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05/05/2024
Re-do 09/03/2025

UNIT Tree Inspections
AY/602/3958 LO 1
UNIT GUIDE 2023-24

Assignment Brief LO 1 and LO2

LO 1. Understand the processes of undertaking safety inspections of trees

1.1 Undertake a systematic inspection of several trees identifying a minimum of five obvious structural defects that would be a cause of concern.

1.2. Classify by broad category the risk posed by a tree with an obvious defect in connection with a target

LO 2. Understand the need to select the appropriate recommendation following inspection

2.1. Provide a recommendation action(s) and timescale(s) for a tree you inspected

2.2. Describe the implications of a given pruning recommendation on a named tree species

2.3. Identify 6 features of a tree which could lead to harm being caused to a target

2.4. Identify 4 control measures which can be used to reduce or mitigate the risk posed to a target by a retained tree with a known defect

I identified 10 trees in the Bartley Green area with noticeable defects. They were in different areas with different targets.
I aimed to collect data that is relevant, factual, consistent and accurate. The defects I found were:

Fungi - showing that there may be rot in the tree
Leaning trees
Cracked and split branches
Storm damage
Overgrown tree with common ivy

2.0 TREE DATA

The data was gathered by observing trees at ground level. I used a DBH and height measure. The measurements are rounded up to the nearest cm.

Tree data: 188 Hasbury Road, B32 4DU Date: 14/05/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T01	Lime, small-leaved (Tilia cordata)	Owned by BCC Target # - footpath; pedestrian way -within the drip line - Occupancy: Frequent (3) tenants but also pedestrians going to the small shops nearby - Not practical to move the target.	Height (m): 8 Crown Radius (m): 6.50 North: 3 East: 3.50 West: 2.50 South 2 DBH (cm): 75 Life Stage: Mature Life Exp.: 200+ Years As a street tree perhaps 50+	Wind Exposure: full mostly from North Crown Size: Medium Unbalanced crown. One broken branch hanging on and could fall on target (human, car) Lichen on bark One branch broke The tree tries to balance the weight Ground cement stone non-permeable One branch on the west side bows down with leaves to a height of 1.60 metres from the ground, people taller must walk around the branch. The branch on the south side missing; broke up. The waste truck came by and hit the hanging branches on the east side which could have happened before and that could be the reason why this branch is broken.	Moderate, except one splitter branch about to fall on a target tension on the opposite branch through the split branch	Fair	Immediately

Tree data: 111 Kitwell Lane, B32 4NL Date: 12/05/2024, update 14/05/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T02	London Plane (Platanus hybrida)	Owned by the GSA Association Target # - footpath; pedestrian way -within the drip line - Occupancy: Frequent (3) tenants but also Woodgate Valley users - Not practical to move the target.	Height (m): 25 Crown Radius (m): 10 North: 7 East: 10 West: 8 South 6 DBH (cm): 180 Life Stage: Mature Life Exp.: 40+ Years	Wind Exposure: mostly from North Crown Size: Large. Unbalanced crown. struck by lightning last year Branch East bowing down Leaves from May on bowing down until Autumn to under 1.5 height from the ground Tension on the branch because of leaves Bark disease: Massaria (Splanchnonema platani)	Moderate to High because of eventual Storm; tension in branch	Good Update 14/5/24 poor condition	6 months

Tree data: 57 Kitwell Lane, B32 4DA Date: 12/05/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T03	Wild Cherry (Prunus avium)	Owned by BCC Target # - footpath; pedestrian way Single car park - Occupancy: Frequent (3) tenants, pedestrians - Not practical to move the target.	Height (m): 7-8 Crown Radius (m): 8 North: 2.20 East: 1 West: 1.70 South 3 DBH (cm): 75 Life Stage: Mature Life Exp.: 3+ Years under this condition Life Exp.: 60+ years	Wind Exposure: mostly from North Crown Size: Small Unbalanced crown. North branches touch above and between the utility line East branches almost straight up within 1 m Shear bark split Black Fungus The trunk is square, not the round you would expect from a tree Structural damage Dead branches in-between The first stem occurs at a height of 1.86 metre Dieback between 1-10%	Moderate	Poor	1 year

