Tree Risk Management Plan

For Council Owned Trees

Rushmoor Borough Council

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Author	Andy Ford / Ben Abbatt
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1. Introduction

There is an increased awareness in the potential risks associated with tree failure by members of the public. This is as a result of increasing media attention on incidents of tree failure, especially those resulting in death or injury and recent court cases. With increasing attention given to personal and organisational responsibility, legal proceedings have become more commonplace and there have been a number of high profile cases brought by the Health and Safety Executive under the Health and Safety at Work Act. Whilst there is an increased level of interest, it is important to keep this in context – it is estimated that nationally on average there are around 6 deaths per year caused by trees failing; this is in comparison to around 3,285 deaths per year as the result of road traffic accidents. It is estimated that the risk per person of being injured by a tree failing is one in 20 million. The risk, per tree, of failure causing a fatality is of the order of one in 150 million for all trees and one in 10 million for those trees in or adjacent to areas of high public use.

Organisations such as Local Authorities must ensure public safety, whilst at the same time maintaining a natural and environmentally diverse landscape. It is only reasonable that organisations and landowners manage their trees so that their land is relatively safe for people to visit who can reasonably expect not to be harmed.

The following Tree Risk Management Plan has been developed by Rushmoor Borough Council with advice from Ben Abbatt MICFor, MRICS, CEnv, Dip. Arb. (RFS), BA (Hons) (Arboricultural Association Registered Consultant) by following current guidance and an industry led methodology and inspired by a presentation by Dave Dowson at the 2003 Arboricultural Conference.

2. What is a Tree Risk Management Plan?

There will always be risk associated with trees. This risk can be managed and reduced by the implementation of a proactive inspection regime to help identify potential failures and safety issues with particular trees.

A Tree Risk Management Plan (TRMP) is, in essence, a pro-active tree survey system that identifies the issues of management and records the way in which trees are assessed and managed so that a realistic response to the issue of tree risk and management is given. This is supported by the Health and Safety at Work Act (1974) and the recently issued sector information minute ‘Management of the risk from falling trees’ (www.hse.gov.uk/foi/internalops/sectors/ag_food/1_07_05.pdf) which requires that a reasonably practicable approach be taken which is proportionate to the risk.

A TRMP is a tool that can be used to provide an audit trail of actions taken in response to a potential risk, what the findings were and how these findings were acted upon. It is a systematic approach that can help to demonstrate

that a landowner has dispensed its duty with ‘reasonable care’ and takes appropriate action as necessary to protect the general public.

A TRMP will:

- address how to prioritise areas for survey,
- suggest the type (pro-active or reactive) and frequency of survey in different areas,
- provide a record keeping facility for surveys carried out and recommended actions,
- detail the competency of the inspector required
- provide a system for obtaining specialist advice where a survey reveals defects requiring a more detailed assessment or where a second opinion is required,
- establish a reporting system for damage / failure to / of trees (e.g. vehicle collision, high winds),
- discuss details of resources necessary for implementation including contract management and auditing of the system and;
- identify methods for recognising changing circumstance to amend the priority of inspection and frequency.

A TRMP will have the effect of bringing the risk of owning and being responsible for trees on the land into the category of ‘broadly acceptable’ risk from an ‘unacceptable’ risk where there is no management of trees occurring. Whilst a risk may be categorised as low, the law requires that, where reasonably practicable measures are available, they should be taken. The Health and Safety Executive acknowledges that a broadly acceptable risk is 1 in 10,000, whilst accepting that this is only a guide and that statue and case law will determine how individual cases are assessed.

It is not possible to create an environment where there are no risks. This would mean removing all of the trees in an area which would be disproportionate to the risk and would result in a landscape devoid of trees, having detrimental effects on the habitat, wildlife, air quality, noise, screening, visual amenity, links to the seasons and many more.

Despite how proactive a tree inspection regime is, trees are living organisms and their circumstances and conditions can alter over relatively short time frames. In some cases decline or the causes of failure are not always obvious and, even with a proactive inspection regime in place, it will not always be possible to predict when a tree might fail. The implementation of a TRMP will not provide a zero risk environment. The TRMP looks at how the council intends to manage that risk.

2.1 What a Tree Risk Management Plan is not

This TRMP does not address the policy by which the management of trees occurs, for instance it does not detail 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), perception of 'oppression'. Tree planting schemes are also outside the remit of this document. Management of trees is addressed in the Tree Maintenance Policy (TMP).

Nor does this TRMP discuss the policy for how trees are managed in relation to planning applications, tree preservation orders, tree works applications or Conservation Area notices. These issues are discussed in the Rushmoor Borough Council Local Development Framework (http://www.rushmoor.gov.uk/index.cfm?articleid=7998).

2.2 Rushmoor Borough Council

This TRMP will aid the council in achieving arboricultural best practice, risk management of the council tree stock and value for money. The TRMP sets out the way in which the council will systematically survey its trees on a repeating cycle in relation to its duty under the various legislation including the Occupiers Liability Act and Health and Safety at Work Act.

The TRMP formalises and records the way in which trees are currently surveyed and managed; this is crucial if an incident occurs and the council is taken to court. The TRMP is a defensible system where actions and inspections are recorded with appropriate responses, based on professional judgement. The TRMP is not meant to avoid liability, but to show that the issues have been considered and that reasonable and proportionate action has and will be taken in relation to the council's duty to manage its trees.

RBC has a Strategic Risk Management Group that is responsible for managing the risks to the council and ensuring that risk assessments are undertaken for key activities. The group is involved, with professional assistance, in assessing the risk posed to the council by their ownership of trees and the potential for incidents to occur. Appendix 1 contains RBC's risk profile template that relates to the 'risk of failing trees'.

