

SECTION TWENTY-ONE

TREE MANAGEMENT

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This Section issued:	November 2007	
Issue number:	6	
Date for review:	No later than November 2008	
Review by:	H&S Committee, Mike Turner	

21.0 TREE MANAGEMENT

21.1 INTRODUCTION

1. This Section of the Manual sets out the way in which The Royal Parks meets its obligations to reduce the hazards from Royal Parks trees to staff, contractors and visitors.
2. All landowners have a common duty of care under the *Occupier's Liability Act 1957* to take all reasonably practicable precautions to ensure the safety of those on his land. Furthermore, the *Health and Safety at Work etc Act 1974* requires employers to conduct their undertaking in such a way that those not in their employment are not exposed to risks to their health and safety. The Royal Parks, therefore, must take all reasonably practicable precautions to ensure that all its trees are in a safe condition (see Guidance, below).
3. The Royal Parks as custodians of the trees within their adoption, is expected in law to have knowledge and tree care to a high standard. The Royal Parks must therefore ensure that it takes steps commensurate with this knowledge towards the good management of trees within its responsibility to ensure that it meets its duty of care to visitors, contractors and staff.
4. However, the law recognises that there is not an infinite financial or operational resource to be able to do all tree work or inspect all the trees at once. It is therefore essential that both the surveys and the works be prioritised. The most efficient way of prioritising is by assessing hazard and risk, but a system must not only manage risk effectively; it should also include a clear audit trail and history to demonstrate that all reasonable precautions and steps have been taken.
5. In many instances defects in trees usually start to develop many years before the tree becomes potentially unsafe. Regular inspections should identify and monitor such defects along with any damage or other factors so that action can be taken before the trees become dangerous. It is therefore essential that a written tree safety policy ensures detailed record keeping.
6. It is impossible to ensure that no branches or indeed whole trees will fall on a person at any time, but this Section does attempt to prescribe a procedure which will ensure that the risk is reduced to an acceptable level. It therefore does not attempt to prevent all falls on people, only those which are heavy enough to cause serious injury. Furthermore, it does not attempt to prevent falls in all parts of all parks because, for example in Richmond Park with its 1,000 hectares and 100,000 trees, this would be impracticable. It also attempts to ensure that drivers on roads and pedestrians on pathways and other areas of high usage are not exposed to unacceptable risks. Whilst an inspection will endeavour to identify and assess hazards, it is accepted that trees which have recently been inspected will occasionally fail unexpectedly, and that any injuries caused by such a fall are unforeseeable.

21.2 POLICY

The Royal Parks undertake to ensure that working practices are established to protect staff and Park visitors from the hazards associated with falling branches and trees.

21.3 AIMS

In order to fulfil its Policy above, the aims of The Royal Parks are to:

- a. prioritise tree work so as to deal effectively in the first instance with areas of highest volume of vehicular, pedestrian, etc., traffic, e.g. roads, cycle paths, horse tracks, footpaths, play areas, etc.;
- b. inspect trees regularly to establish, in so far as is reasonably practicable, the risk of falls which are heavy enough to cause serious injury;
- c. make safe trees, in so far as is reasonably practicable; and
- d. keep records of these activities.

21.4 RESPONSIBILITIES

1. In discharging their H&S responsibilities under this Procedure, Royal Parks staff will, as a minimum, carry out the following duties.

Chief Executive

2. The Chief Executive will ensure support, by way of time and resources, for the Procedure in this Section.

Senior Management Team members

3. SMT members will:
- provide support to the SMT member responsible for Health and Safety; and
 - ensure that sufficient resources are made available for the implementation of this Procedure.

SMT member responsible for H&S

4. The SMT member responsible for H&S will:
- read and understand the obligations and requirements of this Procedure;
 - ensure support for the Procedure through the H&S Committee structure;
 - review and monitor the operation of the Procedure; and
 - bring to the attention of the SMT team the resources required to meet the Procedure.

Arboricultural Officer

5. The Arboricultural Officer will:
- undertake risk assessments;
 - ensure that a schedule of inspection covering all trees in their Parks is produced based on the risk assessments;
 - arrange for the inspections to be undertaken according to the schedule;
 - ensure that suitable and timely actions flowing from the inspections are undertaken;
 - report to his Line Manager any delays beyond the timings in the schedule;
 - ensure that suitable records are kept; and
 - assist Park Managers in their responsibilities under this Procedure.

