Surf COAST SHIRE

Tree Risk Management Plan 2017-21

DRAFT

TABLE OF CONTENTS

1. Introduction

1.1. Background

The Surf Coast Shire municipality covers an area of 1,556 square kilometres with a seasonally variable resident population of around 30,445. In addition, it was recorded in the 2015/2016 financial year that Surf Coast Shire had 2.16 million visitors to the municipality including day trippers, overnight visitors and international visitors.

Surf Coast Shire is renowned for the rich diversity and maturity of trees found within its streetscapes, parkland, bushland areas, coastal areas and private gardens.

Council manages vast numbers of trees over a large area and within many varied landscape contexts. All trees may pose some level of risk to nearby people, structures and assets. Typically, this risk is minimal and is far outweighed by the environmental, social and economic benefits of the tree.

The sheer quantity of trees across the municipality prohibits an individual tree assessment approach. The time involved to inspect and then program works would be extensive and prohibitively expensive for Council.

As such, Council has developed a Tree Risk Management Plan to:
- Establish a management system for the inspection and treatment of trees; and
- Set inspections intervals and response times for dealing with any issue relating to trees

Council is not responsible for all trees in the municipality and for the purpose of this Tree Risk Management Plan, "trees" means "Council managed trees on land which is managed and maintained by Council".

Successful tree management:
- Demonstrates an understanding of the dynamic nature of trees
- Understands the aesthetic and safety requirements of trees.
- Appreciates there is a differing public attitude and perception to the environment.
- Commits to engaging and working with the community.

1.2. Purpose of Tree Risk Management Plan

The purpose of the Tree Risk Management Plan is to set out a system for Council to inspect, identify and evaluate structural defects and stability in trees, and then program and undertake maintenance works for those trees.

Local Government Authorities (LGA) have responsibility for maintaining the safety of large tree populations, and also to address the community's perceptions of the risk posed by

trees. To optimise the use of resources for tree risk mitigation and attend to public fears a tree risk management plan is required *(Pokorny 2003, Tree Management Office 2013).*

All avenues and stands of trees have a finite lifespan and at some point in time trees need to be removed and replaced.

A broader, systematic and proactive approach to tree assessment is recommended that prioritises works on hazard trees based on the establishment of tree risk. A tree risk management program provides a systematic process for scheduling and inspecting trees, enables the prioritisation of works based on perceived risk, and allows judicial use of community resources.

The Tree Risk Management Plan is an action to address *Surf Coast Shire Enterprise Risk – Damage caused by the failure of trees to assets or people*, as well as addressing the recommendations from the coroner's office regarding local governments responsibility in the management of trees from their finding into death inquest (Court Reference 2013/6032) from the fatality caused by a large tree limb as well as the response from the Municipal Association of Victoria (MAV) in regards to the coroner's recommendations.

Maintenance of council managed trees is undertaken in line with Council's service level agreements and relevant Australian Standards.

The Tree Risk Management Plan:
- Sets timeframes for inspection of trees in order to identify or assess hazards or defects (refer to Tables 5 and 6).
- Identifies which hazards or defects will require remedial works.
- The circumstances in which intervention action is to be taken with respect to removal of hazards or repair defects (refer to Table 6); and
- Sets timeframes for intervention action to be undertaken (refer to Tables 5 and 6).

Compliance with the Tree Risk Management Plan will contribute to Council's evidence of duty of care for the community.

1.3. Guiding Principles
Public safety will be maintained through the use of generally accepted professional practices of tree evaluation and treatment in order to reduce risk associated with hazardous trees to an acceptable level.

Council will:
- Utilise a program of systematic tree assessment and best practice tree management to mitigate tree risk for nearby people, structures and assets.

- Maintain accurate and current documentation on the management of Council's tree assets.
- Maintain high standards of tree management to current best practice and recognised standards.
- Provide adequate resources to ensure proper tree management to mitigate risk potential.

1.4. An achievable plan

It is important to both the general public and ratepayers that the Tree Risk Management Plan is achievable. The development of the Tree Risk Management Plan has considered information available to Council regarding its financial and non-financial resources, historical performance and has been developed though discussion with the people that deliver the day-to-day services for Council to ensure that targets and timeframes are achievable.

1.5. A readable plan

The Tree Risk Management Plan helps the community to understand how Council will manage tree risk. It is structured and written using simple language where possible. The Tree Risk Management Plan presents information in tables where practical and incorporates a number of photos and diagrams to explain some of the more technical terms.

2. Roles of the Tree Management Authority

2.1 Council

Council is the Responsible Authority for all trees on land managed and maintained by Council.

