

Loss Prevention Standards

Trees – Property Damage

Introduction

Trees are a critical part of the environment and aesthetically welcome around many buildings or within associated grounds and gardens. However, there are many exposures caused by trees being located too close to buildings, and this document highlights some of these issues and provides guidance to assist in reducing these risks.

As with all exposures to any building or business, the key to understanding the risk is by collating all relevant information and completing a formal risk assessment, enabling risks to be identified and reduced or controlled. This should then be underpinned by ongoing monitoring and maintenance, etc. Occupiers and anyone with responsibility for trees, e.g. a tenant, must take reasonable steps to manage and reduce risk, including identifying and inspecting those trees which might cause injury or place property at risk.



Type of Tree

The type of tree located close to your building will have differing impacts and exposures, which will be influenced by the following:

- The physical height and spread of the tree when mature
- The branch and leaf density; canopy size and shape
- The physical spread and depth of the root network
- If the tree is deciduous or evergreen
- How much water it will consume, e.g. a willow tree will require significantly more water than a conifer
- The strength and flexibility of the trunk and branch network



Soil Type

The nature of the soil in an area associated with the tree can have a significant impact on such things as subsidence and tree collapse. The following need to be considered when understanding the risks:

- Trees that require a lot of water, with a large root network may cause soil to dry out
- Soil type may not be secure for the nature of the root network in strong winds, which may result in trees becoming uprooted and falling over
- Seasonally, the nature of the soil's mechanical properties is different, causing the behaviour of a tree to be different when the soil is wet versus dry

Weather and Season

The weather and season can significantly impact a tree, e.g.:

- The quantity of rain changes the behaviour of the soil and tree
- Prolonged lack of rain changes the moisture content of the tree or its detritus making it more prone to fire involvement
 - It can cause premature leaf-fall or a tree to die
- Strong, prolonged or regular winds can impact the structural integrity and stability of the tree, or cause it to rub against nearby buildings
- Snow and freezing rain can produce additional loading causing limbs to break or trees to collapse
- Autumn causes deciduous trees to lose their leaves
- Sudden or severe storms can cause all the above
- Lightning can strike trees causing fire and/or tree collapse



Distance from Buildings

The distance a tree is from the building is critical. Regardless of the type of tree, its height, the soil conditions, etc., if the tree is located far enough away from a building it is not an exposure. However, too close and the following can occur:

- Compromise security by providing access to windows or roofs
 - 'Urban or free runners' will readily climb a tree to access a building
- Provide a route for wildlife to get onto or into a building
- Cause abrasion to a building wall or roof
- Reduce air flow around wall and roof areas, creating damp
- Deciduous leaves can block drainage, cause pooling on roofs or even damage roof decking
- Limb fracture can impact roofs or walls
- Fire involving trees can spread to buildings, or fires within buildings can spread to trees and to other areas of the same building or other buildings
- Cause building subsidence
- Collapse into buildings or in the worst cases through building walls

Similarly, trees being too close to overhead utility lines or root networks having an impact on subsurface services such as drains, pipelines etc. are all exposures to any business. Damage or interruption to supply of any important services could have a direct impact on any building or business.



Inspection and Maintenance

As with anything associated with or exposing a building or a business, the key to continually understanding the risks and hazards is monitoring and maintenance. Inspections should be formally recorded and should consider the following:

- Health of the tree
 - Keep it healthy and remove dead/dying limbs – monitor for any obvious signs of decay
- Height and spread of the tree – keep it pruned and trimmed
 - Do not let it get higher than your building
 - Do not let it touch your building walls
 - Do not let it overhang your building
 - Ideally do not let the tree be closer to your building than its height
 - Do not let any tree grow close to, higher than or through utility supplies to a building
- Clear leaves from ground, roofs and gutters as soon as they start accumulating
 - In the summer this is just as important as fires do occur
 - In rain, drains can back-up and cause pooling or water ingress into buildings
 - Particularly in spring or summer downpours or storms
- Monitor for signs of ground damage and heave/collapse
 - Consider root networks and underground services
- Monitor building walls and roofs for damp patches
- Monitor buildings for cracks, subsidence and heave
- Monitor the seasons and weather forecasts and consider how this could impact your trees and therefore your buildings
- Consider the security and liability risks as a tree grows

Checklist

A generic Trees – Property Damage Checklist is presented in Appendix 1 which can be tailored to your own organisation.

Additional Information

- [Aviva Loss Prevention Standard: Hazardous Trees](#)

Further risk management information can be obtained from [Aviva Risk Management Solutions](#)

Please Note

This document contains general information and guidance and is not and should not be relied on as specific advice. The document may not cover every risk, exposure or hazard that may arise and Aviva recommend that you obtain specific advice relevant to the circumstances. AVIVA accepts no responsibility or liability towards any person who may rely upon this document.



Appendix 1 – Trees – Property Damage Checklist

Location	
Date	
Completed by (name and signature)	

	Trees – Property Damage	Y/N	Comments
1.	Has a formal risk assessment been completed that considers the trees growing around the building? <ul style="list-style-type: none"> • Does this consider the impact when the tree is mature? • Does this cover utilities/services to the building? <ul style="list-style-type: none"> ○ Overhead? ○ Underground? 		
2.	Are the species of trees growing understood? <ul style="list-style-type: none"> • Mature height and spread? • Mature root ball spread? • Water adsorption rates? • Deciduous or evergreen? 		
3.	Are soil type and condition understood in the area? <ul style="list-style-type: none"> • In wet seasons/periods? • In dry seasons/periods? 		
4.	Are there any trees growing that are higher than the distance between them and the building, i.e. if it collapsed, could hit the building?		
5.	At maturity will any trees be higher than the distance between them and the building?		
6.	Are there any signs of buildings cracking in areas where trees are located?		
7.	Are there any signs of ground heave?		
8.	Are any tree limbs close enough to impact or rub against building walls? Is there any sign of building damage or abrasion?		
9.	Are any trees close enough to cause damp on building walls? Is this monitored?		
10.	Are any trees close enough to pose a security risk, providing access to windows or roof?		
11.	If trees are deciduous. are gutters, roofs and yards cleared of detritus and leaves?		



	Trees – Property Damage Contd.	Y/N	Comments
12.	If a tree was on fire could it spread to a building?		
13.	Are trees monitored for their health?		
14.	Are dead or dying parts of the trees removed?		
15.	Are weather and seasonal changes to the soil and trees understood, and how this could impact the exposure?		
16.	Does any tree pose an exposure from lightning strike?		
17.	Are any trees close to or growing through overhead services or utility lines?		
18.	Do any tree root networks cause an exposure to underground services? Are the locations and layouts of underground services known and recorded in drawings?		
19.	Do site emergency response plans cover strong winds or winter conditions (e.g. snow, freezing rain, etc.) and the impact on trees?		
20.	Additional comments:		

