

# Manor Gardens
# Wrexham Road, Rhostyllen

## Arboricultural Method Statement
## Inspection and Monitoring Report

Report Ref: 238/R/200

August 2026

mdlandscape

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# Manor Gardens
# Wrexham Road, Rhostyllen
# Arboricultural Impact Assessment and Method Statement

Report Reference: 238/R/200
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## Contents

EXECUTIVE SUMMARY ..... 1

1 INTRODUCTION ..... 2

1.1 Scope of assessment ..... 2

2 THE SITE AND SURROUNDINGS ..... 3

2.2 The Development Proposals ..... 3

2.3 Statutory Tree Protection, Ancient Woodland, Veteran and Ancient Trees ..... 4

2.4 Protected Species ..... 7

3 PLANNING CONSIDERATIONS ..... 8

3.1 Planning Policy ..... 8

*Trees, Woodlands and Hedgerows* ..... 8

4 TREE POPULATION AND CONDITION ..... 11

4.1 Tree species and population ..... 11

4.2 Categorisation and value ..... 11

5 ARBORICULTURAL METHOD STATEMENT, MONITORING AND INSPECTION ..... 15

5.1 Site inspection, observations and action required ..... 15

5.2 General requirements ..... 16

6 WORKS TO EXISTING TREES AND HEDGES, REMAINING PHASES OF WORKS ..... 19

6.1 Tree works ..... 19

6.2 Tree and root protection ..... 19

6.3 Topsoil storage ..... 20

6.4 Temporary pedestrian access during construction ..... 21

6.5 Vehicular access ..... 21

6.6 Additional precautions outside the CEZ ..... 21

6.7 Site compounds, cabins, storage of materials and spoil ..... 21

6.8 Installation of services and excavation within the RPA ..... 22

6.9 Demolition and new surfacing within the CEZ ..... 22

6.10 Reinstatement and soft landscaping within the CEZ ..... 23

6.11 Construction of new footpaths within the CEZ ..... 24

6.12 Arboricultural watching brief and supervision ..... 24

7 MITIGATION PLANTING & LANDSCAPING ..... 25

7.1 Mitigation .....25
8 INSPECTIONS .....26
8.1 Prior to commencement of construction .....26
8.2 Reinspection .....26
9 FIGURES .....27
10 APPENDICES .....28

| Figures | Document/Drawing Title | Document/Drawing Reference |
|---|---|---|
| 1.0 | Site Location Plan | |
| 2.0 | Tree Constraints Plans | 238 /T/100, 101, 102 |
| 3.0 | Arboricultural Method Statement Plan | 238 /T/200, 201, 202 |
| 4.0 | Arboricultural Method Statement – Tree Protection Measures | 238 /T/500 |
| 5.0 | Site Plan | WR2-SAL-A1-ZZ-DR-A-0619 |
| **Tables** | | |
| 1.0 | Existing tree and hedgerow population, completed and proposed tree works and protection | |
| 2.0 | Chart showing typical relationship between girth and tree species growing in average conditions (source Ancient Tree Guide no 4, The Woodland Trust) | |
| | | |
| **Appendices** | | |
| 1 | Site photographs | |
| 2 | Tree Quality Assessment Chart | |
| 3 | Tree Inspection Proforma | |
| 4 | National Joint Utilities Group (NJUG) Guidelines | |
| 5 | Common causes of tree death poster | |
| 6 | Glossary of Terms | |
| 7 | References | |



## EXECUTIVE SUMMARY

1. This report has been produced to detail the arboricultural mitigation and protection requirements for trees at a residential development at Manor Gardens, Wrexham Road, Rhostyllen.
2. A tree survey was carried out on 12th September 2022, prior to the commencement of development and the tree data schedule and plans were produced for the site, reference 238-T-100, 101, 102.
3. Based on an objective assessment of the trees, groups of trees, woodland and hedges made in accordance with *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations*, a total of 23 features were surveyed, including 8 individual trees, five groups of trees, and eight hedges. The features fall within category B, C and U of the BS5837:2012 cascade chart for tree categories.
4. An enquiry to Wrexham County Borough Council, has identified that one tree, ash 2834, is the subject of a Tree Preservation Order (TPO). No Conservation Areas are affected by the proposals.
5. A number of trees were observed to have arboricultural features suitable for bats. The capacity of any trees potentially affected by the works to support roosting bats, should be confirmed by an Ecologist prior to undertaking tree works. The trees also provide nesting opportunities for birds and any tree works should occur between September to February to avoid the nesting and breeding bird season from March to August inclusive.
6. One group of trees, ref 2842 and hedges to the site boundary with Wrexham Road have been removed to facilitate construction, formation of new access roads and for visibility splays. Further hedgerow removal and tree removal is required as construction works progress.
7. Tree protection fencing is required to demarcate a Construction Exclusion Zone (CEZ) around trees to be retained for the continuation of development at the site.
8. One oak 2836 to the east boundary has been affected by construction work and remedial works and protection measures are required.
9. One ash 2834 requires investigation due to the presence of bracket fungi within the crown and recent branch loss. An aerial tree inspection and decay detection investigation have been commissioned. This report will be updated with the findings in due course.
10. This report and accompanying drawings should be considered a live document. Changes to trees can occur as a result of natural processes and disease, as well as the influences of development. Continued monitoring and inspections during construction should be carried out to ensure continued protection of trees that are to be retained.
11. Regular tree inspections should be carried out, at least every two years to monitor the health and condition of the groups of trees and individual trees.

# 1 INTRODUCTION

## 1.1 Scope of assessment

1.1.1 MDLandscape have been commissioned by SG Estates to undertake an Arboricultural Method Statement (AMS) of a residential development at Wrexham Road, Rhostyllen to ensure tree protection measures are implemented, maintained, and monitored throughout construction. The purpose of the report is to help ensure the successful retention of trees on site during construction and details the proposed and ongoing protection measures and mitigation.

1.1.2 Tree surveys at the site were conducted on 12th September 2022 prior to commencement of development by M Dobson (FdScArb, MArborA, Lantra certified Professional Tree Inspector) in accordance with *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations*.

1.1.3 The tree survey was carried out to verify the condition of trees in relation to an original Arboricultural Implication Study undertaken in April 2013. The Tree Constraints Verification Report, Ref: 238/R/100 provided updated measurements, comments and recommendations on the tree population within the development site. The Tree Constraints Plans are included in figure 2.0, reference 238/T/100, 101, 102.

1.1.4 This report includes:

- The tree data schedule and constraints plan for trees present within the survey and assessment area;
- An assessment of trees and impacts on trees in relation to development and the requirements for protection during construction;
- Identification of trees and hedges already removed for the development and tree protection requirements that are in place at the site;
- Identification of trees and hedges that are to be removed for the future stages of development, tree protection requirements and remediation works; and
- Recommendations for further inspection of one early ancient stage tree at the site.



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# 2 THE SITE AND SURROUNDINGS

2.1.1 The assessment area is located on land centred on SJ 31674 48626 adjacent to Wrexham Road, Rhostyllen as shown in figure 1.0. The site was formerly a field and is being gradually developed for housing.




Figure 1.0 Site location - Contains ordnance survey data OS Maps (OpenStreetMap Ordnancesurvey.co.uk)

2.1.2 All trees over 75mm stem diameter at breast height (DBH) and potentially impacted by development, were surveyed. Individual stem diameters of trees in woodland and larger groups were not plotted unless they were particularly notable individuals or had a stem of 150mm DBH and above[1] in accordance with BS5837:2012 recommendations for woodland surveys.

## 2.2 The Development Proposals

2.2.1 The AMS has been prepared in relation to a planning application for residential development, as shown on figure 5.0 showing the site layout phases one to five and public open space drawing WR2-SAL-A1-ZZ-DR-A-0619. The western section of the residential development has been completed.

2.2.2 The planning site history includes:

- P/2004/0940 - Outline application for residential development and open amenity land, construction of new vehicular and pedestrian access and alteration to existing vehicular and pedestrian access. Granted - 6.12.04.
- P/2007/0682 - Variation of condition no 5 imposed under planning permission code no P/2004/0940 to allow the installation of signal controlled junctions instead of two roundabouts on Wrexham Road.

[1] Clause 4.2.4 of BS5837:2012 states that *In the case of woodlands or substantial tree groups, only individual trees with stem diameters greater than 150mm usually need to be plotted.*

- P/2007/0683 - Construction of 2 new footpaths/cycleways and erection of three footbridges. Granted 20.07.07.
- P/2007/0684 - Fell 1 no. Ash tree (TPO WCBC No. 23). Refused 10.07.07.
- P/2007/0685 - Development of community centre (D1) retail (A1) and cafe (A3). Granted 3/3/2008
- P/2007/0686 - Residential development (223 dwellings) and construction of new vehicular and pedestrian accesses (granted in outline under code no P/2004/0940 and subsequently varied under code no. P/2008/1063) Granted – 1/12/2008
- P/2008/1063 - Variation of Condition 5 of planning permission code P/2004/0940 to allow the installation of a signal controlled junction and roundabout instead of two new roundabouts at Wrexham Road. Granted - 01/12/2008.
- P/2013/0002- Variation of conditions Nos. 1, 2 and 13 of planning permission
- P/2007/0685 to allow more time to commence development and to amend approved parking layout associated with the development. Granted 4.3.2013
- P/2023/0653 - Variation of Condition 2 of planning permission P/2007/0686 (Plot substitution 83-116). Granted - 1/11/24.
- P/2025/0145 - Non material amendment to planning permission P/2023/0653 to amend approved plans - substitution of house types. Granted - 13/03/25.

2.2.3 The planning condition relating to the remaining site area to be developed to the north and north-east, requires that an Arboricultural Method Statement be submitted to the Local Planning Authority and supervisory visits be undertaken to monitor the trees, constraints and protection methods in relation to construction.

## 2.3 Statutory Tree Protection, Ancient Woodland, Veteran and Ancient Trees

2.3.1 An ash to the north boundary with Wrexham Road, survey reference 2834, is the subject of a Tree Preservation Order (TPO), reference TPO 1998, noted as number 23 T1 Ash (E:331646, N:348702) in the order.

2.3.2 An examination of the Natural Resources Wales (NRW) Interactive Map Viewer on 25/08/2026[2] confirms there is no ancient woodland within the survey area. There is an area of Ancient Semi Natural Woodland to the south of the railway line, approximately 0.03km from Yorke Close. There is no comprehensive national register of veteran trees, however, an examination of the Woodland Trust Ancient Tree Inventory[3] confirms that the ash 2834, is a recorded ancient tree.

2.3.3 The girth of a veteran or ancient tree is measured using a standard measuring tape rather than a calibrated diameter tape and provides the circumference measurement of the stem or trunk. The Woodland Trust guidance on veteran and ancient trees[4] identifies trees with a sizeable girth for their species. Table 2.0 reproduced from The Woodland Trust website, provides guidance on girth size and species.

