Tree Risk
Management Strategy 2017

TORBAY
COUNCIL

Executive Summary

The Council owns many trees and recognises and values the benefit that they bring to the District. Trees do pose a risk to safety but generally the risk they pose is very low and this risk needs to be considered in balance with the benefits that they provide.

The Council will undertake routine inspection of their trees in a cost effective way to ensure that the limited tree budget is spent as effectively as possible. Trees that are in the busiest locations (e.g. those next to roads, buildings, busy paths) and posing the highest risk will be inspected more regularly than those in less used places. All trees will be assessed over a 5 year period according to their priority in relation to public safety.

This approach accords with the current national guidance published in:

- Common Sense Risk Management of Trees – The National Tree Safety Group (NTSG).

This strategy allows a proactive management of the Councils trees and safety management will be prioritised over complaints of nuisance from the public unless there is an urgent need for the works. It is vital that the limited budget is spent according to the priority of the works and public safety is the Council's key duty.

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1. Mission Statement

Torbay Council recognises the environmental, social and economic benefits that trees offer and the need for their respectful and responsible management across the Borough.

Torbay Council will seek to preserve and improve its existing tree stock which offer these significant environmental, social and economic benefits to the residents of Torbay, whilst paying due regard to issues of safety and nuisance.

2. Introduction

Torbay Council owns and manages many thousands of trees growing in parks, open spaces and adjacent to public highways. These trees have the potential to offer multiple services and environmental benefits to society. This was highlighted in a survey commissioned by the Council in 2011 with the resulting report[1] highlighting some key benefits trees offer in urban areas:

- Shade and evaporative cooling.
- Interception and capture of airborne pollutants.
- Interception and storage of rainwater.
- Storage of atmospheric carbon.
- Noise abatement.
- Wildlife habitat.
- Improvement of human health and well being.

However, even with the benefits highlighted above, certain trees do still pose a risk to persons and property and the owners and managers of trees have a duty to manage this risk at an acceptable level. This document will seek to balance the risk trees pose against the many benefits they offer.

This Tree Risk Management Strategy has been created within Natural Environment Services. It was created to enable a proactive, reasonable and balanced methodology of inspecting and managing the risk from Torbay's trees.

3. Risks from Tree Failure

The overall risk from falling trees is extremely low. Research by the Centre for Decision Analysis and Risk Management (DARM) on behalf of the National Tree Safety Group (NTSG) has addressed this point. It demonstrates that the risk to the public represents about a one in 10 million chance of an individual being killed by a falling tree (or part of a tree) in any given year[2].

It is important to remember that the risk from trees can never be completely removed. To do so would create an unacceptable loss of the many benefits that trees provide. There is a need to manage the risk from trees and this can be done by implementing a proactive inspection regime which records details of trees, their condition and any safety issues.

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[1] Torbay's Urban Forest: Assessing Urban Forest Effects and Values, 2011
[2] Common sense risk management of trees: Guidance on trees & public safety in the UK for owners, managers and advisors, 2011.

4. The Legal Position

The Council owes a duty of care to all people who might be injured by a tree in their ownership. The duty is to take reasonable care to avoid acts and omissions that cause a reasonably foreseeable risk of injury to persons or property.

The document has also taken into account the current legal position (both statute law and common law) and how these relate to the Duty of Care placed on landowners.

5. National Guidance

This Tree Risk Management Strategy is informed by the guidance produced by the National Tree Safety Group (NTSG) Common sense risk management of trees: Guidance on trees and public safety in the UK for owners, managers and advisors.

The NTSG position is underpinned by a set of five key principles:
- Trees provide a wide variety of benefits.
- Trees are living organisms that naturally lose branches or fall.
- The overall risk to human safety is extremely low.
- Tree owners have a legal duty of care.
- Tree owners should take a balanced and proportionate approach to tree safety and management.

The HSE sector information minute 'Managing the risk from falling trees'[3] requires that a reasonably practicable approach be taken which is proportionate to the risk. It also highlights that the inspection of individual trees can be disproportionate to the risk they pose.

The key details and guidance from these documents underpins this Tree Risk Management Strategy.

6. Scope of the Strategy

This Tree Risk Management Strategy covers how the risk from trees will be managed and covers the following key detail:

- Site zoning
- Frequency of inspections
- Level of inspections
- Level of competence required
- Timescales for carrying out essential remedial works
- Personnel
- Record keeping

This Tree Risk Management Strategy does not address the policy by which the management of trees occurs such as how trees will be managed in relation to issues such as light, shade, leaves, fruit, honeydew (*which is caused by aphids*), television reception (*terrestrial, digital, satellite, etc*) or perception of 'oppression'. Works to trees posing an unacceptable risk will be prioritised above those causing a nuisance to residents. The implementation of the risk

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[3] Management of the risk from falling trees or branches SIM 01/2007/05

strategy will ensure that limited funds are spent on a basis of priority and in a proactive way to ensure efficient use of the tree budget.