Park Managers

6. Park Managers will:
- ensure that suitable and timely actions flowing from the inspections are undertaken;
 - report to their Line Manager any delays beyond the timings recommended in the inspections; and
 - ensure that suitable records are kept.

Health and Safety Manager

7. The Health and Safety Manager will:
- assist the SMT member responsible for H&S in his responsibilities under this Procedure;
 - assist the Arboricultural officer in his responsibilities under this Procedure; and
 - assist Park Managers in their responsibilities under this Procedure.

All staff

8. All staff will:
- take care in windy weather; and
 - report to their manager any hazards of which they are aware.

Central Health and Safety Committee Representatives

9. The Central Health and Safety Committee will monitor the implementation of this Procedure.

Summary Guide

10. Annex 1 contains a summary of the key steps and roles and responsibilities in the implementation of The Royal Parks Tree Management Arrangements.

21.5 PROCEDURE

Basis of Procedure

1. Like any good H&S Management system, The Royal Parks' a tree risk management system is proactive, rather than reactive as far as possible, with problems identified as part of a routine assessment rather than reacting to reports regarding specific trees. Secondly, any actions, such as tree works or further investigation that are proposed, are prioritised. Finally, any actions proposed are carried out in accordance with the priorities. The procedure therefore has a refined and sensitised approach, which considers the available resource and the time commitment against the priorities.

Risk Assessments

2. In 2006, The Royal Parks reviewed the 2002 risk assessment of the trees under their management, which divided the Parks into three risk zones, and it was determined that the Parks would henceforth be divided into four risk zones: to make the overall commitment more sensitised, efficient and prioritised.

3. The risk zones are:

a. Zone 1.

Examples of top priority zones include; near buildings; key areas of high traffic volume such as roads; high pedestrian occupancy, such as tarmac paths and busy lawns. In many of the smaller parks such as St James's and Green Parks this is likely to be the entire park.

b. Zone 2.

Examples of mid priority zones include areas of high occupancy, but not necessarily high volumes of pedestrian and vehicle usage. Such areas exist around car parks, or close to main access points where visitors are more likely to congregate and linger beneath the crowns of trees e.g. The Cockpit area in Hyde Park.

c. Zone 3.

Areas of the park further away from roads and access points but, due to the numbers of visitors, with a high volume of pedestrians. It also includes minor footpaths, cycle paths and bridle paths in more remote areas of the parks that may be frequently used. In these areas, the occupancy is lower as people tend not to linger, and therefore less likelihood of harm arising from an unforeseen tree failure e.g. woodland pasture in Richmond Park.

d. Zone 4: No Access.

Areas with no access, or restricted access such as The Wilderness in Greenwich Park.

4. The zones reflect normal usage, but will be kept under review as circumstances may change. An event involving large groups of people may change the status for the duration of the event; new paths or re-routed paths and roads will also change the patterns of use and may change the risk zone. Parks staff should be mindful to such changing circumstances and if necessary should discuss the review of a particular zone with the Arboricultural Officer.

5. Also included were areas falling within any freeboard.

6. The Park Manager has the most detailed knowledge of the usage of the site by visitors (routine and special occasions) and trespassers. Park Managers were therefore involved in the assessment of the risk zone classification. Areas by target risk have been identified on plans, and the numbers of trees within each

zone calculated, mainly by extrapolating density of tree cover counted in small areas. Surveys of trees in Zone 1 (high risk) were completed in 2006 and numbers are therefore now more accurate for this Zone.

7. Individual trees may be given a higher inspection priority than the risk zone in which they are sited. This exception is given to trees that are found to have a higher hazard potential than their risk zone suggests, such as tree species or age; e.g. old and veteran trees, and very large single specimen trees sited in open areas. These act as magnets, drawing in people from surrounding areas. Also 'problem' species, e.g. poplars, willows, chestnuts which are known to have a higher incidence of failures. Similarly a tree may be prescribed a reduced cycle of inspection as part of a VTA assessment (*1). This is undertaken from ground level and involves the identification of visual symptoms, which the tree produces in reaction to a weak spot, or area of mechanical stress. Observations from roots up to branch tips in relation to the potential target, the size of the part most likely to fail and the probability of failure enable evaluation of the level of risk in relation to the potential target.