2.2 VicRoads

VicRoads is the Coordinating Road Authority for all State Roads.

Council is responsible for managing trees within the declared townships boundary road reserves where VicRoads is the Coordinating Road Authority.

2.3 Other Stakeholders

Other stakeholder groups who may be responsible for or impacted by trees include:
- The general public including users of open space, facilities and road reserves.
- Residents and businesses adjoining land managed and maintained by Council.
- State and Federal Governments and agencies (e.g. Department of Environment, Land, Water and Planning - DELWP) which provide consent, guidance and support in the management of the trees.
- Section 86 Committees of Management

In the absence of any specific arrangements or agreements, DELWP, VicRoads, Parks Victoria, Great Ocean Road Coast Committee (GORCC) and other agencies have management responsibilities of trees on their land.

3. Scope of the Tree Risk Management Plan

3.1 What does the Tree Risk Management Plan address?
Tree risk management within the Surf Coast Shire encompasses a broad range of tree related issues. The Tree Risk Management Plan provides an overview for the management of trees on Council managed land.

This document is intended for use by staff dealing with issues relating to trees on Council managed land and as a document that can be referred to by the community.

This Tree Risk Management Plan will provide guidance to staff inspecting trees when looking for hazards and defects including:
(i)   Canopy failure
(ii)   Trunk failure
(iii)   Root plate failure

3.2 What does the Tree Risk Management Plan not address?
Things out of scope of the Tree Risk Management Plan include:
- Tree planting
- Tree selection, planting and establishment overview
- Community consultation
- Tree pruning
- Tree support systems
- Protection of trees during construction
- Tree root management
- Management of Pests, Disease, Animal and Weed Species
- Assigning a monetary tree value
- Tree removals
- Street trees and new vehicular crossovers
- Trees on private roads and private property
- Trees on Crown Land not managed by Council

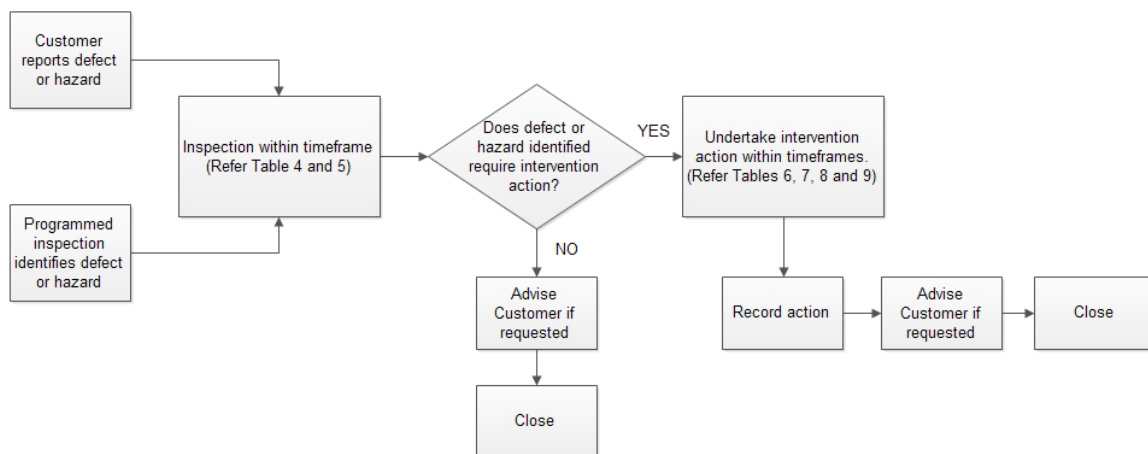## 4. Implementation of the Tree Risk Management Plan

4.1 Systems, processes and skills required to implement the Tree Risk Management Plan

Council recognises that establishing targets in the Tree Risk Management Plan does not ensure their achievement. As part of the development of this Tree Risk Management Plan, Council's tree management processes have been reviewed. The systems that support these processes have been aligned to the targets set in the plan and Council staff have been engaged to assure that there is both an understanding and appreciation of the role and importance of the Tree Risk Management Plan in Council's day-to-day operations.

Council's commitment to implementation of the Tree Risk Management Plan includes:

- Systems and processes that align to the timeframes established in this Tree Risk Management Plan;
- Relevant officers will be trained to ensure understanding of the existence, intent and delivery of the Tree Risk Management Plan and that annual refresher training will be delivered to staff;
- Opportunities to improve the standards, understanding and implementation of the Tree Risk Management Plan, particularly noting opportunities emerging through new technology and Digital Transformation.

Figure 1 – Process for actioning identified hazards and defects

4.2 Reviews of the Tree Risk Management Plan

The Tree Risk Management Plan will be reviewed every five years.

