

# TREE RISK ASSESSMENT

BARLING MAGNA PARISH  
COUNCIL - 2026



**SORENSEN**  
TREE CONSULTANCY

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**Client:** Barling Magna Parish Council

**Sites:** Barling Magna Nature Reserve, Play Area & The Parry

**Ref:** BARMAGNA/QTRA/01

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**Date:** 14.04.2026

**Signed:** 



# Introduction

## 1.1 Instruction and brief

1.1.1 Sorensen Tree Consultancy have been instructed by Steph Raine (Clerk to the Parish Council) of Barling Magna Parish Council to undertake an assessment of trees within the Barling Magna Nature Reserve, The Play Area (off Little Wakering Road) and The Parry.

1.1.2 The majority of the following information was collected on site during a visit on 04.04.2026 by the author. Where details originate from third party information, they will be identified as such in the text. No additional documentation was received from the client regarding the above brief.

## 1.2 Background and basis for tree risk management approach

1.2.1 Research on behalf of the National Tree Safety Group (NTSG) for their 2024 publication '*Common sense risk management of trees*' demonstrated that the average individual fatality risk from a falling tree to the UK public in the period 1997 – 2021 was calculated to be one in 15 million per year.

1.2.2 To illustrate the relationship between the likelihood of harm and the response expected of duty holders, the Health & Safety Executive (HSE) developed the Tolerability of Risk Framework (ToR) in their seminal document, '*Reducing Risk Protecting People*'. The framework describes three regions of risk: **unacceptable**, **tolerable** or **broadly acceptable**, defined by the annual risk, in terms of a ratio of one individual to the overall population dying as a result of exposure to a particular hazard. These regions are then used to inform management decisions.

1.2.3 The same document states that "*HSE believes that an individual risk of death of one in a million per annum for both workers and the public corresponds to a very low level*

*of risk and should be used as a guideline for the boundary between the broadly acceptable and tolerable regions”.*

1.2.4 This means that the research for the NTSG shows that individual risk of death attributable to trees is 15 times less than the threshold of one death in one million per year that the ToR framework suggests people regard as insignificant or trivial in their daily lives.

1.2.5 It is important to recognise that, while the overall risk from trees to society is extremely low, the risk posed by any particular tree can, in rare instances, be extremely high. Accordingly, the principles of the tolerability of risk can also be applied to particular trees (as suggested by the NTSG guidance):

- Where the risk level is deemed **unacceptable** by a competent inspector, a decision to prohibit exposure to the risk would apply (control measures such as reducing access to the affected area, pruning or other tree work, or tree removal might be considered).
- For trees whose condition and situation present a **broadly acceptable** level of risk, no action would be expected (unless some reasonably practicable intervention could be seen to further lower the risk without loss of benefits or value - i.e., adjusting an existing fenceline during scheduled repairs or removing deadwood during an adjacent planned operation).
- Where competent judgement places trees in the **tolerable** level of risk, then additional assessment processes would control the risks, resulting in a residual risk level that is ‘As Low As Reasonably Practicable’ (referred to as the ALARP principle by the HSE) within the context of the benefits those trees provide.

1.2.6 Decisions about what constitute ALARP residual risks would involve a judgement by a competent inspector that assesses broader concerns, (such as climate change and flood mitigation, public health and well-being, ecology, landscape and aesthetic value) against measures to avoid or reduce the risk. These judgements should not

involve actions that are grossly disproportionate to the risk in terms of their time, trouble or cost. For example, it may not be reasonable to remove the deadwood from a tree overhanging a road where that deadwood presents a tolerable level of risk, because it could be necessary to replicate that work for all similar trees and the total cost of the tree work and the loss of a valuable ecological habitat would be excessive compared to the risk reduction – therefore the risk may already be ALARP.

- 1.2.7 The level of risk is proportional to the type and intensity of use of the area around the tree and so the NTSG guidance recommends that trees are inspected according to the occupancy of the areas they can affect. From a management perspective, collective assessment of the usage and occupancy across a site allows areas that share similar characteristics to be placed in zones and programmed together systematically.
- 1.2.8 It is important to recognise that site usage and occupancy is not static and must be regularly reviewed to ensure that the risk is controlled.

