TREE CONSULTANTS

# ARBORICULTURAL REPORT

## & Impact Assessment

## to **BS 5837:2012** at:

## *Land off Bethania Road,*
## *Wrexham,*
## *Clwyd,*
## *LL14 3TR*

Prepared for: *R L Planning*

Report Date: *February 2026*

Reference: *AWA7344*

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# Executive Summary

This report provides independent arboricultural advice in accordance with BS 5837:2012, regarding trees at the site in the context of a proposed residential development.

A total of 12 items of woody vegetation were surveyed, comprising individual trees and groups or hedges. Of these: 3 are moderate value (Category B), 6 are low value (Category C), and 3 are unsuitable for retention (Category U).

The proposed development will require the removal of 1 low-value tree. This will result in a minor negative arboricultural impact.

The layout of the development has been designed to minimise encroachment into Root Protection Areas (RPAs), with only minor incursions into a trees' RPAs, which are not expected to significantly affect tree health. Mitigation measures, including protective fencing and 'no-dig' construction methods, are recommended where necessary.

The scheme presents an opportunity for new tree planting as part of a landscape strategy, offering mitigation for the removals and long-term enhancement of the site's tree cover.

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# 1. Introduction

## 1.1 Instructions and Brief

1.1.1 We have been instructed by R L Planning to visit the site and prepare our findings in a report.

1.1.2 The report is required in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations,* to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

## 1.2 Survey Details

1.2.1 The survey took place during November 2025.

1.2.2 The trees were surveyed visually from the ground using "Visual Tree Assessment" techniques and in accordance with the guiding principles of British Standard 5837:2012.

1.2.3 Any additional off-site trees that could impact a new development design have been included in the tree survey parameters.

1.2.4 The tree positions were plotted on an Ordnance Survey map base-layer using enhanced GPS technology (1-2m accuracy) and laser distance measurer.

1.2.5 This report has been prepared by Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principal and Director of AWA Tree Consultants Ltd.

1.2.6 The tree survey data collection was carried out by Mr Joe Thomas, MSci Biology, Level 4 Diploma Arboriculture, TechArborA, QTRA Registered, PTI (Lantra), Arboriculturist at AWA Tree Consultants Ltd.

1.2.7 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations please refer to the Tree Constraints Plan at **Appendix 5** and for detail of the impacts of the new development refer to the Tree Impacts Plan at **Appendix 6**.

# 2. The Site

## 2.1 Location and Description

2.1.1 The site is located on Bethania Road, in Acrefair, near Wrexham, Wales.

2.1.2 The site comprises an unused parcel of land to the south of Bethania Road. A social club borders the site to the west, a woodland and residential housing to the east, and Llangollen Road to the south.

2.1.3 The approximate area of the survey is highlighted in the (2025 Google Earth) image below:



# 3. The Trees

## 3.1 Legal

3.1.1 The following advice is for guidance purposes only. Some trees are protected by legislation, and it is essential that the legal status of trees is established prior to carrying out works to them. Unauthorised work to protected trees could lead to prosecution, resulting in enforcement action such as fines or a criminal record. Tree Preservation Orders, Conservation Areas, Planning Conditions, Felling Licences or Restrictive Covenants legally protect many trees in the UK.

3.1.2 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a Tree Preservation Order or if they are within a Conservation Area. If either applies, then statutory permission is required before any works can take place.

3.1.3 The Welsh Government Data Map Wales website was used to search for areas of ancient woodlands listed on the WOM21 Ancient Woodland Inventory, and a check for catalogued Ancient and Veteran trees using the woodland trust ancient tree inventory (ATI) (Woodland Trust 2021).

3.1.4 It was confirmed that there are no designated ancient woodlands or veteran or ancient trees within the survey area.

3.1.5 Trees provide a wide range of habitats for many species, some of which are legally protected such as bats, nesting birds, badgers and dormice. It is essential that appropriate care is taken to ensure that this legislation is not contravened.

3.1.6 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.

3.1.7 All tree work should be carried out according to British Standard 3998:2010 Tree Work - Recommendations.

## 3.2 Tree Survey Results

3.2.1 Full details of the surveyed trees, tree groups and hedges are provided in the attached tree data schedule at Appendix 4. General comments are provided below:

3.2.2 The tree survey revealed 12 items of woody vegetation, comprised of 7

individual trees and 5 tree groups.

3.2.3 Of the surveyed trees: 2 trees and 1 group are retention category 'U', 1 tree and 2 tree groups are retention category 'B' and 6 trees and tree groups are retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).

3.2.4 Full details of the surveyed trees, tree groups and hedges are provided in the attached tree data schedule at Appendix 4. General comments are provided below:

3.2.5 The significant tree cover within the site consists mainly of large woodland groups stretching along the eastern and south western boundaries and are part of larger woodland groups. Within these groups is a species mix of varying age categories, however they are predominantly semi- to early-mature trees. The occasional larger tree is situated throughout these groups. The majority of the site's trees are naturalised pioneer species that have established since the site was abandoned.

