



severn

ARBORICULTURAL CONSULTANCY

ARBORICULTURAL APPRAISAL

No.7 THE LAURELS

Report Date

27th November 2024

Location

No.7 The Laurels
Markfield Court Retirement Village
Markfield
Leicestershire
LE67 9HA

Client

Mr. Clive Gamble

Prepared By

Edward Severn
Dip Arb L4 (ABC), TechArborA



Arboricultural
ASSOCIATION
Technician Member

OVERVIEW

1.0 - INTRODUCTION

1.1 - I, Edward Severn of Severn Arboricultural Consultancy was instructed to carry out an arboricultural appraisal by Mr. Clive Gamble on the trees located at his mother's property, No.7 The Laurels, Markfield Court Retirement Village, Markfield, Leicestershire, LE67 9HA, and to assess whether the trees within influencing distance have the potential to cause or contribute to current and future damage, whether direct or indirect.

1.2 - This report is based on an inspection that took place on the 16th of November. This survey was carried out by myself, who holds a Level 4 Diploma in Arboriculture, is a Technician Member of the Arboriculture Association, has a LANTRA Certificate in Professional Tree Inspection, and undertaken training in arboricultural subsidence investigation.

1.3 - The inspection was carried out by utilising ground level visual tree assessment methods.

1.4 - This report is based on the assumption that the structural engineers are satisfied that the current damage is attributable to vegetation related subsidence.

1.5 - A structural inspection was carried out by Simplify Structural Engineering LLP on the 23rd of July 2024. A site investigation was then carried out by Construction Testing Solutions Ltd on the 7th of November 2024.

1.6 - Additional reports have been provided due to two of the assessed trees being identified in a subsidence investigation at the neighbouring property of No. 9 The Laurels. This includes a site investigation that was carried out by CET Property Assurance on the 15th of February 2018 and an arboricultural appraisal that was carried out by MWA Arboriculture Ltd on the 30th of April 2018.

2.0 - PROPERTY DESCRIPTION

2.1 - The property of No.7 The Laurels is a semi-detached bungalow. The building appears to be constructed circa 1980s with the conservatory constructed circa 2000s.

2.2 - Gardens are located at the front and rear of the property and comprise of lawns, slabbed areas, block paving and vegetation, including trees.

2.3 - The main structure of the bungalow shows no sign of external damage and appears in acceptable condition. The only visible damage is a stepped crack located on the north-east corner of the conservatory. The damage appears to be indirect damage. Opinions within this report are based on the findings within the structural engineer's report, and that the engineers are satisfied that the current damage is attributable to vegetation related subsidence

3.0 - SITE INVESTIGATIONS

3.1 - A number of investigations relating to the property and surrounding trees include the following (listed from oldest to latest):

Table 1:

TYPE	DATE	CONTRACTOR
Trial Hole (No.9)	15/02/2018	CET Property Assurance
Soil Analysis (No.9)	15/02/2018	CET Property Assurance
Root Analysis (No.9)	15/02/2018	CET Property Assurance / European Plant Science Laboratory
Arboricultural Appraisal (No.9)	30/04/2018	MWA Arboriculture Ltd
Structural Report (No.7)	23/07/2024	Simplify Structural Engineering LLP
Trial Hole (No.7)	07/11/2024	Construction Testing Solutions Ltd
Root Analysis (No.7)	07/11/2024	Construction Testing Solutions Ltd / European Plant Science Laboratory

3.2 - Although seasonal opening and closing of the cracks on the conservatory have been observed, no crack or level monitoring has taken place on the property of No.7 The Laurels. No Soil analysis has taken place from any sample retrieved from the trial hole at No.7 The Laurels.

3.3 - There have been a minimum of two other cases of conservatory damage through clay shrinkage subsidence at Markfield Court Retirement Village. Both cases found that adjacent oak trees were contributing to the damage and were removed.

4.0 – TREE OWNERSHIP AND PROTECTION

4.1 – The trees that have been implicated as potentially causing or contributing to the damage to No.7 The Laurels all reside within land owned and maintained by Markfield Court Retirement Village.

4.2 - The mature Oak Trees T1 and T2 are subject to a group TPO made by Hinckley and Bosworth Borough Council in 1998.

5.0 - LIMITATIONS

5.1 This report is intended as a preliminary appraisal of the potential influence on the property now and for a period of 5 years as ‘future risk’ from tree related subsidence.

5.2 - Suggestions for tree maintenance and future management are provided to prioritize the safety of trees and mitigate potential soil stability or subsidence concerns related to the property in question, and adjacent properties.

