

Arboricultural Appraisal

Hatfield Broad Oak Parish

Report Production: 29/04/2024

Report Reference: TS00123_HATBR_5888



Client: Hatfield Broadoak Parish Council

Report produced by Paul Zepler: FdSc Arb, NC Arb, LANTRA PTI, VALIDATOR Arb

Date of inspection: 22/04/2024

Date of final report production: 29/04/2024

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Statutory Controls		Mitigation	
TPO	Y	Owner	EDU
TPO potential	Y	Domestic 3 rd Party	N
Cons. Area	Y	Local Authority Intervention	LPA
SSSI	N	Other	N
Local Authority: Ullesford DC			

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1.0 Executive summary

- 1.1 Longacre Tree Surgery consultation services have been asked by the representatives of Hatfield Broadoak Parish Council, to inspect all trees within a designated area. The purpose of this survey is to identify any potential risk associated with the physiological and structural condition of the stock.

A site visit was carried out on 22/04/2024 where an estimated 350 trees were inspected of which 45 were tagged and mapped.

Inspection was carried out in accordance with the 'Passive survey' technique, which will detail condition and priorities in line with the survey specification described within **APPENDIX A**.

Longacre have quantified risk by applying predicted levels of occupancy within the grounds and zoning area in accordance with the resulting footfall, as described within **APPENDIX B & C**.

We have broken down areas into compartments, individual trees were tagged when in proximity to structure or when requiring works to mitigate a physiological or structural concerns, or when blocking pedestrian and/or vehicular progression.

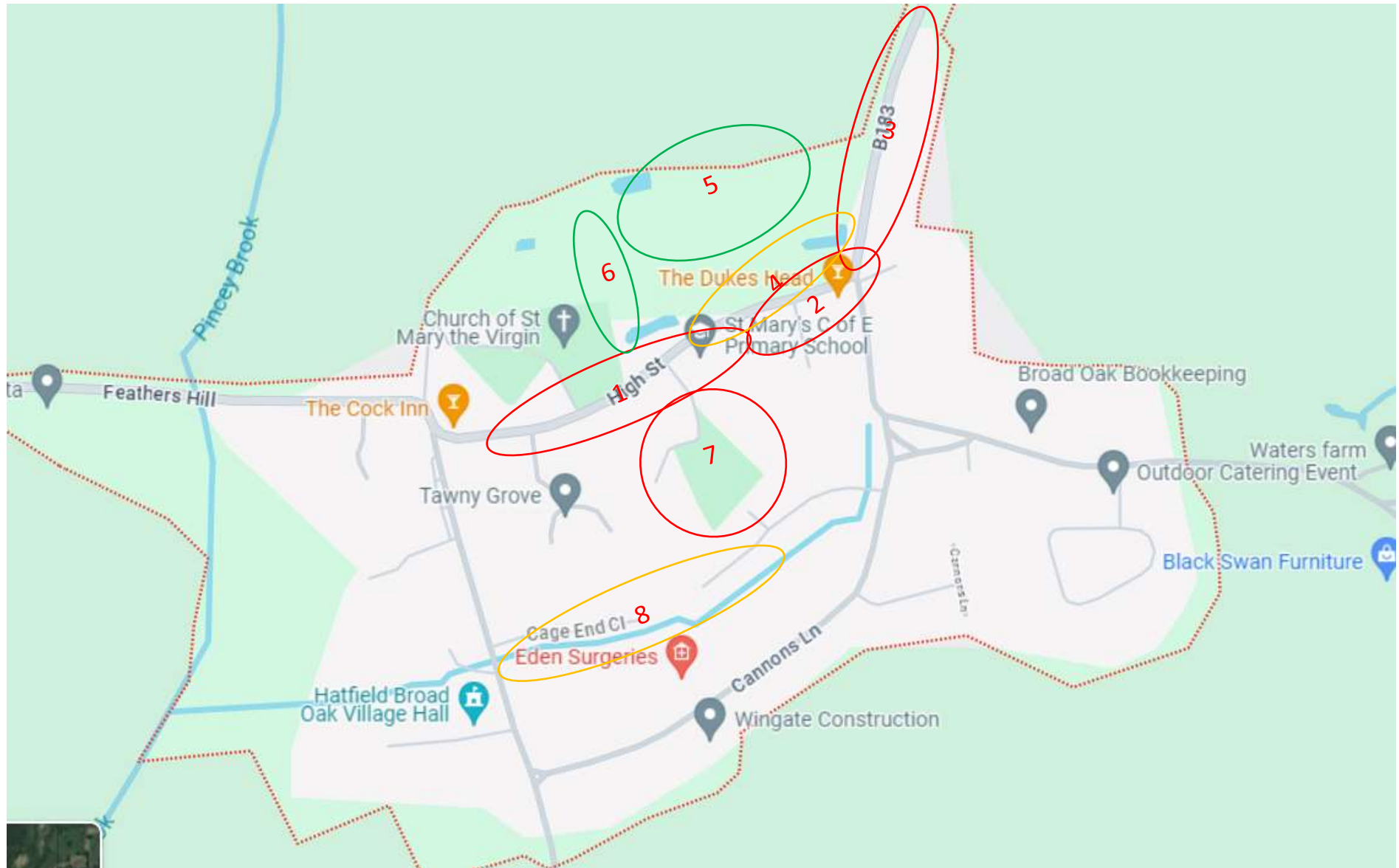
The survey included:

- The site context and observation.
 - Tree survey data obtained during a site inspection.
 - Analysis of data.
 - Discussion, tree works recommendations and conclusion of findings.
- 1.2 Conclusions are based upon analysis of data obtained during the site inspection which will be referenced against good practice standards.

Inspection was carried out at ground level, including a visual and tactile examination of external features. The principal objective of this survey is to identify any impact to arise throughout the inspected tree stock and offer recommendations to aid in its avoidance.

Visual assessment, in accordance with accepted arboricultural practice, was based on apparent vitality (leaf cover, extension growth), bud production, presence of deadwood and die back, fractured, and detached limbs, evidence of excessive basal movement, bacterial and/or fungal infection and external indications of stem and basal decay likely to affect the structural condition of the tree.

- 1.3 The areas that have been highlighted for survey have been broken down into compartments from 1 to 8:



2.0 Introduction

- 2.1 Paul Zepler has produced This report, a professional within the arboricultural industry in relation to multiple disciplines within the sector. I currently hold the qualifications of FdSc arb, NC/arb, LANTRA PTI and VALID Arb. I have also worked as an Arboriculture Officer for seventeen years, consulted for ten years and an additional four years working in the industry in a practical capacity.

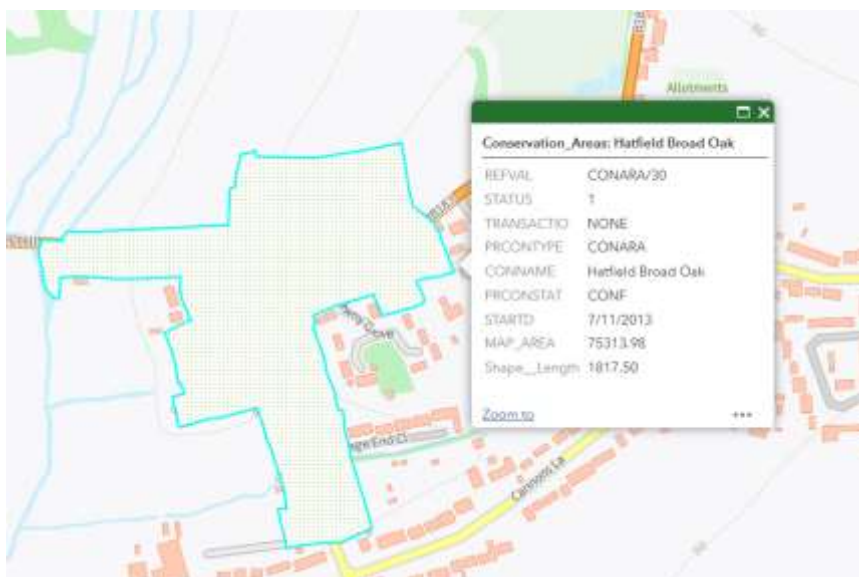
CONTACT DETAILS: info@longacretreesurgery.co.uk / 07435251887

3.0 Site description and local authority constraints

- 3.1 Hatfield Broad Oak is a village and civil parish in the Uttlesford district of Essex, England. The village is approximately 5 miles (8 km) south-east of Bishop's Stortford. Near the church of St Mary the Virgin is former Benedictine priory Hatfield Regis Priory.

The settlement of Hatfield was well established by the time of the Norman Conquest and its *Domesday Book* population of 115 put it as the ninth largest settlement in Essex. At one time a royal manor of Harold I, it fell under the possession of William I. Popular for hunting in the neighbouring forest, its royal patronage led to its becoming known as Hatfield Regis, or King's Hatfield, partly to distinguish it from Hatfield Peverel, also in Essex ([Hatfield Broad Oak - Wikipedia](#)).