8. Only trees greater than 150mm in diameter (measured at 1.3 metres above ground level) are included in the risk assessments. This is based on research¹ of documented tree failures that found that most failures occur in trees greater than 150mm in diameter (DBH). Where trees are in woodlands or groups, only trees along the edges of woodlands or adjacent to recognised path systems within wooded areas and groups are surveyed, unless they are identified with a priority zone as above.

¹ *The Body Language of Trees*, TSO 1995

9. The risk assessments will be reviewed before 2010.

Surveying

10. A typical VTA inspection using the Arbortrack system in accordance with the above procedure, typically takes between 3 & 5 minutes with around 100-150 trees inspected in an average working day. Implementation of the tree risk management procedures will also enable future surveys to be committed strategically. In practice, this usually means that some trees take longer than others, but this is shown to be a reliable average.

Inspection

11. All inspections should take place from ground level when visibility is clear, ideally in early autumn before leaf fall as this permits a good assessment of foliage condition, signs of decline in the canopy and the presence of fungal fruit bodies. Because timing and frequency are of vital importance for the strategy to operate efficiently, the identification of the next inspection will depend on the nature of the hazards identified as well as the circumstances and the definition of the risk zone. If there is a problem that cannot be fully evaluated, suspect trees should be programmed for re-assessment. In the case of a specific defect, this should be recorded and identified for further monitoring or detailed investigation and may require aerial inspection or use of specialist diagnostic tools. Binoculars are also helpful during tree inspections to evaluate defects, fruiting bodies and structural weakness at a high level, which otherwise may not be identified.

12. In addition, various inspections are carried out as part of normal work routine in all parks to reinforce those commissioned by the Arboricultural Officer. These should be recorded by parks on the form included in Annex 3, and copied to The Arboricultural Officer.

Detailed Investigation

13. A specialist examination of trees may be required where trees cannot be fully assessed by visual inspection alone. This type of inspection would normally be specified or requested to evaluate the amount and evaluate the extent and type of decay present in the trunk, major branches or roots. In some cases this may require the use of specialised devices, but the equipment alone cannot be relied upon to make the evaluation. The presence of other factors such as wind loading, which are affected by the height and sail area of the crown, and exposure must also be assessed in relation to the results.

14. In many cases it is simply not appropriate to carry out a detailed investigation. For instance, a woodland tree within a low risk zone would warrant less commitment than a specimen tree in a park. It must also be

borne out that some methods of evaluation are invasive, and cause damage to the tree. Typically, this type of damage is caused by holes being bored into existing decay columns which subsequently break down barriers created by the tree and allow the pathogen to move into previously sound wood. Therefore, the inspector must make a judgement whether the inspection warrants an invasive type of evaluation technique, and where possible, define the method of evaluation when specifying the additional inspection.

Zone1	Frequency	Type of Inspection
<p>All trees</p> <p>Veteran trees and High value trees retained in the High Risk Zone with managed defects</p>	<p>Individually inspected and recorded at least annually unless previous inspection or risk assessment prescribes a different cycle.</p> <p>At least annually as high risk, with additional informal inspections as part of work routine, or in accordance with remedial works management plan.</p> <p>Informal inspections of all trees as part of work routine, and after storms. Any defects recorded and followed up by recorded inspection or remedial works.</p>	<p>Visual Tree Assessment (VTA) inspection especially in the crown and around the base of the tree. Thorough inspection, monitoring rate of decline or increasing hazard. Equipment and climbing inspection may be required.</p> <p>Routine inspection for clear defects.</p> <p>Rapid but careful search for clear visual defects.</p>
Zone 2	Frequency	Type of Inspection
<p>All trees</p> <p>Veteran trees and High value trees retained in the High Risk Zone with managed defects</p>	<p>Biennially. All trees individually inspected and recorded unless previous inspection or risk assessment prescribes a different cycle.</p> <p>At least biennially as medium risk, with additional informal inspections as part of work routine, or in accordance with remedial works management plan.</p> <p>Informal inspections of trees as part of work routine, and after storms. Any defects recorded and followed up by recorded inspection or remedial works.</p>	<p>Careful visual inspection, assessing hazards and rate of decline. Equipment and climbing inspection may be required.</p> <p>Routine inspection for clear defects.</p> <p>Rapid but careful search for clear visual defects.</p>
Zone 3	Frequency	Type of Inspection
<p>All trees</p> <p>Veteran trees and High value trees retained in the High Risk Zone with managed defects</p>	<p>Routine inspections of the general condition of the trees as part of a triennial walk through survey. Any defects recorded and followed up by recorded inspection or remedial works.</p> <p>At least biennially as high risk with additional informal inspections as part of work routine, or in accordance with remedial works management plan.</p> <p>Informal inspections of trees as part of work routine, and after storms. Any defects recorded and followed up by recorded inspection or remedial works.</p>	<p>Rapid but careful visual search and assessment of defects and disease.</p> <p>Routine inspection for clear defects.</p> <p>Rapid but careful search for clear visual defects.</p>