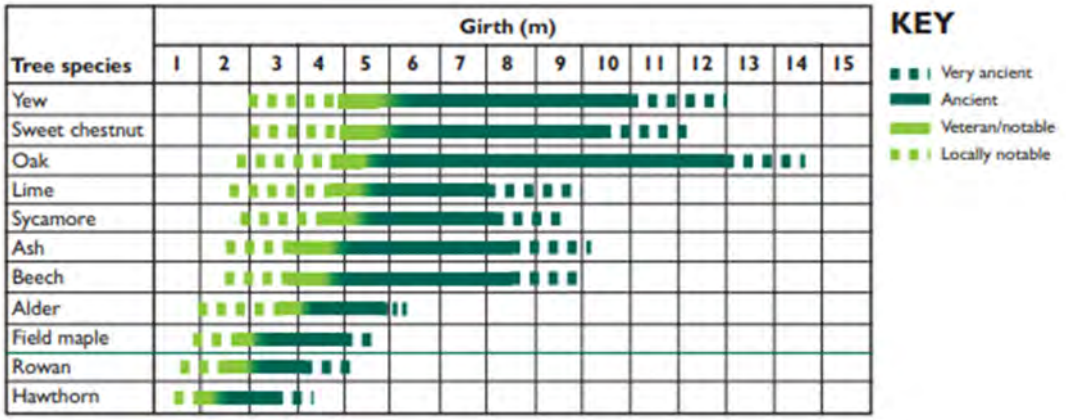
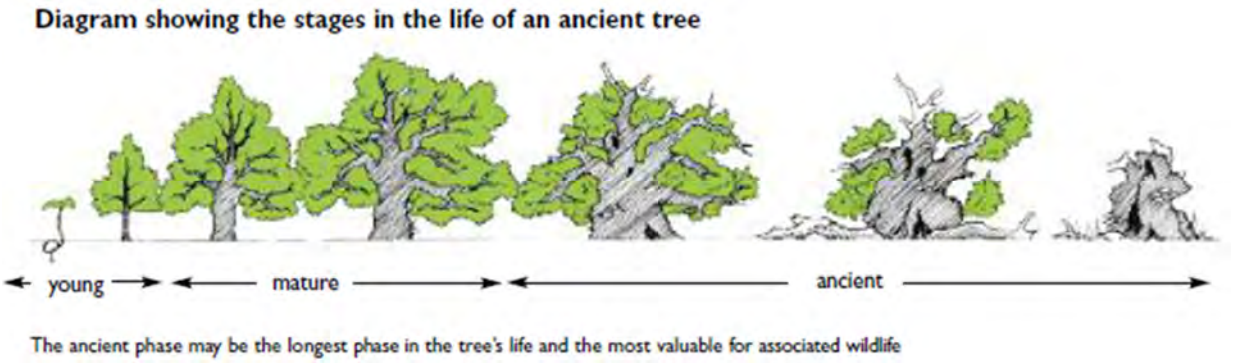



Table 2.0 Chart showing typical relationship between girth and tree species growing in average conditions (source Ancient Tree Guide no 4, The Woodland Trust)




(source Ancient Tree Guide no 4, The Woodland Trust)

[2] Natural Resources Wales Interactive Map Viewer Geocortex Viewer for HTML5 (cyfoethnaturiolcymru.gov.uk)
[3] Ancient Tree Inventory How to record ancient trees - Ancient Tree Inventory (woodlandtrust.org.uk)
[4] Ancient Tree Guide no.4: What is an ancient tree? The Woodland Trust, November 2008

## 2.4 Ash survey reference 2834

2.4.1 The ash 2834 was measured on site and recorded a stem diameter of 1.5m measured at 1.5m from ground level, which equates to a girth of 4.713m, placing it at early ancient phase.

2.4.2 The tree is recorded as an ancient tree on the Ancient Tree Inventory, tree number 132005 measuring 4.34m girth at a height of 1.50m, with a note, *Hollowing trunk, Decaying wood in the crown.*

2.4.3 A climbed inspection of the tree was carried out on 18th October 2022 by Treehogs Ltd after the tree survey in September 2022. Their observations were as follows:

- Only one fruiting body present at time of inspection, on the largest limb facing south.
- The tree is showing early signs of ash die back.
- Large cavity at approximately 5m from historic pruning or branch loss. Lots of decayed timber inside. Once kicked away this uncovered a hollowing in the main branch union of the tree. Probe inserted approximately 1m . Difficult to assess the extent of the internal cavity without a resistograph or PICUS investigation.

2.4.4 The recommendations of Treehogs Ltd were as follows:

- Reduce large south facing limb by approximately 5m to vertical growth point. This would be to reduce end loading and reduce the probability of limb failure.
- Reduce/thin the remainder of the crown by approximately 30% to maintain shape and relieve stress/ weight from the main structure.

2.4.5 Ash 2834 currently has at least five bracket formations of *Inonotus hispidus* on major branches in the crown. A recent failure of a major branch into the Construction Exclusion Zone (CEZ) was noted to have fungal fruiting bodies and internal white rot. *Daldina concentrica* was also noted on a branch to the south aspect, indicating presence on dead and/or dysfunctional sections. Both of these fungi are associated with white rot.

2.4.6 White rot is an aggressive decay agent that can weaken timber and result in trunks or branches breaking and falling in stormy weather.

2.4.7 In general the tree has a healthy crown, with limited dieback, however the recent branch failure and development of a number of fruiting bodies points to further spread of decay and a change in the crown architecture. This may signify an episodic reduction in post-mature crown size.

## 2.5 Protected Species

2.5.1 Trees and hedges are a potential habitat for nesting birds and roosting habitat for bats, both of which are protected under the *Wildlife and Countryside Act 1981* (as amended) and certain species under the *Conservation of Species and Habitat Regulations 2010*. This makes it an offence to intentionally or recklessly, damage or destroy an active birds' nest.

2.5.2 Several trees within the survey boundary may be suitable habitat for nesting birds and roosting habitat for bats, therefore all trees should be inspected for the absence or presence of nesting bird activity or presence of bats, before removal or major pruning work is carried out. A qualified Ecologist should be appointed to ensure a preliminary ecological assessment is undertaken and further ground level tree assessments (GLTA) or climbed tree assessments may be required.

# 3 PLANNING CONSIDERATIONS

## 3.1 Planning Policy

3.1.1 In addition to statutory designations and protection, the planning system also confers importance on trees and woodland in the context of potential development. The Planning Policy Wales document[5] states a number of policies relating to trees and benefits of trees in design, specifically relating to green infrastructure (paragraph 6.2), trees, woodlands and hedgerows in paragraphs 6.4.37 to 6.4.44:

***Trees, Woodlands and Hedgerows***

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

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

*6.4.39 Planning authorities must protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function. Planning authorities should consider the importance of trees and woodland, particularly native woodland and valued trees, and should have regard to local authority tree strategies or SPG and the Green Infrastructure Assessment. Planning authorities should adopt appropriate, locally relevant, time sensitive, minimum tree canopy cover targets for their authority area to guide the protection and where appropriate the expansion of canopy cover. The Green Infrastructure Assessment and tools such as NRW's Tree Cover in Wales' Towns and Cities study and Forest Research's i-Tree Eco tool would help establish a baseline of canopy cover and guide the identification of appropriate and measurable canopy targets.*

[5] Planning Policy Wales, Edition 12, February 2024 Welsh Government Planning Policy Wales - Edition 12 (gov.wales)

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

*6.4.41 Whilst most focus within the planning system is targeted at urban trees, planning authorities should recognise the importance of trees within the countryside, either as woodlands, within hedgerows and hedgebanks, or free-standing trees in fields, or as wood pasture. This is particularly important as the effects of climate change are leading towards pests and diseases that are damaging many of our native species in the rural landscape. Positive mechanisms of rural tree retention should be considered, and measures taken to replace them in an effective and economic manner, either with new planting or by allowing them to grow to their full potential.*

*6.4.42 Permanent removal of trees, woodland and hedgerows would only be permitted where it would achieve significant and clearly defined public benefits. Where individual or groups of trees and hedgerows are removed as part of a proposed scheme, planning authorities must first follow the step-wise approach as set out in paragraph 6.4.15. Where loss is unavoidable developers would be required to provide compensatory planting (which is proportionate to the proposed loss as identified through an assessment of green infrastructure value including biodiversity, landscape value and carbon capture). Replacement planting shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of at least 3 trees of a similar type and compensatory size planted for every 1 lost. Where a woodland or a shelterbelt area is lost as part of a proposed scheme, the compensation planting must be at a scale, design and species mix reflective of that area lost. In such circumstances, the planting rate must be at a minimum of 1600 trees per hectare for broadleaves, and 2500 trees per hectare for conifers. The planting position for each replacement tree shall be fit to support its establishment and health, and ensure its unconstrained long-term growth to optimise the environmental and ecological benefits it affords.*

*6.4.43 Ancient woodland, semi-natural woodlands, individual ancient, veteran and heritage trees and ancient hedgerows are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value. Such trees, woodlands and hedgerows are to be afforded protection from development which would result in their loss or deterioration unless very exceptionally there are significant and clearly defined public benefits; this protection must prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW. Planning authorities should also have regard to the Ancient Tree Inventory, work to improve its completeness and use it to ensure the protection of trees and woodland and identify*



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*opportunities for more planting as part of the Green Infrastructure Assessment, particularly in terms of canopy cover.*

*6.4.44 The protection and planting of trees and hedgerows should be delivered, where appropriate, through locally-specific strategies and policies, through imposing conditions when granting planning permission, and/or by making Tree Preservation Orders (TPOs). They should also be incorporated into Green Infrastructure Assessments and plans.*

# 4 TREE POPULATION AND CONDITION

## 4.1 Tree species and population

4.1.1 The trees surveyed included ash, oak, willow species (sp), lime, silver birch, horse chestnut, sycamore, hawthorn and holly, with hedgerow species including cultivated cypress, privet, hawthorn, wych elm, rose, holly, elder, ash and field maple. An area of woodland to the south east of the site, includes species of beech, alder, elder, hawthorn, willow, oak, silver birch, ash, cherry, wych elm, holly and hazel.

## 4.2 Categorisation and value

4.2.1 Trees within the survey area have been identified within categories B, C and U. Some category C trees are considered to have an estimated remaining contribution of less than ten years. A walkover survey by M Dobson on 19/08/2026 was undertaken to review the condition of trees at the site, protection measures within the development site and ongoing requirements for tree and hedgerow removal and protection.

4.2.2 Features that have been removed as part of the development or are still to be removed, are identified in Table 1.0. The table references trees and hedges present at the time of the original survey in 2022 and recommendations for continued tree protection during construction. The original tree constraints plans are shown in figure 2.0, drawings 238/T/100, 101 and 102. The current status of tree and hedgerow retention and planned removal still to be carried out, is shown on the AMS drawings 238/T/200,201 and 202 in figure 3.0.

| Tree ref | Species | Height m | Stem DBH mm | Crown spread m | | | | Height of crown clearance m | Age class | Physiological condition | Structural condition | Preliminary management recommendations and comments on condition | Estimated remaining condition in years | Category Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | S | E | W | | | | | | | |
| 2834 | Ash | 20 | 1500 | 9 | 11 | 9.5 | 7.5 | 2 | Over mature / early ancient stage | Fair | Poor | Tree is fenced to full extent of RPA; Fungal fruiting bodies, Inonotus hispidus and Daldina concentrica present on major scaffold branches; recent branch failures of 100mm dia including major failure within CEZ.; adaptive (new) growth to stem, tree is compensating for loss of branches in crown but is in slow decline; healthy crown with no sign of ash dieback; if retained as part of new development a review of the potential target area and targets is required; crown reduction required to allow safe retention in an area of potential public access; consider fencing or hedge planting around the crown spread of the tree.<br>Aerial inspection and decay detection investigation have been commissioned for September 2027 | Under 10<br><br>Potentially 10-20 years after intervention and with appropriate ongoing tree management and annual inspections | U<br><br>Potentially B3 after intervention and with appropriate ongoing tree management and annual inspections |
| 2835 | Willow | | | | | | | | | | | No longer present | | |
| T1 | Willow | 8 | Over 1000 basal diameter | 3 | 3 | 2 | 5.5 | 2 | Middle age | Poor | Poor | Tree to north east on railway verge not previously noted; partially collapsed having been extensively pruned; in poor condition<br>Recommended for removal due to impact of development on RPA | Under 10 | U |
| 2836 | Oak | 14 | 700 | 5.5 | 5 | 7 | 7 | 1.5 | Mature | Fair | Fair | Located on boundary with railway; previous pruning to clear crown from over head wires; condition potentially improved from previous survey with growth to crown spread; tree of moderate quality<br>Excavation within the RPA has potentially disturbed 20% of the rooting area on the field side within the development; recommend reinstatement of surface topsoil to the extent of RPA and incorporation of biochar to improve rooting conditions; review with Client with regard to extent of cellular installation. | 20-40 | B2 |
| G1 | Group: Hawthorn, Holly, elder, oak | Up to 7 | | | | | | | Mature | Good | Good | Scattered mature large shrubs/small trees along fence on railway verge with occasional oak under 75mm with potential to develop into larger trees; hawthorn, holly and elder can be pruned if crown extends over boundary; oak saplings may develop into trees with positive contribution; sufficient rooting area within development for future growth; no concerns | 20-40 | C2 |