5.3 - It is important to recognize that these recommendations may occasionally diverge from established best practices in Arboriculture for tree pruning and management. This approach represents a necessary compromise between various competing objectives to ensure both safety and property integrity

5.4 - It is recommend that the contractors used to undertake the work required in the recommendations of the report can demonstrate a sound, up to date arboricultural knowledge and carry out work to British Standard BS 3998: 2010 Tree Work - Recommendations.

SITE INVESTIGATION FINDINGS

6.0 - SOIL

6.1 - I note from the geological survey map (British Geological Survey Solid and Drift Edition 1:50,000 series) that the underlying strata in the locality of the site may well be a glacial deposit of Oadby Till.

6.2 - The soil analysis from the investigation in 2018 at No.9 The Laurel confirms this assumption. The soil has a modified plasticity index of between 20% and 40 % as is categorised as medium volume change potential.

6.3 - As the trial hole at No.7 (TP/BH1) is only 4.39m away from where the trial hole (TP2/BH2) at No.9 The Laurels was dug, it is almost certainly the case that the soil type and volume change potential is the same.

7.0 - STRUCTURE AND DAMAGE

7.1 - The damage at the property is located solely on the north-east corner of the conservatory located at the rear of the property. A stepped crack can be seen externally. This crack can be found underneath the sill of the conservatory window, at the centre of the northern wall. The crack then descends to the north-east corner, becoming wider as it travels.

7.2 - Previous re-pointing of the conservatory's northern brick wall is also present in the north-east corner and reveals evidence of another previous stepped crack.

7.3 - The trial pit dug at No.7 the laurels found that the foundation depth of the conservatory was an inadequate and unacceptable depth of 210mm. The trial holes from the investigation at No.9 The Laurels also found that the conservatory depths of that property were between 200mm and 300mm. Trial hole locations can be found annotated on the map in Appendix 2.

8.0 - TREES AND OTHER VEGETATION

8.1 - Due to the shallow foundations of the conservatory all nearby vegetation to the property has been assessed for the potential to cause or contribute to current and future damage. There are a total of three trees and five small shrubs located in the rear garden of the property.

8.2 - The two trees, T1 & T2 are both English Oaks (*Quercus robur*), and are semi-mature. The NHBC technical standards, chapter 4.2 categorise English Oak as high-water demand tree species.

8.3 - The remaining vegetation consists of routinely trimmed shrubs and small trees. This includes one Common Holly, Cherry Laurel, Portuguese Laurel, and Lawson's Cypress. The Lawson's cypress are categorised as high-water demand tree species, the Laurels are Moderate water demand species, and the remaining vegetation are low water demand species.

8.4 - The two English Oak trees were previously recommended for removal in 2018 by MWA Arboriculture Ltd, however the application to remove these trees was refused by Hinckley and Bosworth Borough Council.

9.0 - ROOT PRESENCE

9.1 - Live roots were observed in abundance within the trial hole of No.7 from 0.6m to 4.0m. Root diameter ranged from 2mm to 3mm. The analysis of the roots found that they were of *Quercus spp.*

DISCUSSION AND SOLUTIONS

10.0 - DISCUSSION

10.1 - The investigations and reports at No.9 the laurels that were conducted in 2018 found that the damage to that property's conservatory was due to clay shrinkage subsidence. Two Oak trees were recommended to be removed however the felling of one (Identified as both T1 and T2 in this report) was refused. The removal of the one Oak prevented further damage to No.9.

10.2 - The structural report from the 23rd of July 2024, suggested that the damage to the conservatory of No.7 was due to clay shrinkage subsidence. Analysis from the trial pit on the 7th of November 2024 matched that of the analysis in 2018 at No.9 The laurels.

10.3 - *Quercus spp* Roots were in abundance observed within the trial pit to a depth of 4.0. As the closest oak trees to the conservatory are T1 and T2, it is clear that these tree's roots are influencing the soil below the foundations. *Quercus robur* is categorised as a high-water demand species.

10.4 - All investigations from both 2018 at No.9 The laurels and the most recent investigations at No.7 The Laurels, point to the current damage being a result of clay shrinkage subsidence.

10.5 - The foundation depth of the conservatory however is unacceptable and is a contributing factor to the damage.

10.6 - Taking into account the expert reports, previous neighbouring subsidence and collected data, it is my opinion that both T1 and T2 are contributing factors to the subsidence damage. Another contributing factor however is the sub-standard foundations to the conservatory.

10.7 - T1 and T2 also have a potential for causing damage again, through clay shrinkage subsidence, to the conservatory of the neighbouring property of No.9 the Laurels. The foundations depths of that conservatory are also sub-standard.