Tree data: 41 Kitwell Lane, B32 4DA Date: 13/05/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T04	Japanese cherry *(Prunus serrulata)*	Owned by Birmingham City Council (BCC) Target # - footpath. - Within drip line. - Occupancy – Frequent (3). - Not practical to move the target.	Height (m): 5 Crown Radius (m): 6-7 North: 2.30 East: 2.10 West: 3.80 South: 2.50 DBH (cm): 95 Life Stage: Mature Life Exp.: 15-20 +Years This one max. 3 years, I assume	Wind Exposure: ¾ , house on north side Crown Size: Unbalanced crown. root bulb around 20 cm in diameter Bark cracks: fungi? The trunk has bulbs around Pruning history East dieback 1-10% Around root trunk: new sprouts occur	Moderate	Poor	Every Year

Tree data: 37 Kitwell Lane, B32 4DA Date: 12/05/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T05	Wild Cherry Prunus avium	Owned by BCC Target # - footpath; pedestrian way -within the drip line - Occupancy: Frequent (3) - Not practical to move the target.	Height (m): 4.50 Crown Radius (m): 7-8 North: 2.50 East: 2.60 West: 4.30 South: 4.0 DBH (cm): 100 Life Stage: Mature Life Exp.: 60 Years This one perhaps 3 years	Wind Exposure: yes, from ¾ house is the north side Crown Size: Unbalanced crown. Dieback: east side 1-10% Fungi black, main trunk crack 5 cm deep Fungi type: was black and in the shape of a bracket before someone destroyed it and I could take a photo. Lichen-type light blue Bark cracks everywhere, partwise deep The trunk has structural damage Roots above ground and tangled	Moderate	Poor	6 months

Tree Date Survey 09/03/2025

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T06	Pin Cherry Tree Prunus pensylvanica	Location: Clapgate Lane. On grass Verge; one side high traffic street; other side food path Owned by Parks Tree Service Birmingham City Council Target - on a high-traffic street connecting two wards - Outside drip line. - Occupancy - Frequent (3). - Practical to move the target.	Height (m): 4 Crown Radius (m): 2.7 DBH (cm): 22 Life Stage: Young Life Exp.: 5 Years	Wind Exposure: Full. Crown Size: 2 meters Unbalanced crown. Leaning trunk towards the street 1 trunk Fungi on trunk Bark damage on the trunk base	High	Fair	yearly

Tree Date Survey 09/03/2025

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T07	Scots pine (Pinus sylvestris)	Location: Clapgate Lane; Woodgate Valley side Owned by Parks Tree Service Birmingham City Council Target: path outside the drip line and tree surrounded by brambles. Occupancy - rare	Height (m): 30 Crown Radius (m): 4 DBH (cm): 75 Life Stage: Mature Life Exp.: 40+ Years	Wind Exposure: Full. Crown Size: Large. Soil Plate detached Storm damage during last Winter Deadwood The tree will become a habitat for wildlife	Low	Poor	5 years

Tree Date Survey 08/12/2024

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T08	Leyland Cypress (Cupressus x leylandii)	Location: Clent Way Estate Owned by GSA HA Target pathway - Within the drip line - Occupancy - Frequent (3) Pruning of the entire tree could minimise the risk of falling onto the building short-term Long-term removal of the tree and planting of new conifer	Height (m): 15 Crown Radius (m): 8 DBH (cm): 80 Life Stage: Mature Life Exp.: 40+ Years	Wind Exposure: Full. Crown Size: Large. Unbalanced crown. Multiple Stems Trunk rotten Black fungi decay Storm damage from 8th December 2024 Pruning of branches short-term Removal of the tree long-term and planting a new tree	High	Poor	Needs to be inspected and pruned asap within 3 working days

