   | 1 | 280                 | 2             | 2 | 1 | 2 | 3         | EM | Fair | Fair | Roadside tree.                                                                                            |                                     | 10+<br>years | C2        | 3.4      |
| T6  | Alder    | 8   | 1 | 120                 | 1             | 1 | 1 | 1 | 3         | Y  | Fair | Fair | Roadside tree.                                                                                            |                                     | 10+<br>years | C2        | 1.4      |
| T7  | Hazel    | 6   | 4 | 40:4<br>0:40;<br>40 | 1             | 1 | 1 | 1 | 0         | Y  | Fair | Fair | Small, coppiced hazel.                                                                                    |                                     | 20+<br>years | C2        | 1        |
| T8  | Sycamore | 10  | 1 | 350                 | 2             | 4 | 4 | 2 | 0         | EM | Fair | Fair | Growing out of wall,<br>unable to access.                                                                 |                                     | 20+<br>years | C2        | 4.2      |

## T7028 Baker Hicks – Feeder Pipe Bridge Replacement

| No. | Species    | Ht. | S | St.<br>1.5m         | Canopy Spread |   |   |   | Cr.<br>CI | Ls | SC   | PC   | Comments<br>/Observation                                                                                               | Preliminary<br>Management<br>Advice                                  | LE           | Cat<br>** | RPA<br>r |
|-----|------------|-----|---|---------------------|---------------|---|---|---|-----------|----|------|------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------|-----------|----------|
|     |            |     |   |                     | N             | S | E | W |           |    |      |      |                                                                                                                        |                                                                      |              |           |          |
| T9  | Alder      | 12  | 3 | 400;<br>400;<br>200 | 1             | 6 | 6 | 3 | 0         | EM | Fair | Fair | Growing against<br>bridge.                                                                                             |                                                                      | 10+<br>years | C2        | 7.2      |
| T10 | Hazel      | 6   | 1 | 200                 | 1             | 1 | 1 | 1 | 0         | M  | Fair | Fair | Hazel coppice approx.<br>15 stems.                                                                                     |                                                                      | 10+<br>years | C1        | 2.4      |
| T11 | Beech      | 14  | 2 | 150;<br>150         | 5             | 4 | 4 | 5 | 2         | M  | Fair | Fair | Grown of bank edge<br>unable to access.                                                                                |                                                                      | 20+<br>years | B2        | 2.5      |
| T12 | Alder      | 10  | 3 | 100;<br>100;<br>100 | 1             | 4 | 3 | 4 | 3         | M  | Fair | Fair | On bank edge, unable<br>to access.                                                                                     |                                                                      | 20+<br>years | C2        | 2.1      |
| T13 | Wild chery | 6   | 1 | 200                 | 2             | 2 | 2 | 2 | 0         | SM | Fair | Fair | Bottom side of path,<br>unable to access.                                                                              |                                                                      | 20+<br>years | C2        | 2.4      |
| T14 | Oak        | 9   | 1 | 300                 | 3             | 3 | 3 | 3 | 0         | Y  | Fair | Fair | Top side of path,<br>unable to access.                                                                                 |                                                                      | 20+<br>years | B2        | 3.6      |
| T15 | Oak        | 9   | 1 | 300                 | 3             | 3 | 3 | 3 | 0         | Y  | Fair | Fair | At junction in paths.                                                                                                  |                                                                      | 20+<br>years | B2        | 3.6      |
| T16 | Oak        | 8   | 1 | 300                 | 3             | 3 | 3 | 3 | 1         | Y  | Fair | Fair | Assessment limited by<br>bracken and bramble.<br>Large wound South,<br>reaction wood<br>present, dead lower<br>branch. | Clear bracken<br>and brambles<br>from around<br>and inspect<br>tree. | 10+<br>years | C2        | 3.6      |