| Tree ref | Species | Height m | Stem DBH mm | Crown spread m | | | | Height of crown clearance m | Age class | Physiological condition | Structural condition | Preliminary management recommendations and comments on condition | Estimated remaining condition in years | Category Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | S | E | W | | | | | | | |
| G2 | Group:<br>Oak | Up to 15m | Up to 440 | | | | | | Young to early mature | Good | Good | Group of oak either side of 2836 on railway verge; crown extends up to 7.5m west into the site but adjacent to proposed open space; no concerns with regard to potential development impact but tree protection fence to RPA is recommended | 20-40 | B2 |
| 2837 | Group:<br>500mm Silver birch<br>est 800mm lime<br>830mm sycamore<br>930mm horse chestnut<br>850mm Lime<br>680mm horse chestnut<br>850mm lime<br>1030mm sycamore<br>770mm horse chestnut | Up to 1 | Up to 1000 | 4 | 6 | 9.5 | 8 | 1.8 (W) | Mature | Poor to Good | Poor to Good | Linear group within church grounds adjacent to stone boundary wall including:<br>Silver birch; lime; sycamore of good form and condition; excessive basal epicormic growth and foliage to lime impeding inspection of stem; sycamores with ivy growth;<br>Trees along the boundary have been topped and crown reduced to 8m in height and crown pruned back to the boundary wall; one horse chestnut has died and has been retained as a monolith for habitat benefit; not fully inspected | Group: 20-40<br>Silver birch (1), sycamore (2),<br>lime (3)<br><br>Group: under 10<br>horse-chestnut (3) | B2<br><br><br><br><br><br><br><br>U |
| 2838 | Hawthorn | 6 | Up to 300 | 6 | 6 | 6 | 6 | 1.5 | Mature | Fair | Fair | Within church grounds | 20 | C2 |
| 2839 | Group: Cypress | 9 | Up to 350 | 2.5 | 2.5 | 2.5 | 2.5 | 0.5 | Mature | Good | Good | Within church grounds | 20 | C2 |
| 2840 | Hawthorn | | | | | | | | | | | Not noted as an individual tree; considered to have formed part of boundary hedge | | |
| 2841 | Sycamore | | | | | | | | | | | Not noted as an individual tree now potentially forming part of woodland edge or has been removed | | |
| 2842 | Group: Hawthorn | | | | | | | | | | | Removed for development | | |
| G3 | Privet | Up to 5m | | | | | | | Mature | Good | Good | Groups of privet to boundary and building of similar height and condition – shrubs<br>Trees to be removed for development | | Not applicable |
| H1 | Hawthorn hedge | | | | | | | | | | | Removed for development | | |
| H2 | Hawthorn, Holly | | | | | | | | | | | | | |
| H3 | Wych elm, Hawthorn, Elder | | | | | | | | | | | | | |
| H4 | Elder, Hawthorn, Privet Holly | Up to 2m | | | | | | | Mature – over 30 years | Good | Good | Mixed species hedge, predominantly privet, well maintained | | |
| H5 | Cypress hedge | Up to 2.5m | | | | | | | Mature | Good | Good | Maintained hedge | | |
| H6 | Hawthorn<br>Wych elm<br>Holly Elder Field maple | Up to 2m | | | | | | | Mature – over 30 years | Good | Good | Mixed species hedge, predominantly hawthorn, well maintained, planted on slightly raised bank parallel with roadside footpath Section within development site partially | | |

| Tree ref | Species | Height m | Stem DBH mm | Crown spread m | | | | Height of crown clearance m | Age class | Physiological condition | Structural condition | Preliminary management recommendations and comments on condition | Estimated remaining condition in years | Category Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | S | E | W | | | | | | | |
| | | | | | | | | | | | | removed for new access; remainder of length within site to be removed for development | | |
| H7 | Privet | Up to 5m | | | | | | | Mature | Good | Good | Individual privet to west and south of fence/wall with larger group of privet to south, rose with scrubby growth to south | | |
| H8 | Hawthorn, Wych elm Elder Rose Ash saplings | Up to 2m | | | | | | | Mature – over 30 years | Good | Good | Mixed species hedge, predominantly hawthorn, well maintained, planted on slightly raised bank parallel with roadside footpath Section within development site partially removed for new access; remainder of length within site to be removed for development | | |
| T2 | Purple leaved cherry | Up to 8m | | | | | | | Early mature | Good | Good | No access for close inspection as within private garden; crown to south and east extends to face of hedge; appears to have multiple stems arising at or below 2m | | |
| T3 | Pine tree | Up to 9m | Est 180 | 2 | 2 | 3 | 2 | 1.5 | Early mature | Good | Good | No access for close inspection as within private garden; crown does not extend to boundary hedge of garden | | |

Table 1.0 Existing tree and hedgerow population, completed and proposed tree works and protection

# 5 ARBORICULTURAL METHOD STATEMENT, MONITORING AND INSPECTION

## 5.1 Site inspection, observations and action required

5.1.1 A copy of this document should be provided to the Project Manager and retained at the site office, with all relevant drawings included in the appendices clearly displayed on site notice boards. The method statement must be made freely available for inspection to contractors and sub-contractors. The document shall be introduced to all new contractors as part of the general site induction.

5.1.2 The site was inspected during a walkover on 19th August 2026 by M Dobson. The existing trees and hedges that have been retained and protected to the west of the development site as shown on drawing 238/T/202 have been suitably and appropriately protected and have not been affected by development.

5.1.3 Where construction work is ongoing to the centre of the site as shown on drawing 238/T/201, the principal feature is an ash, survey reference 2834. The tree is protected with tree protection fencing braced with scaffold poles to the full extent of the RPA in accordance with BS5837:2012. The fence also protects the existing hedge (H6) along this section of the site boundary. As part of the site walkover, M Dobson and the Client' s representative inspected the ash with a specialist arboricultural consultant to discuss the condition the condition of the tree, due to a recent failure of a major branch that had fallen into the construction exclusion zone (CEZ) formed by the fenced area.

5.1.4 Due to the loss of a major limb to south side, presence of bracket fungi in at least five locations throughout crown and *Daldina concentrica*, it was agreed that an aerial tree inspection and decay detection investigation was required to gain a more comprehensive assessment of the tree condition. This has now been commissioned and the findings of the inspection and investigation will be presented in a report to the Client. The report will detail visible cavities, decay, fungal fruiting bodies, presence of splits, cracks and potential areas of structural weakness that cannot be assessed from ground level.

5.1.5 The report will allow an assessment of condition to be made, potential hazardous features in relation to the surrounding targets, such as residential properties, highway and footpaths and recommendations for immediate and future tree management. The intention currently remains that the tree will be retained within the development. A copy of the report will be provided to the LPA Tree Officer for information and consultation with regard to any proposed tree works, future management, ecology constraints and required permissions for tree works.

5.1.6 There has been a request from the SG Estates site team to reduce the RPA radius to enable construction of a proposed access road. This request will be reviewed following the inspection of the ash tree and discussed with the LPA Tree Officer before any decision is made. This method statement will be updated accordingly.

5.1.7 To the remainder of the construction site and compound, there is no tree or hedge protection in place. Although some of the hedges and trees will be removed in future phases, tree protection fencing should be installed in the interim to protect vegetation from damage in accordance with BS5837:2012. Tree protection fencing should also be installed to trees that are outside the site boundary to the east and south east, that have roots extending into the site. This is shown on drawings 238/T/200 and 201.

5.1.8 An oak, survey reference 2836, has been affected by excavation within the RPA. It is estimated that 20% of the RPA has been disturbed as a result of the installation of a cellular tank. Adjacent trees in group G2 have also been affected. The extent of the RPA should be fenced immediately to prevent any further disturbance.

5.1.9 The surface topsoils must be replaced to the RPA to original levels, up to 450mm depth. Due to the loss of roots in the upper soil profile, An enriched biochar soil improver should be incorporated into the soil to help stimulate new root growth and recovery.

5.1.10 A certified enriched biochar (e.g., Carbon Gold Biochar Tree Soil Improver) should be applied as a top-dressing at 2–3 kg/m² within the accessible RPA. This product provides a biologically active carbon matrix containing Trichoderma and mycorrhizal fungi, supporting recovery of soil structure, microbial function, and moisture regulation following construction-related RPA disturbance. Application should be combined with air-spade decompaction and organic mulch to maximise soil-system recovery.

5.1.11 Following biochar application, a 50–100 mm layer of high-quality organic mulch should be applied across the accessible RPA. Mulch stabilises moisture, protects the biochar layer, and provides the organic matter required to support microbial and mycorrhizal recovery. Mulch should be kept clear of the stem and maintained annually.

5.1.12 The tree should be inspected annually for changes in condition.

5.1.13 Smaller trees and vegetation to the boundary with the railway line, survey reference G1, also have RPA that extend into the site. The site layout shows that these features will be within areas of landscaping and open space and will not be impacted by the proposed works, however temporary tree protection fencing should be installed to the extent of the RPA to prevent damage during construction and change in ground levels.

5.1.14 The existing hedgerow H8, has been partially removed for a new access road. Hedgerow either side of this entrance will also be removed for development however it is not currently protected by temporary fencing. Until such time as the hedgerow is removed for construction, temporary fencing should be installed to prevent encroachment into the RPA.

## 5.2 General requirements

5.2.1 An Arboricultural Consultant should inspect the tree works and protection measures to ensure compliance with this method statement. Timing of inspections would generally be every 6-8 weeks or timed to coincide with planned work stages and include ad-hoc inspections.

5.2.2 All proposed tree works shall be carried out by a suitably qualified, competent and insured contractor. Specific experience in working with ancient and veteran trees would be required for works to the ash 2834. Tree work should be undertaken in accordance with BS 3998:2010 – "Tree Work - Recommendations" and current issued FISA Safety Guides (Forestry Industry Safety Accord). No tree works shall be undertaken by construction personnel.

5.2.3 All tree works to be carried out shall comply with all appropriate legislation, including planning application decision notices and conditions, felling licences and statutory Tree Preservation Order constraints and requirements.

5.2.4 The felling of trees in England is regulated by the Forestry Act (1967), the provisions of which are enforced by the Forestry Commission. Advice should be sought from a suitably qualified arboriculturist at least six months before any anticipated felling work is carried out to allow sufficient time to consult with the Forestry Commission, prepare documentation and apply for a felling licence. Exceptions to the need for a felling licence may apply, as specified under the Forestry Act, however it is still advisable to consult with the Forestry Commission to ask advice on whether a specific tree felling exception can be used.[6]

5.2.5 Prior to any development and removal of trees, the protected status of trees on site should be assessed again in the event of any changes since the survey and assessment were undertaken.

5.2.6 Permission from other organisations may be required before trees are felled, for example within locally or nationally designated sites, Sites of special Scientific Interest and ancient woodland. Any tree works must comply with the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000, which provides statutory protection to protected species and birds. All tree work operations are covered by these provisions and advice from an Ecologist should be obtained before undertaking any works that might constitute an offence.

5.2.7 The proposed tree works are shown on the Arboricultural Method Statement Plans 238/T/200, 201 and 202.

5.2.8 No tree removal or pruning works other than those identified in this method statement, are to be carried out as further permissions from Wrexham County Borough Council, Third Parties or the Forestry Commission in relation to felling licences may be required and ecological constraints may be present.

5.2.9 All proposed tree pruning and tree removal, shall be undertaken in accordance with the approved schedule and plans appended within this report and in consultation with the Arboricultural Consultant and Ecologist. No works are to be undertaken on trees that are shown to be retained and protected without prior consultation with the Arboricultural Consultant and Ecologist.

5.2.10 Trees to be removed shall be spray painted in accordance with the drawings and accompanying schedule.

5.2.11 The Site Manager shall be responsible for daily compliance with this method statement and shall contact the Arboricultural Consultant as required for general queries, ad-hoc inspections and unexpected occurrences affecting trees during the course of the works, such as encountering large roots over 25mm diameter or if additional pruning is required.

5.2.12 The contractor and site staff are responsible for ensuring that there are no breaches in the RPA and ensure continued protection of trees on site during construction.

5.2.13 The tree works and subsequent installation of protection must be carried out prior to the commencement of construction, ground preparation works, establishment of site compounds, delivery of construction plant and materials or other investigation works.

5.2.14 All tree works should be undertaken with regard to potential bat constraints and outside of the nesting bird season which is between 1st March to 1st September.

5.2.15 If any tree works are to take place between March and August, a suitably qualified Ecologist should check the tree works area a maximum of 24 hours before any works commence. Should any nesting birds be found, or suspected to be present, advice should be sought from the Ecologist before proceeding.

5.2.16 If nesting birds are found, the tree should be marked with tape or spray paint to prevent the tree from being removed until the young have fledged the nest. The drawing displayed in the site office and showing the relevant tree should be marked to identify the presence of a birds nest and the date noted. This would allow forward planning for reinspection and removal once the young have fledged the nest.

[6] Tree felling: Getting permission - updated 2023 (publishing.service.gov.uk) Forestry Commission (England)

# 6 WORKS TO EXISTING TREES AND HEDGES, REMAINING PHASES OF WORKS

## 6.1 Tree works

6.1.1 The tree works proposed are shown on the Arboricultural Method Statement Plans 238/T/200, 201 and 202.

6.1.2 All operations must be carried out to avoid damaging neighbouring retained trees. Trees to be retained must not be used for anchorage or winching purposes.

6.1.3 Any pruning to facilitate access must ensure there is no significant adverse impact on tree physiology or amenity value. A suitable working area may be created by temporarily tying back tree branches to avoid excessive pruning. The visual appearance, health and stability of a tree must be considered when undertaking pruning works and remedial pruning may be required as part of the tree works.