- 3.2 The area as a whole is very leafy and rural, with many arboricultural features dotted around in clusters or managed within private gardens. There seems to be an abundance of Sycamore on Parish land, this is likely as a result of some historic clearance that has opened up the green space for self-seeded cultivation though avian usage and not likely as a result of the existing seedbank within the soil, as tends to be the case with Sycamore within southern England.
- 3.3 A portion of the Highstreet (B183) is covered by Hatfield Broad Oak conservation area, this covers a section of compartment 1 which means that local authority notification is required for a portion of the recommended works:



- 3.4 Tree preservation orders and group preservation orders are prevalent (green areas within the map below), covering trees within compartment 1, 2, 3, 4, 5, 6, 7 and 8. Notably there is a gap between the Highstreet (B183) and TPO reference 2/76/55 which is the most northern group TPO on the map. This may mean that the trees within compartments 1 and 2 are not governed by this preservation order, but this would need to be qualified by the respective Local Planning Authority. Trees within all other compartments are under preservation and as such require local authority consent before works can commence.



4.0 Statutory obligations

4.1 Duty of Care:

Under British common law, the owner of the land on which a tree stands, together with any party who has control over the tree's management owes a duty of care to all people who may be injured by the tree. The duty of care is to take reasonable care to

avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.

- 4.2 The Occupiers Liability Act (1984) and Health and Safety at Work Act (1974) cover the legislative duty of care.

In England and Wales an occupiers' liability is governed by the [Occupiers' Liability Acts 1957](#) and [1984](#). The occupier is defined as the person 'occupying or having control of the premises'. When a property is rented or leased the person 'having control' may be the owner, agent or tenant depending on the written tenancy agreement. The law outlines an occupiers' responsibility, known in law as 'the duty of care', to take reasonable care to avoid acts or omissions which he or she could reasonably foresee may result in harm or injury. When an occupier fails to exercise his or her responsibility the result may be a claim for negligence. Where A has a 'duty of care' towards B and fails to take any necessary action, resulting in harm or injury to people, animals or property, and if that harm or injury is reasonably foreseeable, then it is likely to be categorised as negligence.

- 4.3 Town and Country Planning Act (1990) (TCPA)

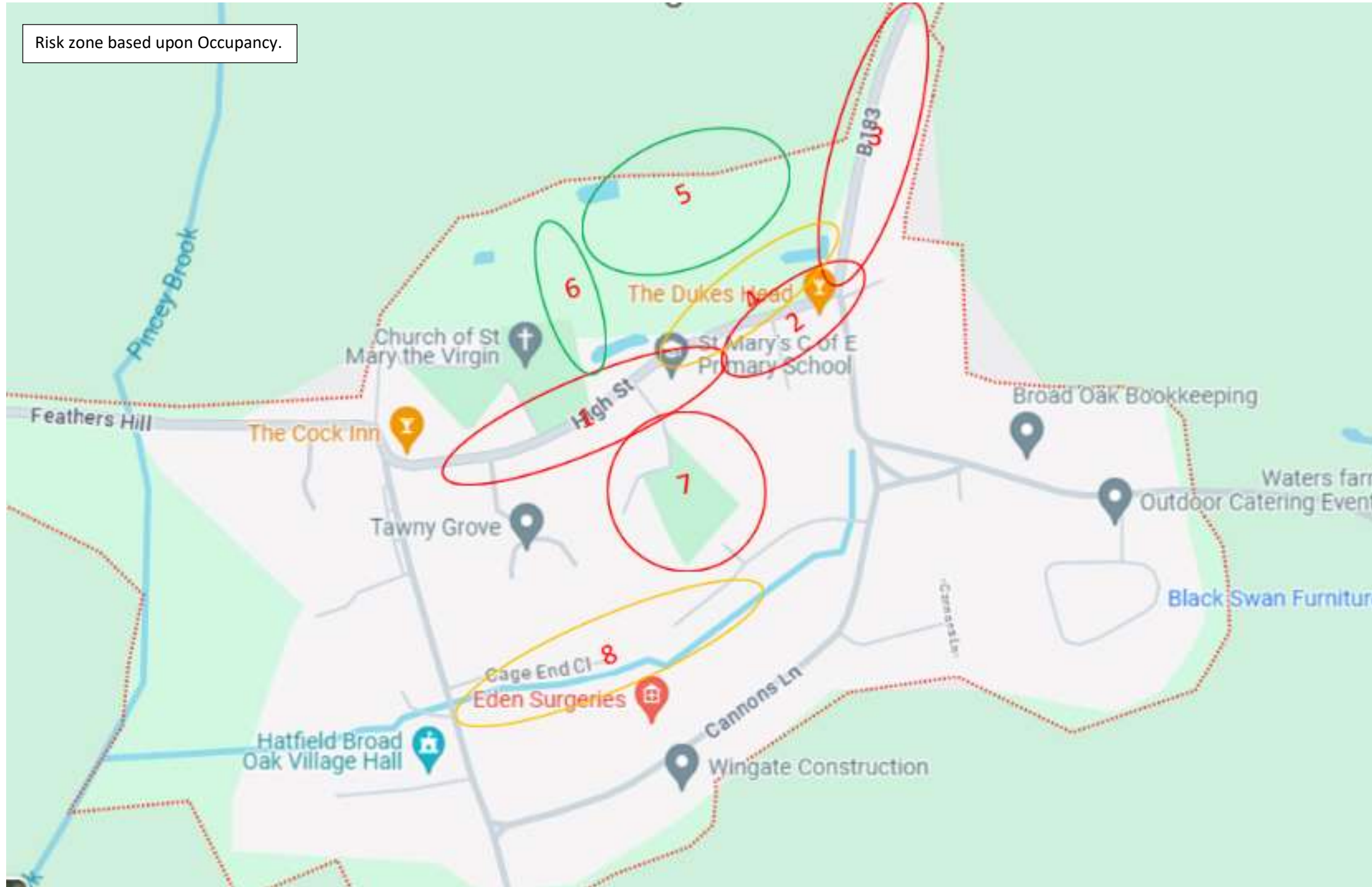
Under the TCPA, any tree that has a Tree Preservation Order placed upon it by the Local Planning Authority (LPA) cannot be worked on without the permission of the LPA. It is an offence to work on a TPO tree with the LPA's permission.

As all trees within the LWT zones may be part of an SSSI, for any that require tree surgery work (unless for urgent risk related work), the relevant service may need to notify of intent to carry out work. The LPA then has six weeks to respond to the notification.

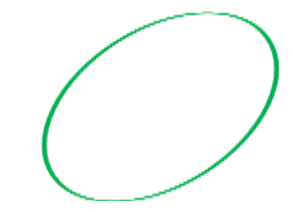
- 4.4 Wildlife and Countryside Act (1981)

The presence of an active bird's nest is a protected habitat for the duration that the nest is active.

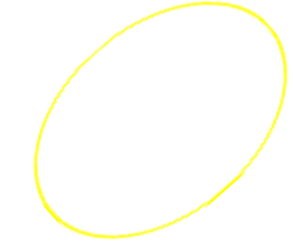
As it is an offence to disturb or destroy an active bird nest, tree surgery work is recommended to wait until after nesting season (1st March – 31st August) where nesting birds are present.



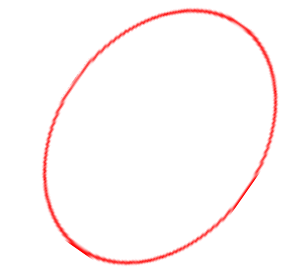
Risk zone based upon Occupancy.



Areas of LOW occupancy = Low vehicular usage or one person footfall less than once every minutes



Areas of MODERATE occupancy = Moderate vehicular usage or at least one person footfall every 31 to 59 seconds