## T7028 Baker Hicks – Feeder Pipe Bridge Replacement

| No. | Species                                      | Ht. | S | St.<br>1.5m | Canopy Spread |   |   |   | Cr.<br>CI | Ls | SC   | PC   | Comments<br>/Observation                              | Preliminary<br>Management<br>Advice | LE           | Cat<br>** | RPA<br>r |
|-----|----------------------------------------------|-----|---|-------------|---------------|---|---|---|-----------|----|------|------|-------------------------------------------------------|-------------------------------------|--------------|-----------|----------|
|     |                                              |     |   |             | N             | S | E | W |           |    |      |      |                                                       |                                     |              |           |          |
| T17 | Hawthorn                                     | 5   | 1 | 200         | 2             | 2 | 2 | 2 | 0         | SM | Fair | Fair | Unable to access stem<br>dur to bramble.              |                                     | 20+<br>years | C2        | 2.4      |
| T18 | Hawthorn                                     | 3   | 1 | 150         | 1             | 1 | 1 | 1 | 0         | SM | Fair | Fair | Unable to access due<br>to bramble.                   |                                     | 10+<br>years | C2        | 1.8      |
| T19 | Hawthorn                                     | 5   | 1 | 200         | 2             | 3 | 2 | 2 | 0         | SM | Fair | Fair | Unable to access stem<br>due to bramble.              |                                     | 20+<br>years | C2        | 2.4      |
| T20 | Oak                                          | 9   | 1 | 400         | 4             | 4 | 4 | 4 | 1         | Y  | Fair | Fair | Unable to access due<br>to bramble. pleasant<br>tree. |                                     | 20+<br>years | B2        | 4.8      |
| WG1 | Dead trees,<br>Ash                           | 5   | 1 | 200         | 1             | 1 | 1 | 1 | 2         | SM | Poor | Poor | Approx 6 dead trees<br>adjacent to path.              | Fell dead trees<br>to ground level. | <10<br>years | U         | 2.4      |
| WG2 | Mixed<br>broadle,<br>beech, Holly,<br>willow | 15  | 1 | 300         | 4             | 4 | 4 | 4 | 0         | EM | Fair | Fair | Mixed woodland.                                       |                                     | 20+<br>years | B2        | 3.6      |
| WG3 | Mixed<br>broadleaf                           | 12  | 1 | 400         | 2             | 3 | 3 | 3 | 0         | SM | Fair | Fair | Mixed group, birch,<br>alder, sycamore etc.           |                                     | 20+<br>years | B2        | 4.8      |
| WG4 | Mixed Broad<br>leaf, Birch<br>oak            | 12  | 1 | 400         | 3             | 4 | 4 | 4 | 1         | SM | Fair | Fair | Mixed birch wood,<br>oak.                             |                                     | 10+<br>years | C2        | 4.8      |

T7028 Baker Hicks – Feeder Pipe Bridge Replacement

| No. | Species                                                            | Ht. | S | St.<br>1.5m | Canopy Spread |   |   |   | Cr.<br>CI | Ls | SC   | PC   | Comments<br>/Observation                                                                     | Preliminary<br>Management<br>Advice | LE           | Cat<br>** | RPA<br>r |
|-----|--------------------------------------------------------------------|-----|---|-------------|---------------|---|---|---|-----------|----|------|------|----------------------------------------------------------------------------------------------|-------------------------------------|--------------|-----------|----------|
|     |                                                                    |     |   |             | N             | S | E | W |           |    |      |      |                                                                                              |                                     |              |           |          |
| WG5 | Mixed Broad<br>Leaf, Willow,<br>Hawthorn,<br>Wild cherry,<br>Birch | 14  | 1 | 450         | 4             | 4 | 4 | 4 | 0         | M  | Fair | Fair | Unable to, access,<br>bramble, barbed wire.<br>ivy covered trees, off<br>edge of roundabout. |                                     | 10+<br>years | C2        | 5.4      |
| WG6 | Mixed<br>Broadleaf,<br>birch                                       | 13  | 1 | 400         | 4             | 3 | 3 | 3 | 2         | SM | Fair | Fair | Mixed group, birch,<br>etc, surrounded by<br>brambles and bracken.                           |                                     | 20+<br>years | C2        | 4.8      |

**Table 2: BS: 5837 2012 Tree Quality Assessment Definitions**

| TREES FOR REMOVAL                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------------------|
| Category & Definition                                                                                                                                                       | Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | Identification on Plan |
| <b>Category U</b><br>Those in such a condition that they cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years. | <ul style="list-style-type: none"> <li>Trees that have a serious, irremediable structural defect such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. Where for whatever reason the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant immediate or irreversible overall decline.</li> <li>Trees infected with pathogens of significance to the health and or safety of other trees nearby by or very low quality trees suppressing adjacent trees of better quality.</li> </ul> |  |  | RED                    |