3.2.6 The central areas of the site contain little of arboricultural significance.

3.2.7 Species diversity at the site is relatively good. The dominant species are Birch and Willow, with several Oak, Ash, Hawthorn, and Sycamore, and the occasional Hazel, Blackthorn, and Elder.

3.2.8 Most of the trees are semi-mature with only occasional early mature to mature trees.

3.2.9 The site's most significant individual tree is T7, an early-mature Oak situated at the site's eastern boundary at the top of a slope which reduces in height to the east. This tree is prominent within the site but is less visible in the surrounding area, providing a moderate level of amenity value.

3.2.10 The tree groups G1 and G11 are semi- to early-mature woodland groups partially adjacent to the site to the east and south west. Both groups are prominent within the local area and provide a significant landscape value, however, individually the trees within these groups are of low arboricultural significance. An area of windblown and damaged trees, G9, prevented the detailed inspection of large parts of G1.

3.2.11 Trees and tree groups G2, T3, G4, T6, and T8 form the western edge of the wider woodland G1. These trees are lower value Hawthorn and Willows directly adjacent or on the site's eastern boundary. The trees provide some screening value but are of limited arboricultural and amenity value.

3.2.12 Willows T5 and T10 as well as tree group G9 are dead or in poor condition and feature defects which are likely to limit their long-term value. No action is required in the current site context, but the trees are unsuitable for long-

term retention with <10 yrs life expectancy.

3.2.13 The remaining trees within the site are of particularly low value and should not pose any significant constraint on the development potential of the site.

3.2.14 Many of the Ash trees in the local area show symptoms consistent with Chalara or Ash dieback disease. Once a tree is infected, the disease is usually fatal, either directly or indirectly. While the identified Ash trees may continue to provide landscape and wildlife benefits for some time, their long-term prospects are likely to be limited as a result of Ash dieback.

3.2.15 Some trees were covered in dense Ivy or were inaccessible (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.

3.2.16 The tree Root Protection Area (RPA) for each tree has been plotted as a polygon centred on the base of the stem. Due to the presence of roads, structures, topography (and past tree management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.

3.2.17 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of these low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.

3.2.18 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of these low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.

## 3.3 Photographs


Photo 1: G1 and G2 looking east


Photo 2: T3 and G4 looking north


Photo 3: T7 and G1 looking east


Photo 4: G1, T7, and T8 looking east


Photo 5: G1-T8 looking north east


Photo 6: G11 looking north west

# 4. Arboricultural Impact Assessment

## 4.1 Proposed New Development

4.1.1 It is proposed to build a new residential development with associated access, parking, landscaping and facilities. The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

## 4.2 Direct Impacts

4.2.1 From assessing the new development proposals, 1 tree will require removal to facilitate the development as its retention and protection throughout the development is not suitable.

4.2.2 The tree which requires removal to facilitate the development is T8.

4.2.3 Trees and tree groups requiring pruning to facilitate the new development are G2, T3, T6, and T7.

4.2.4 T8 is a lower value, retention category 'C' Goat Willow with significantly limited long-term prospects. As such the removal of this tree will have only a negligible negative arboricultural impact.

4.2.5 The required pruning works to trees and tree groups G2, T3, and T6 are minor in nature, and the trees will not be significantly impacted in terms of condition or loss of visual amenity.

4.2.6 The western crown of T7 will require lifting and reduction works to provide suitable clearance from the proposed parking, pruning only to small third order branches. This will have a minor negative impact on the tree and will likely result in future nuisance issues and associated pressure for further pruning works.

4.2.7 T5, G9 and T10 have limited long-term prospects and as such are recommended for removal regardless of the development.

## 4.3 Indirect Impacts

4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Plans at Appendices 5 and 6, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.

4.3.2 New boundary fencing is to be installed within the RPAs of retained trees G1, G2, T3, G4, T6, and T7. The encroachment into the trees' RPAs should not significantly adversely impact on the health or future condition of the trees, provided posts and panels type footings are used as opposed to strip

footings, with the holes for the posts dug by hand, avoiding significant tree roots where possible.

4.3.3 Potentially damaging activities are proposed in the vicinity of retained tree T7. The new development encroaches close to and into the edge of the RPA of T7. Construction within the RPA, can have negative impacts on tree roots. However, the encroachment is very minor, and the detailed RPA for these trees is likely to be a slightly exaggerated representation of the trees actual rooting area. As such, it is unlikely that significant roots will be within these areas and the retained tree should remain largely unaffected by the works, provided care is taken during construction.

4.3.4 New parking and footpaths are proposed which encroach into the RPA of T7. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the potential negative impacts can often be overcome or minimised by employing a 'no-dig' type construction methods with a porous final surface.

4.3.5 We are not qualified to recommend any particular construction method in terms of durability or structural integrity and any proposed construction method should be approved by a qualified structural engineer prior to implementation. Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement system, such as those provided by Geosynthetics Limited (http://www.geosyn.co.uk).