Council may also choose to review its Tree Risk Management Plan if:

- there is new legislation in managing tree risk;
- there is an issue identified with the Tree Risk Management Plan;

- there is an issue identified with Council's performance against the plan; or
- Council's capacity to meet its obligations under the plan change substantively.

4.3 Suspension of the Tree Risk Management Plan

Although Council will make every endeavour to meet all aspects of the Tree Risk Management Plan, Council reserves the right to suspend compliance during extreme events. Pursuant to Section 83 of the Victorian Wrongs Act (1958), Council's obligations may be suspended in the event of:

- Natural disasters – including extreme wind/storm events, floods, fires, droughts, etc.
- Human factors – such as unavailability of Council staff or qualified Contractors.
- Any other major event beyond the control of Council.

In such circumstances, the General Manager Culture and Community may deem that the requirements of Council's Tree Risk Management Plan cannot be satisfied and will seek the Chief Executive Officer's approval to suspend all, or part of this Tree Risk Management Plan. The General Manager Culture and Community will advise the Chief Executive Officer which activities and response times in the Tree Risk Management Plan cannot be achieved.

If the Tree Risk Management Plan is suspended, the Chief Executive Officer will:

- Ensure that there is a record of when the Tree Risk Management Plan is suspended and the circumstances that led to the suspension;
- Determine whether interim timeframes and responses will apply;
- Determine which parts of the Tree Risk Management Plan are to be reactivated and when; and
- Ensure that there is a record of when the Tree Risk Management Plan is reactivated.

In the event that the Chief Executive Officer suspends all or part of the Tree Risk Management Plan, Council will issue a public notice to advise residents about the suspension or reduction of services under the Tree Risk Management Plan.

4.4 Extreme or Code Red Days

Council's priority on any day declared as Extreme or Code Red by the Country Fire Authority is for the safety of its employees, Councillors, contractors and volunteers. On these days, Council's Code Red and Extreme Fire Danger Policy will apply and have precedence over any aspect of the Road Management Plan.

Council Services in all areas, except the Civic Offices, will not be provided on days declared as Code Red.

Council Services in Highest Risk Areas during Highest Risk Times will not be provided on days declared as Extreme in the Surf Coast Shire.

Council Services based in all other areas on days declared as an Extreme will be provided unless:

- Staff required to provide these services have to travel through Highest Risk Areas at Highest Risk Times; or
- Emergency Services advise it is unsafe to provide Council services.

5. Tree risk management procedure

The first step in a risk management program for public trees within Surf Coast Shire is:

- to understand what the assets include and where the risks lie;
- to inspect the trees within the assets and perform maintenance to address the risk issues within a reasonable timeframe; and
- to maintain a record of the inspections and the subsequent maintenance.

While it is not possible to avoid all risks associated with trees, it is possible to implement scheduled asset tree inspections in order to have a proactive tree management system that identifies and mitigates future incidents rather than a reactive system that attends to incidents as they occur.

Council uses a systematic process for the allocation of resources for the assessment and management of trees on Council managed land. It is cost prohibitive to continually assess and monitor all the trees. Rather, Council uses a system that prioritises tree assessments and maintenance works based on levels of risk. Based on these defined levels of risk a scheduled program of inspections is recommended, so that, given time, all sites within the municipality will have been inspected at varying levels of detail.

The scheduling of inspections does not negate the customer request system available to residents and other stakeholders for requesting work on trees. The works produced from tree requests, once inspected, can be prioritised according to the level of risk.

Council managed facilities and properties that contain trees are allocated into risk zones. The zones, categorised as Very High Risk, High Risk, Moderate Risk, Low Risk and Very Low Risk, designate how these areas are to be treated with regard to the type and timing of scheduled tree inspections. The zones are based on the tree resource and the occupancy of the area surrounding the trees.

The risk zone determines the timing of scheduled tree inspections of Council assets; see Table 1

Ground based inspection of trees will determine if there are any trees that are hazardous and therefore, require maintenance works or a more detailed inspection. This inspection would be recorded in Council's Asset Management System.

This inspection will record and detail relevant information as to the location, species, size, health and structure of trees requiring maintenance works. This process involves a consistent, repeatable inspection process to identify and evaluate hazards within the trees. This assessment is also used for inspections performed through the works request system and for planning application requests. The tree inspection reports will also determine the priority for works required from the inspection.

The inspection does not record data in Council's Asset Management System of individual trees that are inspected but <u>do not</u> require any maintenance works.