## Inspection Method

### 2.1 Quantified Tree Risk Assessment

- 2.1.1 The QTRA surveyor will walk the site, taking a general overview of trees (rather than inspecting every individual tree), looking for signs of substantial defects or features that might be significant in relation to the targets.
- 2.1.2 Where significant defects or features are identified; the surveyor will undertake a closer non-invasive inspection in line with recognised LANTRA Professional Tree Inspection principles. Where necessary, the tree or branch is then considered in terms of both impact size and probability of failure. Values derived from the

assessment of these three components (target, size and probability of failure) are combined to calculate the probability of significant harm occurring.

- 2.1.3 For the purposes of this survey, a tolerable risk of harm (where that risk is imposed on the general public) can be judged to be as low as reasonably practicable within a range from <1 in 10,000 to 1 in 1,000,000 in keeping with industry and HSE guidelines, effectively setting the threshold for action for unacceptable risks at or greater than 1 in 10,000. Beyond this, risks less than 1 in 1,000,000 have been judged to be broadly acceptable to all. However, while the risk of harm does not consider the age of the affected individual, due to the emotive nature of preventable injury to children and the associated risk to reputation arising from even minor injuries, the threshold for acceptable risk will be lower for areas that are used by children. In QTRA terms this will be doubled, so that for these areas, the actionable threshold will be 1 in 20,000.
- 2.1.4 At the discretion of the surveyor, only trees that were identified as presenting unacceptable risks (and/or those requiring work to reduce that risk or general management suggestions) may be recorded during inspection to a level of detail sufficient to enable distinction and position. Similarly, at the discretion of the surveyor, those trees that present obvious significant visible defects may be recorded to demonstrate that works are not required.
- 2.1.5 Once the calculation for risk of harm was completed, remedial works will be specified to reduce that risk to more tolerable levels. Between the thresholds outlined above of 1 in 10,000 and 1 in 1,000,000, the surveyor will take into account the practicality, cost and loss of either aesthetic, or habitat value, when considering works to reduce risk levels in line with the ALARP (“As Low As Reasonably Practical”) principle described in sections 1.2.5 & 1.2.6 above.
- 2.1.6 All works are subsequently assigned a work priority based upon their risk of harm, ensuring that the most significant risks are reduced first.

## 2.2 Target value assessment

- 2.2.1 Target assessment was based on estimated expected occupancy considering the visual physical indicators of usage (e.g., the density of undergrowth, desire lines, compaction and wear on paths, and clearance around accesses).
- 2.2.2 To provide a consistent, peer reviewed and open set of criteria against which usage is benchmarked, the Quantified Tree Risk Assessment (QTRA) approach uses Target Ranges. These group equivalent occupancy for a given usage area, so that, for example, a greater number of faster moving cars that would spend a short time under a given tree is within the same range as a smaller number of slower moving pedestrians and an even smaller duration of static occupation (e.g., a bus stop or outdoor restaurant seating area). This approach has the advantage of allowing a degree of leeway within estimates while maintaining significant distinctions between them. These ranges can be seen in Appendix 3 (and are used under licence by the Author).

## 2.3 Limitations

- 2.3.1 The investigation was undertaken visually from ground level without invasive physical examination. The disclosure of hidden defects cannot therefore be expected. Inspection was restricted where trees were ivy-clad or located wholly or partially on neighbouring land or impeded by poor access due to ditches, fencing or where basal growth or other vegetation obscured lower stems and root collars. Where more detailed assessments are required, recommendations are set out below. Height, spread and other dimensions were estimated unless otherwise stated.
- 2.3.2 This report relates specifically to the condition of the tree or trees on the day of inspection. Tree inspection details and recommendations will remain valid for one year from the date of inspection. However, they are necessarily invalid if

development or construction works of any type, (including any changes to soil levels or excavations are carried out on the land which is the subject of this survey), or if any works are undertaken upon or close to trees other than those recommended herein or any tree works not in compliance with BS 3998:2010 (Tree Works Recommendations).