The safe retention of trees within the ownership of the council helps to achieve all of the objectives set out in the Corporate Strategy. 'Trees Matter' (www.**trees**forcities.org/files_reports/tfc_**treesMatter**.pdf) by the National Urban Forestry Unit provides details on how trees are perceived and how they may contribute to the Corporate Strategy:

- Strong Communities
- Safer Communities
- Community Facilities
- Housing for the Community
- Support for People
- Clean and Sustainable Environment
- Better Town Centres
- Supporting a Balanced Economy
- An Efficient and Responsive Council

Highway trees are the responsibility of the Highway Authority (Hampshire County Council). Any issues relating to Highway trees can be referred to HCC.

3. Why do we need a Tree Risk Management Plan?

Society, through the legal process, has demonstrated that where the failure of a tree was foreseeable it considers it unacceptable for the failure of the tree to occur unless in exceptional circumstances or where reasonable remedial measures are being implemented. It is not acceptable for organisations and landowners to fail to take responsibility for features on their land that may cause harm to person or property. Recent court cases have highlighted by finding against landowners where negligence has been identified.

It is important to understand the reasons for the correct and appropriate management of trees in the ownership of a landowner. Whilst this is set out in various pieces of legislation and case law (Appendix 2), appropriate management of a tree stock is good arboricultural practice and should be encouraged at every opportunity. The legislation, case law and guidance that relates to the management of trees is available in the advice that the Health and Safety Executive provide to their inspectors (see Management of the risk from falling trees referred to in Section 2).

3.1 Benefits to the Council

Primarily the actions within this plan will provide a robust defence against claims of negligence against the Council. In addition, a healthy tree population provides benefits to health by filtering polluted air and mitigating against climate change factors, they provide wildlife habitats, land stabilisation, and enhanced quality of urban landscape (more detail available in ‘Trees Matter’).

A TRMP can help to prevent the development of hazards in trees and therefore the potential of harm to person or property can be reduced. A high proportion of hazards are due to defects as a result of poor growth patterns or the failure to manage trees appropriately when they are young. A proactive inspection regime can identify where poor growth patterns have occurred and can identify remedial works to reduce the situation worsening (e.g. pruning out co-dominant leading shoots can stop weak forks forming). This can help to reduce future costs or prevent them escalating.

Undertaking a proactive tree survey will provide the Authority with a detailed knowledge of location and condition of tree population. This is an important element in considering budget resources for future years.

4. Deciding what trees to pro-actively survey

A TRMP aims to minimise the risk of trees causing injury or damage as a result of their failure. It is therefore important to decide which trees to inspect

as a matter of priority and which can be inspected at a later date. One way of deciding which trees to inspect is based on risk and hazard. 'Risk' is location based whilst 'hazard' relates more to the individual tree.

4.1 Frequency and timing of surveys

Ideally, it is best to routinely survey all trees where people or property are likely to be at risk from the failure of a tree or part of it, irrespective of how an area is 'zoned'. How frequently this is carried out depends on the staffing and financial resources of the council. Through providing justifications as to why certain timescales for periods between inspections it is less likely that a council will be held responsible in the case of a tree failing (e.g. Tomlinson vs. Congleton Borough Council). These timescales should however be reviewed in line with recent case law and reassessed if necessary to ensure that the council has 'behaved' in a reasonable and practicable manner.

Table 1: Risk Zones (also see Appendix 4)

	Description	Examples
Priority Inspected every two years and reactively.	Where the probability of tree, in failing, would cause harm or damage is as likely as not.	Parks and high use open spaces. Sites adjacent A roads. Sites adjacent to busy B Roads. Sites adjacent to busy other roads and footways.
Moderate Inspected every three years and reactively.	Where the probability of tree, in failing, would cause harm or damage is unlikely.	Low use open spaces. Sites adjacent to B Roads. Sites adjacent to moderate use other roads, footways and car parks. Sites adjacent to properties and businesses.
Low / Negligible Inspected reactively.	Where the probability of tree, in failing, would cause harm or damage is highly unlikely.	Rarely visited areas.

Creating a risk zone map (see Appendix 4) enables the council to prioritise areas of work. The two principles for determining the risk zone map are the 'target' and the frequency of use. The 'target' can be people or property that may be harmed or damaged because of tree failure whereas the frequency of use helps to indicate the likelihood of harm occurring if a tree were to fail. Therefore, a busy public open space adjacent to an A road has a higher probability of harm or damage occurring than in a woodland which is some distance from public access points and less frequently used, assuming the

same potential for tree failure. It is important however to appreciate that there cannot be a complete distinction where survey is essential and where it is not - even at very busy sites there may be a low risk of injury occurring due to the condition, size, age and species of the specimens.

People are considered more important than property. Whilst property frequently contains people (for instance places of work and homes) they have a measure of protection against harm. Therefore less protected people are prioritised higher than those within property.

Hazards from old large trees sometimes develop rapidly and as such, inspecting such trees located in heavily used areas on a 2 year basis or more frequently may be appropriate.

Surveys should take place following exceptional severe weather conditions which may have resulted in branch failures or affected the stability of a tree.

In trees where there are signs of progressive disorders such as Horse Chestnut Bacterial Canker, Chalara, etc. they should be inspected as part of the proactive survey and where feasible at the point of the year in which the symptoms are most likely to be evident.

4.2 Reactive tree inspections and surveys

RBC also operates a reactive approach to surveying trees and managing its tree stock. The current method is based on the receipt of information from members of the public, staff, contractors or members to which the Community Service then responds. This information is assessed, prioritised and inspections made within a timescale informed by the information received and the principles detailed in Sections 4 and 5.

5. Hazard or Risk Assessment

Whilst risk zone mapping allows the establishment of priority areas for inspection, an assessment of the potential for an individual tree to fail needs to be carried out. The tree risk assessment will assist in quantifying the level of risk posed to public safety. Linked to the risk zone mapping, this system is also ‘target’ led to determine the likelihood of harm or damage occurring from a specific tree.

The hazard or risk rating is determined through the consideration of three issues:

1. Target considers how frequently people use the area and what the probability would be of someone being injured as a result of failure. Clearly, the more used an area is, the higher the likelihood of harm.