6.1.4 All trees that have been approved for removal shall be cut down to a low stump. Those that are in close proximity to trees to be retained shall either have their stumps ground out or left in situ. The stumps of felled trees not in close proximity to retained trees can be fully grubbed out. Access for stump removal must gained from within the designated construction working area, not through groups or woodland to avoid damaging the RPA of trees to be retained.

6.1.5 All arising timber shall be removed from site.

6.1.6 Trees in category U that are dead or in decline may be retained as standing dead wood where there is no public access and no targets. Where there is existing public access, or where new access is planned, in the vicinity of category U trees, it is proposed that these trees are either reduced to 4m in height as standing dead wood, or removed completely. These works should be reviewed by an Ecologist if the potential bat roost features are present or suspected.

6.1.7 Tree protection fencing and ground protection measures shall be installed following completion of the tree works and prior to any other construction or clearance works taking place.

6.1.8 All tree work should be undertaken with due regard to ecological constraints and any mitigation requirements.

## 6.2 Tree and root protection

6.2.1 Following completion of the tree works, and subsequent inspection and sign off by the Arboricultural Consultant, the Site Manager shall arrange installation of the temporary tree protection.

6.2.2 Tree protection fencing in accordance with BS5837:2012 (see drawing 238/AMS/T/500) or other suitable robust and immovable fence to minimum 1.8m in height to be approved by the Arboricultural Consultant and LPA Tree Officer, shall be erected prior to the commencement of any of the following activities:

- Soil stripping;
- Delivery of any plant or materials;

- Demolition and site clearance;
- Commencement of construction works;
- Installation of any utilities;
- Soiling / ground reinstatement; and
- Landscape works.

6.2.3 The protective fencing shall be erected to the alignment as shown on the Arboricultural Method Statement Plan. The temporary tree protection fencing shall tie into the existing boundary fencing where appropriate.

6.2.4 Weather proof tree protection fence signs (drawing 238/AMS/T/500) shall be attached to the fencing at 20m intervals and positioned at eye level. These signs must be replaced if they are removed or become illegible.

6.2.5 Once erected these fenced areas should be respected and after installation, barriers and ground protection should not be removed or altered without prior recommendation by the Arboricultural Consultant and must remain in place until completion of all construction works on site.

6.2.6 No works are proposed within the CEZ once the fence and ground protection measures are installed. The CEZ must not be altered and the following restrictions shall apply:

- No change in ground level, reprofiling or mechanical excavations;
- No excavations by other means without the advice and agreement of the Arboricultural Consultant;
- No removal of grass areas by mechanical means;
- No storage of plant or materials;
- No storage or handling of any chemicals, fuels, wash out areas; and
- No vehicular access.

6.2.7 Where the Root Protection Areas (RPA) for retained trees extends beyond the tree protection fencing, temporary ground protection shall be installed in accordance with BS5837:2012. Such ground protection must ensure that there is no soil compaction and root growth is uninhibited. The ground protection shall consist of the following as relevant to the proposed site layout and construction requirements:

## 6.3 Topsoil storage

6.3.1 Topsoil storage within the RPA of existing trees to be retained should be avoided. It is recommended that geotextile be laid below the proposed topsoil storage bund to segregate existing and stored soils to prevent inadvertent excavation at reinstatement. Topsoil should not be stored more than 1m in height.

## 6.4 Temporary pedestrian access during construction

6.4.1 Single thickness non-slip boards on a 100mm compression-resistant layer of woodchip, over a robust geo/textile membrane; or, geotextile laid over existing ground with 100mm depth clean inert hardcore; or, non-slip boards laid on a purpose formed scaffold frame, creating a suspended walkway. Alternative proposals may be submitted to the Arboricultural Consultant.

## 6.5 Vehicular access

6.5.1 Where vehicular construction access is required within the RPA of trees to be retained, an above ground protection system shall be provided. This shall be installed to accommodate the potential loading within the RPA and shall be designed to an engineering specification in conjunction with arboricultural advice.

6.5.2 On completion of construction and reinstatement works the above ground protection systems shall be removed only with the approval of the Arboricultural Consultant. Surface de-compaction and root zone enhancement measures may be required and can then be undertaken.

## 6.6 Additional precautions outside the CEZ

6.6.1 Care should be taken when planning site operations to ensure that all types of machinery can operate without encountering retained trees. Such contact can result in significant damage and compromise safe retention of the tree. It is recommended that a banksman is employed to ensure adequate clearance from trees is always maintained. Where this is not possible, access facilitation pruning in consultation with the Arboricultural Consultant may be required. No signs, apparatus or any other services shall be attached to any part of a retained tree.

## 6.7 Site compounds, cabins, storage of materials and spoil

6.7.1 Temporary site compounds, including portable welfare facilities and temporary service connections, are to be positioned clear of the RPA of retained trees. The site poster 'Common causes of tree death' (see Appendix 6) shall be posted in the site cabin(s).

6.7.2 The delivery, storage, mixing and discharge of concrete and all other cement based materials shall be carried out away from retained trees, so that there is no risk of runoff and spillage in the RPA. No substances that are potentially injurious to trees (including fuels, building materials and other phyto-toxic materials) shall be stored or used in the vicinity of retained trees where there is a risk of injurious contact. Emergency spillage kits must be available to minimise the impacts of any accidental spillages to the local environment.

6.7.3 No materials shall be stored within the RPA of retained trees. Spoil from any site activity shall be removed or if to be retained for reuse, stored or piled outside the CEZ.

## 6.8 Installation of services and excavation within the RPA

6.8.1 Underground services should be routed outside the RPA of all retained trees to avoid risk of roots being severed during excavation. Mechanical trenching can also affect local soil hydrology. Common ducts should be used to minimise disturbance and segregated from the RPA.

6.8.2 Where there is no alternative and new services are to pass within the RPA, the service plans should be developed with input from the Arboricultural Consultant. Trenchless insertion methods should be used where possible, with the entry and exit pits situated outside the RPA.

6.8.3 Where this is not possible the NJUG 10 Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees should be adopted, refer to Appendix 4. Hand excavation may be acceptable for shallow service runs, where they can be undertaken with the supervision of the Arboricultural Consultant and where roots can be retained and suitably protected. Where possible an air spade or air lance should be used to loosen the soil and removed using a vacuum excavator. Soils should be stored and retained on site for reinstatement on completion of the works. This may also involve wrapping or covering exposed roots to prevent desiccation and the effects of rapid temperature change. All wrappings must be removed prior to backfilling.

6.8.4 Prior to backfilling of soils the installation of a root protection barrier may be required to ensure there are no long-term effects of root growth on buried assets. Backfilling to trenches should ensure that subsoils are replaced first in 300mm layers and soils consolidated but not compacted. The final 300mm of soil backfill to ground level should be topsoil excavated from the trench or a 50/50 mix by volume of as dug topsoil and proprietary tree and shrub compost with organic matter content to replicate the upper soil profile. Injection of soils with mycorrhizal inoculant may also be considered where fibrous roots have been lost due to excavation.

## 6.9 Demolition and new surfacing within the CEZ

6.9.1 Demolition of existing structures in close proximity to retained trees should be carried out under the supervision of the Arboricultural Consultant with works planned to avoid deposition of material within the CEZ and to avoid damage to retained trees. Mechanical plant access within the CEZ should be avoided. Temporary pedestrian access shall be allowed within the CEZ to carry out these operations. A temporary breach in the fencing shall be created to facilitate pedestrian access only.

6.9.2 Removal of the existing hard surfacing adjacent to the RPA should be undertaken first, working away from the retained tree to allow any exposed roots to be appropriately covered and protected as work proceeds. Debris within the RPA should be removed by hand and transported clear of the protective fencing using wheelbarrows.

6.9.3 Where roots are encountered during the course of the works, they shall be retained and carefully worked around, wherever practicable. No root greater than 25mm dia. shall be cut without advice from the Arboricultural Consultant. If damage does occur to a root greater than 25mm diameter, then advice must be sought from the Arboricultural Consultant. Where it is essential to sever roots, they shall be cleanly cut, using an appropriate, sharp clean bladed hand tool. Roots that are to be retained shall be covered with hessian, or similar, to protect from desiccation. Prior to backfilling, any hessian wrapping should be removed and retained roots should be surrounded with sharp sand, or other loose granular fill before soil or other material is replaced.

6.9.4 To minimise risk of damage to tree roots to be retained, an air spade or vacuum excavator may be used to loosen and remove soils, in order to identify the location of roots adjacent to a planned excavation. Roots may then be pruned as previously described.

6.9.5 Where there is a deficit of cover due to removal of existing surfacing, inert sandy subsoil shall be placed where the depth exceeds 300mm. Where the depth of cover is 300mm or less, a loam-sand-based topsoil shall be placed to provide at least 300mm of cover. Grading shall be undertaken using hand tools only to avoid compaction. No reduction of levels of the underlying soil surface shall be carried out. Soiling shall be undertaken in accordance with the Construction code of practice for the sustainable use of soils on construction sites.[7]

## 6.10 Reinstatement and soft landscaping within the CEZ

6.10.1 Reinstatement and soft landscape works, excavation and ground preparation within the CEZ shall be carried out using hand tools to minimise risk of damage to roots. Mechanical cultivation and rotovation shall be avoided.

6.10.2 Chemical application for treatment of woody plant matter shall be minimised. Where used, all instructions, warnings and other relevant information from manufacturers should be strictly observed and followed. Care must be taken to avoid damage to adjacent vegetation and trees to be retained.

6.10.3 During reinstatement, there must be no unplanned changes in ground levels within the RPA and works should only be carried out when ground conditions are suitable to avoid risk of compaction. Final grading to marry in new levels with existing ground with imported soils shall be carried out by hand tools only. Cultivations for seeding shall also be by hand.

6.10.4 All new tree planting should be undertaken in accordance with *BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.* Planting pits for hedgerows, shrubs or trees within the RPA of existing retained trees, must be hand excavated. If substantial roots are encountered, the planting pit should be relocated if possible. Plants and materials for the landscape works should be transported in wheelbarrows and must be moved across existing hard surfacing where possible, or via temporary ground protection minimise risk of compaction.

[7] Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, www.defra.gov.uk September 2009

## 6.11 Construction of new footpaths within the CEZ

6.11.1 New footpaths within the RPA of trees to be retained must be installed using a 'no dig' construction method using a 3D cellular confinement system such as Cellweb TRP or equivalent product, in accordance with the Manufacturer's recommendations.

6.11.2 The process for installation should be in accordance with Manufacturer's recommendations and generally involves:

- Remove all existing vegetation from the surface using hand tools only. Arisings should be removed from the RPA using wheelbarrows only. No further excavations in this area are to take place. Any voids or depressions within the ground surface are to be made good using sharp sand (not builder's sand) to maintain levels.
- Position kerb edges where there is no conflict with tree roots with minimal haunching, or Install a metal edging to the full depth of proposed surfacing.
- Install geotextile to the ground surface and lay 3D cellular confinement mat (e.g. Cellweb) to the recommended thickness for the proposed access use on top of this membrane. Expand the mat to its full length and trim to the desired length and width. Carefully peg down the matting with proprietary staking pins to keep the cells open. Fill all the cells with a 20-40mm no fines angular granular stone working from the area furthest from the tree first. Continue filling all the cells using the previously filled cells as a working platform.
- The finished surface of the access area may be the gravel surface or laid as required with block paving or similar to manufacturers recommendations.

6.11.3 Topsoil is to be graded from the top of the kerb edge or installed edge restraints to the existing ground level to avoid creating trip hazards.

## 6.12 Arboricultural watching brief and supervision

6.12.1 The Site Manager shall inform the Arboricultural Consultant as soon as possible of the need to undertake excavation works within the RPA of existing trees or works to trees above ground and programme in an arboricultural watching brief. All watching briefs must be performed by an Arboricultural Consultant. This should be a planned activity to ensure the extent of tree works and disturbance is minimised and kept to within acceptable limits that do not compromise tree health and condition.

6.12.2 The Arboricultural Consultant would keep a record of any site inspections and make a photographic record for inspection. The inspection would include a ground level visual inspection, review of protection measures and a review of compliance with the AMS. A report would follow the inspection and issued to the Client, site team and LPA Tree Officer.

6.12.3 An example Tree Inspection Report Proforma is included at Appendix 3.

# 7 MITIGATION PLANTING & LANDSCAPING

## 7.1 Mitigation

7.1.1 On completion of construction, landscape reinstatement and creation of areas of public open space would be undertaken in accordance with the approved landscape drawings.

7.1.2 Plants and materials for the landscape works shall be transported along the new footpaths and hard surfacing areas to avoid trafficking over existing soils.

