arbtech

**Arboricultural Impact Assessment to BS5837:2012**

**Steven Heighway**

**Queensbridge Farm**
**Overton**
**Wrexham**
**LL13 0LE**

01 September 2025

Alan Thompson FdSc (Arb) MArborA

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*If this report has been released electronically the appendices referred to herein can be found in the annexed zip folder/s as .pdf files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans are annexed separately as A0, A1, A2 or A3 as appropriate.*


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# Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 19th December 2024 from Steven Heighway to attend Queensbridge Farm, Overton, Wrexham, LL13 0LE; grid reference, SJ 37212 40093 (site) to undertake an arboricultural survey to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees, Tree Constraints Plan, Arboricultural Impact Assessment.

**Site location**

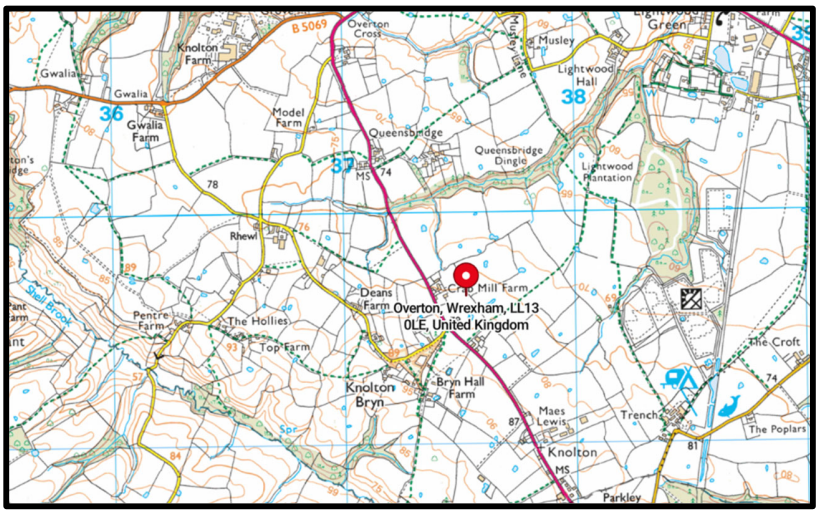



**Figure 1:** OS Map (Bing Maps)

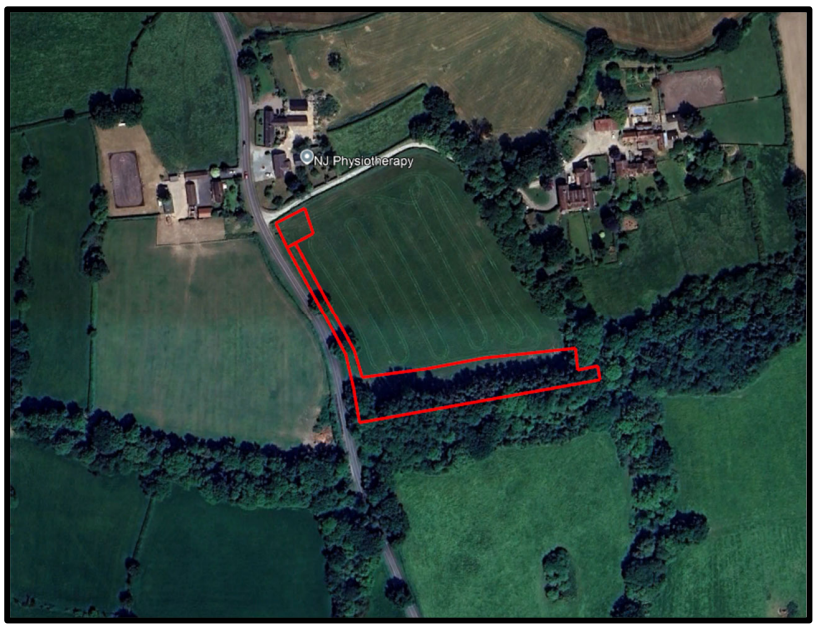



**Figure 2**: Aerial Image of site with approximate blue line survey boundary (Bing Maps)

# Executive Summary

This report describes the extent and effect of the proposed development at the site on individual trees and groups of trees within and adjacent to the site.

Trees within the site were surveyed; using a methodology guided by British Standard 5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’ (“BS5837”).

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of trees. This report comprises all of the requisite elements of an arboricultural implications assessment, method statement and supporting plans.