| TREES TO BE CONSIDERED FOR RETENTION                                                                                                                         |                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                           |                                                                                                                                    |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Category & Identification                                                                                                                                    | 1 Mainly arboricultural values                                                                                                                                                                                                           | 2 Mainly landscape values                                                                                                                                                                                                                                 | 3 Mainly cultural values including conservation                                                                                    | Identification on plan |
| <b>Category A</b><br>Trees of High Quality with an estimated remaining life expectancy of at least 40 years                                                  | Trees that are a particularly good example of their species, especially if rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features e.g. the dominant and/or principal trees in an avenue) | Tree groups or woodlands of particular visual importance as arboricultural and/or landscape features.                                                                                                                                                     | Tree groups or woodlands of significant conservation historical, commemorative or other value (e.g. veteran trees or wood pasture) | GREEN                  |
| <b>Category B</b><br>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.                                             | Trees that might be included in the high category but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage).                                 | Trees present in numbers, usually as groups or woodlands such that they attract a higher collective rating than they might as individuals: or trees occurring as collectives but situated so as to make little visual contribution to the wider locality. | Trees with material conservation or other cultural benefits.                                                                       | BLUE                   |
| <b>Category C</b><br>Trees of a low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.                                                                                                                       | Trees present in groups or woodlands but without this conferring on them significantly greater landscape value and/or trees offering low or only temporary/transient landscape benefits.                                                                  | Trees with no material conservation or other cultural benefits.                                                                    | GREY                   |

**Table 3:** Key Schedule of Trees

| Column Heading                   | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tree No</b>                   | Sequential number corresponding to number on plan.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>                   | English names.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Ht.</b>                       | Height in metres.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>S</b>                         | Number of main stems.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>St. 1.5 (Stem Diameter)</b>   | Stem diameter when measured in accordance with Annex C of BS 5837:2012.                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>NSEW</b>                      | Crown radius in metres to cardinal points of the compass.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Cr. Cl. (Crown Clearance)</b> | Height in metres between the ground and underside of canopy.                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Ls.</b>                       | Life stage definitions. Y= Young. SM = Semi-mature. EM = Early mature. M = Mature. OM = Over mature.                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SC</b>                        | Brief description of structural condition.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>PC</b>                        | Brief description of physiological condition.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Preliminary Advice</b>        | Preliminary tree works advice and recommendations.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>LE</b>                        | Estimated remaining useful life contribution in years. <10, 10+, 20+ and 40+ yr.                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Cat. (Category)</b>           | <p>Categorisation grading in accordance with BS 5837 2012.</p> <p>Trees suitable for retention: - Category A trees of high quality and amenity value. Category B trees of moderate quality and amenity value. Category C trees of low quality or amenity value.</p> <p>British Standards BS 5837:2012 recommends that these categories may be further broken down into sub-categories A1 A2 A3 pertaining to Arboricultural, Landscape or Cultural values respectively.</p> |
| <b>RPA m<sup>2</sup></b>         | Root Protection Area (RPA). Indicative area around a tree measured in m <sup>2</sup> and calculated in accordance with Annex C of BS 5837:2012 deemed to contain sufficient rooting volume to maintain the viability of a tree and where the protection of roots and soil structure is treated as a priority.                                                                                                                                                               |
| <b>RPA r</b>                     | Root Protection Area (RPA) radius calculation centred on the base of the tree and calculated in accordance with Annex C of BS 5837:2012                                                                                                                                                                                                                                                                                                                                     |