2. Potential for failure considers, at the time of the tree survey inspection, characteristics of the tree most likely to fail based on structural and physiological defects.

3. Size of failure part rates the size of the part most likely to fail which in turn, affects the severity of the potential failure. The larger the part, the greater the potential for damage to occur.

Table 2: Risk assessment

		Examples
Target	High	Parks and high use open spaces. Sites adjacent A roads. Sites adjacent to busy B Roads. Sites adjacent to busy other roads and footways.
	Medium	Low use open spaces. Sites adjacent to B Roads. Sites adjacent to moderate use other roads, footways and car parks. Sites adjacent to properties and businesses.
	Low	Rarely visited areas.
Potential for failure	High	High probability of failure – more likely than not
	Medium	Moderate probability of failure – as likely as not
	Low	Low probability of failure – less likely than not
Size	Large	Death or serious injury, structural damage, (e.g. trees with ∅ of over 300mm or major branch over 100mm ∅)
	Medium	Serious to superficial injury, moderate to minor structural damage (e.g. entire small tree e.g. between 300mm and 100mm ∅ or moderate branch between 100mm and 25mm ∅)
	Low / small	Superficial injury, fragile objects damaged (e.g. entire small tree <300mm ∅ or small branch <25mm ∅)

Where ∅ represents diameter

This table of risk assessment informs the management of the tree and the priority of works.

5.1 Failure Log

A failure log will be maintained to record where tree failures occur, the reason for failure when known and the result of the tree failure. This information will help to inform the estimation of real risk levels and over time, will produce patterns providing base data about potential tree failure and possible preventative / corrective actions. Failures will be plotted geographically to enable assessment and feed back in to the Risk Zone mapping and the management of the trees. It is important that any failures or incidents are reported to RBC's Strategic Risk Management Group and the risk reviewed accordingly.

Data recorded will include:

1. Date of failure
2. Location
3. Risk Zone designation within site
4. Species
5. Age class
6. Weather conditions at the time of failure
7. Size of failure part
8. Type / cause of failure
9. Consequence of failure
10. Actions to be taken
11. Works complete date

It is crucial that if the system is to be successful, relevant information must be fed back into it if benefits are to be gained from lessons learned. A template form is shown in Appendix 9.

5.2 Change in conditions

Trees are living, dynamic, structures and changes in their immediate environment or growing circumstances can have implications to the health of the tree. These changes can have a dramatic affect upon the condition and structural stability and integrity of a tree. Therefore, any change in the circumstances of a tree should be brought to the attention of the Parks Development Officer or relevant Council Land Manager for them to assess.

6. Proactive Tree Survey

The following section sets out the various elements of how the pro-active survey or TRMP will continue to be implemented by RBC and the important issues to consider when doing so. It considers areas of responsibility, training and procedures.

6.1 Objectives

To survey the Council tree stock on all Council land (parks, open spaces and estates as shown on the ArcGIS Rushmoor data / conveyance area) to establish the condition of the trees within the specific risk zone maps to identify remedial tree works with priorities.

6.2 How it will be managed / responsibility

The Parks Development Officer / relevant Council Land Manager will direct the areas to be surveyed and will be responsible for auditing the data recorded by the tree surveyor.

6.3 Who will carry out the survey?

It is reasonable to expect that a tree survey should be carried out by someone who is trained in Arboriculture to a minimum of level 3 National Qualification Framework (NQF) or higher [52/75, Poll v Bartholomew]. Higher levels of training would be beneficial and experience in carrying out such work should be demonstrated. The pro-active tree survey is to be carried out by an external consultant appointed as required.

When the surveyor requires advice or recommends that the tree is inspected in detail, then the level of competence will have to be commensurate with the task involved. Experience in carrying out such work should also be demonstrated as it is likely that investigation may require the use of decay detection equipment.

Training needs to be appropriate for the task and for the individual. There are three levels of staff within this TRMP:

- Parks Development Officer / relevant Council Land Manager
- Expert resource (e.g. Arboricultural Consultant)
- Tree Surveyor

Training should be commensurate with the anticipated duties.

Table 3: Qualifications and experience

Parks Development Officer / relevant Council Land Manager (over sight and implementation of TRMP)	Essential: NQF level 4, e.g. Technician's Certificate in Arboriculture or relevant experience Desirable: LANTRA Professional Tree Inspector, NQF level 6, e.g. Professional Diploma in Arboriculture
Outside resource [Arboricultural Consultant (detailed inspections / second opinions)]	Essential: NQF level 6, e.g. Professional Diploma in Arboriculture and experience LANTRA Professional Tree Inspector Desirable: Registered Consultant / Chartered
Contract Tree Surveyor	Essential: NQF level 4, e.g. Technician's Certificate in Arboriculture or LANTRA Professional Tree Inspector and relevant experience

It is essential that the training is revisited frequently, for instance every three to five years for the tree hazard awareness courses and / or that appropriate continuing professional development or attendance at events is carried out and details recorded.

6.4 How the survey will be carried out

The survey will be a walked survey of the trees and will include an assessment from all points using the Visual Tree Assessment (VTA) method from ground level. The VTA method (The Body Language of Trees, p179) proceeds in three stages:

1. Visual inspection for defect symptoms and vitality. If there is no sign of a problem then the investigation concludes.

2. If a defect is suspected on the basis of the symptoms, its presence or absence must be confirmed by a thorough examination.

3. If the defect is confirmed and appears to be a cause of concern, it must be measured and the strength of the remaining part of the tree evaluated.

For simplicity, it will be assumed that the trees are of good form and condition. The survey will concentrate on the specific features of the tree that are not in accordance with this assumption and will record the significant features that have a bearing on the condition of the tree. Therefore it may be possible that no features, other than the physical dimensions of the tree are recorded which would demonstrate that the tree is of good form and condition. However, for purposes of clarification, the surveyor will record the condition of the tree in the ‘condition’ category. Should any trees inspected require immediate works the Parks Development Officer / relevant Council Land Manager should be informed as soon as reasonably possible.