Utilising this process, open space, facilities and road reserves assets containing trees will be inspected based on a scheduled basis. The inspections will generate maintenance works that will be prioritised. Priority for completing the works could vary within a site based on Risk Zone and Target Potential (if a tree fails what is the likelihood of the tree impacting people or property). For example, trees requiring work near facilities would be completed before those in open space or low use areas.

Implementation of scheduled asset tree inspections, with follow-up maintenance if required, shifts the activities of managing the tree resource from reacting to incidents as they occur, to proactive management to mitigate future incidents.

6. Risk Zones and categories

To assist Council with the prioritising of scheduled inspections, all Council assets with trees that require inspection are allocated into tree risk zones.

Determining the level of risk for each asset and therefore the corresponding zone is based on:
- Public use and occupancy patterns within public areas, which could be considered to be low, moderate or high.
- Tree resource characteristics, including tree condition, such as species characteristics or age, and location factors. For example, the position of trees in relation to areas used by the public.

Table 1 below presents the risk classification of assets within the Surf Coast Shire.

Table 1: Tree risk zone categories (Adapted from Pokorny 2003).

Risk Zone	Park/Facility/Road Hierarchy	Category
Very High Risk	Facilities	Council buildings or facilities including car parks, kindergartens, sporting clubrooms, community buildings and gardens, depots and transfer stations.
High Risk	P1	High Profile Streetscapes – Areas which require a high level of maintenance and input with regard to labour, equipment, materials and other resources. The standard of presentation and aesthetics is high. Included are important recreational areas and active sporting grounds.
	Lorne Urban Road Reserves	All council managed road reserves within the urban township boundary in Lorne. This is based on topography, tree species and site conditions.
Moderate Risk	P2	District Parks – Areas which require a lower level of input when compared to the higher level. Recreational areas which are of less significance and importance and that need to be maintained to a medium level of service.
	Urban Road Reserves	All council managed road reserves within Surf Coast Shire urban townships excluding Lorne.
Low Risk	P3	These areas often have significant Low Use Open Space Areas which require grass control or other works on a seasonal basis mainly for the control of fire hazards. These areas often have significant conservation values which need to be recognised and protected.
Very Low Risk	Rural Road Reserves	All council managed rural road reserves within Surf Coast Shire

6.1 Open Space and Facilities

High-use parks will be inspected on a more regular basis than moderate to low use parks. There will also be areas within particular open space (parks / reserves / sports grounds) that will present a higher risk due to tree type, condition and location. For example, trees around a playground, toilet block or car park, may present higher risk than trees on the periphery of the space, adjacent to semi-natural areas where occupancy rates are lower and targets are low.

Facilities that attract high public use and are within the fall-zone of an adjacent tree will be routinely inspected on an annual basis, e.g. playgrounds, pavilions and picnic facilities.

The general open space areas in high-use parks will be routinely inspected on a three-year cycle. All areas within a site will be inspected at that time. Assessment of the trees and the level of work required will be based on the targets near the tree and the level of risk. A quantified assessment to establish tree risk can be used to determine risk thresholds.

6.2 Road Reserves

Urban road reserves will be inspected on a five year basis with the exception of the Lorne Township's urban road reserves due to the tree species, topography, site conditions and historical evidence; these are considered high risk and will be inspected on a three year basis.

Trees on rural road reserves will not be routinely inspected as they are considered a very low risk. This is due to the relatively smaller volume of vehicles using rural roads and their relatively high speed of travel when compared to urban roads.

For inspection and clearance guidelines for trees and vegetation within Council's Road Reserves and at intersections, refer to Appendix C and D Surf Coast Shire Council's Road Management Plan.

7. Tree Risk Assessment methods

Tree risk assessments (inspections) within the municipality will be undertaken by qualified and experienced arborists that can demonstrate good judgement based upon sound arboricultural knowledge utilising Tree Risk Assessment Qualification (TRAQ) assessment tool or similar.

Tree risk assessment methods generally consider three components of tree failure: risk-target value, probability of failure, and impact potential. All tree details and risk assessment information is to be documented.

The underlying principles of the tree assessment are reiterated in the Visual Tree Assessment (VTA) method developed by Mattheck and Breloer (1997).

The VTA is a method of evaluating structural defects and stability in trees. The first stage is the visual inspection of the tree for defect symptoms and vitality. If problems are suspected on the basis of symptoms a thorough examination is carried out. If a defect is confirmed it could be measured or further diagnostic work undertaken. For example, testing the strength of the defective tree part, root plate investigation, or pathogen identification.

