



Project: 23_5838_08_45
Site: 14 Willow Drive, Llay, Wrexham, LL12 0UA
Client: Gemma Simon



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Document Title:	Tree Survey & Arboricultural Impact Assessment
Document Author:	Alexander N Barnes - BSc (Hons), MArborA.
Project Title:	14 Willow Drive, Llay, Wrexham, LL12 0UA

Revision History.

Date:	Version number:	Summary of changes:
11/09/2023	1.0	First Draft
18/09/2023	1.0	First Issue

Distribution.

Approved by:	Signature	Date:	Version:
Matt Harmsworth	MWH	18/09/2023	1.0
Gemma Simon	GS	18/09/2023	1.0
			Reviewed before issue.

Re-Survey Date.

Survey Type:	Lifecycle:	Re-survey Date:
BS5837: 2012	Planning Only	N/A

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Summary:

This is a BS5837 compliant arboricultural assessment report providing detailed and sufficient information for the Local Planning Authority to be able to consider the effect of the proposed development on local character and amenity from a tree perspective.

Our brief has been to obtain details of the tree population on site with a view to assessing any arboricultural constraints.

This report was commissioned in relation to the proposed development at 14 Willow Drive, Llay, Wrexham, LL12 0UA.

The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development. The position of the trees on the site is illustrated on the tree constraints plan and information about the tree stock and its current condition is given within the arboricultural data tables.

It will assist the planning process by discussing the impact that the proposals will have on the existing tree stock.

An Arboricultural Impact Assessment is included at Section 4 which details the constraints placed on the proposed development from the rooting area of the trees below ground and above ground by virtue of their size and position.

Report Author.

ROAVR (ROAVR Group) was formed in 2010 and since then has carried out arboricultural consultancy Nationwide with directly employed consultants. Our consultants are all individual members of the Arboricultural Association and the report author is listed in the document control sheet.

Validation Statement for the Local Planning Authority.

This report includes the following for LPA validation purposes:

- A **tree survey and tree constraints plan** showing the existing trees, their category rating and above and below ground constraints shown on an OS extract OR a topographical survey
- An **arboricultural impact assessment** which describes how the development will affect local character from a tree perspective
- An **appendices** highlighting tree related information including the **arboricultural data tables**

Customer Action Points.

- ☐ - reporting complete - send to your Local Planning Authority
- ☐ - on planning award contact us with your decision notice

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Tree Survey & Arboricultural Impact Assessment to BS 5837 2012 of trees at:

14 Willow Drive, Llay, Wrexham, LL12 0UA.

1 Scope

- 1.1 We have recently been instructed to undertake an appraisal of mature tree cover at 14 Willow Drive, Llay, Wrexham, LL12 0UA.
- 1.2 The data was collected to the British Standard BS5837 'Trees in Relation to Design, Demolition and Construction - Recommendations' 2012.
- 1.3 The survey has been commissioned to offer guidance on the arboricultural constraints with a view to the future development of the site.
- 1.4 The trees were inspected on the 30/08/2023 following the guidance in the British Standard by ROAVR. The crowns and stems were inspected from the ground using the 'Visual Tree Assessment (VTA)' method; non invasive techniques were used at this stage. Although a sounding hammer was used to determine the presence of any decay.
- 1.5 The site was assessed and data was collected on all woody vegetation falling within the scope of the British Standard. Trees were grouped or designated woodlands as per the allowance in the British Standard when the area in question was uniform in terms of species, age or geography.

Photographic Plates.



Photographic plate showing T1 from the north.



Photographic plate showing the compaction around the basal area of T1.



Photographic plate showing the stem and crown of T1 (left) and the stem and crown of T2 (right).



Photographic plate showing historic damage to the west side of the stem on T1.

2. Site Conditions & Site Surroundings

- 2.1 The site is situated in Wrexham in the Wrexham County Borough Council control area. The site is located on the north side of the town and has a suburban feel.
- 2.2 The site is home to a detached residential dwelling with associated hard and soft landscape.
- 2.3 The wider locality is predominantly residential housing. The site is accessed via a private driveway off the adjacent public highway.
- 2.4 A desktop assessment has failed to highlight, without direct checks with the local planning authority, whether or not the site is located within a Conservation Area or if there are any TPO protected trees on or adjacent to the plot.
- 2.5 All desktop assessment data was cross checked and validated on the 18/09/2023 using the web portal provided by the local planning authority.
- 2.6 Works to protected trees require consent from the local planning authority. In the case of TPO's an application must be made. In the case of conservation areas a notification must be made. TPO applications take up to eight weeks, conservation area notifications take six weeks.
- 2.7 Certain exemptions apply; for example the removal of deadwood. In the case of dangerous trees 5-days written notice should be given to the local authority (in the cases of immediate danger the work should proceed, but the local authority contacted as soon as possible afterwards) with the works evidenced by photographs and video where possible. You should also check to ensure the works are exempt from the requirements of a felling licence.