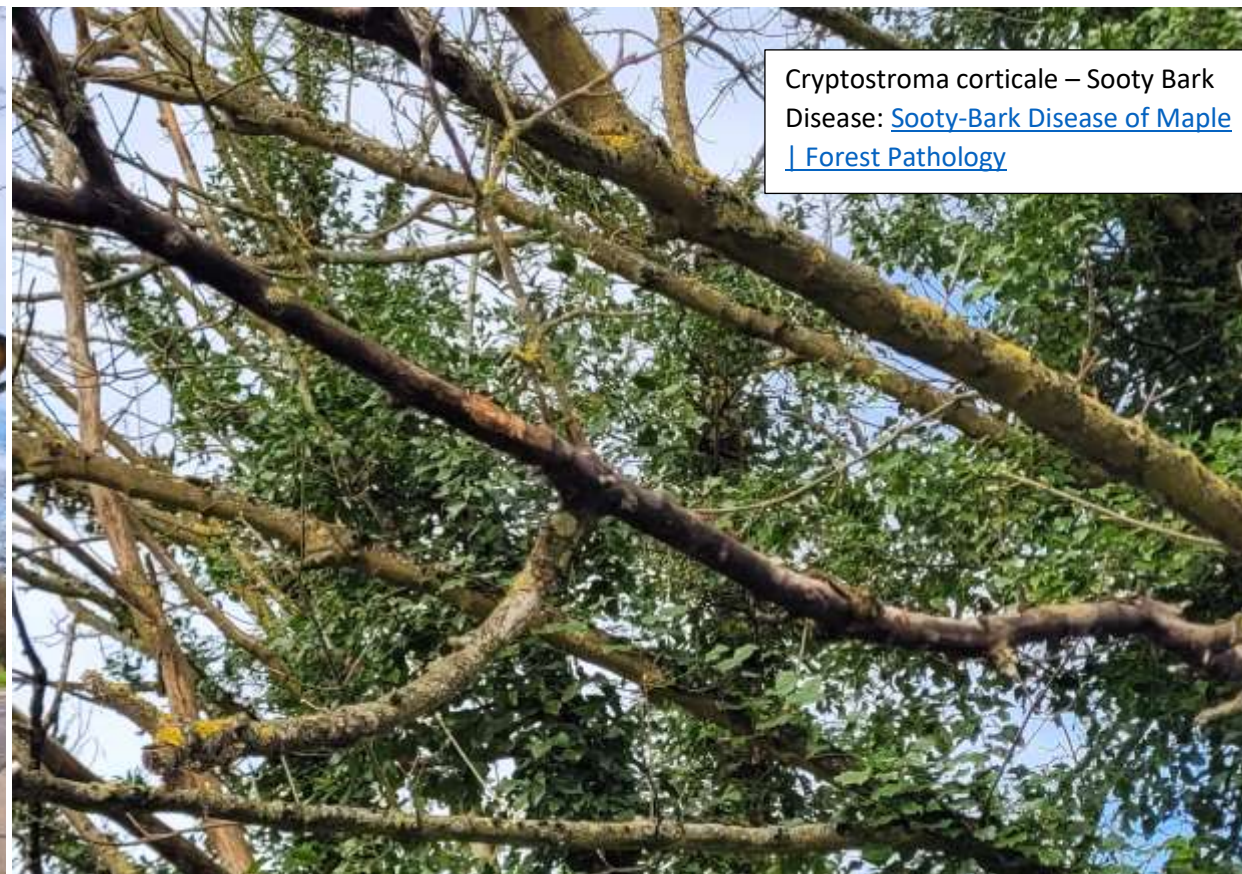
Areas of HIGH occupancy = High vehicular usage or at least one person footfall every 1 to 30 seconds

FULL TREE SURVEY INSPECTION DATE – ATTENDED BY: PAUL ZEPLER AND CHRISTOPHER STILES

Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority
3492	1	Sycamore	C1 Opposite School	210	14	6	Semi Mat	Asymmetrical, deadwood	Fair	Ivy covered	footpath within canopy dripline	growing from sloping verge	Fair	single dead Elm, low branches obstructing historic sign	Remove deadwood, cl 3m, fell dead Elm, street light clearance	Orange	2
3493	2	Sycamore	C1 Opposite School	230	13	5	Semi Mat	asymmetrical, low branches, minor deadwood	Fair	leaning, Ivy present	footpath within canopy dripline	growing from sloping verge	fair	low branches and deadwood above footpath	Remove deadwood, 3m crown lift, street light clearance	Orange	2
3494	3	Elm	C1 Opposite School	May-00	14	5	Semi Mat	Low branches	Ivy present,	Ivy throughout	services & footpath within dripline	growing on sloping verge	Fair	dead tree	Fell	Orange	2
3495	4	Sycamore	C1 Opposite School	170	13	4	Early	Poor	Poor	Ivy present, compression fork	footpath within canopy dripline		Poor	sooty bark	Pollard 10m	Orange	2
3496	5	Sycamore	C1 Opposite School	180	12	10	Semi Mat	Poor	Poor	Multi stem - 2	footpath within canopy dripline	mixed vegetation at base,	Good	low branches	Pollard 10m cut back from road 2m clearance	Orange	2
3497	6	Elder	C1 Opposite School	17	12	10	Early	open canopy, balanced crown, dual leaders	Good	Fair	footpath within canopy dripline	mixed vegetation at base,	Fair	low growth	Cut back from road 2m	Green	3
3498	7	Field Maple	C1 Opposite School	230	12	10	Semi Mat	Fair	Good	Good	Good	Good	Good	low growth, hanger	Crown lift 3m, remove hanger	Orange	2
3499	8	Field Maple	C1 Opposite School	210	12	10	Semi Mat		Good	Good	Good	Good	Good	low growth	Crown lift 3m	Green	3

COMPARTMENT 1 OVERVIEW

Sooty bark present within stock this will require monitoring of the Sycamore on an annual basis to gauge the progression. Low growth over road will be a restriction to high sided vehicles sometime within the next 12 month. Flail works apparent but not to extra heavy vehicle height i.e.4.6m.



Cryptostroma corticale – Sooty Bark Disease: [Sooty-Bark Disease of Maple](#) | [Forest Pathology](#)

Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority
3500	9	Sycamore	C2 Opposite Spiders	200-300	18	9	Semi Mat	Sooty bark / Poor	Fair	Multi stem - Fair	Good	Good	Fair	N/A	reduce weight over road 50%, cl 5m	High	2
3501	10	sycamore	C2 Opposite Orchard End	100-200	14	5	Semi Mat	Sooty bark / Poor	Fair	Multi stem - Fair	Good	Good	Fair	N/A	reduce weight over road 50%, cl 5m	High	2
3502	11	Lime	C2 Opposite Orchard End	900-1000	24	17	Mature	Fair	Good	Fair	localised decay	Root ball degradation	Fair	Basal growth, localised	Deadwood, monitor 12	High	2
3503	12	Sycamore	C2 Opposite Orchard End	300	18	10	Semi Mat	Sooty bark / Poor	Good	Multi stem Good	Good	Good	poor	Sooty bark	Crown lift 5m, 50% cut back	High	2
3504	13	Sycamore	C2 Opposite Orchard End	300	18	9	Semi Mat	Good	Good	Multi stem Good	Good	Good	fair	N/A	Crown lift 5m	Medium	3
3505	14	Sycamore	C2 Opp Dukes Orchard	300	17	9	Semi Mat	Good	Good	Multi stem Good	Good	Good	Good	N/A	Crown lift 5m	Medium	3
3506	15	Thorn	C2 Opp Dukes head car park	200	10	6	Mature	Good	Good	Multi stem Good	Good	Good	Good	N/A	Crown lift 5m	Medium	3
3507	16	Sycamore	C2 Opp pub	350	14	9	Mature	Good	Good	Multi stem Good	Good	Good	Good	N/A	Crown lift 5m	Medium	3
3508	17	Ash	C2 Opp pub	350	16	9	Mature	Good	Good	Forked stem - Good	Good	Good	Good	N/A	Crown lift 5m, 50% cut back of road overhang	Medium	3
COMPARTMENT 2 OVERVIEW	Sooty bark present within stock this will require monitoring of the Sycamore on an annual basis to gauge the progression. Low growth over road will be a restriction to high sided vehicles sometime within the next 12 month. Flail works apparent but not to extra heavy vehicle height.																



Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority
3509	18	Hawthorn	C3 opposite Bickmere Cottage	180	7	5	Mature	heavily weighted with Ivy	Good	Good	Good	Good	Fair	N/A	2m cut back from road		3
3510	19	Sycamore	C3 opposite Brambley Hedge	180	10	8	Semi Mat	ivy present	Good	Good	Good	Good	Good	N/A	2m clearance of telegraph pole		3
3511	20	Sycamore	C3 opposite no.4	210	14	10	Mature	Good	Good	Multi stem - Fair	Good	Good	Fair	Deadwood, sooty bark	Crown lift to 5m, 50% cut back from road, deadwood		2
3512	21	Field Maple	C3 opposite Mulligans	190	10	6	Semi Mat	Good	Good	Multi stem - Good	Good	Good	Good	N/A	Crown lift 5m		3
3513	22	Ash	C3 opposite Fox Cottage	300	17	8	Mature	Good	Good	Multi stem - Good	Good	Good	Good	High volume of deadwood, sparse, nesting wildlife, exposed roots, poor bud production	Pollard at 12m		2
3514	23	Oak	G3 past Fox Cottage before nat speed limit sign	1400	16	14	Mature	Good	Good	Good	Good	Good	good	Deadwood indicative of age and species	Crown lift 5m		3
3515	24	Corsican Pine	C3 before national speed limit sign	900	21	12	Mature	Good	Good	Good	Good	Good	Good	N/A	Crown lift 5m		3
3516	25	Oak	C3 along verge	2220	16	11	Veteran	Good	Good	Good	Good	Good	Good	N/A	N/A		
3517	26	Chestnut x2	C3 opposite national speed limit sign	600	17	8	Mature	Good	Good	Good	Good	Good	Fair	Recently reduced	N/A		
3518	27	Chestnut	C3 opposite nat speed limit sign	500	17	7	Mature	Good	Poor	Poor	Poor	Poor	poor	Fungal fruiting body (ffb)- Ganoderma, multiple cavity, red paint on tree	Pollard at 8m - nonemergency but as soon as reasonably practicable		2
3519	28	Sycamore	C3	140	11	6	Early	Good	Good	Good	Good	Good	good	N/A	Crown lift 5m		3
3520	29	Ash	C3 adjacent to field entrance	300	15	11	Mature	Good	Good	multi stem	Good	Good	Fair	N/A	Deadwood, crown lift 5m		2
COMPARTMENT 3 OVERVIEW	Sooty bark present within stock this will require monitoring of the Sycamore on an annual basis to gauge the progression. Low growth over road will be a restriction to high sided vehicles sometime within the next 12 month. Flail works apparent but not to extra heavy vehicle height. Group of Horse chestnut found to be in poor condition. Collapse of these would potentially be onto the public carriageway, mitigation works, and annual monitoring required.																



Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority	
3554	30	Elm x5	C4 Football pitches, road adjacent	100	7	3	young tree	Good	Good	Good	Good	Good	Good	dead	tag on post	Fell to ground level		3
3555	31	Ash	C4 Football pitches, road adjacent within ecological area	400	6	2	Mature	Poor	Poor	Poor	Poor	Good	Poor	<i>Prenniporia fraxinea (ffb)</i> – Tree well managed, reduced to prevent failure	N/A			
COMPARTMENT 4 OVERVIEW			No risk associated with area apart from pocket of dead elm adjacent to fence line. Ecological areas are closed off to public.															



Compartment 4



Pocket of dead Elm



Tag on fence line adjacent to dead Elm



T 3555



T 3555 - *Prenniporia fraxinea*: [TMA Fungi \(tma-fungi.co.uk\)](http://TMA Fungi (tma-fungi.co.uk))

Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority
3586	32	Chestnut	C5 fields open area, footpath adjacent - Copse	780	17	9	Mature	asymmetrical, abscission limb @5m	Good	Fair	Good	Good	Good	Nesting wildlife	Crown lift 3m over footpath		2
3587	33	chestnut	C5 fields open area, footpath adjacent - Copse	950	18	9	Mature	cavities on central stem, limb abscission,	included union at crown break	Fair	Good	Good	Fair	N/A	Crown lift 3m over footpath		2
3588	34	Chestnut	C5 fields open area, footpath adjacent - Copse	830	11	8	Mature	Poor - Limb abscission, crown fracture	Poor	Fair	Good	Good	Fair	Historic crown reduction to manage weight distribution over cavity.	N/A		
3589	35	Chestnut	C5 fields open area, footpath adjacent - Copse	1000	18	14		limb abscission, white rot within limb on secondary stem - Poor	Fair	Good	Good	Good	Fair	N/A	N/A		
3590	36	Chestnut	C5 fields open area, footpath adjacent - Copse	820	18	10	Mature	Good	Good	Good	Good	Good	Good	N/A	N/A		
3591	37	Chestnut	C5 fields open area, footpath adjacent - Copse	910	14	12	Mature	Good	Good	Fair	Good	Fair	Fair	N/A	N/A		
3592	38	Chestnut	C5 fields open area, footpath adjacent - Copse	820	17	13	Mature	Honeycomb in decayed limb - Fair	Good	Fair	Good	Good	Fair	Potentially active hive	N/A		
3593	39	Chestnut	C5 fields open area, footpath adjacent - Copse	480	16	5	Mature	suppressed canopy, failed secondary leader, dead tertiary leader	Good	Fractured stem	Poor	Poor	Poor	Pseudomonas bacterial infection	Remove dead stem + deadwood and fully survey in 12 months		2
3594	40	Chestnut	C5 fields open area, footpath adjacent - Copse	810	19	16	Mature	Asymmetric	Good	Fair	Good	Good	Good	N/A	N/A		
3595	41	Oak	C5 - Standalone Oak adjacent to football field	1200	15	15	Mature	Good	Good	Good	habitation holes, elder growing at base	footpath within canopy dripline	Good	deadwood indicative of species	Crown lift 3m over footpath, remove basal suckers and invasive growth		3

COMPARTMENT
5 OVERVIEW



Compartment 5



Compartment 5



T3592 Potentially active Hive



T3593 *Pseudomonas syringae* pv. *Aescul*
[Bleeding Canker of Horse Chestnut](#)
[\(*Pseudomonas syringae* pv. *aesculi*\) -](#)
[Forest Research](#)

MAP/ Tag ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)		
COMPARTMENT 6 OVERVIEW	No risk associated with land due to occupations. Land is likely only associated with the Parish due to Riparian ownership															



MAP/ Tag ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)		
COMPARTMENT 7 OVERVIEW	No risk associated with land due to tree condition. There are notable issues with the lapsed hedge and shrub adjacent to the waterway, but this is outside of the area of occupation, not considered an arboricultural feature, and away from the play zone. It would be worth considering restricting access to the waterway.															



Tag ref	Map ref	Species	Location	DBH (mm)	Height (m)	Radial crown spread (m)	Age	Crown	Crown break	Stem	Root crown	Rooting area	Overall Condition	Comments	Recommendation(s)	Risk	Priority
3598	42	Maple	G8 adjacent to no.12	100	8	8		Poor	Poor	twin stem	Poor	Poor	Poor	Leaning	Fell		2
3599	43	Hawthorn	G8 Water course adjacent	110	6	3		x	x	x	x	x	Dead	Dead	Fell		2
3600	44	Hawthorn	G8 opposite no.4	140	5	4		x	x	x	x	x	Dead	Dead	Fell		2
3555	45	Ash	G8 adj Brook Hse	840	12	10		Good	Good	Good	Good	Good	Good	Proximity to property	Reduce to historic points of reduction		3
COMPARTMENT 8 OVERVIEW	Stressed and dead trees within the grass area adjacent to the waterway. Works is required to mitigate the risk of collapse which could cause injury to person or property or restrict access																

