



TRACY CLARKE  
TREE CONSULTANCY

# Tree Risk Survey

Client: St Mary Magdalene Church

Site: St Mary Magdalene Church

TCTC-18677

May 2023

# Introduction

## Terms of Reference

Tracy Clarke Tree Consultancy Ltd are instructed by St Mary Magdalene Church to provide a Tree Risk Survey with recommendations for works by carrying out a Formal Inspection of all trees within the Survey Area at St Mary Magdalene Church.

A plan showing the boundary of the area covered by this report is at Appendix A.

The site was visited on 2 May 2023

## The Site

The site address:

St Mary Magdalene Church

Harlow

CM17 9HD

The Local Authority: Harlow Council

## Summary

Four trees require works to mitigate risk.

Two trees have a priority of 6 months

Two trees are carried over from the last survey and so should be carried out as soon as possible



Survey Area



Google Earth

## Method of Assessment

A Formal Inspection is carried out for every tree in the Survey Area of the property. This follows a structured process called Visual Tree Assessment (VTA). Every tree is inspected from ground level, the health of the tree assessed, and any obvious defects identified.

When a tree shows a defect that requires remedial action it will be plotted individually (unless grouping is reasonable and unambiguous) using tree survey mapping software. The position of trees will be estimated using GPS.

The following data is collected:

- Tree reference number
- Tree tag number (the tree will be tagged if one does not exist)
- Species
- Estimated height (m)
- Estimated stem diameter (cm) measured at 1.5m above ground level
- Estimated crown spread diameter (m)
- Life stage
- Physiological condition
- Structural condition
- Notes and observations of defects
- Recommended works
- Bat Roost Potential
- Works will usually be prioritised to within – 7 days / 3 Months / 6 Months / 1 Year / 2 Year

THREATS (Tree Hazard: Risk Evaluation and Treatment System) method may be used to guide recommendations and prioritisation for works.

Trees that do not require work will not be recorded.

## Scope and Limitations

All trees have been inspected from ground level only applying Mattheck's (1994) Visual Tree Assessment method (VTA)\*. For individual high value trees, a more detailed inspection is sometimes required, and may be a recommendation from the Formal Inspection. This may be an assessment of the rooting environment, an aerial inspection of the upper stem and crown or a detailed decay investigation.

Recommended timing of works may be prioritised with guidance from the THREATS system of risk evaluation and treatment\*\*, and by following the guidance produced by The National Tree Safety Group's report 'Common sense risk management of trees' (2011)\*\*\*.

Tree positions are approximate only.

Observations and recommendations of trees in this report do not allow for extreme weather events. It is recommended that a High Winds Policy is developed to manage Tree Risk during storms.

All trees should be inspected following storms and extreme weather events to identify any damage or changes in condition of the trees that may have occurred.

All recommendations are given in the context of the sites current use.

Trees are dynamic living organisms, and subject to changes in their condition. They are susceptible to effects from disease, weather and changes to their surrounding environment.

The assessment of trees within this report is valid for two years from the date of inspection.

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\*Mattheck, C, Broeler, H. (1994). The body language of trees. A handbook for failure analysis – Research for Amenity Trees No.4 Research for Amenity Trees

\*\*Forbes-Laird, J. L. (2009) TREE HAZARD: RISK EVALUATION AND TREATMENT SYSTEM -THREATS

\*\*\*NTSG (2011): COMMON SENSE RISK MANAGEMENT OF TREES (Forestry Commission, Edinburgh)

## Best Practice

Any works recommended will have been given a priority - a timescale that the works need to be carried out. However, where possible within these timescales it is beneficial to the tree if major works are undertaken during periods of lower functional activity. This may be during the winter when the tree is dormant (November to end of February), or during late July to the end of August when the tree is less active. During these periods the tree is better able to react to wounding and a decrease in leaf area.

It should be noted that during July and August there are potential implications regarding protected species - see next section: Legal Status.

All tree works should comply with BS3998: (2010) Tree Work - Recommendations.

Arborists carrying out the work should be suitably qualified and insured

## Legal Status

No details have been requested from the Local Planning Authority (LPA) as to whether the trees on the site are within a Conservation Area or protected by a Tree Preservation Order (TPO).

Prior to any works to prune or remove a tree within a Conservation Area or protected by a TPO written consent from the LPA is required.

Care should be taken in regard to species and their habitats that are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 (CRoW Act) and the consolidation of the Conservation of Habitats and Species Regulations 2010 (the 'Habitat Regulations 2017').