11.0 - SOLUTIONS

11.1 - Underpinning the conservatory is a construction option that is available, however the cost of the work being undertaken is likely to exceed £30,000.

11.2 - The conservatory could be demolished and renovations to the external wall be completed. This would cost in excess of £5,000, and potentially effect the sale value of the property by a minimum of 5%. The property is valued at £195,000.

11.3 - A root barrier could be installed between the trees and the conservatory, however this option will have a significant physiological and structural impact to the trees. Due to this the installation of a root barrier is not viable.

11.4 - Pruning of T1 and T2 is also not a viable option due to the proximity of the tree to the damaged areas of the property. Pruning would also only act as a temporary solution.

11.5 - Although unfavourable, the removal of T1 and T2 would prevent further damage to the property of No.7 the Laurels, and also avoid potential future damage occurring to No.9 The laurels , from clay shrinkage subsidence. The of this work is estimated to be £2,200.

CONCLUSIONS AND RECOMMENDATIONS

12.0 - CONCLUSIONS

12.1 - The previous structural and engineering reports deem that the damage to No.7 the Laurels is related to clay shrinkage subsidence.

12.2 - An abundance of roots of the same species as the English Oak of T1 and T2 were found underneath the foundations of the damaged conservatory. Therefore, these trees have the potential to influence the soil conditions beneath the foundations.

12.3 - The foundations of the conservatory's of No.7 and No.9 are sub-standard and therefore have a greater chance to be damaged by clay shrinkage subsidence.

12.4 - T1 and T2 have the potential to impact the conservatory of No.9 The Laurels in the future.

12.5 - Had T1 and T2 been removed in 2018 as recommended by MWA Arboriculture Ltd, then it is likely that the damage to the conservatory of No.7 The laurels would not have occurred.

13.0 - RECOMMENDATIONS

13.1 - It is recommended that the Oaks T1 and T2 be removed and the stumps treated, with a suitable chemical herbicide, to prevent regrowth.

13.2 - The remaining vegetation should be maintained at their current size.

13.3 - It is recommended that suitable native species trees be replanted in the place of T1 and T2. Field Maple, Silver Birch or Hornbeam would be suitable.

APPENDIX 1

SURVEY SCHEDULE

NO.7 THE LAURELS, MARKFIELD COURT RETIREMENT VILLAGE, MARKFIELD, LEICESTERSHIRE, LE67 9HA

TREES CONTRIBUTING TO DAMAGE – IMMEDIATE ACTION

Tree No.	Species	Age	Diameter (mm)	Est Height (m)	Crown Spread (m)	Distance To Main Building (m)	Ownership	Protection Status	Water Demand
T1	English Oak (<i>Quercus robur</i>)	Older than property	640	15	12	6.2	Markfield Retirement Village	Confirmed TPO (Hinckley and Bosworth Borough Council)	High
	Management History	No visible previous management				Recommendations	Take down to ground level, and treat stump to prevent regrowth		
T2	English Oak (<i>Quercus robur</i>)	Older than property	370	11	9	7.6	Markfield Retirement Village	Confirmed TPO (Hinckley and Bosworth Borough Council)	High
	Management History	No visible previous management				Recommendations	Take down to ground level, and treat stump to prevent regrowth		

VEGETATION WITH POTENTIAL FOR FUTURE DAMAGE – PROACTIVE WORKS

Tree No.	Species	Age	Diameter (mm)	Est Height (m)	Crown Spread (m)	Distance To Main Building (m)	Ownership	Protection Status	Water Demand
T3	Common Holly (<i>Ilex aquafolium</i>)	Younger than property	Multi-stemmed 50 & 40	3.5	2	5.0	Markfield Retirement Village	None	Low
	Management History	No visible previous management				Recommendations	Maintain height below 5m and lateral spread below 3m		
S1	Cherry Laurel (<i>Prunus lauroceasus</i>)	Younger than property	Multi-stemmed 40 & 40	2	2	5.0	Markfield Retirement Village	None	Moderate
	Management History	Routinely cut back and shaped				Recommendations	Maintain at current height and spread		
S2	Portuguese Laurel (<i>Prunus lusitanica</i>)	Younger than property	Multi-stemmed 50, 50, 50	3	3	5.2	Markfield Retirement Village	None	Moderate
	Management History	Routinely cut back and shaped				Recommendations	Maintain at current height and spread		
S3	Lawson's Cypress (<i>Chamaecyparis lawsoniana</i>)	Younger than property	90	2	3	4.4	Markfield Retirement Village	None	High
	Management History	Routinely cut back and shaped				Recommendations	Maintain at current height and spread		