Tree Date Survey 09/03/2025

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T09	Ash tree Fraxinus excelsior	Location: Clapgate Lane Ownership: The land, including the area where the business park is situated, was owned by Birmingham Corporation by 1953 and is now managed by Birmingham City Council. Target: footpath - Within the drip line. - Occupancy - Frequent (3). - Practical to move the target.	Height (m): 16 Crown Radius (m): 3 DBH (cm): 40 Life Stage: Mature Life Exp.: 40+ Years	Wind Exposure: Full Crown Size: Large Unbalanced crown Leaning trunk towards the street Diseased in the trunk area with fungi cushion bracket fungi on a branch; Phellinus poaceous other branch fungi: Polypore, also known as bracket or shelf fungi. More specifically, it strongly resembles Crimped Gill fungus (Plicatura crispa) Interferes with a newly planted street tree	High	Poor	Asap Needs branch removal towards the street

Tree Date Survey 07/03/2025 – 09/03/2025

Ref	Species	Description	Measurements	Survey Notes	Risk Rating	Condition	Inspect Period
T10	Cockspur hawthorn (Crataegus crus-galli)	Location: Kitwell Lane 127 Owned by GSA HA Target footpath to flats and pathway street - Within drip line. - Occupancy - Frequent (3). - Practical to move the target.	Height (m): 5 Crown Radius (m): 2 DBH (cm): 24 Life Stage: Mature Life Exp.: 40+ Years	Wind Exposure: Half Crown Size: 2 Unbalanced crown. Leaning trunk towards the street pathway The tree is overgrown with common ivy which caused the tree to split under the weight of the ivy.	High	Poor	Asap Pruning and removing ivy

3.0 RECOMMENDATIONS

Ref	Species	Recommendation	Work Timescale	Photo
T01	Lime, small-leaved (Tilia cordata)	Structural pruning of entire tree and target pruning of split and cracked branches Ground maintenance for roots to breathe, taking water and nutrients in branch on the west side overhanging through weight balancing. Tension on this branch. Needs Inspection regularly, especially from May to Autumn as leaves add weight to the branch, I measured today the leaves came down to 1.6 metres in height from the ground.	14-May-2024 (immediately for the broken hanging branch which could hit the target human/car) Ground maintenance within 6 months	  
T02	London Plane (Platanus hybrida)	Large branch overhanging through lightning. Needs Inspection regularly, especially during May to	12-May-2024 (6 months)	

		Autumn as leaves add weight to the branch, I measured last year's leaves came down to under 1.5 meters from the ground. Pruning of branches is recommended. The large branch on the left side of the picture, marked red, poses a risk for pedestrians as the weight of the branch came down to a height of 1.50 meters above the ground.		 

T03	Wild Cherry (Prunus avium)	The decay of the tree must be watched. First Aid: Pruning of the straight branches east side that go and touch already the utility cables within 3 months Removal of the tree would be recommended and planting a new street tree Shear bark split Black Fungus The trunk is square, not the round you would expect from a tree Structural damage Dead branches in-between	12-May-2024 (1 year) general inspection Eventually felling the tree within two years and planting a new street tree instead Pruning of east side branches that touch utility line <u>within 3 months</u>	

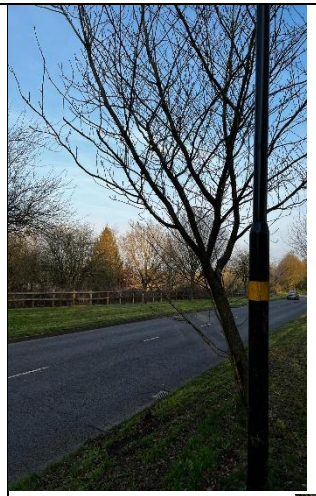
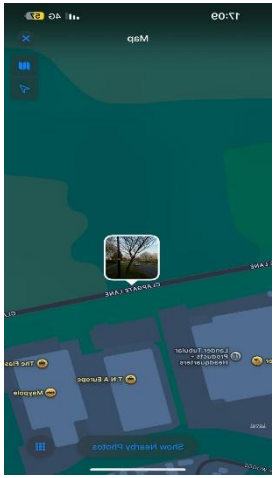
				 