With tree work this particularly refers to birds and bats.

Ideally, if possible, work should be undertaken outside of the bird nesting season (March to September).

A scoping survey that identifies Potential Bat Features (PRF's) and the likelihood of a tree being used by bats is included as part of the Visual Tree Assessment. This survey follows BS8596: (2015) Surveying for Bats in Trees and Woodland - Guide. Trees are rated as Negligible / Low / Medium / High / Confirmed.

A Negligible or Low rating means that no further action is required, and works can be carried out on the tree.

If rated as Medium, tree surgery works should only proceed with caution, with the arborist following best practice.

If rated as High, a Secondary Survey should be carried out to confirm or discount the presence of bats.

If Confirmed, either from the Scoping Survey or Secondary Survey, a Natural England European Protected Species Licence will be required, and a Licensed Bat Worker must be contacted and involved in the process.



# Discussion

T1 is a twin stemmed ash (Image 1). The stem to the south (nearest road) is in good condition, however the stem to the north has effectively been monolithed at 10 metres due to basal decay - this decay has progressed and can be probed 40cm at the base.

T2 is a lime that is in significant decline (Image 2). The top 4 metres is now dead (Image 3)- this further decline has happened since 2020 when there was still live growth in the upper crown.

T3 and T4 are carried over from the last survey of 2020. T3 is a horse chestnut with significant stem decay (previously T12 in the 2020 survey). The leaf cover was very dense at the time of surveying and it was not possible to see the upper crown - it is possible that the works were carried out but it does not appear so. T4 is a semi mature ash (Image 4) (previously T13 in the 2020 survey) with a cracked fork (Image 5).

Most of the limes have had the basal epicormic growth managed which has improved the ability to assess the base of the trees, however with such long term growth even when pruned it is not possible to fully assess the base of these trees (Image 6), but they have been assessed as well as they can be.

There is a strip of land on the west side of the footpath from the church to the graveyard that has been confirmed as not within the responsibility of the church (Image 7). This area was surveyed in 2020 and a dead hawthorn, group of dead blackthorn (Image 8), and an ivy covered ash tree (Image 9) were identified as needing work. Not within the responsibility of the church these works have not been carried out and not included within this survey, however they still present a risk and ownership should ideally be confirmed and the works notified to them so they can be implemented.