- 2.3.3 This assessment is confidential to the client and their professional advisers for the purposes of the brief and no liability is accepted to any other parties. Beyond the remit of the brief, it is not to be disclosed to other parties without the written consent of Sorensen Tree Consultancy.
- 2.3.4 Trees are dynamic living organisms. Healthy trees, or parts of healthy trees, may fail naturally at any time and more so as a result of high winds or violent storms and as such the consequences of unusual weather phenomena are unforeseeable - it follows that Sorensen Tree Consultancy cannot be held liable for any such failures.
- 2.3.5 Some trees may be subject to legal protection by a Tree Preservation Order or by virtue of growing within a Conservation Area and as a result some tree work (i.e., pruning or felling) requires an application or notification to the Local Planning Authority. Tree work may also be subject to restrictions by planning conditions.
- 2.3.6 All conclusions and recommendations of the assessment are necessarily the product of author's experience and qualified opinion.

## Assessment

### 3.1 Risk management

- 3.1.1 At this time, only one tree on site presents an unacceptable risk to users of the site (i.e., one that is more likely than the actionable threshold of be 1 in 20,000 as set out in section 2.1.3). T13 is a declining semi-mature Wild Cherry, located on the northern boundary of the Play Area, that has extensive major deadwood within the northern

canopy over an adjacent play area within the neighbouring Nursery. The condition of the deadwood indicates that it has been present for more than one season (the twig structure has begun to break down) and the thick bark of the species can obscure the assessment of the degree of degradation. As the decline of the tree appears to be systemic, it is recommended that the tree be felled to ground level so as to make the risk of harm As Low As Reasonably Practical (ALARP). Due to its location it may be that it is not within the Parish Council ownership; in which case it would be prudent to let the adjacent landowner know so that they can undertake the recommended mitigation works.

- 3.1.2 The remaining trees with works outstanding are designated low priority. These trees already present a tolerable or broadly acceptable risk of harm and so work to make the risk of harm that they present ALARP need only be undertaken within overlapping general management works, or when funds allow.

## 3.2 Re-inspection

- 3.2.1 Due to the extent of usage and occupancy within the sites, it is recommended that all are subject to formal re-inspection on a three-year cycle. Accordingly, the next formal inspection should be undertaken in the spring of 2029.