7.1 Drive-by / Windshield assessment method

The assessment of roads can initially use a drive-by / windshield inspection method. One person drives a vehicle slowly along the road while another person inspects and records the trees. Drive-by inspections could use two passes along the road. The first pass is to get a feel for the tree condition/value and the second to evaluate and record the trees that require

work. Windshield surveys are most efficient when the arborist is looking for one or two particular tree characteristics.

The assessment aims to identify visual indicators of faults or road clearance issues, which suggest a tree requires further inspection. The method is limited in that it can only assess defects that are visible from the road, as only that side of the tree will be visible. Furthermore, even on the visible side, small defects, such as narrow cracks or girdling roots, may not be apparent. Rooney et al. (2005) compared the reliability of windshield inspections to walk through inspections. They found that the reliability of identifying highly hazardous trees with the windshield method was as high as 89%, but the inclusion of less hazardous defects decreased the reliability to as low as 58%. In short, the method is better in picking major, more visible hazards than minor hazards.

Given the resource limitations of some communities, drive-by / windshield inspections can provide a cost-effective approach to assess large areas or long sections of roadside vegetation. This method may also be useful after storms, where damage to trees or fallen branches may be visible from the road.

The main factor in deciding when and where to use the windshield survey is efficiency. Some limitations of the survey method are outlined below:
- The windshield survey works better in low-traffic areas than in high-traffic areas as the drivers and assessors are concerned about the traffic. In high-traffic areas, walking or using other means, such as a bicycle to move from tree to tree, would be advisable.
- Poor weather conditions can limit visibility and delay assessment schedules.
- If the trees are not well maintained the method may not be suitable due to the volume of work it generates or that some tree defects may be missed, a thorough street tree inventory may be the best choice. If the trees are reasonably maintained, the windshield survey could be used just to locate quickly developing hazardous conditions such as hanging branches or recent storm damage.

The drive-by / windshield inspection method can also be used for the regular update of streetscape conditions for the development of planting programs.

7.2 Ground inspection assessment method

Ground inspections of trees can be used for scheduled tree inspections of Council managed properties and parks. The method can also be used to undertake more detailed inspections of street trees. The process consists of a walk through inspection of trees located in a site. In remote sites in may only be necessary to inspect trees within striking distance of a target.

The inspection is based on overt, visual indicators of faults that suggest a tree requires further inspection. Trees should be inspected from all sides for indicators of tree defects, not limited to *(adapted from Pokorny 2003):*

Other considerations are altered growing conditions. For example, excavation or increased exposure. This method may not detect all problems with all trees, yet it should identify the majority of major faults or those most likely to cause harm.

7.3 Additional inspections

If required, the initial tree inspection can lead to additional assessments. For example:

- A quantified risk assessment, which involves recording of the target value and occupancy rates to determine a probability of harm;
- An aerial inspection of the tree crown;
- Root plate investigation;
- Diagnostic works, e.g. pathogen identification, decay detection.

7.4 Quantified risk assessments

It may occasionally be necessary to further define the level of risk using a numerical or quantified tree assessment method. This component can help identify acceptable risk levels and priority for action.

These detailed risk assessments estimate the degree of risk associated with a given tree to fail and potentially injure persons or damage property. There are many evaluation systems that rate the risk of damage or injury posed by a defective tree or tree part Paine (1971), Helliwell (1990, 1991), and Matheny and Clark (1994), Forbes-Laird (2007) and Ellison) 2005). Some systems define a numerical risk value while others are categorical, e.g. low to very high.

As far as hazards are concerned, the need is to be able to quantify them and any associated risk, so that the risk can be kept within acceptable or reasonable limits, without implementation of disproportionate risk control measures, e.g. unnecessary tree removal. The use of quantification in the assessment of tree hazards will enable tree managers to operate, as far as is reasonably practicable, to a predetermined limit of reasonable or acceptable risk.

Once a threshold has been reached, according to a particular risk assessment method, action can be instigated to mitigate the risk or the quantified level of tree risk can be presented to appropriate Council Officers for a decision on the management of the tree.

8. Programmed and Emergency Works

8.1 Programmed works

Tree maintenance works identified through the tree risk management process will be recorded and scheduled for works. Completed works will be documented and recorded with the tree inspection details.

8.2 Emergency work - Immediate hazard

Emergency work is defined as *tree removal required due to the immediate risk of damage to property or personal safety as deemed by a suitably qualified person*. A tree must only be removed as emergency work if it is considered to be hazardous or structurally unsound and is likely to fail in the immediate future and there is a potential target.

A record of trees removed under the emergency work provisions will be maintained to ensure replanting occurs, where replacement is appropriate.

9. Quality Management

9.1 Documentation systems

The key to the success of tree risk management program is accurate and current documentation. Accurate recording of all aspects of Council's tree assets provides management with clear information on the resource being managed and enables the tracking of issues related to specific trees.