4.3.6 All the retained trees have been assessed as suitable for retention in terms of BS5837 (2012) section 5 "Proximity of structures to trees." The retained trees will not cause unreasonable inconvenience or nuisance issues to future occupiers, leading to associated pressures for felling or excessive pruning. The layout allows sufficient space to enable the retained trees to grow to maturity without significantly adversely affecting the amenity of the dwelling or amenity space.

4.3.7 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

## 4.4 Suitable Mitigation

4.4.1 The development of the site provides an excellent opportunity to undertake new tree planting throughout the site as part of a soft landscaping scheme. As such, suitable new tree planting has the potential to mitigate for the required tree removals and, in the longer term, has the potential to improve the sites tree cover.

## 4.5 Protection of the Retained Trees

4.5.1 To ensure the successful retention of trees during the development process, all trees identified for retention must be physically protected from the outset of site preparation through to final landscaping. This protection should be in accordance with section 6.1 of BS:5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations.

4.5.2 The primary method of protection will be the installation of tree protection fencing, constructed in line with the specification shown in BS 5837:2012.

4.5.3 This fencing must be installed prior to the commencement of any site clearance, demolition, or construction activity and remain in place for the duration of all potentially damaging operations.

4.5.4 The protected areas must be treated as construction exclusion zones. No materials, spoil, or equipment should be stored within these zones, and no access should be permitted.

4.5.5 Ground levels within the RPAs should be left unaltered, and care must be taken to avoid compaction of the soil structure, which could have long-term impacts on tree health.

4.5.6 If conditioned by the Local Planning Authority, an associated Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) detailing protective fencing locations and specifications, construction methods close to the retained trees, and any required site monitoring, can be provided.

4.5.7 The AMS and TPP explain how and when the protection measures will be installed and maintained throughout the development. They are designed to be referenced for practical guidance on how to protect the retained trees at the site to ensure contractors do not accidentally damage trees during construction.

## 5. Summary of Tree Impacts

| ***Tree/ Group Ref*** | ***Value*** | ***Impact Type*** | ***Description of Impact*** | ***Impact Level*** | ***Mitigation / Solution*** |
|---|---|---|---|---|---|
| T8 | C (Low) | Direct - Removal | Within footprint of development area | Negligible | Mitigation planting |
| T7 | B (Moderate) | Direct - Pruning | Reduction and lifting works required to provide clearance from proposed parking | Low to Moderate | Pruning works to BS:3998 |
| G1, G2, T3, G4, T6, and T7 | C (Low) | Indirect - RPA Incursion | Minor encroachment by proposed fencing | Low | Post and panel footings |
| T7 | B (Moderate) | Indirect - RPA Incursion | Encroachment of proposed parking and footpaths | Low to Moderate | 'no-dig' type construction methods with a porous final surface |
| T5, G9 and T10 | U (Unsuitable) | Direct - Removal | Unsuitable to retain regardless of development | Not applicable | Work to British Standard 3998:2010 |

# 6. Signature

I trust this report provides all the required information.



**Adam Winson**, *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, ACIEEM*

**23rd February 2026**

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## Our Charity Partner: Kids Plant Trees

At AWA Tree Consultants, we are proud to partner with the local charity, Kids Plant Trees. This collaboration allows us to support a cause that reflects our commitment to trees and the environment while making a positive impact on local communities.

Kids Plant Trees is a grassroots charity dedicated to improving tree equity by planting trees in underserved areas with limited green spaces, often in communities facing higher levels of deprivation.

We are proud to support their mission to create greener, healthier environments for future generations.

# Appendices

**Appendix 1: Authors Qualifications and Experience**
**Appendix 2: Survey Methodology and Limitations**
**Appendix 3: Explanation of Tree Descriptions**
**Appendix 4: Tree Data**
**Appendix 5: Tree Constraints Plan**
**Appendix 6: Tree Impacts Plan**

# Appendix 1: Authors Qualifications & Experience

**Adam Winson:** ***Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, QTRA + VALID Registered***
Adam is the company Director and Principal Consultant. He has a mix of the highest-level academic qualifications and relevant work experience. He has worked within the tree care profession for over 25 years and was awarded an MSc in Arboriculture and Urban Forestry, with distinction. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association and he has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major infrastructure projects. His work often involves trees with preservation orders or litigation, and he has appeared as a tree expert, at planning appeal hearings up to the crown court. Adam also regularly undertakes locum Tree Officer work for several Local Planning Authorities.

**James Brown:** ***Chartered Arboriculturist, BSc (Hons) Arboriculture, MICFor, MArborA, PTI (Lantra), QTRA Registered***
James is a highly experienced and qualified Arboricultural Consultant. He is a Chartered Arboriculturist and a Professional Member of the Arboricultural Association, and he has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Foresters student award. James joined AWA in 2016, he has many years' experience as an Arboricultural Consultant, he previously worked in Europe's largest container tree nursery and he has experience of local authority Tree Officer work.