T04	Japanese cherry *(Prunus serrulata)*	It would be advisable to target pruning some branches to relieve the stress of the tree. Being a street tree perhaps some extra nutrients could hold the decay stage. Improving soil. Make a tree sponsorship through the neighbours who are living in front of the tree. Watering, but observing and eventually collecting data about the decay would be so helpful. Inform the tree warden when the tree deteriorates. Data collection on the spot. A professional tree inspection	12-May-2024 Within 2 months The tree is in a line of trees and all of them have fungi and decay issues.	

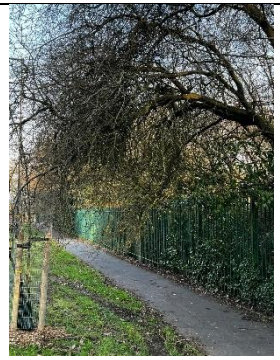
T05	Wild Cherry (Prunus avium)	This tree is diseased. The fungi decay is everywhere, in the trunk, and roots as far as I could see and reach without a ladder. The recommendation would be to remove the tree (no birds nesting), remove the soil, fill up new soil establish a new planting base in this green area and plant another species; more robust. On the other hand, speak with the neighbour and try to establish a tree sponsorship with a new tree and educate them about taking care of this tree. Often these car owners wash their cars and because of the slope, the soap/chemicals run off the direction tree. Establish a cheap sustainable fence system around the entire green verge for the tree and involve a tree warden and the neighbour if interested in looking after this tree. BTP could do pruning sessions for tree sponsorships…	12-May-2024 Within two years planting a new street tree	 

T06	Pin Cherry Tree Prunus pensylvanica	Removing the tree Leaning trunk towards the street can endanger public traffic One trunk Black Fungi on the trunk Bark damage on the trunk base	Removal of the tree asap Planting a new street tree within 1 year March 2026	    
T07	Scots pine (Pinus sylvestris)	Soil Plate detached Storm damage during last Winter Deadwood	Surveying in 5 years again as the area has a wooden fence boundary (2 planks) and bramble surrounding	

		The tree will become a habitat for wildlife		  

T08	Leyland Cypress (Cupressus x leylandii)	Multiple Stems Trunk rotten Black fungi decay Storm damage from 8th December 2024 Pruning of branches short-term Removal of the tree long-term and planting a new tree	Pruning tree branches <u>asap within three working days</u>; short-term Long-term: removal of the entire tree and planting of a tree	  
T09	Ash tree Fraxinus excelsior	Leaning trunk towards the street and spanning completely the footway. Diseased in the trunk area with fungi cushion bracket fungi on a branch; Phellinus poaceous other branch fungi: Polypore, also known as bracket or shelf	Target pruning of affected branches within 4 weeks.	

		fungi. More specifically, it strongly resembles Crimped Gill fungus (Plicatura crispa) Interferes with a newly planted street tree		     
T10	Cockspur hawthorn (Crataegus crus-galli)	Leaning trunk towards the street pathway The tree is overgrown with common ivy which caused	Pruning asap and removing the common ivy within 3 working days	

		the tree to split under the weight of the ivy.		  

4.0 IMPLICATIONS OF GIVEN PRUNING RECOMMENDATION

This inspection has identified 3 trees that required pruning, and this has implications for the tree.

Tree 01 would benefit from target pruning the branches which are already split and cracked. Target pruning, or selective branch removal, aims to improve tree health, safety, and aesthetics by removing specific problematic or unwanted branches, potentially impacting the tree's growth and structure. Target pruning, when done properly, promotes effective wound healing from the cut. The tree will be more susceptible to decay and parasites if the cut is too close to the trunk, and it cannot heal if it is too short. The branch on the left side of the tree must be structurally pruned as the branch is hanging down with a lot of weight which makes the branch susceptible to breakage. The tree will be less vulnerable to harm from wind, snow, and other stressors because of its stronger, more balanced structure.