**APPENDIX 1 - TREE RISK ASSESSMENT SCHEDULE**

Identification			Tree Details					Risk Assessment						Actions	
Tree Ref.	UK Grid Easting*	UK Grid Northing*	Common Name	Height (m)	Stem Dia. (mm)	Life Stage	Comments	Most Likely Failure	Target Range	Size of Part	Probability of Failure	Risk of Harm	Advisory Risk Threshold	Recommendations	Action Priority
T1	592147	189863	Lombardy Poplar	15	600	Mature	Previously topped or reduced to 8m with mature regrowth. No significant visible defects.	Major limb/s pullout (see comments)	3	2	6	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree value sufficiently high and risk is ALARP
T2	592136	189862	Lombardy Poplar	15	800	Mature	Previously topped or reduced to 8m with mature regrowth. No significant visible defects.	Major limb/s pullout (see comments)	3	2	6	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree value sufficiently high and risk is ALARP
T3	592130	189863	Lombardy Poplar	15	800	Mature	Previously topped or reduced to 8m with mature regrowth. No significant visible defects.	Major limb/s pullout (see comments)	3	2	6	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree value sufficiently high and risk is ALARP
T4	592146	189899	Lombardy Poplar	15	400	Dead	Dead tree located on other side of bank within boundary. Base and lower main stem obscured by vegetation.	Major deadwood (>25mm diameter or >1m length)	3	2	3	1 in 100,000	Tolerable (where imposed) <1/10,000	Fell to ground level to make risk of harm ALARP.	Low (as general management or when funds allow)
T5	592133	189901	Monterey Pine	10	350	Mature	Sweeps to east. No signs of recent rootplate movement at base and the branch form and shoot orientation indicate historic lean has been adapted to.	Total failure of rootplate (see comments)	3	1	7	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work.	No work required as tree value sufficiently high and risk is ALARP
T6	592105	190034	Willow	5	1200	Veteran	Located outside of boundary. Historical failure of main stem with associated partial failure of laterals. Limb to south has made contact with ground (and layered) but exhibits long end weighted branch over path. No other significant visible defects.	Major limb/s splitting / longitudinal fracture (see comments)	3	3	5	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Reduce branch back to boundary with stub or internodal cut to make risk of harm ALARP. Pruning unlikely to significantly affect tree.	Low (as general management or when funds allow)
T7	592114	190111	Field Elm	6	200	Dead	Cluster of dead trees displaying residual symptoms of Dutch Elm Disease. Base and main stems obscured by Ivy.	Major deadwood (>25mm diameter or >1m length)	3	3	4	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Fell to ground level to make risk of harm ALARP.	Low (as general management or when funds allow)
T8	592152	190130	Horse Chestnut	10	960	Mature	Partially occluded root collar bark wound to south. Emerging fungal fruiting body between basal buttresses to east consistent with Ganoderma sp.. Main stem displays infrequent lesions typical of Horse Chestnut Bleeding Canker. Historically pollarded at 3m with mature regrown branch structure and likely large vertical cavity. Branches about 1m over path and bench with undergrowth dissuade closer access. No significant visible defects.	Minor limb/s pullout (see comments)	3	3	6	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree value sufficiently high and risk is ALARP
T9	592112	190164	Horse Chestnut	9	750	Mature	Normal amount of minor well occluded cavities. Northern limb growing rapidly over path. No significant visible defects.	Major limb/s pullout (see comments)	3	2	7	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time	No work required as tree value sufficiently high and risk is ALARP
T10	592091	190165	Horse Chestnut	3.5	70	Dead	Small recently dead tree.	Major deadwood (>25mm diameter or >1m length)	3	4	4	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree small enough that risk is already ALARP.
T11	592073	190179	Ash	11	450	Mature	Multistemmed structure with southern limbs over path containing minor deadwood. No significant visible defects.	Minor deadwood (<25mm diameter or <1m length)	3	4	6	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Remove major deadwood (>25mm or 1m length) over path to make risk of harm ALARP.	Low (as general management or when funds allow)
T12	592024	190190	Field Elm	3.5	70	Dead	Small recently dead trees.	Major deadwood (>25mm diameter or >1m length)	3	4	4	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	No work at this time.	No work required as tree small enough that risk is already ALARP.
T13	593076	189207	Cherry	11	450	Mature	Located on the boundary with the adjacent nursery. Base and lower main stem obscured by vegetation and Ivy. Canopy in extensive decline with major deadwood over adjacent play area and subject to an unknown degree of degradation.	Major deadwood (>25mm diameter or >1m length)	1	2	3	1 in 1000	Unacceptable >1/1000	Notify nursery and fell to ground level to make risk of harm ALARP to make risk of harm ALARP.	High (within 6 months)
T14	593356	188311	Oak	10	500	Mature	Normal amount of scattered major deadwood throughout canopy. No significant visible defects.	Major deadwood (>25mm diameter or >1m length)	3	3	4	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Remove major deadwood (>25mm or 1m length) to make risk of harm ALARP.	Low (as general management or when funds allow)
T15	593358	188256	Willow	10	600	Mature	Normal amount of scattered major deadwood throughout canopy. No significant visible defects.	Major deadwood (>25mm diameter or >1m length)	3	3	4	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Remove major deadwood (>25mm or 1m length) to make risk of harm ALARP.	Low (as general management or when funds allow)
T16	593413	188189	Cherry	9.5	650	Mature	Twin stemmed structure with southern stem displaying large canker at main union. Tree has previously been reduced. No other significant visible defects.	Major limb/s pullout (see comments)	3	2	7	<1 in 1,000,000	Broadly Acceptable <1/1,000,000	Works to date have reduced likelihood of failure to ALARP.	No work required as reduction works to date have ensured that risk is ALARP



0 250 500 m  
Scale: 1:7500 (at A3)





0 25 50 m

Scale: 1:500 (at A3)



Legend

Site Boundaries

Works Priority

- High (within 6 months)
- Low (as general management or when funds allow)
- No work required.



0 25 50 m

Scale: 1:750 (at A3)

## Appendix 3 - QTRA Target Ranges

Replicated under licence from the Quantified Tree Risk Assessment Practice Note V5.3.9 (available in full at <https://qtra.co.uk/practice-notes/>).