Zone 4	Frequency	Type of Inspection
<p>All trees</p> <p>Veteran trees and High value trees retained in the Low Risk Zone with managed defects</p>	<p>Informal inspection of the general condition of the trees as part of a walk through survey. Any defects recorded and followed up by recorded inspection or remedial works.</p> <p>At least biennially and informal inspections as part of work routine, or in accordance with remedial works management plan.</p>	<p>Rapid but careful search for clear visual defects.</p> <p>Rapid but careful search for clear visual defects.</p>

15. Although the objective is to survey the trees in accordance with the specified inspection regime, the extent of the estate and the numbers of trees involved means that the cycle cannot be applied rigidly. Within the cycle of the inspections, it is important that the timing is rotated, and undertaken at different times of year between spring and autumn to enable the trees to be evaluated in various seasons. The cycle also needs to be sufficiently flexible to accommodate weather events, duration of surveys and availability of inspectors. Therefore, re-inspections will be programmed by reference to the previous years inspections, and committed strategically to avoid any hazards being overlooked. The surveys are also reinforced by routine inspections by park staff as part of their daily duties, and individual hazards reported and assessed accordingly.

16. If it seems likely that the cycle is not going to be met, the Arboricultural Officer will discuss the situation with the Park Manager, and will ensure that an appropriate inspection will be prioritised as necessary.

Remedial Works

17. Following the inspection, the inspector would propose action: in H&S terms this would be seen as a control method to reduce risk to the public from falling branches, etc.

18. Some degree of risk will be inherent even in a tree with no identified defects. The inspector's task is to evaluate the hazard that the defects pose and the risk of damage to people or property if the tree, or part of it, fails, and to propose appropriate action to reduce the risk to an acceptable level.

19. Works prescribed must therefore relate to the assessment of the hazard, and the priority for the works appropriate to the risk zone. However, the remedial work or monitoring specified must also be commensurate with the amenity value of the tree; it is not practical to spend vital resource to maintain or carry out detailed investigations of low value trees, or trees which have minimal useful life span. Furthermore, it is necessary to take into account broader issues such as whether the tree has particular amenity value either in itself, or as a habitat for wildlife.

20. There may also be the potential risk of habitat loss or harm to protected species. Cavities, splits and bark flaps may be a potential bird nesting site or bat roost. These species are protected by law under the *Countryside and Rights of Way Act 2000* and the *Wildlife and Countryside Act 1987* and, if they themselves or their resting places are present, no tree works can take place without a licence. This is likely to be particularly significant in the case of veteran and over mature trees, and those providing a habitat for protected species and if necessary include precautions or seek further advice (see Annex 2). In general, safety takes precedence over amenity; but that does not mean that potentially dangerous trees must necessarily be felled. There may well be other possible actions that will eliminate or sufficiently reduce the risk remedial works on the trees, visitor management such as zoning, re-routing paths, re-locating car parks or picnic sites, or changing ground vegetation (i.e. long grass, dead hedges) to encourage people away from high risk areas should also be considered. In this way aerial tree works can be avoided, eliminating the need to climb and the risks associated with work at height. These additional options to reduce the risk may be proposed by the inspector as an additional option to tree works to be considered by the Park Manager. Where the likely risk of harm is very small and the impact of controls very great, it may be reasonable to take no further action.

21. In any risk area, trees which show obvious signs of imminent collapse or other serious hazards, should be dealt with or controlled immediately. This may require the use of temporary fencing to keep park staff and visitors out of the area until such time as the works can be carried out.

Roles and Responsibilities

22. There needs to be consideration of the existing resource available within the organisation e.g. who is going to organise and implement the tree management procedures. This needs to take account of the entire system, incorporating a system of recording and tree strategy development, including management through to tree inspectors and tree works contractors. Using a consultant to inspect the trees means that some of the financial resource is used for inspection, and is therefore not available for tree works when there may be adequate resource in house to carry out the inspections. Therefore a combination of methods committed strategically achieves the objectives of risk and optimum use of resource.