7.1.3 Soils to either side of the hard surfacing areas shall be graded to smooth, flowing contours, suitable for seeding and planting as per the reinstatement proposals. Care shall be taken not to overwork soils.

7.1.4 Replacement tree planting is proposed to mitigate for the removed trees, and to replace amenity or biodiversity value that may be lost because of the tree removal. There are opportunities on site to improve the composition and quality of existing tree groups and therefore enhance screening, biodiversity and visual amenity.

# 8 INSPECTIONS

## 8.1 Prior to commencement of construction

8.1.1 Once the protective fencing and ground protection measures have been installed but prior to the commencement of the development a site inspection should be undertaken by the Arboricultural Consultant. This is to confirm that all protection measures have been installed in accordance with the Tree Protection Plan and the method statement. The inspection should be recorded using the example proforma in Appendix 3, or similar and distributed to the Client, Site Manager and Wrexham CBC Tree Officer.

8.1.2 Checks of the tree protection fence and ground protection should be carried out by the contractor at regular intervals during the development to ensure trees remain adequately protected.

8.1.3 On completion of the development a general survey of the trees by the Arboricultural Consultant is recommended to identify any remedial action necessary as a result of the works. Note that permission for any additional tree works not included in the original development consent may need to be obtained through application to the LPA.

8.1.4 If any arboricultural issues arise during the development then the site manager should immediately contact the Arboricultural Consultant for advice on how to proceed.

## 8.2 Reinspection

8.2.1 It is recommended that trees are inspected every two years, particularly after storms or other extreme weather events, to identify potential new hazards or changes to known defects. Annual inspections have been recommended for specific trees where fungal fruiting bodies or defects are known to be present. Inspections of all retained trees should be undertaken by a qualified Arboriculturist/Arboricultural Consultant and records of inspection held at the site or with the landowner.

8.2.2 Hazard recommendations are based on observations at the time of survey. Trees are dynamic living organisms whose structure is constantly changing. Even those in good condition can suffer from damage or stress. Following site development, regular (annual or biennial) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.

# 9 FIGURES



6 Kinderton Close | High Legh | Knutsford| Cheshire | WA16 6LZ | mdlandscape@btinternet.com | 07710 498231

north

## Notes

1. Dimensions are given in metres and millimetres as stated on the drawing.
2. Drawing must be reproduced in colour.

## Legend

*Trees categorised in accordance with BS5837:2012 Trees in relation to design, demolition and construction : Recommendations*
*This drawing must be reproduced in colour*

- CATEGORY A - high quality
- CATEGORY B - moderate quality
- CATEGORY C - low quality
- CATEGORY U - unsuitable for retention
- HEDGE - CANOPY EXTENTS
- ROOT PROTECTION AREA (RPA)
- T, G, H REFERENCE tree, group, woodland, hedge

Tree Constraints Plan

0 10 20 30 40 50

SCALE 1:500 (A1)
SCALE 1:1000 (A3)
METRES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/100 | | | | |
| Title | TREE CONSTRAINTS PLAN SHEET ONE OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date | 13/09/2022 | Drawn | MD |

| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 13/09/2022 | FOR INFORMATION | MD |

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6 Kinderton Close | High Legh | Knutsford
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north

## Notes

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## Legend

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- HEDGE - CANOPY EXTENTS
- ROOT PROTECTION AREA (RPA)
- T, G, H REFERENCE tree, group, woodland, hedge

Wrexham Road

Garage

Holy Trinity Church

CLOSE

not surveyed copperbeech sycamore lime

T2 not surveyed

T3 not surveyed

2837-B2 (CP) 2834-B2,3 V (PO)

2837-C2

G1-C2

99.7m

331600E 331700E 331800E

348700N 348600N

# Tree Constraints Plan

0 10 20 30 40 50

SCALE 1:500 (A1)
SCALE 1:1000 (A3)
METRES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/101 | | | | |
| Title | TREE CONSTRAINTS PLAN SHEET TWO OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date | 13/09/2022 | Drawn | MD |

| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 13/09/2022 | FOR INFORMATION | MD |

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north

## Legend

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- ROOT PROTECTION AREA (RPA)
- T, G, H REFERENCE tree, group, woodland, hedge

## Notes

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2. Drawing must be reproduced in colour.

Holy Trinity Church

Colliery Garage

WREXHAM ROAD

Wexham Road

T2 not surveyed

T3 not surveyed

not surveyed copper beech sycamore lime

348600N

348500N

348400N

331700E

331600E

# Tree Constraints Plan

SCALE 1:500 (A1)
SCALE 1:1000 (A3)

0 10 20 30 40 50 METRES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/102 | | | | |
| Title | TREE CONSTRAINTS PLAN SHEET THREE OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date | 13/09/2022 | Drawn | MD |

| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 13/09/2022 | FOR INFORMATION | MD |

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Cheshire | WA16 6LZ | 07710 498231

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north

No work currently in this area

Trees outside of the site, but RPA within proposed landscape area

Construction compound

H8
H7
H6
G3
G1-C2
G2-B2
2836-B2
T1-U

## Notes

1. Dimensions are given in metres and millimetres as stated on the drawing.
2. Drawing must be reproduced in colour.

## Legend

Trees categorised in accordance with *BS5837:2012 Trees in relation to design, demolition and construction : Recommendations*
This drawing must be reproduced in colour

- TREE / GROUP RETAINED
- TREE / GROUP REMOVED
- TREE / GROUP TO BE REMOVED AS PART OF THE DEVELOPMENT
- HEDGE RETAINED
- HEDGE REMOVED
- HEDGE TO BE REMOVED AS PART OF THE DEVELOPMENT
- ROOT PROTECTION AREA (RPA)
- T, G, H, V — REFERENCE - TREE, GROUP, HEDGE VETERAN
- A B C U — TREE CATEGORY
- RPA AFFECTED BY SITE EXCAVATION REMEDIATION REQUIRED
- TEMPORARY TREE PROTECTION FENCE IN PLACE TO RPA
- TEMPORARY TREE PROTECTION FENCE TO BE INSTALLED TO RPA

Oak 2836 - affected by excavation within RPA, potential loss of 20% of RPA, remedial action required:

- Extent of the RPA should be fenced immediately to prevent any further disturbance.
- Surface topsoils must be replaced to the RPA to original levels, up to 450mm depth.
- An enriched biochar soil improver should be incorporated into the soil to help stimulate new root growth and recovery.
- (e.g., Carbon Gold Biochar Tree Soil Improver) should be applied as a top dressing at 2-3 kg/m² within the accessible RPA.
- Application should be combined with air spade decompaction and organic mulch to maximise soil system recovery.
- Following biochar application, a 50-100 mm layer of high quality organic mulch should be applied across the accessible RPA. Mulch stabilises moisture, protects the biochar layer, and provides the organic matter required to support microbial and mycorrhizal recovery. Mulch should be kept clear of the stem and maintained annually.

Arboricultural Method Statement Plan

0 10 20 30 40 50 METRES

SCALE 1:500 (A1)
SCALE 1:1000 (A3)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/200 | | | | |
| Title | ARBORICULTURAL METHOD STATEMENT PLAN SHEET ONE OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date | 27/08/2026 | Drawn | MD |

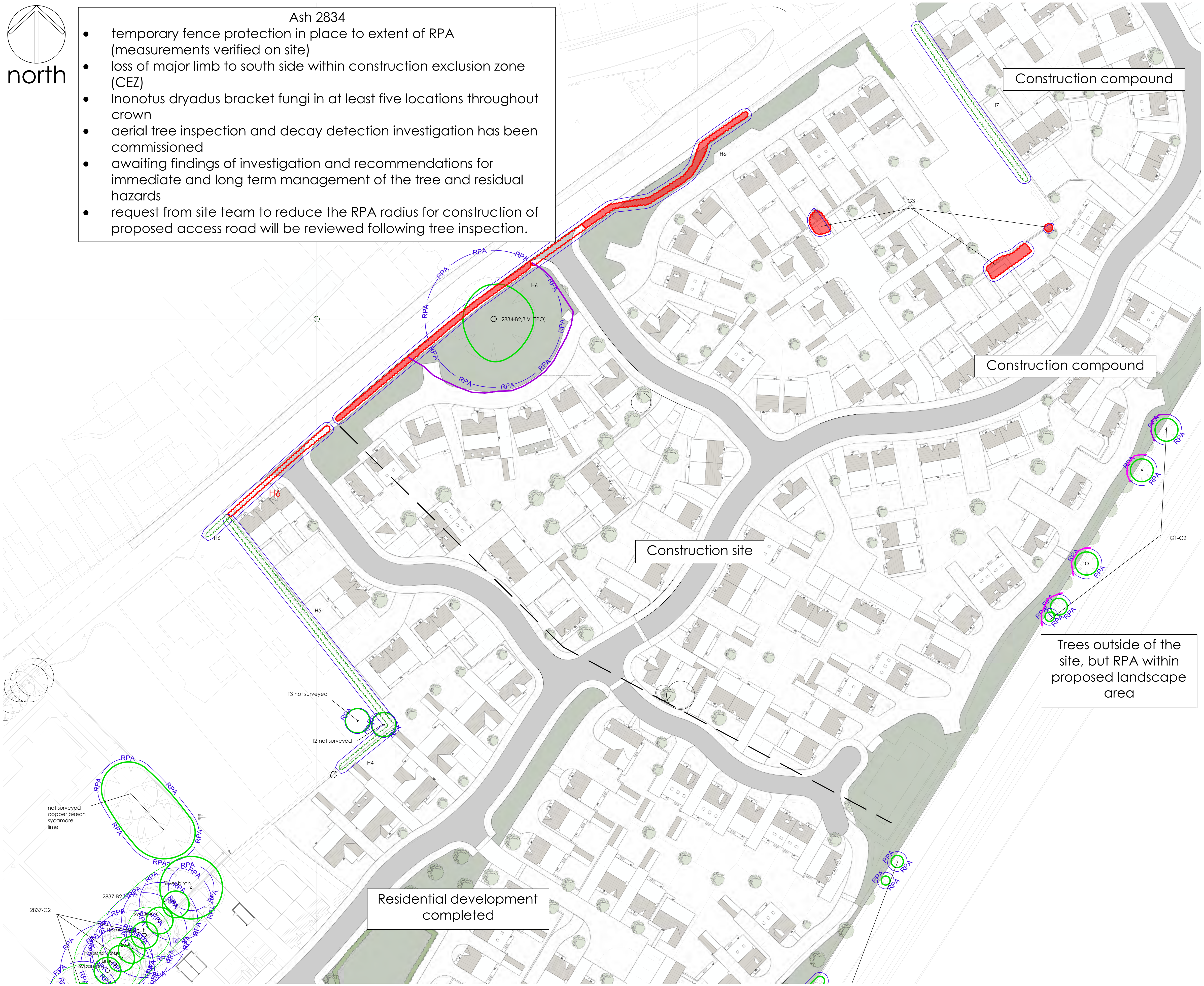
| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 27/08/2026 | FOR INFORMATION | MD |

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**Ash 2834**

- temporary fence protection in place to extent of RPA (measurements verified on site)
- loss of major limb to south side within construction exclusion zone (CEZ)
- Inonotus dryadus bracket fungi in at least five locations throughout crown
- aerial tree inspection and decay detection investigation has been commissioned
- awaiting findings of investigation and recommendations for immediate and long term management of the tree and residual hazards
- request from site team to reduce the RPA radius for construction of proposed access road will be reviewed following tree inspection.




## Notes

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2. Drawing must be reproduced in colour.