Target Range	Human <sup>1</sup> (not in vehicles)	Vehicle Traffic <sup>2</sup> (number per day)	Property Value <sup>3</sup> (repair or replacement)
1	<b>Occupation:</b> Constant – 2.5 hours/day <b>Pedestrians &amp; cyclists:</b> 720/hour – 73/hour	26000 – 2 700 @ 110kph (68mph) 32000 – 3 300 @ 80kph (50mph) 47000 – 4 800 @ 50kph (32mph)	£2 000 000 - >£200 000
2	<b>Occupation:</b> 2.4 hours/day – 15 min/day <b>Pedestrians &amp; cyclists:</b> 72/hour – 8/hour	2600 – 270 @ 110kph (68mph) 3200 – 330 @ 80kph (50mph) 4700 – 480 @ 50kph (32mph)	£200 000 - >£20 000
3	<b>Occupation:</b> 14 min/day – 2 min/day <b>Pedestrians &amp; cyclists:</b> 7/hour – 2/hour	260 – 27 @ 110kph (68mph) 320 – 33 @ 80kph (50mph) 470 – 48 @ 50kph (32mph)	£20 000 - >£2 000
4	<b>Occupation:</b> 1 min/day – 2 min/week <b>Pedestrians &amp; cyclists:</b> 1/hour – 3/day	26 – 4 @ 110kph (68mph) 32 – 4 @ 80kph (50mph) 47 – 6 @ 50kph (32mph)	£2 000 - >£200
5	<b>Occupation:</b> 1 min/week – 1 min/month <b>Pedestrians &amp; cyclists:</b> 2/day – 2/week	3 – 1 @ 110kph (68mph) 3 – 1 @ 80kph (50mph) 5 – 1 @ 50kph (32mph)	£200 - >£20
6	<b>Occupation:</b> <1 min/month – 0.5 min/year <b>Pedestrians &amp; cyclists:</b> 1/week – 6/year	None	£20 - £2

### Notes

<sup>1</sup> The probability of pedestrian occupation at a particular location is calculated on the basis that an average pedestrian will spend five seconds walking beneath an average tree. For example, an average occupation of ten pedestrians per day, each occupying the target for five seconds is a daily occupation of fifty seconds, giving a likelihood of occupation 1/1,728. Where a longer occupation is likely, as with a habitable building, outdoor café, or park bench, the period of occupation can be measured, or estimated as a proportion of a given unit of time, e.g. six hours per day (1/4). Ranges of occupancy are presented in the table and the assessor's estimate need only be sufficient to determine which of the six ranges to select

<sup>2</sup> In the case of vehicles, likelihood of occupation may relate to either the falling tree or branch striking the vehicle or the vehicle striking the fallen tree. Both types of impact are influenced by vehicle speed; the faster the vehicle travels the less likely it is to be struck by the falling tree, but the more likely it is to strike a fallen tree. The probability of a vehicle occupying any particular point in the road is the ratio of the time it is occupied - including a safe stopping distance - to the total time. According to Department for Transport figures, the average vehicle on a UK road is occupied by 1.6 people. To account for the substantial protection that the average vehicle provides against most tree impacts and in particular, frontal collisions, QTRA values the substantially protected 1.6 occupants in addition to the value of the vehicle as equivalent to one exposed human life.

<sup>3</sup> Property can be anything that could be damaged by a falling tree, from a dwelling, to livestock, parked car, or fence. When evaluating the exposure of property to tree failure, the QTRA assessment considers the cost of repair or replacement that might result from failure of the tree. Ranges of value are presented in the table and the assessor's estimate need only be sufficient to determine which of the six ranges the cost to select. In the table, the ranges of property value are based on a VOSL of £2,000,000, e.g. where a building with a replacement cost of £20,000 would be valued at 0.01 (1/100) of a life (Target Range 2). When assessing risks in relation to buildings, the Target to be considered might be the building, the occupants, or both. Occupants of a building could be protected from harm by the structure or substantially exposed to the impact from a falling tree if the structure is not sufficiently robust, and this will determine how the assessor categorises the target.