<https://www.legislation.gov.uk/uksi/2012/605/regulation/14/made>
- 2.8 It should be noted that planning consent overrides protected trees, where the works or removal are necessary for development to proceed and have been highlighted in the tree survey documents.

- 2.9 Bats. Under current legislation it is an offence to 'intentionally or recklessly disturb a bat' or 'damage, destroy or block access to the resting place of any bat'. For further details consultation must be made with the Statutory Nature Conservancy Organisation. Where relevant any current ecological surveys for the site will take precedence in this matter. Trees provide numerous 'potential roosting features' for a wide range of bat species. It is therefore crucial that any trees proposed for removal are checked by an appropriately competent person before any felling or ivy stripping works commence.

<https://www.bats.org.uk/advice/bats-and-the-law>

- 2.10 Birds. It is an offence to kill, injure or take any wild bird; or take, damage or destroy the nest of any wild bird while it is in use or being built. Therefore work likely to disturb nesting birds must be avoided from late March to August. All birds, their nest and eggs are protected by law.

<https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/>

3. Drawings

- 3.1 Appended to this report is a tree constraints plan and a tree assessment plan.
- 3.2 The tree constraints plan has been produced using an OS supplied .dwg (AutoCAD) base plan as no topographical survey was available. Tree positions and data have been applied using our survey handset as an onsite exercise with the constraints plan being produced as a PDF through Auto CAD.
- 3.3 An autoCAD .dwg file of the tree constraints is available on request for project stakeholders to utilise.
- 3.4 The *Tree Constraints Plan* shows the existing layout. For each tree the stem location is indicated and scaled according to its diameter, the canopy is indicated according to measurements taken along the four cardinal points of the compass. Root protection areas (RPAs) are indicated which are calculated according to the guidelines within BS 5837 (2012).
- 3.5 Where appropriate, the shapes of the RPAs have been amended to reflect actual site conditions or where trees have been heavily pruned. The 'original' RPAs are indicated as a dashed line whereas the amended RPAs are indicated as a solid line. Any variation to this approach will be highlighted on the appropriate plans.
- 3.6 The *Tree Assessment Plan / Arboricultural Impact Assessment* indicates the tree constraints with the proposals overlaid. Where applicable, this plan shows where works are proposed in Root Protection Areas and which trees are to be pruned or removed. This plan accompanies the Impact Assessment which is to be found in Section 4.

4. Arboricultural Impact Assessment - Site Specific

Tree Quality Statement.

The tree cover at 14 Willow Drive is made up of one onsite and one offsite mature sycamores. Both trees add high levels of amenity and ecological value to the site and surrounding area.

4.1 Description of The Proposed Development

The drawings listed in the table below were used by ROAVR to produce the Arboricultural drawings referenced in this report. If your plans change (either before or after planning submission), then the tree drawings will require updating. This report cannot be submitted in support of a scheme that varies from the drawing reference number shown in box one below as the Impact Assessment (Section 4) will not be valid.

Drawing Name / No.	Date Issued To ROAVR	ROAVR Drawings Issue Date:
downstairs_planView new.pdf	22/08/2023	18/09/2023

4.1.1. It is proposed to erect a single storey side extension with associated hard and soft landscapes.

4.1.2. The table below summarises the potential impact on trees due to various activities.

Trees Potentially Affected:

Tree or Tree Group	Impacts
T1 and T2	No direct impacts trees can be retained and protected throughout construction.