## Legend

*Trees categorised in accordance with BS5837:2012 Trees in relation to design, demolition and construction : Recommendations*
This drawing must be reproduced in colour

- TREE / GROUP RETAINED
- TREE / GROUP REMOVED
- TREE / GROUP TO BE REMOVED AS PART OF THE DEVELOPMENT
- HEDGE RETAINED
- HEDGE REMOVED
- HEDGE TO BE REMOVED AS PART OF THE DEVELOPMENT
- ROOT PROTECTION AREA (RPA)
- T, G, H, V — REFERENCE - TREE, GROUP, HEDGE VETERAN
- A B C U — TREE CATEGORY
- RPA AFFECTED BY SITE EXCAVATION REMEDIATION REQUIRED
- TEMPORARY TREE PROTECTION FENCE IN PLACE TO RPA
- TEMPORARY TREE PROTECTION FENCE TO BE INSTALLED TO RPA

## Arboricultural Method Statement Plan

0 10 20 30 40 50
SCALE 1:500 (A1)
SCALE 1:1000 (A3)
METRES

| | | | | | |
|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/201 | | |
| Title | ARBORICULTURAL METHOD STATEMENT PLAN SHEET TWO OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date 27/08/2026 | Drawn MD |

| Revision | Date | Reason | Initials |
|---|---|---|---|
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north

## Legend

*Trees categorised in accordance with BS5837:2012 Trees in relation to design, demolition and construction : Recommendations*
*This drawing must be reproduced in colour*

- TREE / GROUP RETAINED
- TREE / GROUP REMOVED
- TREE / GROUP TO BE REMOVED AS PART OF THE DEVELOPMENT
- HEDGE RETAINED
- HEDGE REMOVED
- HEDGE TO BE REMOVED AS PART OF THE DEVELOPMENT
- ROOT PROTECTION AREA (RPA)
- T, G, H, V — REFERENCE - TREE, GROUP, HEDGE VETERAN
- A B C U — TREE CATEGORY
- RPA AFFECTED BY SITE EXCAVATION REMEDIATION REQUIRED
- TEMPORARY TREE PROTECTION FENCE IN PLACE TO RPA
- TEMPORARY TREE PROTECTION FENCE TO BE INSTALLED TO RPA

## Notes

1. Dimensions are given in metres and millimetres as stated on the drawing.
2. Drawing must be reproduced in colour.

Construction site

Residential development completed

Trees in group in church yard have been crown reduced to 8m

Hedges removed

Residential development completed

Group removed and area landscaped

Trees outside of the site but RPA within new landscaped area

H1 H2 H3 H4 H5 H6

T3 not surveyed

T2 not surveyed

not surveyed
copper beech
sycamore
lime

2837-C2 2838-C2 2839-C2 2840-C2 2841-C2 2842-C2 G1-C2

ash under 75mm dbh

RPA

# Arboricultural Method Statement Plan

0 10 20 30 40 50

SCALE 1:500 (A1)
SCALE 1:1000 (A3)
METRES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/202 | | | | |
| Title | ARBORICULTURAL METHOD STATEMENT PLAN SHEET THREE OF THREE | Scale | 1:500 @ A1 / 1:1000 @ A3 | Date | 27/08/2026 | Drawn | MD |

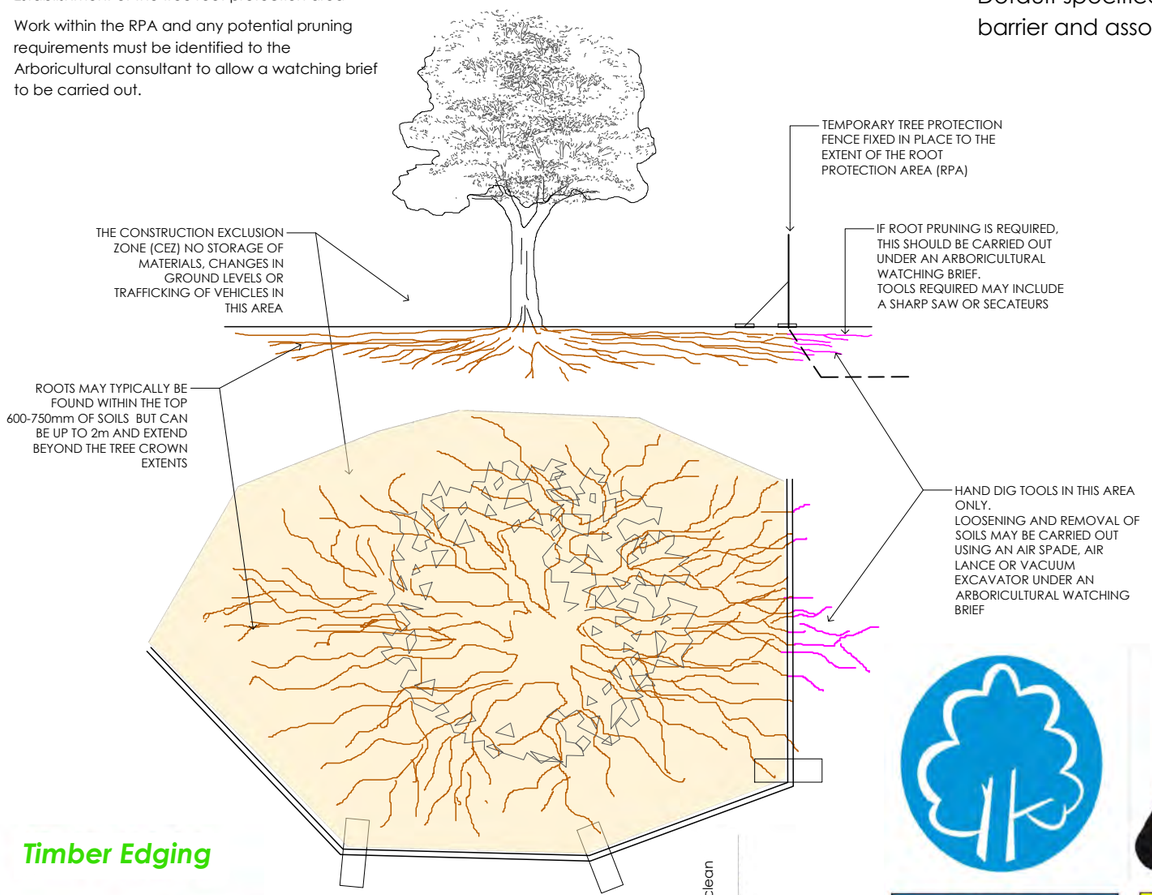
| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 27/08/2026 | FOR INFORMATION | MD |

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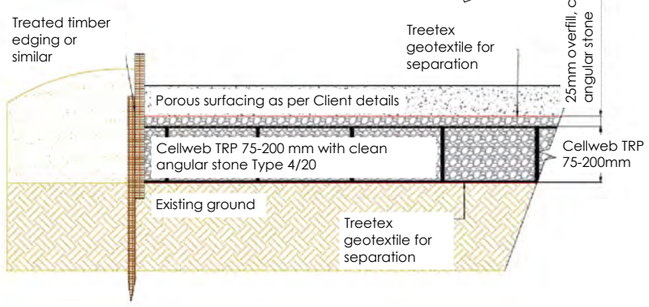
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Establishment of the tree root protection area

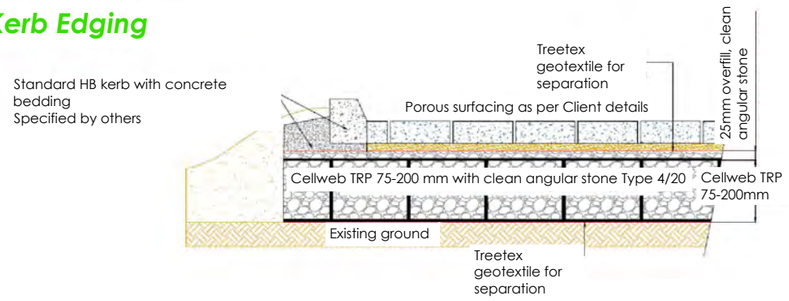
Work within the RPA and any potential pruning requirements must be identified to the Arboricultural consultant to allow a watching brief to be carried out.




## Timber Edging

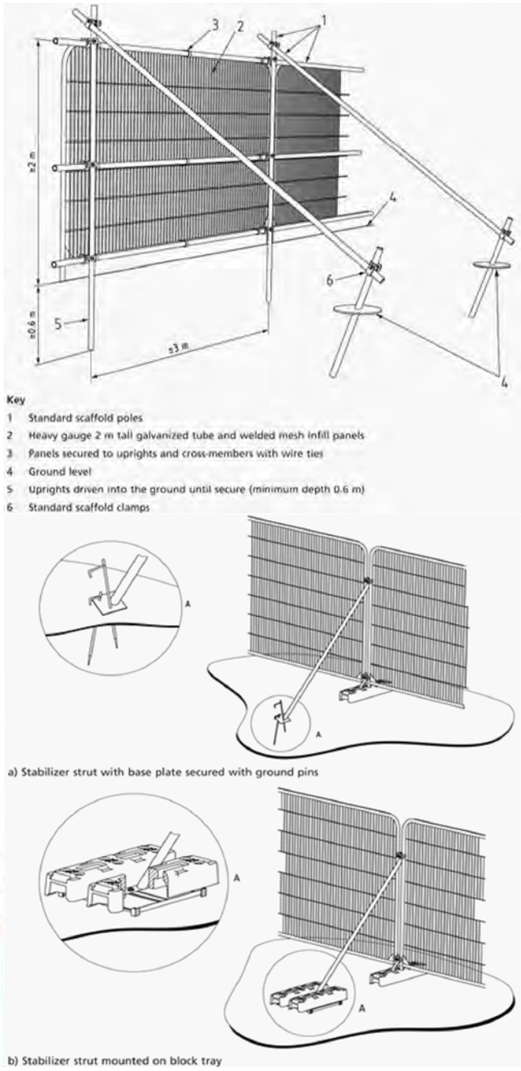


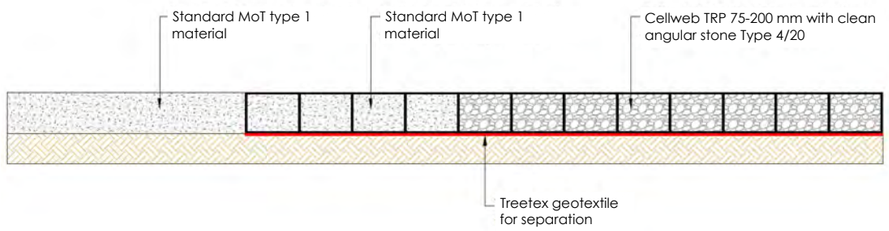

## Kerb Edging




## Default specification for protective barrier and associated signage




## Transition from Cellweb TRP to Crushed Hardcore or MoT Surfacing

Information taken from Cellweb TRP Product Information; please refer to website and Manufacturer for further information and specification




**Example of heavy duty ground protection matting for temporary vehicular access**



**Example of temporary and permanent ground protection systems such as CellwebTRP**

# ARBORICULTURAL METHOD STATEMENT
# PROPRIETARY TREE PROTECTION MEASURES

| | | | | | |
|---|---|---|---|---|---|
| Project | WREXHAM ROAD, RHOSTYLLEN | Dwg No | 238/T/500 | | |
| Title | ARBORICULTURAL METHOD STATEMENT PLAN - TREE PROTECTION MEASURES | Scale | Date 27/08/2026 | Drawn | MD |

| Revision | Date | Reason | Initials |
|---|---|---|---|
| P01 | 27/08/2026 | FOR INFORMATION | MD |


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| PRINTED: | | 14/08/2026 08:07:37 | |
|---|---|---|---|
| REV: | DESCRIPTION: | DATE: | BY: CHK: |
| P1 | FIRST ISSUE | 10/09/2025 | SD DP |
| P2 | POS AREAS UPDATED | 14/08/2026 | DP DP |




| | PHASE 1 & 2A | PHASE 2B - 5 |
|---|---|---|
| POS 1 | 0.955 | |
| POS 2 | 0.074 | |
| POS 3 | 0.024 | |
| POS 4 | 0.075 | 0.420 |
| POS 5 | | 0.106 |
| POS 6 | | 0.052 |
| POS 7 | | 0.024 |
| POS 8 | | 0.065 |
| POS 9 | | 0.020 |
| POS 10 | | 0.041 |
| **TOTAL** | **1.128 HECTARES** | **0.728 HECTARES** |

**1.856 HECTARES TOTAL**

**229 DWELLINGS = 1.832 HECTARES REQ**

KEY

TOTAL PUBLIC OPEN SPACE ACROSS ALL APPLICATIONS - 1.856 HECTARES

PLAY AREAS

0 10 20 30 40 50 60m

1:1000 @ A1


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PROJECT:
WREXHAM ROAD, RHOSTYLLEN - PHASE 2

CLIENT:
SG ESTATES

DRAWING TITLE:
SITE LAYOUT PHASES 1-5 PUBLIC OPEN SPACE

| DRAWING STATUS: | STATUS: |
|---|---|
| PLANNING | S3 |
| DRAWING No: | PROJECT No: |
| WR2-SAL-A1-ZZ-DR-A-0619 | P1249 |
| SCALE: | REVISION: |
| As indicated@A1 | P2 |