Individual trees to be plotted and surveyed should normally be larger than 100mm in stem diameter. All individual trees over 100mm diameter are to be surveyed and their details recorded regardless of whether remedial works are required. Discretion is given to the surveyor to survey smaller diameter trees when there is particular reason to do so, for instance formative pruning or sensitive location (for instance close to an adjacent property).

Trees will be plotted by estimate using site features. Where GPS is available it may be possible to more accurately plot the location of the trees. The approximate centre of the tree stem is to be plotted. Groups or woodlands can be plotted as areas (polygons) marking the estimated canopy spread where reasonably possible.

Tree tags may be used / required to identify specific trees where their exact position is unclear, for instance within a woodland, and the tag number should be recorded.

Where a woodland or copse is to be surveyed it is not cost effective to survey, record their data and tag each tree. Therefore the process for a copse or woodland will consist of a walked survey though the woodland marking each tree with a timber crayon when it has been surveyed. If features of a tree that require remedial works are identified then the tree should be tagged and the

works recorded against that tag number. The tag ensures that the specific tree is easily identified and the remedial works carried out on the correct tree.

6.5 How the data will be stored

The survey data will be collected on hardware provided by RBC using the PSS Live and ArcMap software programs.

6.6 Data to be recorded

The following information recorded for each tree surveyed:

site
date
surveyor
weather
tag number (where appropriate)
species
age class
condition of the tree
recommended tree works and
priority for completion of those works

(The zone in which the tree stands will normally denote the resurvey date.)

It is also important to record any features relevant to the site (e.g. buildings, access points, use) in the notes field.

Trees given a general condition in relation to their physiological and structural condition as follows:

Table 4: Tree condition descriptions

Good	Typical vitality for the tree species and growing conditions and good structural form so that it is likely to require little or no tree works within the next inspection period and it is anticipated to be retained for over 10 years
Fair	Reduced vitality for the tree species and growing conditions or reduced structural form so that it is likely to require tree works within the next inspection period to enable its retention. Anticipated to be retained for over 5 years.
Poor	Significantly reduced vitality for the tree species and growing conditions or poor structural condition and is likely to require considerable tree works to aid its retention, if feasible.

Recommendations for any works required to be recorded and the priority determined. Works will then be instructed on the basis of the priority and at the discretion of the Parks Development Officer.

The data listed in Appendix 5 also recorded for each tree surveyed.

6.7 Priority for works

Priorities for works are:

Table 5: Tree work timescale descriptions

Immediate / immediate	These works should be carried out immediately. The surveyor should contact the Council and inform them of the concerns so that the Council can arrange for the works to be carried out without delay. Works in this category relate to trees that are imminently about to fail and that the failure of the tree / part is more likely than not to cause significant harm or damage.
High / 3 months	These works should be carried out within 3 months from the identification of the works. The surveyor should contact the Council and inform them of the concerns so that the Council can arrange for the works to be carried out within the month. Works in this category relate to trees that are likely to fail and that the failure of the tree / part is likely to cause significant harm or damage.
Medium / 6 months	These works should be carried out within 6 months from the identification of the works. There is no need to contact the Council in relation to these works other than through the normal downloading of the data collected. Works in this category should include works that are necessary for the safe use of the site or adjacent properties and land, for instance crown lifting to clear for access. These works may also relate to good arboricultural practice, for instance formative pruning or clearance of a property.
Low / 1 year	These works should be carried out within 1 year from the identification of the works. There is no need to contact the Council in relation to these works other than through the normal downloading of the data collected. Works in this category should include works that are necessary for the safe use of the site or adjacent properties and land, for instance where it is anticipated that the tree growth will become an issue before the next cyclic of inspections. These works may also relate to good arboricultural practice, for instance formative pruning or preventative clearance of a property. It is anticipated that these works may not always be possible to complete within the year.

Once the initial survey of council owned land is complete, an assessment of the priorities for survey and their frequency can be addressed as part of a review of this exercise.

6.9 Reviewing TRMP

The TRMP should be reviewed as necessary (for instance new guidance, recent case law and statute law, etc.) and / or at least on a three year basis. The purpose of reviewing the TRMP gives the Council the opportunity to not only ensure it is up to date and accurate but also to make improvements, particularly in methods of working and how data is recorded.

Benchmarking with other Local Authorities can also be a useful way to make improvements to the TRMP based on the successes of others and understanding how they have approached the same problem. If the Council wishes to measure and assess how the TRMP is performing it can set local performance indicators based on SMART (specific, measurable, achievable, result orientated, time bound) objectives linked to individual performance reviews.

6.10 Auditing

It is important that auditing of the quality of data is carried out throughout the implementation of the TRMP. This will help to ensure that the details recorded are accurate, retrievable, meaningful and fit for purpose. Failure to audit may reduce the validity of the system.

It is therefore important to show that not only is the proactive survey being carried out, but that someone separate, qualified and experienced is auditing the work.

7. Implementing a Tree Risk Management Plan

Whilst implementing a TRMP can be hugely beneficial to the Council in terms of providing a cost effective proactive tree surveying regime and a systematic approach to managing risk, its implementation needs to be considered in terms of resources.

7.1 Finance

In this instance it is not anticipated that the implementation of the TRMP will significantly identify tree works above that which the normal council tree budget would cover as RBC currently have a tree survey regime in place. TRMP formalises and records the way in which the current process is implemented and provides the basis for improvement to the existing process. The idea of a proactive tree survey regime is to identify appropriate works

necessary for the safe retention of the trees in advance of any failings and to maintain the trees in accordance with good arboricultural practice.

Where tree works are identified they will be prioritised. Works that are immediate or high priority will be carried out before medium and low priority works. This will enable the tree works to remain within the parameters of the budget available. If appropriate additional budget can be sought and such budget requests are to be considered in relation to the other responsibilities that the council has.