4.2. Tree Removal.

4.2.1. No trees require removal to facilitate the proposed development.

4.2.2. Details specific to each tree can also be found in the Tree Data Schedule.

4.3. Mitigation Planting.

4.3.1. No trees to be removed so no mitigation planting is considered necessary.

4.4. Impact on Tree Canopies.

4.4.1. No pruning works are required to facilitate the proposed development.

4.5. Impact on Tree Roots.

4.5.1. No impacts on tree roots to be made by the proposed development.

4.6. New Surfaces.

4.6.1. No new hard surfaces are proposed within the Root Protection Areas of any trees.

4.7. Underground Services.

4.7.1. No underground services are to be installed through any Root Protection Areas.

4.8 Changes in Ground Levels.

4.8.1 No changes in ground levels are required within the RPAs of any trees.

4.9 Soil Compaction.

4.9.1 The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.

4.9.2. Healthy soils contain about 25% air space between solid particles. Increased loading of the soils caused by construction activity causes air to be squeezed out as the soil becomes compacted preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.

4.9.3 It is important therefore that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. This may be done by installing protective fencing and ground protection measures as recommended within a tree protection plan.

4.10 Demolition Activities.

4.10.1 The tree protection measures specified within a TPP should be installed prior to the commencement of all demolition activities (including soil stripping) to prevent any detrimental impact on tree health. Where this is not practicable, demolition of structures within Construction Exclusion Zones shall be undertaken very early on in the demolition phase and the protective barriers installed immediately thereafter.

4.11. Hazardous Materials.

4.11.1 All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that cement and cement run-off are contained outside of all Root Protection Areas.

4.12. Cabins and Site Facilities.

4.12.1. Consideration should be given to the location of any site welfare facilities in terms of potential impact on trees. Where it is proposed to install cabins or site facilities in Root Protection Areas, the appointed arborist should be consulted and approval obtained from the local authority.

4.13. Boundary Treatments.

4.13.1. No changes are proposed to the existing boundary features that might impact on trees.

4.14. Impact of Retained Trees on the Development.

4.14.1. Adequate space has been allowed between all retained trees and the proposed development works. Consequently the proposal shall not result in increased pressure to remove or prune any of the retained trees.

4.15. Summary.

4.15.1. It is proposed to erect a single storey side extension with associated hard and soft landscapes. The proposed development will have no impacts on any trees on or offsite. However, the trees will require protection throughout construction. Therefore, it will be required that an arboricultural method statement be conditioned upon consent in order to highlight how the trees can be protected throughout construction.

Appendix: BS 5837: 2012 – Guidance Notes

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with trees in relation to design, demolition and construction to form balanced judgements.

It acknowledges the positive contribution trees may offer to a site, as well as the negative aspects of retaining inappropriate trees. It addresses the negative impacts that construction activity may have upon trees and offers mitigation strategies to minimise these impacts.

The Standard suggests a three stage approach to ensure best practice is followed when developing close to trees:

Stage 1: Survey Details and Notes

A ground level visual survey was undertaken. No climbing inspections or specialist decay detection were undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, were included.

Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full Safety Survey or Management Plan which are specifically designed to minimise risk and liability associated with responsibility for trees.

Wherever practicable dimensions were obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees of privately owned third parties are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.

Stage 2: Arboricultural Impact Assessment

After the initial survey and the production of the Tree Constraints Plan, arborists and designers are encouraged to work together to establish a design proposal with minimal impact on the high quality trees. An assessment should be made of all possible impacts including the impact that the trees may have upon the proposal.

The arborist may recommend mitigation strategies to minimise these impacts and help achieve a more harmonious juxtaposition between buildings and trees and will offer advice in relation to the best chances of success at planning.

Appendix: Survey Methodology

Ground level visual surveys are carried out using the Visual Tree Assessment technique described by Mattheck and Broeler (1994) and endorsed by the Arboricultural Association (LANTRA Professional Tree Inspection course, 2007).

Structural condition is assessed by inspecting the stem and scaffold branches from all angles looking for weak branch junctions or symptoms of decay. Particular attention is paid to the stem- base. Cavities are explored using a metal probe in order to assess the extent of any decay. If this is not possible further inspection is recommended in the form of a climbing inspection or using specialist decay detection equipment.

The physiological condition is assessed by inspecting the stem, branches and foliage for symptoms of disease. The overall vigour of the tree is also taken into account.

Where significant defects are observed, recommendations are made according to a scale of priority in order to reduce the likelihood of structural failure. The position of the tree and its potential targets are taken into account.

Measurements are obtained using a diameter tape, clinometer, distometer and loggers tape.

Where this is not practical measurements are estimated.

Some trees are surveyed as groups, though this is usually avoided close to areas likely to be developed.