23. Only staff qualified to NVQ III and above in Arboriculture or as approved and delegated by the Park Manager, may carry out annual or biennial cyclical inspections. All staff that have been trained in the implementation of the system and have been delegated this responsibility by the Park Manager and/or undertaken the LANTRA Basic Tree Inspection training, carry out roles for routine and rapid visual inspections.

24. Tree work contractors also have a duty to report any significant hazards that may be apparent during the course of their work, and in extreme cases may take appropriate action to address the hazard without further consultation.

Follow up

25. Park Managers must ensure that the trees identified in the Inspection as having a high risk of injuring people are made safe as soon as is reasonably practicable – usually within a day. In any risk area, trees which show obvious signs of imminent collapse or other serious hazards, should be dealt with immediately. This may require the use of temporary fencing to keep park staff and visitors out of the area until such time as the works can be carried out.

26. All other control measures shall be undertaken as soon as is reasonably practicable, bearing in mind the level of risk. Park Manager's MUST report to their Line Manager any delay beyond the timing recommended in the Inspection Report.

27. If insufficient resources are available to achieve the Control Methods described above, the Park Manager must bring this to the attention of his line manager, who must discuss and record what steps to take.

28. If the risk of a failure is high and the area around the tree has high public, staff or contractor usage, the Park Manager should give consideration to closing off surrounding area, backed by appropriate temporary signing.

Severe weather

29. During periods of extremely windy weather the risk from falling branches will be increased. At gale forces, the risk may be increased to an unacceptable level. Parks Managers (or the duty Park Manager) must give consideration to closing the roads or footpaths physically, backed by appropriate temporary signing. There may be instances where conditions are severe enough to consider closing the whole Park.

30. Staff are reminded that the Chief Executive has been asked to be informed of any Park closure immediately.

Accident/Incident Reporting

31. Park Managers must ensure that all accidents involving trees are reported to the H&S Manager.

32. Just as important, Park Managers must report all incidents ("near misses") involving trees to the Arboricultural Officer. It is important to record events such as a tree shedding a branch, whether or not it injured someone, so that The Royal Parks may demonstrate due diligence and assess if there are any risks of which they are not aware.

Climate Change/Pests and Diseases

33. A review of the possible impact of climate change on the vegetation and park management regimes is being carried out during 2007/08. The cumulative impact of climate-induced stress and of any associated changes in the impact of pests on the trees is uncertain in the medium-long-term.

34. Although there is unlikely to be any significant short-term increase in the resource commitment as a result of climate change, a flexible approach will be necessary to meet any challenge posed by any long-term changes. This will be considered during the ongoing review of policy and procedure.

Review

35. The policy and procedure will be subject to regular review by the Royal Parks in recognition of developing industry best practice, the implementation of The Royal Parks new inspection and recording arrangements and the associated development of the tree database.

21.5 GUIDANCE

Further Information

1. For further information on this document or on the undertaking of tree management, please contact Mike Turner, The Royal Parks Arboricultural Officer on 020 7298 2086 or mturner@royalparksgsi.gov.uk

Case Law

2. It may be helpful when deciding a reasonable practicable approach to falling branches within the Royal Parks to consider the case of "Latimer v. AEG". This case, although not directly relevant, dealt with the position at common law relating to "unprecedented and freak hazard".

3. The Court held that where a means of access becomes hazardous, it may not be reasonably practicable to take immediate steps to do something about it and a temporary delay may be expected. However there must be reasonable attempts to deal with the problem.

4. In June 2002 Birmingham City Council was taken to Court by the HSE under the *Health and Safety at Work, etc. Act 1974* after a tree fell on a car, killing three people. The Council was fined £150,000 plus £56,000 costs for failing to have in place an effective inspection regime, in particular a risk assessment to determine where the risks are greatest. The Royal Parks Procedure was designed specifically to address this.

5. The *Miscellaneous Provisions Act 1976* contains legislation in sections 23 and 24 that enables the Local Authority (LA) to deal with dangerous trees on private property. An example of such a situation could be 'that a tree is dangerous to third parties and the owner refuses to make it safe; the LA can serve notice on the owner to make the tree safe, if the owner still refuses then the LA can **enter** on to the owners property to make the tree safe and recover the expenses incurred from the owner.