As the tree survey will identify trees that have previously been unrecorded, it is likely that some remedial tree works will be necessary that the Council were not previously aware of. Over time, following complete cycles of prioritised survey and remedial works, it is anticipated that the amount of work generated by the surveys will reduce in volume, priority and frequency. Works will be prioritised so that budget expenditure can be limited in a rational manner. It will be important to manage and review the current financial resource available given that additional funding may be required.

It is the responsibility of the Parks Development Officer / relevant Council Land Manager to report excess priority works, either as a result of an extreme severe weather event or significantly more high or moderate priority works than anticipated. This report should be sent to the Head of Community or relevant lead officer when the works cannot be carried out within the normal tree resources budget to seek additional funding.

7.2 Sourcing of tree works

RBC obtains quotations for the tree works from a variety of contractors relevant to the complexity of the task and works within a procured schedule of rates. This helps to ensure that a reasonable market price is sourced from competent and experienced contractors. Such contractors are mostly local to the borough and therefore helping maintain a sustainable business community.

Such companies must have appropriate working procedures, staff, financial stability, insurance, record keeping, qualifications and experience in all aspects of tree work. Additional benefits to using local tree contracting companies is their ability to rapidly respond to RBC requests, long standing knowledge of the trees within the borough and the locality itself.

7.3 Internal management of the TRMP

For a pro-active survey regime to be managed properly, adequate staff time must be set aside. It is not enough to simply say that such a survey is in place; it must be managed and resourced appropriately with regular reviews.

The Parks Development Officer / relevant Council Land Manager is responsible for the implementation of the TRMP. Due to the level of staffing resources within the Parks Section of the Community Service it is necessary to obtain additional outside resource in the form of a professional tree surveyor. This is currently covered by the employment of a contracting professional tree consultant for 1 day per week. There is no further additional resource anticipated as this TRMP works within current practice and management of the tree risk.

The implementation of this tree risk management plan has a number of actions which must be undertaken to ensure efficient use of the TRMP and maintenance of the defensible approach to tree risk management. A list of such actions is in Appendix 7.

Appendix 1

Rushmoor Borough Council's risk profile template for the 'risk of failing trees'

	Risk	Inherent risk (Value)	Mitigation procedure/controls	Residual risk (Value)	Action planned	By whom/when
Personnel Injury						
2	**Structural Failures** - Buildings, **trees**, playground equipment, public lakes/areas (Parks & Open Spaces) & roadworks.	**25**	**Regular recorded inspections (Routine Inspection (Visual)** in playgrounds and Parks/Open Spaces infastructure by Community Patrol (Environmental Health), **Trees by Community & Buildings** by Democratic Services) **together with regular maintenance**. Provision of safety/rescue equipment with regular inspections to ensure present with replacement as required (by Contracts (Environmental Health), signage. Roadworks - individual risk assessments & inspection (also Contractor responsible for risk during works).	**19**	**Ensure ongoing inspections and appropriate recording of inspections. Review of tree inspection and maintenance with view to adopting formal policy (report to cabinet by September 2009).**	**Tree inspections review by AF (Community) by September 2009.** Weekly inspections of safety equipment by Contract Services. Routine Visual Playground inspections and Parks footpaths & furniture by CPO team (Environmental Health). Playground monthly operational inspections by contract and annual inspection by contract. All playground inspections by RPII registered inspectors. Roadworks ongoing by John Trusler (Community). Buildings by Andrew Colver (Democratic Services).

Appendix 2

Legislation (Statutes)

- The **Occupiers Liability Act (1957 and 1984)** - Under the 1957 Act a common duty of care is owed to all lawful visitors. The duty is to take such care as, in all the circumstances of the case, is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he/she is invited or permitted to be there. This means that any visitor to public open space, countryside land or any other site has the right to expect that no harm will come to them. Whilst it is not currently possible to be prosecuted under these acts, there is the possibility of being sued in the civil court if an incident were to occur.

  The 1984 Act imposes a duty of care to those who are not visitors (i.e. trespassers). The Act imposes a limited duty of care on occupiers to take 'reasonable' steps to offer protection to trespassers from dangers which should be known to exist on the property. The duty under the 1984 Act is more restricted than the 1957 Act, in that it only applies where a danger that the occupier knows of or ought to know of exists and if the occupier knows or ought to know that trespassers are likely to come on the land. The scope of the duty under the 1984 Act is limited to personal injury and does not cover property damage.

- The **Town and Country Planning Act (1990)** and **Town and Country Planning (Trees) Regulations (1999)** contains provisions for protecting trees that provide public amenity. The additional implied duty in the Act is that organisations such as Local Authorities should maintain such valuable amenity as they can be exempt from Tree Preservation Orders as they may be deemed to be appropriate managers of the tree population within their control.

- The **Highways Act (1980)** and the **Local Government (Miscellaneous Provisions) Act (1976)** give Local Authorities the powers to deal with trees in private ownership that endanger the highway, persons or property. The Highways Act empowers the Highways Authority (Hampshire County Council) to require that trees adjacent to the highway are managed to prevent them becoming a hazard to the safe use of the Highway.

  Sections 23 and 24 of the 1976 Act allow Local Authorities to deal with trees on private land when asked to do so by the landowner, although these powers are discretionary and usually a last resort. Expenses then need to be recovered from the landowner.

- The **Wildlife and Countryside Act (1981),** the **Countryside Rights of Way Act (2000)** and the **Conservation (Natural Habitats, &c) Regulations (1994)** all place legal obligations on the protection of wildlife species and habitats. The 2000 Act's duty of care is extended to cover those who might be described as ramblers or persons exercising their right of access over land or the 'right to roam'. The duty under this Act is limited in its scope and does not extend to risks that exist as a result of natural

features on land. The 1981 and 1994 Acts place some obligation on local authorities to consider wildlife issues within the planning process where sites are considered to be of wildlife importance. Whilst it is not within the scope of this document to discuss the wildlife implications of tree management, it is an important consideration for landowners / occupiers.