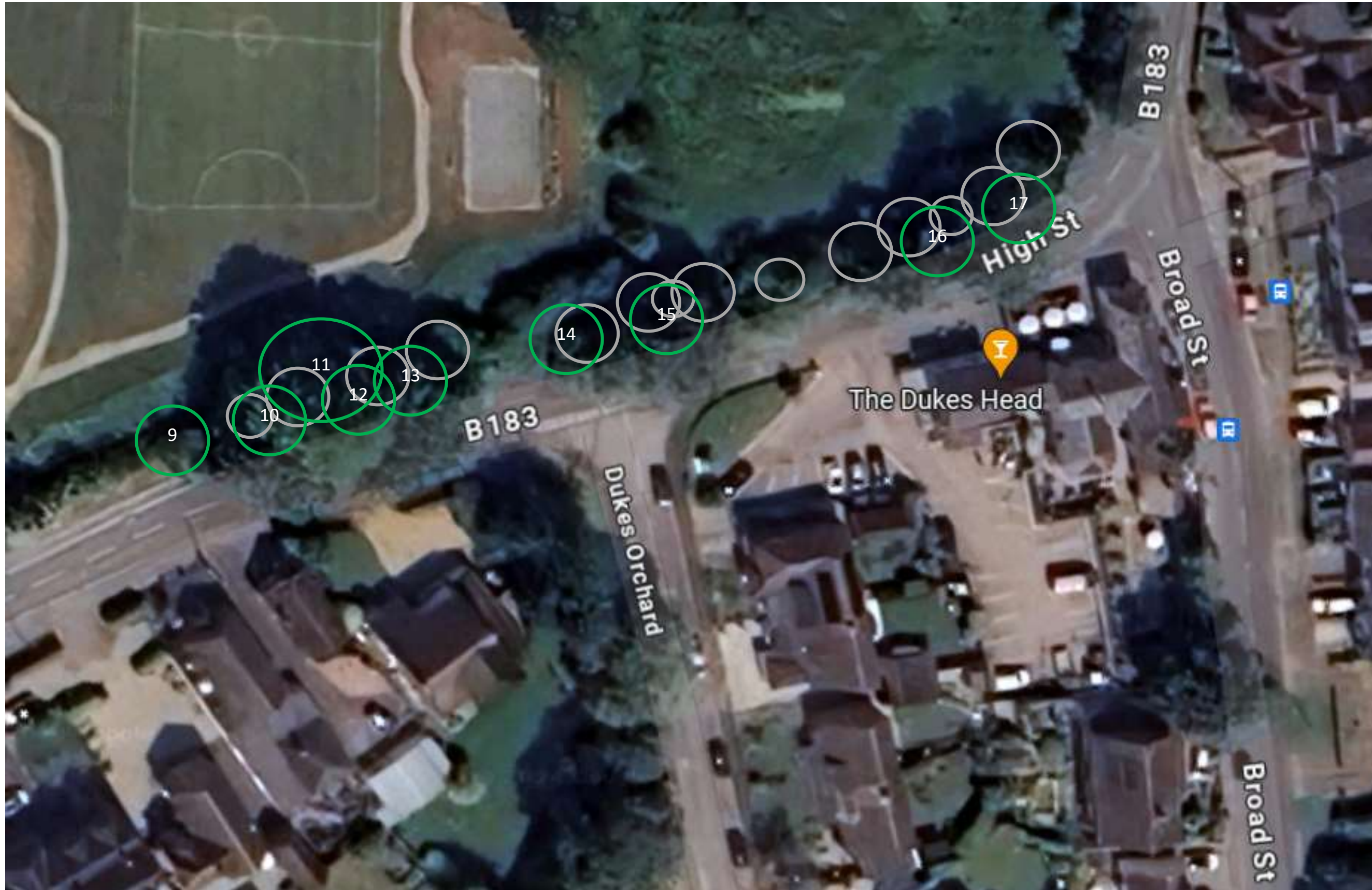


Compartment 8

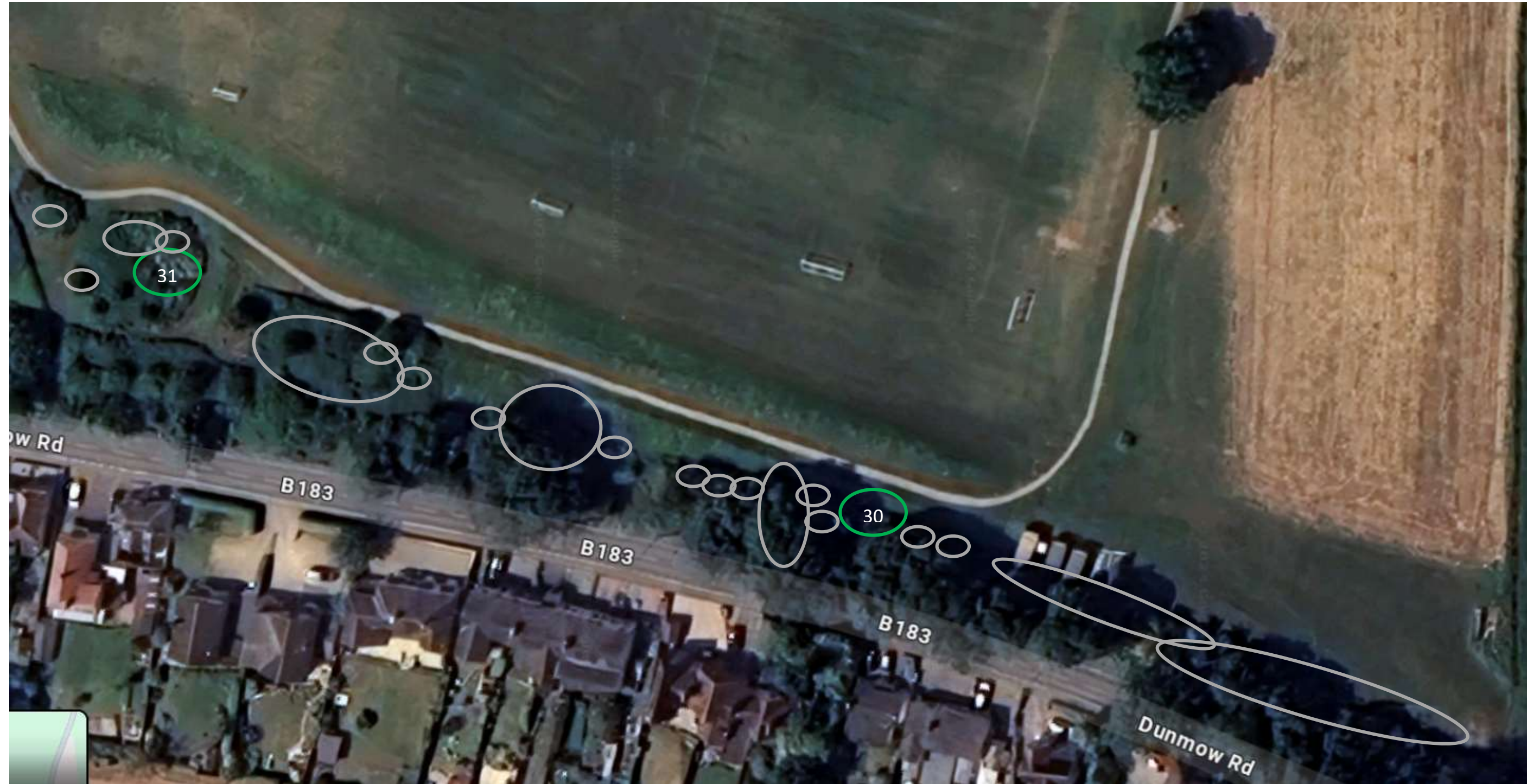


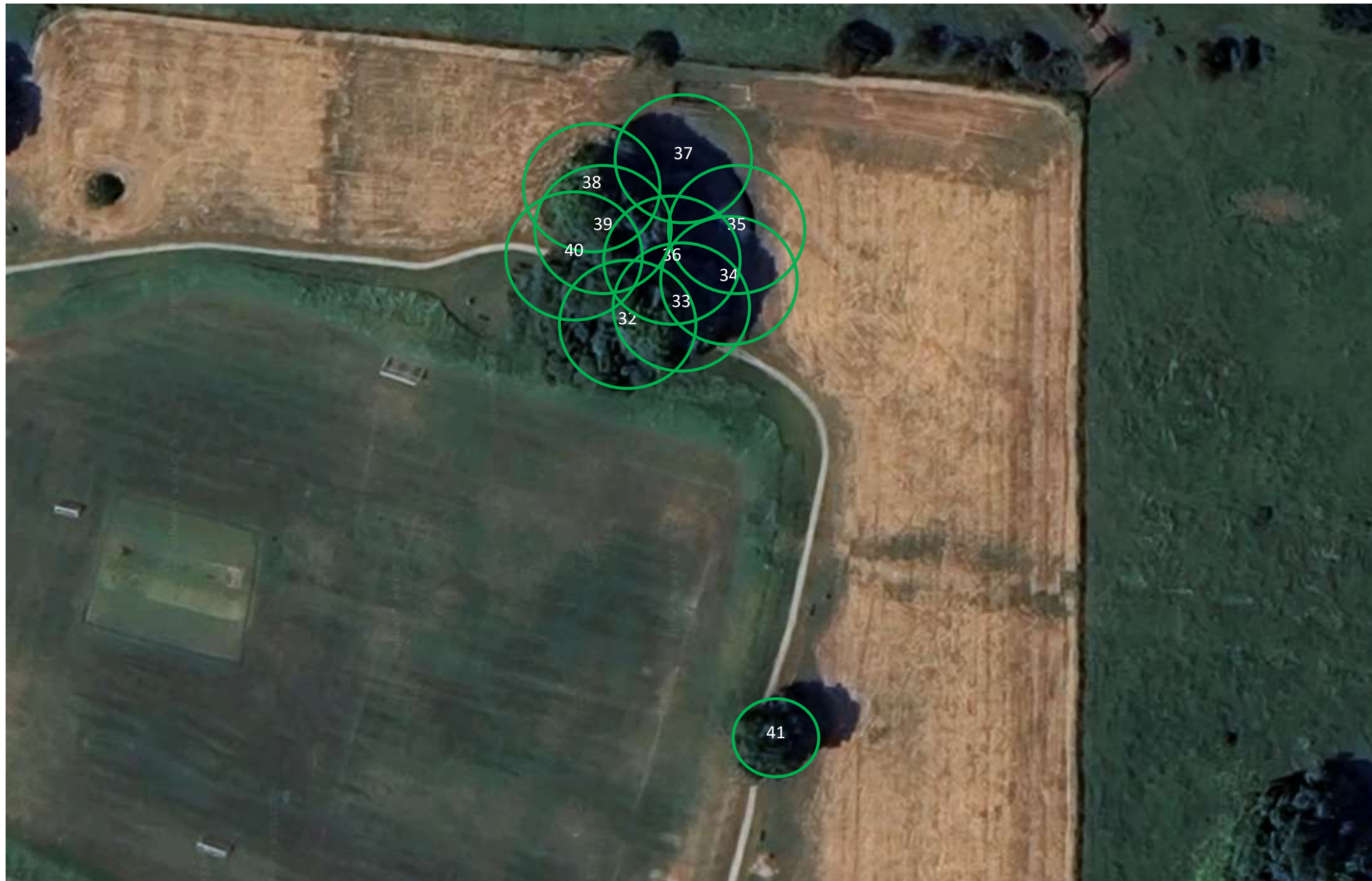
3598 – Field maple

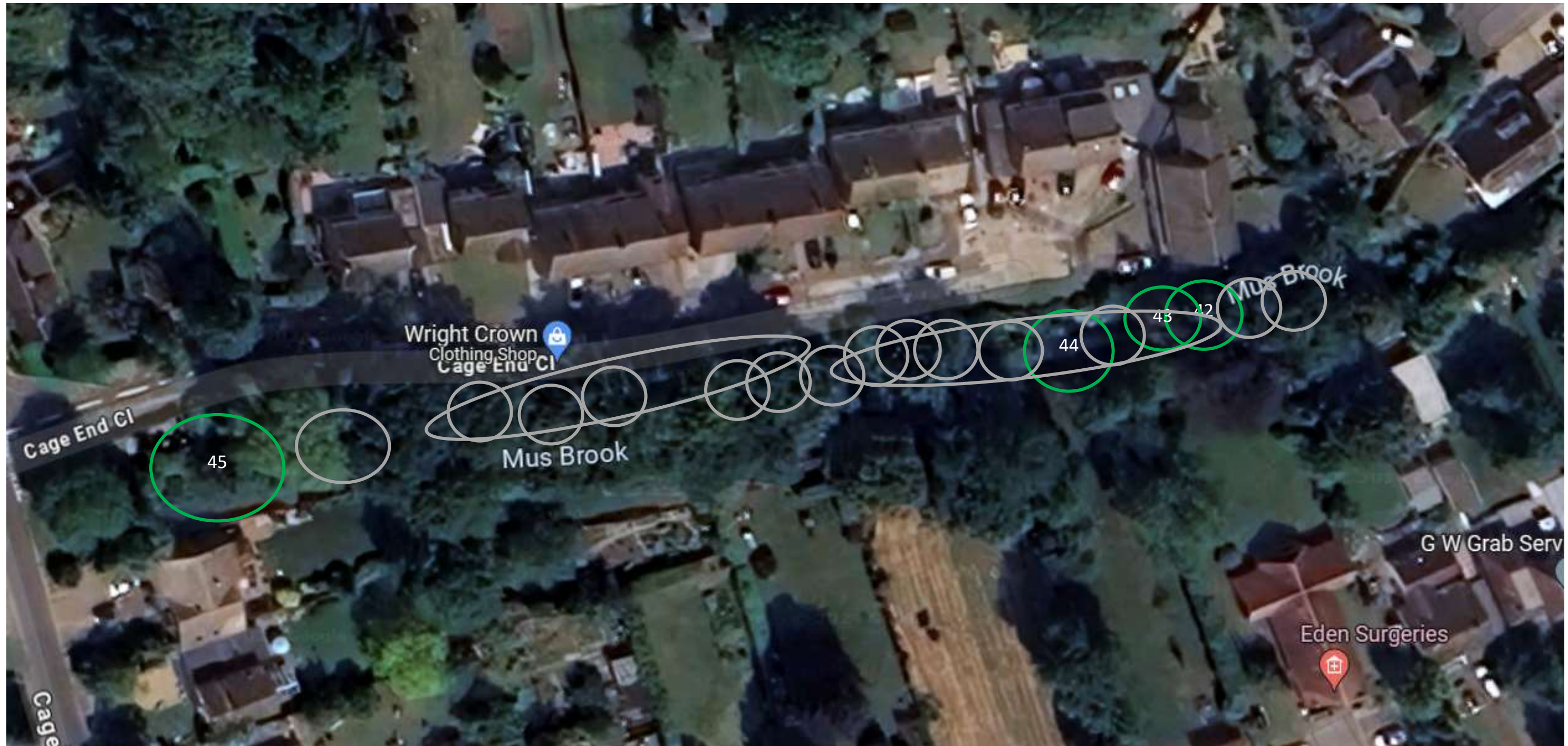












6.0 Discussion & Summary

- 6.1 Any tree under local authority protection will require local authority notification and or permission before works can commence. Hatfield Broak Oak representatives will be required to undertake the relevant checks before any works can commence. These check can be undertaken by submitting this report and askijg if the TPO and CON areas data is current in comparison to the LPA register (<https://www.trees.org.uk/Help-Advice/Public/A-brief-guide-to-legislation-for-trees>).
- 6.2 Longacre have surveyed an estimated 350 trees as part of this inspection.
- 6.3 There is a total of forty-five trees which require some form of works.
- 6.4 Trees are dynamic organisms that can deteriorate at a rapid rate. All recommended inspection schedules need to be adhered to for indemnity to be upheld. For all trees with a designated priority of one, two or three: works needs to be carried out in accordance with the recommended timeframe.
- 6.5 Under the occupier's liability act and within common law, the owner of this land has a duty of care to ensure that no harm to person or property arises as a result of negligence of their duty of care. In relation to trees this is a persistent aspect of the law which will carry into the ownership of whoever buys this land. They must ensure that this tree is safe to uphold this common law component, or potentially be found guilty of negligence should property damages or harm to a person occur. As it stands this tree would be considered a potential hazard in need of mitigation, rendering insurance claims for damages to adjacent property, or harm to person or persons caused by tree or limb failure at the liability of the owner.

7.0 Conclusion(s)

TREE STOCK: To minimize risk, maintain the safe usage of the land and to uphold the occupiers 'Duty of Care', tree works to mitigate the physiological and structural issues, as described within this report are required. Recommendations supplied within section five should be carried out in accordance with the priority stated within the same section to remove the associated risk of tree failure onto a listed target.

INSPECTION: In accordance with industry recommendations regarding tree inspection frequency. To minimise risk associated with land usage and tree stock this site should be surveyed no less frequently than once every three years. All trees that have an inspection recommendation of less than three years should be surveyed in accordance with the recommendation within this document.

MITIGATION: When all works recommendation has been adhered to, then the risk of foreseeable incident arising that may cause injury to person or harm to property would be less than 1:1,000,000 and move into a tolerable risk zone.

APPENDICES

APPENDIX A: SURVEY BRIEF / SPECIFICATION

Passive Survey:

The objective of a passive survey is to visually inspect every tree, in accordance with the VTA* method, which is within falling distance of any potential targets including roads, car parks, paths, buildings, areas of congregation, deer fences and property boundaries located within the relevant sub-compartment or zone. The precise location and extent of each individual sub-compartment zone, subject to survey is detailed against an indicative map and can be cross referenced with individual tree-tags.

The date of inspection of each sub-compartment zone is remarked upon within the report as evidence of survey completion. Indemnity is then offered for three years against all foreseeable tree related impacts if all works recommendations are followed within a specified time frame.

Any perceived inaccuracies or changes of land use or targets, to the sub-compartment zone observed by the Tree Inspectors during survey, in comparison to how they are detailed on the Compartment Maps, will be communicated to the client.

Picking up on Obvious Tree Risk Features you can't help but notice:

When a tree has a risk that might not be Acceptable or Tolerable it will usually have Obvious Tree Risk Features which we can't help but notice. Passive Assessment is simply noticing these obvious features when we pass by trees whilst going about our day-to-day routine. Passive Assessment is conducted by a trained assessors, contractors, staff, and the public.

Passive Assessment is an arborist most valuable risk management asset:

Passive Assessment is a multi-layered approach to managing the risk that gives us defence in depth. It's our most asset because:

- Trees with the highest risk are the easiest to find.
- It is happening in all zones of use, day in day out, at no additional cost.