# 10 APPENDICES

**APPENDIX 1 - SITE PHOTOGRAPHS**

**ONGOING CONSTRUCTION 19.08.2026**

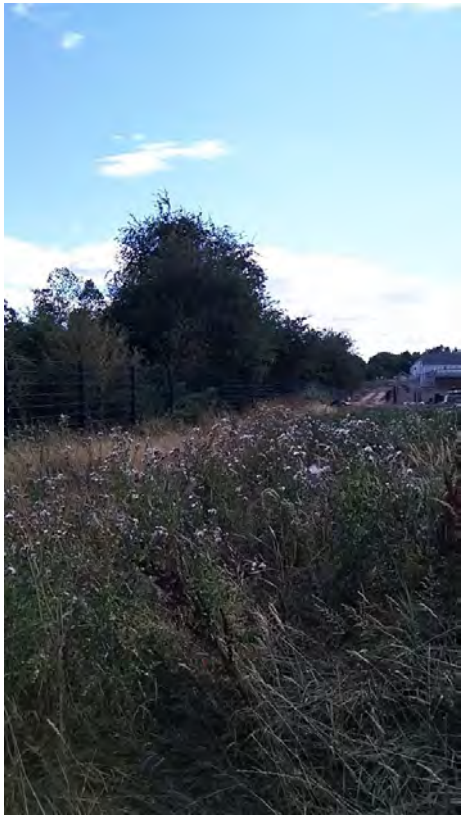




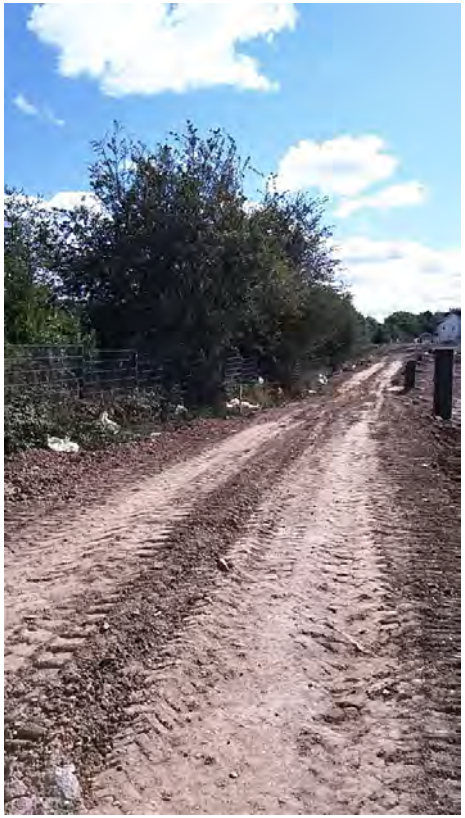
Excavation within the RPA of oak 2836 has affected 20% of the RPA. No tree protection fence was present. Remedial action required to soils with RPA and fence protection must be established within the site to the extent of the RPA



View of oak 2836 and adjacent group



Vegetation at boundary with railway line, RPA extends into site



RPA extends into site; no temporary fence protection



Photographs of compound and construction site to the centre and east of the site, currently no fence protection

























Entrance into site adjacent to ash 2834



Fence protection to ash 2834 to extent of RPA



Fallen branch within CEZ



## APPENDIX 2 – CASCADE CHART FOR TREE QUALITY ASSESSMENT

Table 1 **Cascade chart for tree quality assessment**

| Category and definition | Criteria (including subcategories where appropriate) | | | Identification on plan |
|---|---|---|---|---|
| **Trees unsuitable for retention** (see Note) | | | | |
| **Category U**<br>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years | • 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 category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)<br>• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline<br>• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality<br>*NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.* | | | See Table 2 |
| | **1 Mainly arboricultural qualities** | **2 Mainly landscape qualities** | **3 Mainly cultural values, including conservation** | |
| **Trees to be considered for retention** | | | | |
| **Category A**<br>**Trees of high quality** with an estimated remaining life expectancy of at least 40 years | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue) | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) | See Table 2 |
| **Category B**<br>**Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation | Trees present in numbers, usually growing 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 value | See Table 2 |
| **Category C**<br>**Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm | 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 collective landscape value; and/or trees offering low or only temporary/transient landscape benefits | Trees with no material conservation or other cultural value | See Table 2 |

Summary of *BS 5837:2012* tree quality categorisation criteria

**APPENDIX 3 – ARBORICULTURAL INSPECTION PROFORMA**

Part 1 Project details

| RECORD OF ARBORICULTURAL INSPECTION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **Inspection by** | **Marianne Dobson** FdSCArb, MArborA, Lantra certified in Professional Tree Inspection | **Visit number** | | | **Date of visit** | |
| | | **Signed** | | **Work stage** | | | | |
| | | **Accompanied by** | | **Activities inspected** | | | | |
| | | **Signed** | | **Weather conditions** | | | | |
| | **PROJECT DETAILS** | | | | | | | |
| | **Title and Site** | | **Drawing Title** | | **Drawing Number** | | **Version** | |
| | **Planning application reference** | | | | | | | |
| | **Tree Preservation Order and/or Conservation Area Details** | | | | | | | |
| | **Other Site Constraints** | | | | | | | |
| | *Add other information as required* | | | | | | | |

Part 2 Record of arboricultural inspection – *inspections would generally be undertaken every 4-8 weeks depending on progress of the works and complexity, unless specific visits are programmed to coincide with planned site activities. Planned dates to be entered in the table once programme of works is known.*

| **Ref** | **Work stage** *Add or delete as relevant to specific works* | **Activity requiring on site attendance by Arboriculturist** *Add or delete as relevant to specific works* | **Planned date of inspection** | **Actual date of inspection** | **Inspection details and comments** | **Compliance with AMS** | **Follow up action required** |
|---|---|---|---|---|---|---|---|
| 1 | Advance works | Prestart meeting for tree works | | | | | |
| | | Marking out for trees to be removed | | | | | |
| | | Commencement of tree works | | | | | |
| | | Completion of tree works | | | | | |
| | | Commencement of installation of tree protection fencing | | | | | |
| | | Completion of installation of tree protection fencing | | | | | |

| Ref | **Work stage** *Add or delete as relevant to specific works* | **Activity requiring on site attendance by Arboriculturist** *Add or delete as relevant to specific works* | **Planned date of inspection** | **Actual date of inspection** | **Inspection details and comments** | **Compliance with AMS** | **Follow up action required** |
|---|---|---|---|---|---|---|---|
| | | Periodic monitoring (depending on timing of specific inspection visits) | | | | | |
| | | | | | | | |
| 2 | Site clearance and demolition | Toolbox talk | | | | | |
| | | Removal of above ground structures within the crown spread or RPA of trees to be retained | | | | | |
| | | Removal of hard standing and below ground structures or features within the crown spread or RPA of trees to be retained | | | | | |
| | | Periodic monitoring (depending on timing of specific inspection visits) | | | | | |
| | | | | | | | |
| 3 | Construction works | Toolbox talk | | | | | |
| | | Excavation or works within RPA of trees to be retained | | | | | |
| | | Reprofiling of ground levels within RPA of trees to be retained | | | | | |
| | | Installation of services within RPA of trees to be retained | | | | | |
| | | Installation of ground protection below temporary hard standing within RPA of trees to be retained | | | | | |
| | | Installation of ground protection below permanent hard standing within RPA of trees to be retained | | | | | |
| | | Periodic monitoring (depending on timing of specific inspection visits) | | | | | |
| | | | | | | | |
| 4 | Landscape reinstatement | Toolbox talk | | | | | |

| Ref | Work stage<br>*Add or delete as relevant to specific works* | Activity requiring on site attendance by Arboriculturist<br>*Add or delete as relevant to specific works* | Planned date of inspection | Actual date of inspection | Inspection details and comments | Compliance with AMS | Follow up action required |
|---|---|---|---|---|---|---|---|
| | | Soiling within RPA of trees to be retained | | | | | |
| | | Land drainage within RPA of trees to be retained | | | | | |
| | | Turfing and Seeding within RPA of trees to be retained | | | | | |
| | | Planting within RPA of trees to be retained | | | | | |
| | | Periodic monitoring (depending on timing of specific inspection visits) | | | | | |
| | | | | | | | |
| 5 | Completion | Removal of tree protection fencing | | | | | |
| | | | | | | | |
| | | *Add other activities as required relevant to the project and construction activities* | | | | | |

Part 3 Follow up actions identified during inspection

| Ref | Follow up action required | Date completed | Comments and / or photographs from site team | Follow up or close out |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Part 4 Evidence of arboricultural inspection

| | PHOTOGRAPHS TAKEN DURING SITE VISIT | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

| | | |
|---|---|---|
| | | |

Part 5 Circulation of record of inspection

| | **RECORD OF INSPECTION ISSUED BY** | | |
|---|---|---|---|
| | *Print name* | *Signature* | *Date* |
| | | | |

**RECORD OF SITE INSPECTION ISSUED TO THE FOLLOWING**

| ISSUE | PROJECT CONTACTS | NAME | CONTACT NUMBER | EMAIL SITE | ROLES AND RESPONSIBILITIES FOR ARBORICULTURAL ISSUES ON SITE |
|---|---|---|---|---|---|
| ☐ | **Project Manager** | | | | • Delivery of project and compliance with legal requirements and planning consents relating to the project |
| ☐ | **Site Construction Manager** | | | | • Ensure compliance with the Arboricultural Method Statement, monitor performance of construction site staff and sub-contractors and maintain records to demonstrate compliance with and implementation of the Arboricultural Method Statement; and<br>• Main contact for any Third Party queries and shall keep a record of any Third Party contacts and any follow up actions that may be taken. |
| ☐ | **Site Manager with responsibility for environmental compliance / Environmental Advisor / or Environmental Clerk of Works** | | | | • Delivery of tool box talks for inductions of construction site staff and sub-contractors to ensure arboricultural protection methods are effectively communicated to the site team;<br>• Undertake daily audits of tree protection fencing, ground protection fencing and compliance with the Arboricultural Method Statement; and<br>• Liaises and cooperates with the Arboricultural Consultant at each site inspection and for the duration of the project |
| ☐ | **Arboricultural Consultant** | | | | • Delivery of initial tool box talk for construction site staff to ensure arboricultural protection methods are effectively communicated to the site team;<br>• Undertake site inspections at key work stages identified in the programme and at 8 weekly intervals during the course of the construction project; and<br>• Report to the Local Planning Authority within 3 days of each inspection |

| ISSUE | PROJECT CONTACTS | NAME | CONTACT NUMBER | EMAIL SITE | ROLES AND RESPONSIBILITIES FOR ARBORICULTURAL ISSUES ON SITE |
|---|---|---|---|---|---|
| ☐ | **Site construction team and sub-contractors** | *Updated information on arboricultural constraints to be issued to site team as part of regularly site briefings, inductions and tool box talks* | | | • Work to agreed Arboricultural Method Statements, plans and procedures and minimise environment impacts;<br>• Understand the importance of maintaining arboricultural protection on site and maintaining the integrity of the tree protection fencing;<br>• Understand the importance of avoiding pollution, including silt run-off, dust, escape of fuel, chemicals, cement and concrete;<br>• Report all incidents immediately to the Environment Site Manager; and<br>• Monitor the site for potential environmental risks and engage with co-workers to be proactive and ensure method statements, plans and procedures are complied with |
| ☐ | **Third Party Co-ordinator / Project Co-ordinator / Customer Co-ordinator** | | | | • Liaison with Local Planning Authority, stakeholders and Third parties |
| ☐ | **Arboricultural Contractor** | | | | • Undertake tree removal and pruning requirements prior to commencement of construction;<br>• Works to be in accordance with approved planning drawings; and<br>• Works to be undertaken with regard to environmental and ecological constraints, such as nesting and breeding birds, bats, proximity to watercourse |
| ☐ | **Ecology Consultant** | | | | • Advise on ecological constraints at the site |
| ☐ | **Local Authority, include Tree Officer details where known** | | | | |
| | *Additional contacts* | | | | |
| | | | | | |
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Part 6 Reporting procedure:

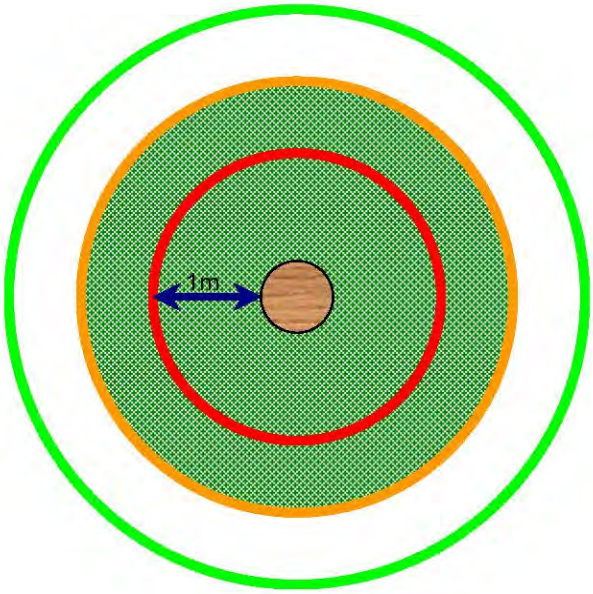
a) Undertake site inspection and record comments (Parts 2);
b) Discuss any follow up actions immediately with the responsible person on site for environmental compliance and set date for completion of actions (Part 3) where possible rectification works should be undertaken as soon as possible, exceptions to this may include works to protected trees that requires additional consent or work that may require LPA approval before proceeding;
c) Add evidence of rectification works or follow up actions to inspection record in Part 3;
d) Add photographic record of site visit inspection in Part 5; and

e) Issue record of inspection to nominated person for liaison with Local Planning Authority (LPA) or direct issue of record of inspection to LPA, project team and site team as per circulation list.