Tree 06 is a tree leaning towards a high-traffic road at a 40-degree angle which poses a risk to motorists. If a tree leans 15 degrees or more, or if you see that the angle of lean is growing over time, it is deemed unsafe. This is particularly true if the tree has any diseased or dead sections. At this point, the tree should be removed from the property to mitigate potential safety hazards. The tree suffers already from a black fungus and damage around the trunk base. It would be proactive to remove this tree as the straight street has high winds, especially with increasing storms coming up. This will eliminate the risk of injuries if the tree falls on the road. Opposite the road is a plain wide field with strong winds pushing towards the street and trees. It would be beneficial to plant hedges on the green verge area to puffer windthrown.

Tree 09 covers the walkway and is bowed, leaning towards the street. Both Phellinus pomaceous (cushion fungus) and Polypore, sometimes referred to as bracket or shelf fungus, are present on the tree's branches, causing disease in the trunk area. In particular, it has a striking resemblance to the Crimped Gill fungus (Plicatura crispa). A recently planted street tree will be hampered by the weight of the drooping branches, as well as by having less room to grow and less sunlight. Pruning serves to alleviate the burden of drooping branches, which can diminish stress on the trunk and the overall structure of the tree, thereby mitigating the risk of further leaning or potential breakage. By eliminating overgrown or unhealthy branches, the tree can gain improved access to sunlight, a crucial element for its photosynthesis. This enhancement may bolster the tree's overall health, particularly if it is being overshadowed by nearby structures or other trees. Pruning can facilitate better air circulation within the canopy, thereby decreasing the risk of fungal infections such as Phellinus poaceous or Polypore, which thrive in damp and stagnant environments. By excising diseased or damaged branches affected by fungal infections, the tree can redirect its energy towards healthier, unaffected areas, potentially hindering the spread of the disease. Pruning a tree already under stress from disease may exacerbate its condition. Excessive pruning or performing it at an inappropriate time of year can increase the tree's susceptibility to diseases or environmental pressures. Improper pruning techniques can create wounds on the tree, which may become entry points for additional fungal infections. The presence of Phellinus poaceous and Polypore could continue to impact the tree even post-pruning, potentially worsening the situation. Given that the tree is already burdened by the weight of its branches and suboptimal growth conditions, pruning may hinder its overall growth and the development of a stable structure. If too much of the canopy is removed, the tree may find it challenging to regenerate new growth.

5.0 IDENTIFY 6 FEATURES OF A TREE WHICH COULD LEAD TO HARM BEING CAUSED TO A TARGET

Tree 06

Tree 06 is leaning at a 40-degree angle towards a busy road, creating a danger for drivers. A tree is considered unsafe if it leans 15 degrees or more or if its lean increases over time. This is more critical if the tree has diseased or dead parts. Tree 06 has a black fungus and damage at its base. It should be removed to prevent accidents and injuries, especially with high winds and storms expected. Removing the tree will help ensure safety on the road.

Tree 09

The identification of Phellinus pomaceous (cushion fungus) and Polypore (shelf fungus) on the branches and trunk signifies potential decay or disease affecting the tree. The growth of these fungi can compromise the tree's structural integrity, increasing its vulnerability to breakage or collapse. Fungal infections and diseases frequently lead to the deterioration of the wood within the tree, resulting in a loss of structural stability. A compromised trunk or branch is at a higher risk of snapping, particularly during storms or strong winds, which poses a danger to individuals situated beneath it.

Tree 10

The tree has weak and split branches because of heavy overgrown ivy, which harms its structure and leads to falling branches that could injure people or damage property. The ivy adds weight and makes it hard to check for dangers while also blocking the view. If the tree bends toward the pathway, the low-hanging branches might have hit pedestrians, or cyclists, causing injuries or damage.