- High-use zones are being assessed more frequently than lower use zones because they are visited more often.

Tree Work Recommendations and Priority Ratings:

Where works are recommended, they are allocated one of the 'Priority' criteria available as described below.

Priority 1: Urgent (48 hrs – note: the client will also be immediately notified by phone and email)

Priority 2: High (3 months)

Priority 3: Scheduled (12 months)

Next cycle – non-essential consideration for next recommended inspection cycle. Works not required before next inspection cycle but likely to be required after.

Where the recommended works are not directly safety related, they are allocated the priority 4 rating below. For example, suggestions for proactive maintenance may be recommended to improve the tree's condition and potentially mitigate future works.

Additional Information:

In addition, the Tree Inspector may on occasion add general information to a tree's record that is not causally related to any current risk, and which does not involve any recommendations for remedial works. In such cases, the information will be added and dated in the 'Comments' section of the tree record within this report.

Where such additional general information is suggested by the Tree Inspector that applies to several trees together throughout an area e.g., "consider ivy management at the southern end of zone A", then the details will be entered onto the survey schedule for the relevant zone.

Survey Validity Period and Limitations:

The survey of each tree is valid for a maximum period of three years. The recommended inspection frequency (section 5) will reflect a frequency associated with any physiological or bio-mechanical concerns. Three years reflecting little or no concerns at the time of survey.

Inspections will become invalid after unforeseeable events; extreme weather, construction or development including tree works, or disturbance to the soil volume utilised by the tree. However, a walk-by survey undertaken after such an event can be arranged to validate the remaining period as advised within the recommended inspection frequency.

Inspections will become invalid if physical changes are made to the site post-survey which alter any potential target locations. This includes alterations in the location of paths and areas of congregation, and where vegetation management such as scrub, bramble, dead hedges, or temporary fencing which were restricting access to the proximity of trees at the time of survey are no longer present.

For the rating of each compartment please see zone map provided within section

Visual Tree Assessment (VTA) Method:

All trees will be inspected using the Visual Tree Assessment method expounded by Mattheck and Broeler (1994) and hazard assessment to Lonsdale D. (1999)

APPENDIX B OCCUPANCY / CONFLUENCE DEFINITION

A typical zone of high consequence:

We're most likely to find any risks that aren't Acceptable or Tolerable where we have a combination of high use, that's not affected by foul weather, and large trees. We call these

'Zones of High Confluence' because in tree risk benefit language they're where the highest categories of Likelihood of Occupancy and Consequences merge; Likelihood of Failure being the third risk component. The illustration on the left is a typical large tree, providing many benefits, in a high-use zone, which has a low Likelihood of Failure, which is an Acceptable risk. For risk management zoning, rather than assessment, the highest Consequences are trees that have a diameter at breast height of about 50cm/20in or more. It's trees in Zones of High Confluence where we'll carry out Active Assessment.

A typical zone of high confluence



Zones of highest occupancy (high use):

This is how we are measuring the zones of highest occupancy. The highest Likelihood of Occupancy zones for roads are where traffic is on average 1400 or more vehicles per day. Generally, they're roads you'd think of as being busy. We zone train or tram lines as being the highest occupancy. For people, it's roughly someone passing about every minute or so between 7am – 7pm, Monday to Friday, which is around 1200 per day. Typical combinations of traffic and people which are zones of highest occupancy are urban areas that are rich with offices, shops, bars, and restaurants. Shopping centres and markets make it into this category as well. In and immediately around schools, colleges, universities, hospitals, transport stations and stops, sports stadiums, and many pedestrian crossings, also qualify. Some footpaths through urban parks that are well-used to get to work or school are included. Last, locations where events are held, emergency routes, and campsites, are in the highest Likelihood of Occupancy categories.