6. The *Occupiers Liability Act 1957/1984* lays down a duty for occupiers to take reasonable steps to ensure that premises (including woodland) are reasonably safe for visitors permitted to be there. This affects managers of woodland and forest who need to make regular safety inspections of trees adjacent to car parks, footpaths, picnic areas, public areas etc.

7. The *Highways Act*. Section 15 permits a Highways Authority to serve a notice requiring the pruning of vegetation which obstructs the passage of vehicles, the view of drivers, the light from a street lamp, etc to be cut. This section also covers the ordering of the removal of dangerous trees which may threaten the users of the road. The work should be carried out within 14 days. Section 79 permits a Highways Authority to serve a notice to restrict new planting or remove existing vegetation which is/may cause a danger to road users on a bend or junction. Objections should be made within 14 days.

8. The *Wildlife and Countryside Act 1981* (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain.

9. The *Countryside & Rights of Way Act 2000* (CRoW) includes amendments to the Wildlife and Countryside Act. These strengthen the protection for species within the Schedules 1 & 5 of the Act, notably bats.

References

10. The following have been referred to in preparing this document:

- TSO - Diagnosis of Ill Health In Trees, 1994

- TSO – Principles of Tree Hazard and safety Assessment, 1999
- TSO – The Body Language of Trees, 1995
- Sweet & Maxwell - The Law of Trees Forests & Hedgerows, 2002.
- English Heritage – Tree Safety Instruction, 2001.
- National Trust – Tree Safety Management Policy, 2003.
- Forestry Commission Westonbirt Arboretum – Tree Risk Management Strategy, 2003.

Further reading

Occupier's Liability Act 1957 (HMSO)

Health and Safety at Work, etc., Act 1974 (HMSO)

Principles of Tree Hazard Assessment & Management – David Lonsdale (Forestry Commission/HMSO)

Hazards from Trees - General Guide (Forestry Commission/HMSO)

The Law of Trees, Forests and Hedgerows – Mynors (Sweet & Maxwell)

ANNEX 1

THE ROYAL PARKS OPERATIONAL GUIDE TO ARBORICULTURAL MANAGEMENT ARRANGEMENTS 2007/08

Introduction

1. This guide and desk instruction is intended to provide a summary reference to The Royal Parks (TRP) procedures for tree management and for Arbortrack use during 2007/08. It confirms management roles and responsibilities and provides an update on current plans for inspections. It is applicable to all parks and sites managed by TRP and forms an Annex to "The Royal Parks Tree Risk Management Policy and Procedures"
2. The procedures in this guide should be followed by and made available to all involved in Royal Parks tree management, including consultants.

Inspection Priorities

3. Whilst only trees greater than 150mm in diameter (measured at 1.3 metres above ground level - DBH) are being initially included in the hazard assessments, in subsequent reinspections further detail and information on all trees, including small and young trees, will be successively added to the database.