**James Godfrey:** ***BA (Hons), FdSc Arboriculture and Tree Management, TechArborA, PTI (Lantra), QTRA Registered*** James has had extensive arboricultural experience working as an arborist within the public and private sector. While working at AWA, James completed his FdSc in Arboriculture and Tree Management, graduating with a distinction and was also awarded for achieving the highest overall mark in his year. James has used his arboricultural knowledge to inform and carry out accurate tree surveys and produce detailed reports that aim to balance appropriate tree retention with the requirements of landowners.

**Joe Thomas:** ***MSci Biology, L4 Dip Arboriculture, TechArborA, PTI (Lantra), QTRA Registered***
Joe achieved a first class degree in Biology with an integrated Masters (MSci) from the University of Sheffield. Additionally, he has a Level 4 Diploma in Arboriculture. Joe joined AWA in 2022 after an Urban Forestry role with the Sheffield and Rotherham Wildlife Trust and Sheffield City Council, where he gained a variety of experience in different aspects of the arboriculture sector.

**Lucy Garbutt:** ***MSc, PGCert, BSc (Hons) Biology, PTI (Lantra), TechArborA, QTRA Registered***
Lucy graduated with a masters degree in Animal Behaviour from the UK's highest rated university, St Andrews of Scotland, immediately following the completion of her BSc degree in Biology from Lancaster University. Lucy has experience in botany and plant science and moved into arboriculture after previous experience of protected species and botanical surveys with a large environmental consulting company.

**Sophie Beckerman:** ***BA (Hons), Dip Arboriculture Level 4, PTI (Lantra), TechArborA, QTRA + VALID Registered***
Sophie has more than 10 years' experience as an arborist, working for a variety of private companies as well as undertaking tree management with Sheffield City Council Ranger Service and The Wildlife Trust. Her expertise in arboriculture is demonstrated in the practical NPTC qualifications gained, and her excellent knowledge is reflected in the L4 diploma in Arboriculture, which she completed while working. Her roles as a climbing arborist and team leader included estimating for jobs and project management, supervising tree contracting teams - ensuring that work is carried out safely and efficiently and that health and safety standards are adhered to, and risk assessments are carried out.

**Ross Lane:** ***FdSc Environmental Conservation, Diploma Arboriculture, TechArborA, PTI (Lantra), QTRA + VALID Registered***
Ross has a diverse background spanning horticulture, arboriculture, and ecology. Ross has extensive experience conducting surveys throughout the UK and has worked on projects of all sizes, including major infrastructure projects such as HS2. In his previous role as a Tree Inspector at Derbyshire County Council, projects involved managing the county wide tree stock in relation to the ash dieback response and contributing to ambitious County Council targets of planting a million trees. Possessing technician-level membership with the Arboricultural Association, coupled with a comprehensive range of qualifications from tree risk assessment to habitat management, underscores Ross' dedication in professional arboriculture.

**Brandon Townsend:** ***BSc (Hons) Biology, L4 (Arb) Apprentice, QTRA Registered***
Brandon is an Arboricultural Technician at AWA, currently completing the Level 4 Arboriculture Apprenticeship at Myerscough College. He holds a BSc (Hons) in Biology from Bangor University, where he developed a strong interest in woodland ecology. Before joining AWA in April 2024, he gained practical arboricultural experience and completed his NPTC chainsaw qualification. Brandon supports a range of consultancy work including tree surveys, risk assessments, and technical reporting, and is developing skills in specialist inspection methods such as PiCUS tomography.

# Appendix 2: Survey Methodology and Limitations

The survey was undertaken in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The trees were assessed objectively and without reference to any proposed site layout. The trees were surveyed from the ground using 'Visual Tree Assessment' (VTA) methodology. VTA is appropriate and is endorsed by industry guidance. It is used by arboriculturists to evaluate the structural integrity of a tree, relying on observation of trees biomechanical and physiological features. Measurements are obtained using a diameter tape, clinometer, laser distometer and loggers tape. Where this is not practical measurements are estimated. Tree groups have been identified in instances as defined in BS 5837:2012. Shrubs and insignificant trees may have been omitted from the survey.

This report represents a BS 5837:2012 tree survey and should not be accepted as a detailed tree safety inspection report; however, tree related hazards are recorded and commented upon where observed, yet no guarantee can be given as to the absolute safety or otherwise of any individual tree. All recommended tree work must be to BS 3998:2010 - '*Tree Work: Recommendations*'.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey. The author shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with these guidelines and terms.

# Appendix 3: Explanation of Tree Descriptions

**HEIGHT** of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

**CROWN HEIGHT** is an indication of the average height at which the crown begins.

**STEM DIAMETER** is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level or else a combined stem diameter is calculated.

**CROWN SPREAD** is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

**AGE CLASS** of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

**PHYSIOLOGICAL CONDITION** is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

**STRUCTURAL CONDITION** is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

**LIFE EXPECTANCY** is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

**Retention Categories**

**A (marked in green on Appendix 5) = retention most desirable.** These trees are of very high quality and value with a good life expectancy.