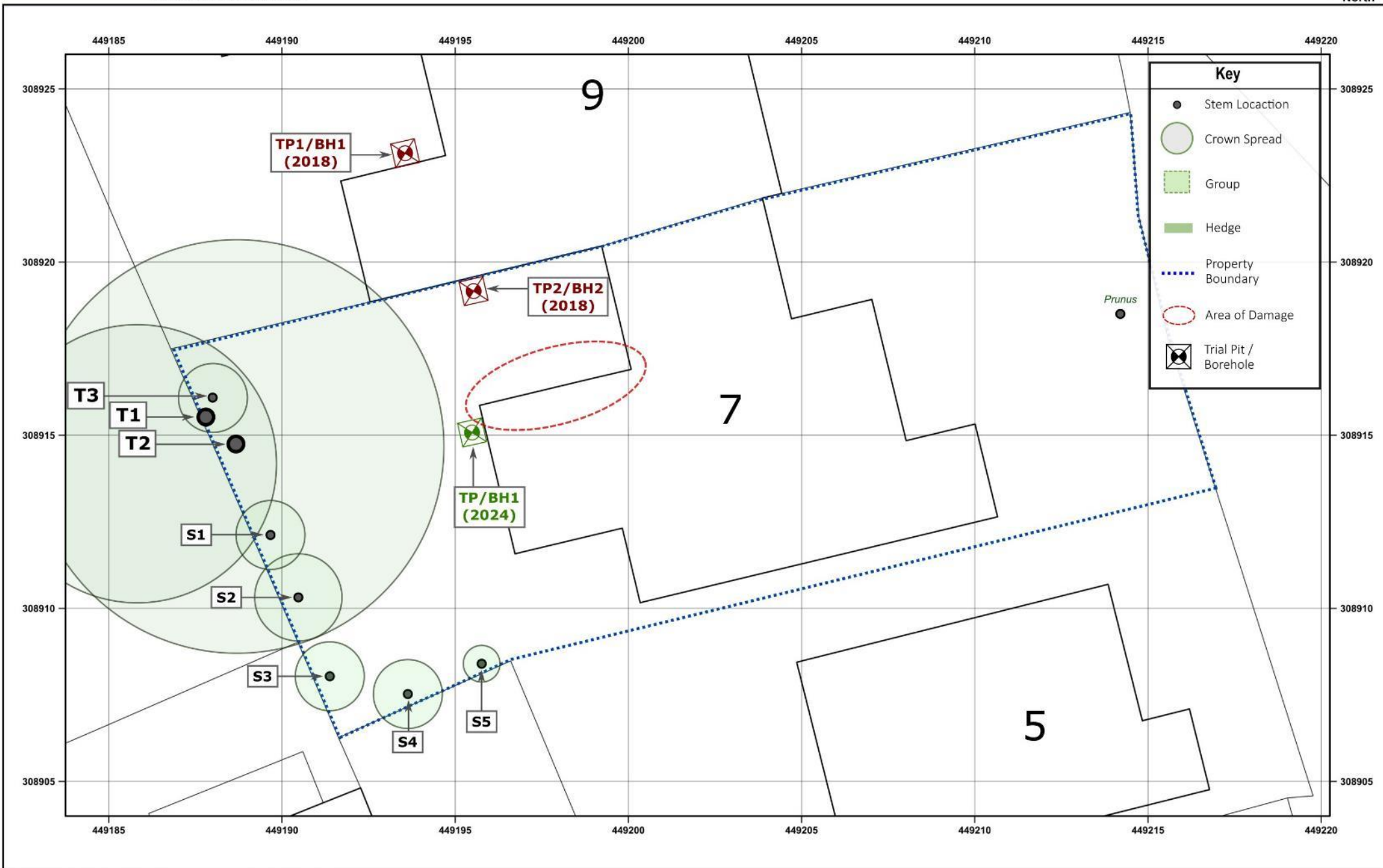
Tree No.	Species	Age	Diameter (mm)	Est Height (m)	Crown Spread (m)	Distance To Main Building (m)	Ownership	Protection Status	Water Demand
S4	Cherry Laurel (<i>Prunus lauroceasus</i>)	Younger than property	110	2	2	3.6	Markfield Retirement Village	None	Moderate
	Management History	Routinely cut back and shaped				Recommendations	Maintain at current height and spread		
S5	Lawson's Cypress (<i>Chamaecyparis lawsoniana</i>)	Younger than property	60	2.5	1	3.0	Markfield Retirement Village	None	High
	Management History	No visible previous management				Recommendations	Maintain height below 2m and lateral spread below 1.5m		