APPENDIX C RISK RATING DEFINITION

Risk reduction work will be given the highest priority where it's an emergency. Outside of that, we'll deal with the highest risks first and carry out the work in a sensible order.

Red: Not Acceptable risks will be reduced to an Acceptable level

Amber: Not Tolerable risks will be reduced to an Acceptable level, but with a lower priority than red Not Acceptable risks

Amber: Tolerable risks will not be reduced but may require an increased frequency of assessment than green Acceptable risks

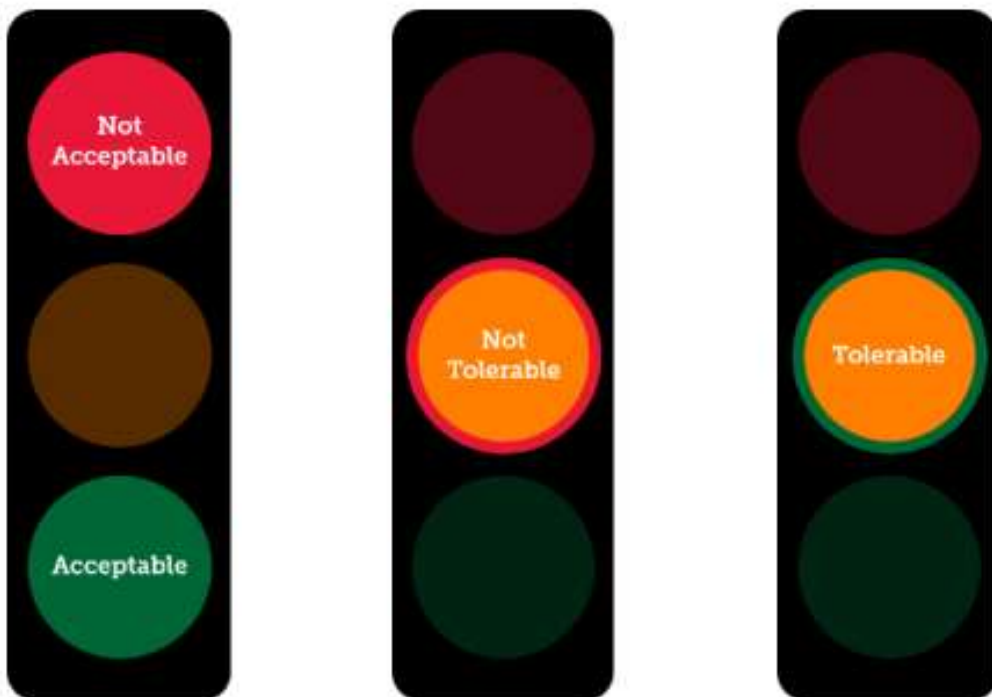
Green: Acceptable risks will not be reduced

Emergency Works:

If a tree has a very high likelihood of failure and it's in a high-use zone, then these Not Acceptable risks are 'emergency work'. This is when works need to be carried out as soon as practicable and the area of potential hazard should completely limit access if possible

Not Acceptable & Not Tolerable risks

We'll make Not Acceptable risk reduction work the priority. Where possible, risk reduction work for risks that are Not Tolerable will be organised alongside other tree maintenance works. We also have to deal with other risks from trees, such as low branches, obscured road signs, and sightlines. If there's not enough budget to carry out both the risk reduction and other maintenance works, priority will be given to the risk reduction work.



Acceptable and/or tolerable risk

An acceptable or tolerable risk is where the associated concern has either a low chance of impacting upon the site occupancy; meaning that any chance of branch or tree failure would likely have no consequence, or the site occupancy is low enough to minimize the risk of incident to below: 1:1,000,000 chance during the occupancy period.

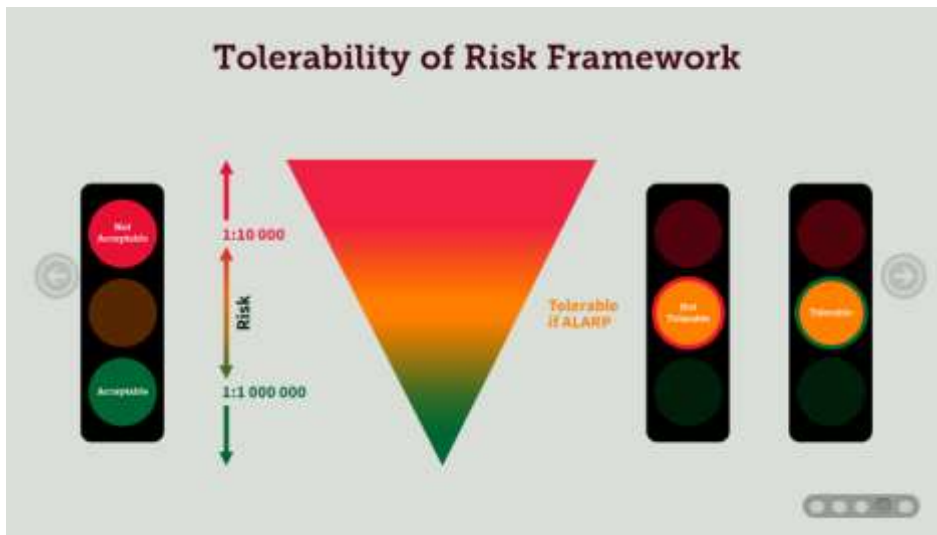
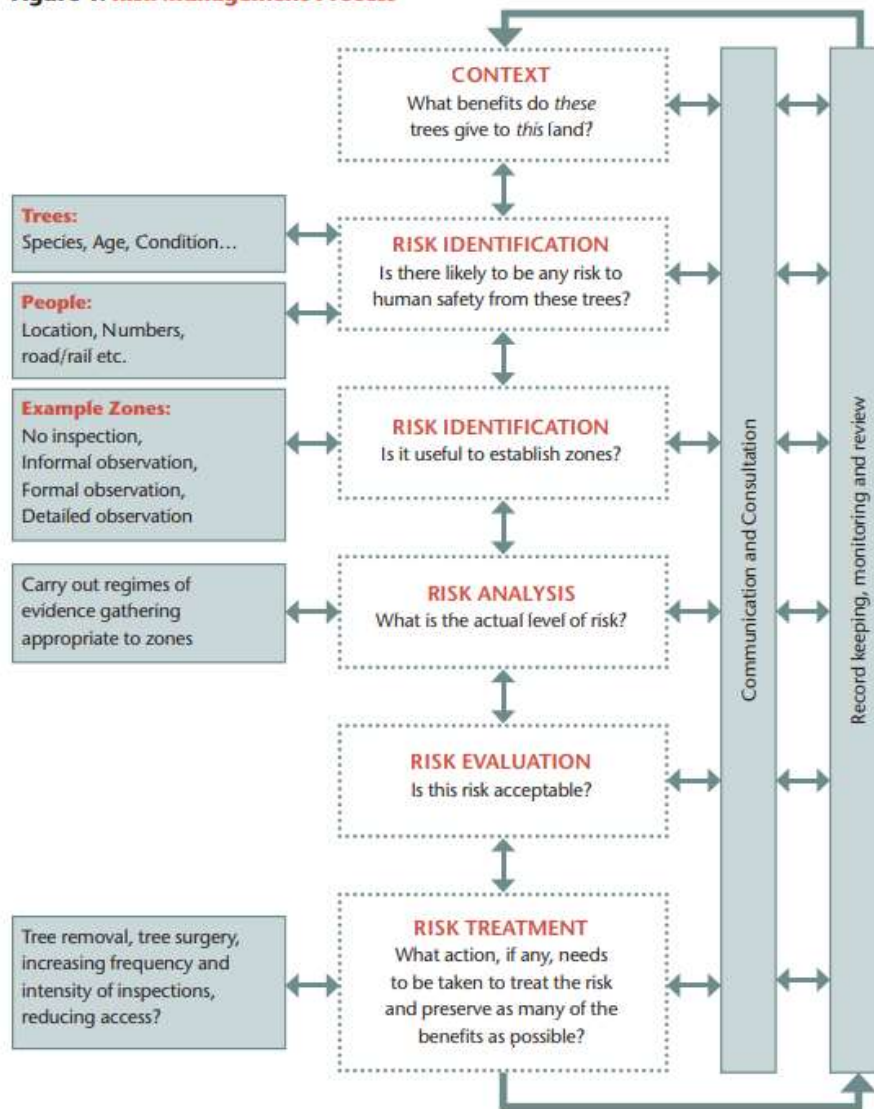
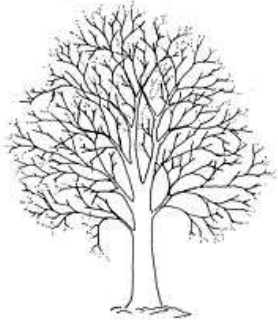


Figure 1. Risk Management Process

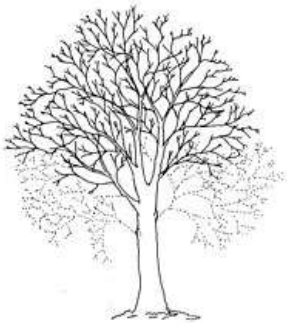


APPENDIX D: PRUNING DEFINITIONS



Crown Thin

Crown thinning is the removal of a portion of smaller/tertiary branches, usually at the outer crown, to produce a uniform density of foliage around an evenly spaced branch structure. It is usually confined to broad-leaved species. Crown thinning does not alter the overall size or shape of the tree. Material should be removed systematically throughout the tree, should not exceed the stated percentage and not more than 30% overall. Common reasons for crown thinning are to allow more sun-light to pass through the tree, reduce wind resistance, reduce weight (but this does not necessarily reduce leverage on the structure) and is rarely a once-only operation particularly on species that are known to produce large amounts of epicormic growth.



