

## Arboricultural Appraisal

HCGB - Wolverton Park, MK12 5FJ

Report Reference: TS001\_WOLPRK6\_6466\_23



Client: Teimoor Nasir\_HCGB\_Wolverton Park

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

Date of inspection: 26/11/2023

Date of final report production: 30/11/2023

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Statutory Controls		Mitigation	
TPO	N	Owner	MO
TPO potential	Y	Domestic 3 <sup>rd</sup> Party	N
Cons. Area	N	Local Authority Intervention	N
SSSI	N	Other	N
Local Authority: Milton Keynes			

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## 1.0 Executive summary

- 1.1 Longacre arboricultural consultation services have been asked by the representatives of Wolverton Park MK12, to inspect all trees within a designated area as indicated within **APPENDIX A**. The purpose of this survey is to identify any potential risk associated with the physiological and biomechanical condition of the stock.

A site visit was carried out on 26/11/2023 where an estimated 100 trees were inspected and of which 67 were tagged and mapped. Groups of vegetation was also commented on as well as a line of Willow on an inaccessible part of the canal that runs through the estate adjacent to Wolverton Park.

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

Risk was identified by applying predicted levels of occupancy within the grounds and zoning area in accordance with the resulting footfall, as described within **APPENDIX C & D**.

Wooded areas and areas of a low occupancy are quantified as groups. Individual trees are mapped when in proximity to structure or when requiring works. Individual trees within wooded compartments or hedge lines were only mapped when requiring works.

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 possible 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.

## 2.0 Introduction

- 2.1 This report has been produced by Paul Zepler, 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 eight years and an additional four years working in the industry in a practical capacity.

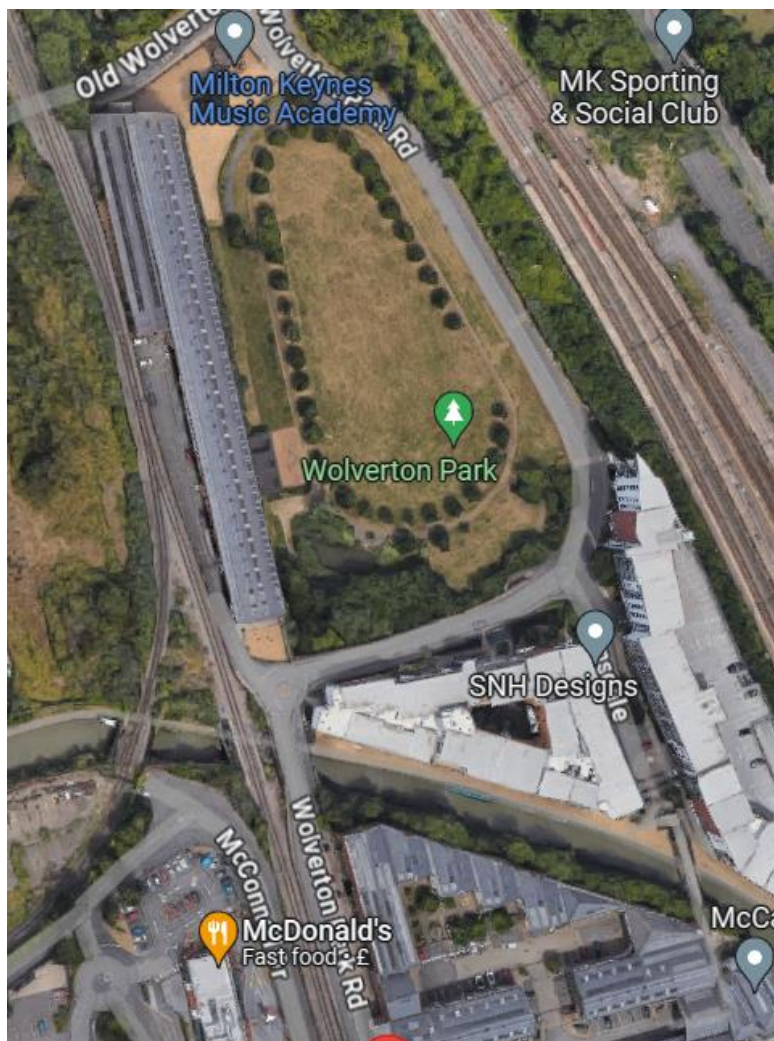
CONTACT DETAILS: [info@longacretreesurgery.co.uk](mailto:info@longacretreesurgery.co.uk) / 07435251887

## 3.0 Site description

- 3.1 Wolverton Park and the surrounding green spaces comprise of formal and informal tree planting programmes made up of ornamental and ecological species to consider both the environmental and amenity use of the area.