5. Limitations

- 5.1 ROAVR has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.
- 5.2 This Report may not be relied upon by any other party without the prior and express written agreement of ROAVR. The assessments made assume that the land use will continue for their current purpose without significant change. ROAVR has not independently verified information obtained from third parties.
- 5.3 This report, video walkthrough, data tables and raw data remain the copyright of ROAVR until such time as any monies owed are settled in full and the report may be withdrawn at any time.
- 5.4 This report, site visit, plans and conclusions are proportional to the proposals and in some cases a simple plan based impact assessment may be all that is required.
- 5.5 Important - to ensure fair allocation of resources, we allow you ten working days to review the report and issue any feedback, beyond that changes are chargeable.

Should you require any further information, please do not hesitate to contact us at any time.

Mr. Alexander N Barnes BSc Arb, MArborA
Consultant Arborist

Alexander Barnes


ROAVR | GROUP

Prepared by: Alexander Barnes
Checked by: Peter Haine

Appendix 1 – Site Location

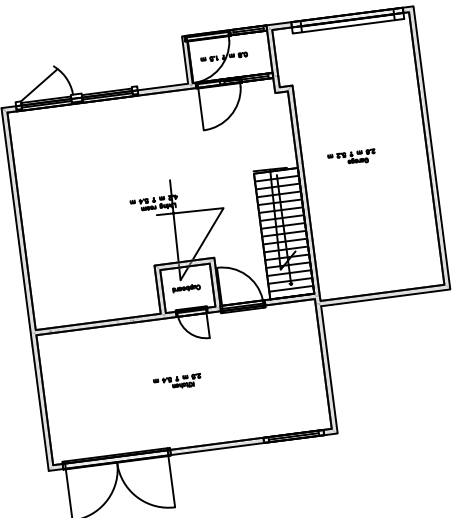
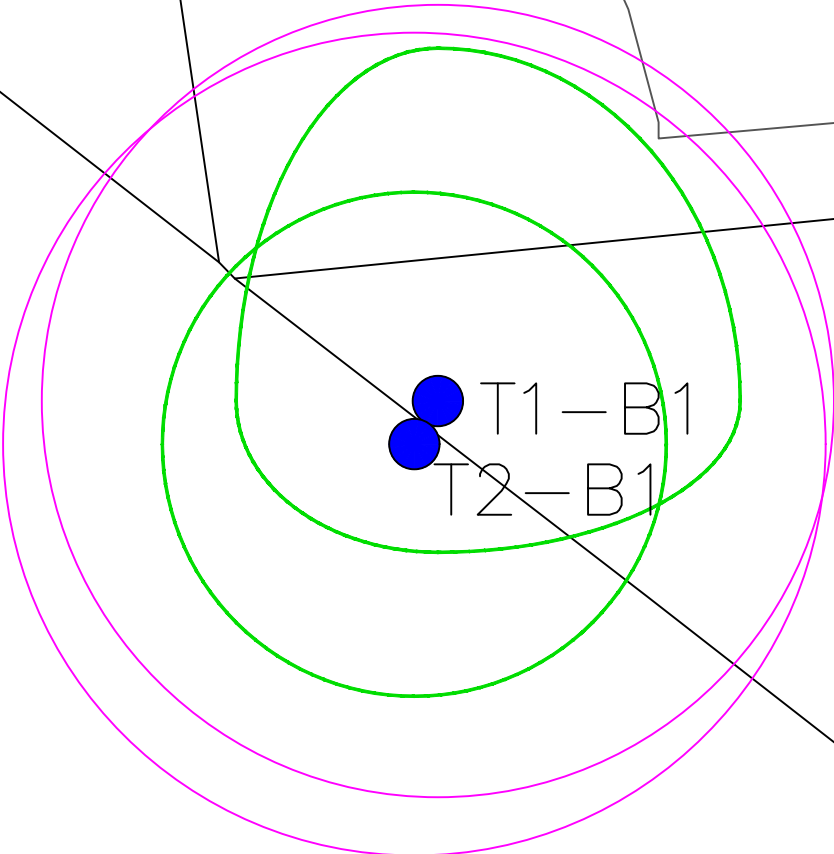


Appendix 2 – Arboricultural Data Tables

Appendix 3 – Arboricultural Plans

Tree Number	Species	Age Class	DBH	Height (crown height)	N	E	S	W	Condition	Life Expectancy	Physical Description	Comments	Managment Recommendations	RPA offset from stem.	Category Rating
T1	<i>Acer pseudoplatanus</i> (Sycamore)	M	655	20(2)	4	7	6	3	Fair	20+	Area of stem damage 0.5 metres above ground level. 150mm width by 170mm length. Lots of compacted ground around the basal area.	/	Tree would benefit from decompaction works such as vertical mulching.	7.86	B1
T2	<i>Acer pseudoplatanus</i> (Sycamore)	M	680	20(2)	4	5	5	5	Fair	20+	/	Ivy on tree. Offsite tree.	/	8.16	B1

General Notes
Do not scale off drawing – refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
All rights reserved.