**B (marked in blue on Appendix 5) = retention desirable.** These trees are of good quality and value with a significant life expectancy.

**C (marked in grey on Appendix 5) = trees which could be retained.** These trees are of low or average quality and value, and are in adequate condition to remain until new planting could be established.

**U (marked in red on Appendix 5) = trees unsuitable for retention.** These trees are in such a condition that any existing value would be lost within 10 years.

| | Tree Species | | | Measurements | | | | Crown (m) | | | | | Tree Condition | | | | | Value | | Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tree ID* | *Common Name* | *Latin Name* | *Maturity* | *Height (m)* | *Stems* | *Stem Diameter (mm)* | *Estimated* | *Crown height* | *N* | *E* | *S* | *W* | *Roots* | *Stem* | *Crown* | *Comments* | *Physiological* | *Structural* | *Life Expectancy* | *Amenity* | *Category* | *Works* |
| G1 | Birch, Ash, Sycamore, Oak, Hawthorn, Willow, Hazel, Blackthorn, and Elder | *Betula sp., Fraxinus sp., Acer sp., Quercus sp., Crataegus sp., Salix sp., Corylus sp., Prunus sp., Sambucus sp.* | Early-mature | 16 | 10+ | 300 avg. | No | 0 | See plan | | | | Partially adjacent woodland type group occupying land to east of main site and surrounding additional redline area. Group is situated on banking which reduces in height to east of main site and on the lower lying ground to east. Mixed species young to early-mature group comprising Birch, Ash, Sycamore, Oak, and Hawthorn, as well as several Willow, and native shrub species. Provides some screening and habitat value but individually trees of lower arboricultural significance. Several dead or partially failed trees in low target inaccessible areas, including windblown area in G9 which prevented access to much of G1. Occasional informal footpaths through group. Dense undergrowth and access prevented detailed inspection and accurate stem measurements for majority of group | | | | Fair | Fair | 20 to 40 yrs | Moderate | B | No works required to facilitate the development. |
| G2 | Hawthorn | *Crataegus monogyna* | Early-mature | 7.5 | 10+ | 200 avg. | No | 0 | See plan | | | | Several early-mature Hawthorn situated to east of site, partially on banking which reduces in height to east. Typical forms with several multiple stemmed trees with tight unions. Occasional minor deadwood or old pruning wounds and ivy covered. Ownership unclear | | | | Good | Fair | 20 to 40 yrs | Low | C | Lift crown of trees within group to provide suitable clearance for proposed garden fence - pruning to suitable pruning points. |
| T3 | Goat Willow | *Salix caprea* | Mature | 11 | 10+ | 180 avg. | No | 0 | 7 | 2.5 | 3.5 | 4.5 | Limited access around base | Multiple stemmed at 0.5m. Vertical. Old pruning wounds. Stubs. Epicormic growths. Bark damage. Ivy covered. Minor cavities. Minor decay | Minor deadwood. Old pruning wounds. Slightly unbalanced | Situated at top of bank to east of site, ownership unclear. Typical multiple stemmed form with several tight unions and partially included bark. Large southern stem historically removed leaving large wound and decay with unbalanced crown. Dense epicormic growths and undergrowth prevented detailed inspection and accurate stem measurement | Fair | Fair | 10 to 20 yrs | Moderate | C | Lift northern crown to provide suitable clearance for proposed garden fence - pruning to suitable pruning points. |

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| | Tree Species | | | Measurements | | | | Crown (m) | | | | | Tree Condition | | | | | | Value | | Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tree ID* | *Common Name* | *Latin Name* | *Maturity* | *Height (m)* | *Stems* | *Stem Diameter (mm)* | *Estimated* | *Crown height* | *N* | *E* | *S* | *W* | *Roots* | *Stem* | *Crown* | *Comments* | *Physiological* | *Structural* | *Life Expectancy* | *Amenity* | *Category* | *Works* |
| G4 | Hawthorn | *Crataegus monogyna* | Early-mature | 7.5 | 10+ | 200 avg. | No | 0 | See plan | | | | Several early-mature Hawthorn situated to east of site, partially on banking which reduces in height to east. Typical forms with several multiple stemmed trees with tight unions. Occasional minor deadwood or old pruning wounds and ivy covered. Ownership unclear | | | | Good | Fair | 20 to 40 yrs | Low | C | No works required to facilitate the development. |
| T5 | Goat Willow | *Salix caprea* | Early-mature | 4.5 | 1 | 480 | No | 0 | 1 | 0.5 | 6.5 | 2 | Limited access around base | Single stemmed at base. Significant lean. Old pruning wounds. Epicormic growths. Stubs. Bark damage. Major cavity. Major decay | Old pruning wounds. Cavities. Moderate dieback. Moderate deadwood. Snapped /hanging branches | Situated at top of banking to east of site. Ownership unclear. Historical tight union failed at 1m leaving massive wound to base with decay. Remaining stem partially failed just above at 1.5m with stem resting on ground to south | Poor | Poor | <10 yrs | Low | U | Removal recommended regardless of the development. |
| T6 | Goat Willow | *Salix caprea* | Mature | 12 | 2 | 460, 440 | No | 3.5 | 5.5 | 4.5 | 6 | 5 | Limited access around base | at 0.5m. Vertical. Old pruning wounds. Stubs. Epicormic growths. Bark damage. Ivy covered. Minor cavities. Minor decay. Twin stemmed. Tight union. Partially included bark | Old pruning wounds. Slightly unbalanced. Minor dieback. Moderate deadwood | Situated at top of bank to east of site, ownership unclear. Typical multiple stemmed form with several tight unions with partially included bark. Several hazard beams and snapout wounds in crown as well as minor dieback with associated deadwood. Dense ivy prevented detailed inspection and accurate stem measurement | Fair | Poor | 10 to 20 yrs | Moderate | C | Lift western crown to provide suitable clearance for proposed garden fence - pruning to suitable pruning points. |