There is a space that is directly adjacent to a canal comprised of lapsed willow pollards, the maintenance of which is likely the responsibility of the management organisation due to riparian ownership.

The interior of the estate also has some ornamental species sporadically spaced across the hard landscape.



## 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.



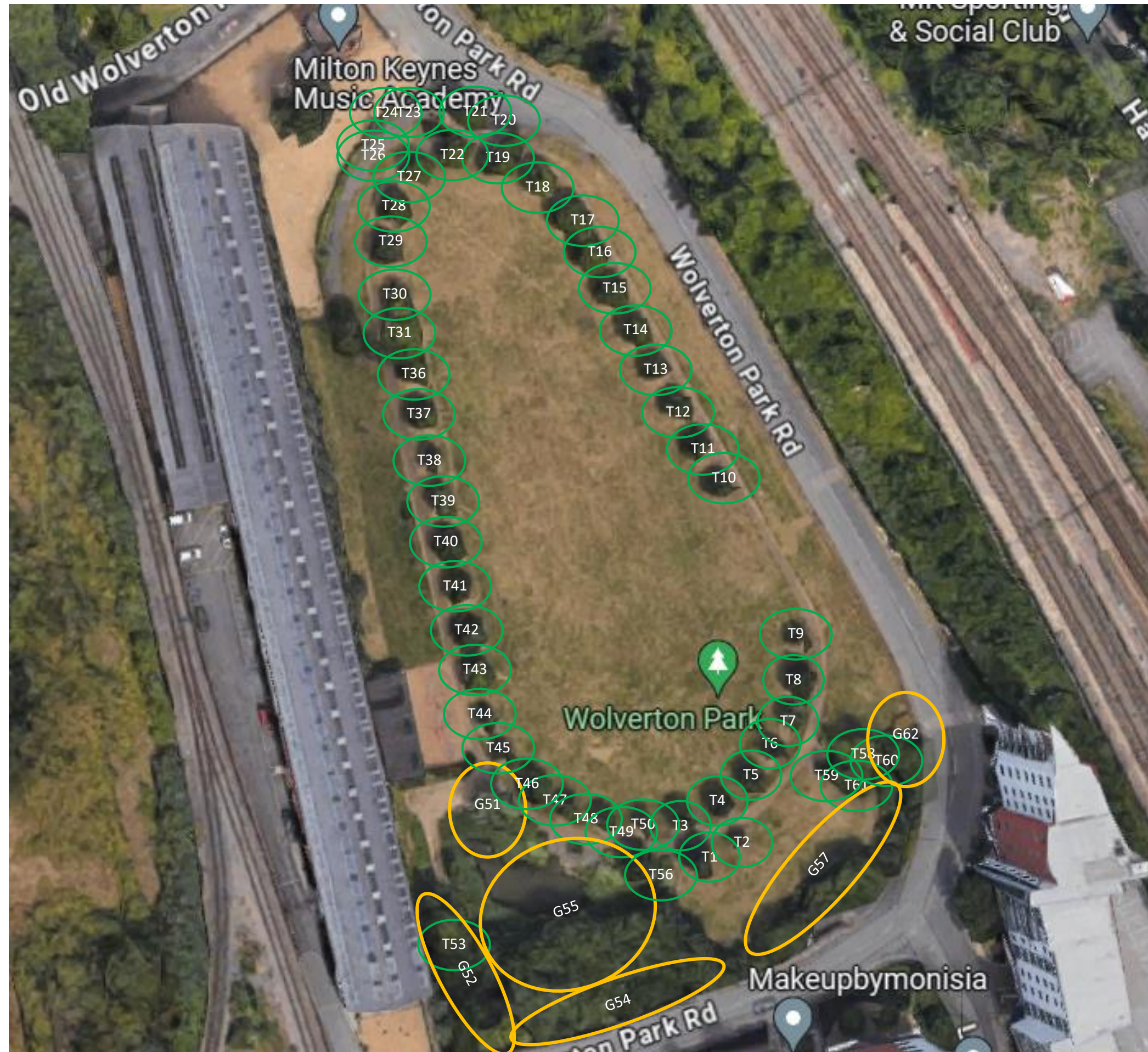
WOLVERTON PARK TREE INSPECTION 26/11/2023												
Tree Map Number	Tree Tag	Tree Species	Height (m)	Radial crown spread (m)	Age	Condition	SULE	Comments	Risk against occupancy	Recommendation	Priority	Recommended inspection frequency (years)
1	3085	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
2	3086	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
3	3087	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
4	3088	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
5	3089	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
6	3090	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
7	3091	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
8	3092	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
9	3093	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
10	3094	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
11	3095	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
12	3096	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
13	3097	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
14	3098	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
15	3099	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
16	3100	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
17	3101	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
18	3102	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
19	3103	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3