This document is one of seven which detail Torbay Council's approach on tree management in the short and long term. These documents are:

- A Tree and Woodland Framework for Torbay.
- Trees: Frequently asked questions (FAQ's).
- Pollarding policy.
- Tree-Membrance scheme.
- Tree Preservation Orders: Amenity Evaluation for Tree Preservation Orders.
- Cyclical management schedule 2012-2023.

All of these documents detail a proactive approach to tree management and this Tree Risk Management Strategy will sit alongside them.

7. Performance Indicators

This strategy will contain key performance indicators which provide a clear and defendable methodology for managing the risk from Torbay Council trees. The Council will ensure the following rules of operation are not breached:

- Inspect all high risk or priority trees within their designated time frame.
- Tree inspections are carried out by appropriately qualified personnel.
- Keep comprehensive records of inspections on all trees and identifying any which have significant defects.
- Follow up on all informal observations within the appropriate timescales.
- A tree failure log will be completed for each failure and recorded centrally.
- Specify works in accordance with current best practice as recommended in British Standard 3998: 2010- Tree work - Recommendations.
- Internally review operational parameters on an annual basis.
- Undertake an initial review of the risk strategy within 3-6 months of implementation (with ongoing monitoring by an independent third party and a full review after 12 months. The strategy will be reviewed annually to ensure that it is being implemented properly and that it reflects working practice.

8. Managing the Risk from Trees

Torbay Council has adopted the principles of Quantified Tree Risk Assessment[4] (QTRA) for managing the risk from trees on its sites.

One of the key reasons for this is that the QTRA system does not place the condition of the tree as its first consideration. Instead it allows for tree managers to consider the usage of the land on which the tree(s) stand, which in turn will inform the process for assessing the tree(s).

This will therefore allow for a more targeted approach to managing its tree stock and the risks associated with them.

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[4] www.qtra.co.uk

The QTRA system is licensed and requires users to have attended and passed a training course while also attending regular updates (see Manual for Version 5). It is constantly being improved and updated with new data to ensure that the information used is as relevant as possible.

The QTRA system evaluates risk in terms of:

- Targets: Firstly people or property and their location in relation to the tree, thus allowing the inspector to determine the level of survey required.

- Impact potential (size): Where necessary the tree or part thereof considered most likely to fail is then considered in terms of its size and potential to cause harm.

- Probability of Failure: The assessment of the likelihood of the tree or branch failing based on technical knowledge and experience of the inspector.

Values from the assessment of these three parts is then combined to calculate the probability of significant harm occurring.

The benefit of using this system is that it moves away from the terms generally used "safe" or "unsafe", and instead quantifies the risk of significant harm from potential tree failure in a way that allows Torbay Council to balance safety with acceptable levels of risk.

9. Site Zoning

Zoning is a practice whereby Torbay Council will define areas according to levels of use[5]. This practice prioritises the most used areas, and by doing so contributes to a cost-effective approach to tree inspection, focusing resources where most needed.

The inspection regime for council-owned trees is informed by a desktop exercise which will identify zone categories. Torbay Council will use three zone categories which will be high, medium and low.

The designation of zone categories is a matter of informed judgement and periodic review. It is the responsibility of the Council to ensure that the zones are periodically reviewed and realistically assessed with decisions documented.

The criteria to define Torbay Council zones, shown in table 1 below, are as follows:

- Highway characteristics are prioritised according to traffic volume, speed and emergency accessibility.

- Public areas and buildings are prioritised according to occupancy. Top priority will be areas around schools, shopping precincts, emergency and medical facilities where large diameter tree species are present.

- Tree population characteristics are primarily prioritised according to age and species. Discrete populations of trees that are mature to over mature or are known to be inherently prone to failure through their past management, species characteristics or as recorded through the tree failure log.

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[5] Tree size, species, age and condition will also be an important factor when focusing inspections and managing resources and determining re-inspection frequency

Table 1: Table detailing zones and their examples of usage

Usage zones	Usage criteria	Examples
High	High volumes of traffic. High likelihood of public access.	Areas close to dual carriageways, railway lines, trunk roads and busy B roads. Areas which contain large mature tree species and are close to private dwellings, schools and busy car parks. Areas next to high use footways.
Moderate	Moderate volumes of traffic. Moderate likelihood of public access.	Areas close to B roads and busy C roads. Areas close to moderate use parks, playgrounds, footpaths and picnic areas. Main footpaths within woodlands.
Low	Low volumes of traffic. Low likelihood of public access.	Areas next to high targets which contain small tree species, and/or trees in a good condition with a low probability of failure.