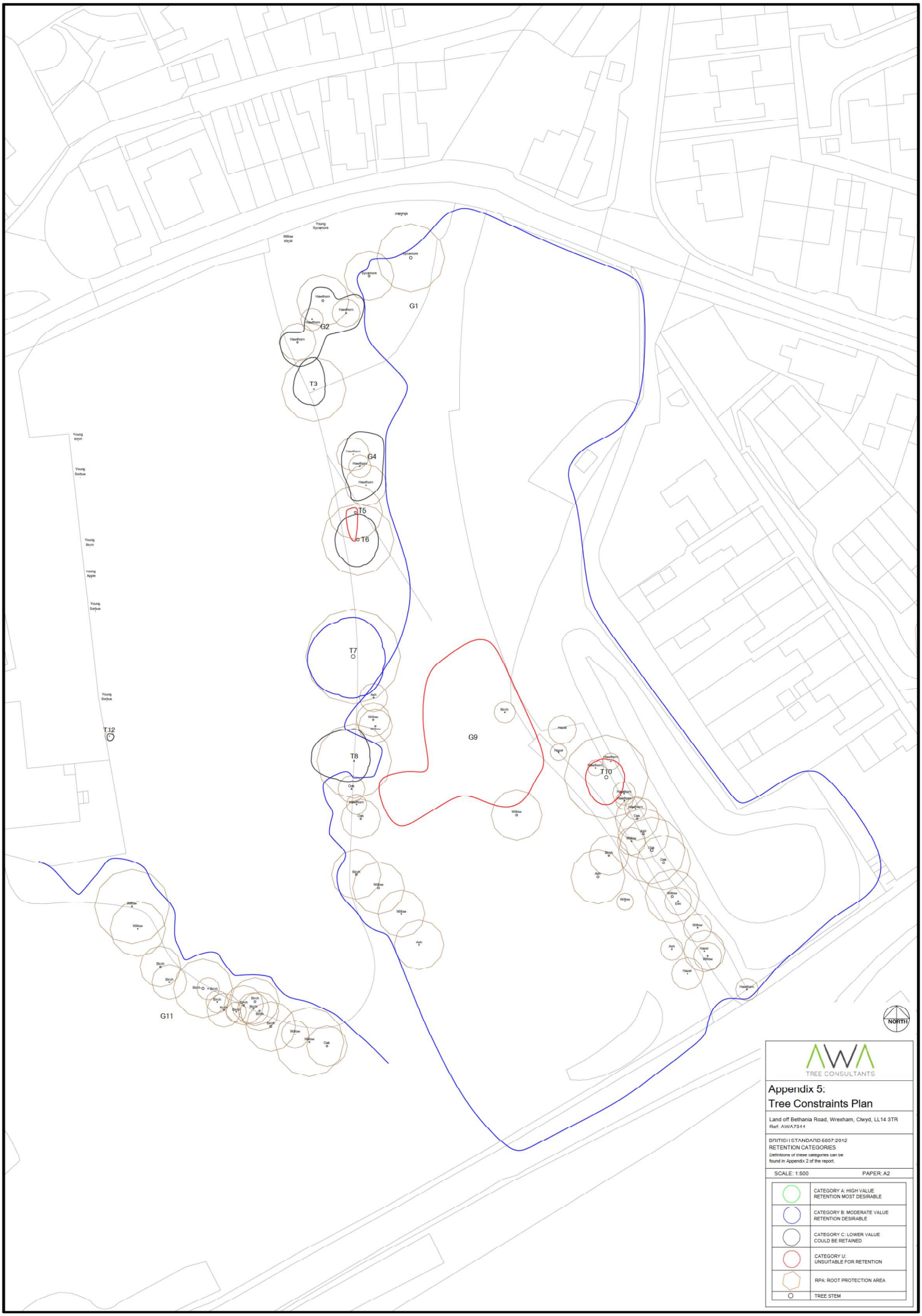
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| | Tree Species | | | Measurements | | | | Crown (m) | | | | | Tree Condition | | | | | | Value | | Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tree ID* | *Common Name* | *Latin Name* | *Maturity* | *Height (m)* | *Stems* | *Stem Diameter (mm)* | *Estimated* | *Crown height* | *N* | *E* | *S* | *W* | *Roots* | *Stem* | *Crown* | *Comments* | *Physiological* | *Structural* | *Life Expectancy* | *Amenity* | *Category* | *Works* |
| T7 | Oak | *Quercus robur* | Early-mature | 15 | 1 | 840 | No | 0.5 | 8.5 | 7 | 9 | 10 | Limited access around base | Single stemmed. Vertical. Epicormic growths. Stubs. Old pruning wounds | Minor deadwood. Old pruning wounds. Snapped /hanging branches | Situated at top of banking to east of site. Ownership unclear. Wide low spreading crown. Prominent tree in landscape. Occasional minor deadwood and snapped hanging branches | Good | Good | >40 yrs | Moderate | B | Reduce western crown by 2-3m and raise to provide 2.5m clearance from proposed parking, pruning only to small third order branches |
| T8 | Goat Willow | *Salix caprea* | Mature | 13 | 7 | 250 avg. | No | 0 | 6 | 3.5 | 4.5 | 9.5 | No visual defects | Multiple stemmed at 0.5m. Vertical. Old pruning wounds. Stubs. Epicormic growths. Bark damage. Ivy covered. Minor cavities. Minor decay | Minor deadwood. Old pruning wounds | Situated at top of bank to north of site, ownership unclear. Steps down bank to north. Typical multiple stemmed form with several tight unions and partially included bark. Large south western stem with historical partial failure and decay, with associated crown resting on ground. Large snapped hanging branch in southern crown. Low target in current site context | Fair | Poor | 10 to 20 yrs | Low | C | Removal required to facilitate the development. |
| G9 | Birch, Willow, Ash, Oak, and Hawthorn | *Betula sp., Salix sp., Fraxinus sp., Quercus sp., Crataegus sp.* | Semi-mature | 6 | 10+ | avg. | Yes | 0 | See plan | | | | Area of windblow and damaged trees within G1, partially adjacent to redline boundaries. Several dead or standing or failed trees with occasional partially failed or damaged by failure of other trees. Predominantly semi-mature with the occasional early-mature individuals. Access prevented detailed inspection of both the tree group and the northern section of G1 adjacent to parts of the site's redline boundary. Very low target in current site context | | | | Poor | Poor | <10 yrs | Low | U | Removal recommended regardless of the development. |