20	3104	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
21	3105	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
22	3106	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
23	3107	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	Lift low growth over footpath to 3m	3	3
24	3108	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
25	3109	Himalayan Birch	6-7	2-3	SM	Good	80+	Bark delamination, vandalism. Formal planting - native species	LOW	Monitor reaction to vandalism	NA	2
26	3110	Himalayan Birch	6-7	2-3	SM	Good	80+	Bark delamination, vandalism. Formal planting - native species	LOW	Lift low growth to 3m - Monitor reaction to vandalism	4	3
27	3111	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
28	3112	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
29	3113	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
30	3114	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
31	3115	Acer campestre	5-6	2-3	EM	Poor	5-10	Stressed, browning of leaves. Formal planting - native species	LOW	Monitor bud production and regrowth	NA	1
32	3116	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	Remove stake	4	3
33	3117	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
34	3118	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	NAR	NA	3
35	3119	Himalayan Birch	6-7	2-3	SM	Good	80+	Formal planting - native species	LOW	Remove stake	4	3
36	3521	Acer campestre	5-6	2-3	EM	Poor	5-10	Stressed, browning of leaves. Formal planting - native species	LOW	Monitor bud production and regrowth	NA	1
37	3522	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
38	3523	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
39	3524	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3



40	3525	Acer campestre	5-6	2-3	EM	Good	80+	Stressed, browning of leaves, bark wound. Formal planting - native species	LOW	Monitor bud production and regrowth	NA	1
41	3526	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
42	3527	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
43	3528	Acer campestre	5-6	2-3	EM	Good	80+	Stressed, browning of leaves. Formal planting - native species	LOW	Monitor bud production and regrowth	NA	1
44	3529	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
45	3530	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species - epicormic growth	LOW	Lift low growth to 3m, remove epicormic growth	4	3
46	3531	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
47	3532	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
48	3533	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
49	3534	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth to 3m	4	3
50	3535	Acer campestre	5-6	2-3	EM	Good	80+	Stressed, browning of leaves. Formal planting - native species	LOW	Monitor bud production and regrowth	NA	1
GROUP 51	3536	Mixed ecological species including willow, cornus and blackthorn	5-10	As displayed	SM/M	Fair	40-80	Willow adjacent to footpath has dead stem from coppice near seating area	MODERATE	Remove dead limb from coppice Willow	2	2
GROUP 52	3537	Mixed ecological species including willow, cornus and blackthorn	5-10	As displayed	SM	Fair	40-80	Low growth over swathe	LOW	Lift all low growth adjacent to peripheral swathe to 3m	4	3
GROUP 53	3538	Mixed ecological species including willow, cornus and blackthorn	5-10	As displayed	SM	Fair	40-80	Low growth over swathe, proximity to boundary wall	LOW	Lift all low growth adjacent to peripheral swathe to 3m + Cut back growth from peripheral wall	3	3
54	3539	Oak	11-12	4-5	EM	Good	80+	Good specimen	LOW	NAR	NA	3