Crown Lift or Crown Raising

Crown lifting is the removal of the lowest branches and/or preparing of lower branches for future removal. Good practice dictates crown lifting should not normally include the removal of large branches growing directly from the trunk as this can cause large wounds which can become extensively decayed leading to further long-term problems or more short-term biomechanical instability. Crown lifting on older, mature trees should be avoided or restricted to secondary branches or shortening of primary branches rather than the whole removal wherever possible. Crown lifting is an effective method of increasing light transmission to areas closer to the tree or to enable access under the crown but should be restricted to less than 15% of the live crown height and leave the crown at least two thirds of the total height of the tree. Crown lifting should be specified with reference to a fixed point, e.g. 'crown lift to give 5.5m clearance above ground level'.



Crown Reduction

The reduction in height and/or spread of the crown (the foliage bearing portions) of a tree. Crown reduction may be used to reduce mechanical stress on individual branches or the whole tree, make the tree more suited to its immediate environment or to reduce the effects of shading and light loss, etc. The final result should retain the main framework of the crown, and so a significant proportion of the leaf bearing structure, and leave a similar, although smaller outline, and not necessarily achieve symmetry for its own sake. Crown reduction cuts should be as small as possible and in general not exceed 100mm diameter unless there is an overriding need to do so. Reductions should be specified by actual measurements, where possible, and reflect the finished result, but may also refer to lengths of parts to be removed to aid clarity, e.g. 'crown reduce in height by 2.0m and lateral spread by 1.0m, all round, to finished crown dimensions of 18m in height by 11m in spread (all measurements approximate.)'. Not all species are suitable for this treatment and crown reduction should not be confused with 'topping', an indiscriminate and harmful treatment.

Illustrations courtesy of European Arboricultural Council.

The importance of correct pruning cuts

Every pruning cut inflicts a wound on the tree. The ability of a tree to withstand a wound and maintain healthy growth is greatly affected by the pruning cut – its size, angle and position relative to the retained parts of the tree. As a rule, branches should be removed at their point of attachment or shortened to a lateral which is at least 1/3 of the diameter of the removed portion of the branch, and all cuts should be kept as small as possible. Examples of correct pruning cuts are shown as follows.

Showing sequence of removal to avoid damage to the retained parts.

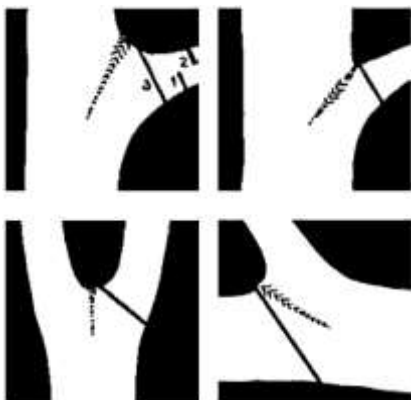


Diagram 2 – examples of correct pruning cuts. Drawings courtesy of European Arboricultural Council.

Other useful terms associated with tree work

Adaptive growth

An increase in wood production in localised areas in response to a decrease in wood strength or external loading to maintain an even distribution of forces across the structure.

Adventitious/epicormic growth

New growth arising from dormant or new buds directly from main branches/stems or trunks.

Bracing

Bracing is a term used to describe the installation of cables, ropes and/or belts to reduce the probability of failure of one or more parts of the tree structure due to weakened elements under excessive movement.

Branch bark ridge and collar

See diagram 3 section 3. Natural features of a fork or union that may or may not be visually obvious. Neither the branch bark ridge nor collar should be cut.

Callus

Undifferentiated tissue initiated because of wounding, which become specialised tissues of the repair over time.

Cavity

A void within the solid structure of the tree, normally associated with decay or deterioration of the woody tissues. May be dry or hold water if the latter it should not be drained. Only soft decomposing tissue should be removed if necessary, to assess the extent. No attempt should be made to cut or expose living tissue.

Co-dominant stems

Two or more, generally upright, stems of roughly equal size and vigour competing for dominance. Where these arise from a common union the structural integrity of that union should be assessed.

Coppicing

The cutting down of a tree within 300mm (12in) of the ground at regular intervals, traditionally applied to certain species such as Hazel and Sweet Chestnut to provide stakes etc.

Crown

The foliage bearing section of the tree formed by its branches and not including any clear stem/trunk.

Deadwood

Non-living branches or stems due to natural ageing or external influences. Deadwood provides essential habitats, and its management should aim to leave as much as possible, shortening or

removing only those that pose a risk. Durability and retention of deadwood will vary by tree species.

Decline

When a tree exhibits signs of a lack of vitality such as reduced leaf size, colour or density.

Dieback

Tips of branches exhibit no signs of life due to age or external influences. Decline may progress, stabilise, or reverse as the tree adapts to its new situation.

Dormant

The inactive condition of a tree, usually during the coldest months of the year when there is little or no growth and leaves of deciduous trees have been shed.

Drop Crotching

Shortening branches by pruning off the end back to a lateral branch which is at least 1/3 of the diameter of the removed branch.

Fertilising

The application of a substance, usually to the tree's rooting area (and occasionally to the tree), to promote tree growth or reverse or reduce decline. This will only be effective if nutrient deficiency is confirmed. If decline is the result of other factors such as compaction, physical damage, toxins etc., the application of fertiliser will not make any difference.

Formative pruning

Minor pruning during the early years of a tree's growth to establish the desired form and/or to correct defects or weaknesses that may affect structure in later life.

Fungi/Fruiting bodies

A member of the plant kingdom that may colonise living or dead tissues of a tree or form beneficial relationships with the roots. The fruiting body is the spore bearing, reproductive structure of that fungus. Removal of the fruiting body will not prevent further colonisation and will make diagnosis and prognosis harder to determine. Each colonisation must be considered in detail by a competent person to determine the long-term implications of tree health and structure when considered alongside the tree species, site usage etc.

Lopping and Topping

Generally regarded as outdated terminology but still included as part of Planning legislation. Lopping refers to the removal of large side branches (the making of vertical cuts) and topping refers to the removal of large portions of the crown of the tree (the making of horizontal cuts, generally through the main stems). Often used to describe crude, heavy-handed or inappropriate pruning.

Painting or Sealing

Covering pruning cuts or other wounds with a paint, often bitumen based. Research has demonstrated that this is not beneficial and may in fact be harmful. On no account should timber treatments be used as these are harmful to living cells.

Pollard

The initial removal of the top of a young tree at a prescribed height to encourage multi-stem branching from that point, traditionally for fodder, firewood or poles. Once started, it should be repeated on a cyclical basis always retaining the initial pollard point or boiling as it becomes known.

Retrenchment pruning

A form of reduction intended to encourage development of lower shoots and emulate the natural process of tree aging.

Root pruning

The pruning back of roots (like the pruning back of branches). This can affect tree stability, so it is advisable to seek professional advice prior to attempting root pruning.

Topping

See Lopping and Topping.

Vitality

The degree of physiological and biochemical processes (life functions) within an individual, group or population of trees.

APPENDIX E: REFERENCES AND USEFUL LINKS

- British Standards Institute (BSI). London. (2010). BS 3998:2010 Recommendations for Tree Work.
- Forestry Commission: Managing Native Broadleaf Woodlands (2013), R.Harmer, et al. ISBN: 978 0 11 497344 5
- Lonsdale D. (1999). Research for amenity Trees No.7: Principles of Tree Hazard Assessment and Management. HMSO, London.
- Mattheck and Breloer H. (1994). Research for Amenity Trees No.4: The Body Language of Trees. HMSO, London.
- National Tree Safety Group (NTSG). (2011). Common Sense Risk Management of Trees: <http://ntsgroup.org.uk/wp-content/uploads/2016/06/FCMS024.pdf>
- Read, H. (2000). Veteran Trees: A Guide to Good Management. Ancient Tree Forum
- VALID: Tree inspections and Risk tolerance

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https://www.conservationhandbooks.com/why-fell-trees/?gclid=CjwKCAiAr6-ABhAfEiwADO4sfeusIHpJzoWxalhqiE_TFQF_lISalzwmX6YD39A9gZ7ZVnunzhznpBoCyX0QAvD_BwE

<https://www.trees.org.uk/Trees.org.uk/files/f0/f0e3a76b-926f-4cde-b703-417563ae93df.pdf>

<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/dead-wood-for-wildlife/>