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| | Tree Species | | | Measurements | | | | Crown (m) | | | | | Tree Condition | | | | | | Value | | Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tree ID* | *Common Name* | *Latin Name* | *Maturity* | *Height (m)* | *Stems* | *Stem Diameter (mm)* | *Estimated* | *Crown height* | *N* | *E* | *S* | *W* | *Roots* | *Stem* | *Crown* | *Comments* | *Physiological* | *Structural* | *Life Expectancy* | *Amenity* | *Category* | *Works* |
| T10 | Goat Willow | *Salix caprea* | Mature | 17 | 2 | 530, 520 | No | 4.5 | 4 | 4 | 6 | 4.5 | Limited access around base | Twin stemmed at base. Vertical. Old pruning wounds. Stubs. Tight union. Partially included bark. Bark damage. Major cavity. Major decay | Low vigour. Minor dieback. Moderate deadwood. Snapped /hanging branches | Adjacent mature tree in group. Tight union at base historically partially failed but stabilised. Several snapped hanging limbs and hazard beams. Some decay to stem. Low target in current site context | Fair | Poor | <10 yrs | Low | U | Removal recommended regardless of the development. |
| G11 | Silver Birch | *Betula pendula* | Early-mature | 16 | 10+ | 250 avg. | No | 0 | See plan | | | | Partially adjacent woodland type group occupying land to south west of site. Mixed species young to early-mature group primarily comprising Birch and Willow, with several semi-mature Oak and native shrub species. Provides some screening and habitat value but individually trees of lower arboricultural significance. Several dead or partially failed trees in low target inaccessible areas. Dense undergrowth prevented detailed inspection and accurate stem measurements for parts of group | | | | Fair | Fair | 20 to 40 yrs | Moderate | B | No works required to facilitate the development. |
| T12 | Himalayan Birch | *Betula utilis* | Young | 4 | 1 | 80 | No | 0.5 | 0.5 | 1 | 1 | 0.5 | No visual defects | Single stemmed. Vertical. Old pruning wounds | Normal | Planted tree at boundary. Adjacent carpark to west | Good | Good | >40 yrs | Low | C | No works required to facilitate the development. |