10. Frequency of Inspections

Table 2: Frequency of inspections including the recommended method

Route Categories	Timing of Inspections	Recommended Inspection Methods
High	Monthly	Highway observations
	18 monthly	Formal inspection Detailed
Moderate	3 monthly	Highway observations
	3 year	Formal inspection Detailed
Low	6 monthly	Highway observations

	5 year	Cyclical tree pruning team Detailed
All Zones	After reports of damage (*informal observations*).	Formal inspection Detailed
	Ward working intervals	Cyclical tree pruning team

11.   Level of Inspection and Competence Required

Torbay will incorporate four methods of inspection to manage the risk from trees-

- **Informal observations-** These are observations/concerns reported to Torbay by members of the public. Informal observations will be acted on within the agreed timescales.

  No formal training just local knowledge and familiarity with trees in their area.

- **Highways observations-** Undertaken by highways officers. These are trees which are observed as part of the Torbay Council Highway inspection regime.

  All highways staff involved with identifying defect trees will have attended the in house '*Obvious Tree Defect Identification*' seminar. They will know their limits and if there is concern about a tree outside of their experience, it will be passed on for a detailed inspection.

- **Ward working survey-** These are trees which are surveyed as part of the Torbay cyclical tree pruning regime.

  Undertaken by the Hi-Line cyclical tree cutting team.

  The team will have a basic understanding of trees and obvious defects through their experience and will have attended the in house '*Obvious Tree Defect Identification*' seminar. They will know their limits and if there is concern about a tree outside of the team's experience, it will be passed on for a detailed inspection.

- **Formal inspection-** An inspection of trees, from ground level, by the means of a 'drive by' and/or a 'walkover' survey. This could be part of the planned inspections or after reports from informal observations.

  Undertaken by tree inspector.

  Inspector will be qualified to a minimum of QCF Level 3-4, for example, Technicians Certificate, National Diploma in Arboriculture and/or hold the Professional Tree Inspectors Certificate.

- **Detailed inspection-** These will normally result from the findings of an informal observation or formal inspection. They will entail a ground level, visual tree assessment (VTA) looking at the exterior of the tree for signs of structural failure and an assessment of the overall condition of the tree. A detailed inspection could entail the following:
  a. further investigation with the use of decay detection equipment
  b. soil and root condition assessment
  c. aerial inspection of upper trunk and crown

  Undertaken by tree inspector.

  Inspector should be qualified to a minimum of QCF Level 5-6, for example, FdSc Arboriculture*,* Dip Arb (RFS) [the Professional Diploma in Arboriculture]*.*

Any inspector undertaking risk assessments on trees with defects must be licensed and competent users of the Quantified Tree Risk Assessment system or a recognised risk assessment methodology.

12.   Timescales for Carrying Out Essential Remedial Works

Works identified during inspections will be prioritised as follows within table 3 below:

Table 3: Prioritisation of recommended works

Funding	Ezytreev Work Category	Details	Target Response Time
Arboricultural Services Budget (Listed in priority order)	Emergency	Response to trees that are perceived as imminently dangerous.	Onsite within 1 hour (Or barrier off until resources available)
	Urgent Works	Response to trees that are perceived as dangerous but where work needs to be undertaken at a safe time.	Works completed within 14 days (Or barrier off until resources available)
	Planned	Works to trees which have been identified through inspections and require further planning and organisation to undertake subject to review and budget availability.	Any time up to 12 months from the day of inspection but determined by available budget – works will be prioritised.
	Nuisance	Work to abate or remove actual or potential nuisance caused by council trees (see appendix 1)	Completed within 12 months of inspection. (Budget constraints)
	Management (Budget Constraints)	Improvement works to enhance street scene or public space.	Works to be dealt with within 60 months of inspection and/or when funds become available.

External Payment (Listed in priority order)	Private Emergency	Emergency response to deal with hazardous private trees blocking or threatening the public highways or POS.	Onsite within 1 hour (Or barrier off until resources available)
	Private Planned	Agreed works to deal with hazardous trees on council leased land.	Works completed within 7 days
	Recharge	Tree work projects for council partners.	As and when required. Dependant on time scale as set by clients.
Target response times follow the Arboriculture Contact AR/R/0091			

The works identified by the inspectors will be assessed by the works manager (Hi Line) and prioritised according to risk and need. Prioritisation of works will be undertaken at least every three months.

13.   Personnel

The management of Torbay's trees falls within Natural Environment Services. The following personnel will be involved in managing the risk from trees which are the responsibility of the Council-

Hi-Line Support- Hi-Line Contractors SW Ltd is Torbay Councils approved tree specialist. As part of this service they will be undertaking all forms of inspections (formal, detailed and ward working) which are planned, ad-hoc or emergency. This service also includes logging details within the Ezytreev database (Section 14) and providing feedback where required.