Council will develop and implement recording systems either in line with current systems (e.g. the Asset Management System), or independently to document and record information related to the tree asset. The system should address the following requirements:

- A clear documented procedure for inspection of assets and trees detailing relevant information as to the location, species, size, health and structure of public trees within the Shire.
- A documented system of logging customer requests or notification of problems.
- A documented system for assessing and prioritising the risk posed by identified trees.
- A documented system for addressing the risks posed through appropriate maintenance procedures for abating risks identified consistent with the general financial constraints upon the authority having regard to its general responsibilities.

Adapted from Gardner (2005)

9.2 Method of review

In line with AS/NZS 4360:2004 (Risk Management) ongoing review is essential to ensure that tree risk management remains relevant. Factors that affect the likelihood of inspection activities may change. For example, severe drought may cause rapid tree decline prompting the need for more frequent inspections. Similarly, knowledge gained through experience and

implementation of tree management could provide beneficial insights and allow refinement of tree risk management.

Monitoring and review also involves learning lessons from the risk management process, by reviewing events, the treatment plans, and their outcomes. The tree risk management program will be reviewed every five years. The process will include reassessment of Council's asset classification into risk zones, and evaluation of the tree inspection and assessment methods and recording processes.

10. Park Hierarchy Classification

Council has developed a hierarchy for parks (all parcels of open space) through the Land Management System. The Land Management System identifies the level of service provided to a park and this will depend in part on its park hierarchy classification.

Table 2: Facility, Park and Road Reserve Hierarchy Classification (Refer to Open Space Register for classification)

Hierarchy	Description
Facilities	Council buildings or facilities including car parks, kindergartens, sporting clubrooms, community buildings and gardens, depots and transfer stations.
P1	High Profile Streetscapes – Areas which require a high level of maintenance and input with regard to labour, equipment, materials and other resources. The standard of presentation and aesthetics is high. Included are important recreational areas and active sporting grounds.
P2	District Parks – Areas which require a lower level of input when compared to the higher level. Recreational areas which are of less significance and importance and that need to be maintained to a medium level of service.
P3	These areas often have significant Low Use Open Space Areas which require grass control or other works on a seasonal basis mainly for the control of fire hazards. These areas often have significant conservation values which need to be recognised and protected.
Road reserves	Trees identified with a medium or high hazard rating in urban road reserves.

11. SETTING SERVICE LEVELS

11.1   Principles and Risk Management Philosophy

A key principle of the Tree Risk Management Plan is the minimsation of tree safety hazards. In the application of this principle, Council has taken a risk management approach to the development of timeframes and intervention levels that apply to the inspection and remedial works of hazards and defects to trees.

The hazards and defects, intervention levels and timeframes documented in this Tree Risk Management Plan have considered:

- The anticipated pedestrian volumes of different classification of Open Space;
- The likelihood that a particular type or extent of defect or hazard may contribute to an incident resulting in harm to persons or damage to property; and
- The potential harm that might be experienced in the event of an incident.

The above considerations are balanced with the cost to the community of tree management.

The above principles and considerations are reflected in the nominated timeframes and intervention levels outlined in Tables 4 and 5.

11.2   Community considerations

Council sets levels of service for its open space in accordance with the needs of the community. To do this Council uses various techniques to identify those needs, then considers those needs within the overall context of its tree risk management resources. Techniques to identify the community needs include:

- Community Satisfaction Measurement Survey;
- Council's Customer Service Request system data.

11.3   Financial and non-financial considerations

To evaluate its resources, Council's considerations include:

- Level of service (Parks and Open Space Service Level Agreement).
- Annual budget for both recurrent and capital works expenditure.

11.4   Inspection and required action commitments

Council undertakes regular inspections of trees as part of the Tree Risk Management Plan. The table below outlines the definition and purpose of each inspection type.