APPENDIX 2

TREE LOCATION PLAN

NO.7 THE LAURELS, MARKFIELD COURT RETIREMENT VILLAGE, MARKFIELD, LEICESTERSHIRE, LE67 9HA

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APPENDIX 3

PHOTOGRAPHS

NO.7 THE LAURELS, MARKFIELD COURT RETIREMENT VILLAGE, MARKFIELD,
LEICESTERSHIRE, LE67 9HA



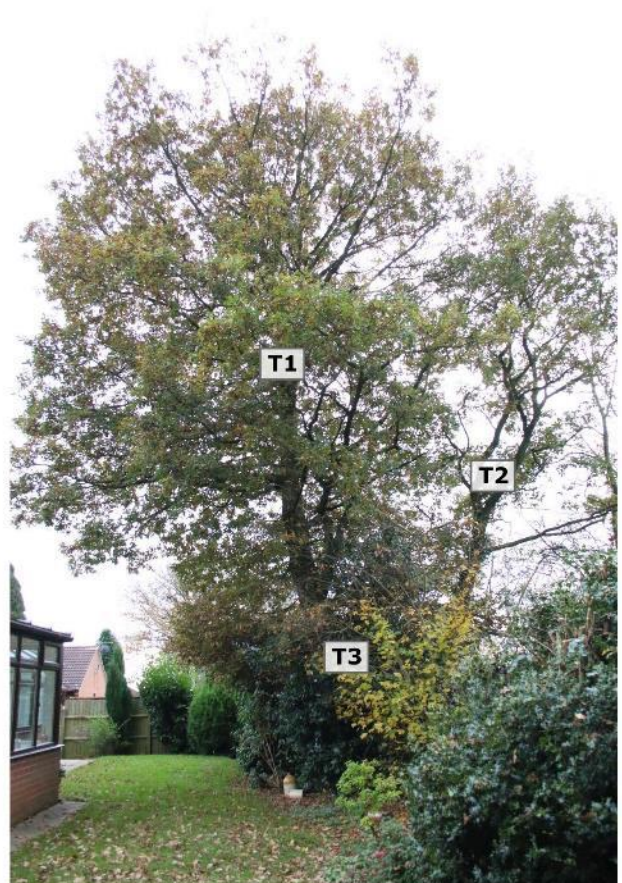
Shrubs - S1, S2



Shrubs - S3, S4, S5



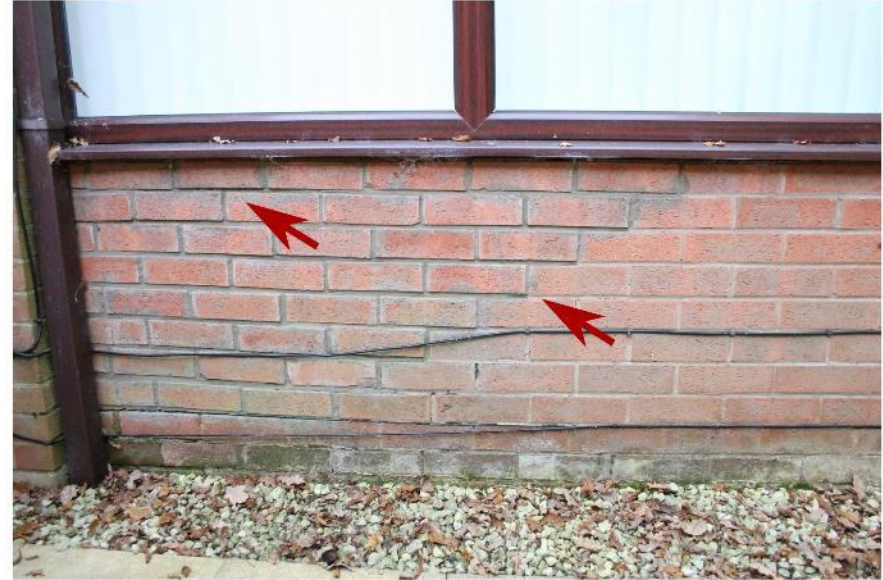
Trees - T1, T2, T3



Trees - T1, T2



Damage - Current Damage



Damage - Repaired Damage



Property - No7, Conservatory



Property - No7, Front



31 Nursery Close
Thurlaston
Leicestershire
LE9 7TQ

TEL: 07933 244 832

EMAIL: severnarboricultural@gmail.com

www.severnarboricultural.co.uk

Edward Severn
DipArb L4 (ABC), TechArborA