GROUP 55	3540	Mixed ecological species including willow, cornus and blackthorn	5-10	As displayed	SM	Good	40-80	Low growth over seating area	MODERATE	Lift all low growth clearing seating area by 3m, remove any hangers and deadwood above seating area	2	3
56	3541	Acer campestre	5-6	2-3	EM	Good	80+	Formal planting - native species	LOW	Lift low growth over footpath to 3m	3	3
57	3542	Mixed ecological species including birch, willow, cornus and blackthorn	5-10	As displayed	SM	Fair	40-80	NA	LOW	NAR	NA	3
58	3543	Alder	4-5	1-2	EM	Good	80+	NA	LOW	NAR	NA	3
59	3544	Cherry	4-5	1-2	EM	Good	80+	NA	LOW	NAR	NA	3
60	3545	Alder	4-5	1-2	EM	Good	80+	NA	LOW	NAR	NA	3
61	3546	Cherry	4-5	1-2	EM	Good	80+	NA	LOW	NAR	NA	3
GROUP 62	3547	Ornamental species x 4	3-4	1-2	EM	Good	20-40	NA	LOW	NAR	NA	3
GROUP 63	Embankment	Willow (x approximately 60)	14-18	4-5	SM	Fair	80+	Lapsed pollards on inaccessible area – subsidence risk species when in proximity to structure	MODERATE	Re-pollard to historic levels	3	3
64	3548	Robinia	3-4	2-3	SM	Fair	20-40	Dead wood within crown over parking areas	MODERATE	Remove dead wood + lift low growth to umbrella canopy	2	3
65	3549	Robinia	3-4	2-3	SM	Fair	20-40	Dead wood within crown over parking areas	MODERATE	Remove dead wood + lift low growth to umbrella canopy	2	3
66	3550	Robinia	3-4	2-3	SM	Fair	20-40	Dead wood within crown over parking areas	MODERATE	Remove dead wood + lift low growth to umbrella canopy	2	3
67	3551	Robinia	3-4	2-3	SM	Dead	0	Dead wood within crown over parking areas	MODERATE	Remove and replace	2	3
68	3552	Robinia	3-4	2-3	SM	Fair	20-40	Dead wood within crown over parking areas	MODERATE	Remove dead wood + lift low growth to umbrella canopy	2	3
GROUP 69	Untagged	Palm x 4	2-3	1-2	EM	Fair	20-40	Excavation around root plate may result in poor Vigor and eventual death	LOW	NAR	NA	3
GROUP 70	Untagged	Mixed broadleaf species. Acer / Birch	5-10	As displayed	SM	Fair	40-80	Acer with proximity to structure	LOW	Reduce acer by 30% of branch length	2	2







## 6.0 Discussion & Summary

- 6.1 An estimated 130 trees have been surveyed as part of this inspection.
- 6.3 67 of the 130 trees have been tagged with the remaining 63 situated within inaccessible areas. All untagged trees have been mapped either individually or as part of a group.
- 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 designation of priority of one, two or three: works needs to be carried out in accordance with the recommended timeframe for indemnity to be upheld.
- 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)