Image 1 - T1 Decayed stem



# Images



Image 2 - T2



Image 3 - T2 dead top



# Images



Image 4 - T4



Image 5 - T4 fork



# Images



Image 6 - Epicormic growth on base of limes

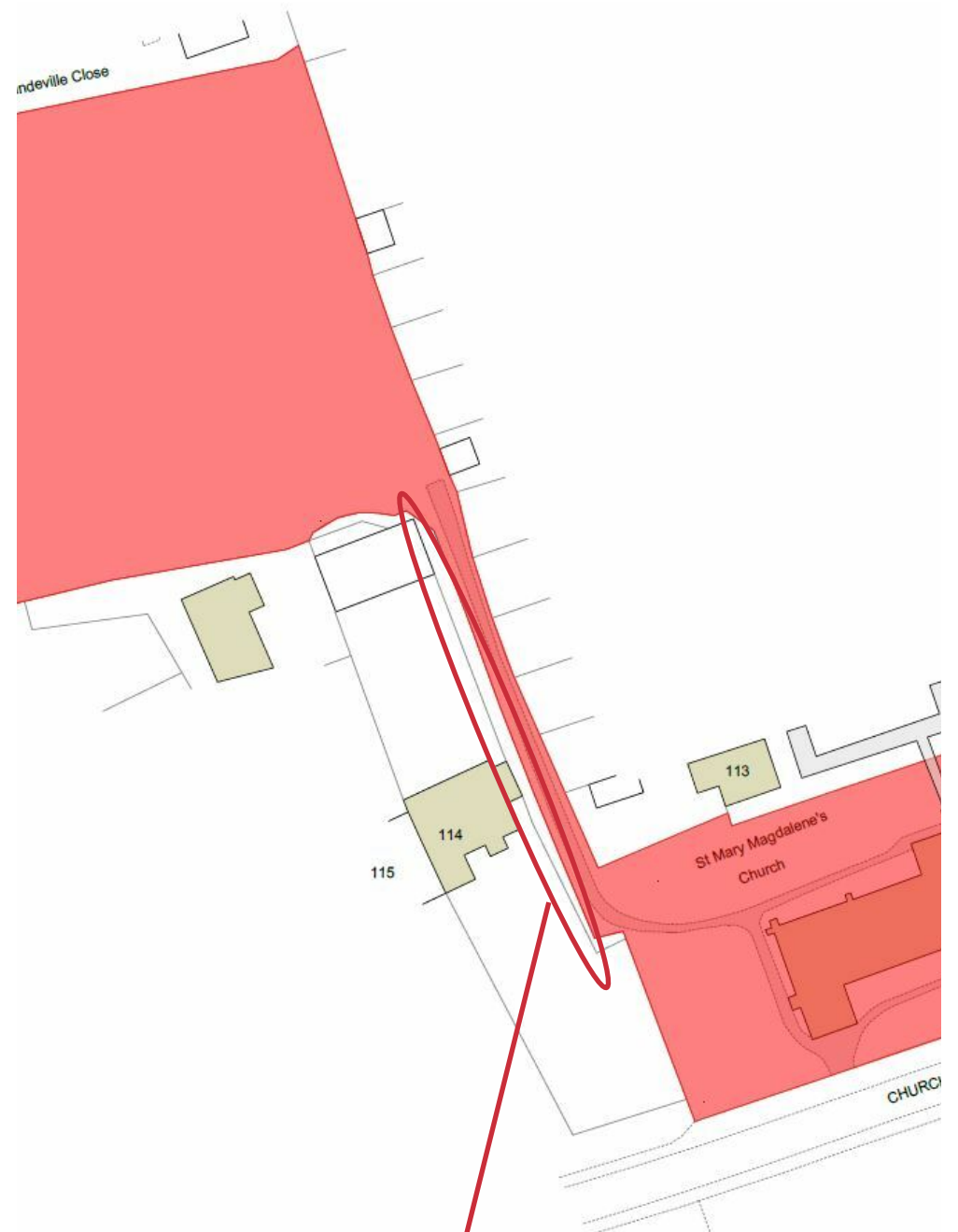


Image 7 - Area not surveyed as not in ownership



# Images



Image 8



Image 9



# Tree Survey Results

## Tree Data

Tree survey data can be found in the following appendices:

- Tree Survey Plans - Appendix B
- Tree Schedule (inc, notes and recommendations) - Appendix C

Issued separately and in addition to this report to facilitate organisation and implementation of works:

- Tree Survey Plans
- Tree Schedule (in .XLS format to enable filtering of priorities, and has an additional column to record date work is completed).

## Recommendations

The usage of the site is **High**

It is recommended that the frequency of re-inspection is **two years**

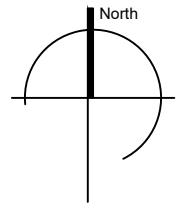
Prioritised tree works can be found in the Tree Schedule - Appendix C





# Appendix A - Survey Area





**Key**

Survey Area

Do not scale from this drawing, tree positions and dimensions should always be checked on site.

The original of this drawing is in colour, do not rely on monochrome versions.

This drawing is copyright Tracy Clarke Tree Consultancy Ltd. ©



Date	Revision	Description
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**Title**  
Survey Area

**Client**  
St Mary Magdalene Church

**Site**  
St Mary Magdalene Church, Harlow, CM17 9HD

<b>Ref:</b> TCTC-18677-RA-00	<b>Rev:</b> -	<b>Scale:</b> 1:500 @ A3
<b>Status:</b> Risk	<b>Date:</b> May 2023	<b>Drawn By:</b> AC

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# Appendix B - Tree Survey Plan





**Key**

- Carried over - works overdue
- Works within 1 month
- Works within 3 months
- Works within 6 months
- Works within 1 year
- Works within 2 years

Do not scale from this drawing, tree positions and dimensions should always be checked on site.  
 The original of this drawing is in colour, do not rely on monochrome versions.  
 This drawing is copyright Tracy Clarke Tree Consultancy Ltd.©



Date	Revision	Description
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**Title**  
Tree Risk Survey

**Client**  
St Mary Magdalene Church

**Site**  
St Mary Magdalene Church, Harlow, CM17 9HD

<b>Ref:</b> TCTC-18677-RA-01	<b>Rev:</b> -	<b>Scale:</b> 1:500 @ A3
<b>Status:</b> Risk	<b>Date:</b> May 2023	<b>Drawn By:</b> AC

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# Appendix C - Tree Schedule