### Checklist for Submission to Local Planning Authority

| | |
|---|---|
| Tree survey | ☒ |
| Tree constraints plan | ☒ |
| Arboricultural impact assessment | ☒ |

This report and its appendices follow precisely the strategy for arboricultural appraisal intended to provide local planning authorities with evidence that trees have been properly considered throughout the development process.

### Proposed Site Plan



## General Information

**Client:** Steven Heighway

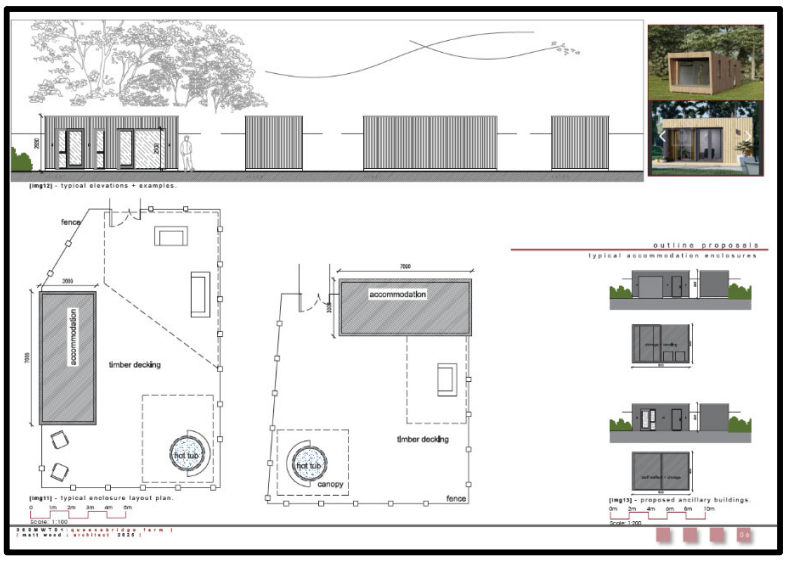
**Site:** Land at Queensbridge Farm, Overton, Wrexham, LL13 0LE.

**Brief proposal description:** Construction of 7 No. glamping pod plots with associated access, footpaths, drainage & storage/vending sheds.

Table 1: Documents referred to.

| Document | Reference No. |
|---|---|
| Topographical Survey | 25017 - 25 – 01 |
| Proposed layout drawing | 168-DAC-PL-001 P1 |
| Landscape master plan drawing | N/A |
| LPA pre-app comments | N/A |
| British Standard 5837:2012 | “BS5837” |
| Arboricultural Impact Assessment | Arbtech AIA 01 |

### Proposed Layout for Individual Plots



## Tree Survey

**Survey:** An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Shaun Rowe of Arbtech Consulting on 13th January 2025. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 1)

Table 2: Documents upon which this tree survey has been based:

| Document | Originator | Reference Number | Title |
|---|---|---|---|
| Survey base drawing | The Survey House | 25017-25-01 | Topographic Site Survey |

**Limitations:** The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

**Scope:** Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

**Legal Status:** No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

* For more information on the surveyed trees please see Arbtech Consulting Ltd, Tree Survey Schedule (Appendix 1), Tree Survey Report and Tree Constraints Plan.

## Arboricultural Impact Assessment

Table 3: Documents upon which this assessment has been based:

| Document | Originator | Reference Number | Title |
|---|---|---|---|
| Survey base drawing | The Survey House | 25017-25-01 | Topographic Site Survey |
| Proposals | Matt Wood Architect | 168-DAC-PL-001 P1 | Proposed Site Layout Plan |

There are a number of issues that may need to be addressed in an arboricultural impact assessment between the trees and the proposed development, these are as follows:

- The effect and extent of the proposed development within the root protection areas (RPAs) of retained trees;
- The potential conflicts of the proposed development with canopies of retained trees; and
- The likelihood of any future remedial works to retained trees beyond which would have been scheduled as a part of usual management.

Table 4: Impacts upon the RPAs of retained trees:

| Tree Number | Species | Structure | Incursion |
|---|---|---|---|
| T01 | Oak | Footpath | RPA |
| T02 | Oak | Footpath & storage shed | RPA |

These impacts can be seen on the Arboricultural Impact Assessment drawing number Arbtech AIA 01

**Issues Addressed:**

- Proposed storage shed is partially located within the RPA of tree T02. Specialist screw-pile foundations will be used to minimise any impact upon the tree's rooting environment.