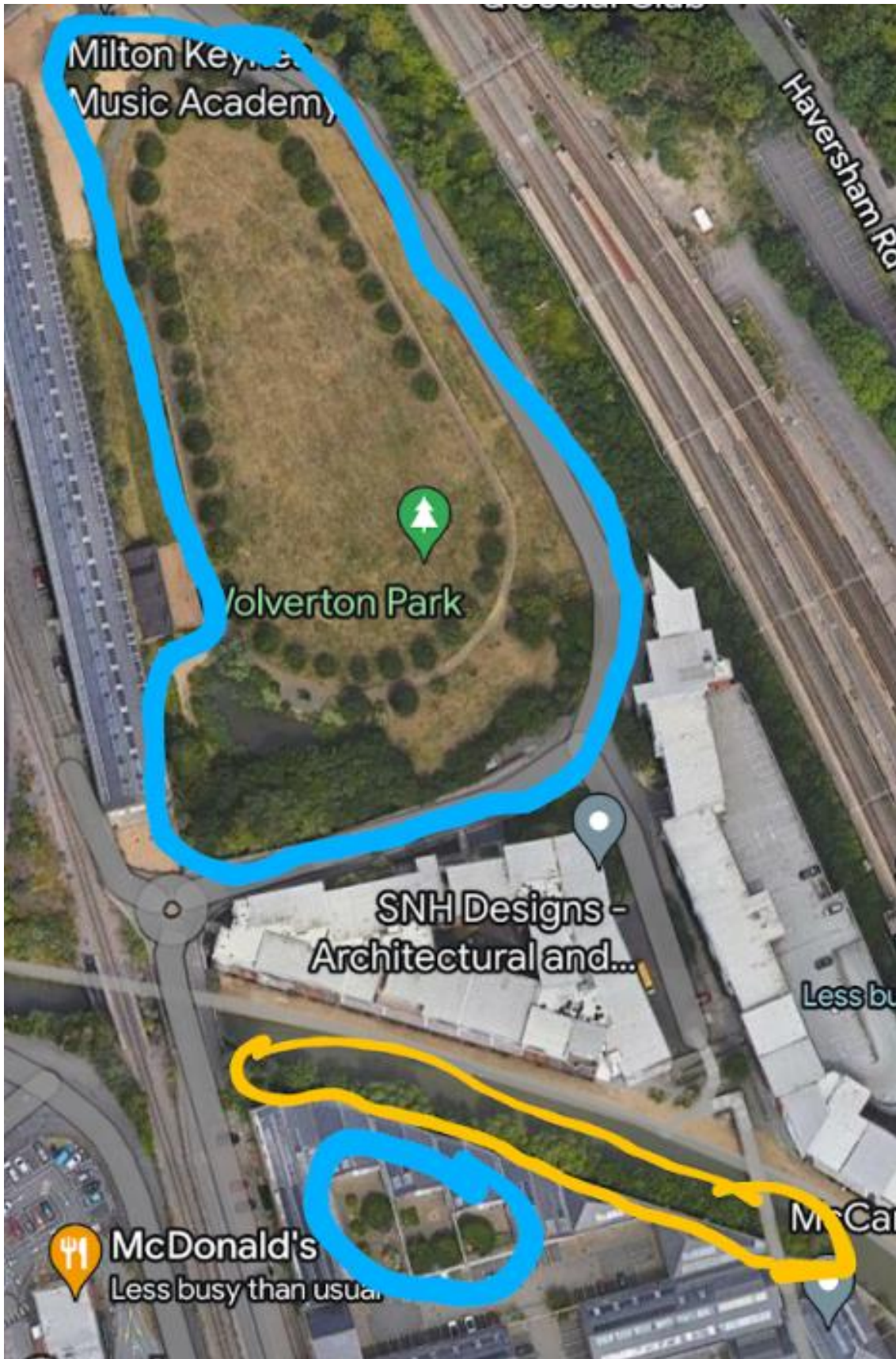
**TREE STOCK:** To minimize risk, maintain the safe usage of the land and to uphold the occupiers 'Duty of Care', tree works to mitigate the physiological and structural issues for trees with priority 1 and 2 as described within this report are required. All works of priority 3 can be considered cyclical management, but is still required to manage risk either through the removal of low obstructive growth or the management of a tree that has proximity to structure in order to reduce the potential for an association with property damages.

**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 of priority 1, 2 and 3 has been adhered to, then the risk of foreseeable incident is minimalised to an acceptable level.

# APPENDICES

APPENDIX A: AREA OF INSPECTION





## APPENDIX B: SURVEY BRIEF / SPECIFICATION

### Survey:

The objective of this survey is to visually inspect every tree, in accordance with the VTA\* method, that 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'll usually have Obvious Tree Risk Features which we can't help but notice. Passive Assessment is simply picking up on these obvious features when we pass by trees whilst going about our day-to-day routine. Passive Assessment is carried out by our 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's 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're 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)

**Priority 4:** General maintenance (within 3 years)

**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)

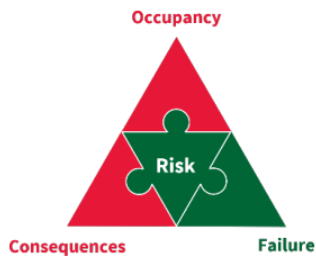
## **APPENDIX C OCCUPANCY / CONFLUENCE DEFINITION**

### **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, that 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're 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 D 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 in accordance with the stated priority and risk zoning map.