Table 3: Inspection types

Inspection Type	Definition and Purpose
Reactive inspection	• Inspections undertaken in response to notification to council by members of the community. • These inspections allow Council to program required works. • Inspection undertaken specifically to identify deficiencies in the structural integrity of the various components of tree, which if untreated, are likely to adversely affect the level of risk to public safety.
Programmed Inspection	• Inspection undertaken in accordance with a programmed inspection schedule. • These inspections determine if the tree complies with the levels of service as specified in the Service Level Agreement. • Inspection undertaken specifically to identify deficiencies in the structural integrity of the various components of the tree, which if untreated, are likely to adversely affect the level of risk to public safety.
Incident Inspection	This inspection enables an incident condition report to be prepared for use in legal proceedings and the gathering of information for the analysis of the causes of the incident and the planning and implementation of the tree management and safety measures.
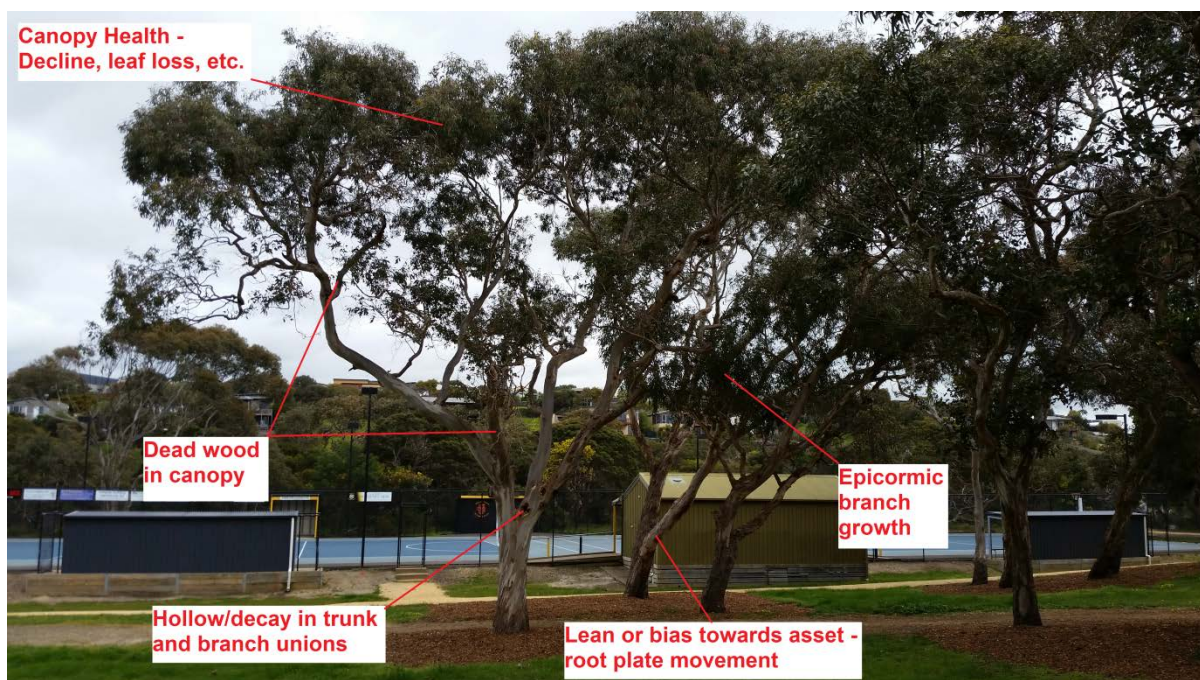
12. INSPECTION FREQUENCY

An inspection regime has been established for all Trees as part of the Tree Risk Management Plan. The frequency of the inspections is greater for high risk trees that fall within high risk areas (higher classification and usage).

The frequency of the inspections is greater for trees of higher classification and usage. The schedule set out in the table below and identifies the frequency that inspections must take place.

For the purpose of the following tables, Council defines "days" as usual business days, excluding weekends, public holidays, and common rostered days off.

The schedule set out in the table below identifies the frequency that inspections must take place.

Table 4: Inspection regime / schedule for trees

| Inspection type | Hazard | Inspection program and/or response time | | | | |
		Facilities	P1	P2	P3	Road reserve
Reactive	Canopy failure *(Broken, hanging branch)* Trunk failure Root plate failure	Respond by inspecting within four **hours** and implement temporary repairs or signage as required.	Respond by inspecting within four **hours** and implement temporary repairs or signage as required.	Respond by inspecting within four **hours** and implement temporary repairs or signage as required.	Respond by inspecting within four **hours** and implement temporary repairs or signage as required.	Respond by inspecting within four **hours** and implement temporary repairs or signage as required.
Reactive	Other defects as listed on Table 6	Respond by inspecting within five **days** and implement temporary measures as required.	Respond by inspecting within five **days** and implement temporary measures as required.	Respond by inspecting within five **days** and implement temporary measures as required.	Respond by inspecting within five **days** and implement temporary measures as required.	Respond by inspecting within five **days** and implement temporary measures as required.
Programmed	Refer to Council's Service Level Agreement.	Based on the maintenance program, but at least every twelve months.	Based on the maintenance program, but at least every three years.	Based on the maintenance program, but at least every five years.	Based on the maintenance program, but at least every ten years.	Based on the maintenance program, but at least every three years in Lorne and five years for all other urban road reserves.