- Proposed footpaths are situated partially within RPAs of trees T01 & T02. Proposed footpaths are designed to be constructed entirely above the existing soil level, and to be permeable.

**Trees to be removed.**

The proposal requires the removal of 2 x small sections of hedgerow to facilitate construction of the proposed site entrance/access.

A breakdown of all tree works can be seen in Table 7: Summary of Tree Works

Table 5: Number of individual trees to be removed.

| U | A | B | C |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

Table 6: Number of hedges to be removed. () Represents partial removal of a hedge

| U | A | B | C |
|---|---|---|---|
| 0 (0) | 0 (0) | 0 (0) | 0 (2) |

## Tree Works

For reasons of public safety, all tree works referred to herein must be carried out prior to any site personnel commencing works or any building materials being delivered.

Table 7. Summary of Tree Works

| No. | Species | Works | Cat |
|---|---|---|---|
| H01 | Various | Removal of section of hedgerow to facilitate construction of the proposed site entrance/access. | C2 |
| H02 | Various | Removal of section of hedgerow to facilitate construction of the proposed site entrance/access. | C2 |

**Notes on tree works**

All tree work is to be undertaken in accordance with British Standard BS 3998:2010, Recommendations for tree work. All arising's are to be removed and the site is to be left as found. Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber Lorries, tractors, excavators or cranes shall be parked or driven beneath the crowns of any retained trees, to prevent subsequent compaction and root death.

# Appendix 1: Arboricultural Impact Assessment Plan

Queensbridge Farm

74.1m

**Note:** No unauthorised excavations are to be carried out within the RPAs of any retained trees. Any level changes must form part of a construction method statement & must protect the rooting environments of all retained trees.

**Issue:** Proposed footpath is situated partially within RPAs of trees T01 & T02.
**Solution:** Proposed footpaths are designed to be constructed entirely above the existing soil level, and to be permeable.

**Issue:** Proposed storage shed is partially located within the RPA of tree T02
**Solution:** Specialist screw-pile foundations will be used to minimise any impact upon the tree's rooting environment.

Queensbridge House

Queensbridge Villa

Sewage Tank

69.5m

A 528

H01 H02 T01 T02 T03 T04 T05 T06 T07 G01 G02 W01

0m 10m 20m 30m 40m 50m

Indicative only

## Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

## Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a minimum area in $m^2$ which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations.

The calculated RPA is capped to 707$m^2$, which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

## Arboricultural Impacts

| Impacts | Nos. of trees |
|---|---|
| Individual trees to be removed | 0 |
| Hedges to be removed (Partial removal of hedge) | 0 (0) |
| Trees with proposed incursions into RPAs | 2 |
| Groups / Hedges with proposed incursions into RPAs | 0 |
| Trees that will require pruning | 0 |
| Groups / Hedges that will require pruning | 0 |
| Trees to be transplanted | 0 |
| Groups / Hedges to be transplanted | 0 |

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https://arbtech.co.uk, 01244 661170

Project:
Queensbridge Farm,
Overton,
Wrexham,
LL13 0LE

Client:
Steve Heighway

Drawing:
Arboricultural Impact Assessment

Based on:
168-DAC-PL-001 P1

| Drawing No: | Rev: |
|---|---|
| Arbtech AIA 01 | |

| Date: | Scale: | Drawn: |
|---|---|---|
| Sept 2025 | 1:250 @ A0 | A |

Key:

Tree Nos.: T01 | Tree Canopies: | Trunks:
RPAs: | Category 'U' trees: | Category 'A' trees:
Category 'B' trees: | Category 'B' groups: | Category 'C' trees:
Category 'C' groups: | Section of hedge to be removed: | Incursion - Hard surfacing:
Incursion - Structures:

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing on which this plan is based.
This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of trees and hedges.
This drawing is not to be read as a definitive part of the engineering or construction designs or method statement. Arbtech Consulting Ltd. cannot be held responsible for any discrepancies between this drawing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.
The drawing was produced in colour – a monochrome copy should not be relied upon.
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# Appendix 2: Tree Survey Schedule