**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

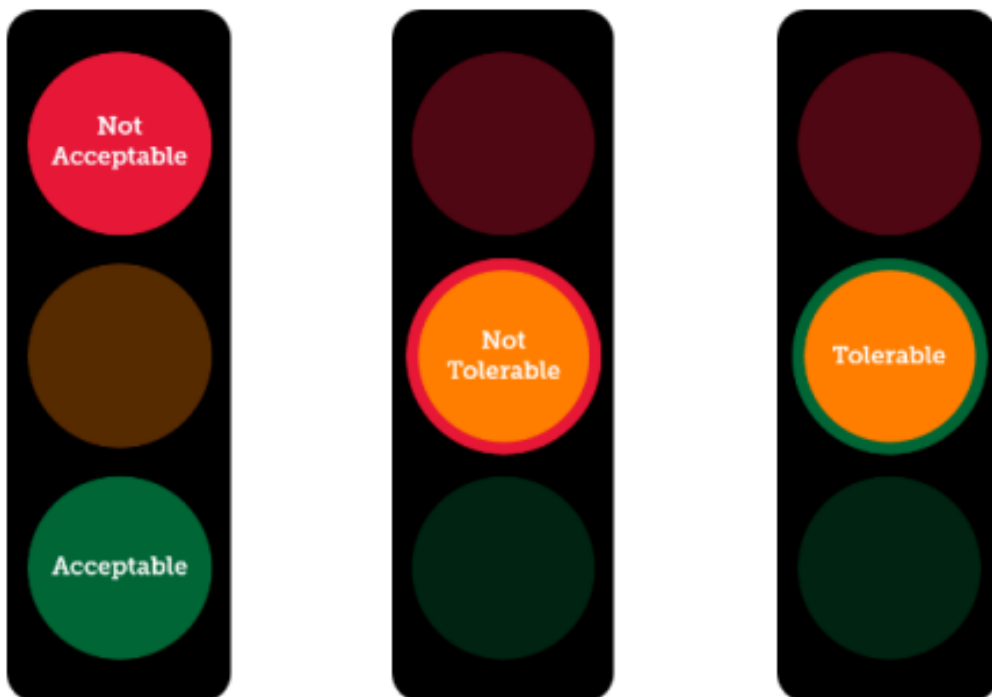
**Green:** Acceptable risks will not be reduced

**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

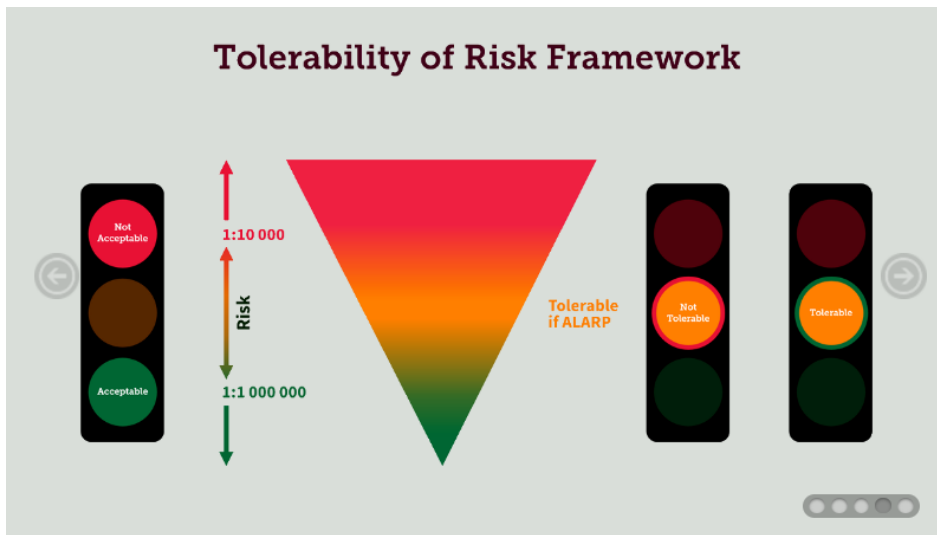
**Not Acceptable & Not Tolerable risks**

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.