Key

Trees
Showing Canopy extents,
category colour and tag
number (with category).

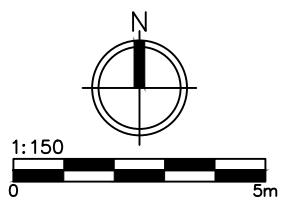
Category A
Trees of high quality with an
estimated remaining life
expectancy of at least 40
years.

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 150 mm.

Category U
Trees in such a condition that
they can not realistically be
retained as living trees in the
context of the current land use
for longer than 10 years.

**BS 5837:2012 Root Protection
Area**



Drawing Title
Tree Constraints Plan

Client
Gemma Simon

Site/Project
14 Willow Drive, Llay,
Wrexham, LL12 0UA

Scale/Sheet
1:150 @ A3

Date
14/09/2023

Drawing No
23_5838_08_45

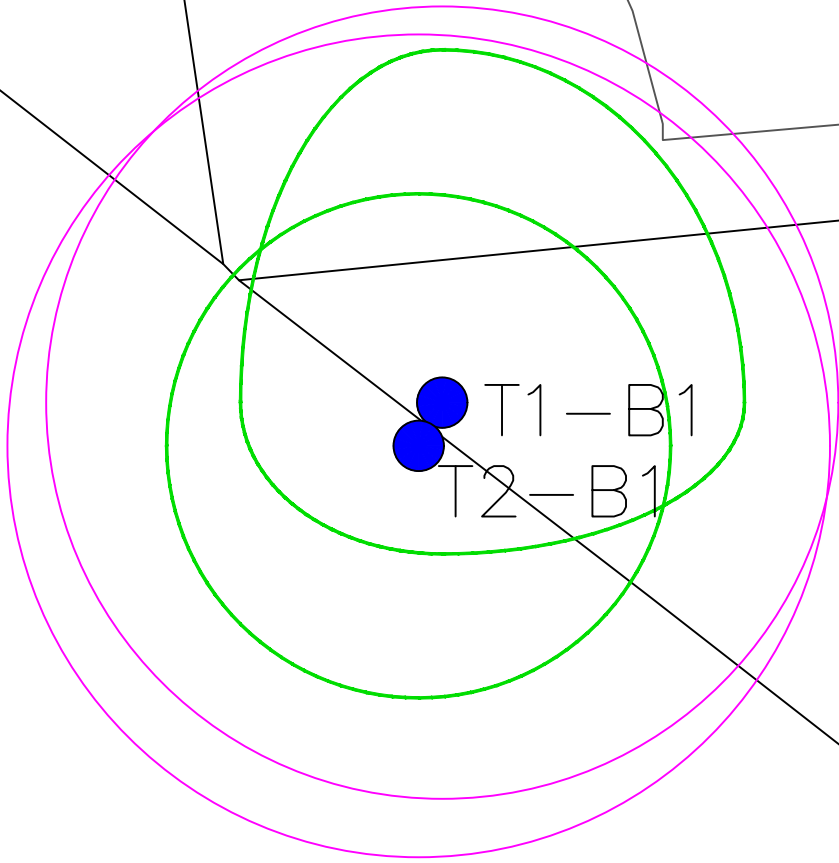
Rev
1

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General Notes
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Key

Trees
Showing Canopy extents, category colour and tag number (with category).

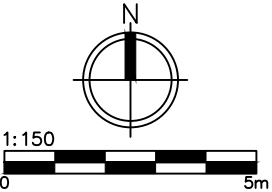
Category A
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Category C
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Category U
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837:2012 Root Protection Area



Drawing Title
Tree Assessment Plan

Client
Gemma Simon

Site/Project
14 Willow Drive, Llay, Wrexham, LL12 0UA

Scale/Sheet
1:150 @ A3

Date
14/09/2023

Drawing No
23_5838_08_45

Rev
1

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