Highways staff and Park rangers- Directly employed by Torbay Council and will incorporate informal observations as part of their day to day duties.

Members of the public- These are people with good local knowledge and familiarity with local trees and their surroundings through their day to day routine, where they live (*trees outside houses*) or places of work. They will form an integral part of the informal observations by reporting concerns back to the Council on an ad-hoc basis.

14.   Recording System

The identified target zones, survey dates and data (*including the risk of significant harm*), and records of remedial work carried out, will be recorded within Torbay's tree database. Torbay uses the 'EzyTreev' tree management software which is an integrated software system that simplifies and co-ordinates the complete management of the trees and collected data.

This comprehensive database allows Torbay to confidently defend claims of liability and forms a publicly transparent documentary system of tree risk management.

All reports of tree defects from informal inspections and highway/park observations will be reported to Hi-Line Support through Torbay Council. These observations will be added into the 'EzyTreev' software and allocated to the appropriate personnel for further action. Action

will be taken to investigate the defect after consideration is given to previous inspection of the tree and the usage zone.

15.   Trees in Private Ownership

Trees on private land within falling distance of a highway can also present a risk to the public. Under the Local Government (Miscellaneous Provisions) Act 1976, if a tree poses a danger not only to the public highway, but also to a neighbouring property, this may be dealt with accordingly at the discretion of the local authority pursuant to Section 23 of the Act.

No formal inspection regime will be undertaken by Torbay Council on trees within private ownership. Only trees with obvious signs of poor health that can be seen from outside the property will be noted. A clear auditable trail is kept of hazardous private trees and any actions that have been taken to reduce the risk.

16.   Review

A review of this Tree Risk Management Strategy will be undertaken by Torbay on an annual basis from the date of adoption at the executive level. This review will be undertaken by staff within Natural Environment Services lead by the Principal Officer. Informal / internal review will be undertaken every three months for the first year, to ensure compliance and to adapt to working practices on site.

An internal review of the operational parameters will be undertaken annually. Part of this review will include external assessment by an independent third party, including an assessment of the quality of the tree surgery operations and the data gathered by inspectors.

17.   Tree Failure Log

The tree failure log will be used to record all known or reported whole or part tree failure. These failures will be recorded when reported by members of the public and staff or through formal inspections.

The failure log will help inform estimation of the real risk levels and produce patterns which will provide base data about tree failure. Data can be correlated and analysed to help in future priority setting and inform management strategies.

The tree failure log will be kept centrally by Torbay Council and the collected information will be reviewed annually.

18.   History of Strategy

Strategy date	Summary of changes	Contact	Implementation date	Review date

19. Glossary of Terms

Target
A 'Target' is anything of value, which could be harmed in the event of tree failure.

Value of statistical life
The 'Value of Statistical Life' and 'Hypothetical Life' are terms used in risk management to facilitate proportionate allocation of resources to the reduction or risk in terms of lives saved. In the UK, this value is currently in the region of £1,500,000 to correlate the loss of or damage to property with the value of human life.

Basic understanding of trees and obvious defects through their experience and training
This means that the team will hold certification relating to their work of tree climbing, pruning and aerial rescue. As part of this training there is a requirement, prior to climbing a tree, to assess its condition for defects. The team will be familiar with obvious defects through their experience climbing and working on trees. They will also have had in-house training from a suitably trained person which is updated at regular intervals as part of their ongoing professional development (CPD).

Observation
No formal tree inspection qualification required but the surveyor will have attended an in house 'Obvious Tree Defect Identification' seminar.

Inspected
Formal tree inspection qualification required dependant on the form of inspection being undertaken.

Obvious Tree Defect Identification seminar
Normally run over the course of a morning (4 hours) and separated into two parts. The first session is indoors with a talk on trees, how they function and defects associated with them. Slides will be shown of obvious defects and why they can be a problem. The second session will involve a walk outside to look at trees so attendees can identify any obvious defects from specially selected trees. This will be under supervision and a chance for attendees put into practice what they have learnt from the first session. A certificate of attendance will handed out to all attendees.

Planned inspections
Inspections of Torbay trees as required within the specified timescales.

20. Measuring performance

The following local indicators have been developed to measure the performance of all the key areas of the system.

- Percentage of work required on council owned trees falling in the emergency category.(target annual reduction)

- Percentage of planned work undertaken on time.(target annual increase)

- Number of incidence recorded in the failure log each year.(target annual decrease)

- Percentage of re-inspections undertaken within the assigned re-inspection date.

- Performance targets will be further defined as data becomes available from tree inspections. These will be informed by national statistics.

21.   References

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