# Tree Risk Schedule and Recommendations

Site: St Mary Magdalene Church

Date: May 2023

Tree / Group No.	Tag Number	Species	Number of Stems	Height (m)	DBH (cm)	Crown Spread (m)	Bat Potential	Vitality	Age Class	Physiological Condition	Structural Condition	Targets	Notes and Observations	Recommended works	Priority
T1	1535	Fraxinus excelsior (Ash)	2	14	50	12	M	Moderate	Mature	Poor	Poor	Building within falling distance of tree Road within falling distance of tree	Twin stemmed ash Stem to south (nearest road) is in good condition Stem to north has effectively been monolithed at 10 metres due to basal decay - this decay has progressed and can be probed 40cm at the base	Fell to ground level stem to north only leave 1 metre stump	6 months
T2	928	Tilia sp. (Lime sp.)	1	12	55	8	M	Low	Mature	Poor	Poor	Footpath within crown spread Tree overhangs neighbouring property	Tree is in significant decline with dieback in the upper crown Top 4 metres of stem is dead Unable to fully assess base of stem due to basal epicormic growth	Remove deadwood	6 months
T3	933	Aesculus hippocastanum (Horse Chestnut)	2	12	60	10	M	Moderate	Mature	Fair	Poor	Footpath within falling distance of tree	Both stems have significant decay with open cavities between 1 metre and 3 metres above ground level - there is substantial wound wood developed that reduces some of the loss of structural strength	Reduce crown by 2 metres in height - target prune back to live growth points	Overdue - carry out as soon as possible
T4	934	Fraxinus excelsior (Ash)	1	12	20	8	L	High	Semi Mature	Good	Poor	Neighbouring property in falling distance	One stem in a group of 4 semi mature ash - a weak fork at 2 metres has cracked creating a potential point of failure Neighbours garden within reach	Fell to ground level	Overdue - carry out as soon as possible

# Appendix D - Additional Information

## Detailed Assessment

One of the limitations of a Formal Inspection is that it is carried out from the ground with standard equipment to assist with the assessment of trees. Sometimes faults are observed that cannot be fully assessed as they are either out of reach or internal to the tree.

For trees of high value, a Detailed Inspection can determine the extent of the fault and enable a more accurate specification of works.

Without this additional information, a more precautionary approach, which often means a more severe specification, may have to be recommended.

Detailed Inspections obviously require additional resource and so are only recommended when the tree is considered of high enough value, either for amenity, wildlife conservation or for cultural reasons.

If the tree is protected by a Tree Preservation Order the Local Authority may insist on a Detailed Investigation to justify works.

## Priority of Works

All recommended works are prioritised depending on the degree of the hazard and the level of risk, usually from 7 days to 2 years.

It should be noted that different recommended works on the same tree may have different priorities as they are assessed separately.

It is often more efficient to have works carried out at the same time, and so this should be considered when reviewing the recommendations and planning the remedial work with an arborist.

## Ivy / Epicormic Growth

Ivy is very rarely a problem for a tree and can in fact add to the biodiversity and habitat value of a tree. However, when it prevents the full assessment of a tree for risk in a High Usage Zone, we will usually recommend its removal.

Ivy can obscure faults that present a significant risk.

The recommendation is usually in the form of 'Sever and Strip'. It is suggested that the ivy is severed at the bottom of the tree, leaving at least 15cm gap in the cut stems. This can then be left for a period of time to die back and should then be stripped from the tree.



Depending on the extent and height of the ivy this may need to be carried out by an arborist.

Dead or dying ivy is much easier to remove from a tree, but it should be noted that large sections of dead ivy, if left, may present a hazard in itself and should be removed as soon as it is practicable.

Some trees (such as lime trees) produce epicormic growth from the base of the stem, and sometimes up the stem as well.

This is small diameter growth that can obscure the base of the tree and prevent the identification of decay in the lower stem.

Therefore, it may be recommended for this growth to be removed to enable full assessment of the tree.

Trees that have ivy or epicormic growth to an extent that there is a recommendation to remove it, have not been fully assessed and so cannot be considered Formally Inspected in their entirety.

It is recommended that once the trees have been cleared that they are Formally Inspected again.

## Tree Tags

Trees that require works will be tagged if this is required to identify the tree on the ground.

This means the tree will have two numbers – the 'T' number that identifies the tree on the Tree Survey Plan (this number is chronological and starts at 1 and finishes with the last tree surveyed).

The Tag Number may be any number but is there to identify the tree on the ground. This enables two trees next to each, and close together on the plan, to be positively identified by the arborist so that the correct works are carried out on the right tree.