Tree 08

Tree 08 exhibited numerous issues that rendered it weak and more susceptible to breaking during the storm on December 8, 2024. It possessed multiple stems, which introduced weak points, thereby facilitating the breakage of branches under stress. The trunk suffered from rot and decay, exacerbating its vulnerability during adverse weather conditions, which could result in sections of the tree falling onto nearby objects. The presence of black fungi decays further compromised its structural integrity, increasing the likelihood of failure. Moreover, the tree contained dead and weak branches that could easily break in strong winds, thereby posing a risk to nearby structures or individuals. Should the tree have been leaning to one side, it might have heightened the risk of breakage during the storm. Overcrowded branches and dense foliage might obstruct airflow and create greater wind resistance, consequently further weakening the tree. Furthermore, had Tree 08 possessed damaged or shallow roots, it would have been less stable in the face of heavy winds or storms. Trees positioned close to buildings or pathways are capable of inflicting significant damage if they were to fall. Finally, if the tree had a history of suffering damage from previous storms, it would likely have been more prone to breaking again during this particular storm.

Tree 07

Soil Plate Detachment occurs when a tree's support layer of soil and roots becomes dislodged during a storm. This situation can destabilize the tree, increasing the risk of it falling, especially if the roots are already weakened. Trees with dense, heavy crowns can have added risks during storms, as their weight can lead to broken branches or the tree collapsing. Additionally, tall trees pose a higher risk because, if they fall, they can cause more damage due to their height and the larger area they cover.

Tree 05

Girdling roots are defined as roots that encircle the trunk of a tree, thereby restricting the flow of water and nutrients, and can ultimately lead to the demise of the tree. They are frequently located at or just below the soil surface. A weakened tree may become unstable, thereby increasing the likelihood of it falling during storms or high winds, which could potentially harm targets located beneath it. If the roots are positioned near the surface or are growing in a circular configuration around the tree base, they may negatively impact stability and overall health. A tree exhibiting visible cracks, splits, or cavities in its trunk may be structurally compromised, leading to a state of weakness and an elevated risk of collapse. If the trunk is compromised, the tree may fall unexpectedly, thereby posing a danger to targets located in the nearby vicinity.

6.0 IDENTIFY 4 CONTROL MEASURES WHICH CAN BE USED TO REDUCE OR MITIGATE THE RISK POSED TO A TARGET BY A RETAINED TREE WITH A KNOWN DEFECT

This report outlines several control measures to mitigate the risks posed to targets.

For **Tree 06**, it has been recommended that removal take place. This measure eradicates all associated risks; however, it complicates the achievement of the City Council's canopy percentage goals. Should the planting plot not be replanted in a timely manner, the residents may grow accustomed to utilizing this space for the disposal of litter from their vehicles. Additionally, the planting of hedges adjacent to the green verge areas of this heavily trafficked road could also mitigate noise and pollution in this locality.

For **Tree 08**, which has previously experienced storm damage, careful monitoring should be conducted following each subsequent storm. Consistent maintenance and evaluations after significant storms will assist in identifying any new vulnerabilities before they result in failures. Should the tree be considered beyond safe repair or if mitigation strategies prove ineffective, it may become necessary to contemplate the complete removal of the tree and its replacement with a more appropriate, structurally sound species.

For **Tree 10** identify possible targets (e.g., pedestrians, vehicles, buildings) in the vicinity of the tree and prioritize protective measures for these targets. Remove the ivy to decrease its weight and to avert further damage to the tree. It is imperative to remove the ivy at the base, where it links to the trunk, to diminish the risk of stress on the tree. After the removal of the ivy, monitor the tree to prevent regrowth and reestablishment of the ivy. Regularly inspect and manage any new growth to prevent a recurrence of the issue.

For **Tree 02** Install cables or braces to provide additional support to the branch and prevent it from breaking. These systems can help reduce stress on the branch by redistributing the weight more evenly.