13. INSPECTION, INTERVENTION AND REPAIR TIMELINE

Council carries out hazard removal works on its trees. These works are programmed after the identified defects have been received via:
- Regular inspections as described above.
- Community and other requests for works. These are inspected prior to programming.

Table 5: Action timelines

Hazard	Intervention	Facilities	P1	P2	P3	Road reserve
Tree failure *(canopy, trunk or root)*	Remove hazard	within 5 days	within 5 days	within 20 days	within 60 days	within 5 days
Fallen tree or limb	Remove hazard	within 5 days	within 5 days	within 60 days	within 120 days	within 5 days
Illegal structures	Remove structure hazard	within 5 days	within 5 days	within 5 days	within 5 days	within 5 days

APPENDIX A – EXAMPLES OF HAZARDS AND DEFECTS

13.1   Types of defects

Table 6 – Types of defects

Defect	Description
Dead tree	A dead tree or branches.
Decline	Reduced vigour, crown thinning or dieback.
Decay	Wood that has rotten or is missing from trunk or major structural branches, includes cavities, holes, open cracks, bulges or fungal fruiting bodies.
Crack	A split through the bark into the wood where the wood has separated, in the trunk or major branches.
Root problems	Inadequate anchorage of the roots. Includes dead, severed, decayed, or girdling roots, trunk lean, or evidence of soil root movement, soil movement or soil lifting.
Canker	An area where the bark or cambium are dead on trunk or branches
Weak branch union	An epicormic branch attachment or branch union with included bark includes co-dominant stems or unions of large branches. Pronounced collar formation.
Poor architecture	Growth patterns indicate structural imbalance or weakness in the branch, stem or tree.

Photo reference	1	Photo reference	2
Hazard	Trunk failure	Hazard	Root plate failure

Photo reference	3	Photo reference	4
Hazard	Limb failure	Hazard	Tree failure

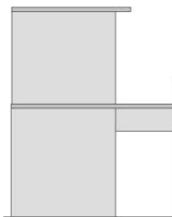| Photo reference	5	Photo reference	6
Hazard	Fallen limb	Hazard	Tree Decay

APPENDIX B – SAMPLES OF HEIRARCHY

Facility: (Lorne Kindergarten)

Facility - Council buildings or facilities including car parks, kindergartens, sporting clubrooms, community buildings and gardens, depots and transfer stations.

P1: Anglesea Shopping Precinct

P1 - High Profile Streetscapes – Areas which require a high level of maintenance and input with regard to labour, equipment, materials and other resources. The standard of presentation and aesthetics is high. Included are important recreational areas and active sporting grounds.

P2 – Saranbande Reserve

P2 - District Parks – Areas which require a lower level of input when compared to the higher level. Recreational areas which are of less significance and importance and that need to be maintained to a medium level of service.
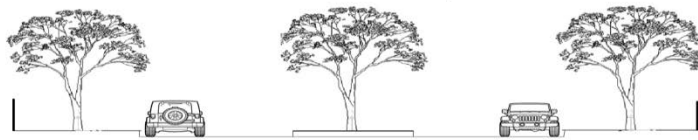

P3: E.F. Guye Reserve Winchelsea

P3 - These areas often have significant Low Use Open Space Areas which require grass control or other works on a seasonal basis mainly for the control of fire hazards. These areas often have significant conservation values which need to be recognised and protected.
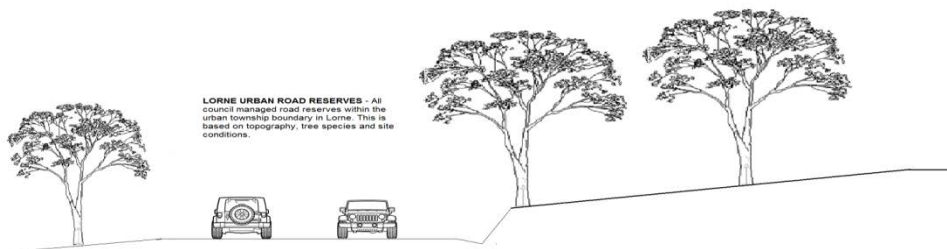
URBAN ROAD RESERVE : Surf Coast Hwy/Geelong Rd Torquay

Urban Road Reserve - All council managed road reserves within Surf Coast Shire urban townships excluding Lorne

LORNE URBAN ROAD RESERVE: (Mountjoy Parade)

LORNE URBAN ROAD RESERVES - All council managed road reserves within the urban township boundary in Lorne. This is based on topography, tree species and site conditions.