# Appendix E - Definition of Terms

<b>Tree / Group / No:</b>	Identification reference T= individual tree, G = groups of – this is the number shown on the Tree Survey Plans	
<b>Tag Number</b>	Number stamped on tag that is nailed to tree to identify it, enabling certainty when carrying out recommended works by cross referencing with T or G number on plan	
<b>Species:</b>	Botanical and Common name	
<b>Height:</b>	Estimated height of tree in metres (to the nearest m)	
<b>DBH:</b>	Estimated stem diameter taken at 1.5m above ground level, in centimetres	
<b>Crown Spread:</b>	Estimated crown spread averaged over the four cardinal points N, E, S, W	
<b>Vitality</b> <i>(dynamic characteristic):</i>	<b>Normal</b>	Normal growth for the species in its environment
	<b>Moderate</b>	Below normal growth for the species in its environment
	<b>Poor</b>	Sparse / weak growth for the species in its environment
	<b>Dead</b>	A dead tree, no live growth, cannot be considered a veteran tree despite size
<b>Age Class</b>	<b>Young (Y)</b>	A small tree that has been recently planted, or an establishing tree naturally self-sown in the very early stages of growth for its species
	<b>Semi mature (SM)</b>	An established tree in the first third of the life span for its species with significant growth potential
	<b>Early mature (EM)</b>	Tree in the second third of the life span for its species, with some growth potential but is less vigorous / slowing down
	<b>Mature (M)</b>	Tree that has reached its optimum crown size and growth potential for its species, in its last third of expected lift span for its species
	<b>Over mature (OM)</b>	Declining tree, and / or approaching the end of its natural lifespan for its species,
<b>Physiological condition</b>	<b>Good</b>	Generally good healthy specimen for the species, full, healthy crown density, normal extension growth, foliage colour and size normal, limited deadwood, functioning well and able to adapt well to its environment
	<b>Fair</b>	Showing minor signs of decline, slow extension growth, possibly yellowing leaves, numerous deadwood present
	<b>Poor</b>	Trees with poor crown density for its age and species, small developed leaves, limited extension growth, generally functioning poorly, in decline, major deadwood present
<b>Structural condition</b>	<b>Good</b>	A tree showing no adverse risk of failure, minor <u>defects</u> or weak characteristics, with little overall significance
	<b>Fair</b>	A tree with defects that may require works to remove or improve the defect
	<b>Poor</b>	A tree with major structural defects, unlikely to return to a good structural condition following remedial works, may have significant decay, cavities, cracks, splits
<b>Deadwood</b>	<b>Twigs</b>	Diameter up to 10mm
	<b>Minor</b>	Diameter 10-50mm
	<b>Major</b>	Diameter >50mm
<b>Site factors</b>	Common site factors that should be considered that may influence the likelihood of tree failure	
<b>Target</b>	People or property at risk from the tree / groups	
<b>Priority for works</b>	A = immediate, D7 = within 7 days, M1 = within a month, M6 = within 6 months, Y01 = within 1 year, Y02 = within 2 years, Y03 = within 3 years, Y05= within 5 years  <i>Guided by THREATS (Tree Hazard: Risk Evaluation and Treatment System) method to guide my recommendations and prioritisation for works. For further information on this method, please refer to <a href="http://www.flac.uk.com/wp-content/uploads/2010/07/THREATS-GN-June-2010.pdf">http://www.flac.uk.com/wp-content/uploads/2010/07/THREATS-GN-June-2010.pdf</a></i>	



# Appendix F - Qualifications

Ade Clarke, a qualified arboriculturist with extensive experience spanning thirty years working with trees. Areas of expertise include tree risk, ancient tree and woodland management.

An experienced tree surveyor managing tree risk at various levels - from surveying to managing policy and procedures as well as delivering training to surveyors and to those responsible for the management of tree populations.

Ade has been involved with ancient trees since 1992, and over that period has experience of every aspect of ancient tree management, from practical hands-on management, surveying, contract management, the management of ancient trees in relation to risk, and finally strategic responsibility for one of Europe's most important ancient tree populations.

Over the last few years, Ade has also specialised in the very detailed analysis of tree condition and structural integrity with the use of tomography, aerial tomography, and stability assessments. With this specialist equipment and the analysis of the additional data it provides, we are able to determine more refined safety factors that often enables the retention of the most valuable trees in high target areas that otherwise may be removed or have inappropriate tree surgery carried out due to the perceived risk.

Ade Clarke is a Chartered Forester, a Registered Consultant and Professional Member with the Institute of Chartered Foresters, and a Professional Member of the Arboricultural Association.



Ade Clarke MICFor. MArborA



# Excellence in Arboriculture



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