# BS5837:2012 Tree Survey

**Arbtech Consulting Ltd.**
Chester Road
Chester
Cheshire
CH4 0DH
Phone: 01244661170
Mobile: N/A

Client: Steven Heighway
Project: Queensbridge Farm, Overton, Wrexham, LL13 0LE
Survey Date: 13/01/2025
Surveyor: Shaun Rowe

| Tree and Tag No / Species | Hght (m) | Stems No | Stems Ø (mm) | Crown Spread (m) | Crown Clear (m) | Age | RP A (m²) R (m) | Phys Condition | Structural Condition | Preliminary Recommendations / Survey Comment | Cat ERC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| G01 | | | | | | | | | | Estimated Measurements | |
| Various | 6 | 1 | 150 | N | 2 | 1 | SM | A: 10.2 | Good | C: Good | C.2 |
| *See comments for details* | | | | E | 2 | 1 | | R: 1.8 | | S: Good | 10+ yrs |
| | | | | S | 2 | 1 | | | | B: Not visible | |
| | | | | W | 2 | 1 | | | | Group plotted indicatively to GPS and site features. Group comprised of field maple and hawthorn. Stem diameter is a maximum estimate. Ivy growth throughout. | |
| G02 | | | | | | | | | | Estimated Measurements | |
| Various | 16 | 1 | 350 | N | 4 | 4 | EM | A: 55.4 | Good | C: Good | B.2 |
| *See comments for details* | | | | E | 4 | 4 | | R: 4.19 | | S: Good | 20+ yrs |
| | | | | S | 4 | 4 | | | | B: Not visible | |
| | | | | W | 4 | 4 | | | | Group plotted indicatively to GPS and site features. Group comprised of early mature trees, individual locations not included within topographical survey. Species include poplar, silver birch, hazel and elder. Stem diameter is a maximum estimate. | |
| H01 | | | | | | | | | | Estimated Measurements | |
| A Hedge | 1.5 | 1 | 75 | N | 0.5 | 0 | SM | A: 2.5 | Good | C: Good | C.2 |
| *See comments for details* | | | | E | 0.5 | 0 | | R: 0.89 | | S: Good | 10+ yrs |
| | | | | S | 0.5 | 0 | | | | B: Not visible | |
| | | | | W | 0.5 | 0 | | | | Well maintained, small section of hedge that continues to east. Stem diameter is a maximum estimate. | |
| H02 | | | | | | | | | | Estimated Measurements | |
| A Hedge | 1.5 | 1 | 75 | N | 0.5 | 0 | SM | A: 2.5 | Good | C: Good | C.2 |
| *See comments for details* | | | | E | 0.5 | 0 | | R: 0.89 | | S: Good | 10+ yrs |
| | | | | S | 0.5 | 0 | | | | B: Not visible | |
| | | | | W | 0.5 | 0 | | | | Well maintained hedgerow. Stem diameter is a maximum estimate. | |

**Age Classifications:** N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

**Condition:** C Crown; S Stem; B Basal area

**Stems:** Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

**ERC:** Estimated Remaining Contribution

| Tree and Tag No<br>Species | Hght (m) | Stems<br>No | Stems<br>Ø (mm) | Crown<br>Spread (m) | Crown<br>Clear (m) | Age | RP<br>A (m²)<br>R (m) | Phys Condition | Structural Condition | Preliminary Recommendations<br>Survey Comment | Cat<br>ERC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T01 | | | | | | | | | | Estimated Measurements | |
| Common Oak<br>*Quercus robur* | 12 | 1 | 1300 | N 8<br>E 8.5<br>S 7.5<br>W 9 | 6<br>6<br>6<br>6 | M | A: 707<br>R: 15 | Good | C: Good<br>S: Ivy<br>B: Not visible | Tree growing within gap in hedge. Dense ivy from base into lower crown. Low level deadwood scattered around crown, typical for species. Surveyed from within field to east. Ganoderma bracket at base to southeast. Excellent landscape value. | A.1<br>40+ yrs |
| T02 | | | | | | | | | | Estimated Measurements | |
| Common Oak<br>*Quercus robur* | 14 | 1 | 1400 | N 9.5<br>E 9<br>S 10<br>W 10 | 6<br>6<br>6<br>6 | M | A: 707<br>R: 15 | Good | C: Good<br>S: Ivy<br>B: Good | Tree growing to east of hedge. Dense ivy from base into lower crown. Low level deadwood scattered around crown, typical for species. Major deadwood to southeast overhanging field. Surveyed from within field to east. Excellent landscape value. | A.1<br>40+ yrs |
| T03 | | | | | | | | | | Estimated Measurements | |
| Field Maple<br>*Acer campestre* | 8 | 3 | 308 (Eq) | N 3<br>E 5.5<br>S 2<br>W 0.5 | 4<br>4<br>4<br>4 | EM | A: 42.9<br>R: 3.69 | Good | C: Good<br>S: Good<br>B: Good | Tree growing within group. Naturally suppressed crown. Multistemmed with natural bracing present. | C.1<br>10+ yrs |
| T04 | | | | | | | | | | Estimated Measurements | |
| Common Oak<br>*Quercus robur* | 12 | 1 | 480 | N 6<br>E 5<br>S 4<br>W 6 | 6<br>6<br>6<br>6 | M | A: 104.2<br>R: 5.75 | Good | C: Good<br>S: Good<br>B: Good | Dominant tree within group. Ivy from base into central crown. Fungi fruiting c. 2 m north east of base, likely mycorrhizal. | B.1<br>20+ yrs |
| T05 | | | | | | | | | | Estimated Measurements | |
| Common Ash<br>*Fraxinus excelsior* | 15 | 1 | 550 | N 6<br>E 6<br>S 6<br>W 4 | 8<br>6<br>8<br>8 | M | A: 136.9<br>R: 6.6 | Good | C: Good<br>S: Ivy<br>B: Good | Dominant tree within group. Ivy from base into central crown. | B.1<br>20+ yrs |