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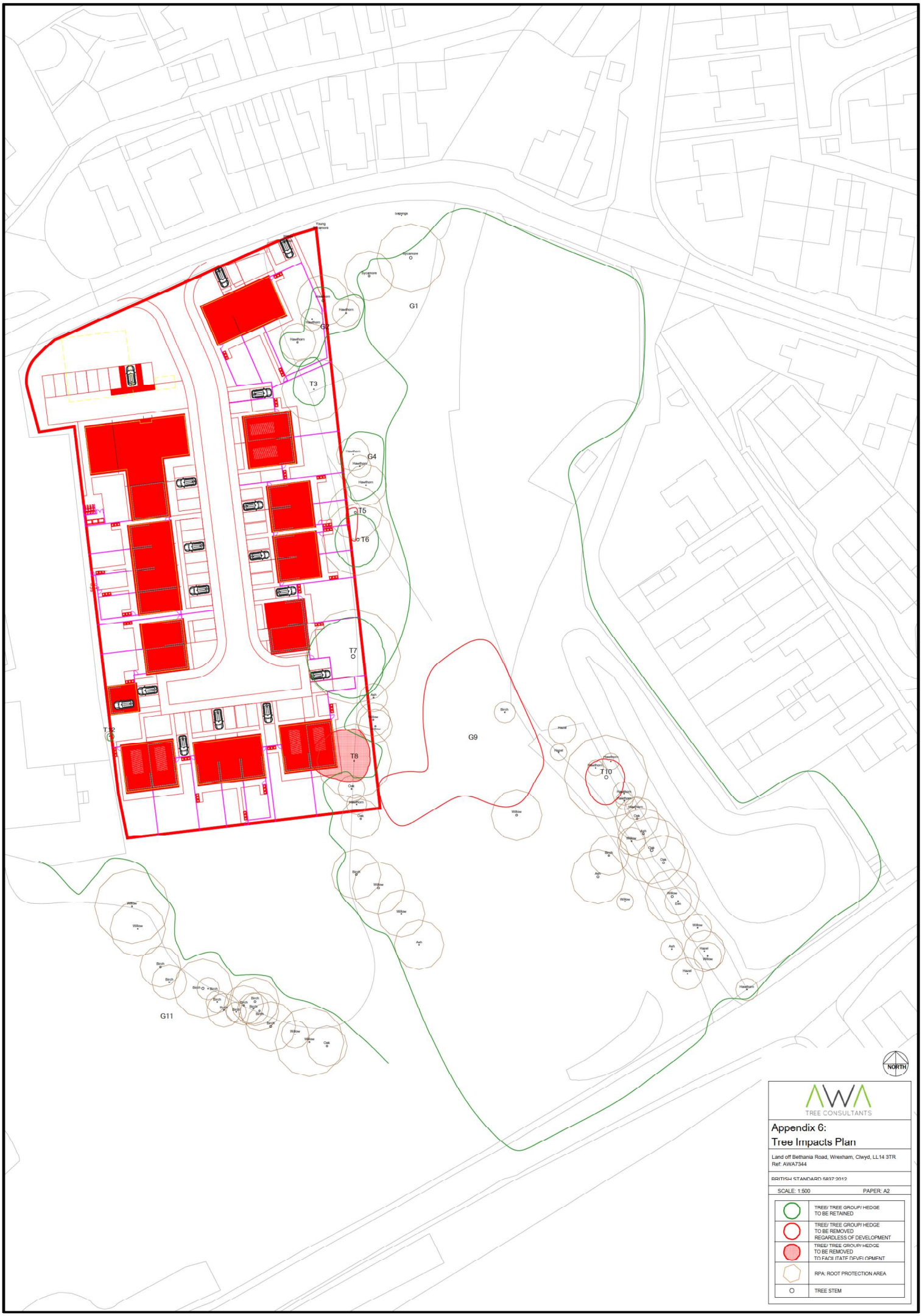
# Appendix 5:
# Tree Constraints Plan

Land off Bethania Road, Wrexham, Clwyd, LL14 3TR
Ref: AWA7344

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these categories can be found in Appendix 2 of the report.

SCALE: 1:500 PAPER: A2

| | |
|---|---|
| | CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE |
| | CATEGORY B: MODERATE VALUE RETENTION DESIRABLE |
| | CATEGORY C: LOWER VALUE COULD BE RETAINED |
| | CATEGORY U: UNSUITABLE FOR RETENTION |
| | RPA: ROOT PROTECTION AREA |
| | TREE STEM |




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# Appendix 6:
# Tree Impacts Plan

Land off Bethania Road, Wrexham, Clwyd, LL14 3TR
Ref: AWA7344

BRITISH STANDARD 5837:2012

SCALE: 1:500 PAPER: A2

| | |
|---|---|
| | TREE/ TREE GROUP/ HEDGE TO BE RETAINED |
| | TREE/ TREE GROUP/ HEDGE TO BE REMOVED REGARDLESS OF DEVELOPMENT |
| | TREE/ TREE GROUP/ HEDGE TO BE REMOVED TO FACILITATE DEVELOPMENT |
| | RPA: ROOT PROTECTION AREA |
| | TREE STEM |