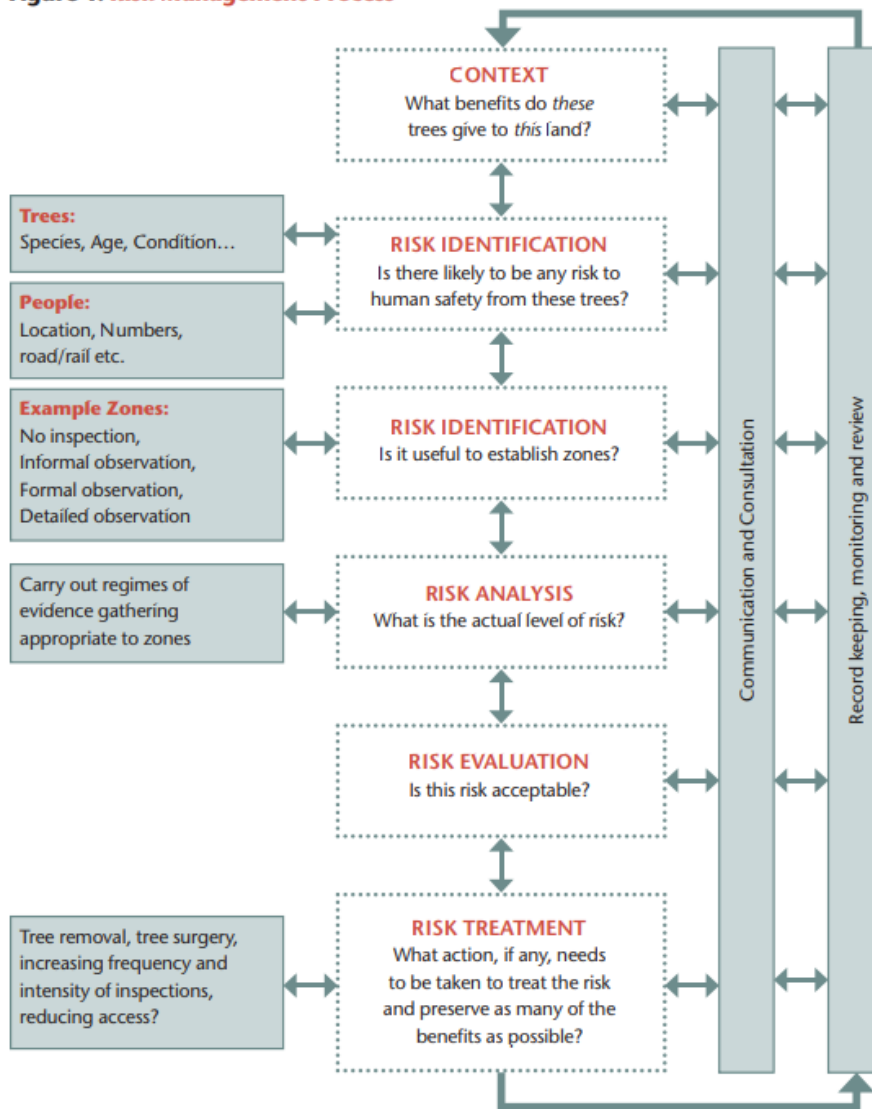


**Acceptable and/or tolerable risk**

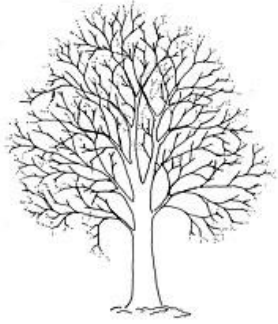
An acceptable or tolerable risk is where the associated concern has either a low chance of impacting upon the site occupancy; meaning that any chance of branch or tree failure would likely have no consequence, or the site occupancy is low enough to minimize the risk of incident to below: 1:1,000,000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



**Figure 1. Risk Management Process**

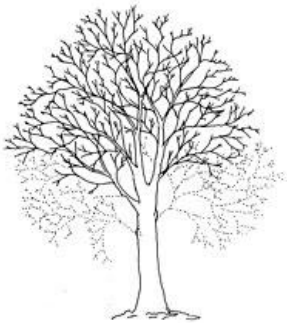


## APPENDIX E: PRUNING DEFINITIONS



### 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.

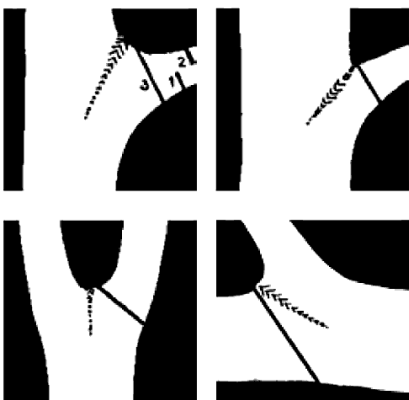


Diagram 2 – examples of correct pruning cuts. Drawings courtesy of European Arboricultural Council.

### 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 F: REFERENCES AND USEFUL LINKS

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