**Age Classifications:** N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

**Condition:** C Crown; S Stem; B Basal area

**Stems:** Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

**ERC:** Estimated Remaining Contribution

| Tree and Tag No<br>Species | Hght (m) | Stems<br>No | Stems<br>Ø (mm) | Crown<br>Spread (m) | Crown<br>Clear (m) | Age | RP<br>A (m²)<br>R (m) | Phys Condition | Structural Condition | Preliminary Recommendations<br>Survey Comment | Cat<br>ERC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T06 | | | | | | | | | | Estimated Measurements | |
| Poplar<br>*Populus sp.* | 18 | 4 | 1072 (Eq) | N 6<br>E 6<br>S 6<br>W 6 | 10<br>10<br>10<br>10 | M | A: 519.8<br>R: 12.86 | Good | C: Good<br>S: Good<br>B: Not visible | Tree location plotted indicatively to GPS and site features. Multistemmed from base, no access to or view of basal area. Deadwood within lower crown, typical of species. | **B.1**<br>20+ yrs |
| T07 | | | | | | | | | | Estimated Measurements | |
| Unknown<br>- - | 8 | 1 | 350 | N 0.5<br>E 0.5<br>S 0.5<br>W 0.5 | 0<br>0<br>0<br>0 | EM | A: 55.4<br>R: 4.19 | Dead | C: Poor<br>S: Poor<br>B: Poor | Standing dead tree. | **U**<br><10 yrs |
| W01 | | | | | | | | | | Estimated Measurements | |
| Various<br>*See comments for details* | 18 | 1 | 280 | N 4<br>E 4<br>S 4<br>W 4 | 3<br>3<br>3<br>3 | EM | A: 162.9<br>R: 7.2 | Good | C: Good<br>S: Good<br>B: Good | Woodland located to the south of field. Stem diameter is an average estimate. Unmanaged woodland that is comprised mainly of poplar, Lawsons cypress and fir. Elder, larch and ash less common throughout. Few hung up and fallen trees within woodland. Dense ivy growth throughout. Limited access due to post and wire fence and ground conditions. | **B.2**<br>20+ yrs |

**Age Classifications:** N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

**Condition:** C Crown; S Stem; B Basal area

**Stems:** Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

**ERC:** Estimated Remaining Contribution

## Appendix 2: Contact Details

| Name | Position | Company | Contact |
|---|---|---|---|
| Steven Heighway | Client | | |
| | Tree Officer | | |
| Alan Thompson | Arboricultural Consultant | Arbtech Consulting Ltd. | 01244 661170<br>07703 676216<br>at@arbtech.co.uk<br>https://arbtech.co.uk |
| | Site Manager | | |
| | Main contractor | | |

## Document Production Record

| Document number | Editor | Signature | Position | Issue number | Date |
|---|---|---|---|---|---|
| Arbtech AIA 01 | Alan Thompson |  | Arboricultural Consultant | 1 | 01/09/2025 |

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