## Appendix 2: Tree Constraints Plan

# temple

Job Title  
Feeder Pipe Bridge Replacement, Abercynon  
Temple Job No. T7028

Client  
Baker Hicks

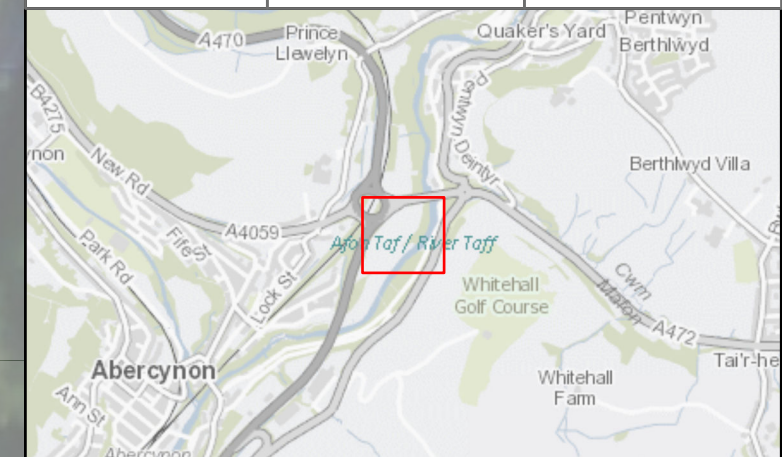
Map Title  
Stage 1 tree survey

Date of survey  
20/03/2023

Surveyor  
Matthew Wilcox

Section  
N/A  
Scale  
1:1,000

Drawn  
JET  
Approved  
MW  
Date  
24/03/2023



## Legend

Tree stem location

- Category B
- Category C
- Category U

Root Protection Area

- Category B
- Category C
- Category U

Canopy/crown spread

- Category B
- Category C
- Category U

- Ancient Woodland Inventory (Wales)
- 15m buffer of ancient woodland

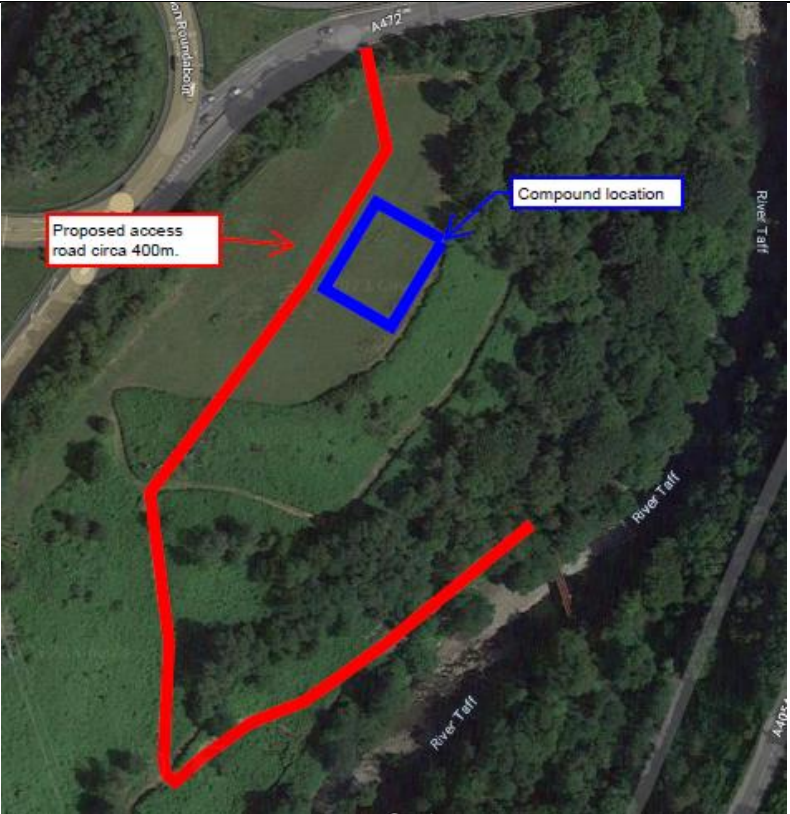
0 40 Metres

N

OS Open Background Tile Layer: Contains OS data © Crown Copyright and database right 2020  
World Imagery: Maxar, Microsoft

This plan is provided solely for the purpose of supporting the description of the ecological features of the site as contained in the accompanying report.

## Appendix 3: Photographs

|                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Photograph 1</b></p> <p>Proposed route of<br/>Access track</p>   |  <p>The aerial map shows a green field area. A red line indicates a proposed access track starting from a road labeled 'A472' and extending into the field. A blue rectangle marks the 'Compound location'. A red arrow points to the start of the track with the text 'Proposed access road circa 400m.'. The 'River Taff' is visible on the right side of the map.</p> |
| <p><b>Photograph 2</b></p> <p>View towards the Hazel<br/>Stems T1.</p> |  <p>The photograph shows a view of a river flowing through a wooded area. In the foreground, there is a metal railing and a large, rusted metal pipe. Bare trees and branches are visible in the background, and the sky is overcast.</p>                                                                                                                               |

|                                                                   |                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Photograph 3</b></p> <p>View towards<br/>Sycamore, T8</p>   |  A photograph showing a view through a metal gate towards a wooded area. The gate is made of vertical metal bars and is partially open. Bare trees and some brown leaves are visible in the background.                                                      |
| <p><b>Photograph 4</b></p> <p>View toward Alder<br/>Stems, T9</p> |  A photograph showing a view towards a stone wall and a tree trunk. The tree trunk is covered in ivy and has a large, gnarled base. The stone wall is made of rough-hewn stones and has a wooden fence on top. The ground is dirt and there are some rocks. |

|                                                                                                     |                                                                                      |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <p><b>Photograph 5</b></p> <p>View towards Woodland WG3, Oak T14 (Left) and Cherry T13 (Right).</p> |    |
| <p><b>Photograph 6</b></p> <p>View down bank towards Oak T16.</p>                                   |   |
| <p><b>Photograph 7</b></p> <p>View towards Mixed species group G6</p>                               |  |