## APPENDIX 4 – NATIONAL JOINT UTILITIES GROUP (NJUG) GUIDELINES

The National Joint Utilities Group

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Issue 2




TREE PROTECTION ZONE

Key to Diagram

Trunk of Tree

Spread of canopy or branches

**PROHIBITED ZONE – 1m from trunk.** Excavations of any kind must not be undertaken within this zone unless full consultation with Local Authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.

**PRECAUTIONARY ZONE – 4 x tree circumference.** Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with Local Authority Tree Officer if in any doubt.

**PERMITTED ZONE – outside of precautionary zone.** Excavation works may be undertaken within this zone however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

The National Joint Utilities Group

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Issue 2

**DAMAGE TO TREES**

Tree roots keep a tree healthy and upright. Most roots are found in the top 600mm of soil and often grow out further than the tree's height. The majority of these roots are very fine; even close to a tree few will be thicker than a pencil. Most street tree roots grow under the footway but may also extend under the carriageway. If roots are damaged the tree may suffer irreversible harm and eventually die.

**PROTECTING ROOTS - DO'S and DON'TS**

There are three designated zones around a tree each of which has its own criteria for working practices.

**THE PROHIBITED ZONE**

**Don't** excavate within this zone.

**Don't** use any form of mechanical plant within this zone

**Don't** store materials, plant or equipment within this zone.

**Don't** move plant or vehicles within this zone.

**Don't** lean materials against, or chain plant to, the trunk.

**Do** contact the local authority tree officer or owner of the tree if excavation within this zone is unavoidable.

**Do** protect any exposed roots uncovered within this zone with dry sacking.

**Do** backfill with a suitable inert granular and top soil material mix as soon as possible on completion of works.

**Do** notify the local authority tree officer or the tree's owner of any damage.

**THE PRECAUTIONARY ZONE**

**Don't** excavate with machinery. Where excavation is unavoidable within this zone excavate only by hand or use trenchless techniques.

**Don't** cut roots over 25mm in diameter, unless advice has been sought from the local authority tree officer.

**Don't** repeatedly move / use heavy mechanical plant except on hard standing.

**Don't** store spoil or building material, including chemicals and fuels, within this zone.

**Do** prune roots which have to be removed using a sharp tool (e.g. secateurs or handsaw). Make a clean cut and leave as small a wound as possible.

**Do** backfill the trench with an inert granular material and top soil mix. Compact the backfill with care around the retained roots. On non highway sites backfill only with excavated soil.

**Do** protect any exposed roots with dry sacking ensuring this is removed before backfilling.

**Do** notify the local authority tree officer or the tree's owner of any damage.

**THE PERMITTED ZONE**

**Don't** cut roots over 25mm in diameter, unless advice has been sought from the local authority tree officer.

**Do** use caution if it is absolutely necessary to operate mechanical plant within this zone.

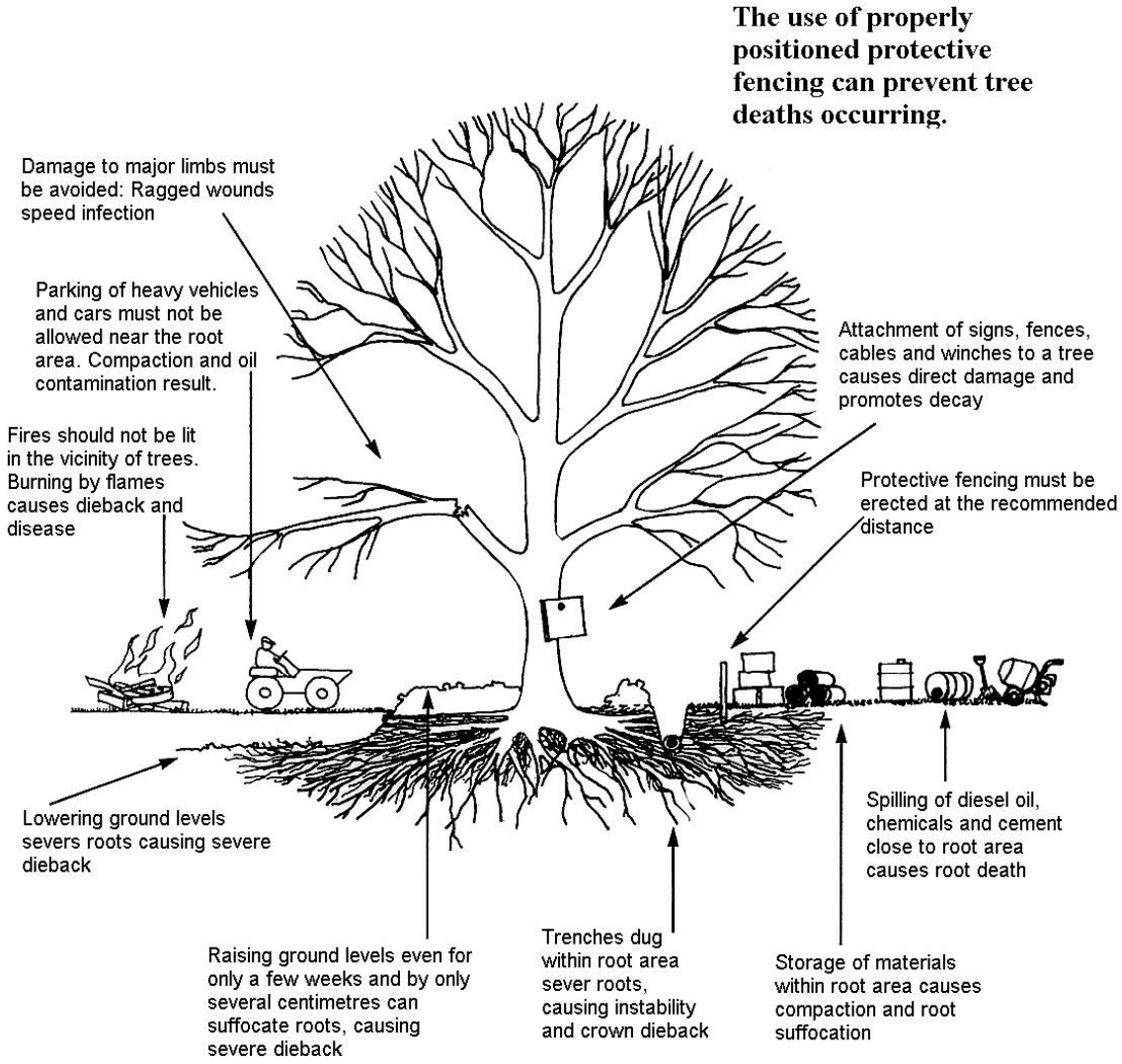
**Do** prune roots which have to be removed using a sharp tool (e.g. secateurs or handsaw). Make a clean cut and leave as small a wound as possible.

**Do** protect any exposed roots with dry sacking ensuring this is removed before backfilling.

**Do** notify the local authority tree officer or the tree's owner of any damage.

**APPENDIX 5 – COMMON CAUSES OF TREE DEATH POSTER**

# *Common causes of Tree Death*




*Please use copies of this as an on-site poster for personnel*

**APPENDIX 6 - GLOSSARY OF TERMS**

| | |
|---|---|
| **Maturity** | Newly planted - Not fully established and capable of being transplanted or easily replaced |
| | Young - Establishing, usually with good vigour, still capable of being transplanted or replaced |
| | Early mature - Established, usually vigorous and increasing in height |
| | Semi-mature – Established with an overall height in excess of 4 metres and or a stem girth measurement (circumference) of 20 centimetres or larger; |
| | Middle Age - Trees in the established growth stage of their life with the potential to continue increasing in size; |
| | Mature - Trees that have reached their ultimate size, given their location and surroundings; |
| | Over-mature - Fully mature, in last quarter of life expectancy, vigour decreasing |
| **Condition** | Good, Fair, Poor. An overall assessment of a tree's physiological and structural state |
| **Veteran** | Trees that have biological, cultural or aesthetic value due to age and / or condition. Typically trees that may be living beyond their expected age range for their species |
| **BS 5837 Tree Quality Assessment** | The tree quality assessment is based on four categories (A, B, C and U) are used to denote tree quality (A= High, B = Moderate, C = Low, U= Unsuitable for retention). |
| | Subcategories (1-3) denote the specific function value of the trees and the reasoning behind the allocation of a specific category. |
| **Root Protection Area (RPA)** | The theoretical rooting area of a tree as defined in *BS5837: 2012*. RPA is allocated to ensure that a sufficient area is left undisturbed during development. It is provided as an area ($m^2$) and as the radius of a circle (m) typically plotted from the centre of the stem. |
| **Estimated Remaining Contribution** | The approximate life expectancy as healthy functioning tree and relates to species and the condition of the tree at the time of survey.<br>Long > 40 years<br>Medium 20 – 40 years<br>Short – Medium 10- 20 years<br>Short - Imminent removal <10years |
| **Adventitious or Epicormic shoots** | Small branches that grow in clusters around the stem or base of a tree in an uncharacteristic fashion for a normally healthy tree, usually at the site of pruning wounds or as an indicator of stress |
| **Bifurcate** | Divided into two branches or forks |
| **Buckling** | Deformation of a structure subjected to a bending load Buttress zone, irreversible. |
| **Chalara – Ash dieback** | Chalara dieback of ash, also known as Chalara or ash dieback, is a disease of ash trees caused by a fungus called *Hymenoscyphus fraxineus* |
| **Decurrent** | The tree crown is borne on several major wide spreading limbs of similar size |
| **Defect** | A feature which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment |
| **Dieback** | A condition in which a tree or shrub begins to die from the tip of its leaves or roots backwards, owing to disease or an unfavourable environment. |
| **Disease** | A malfunction or destruction of tissues usually caused by pathogens. |
| **Dominance** | The tendency for a leading shoot to grow faster than the lateral shoots; also a tree that maintains a taller crown than its neighbours. |
| **Excurrent** | A well-defined central main stem to the crown, bearing branches which are limited in their length, diameter and secondary branching. |
| **Flush-cut** | A pruning cut which removes part of the branch bark ridge and or branch-collar. |
| **Girdling root** | A root which circles and constricts the stem. |

| | |
|---|---|
| **Hazard beam** | An upward curving part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting or may form a banana shaped crack. |
| **Included bark (ingrown bark)** | Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact. |
| **Infection** | The establishment of a parasitic micro-organism in the tissues of a tree or other organism. |
| **Lopping** | Removal of large branches from a tree that does not follow natural target pruning practices. |
| **Natural target pruning** | The siting of pruning cuts at the branch bark ridge with a cut of minimal surface area to allow quicker healing of the wound. |
| **Occlusion** | The process of continual radial growth and healing of a wound which is progressively closed by the formation of new wood and bark around it. |
| **Plant pathogen** | Infectious organism that causes a disease on a plant. Although relatives of some plant pathogens are human or animal pathogens, most plant pathogens only harm plants. Plants are rarely cured of disease once infected. |
| **Pollarding** | The removal of the tree canopy, back to the stem or primary branches. The management regime is usually repeated as part of a regular management programme. |
| **Primary branch** | A major branch, of greater order than secondary branches. |
| **Pruning** | The removal or cutting back of lesser branches or twigs. |
| **Reactive Growth/ Reaction Wood** | Production of woody tissue in response to mechanical stresses. |
| **Root-collar** | The transitional area between the stem/s and roots prior to development of a root flare or buttress. |
| **Secondary branch** | A branch, of lower order than primary branch. |
| **Veteran tree** | An aged old specimen that has features which increase its value as habitat for wildlife (dead wood, cavities etc.) irrespective of its chronological age and that is of interest biologically, culturally or aesthetically because of its age, size or condition, is usually of advanced age. |
| **Windthrow** | The fall of a tree in high wind, blowing over of a tree at its roots. |
| **Wound wood** | Wood developing in response to a wound which gradually heals and occludes the wound |

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