- The **Health and Safety at Work Act (1974)** places a duty on all employers to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all employees, as well as those not in his employment who may be affected if exposed to risks to their health or safety. This means ensuring that all places of work are, so far as is reasonably practicable, safe and without risks to health to both employees and visitors to the site. Cases have been brought by the Health and Safety Executive under sections 2 (general duties of employers to their employees), 3 (general duties of employers and self employed to persons other than their employees) and 4 (general duties of persons concerned with premises to persons other than their employees) of the Act.

- The implications of the **Corporate Manslaughter and Corporate Homicide Act (2007)** means that companies or organisations whose gross negligence causes the death of an individual now could face prosecution for manslaughter. The fines are unlimited. Immunity from prosecution for the Crown has been removed. Crown bodies, such as Government departments, will now be liable for prosecution. The continued implementation of this TRMP will help form the reasonable 'defense' against such a potential prosecution for the council.

Legislation (Case Law)
There are other cases that are applicable, but these are the main and current ones.

- **Chapman v Barking and Dagenham London Borough Council (1998)** Barking and Dagenham London Borough Council were taken court in 1998 by the plaintiff, Mr Chapman who had sustained serious physical injury when the cab of the van he was driving was crushed by a falling limb from a Council owned Horse Chestnut tree. Whilst the tree had been pruned some years before it should have been inspected at regular intervals, especially given the recent strong wind warnings that were issued by local meteorological stations. The Council had no formal system in place to inspect trees in their ownership.

  The judge found for the plaintiff on the basis that:
  "a person is liable for a nuisance constituted by the state of his property:
  1) if by neglect of some duty he allowed it to arise; and
  2) if, when it has arisen without his own act or default, he omits to remedy it within a reasonable time after he did or ought to have become aware of it." (See *Noble -v- Harrison* [1926] 2 KB 332 at 338)

- **Birmingham City Council**
  Birmingham City Council were successfully prosecuted under section 3 of the Health and Safety at Work Act in July 2002 following the failure of an ash tree adjacent to a road which led to the death of three people.

- **Gary Poll v Viscount Morley (May 2006)**
  This case involved a motorcyclist colliding with a fallen tree. The motorcyclist made a claim against the tree owners for damages. Judgement was awarded in favour of the claimant. Whilst the owner of the tree had an inspection regime in place, it was judged that it was insufficient to detect structural defects and that a different (more detailed) method of inspection would have detected the warning signs. The Judge determined that an experienced Arboriculturist would have identified the hazardous nature of the tree and ordered its removal.

  This case is particularly important as it suggests the different levels of inspection and competence are required to fulfil a tree owner's duty of care.

- **Essex County Council (2003)** were found guilty under Section 2 of the Act following the death of a Senior Ranger as the result of insufficient inspection regimes and staff competence. The Council were found to have inadequate systems in place to ensure that tree work was properly assessed and allocated to appropriately trained individuals.

- **Atkins v Scott (2008)** In this case the Judge criticised the defendant for not have a formal written system for tree inspections.

Government Guidance

The main guidance is taken from 'Well-Managed Highway Infrastructure: A, Code of Practice' published in October 2016, Section B.5. Inspection, Assessment and Recording – Highways; B.5.4. Safety Inspection of Highway Trees.

In summary this covers;

- *Method of inspection.*
- *Frequency of inspections.*
- *Appropriate risk management.*
- *Appropriate training.*
- *Reliability of data.*

Appendix 3

List of Priority Risk Sites

Priority Risk Sites (inspection every 2 years)

Aldershot Lido
Aldershot Park (area around destination playground)
King George V Playing Fields
Manor Park, Aldershot

Moderate Risk Sites (inspection every 3 years)

The following is not a comprehensive list of Moderate Risk Sites.
A full list is to be developed over time.

Cove Green Recreation Ground off Prospect Road
Farnborough Community Area
Farnborough Gate Sports Complex
Lynchford Road
Moor Road Recreation Ground
Napier Gardens (subject to lease)
North Lane / Ivy Road Playing Fields
Oak Farm Recreation Ground off Tile Barn Close
Osborne Road Recreation Ground
Prince's Gardens (opposite Princes Hall)
Municipal Park, Aldershot
Queen Elizabeth (play area and footpaths)
Queens Road Recreation Ground
Rectory Road Recreation Ground
Redan Hill Gardens
Redan Hill Fort Open Space / High Street Recreation Ground
St. Michael's Gardens
Southwood Playing Fields

Low / Negligible Risk Sites

Alexandra Road Allotments
Birchbrook Reserve
Birchett Road Allotments
Brook Gardens Open Space
Calvert Close Allotments
Cherrywood Road Allotments
Cove Brook Flood Plain Area off Bridge Road, Cove (excluding footways)
Cove Green Allotments
Fernhill Road Allotments