## Appendix 4: Glossary of Terms

## Glossary of Terms

| Term                                                               | Explanation                                                                                                                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Arboricultural impact assessment and method statement (AIA)</b> | Evaluation of direct and indirect effects of a proposed design and/or construction.                                                                                                   |
| <b>Arboricultural Method Statement (AMS)</b>                       | Methodology for the implementation of any aspect of development that is in the root protection area or has the potential to result in the loss of or damage to a tree to be retained. |
| <b>Branch structure</b>                                            | Qualitative description of formation of main framework of limbs and branches.                                                                                                         |
| <b>Canopy face</b>                                                 | Orientation of canopy relative to cardinal points of the compass                                                                                                                      |
| <b>Canopy radius</b>                                               | A measurement taken from the centre of a tree to the furthest radial extension of tree canopy relative to the cardinal points of the compass.                                         |
| <b>Competent Person</b>                                            | Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.                       |
| <b>Conservation Area</b>                                           | Local Planning Authority special designation generally prohibiting tree works without 6 weeks prior written notification.                                                             |
| <b>Construction Exclusion Zone (CEZ)</b>                           | Area based upon the calculated root protection area prohibiting access.                                                                                                               |
| <b>Cavity</b>                                                      | Open and exposed aperture where wood tissue has internally degraded.                                                                                                                  |
| <b>Constraints check</b>                                           | Formal search of local authority records to determine legal and statutory constraints on tree works.                                                                                  |
| <b>Crown lifting</b>                                               | Removal of lower branches to achieve a stated vertical clearance above ground level or other surface.                                                                                 |
| <b>Crown reduction</b>                                             | Pruning of a trees canopy in both height and width.                                                                                                                                   |
| <b>Decay</b>                                                       | Deterioration and breakdown of tree wood fibres resulting in structural and/or physiological dysfunction of a tree.                                                                   |
| <b>Dieback</b>                                                     | Continual decline and death of wood tissue including twigs and branches.                                                                                                              |
| <b>Epicormic growth</b>                                            | Growth that emerges from dormant buds along the trunk and branches of a tree.                                                                                                         |
| <b>Failure</b>                                                     | Description of structural failure or wood fibres including fracture of branches, limbs and main stems.                                                                                |
| <b>Fork</b>                                                        | Area or point of union between one or more limbs or branches.                                                                                                                         |
| <b>Hazard Risk Assessment</b>                                      | Qualitative and quantitative appraisal of the potential for tree failure and the possible risk of harm or damage to persons or property.                                              |
| <b>Local Planning Authority</b>                                    | Body responsible for the administration of Statutory duties relating to Development Management.                                                                                       |
| <b>Multi-stem</b>                                                  | A single tree formed from 2 or more codominant main stems                                                                                                                             |

## Glossary of Terms

| Term                                | Explanation                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Occlusion</b>                    | Wood development enclosing an extant wound or pruning cut.                                                                                                                                     |
| <b>Pruning</b>                      | The targeted removal of branches or limbs using saws or other tools.                                                                                                                           |
| <b>Physiological Condition</b>      | Observation relating to a trees physiology for example vigour, leaf area, growth rate, the presence of pests or disease.                                                                       |
| <b>Root Protection Area</b>         | Root Protection Area (RPA). Indicative area around a tree deemed to contain sufficient rooting volume to maintain the viability of a tree.                                                     |
| <b>Shelter belt</b>                 | A wind break normally made up of one or more trees planted in such a way to provide cover from the wind.                                                                                       |
| <b>Structural Condition</b>         | Observation relating to a trees structural integrity and the presence of any physical defects.                                                                                                 |
| <b>Suppressed</b>                   | Where a trees development has been influenced or effected by the presence of competing vegetation.                                                                                             |
| <b>Tree Constraints Plan</b>        | A scaled plan indicating above and below ground constraints relating to the protection of trees                                                                                                |
| <b>Tree Preservation Order</b>      | A legal order made by the local planning authority protecting specific trees in the interests of amenity.                                                                                      |
| <b>Visual Tree Assessment (VTA)</b> | A method of assessment based upon the research developed to recognise dynamic responses of a tree to its surroundings.                                                                         |
| <b>‘V’ Shaped Branch Union</b>      | The union point between two branches that have grown at a tight angle, forming the ‘V’ shape. This structure is inherently weaker than the ‘U’ shaped union.                                   |
| <b>‘U’ Shaped Branch Union</b>      | The union point between two branches that have grown at a wider angle, forming the ‘U’ shape. This structure is considered to be the strongest and most optimised shape that a union can form. |