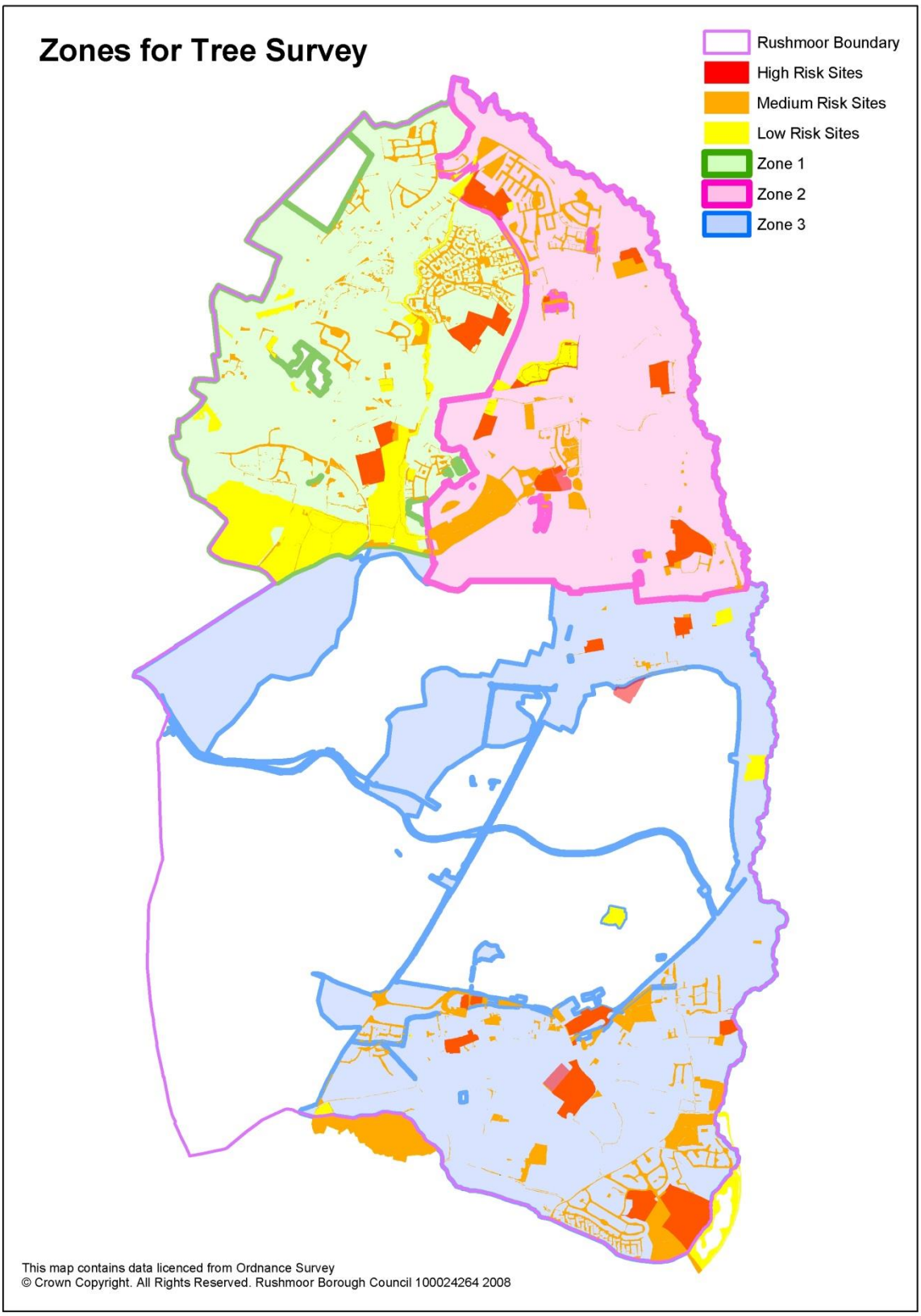
Hazel Road Allotments
Land off Ratcliffe Road (land locked)
Park Road Allotments
Prospect Road Allotments
Queen Elizabeth Park (excluding the footpaths, play ground and car park)
Ratcliffe Road Allotments
Strip of land at Hannover gardens (land locked / no access)
The Birches open space
Tongham Pool (extension of Aldershot Park)
Woodland / Copse off Chestnut Tree Grove (excluding the footpaths)
Woodland / Copse off Howard Drive (excluding the footpaths)
Woodland / Copse off Nightingale Close (excluding the footpaths)
Woodland / Copse off The Potteries (excluding the footpaths)
Woodland strip off Juniper Road

List of Leased Sites / 3rd Party Management

	Included for surveying	Excluded for surveying
Aldershot High Street Recreation Ground (Aldershot Football Ground) (site managed by third party)		✓
Aldershot Ski Centre (subject to lease) (site managed by third party)		✓
Holly Bush Lane nature area (site managed by third party)		✓
Southwood Golf Course (site managed by third party)		✓
Rowhill Nature Reserve (site managed by third party)		✓
Southwood Woodland (site managed by third party)		✓
Napier Gardens (subject to lease)	✓	

Appendix 4

Risk Zone Maps (Old map, replacement pending)



Appendix 5

Tree Risk Management Plan Survey Brief – data to be recorded

The following types of data about the trees being surveyed should be assessed. This list has been complied from a variety of sources including The Hazards from Trees: a general guide (see Appendix 2), Circular 52 / 75 and Hampshire County Council's Arboricultural Works Procedure (11/2005) in relation to the Highway.

This list is not exhaustive and other features should also be considered at the time of survey.

- Abrupt bends in branches
- Brittle decay
- Bottle butt
- Excessive sinking down of branches
- End loading
- Exposure of previously sheltered trees
- Fork and unions with included bark
- Grafts (showing incompatibility)
- Instability due to restricted rooting
- Neglected pollards
- Poor crown condition
- Ribs and open cracks on stems and major branches
- Target cankers
- Wounds
- Thinning of foliage and dying back of branches
- Wounds where branches have been removed
- Areas where bark has peeled off
- Galls, cankers and lesions
- Fungal fruiting bodies
- Moisture issuing from the tree
- Dead trees
- Significant dieback in the crown
- Individual dead or broken branches
- Obvious signs of decay: cavities, fungal growth or substantial areas of dead bark
- Persistent history of live branch breakage
- Obvious signs of root heave, soil movement around the base
- Roots damages by excavations
- Obvious signs of damage to adjacent structures
- The proximity and significance of nearby targets

Appendix 6

Failure Log Record Sheet				
Date of failure				
Location				
Risk Zone designation within site	Low / Negligible		Medium	High
Species				
Age class	Young		Middle Aged	Mature
Weather conditions at the time of failure	Wind speed / Beaufort Scale: 1 2 3 4 5 6 7 8 9 10 11 12 Rain: None / Light / Moderate / Heavy			
Size of failure part	Tree:	<100mm∅	100 to 300mm∅	>300mm∅
	Branch:	<50mm∅	50 to 100mm∅	>100mm∅
Cause of failure				
Consequence of failure				
Actions to be taken				
Works complete (date)				

FORCE	EQUIVALENT SPEED 10 m above ground		DESCRIPTION	SPECIFICATIONS FOR USE ON LAND
	miles/hour	knots		
0	0 to 1	0 to 1	Calm	Calm; smoke rises vertically.
1	1 to 3	1 to 3	Light air	Direction of wind shown by smoke drift but not by wind vanes.
2	4 to 7	4 to 6	Light breeze	Wind felt on the face; leaves rustle; ordinary vanes moves be the wind.
3	8 to 12	7 to 10	Gentle breeze	Leaves and small twigs in constant motion; wind extends light flag.
4	13 to 18	11 to 16	Moderate breeze	Raises dust and loose paper; small branches are moved.
5	19 to 24	17 to 21	Fresh breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	25 to 31	22 to 27	Strong breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.
7	32 to 38	28 to 33	Near gale	Whole trees in motion; inconvenience felt when walking against the wind.
8	39 to 46	34 to 40	Gale	Breaks twigs off trees; generally impedes progress.
9	47 to 54	41 to 47	Severe gale	Slight structural damage occurs (chimney pots and slates removed).
10	55 to 63	48 to 55	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.
11	64 to 72	56 to 63	Violent storm	Very rarely experienced; accompanied by wide spread damage.
12	73 to 83	64 to 71	Hurricane	Very rarely experienced; accompanied by wide spread damage.

Appendix 7

Action Plan

No.	Action	Responsibility	Target date for completion
1.	Review TRMP prior to issuing to Council Members to consider for formal adoption.	Line management / Risk Management Group / Council Insurer	Jan 2010
2.	Amendments made.	Parks Development Officer	Feb 2010
3.	Consideration for formal adoption by Council Members.	Council Members	Feb 2010
4.	Amendments made.	Parks Development Officer	Feb/March 2010
5.	Formal adoption by the Council Members.	Council Members	March/April 2010
6.	Implementation. 2009: survey of all high risk sites 2009: survey of zone 1 moderate risk sites 2009: prioritisation of tree works and their implementation within the limitations of the tree budget. 2010: survey of all high risk sites 2010: survey of zone 2 moderate risk sites 2010: prioritisation of tree works and their implementation within the limitations of the tree budget. 2011: survey of all high risk sites 2011: survey of zone 3 moderate risk sites 2011: prioritisation of tree works and their implementation within the limitations of the tree budget. Cyclic proactive survey of priority and moderate risk sites continues.	Parks Development Officer	On Target
7.	Check leased sites for management of tree responsibilities.	Parks Development Officer / Legal Services	March/April 2010 (1st requested Jan 2009)
8.	Three-year audit (2011)	Line management / Risk Management Group / Council Insurer / External resource	March 2011 November 2016 Due 2019

Appendix 8

Rushmoor Borough Council - Policy relating to Ash Dieback (Chalara)

Overview

It is predicted that Chalara will have an impact on Ash trees within the UK similar to that experienced with Elm trees during the Dutch Elm Disease outbreak in the 1970/80's. The Eastern Counties of the UK are already experiencing significant losses and this impact is expected to spread across the country with Hampshire seeing an increase of mortality within the next 3 to 4 years.

Ash Dieback is caused by a fungus on Ash trees, which is present in most parts of the UK. Initial infection to significant symptoms becoming evident can take a number of years, up to 10 years in some cases. Experience shows it can cause a high proportion of infected trees to die, however, some Ash trees (studies suggest about 5% of the population) are resistant and identification of resistant trees is of high importance.

Consideration towards the safety of persons and property is of primary concern with consideration towards the recovery of canopy cover in the longer term.

The Guiding Principle

Ash Die-back may well have a significant impact on the present and future Ash population, however, the presence of Ash die-back will not, in itself, necessarily be considered as a reason for premature pruning, felling, or intervention.

Where infection of an Ash tree is suspected or known, each situation will be judged on its individual merits taking into account the extent of die-back, the visual amenity that the tree or trees provide, and any health and safety considerations. Whilst it may appear to make economic sense, if one or more trees in a wider group do require intervention, removal of the whole group will not necessarily be considered justified.

Arising's from works to Ash trees will continue to be dealt with in accordance with current guidelines relating to biosecurity. As the disease is already widespread no special consideration toward Ash arising's is deemed necessary.

How the Council will manage Ash Trees

The timing of inspections are to be optimised where possible and feasible to identify the presence and extent of infection within the Ash population and permit forward planning in relation to remedial works and replacement planting.

As part of the ongoing proactive tree survey where Ash trees are identified as being significantly affected then these trees will be considered for removal or other remedial works depending upon location and condition. As a general guide once an infected tree exceeds <50% crown density then removal may be the most pragmatic action. This early intervention saves costs over longer-term remedial works. Replacement tree planting will be considered in line with the Tree Maintenance Policy.

Where the council is informed of a council owned tree that may be affected by Chalara then the enquiry will be prioritised accordingly based upon location, condition and the inspections that have been carried out previously.

The Council will not consider requests to remove Ash trees that show no evidence of infection on the grounds of safety as to remove an otherwise healthy tree may be removing one of the 5% resistant trees that are of high value for the future of the species as a whole.

Addendum - References

Arboricultural Journal, Arboricultural Association
Arboricultural Association Newsletter
Journal of Arboriculture, International Society of Arboriculture
Arborist News, International Society of Arboriculture

Principles of Tree Hazard Assessment and Management, David Lonsdale, DETR, 1999
The Body Language of Trees, Claus Mattheck & Helge Breloer, DoE, 1994
Diagnosis of ill-health in trees, R.G. Strouts & T.G. Winter, DoE, 1994
Hazards from trees a general guide, Forestry Commission

Hampshire County Council Arboricultural Works Procedure [11/2005]
Circular 52/75, Department of Environment

Well Maintained Highways, Roads Liaison Group

Health and Safety Executive sector information minute 'Management of the risk of falling trees'
Management of the risk from falling trees, HSE advisory SIM 01/2007/05

Trees Matter, National Urban Forestry Unit

Jon Stokes; The Tree Council (information in relation to Chalara in the UK)