Woodlands & Groups

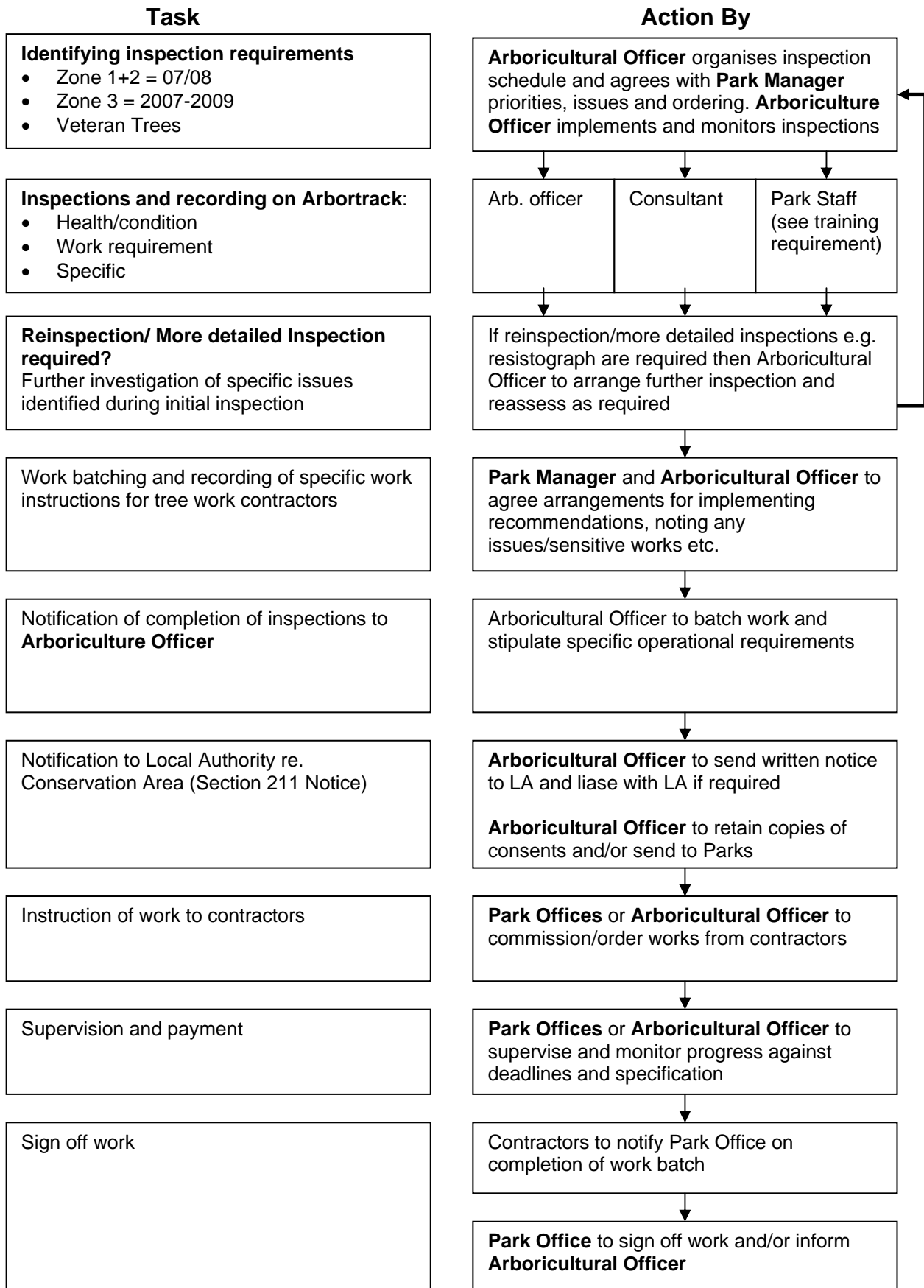
4. Where trees are in woodlands or groups, only trees along the edges of woodlands or adjacent to recognised path systems within wooded areas and groups are surveyed, unless they are identified within a priority zone, as described above.

Veteran Trees

5. All veteran trees should have in place either an Individual Tree Management Plan (ITMP), including recommendations for survey frequency, or where veteran trees do not have an ITMP, the trees will be inspected in accordance with the Tree Risk Policy. In the case of veterans in Richmond Park the programme is led by the Park Manager in liaison with the Arboricultural Officer.

Roles and Responsibilities

6. The arrangements for commissioning, supervising and managing inspections and maintenance works are summarised in the following flow chart:



Inspection Arrangements

7. It is essential that TRP tree safety policy includes detailed record keeping. Arbortrack must be used for all routine and regular Royal Parks tree surveys and tree work recording. Arbortrack inspectors/users will survey trees using the tablet PC in accordance with the risk management procedures i.e. risk zones. When surveying, the name of the user is recorded against the tree record and the associated recommendations are automatically updated.

8. The existing Royal Parks tree numbering will be retained on Arbortrack where the historical number has been determined. However, the Arbortrack system will automatically generate an individual new number to each tree. It may therefore be necessary to use the Arbortrack reference until such time as TRP reference can be confirmed, to avoid error or duplication. This does of course require the use of the Arbortrack plans rather than the existing CAD plans. However, the Arbortrack system permits the rapid toggling of either number while on site or when using the desktop.

Inspection Regimes 07/08

9. The following inspection arrangements have been put in place for 2007/08:

Zone	Comments
1.	Reinspect all Zone 1 and develop Zone 1 database
2.	Longford River inspected 2006/07. All remaining Zone 2 to be inspected 2007/08
3.	Inspections to commence 2007/08
4.	Planning for future years with some walk though 2007/08
Detailed Investigations	To be arranged as required

10. All inspections are being instigated and monitored by The Arboricultural Officer in accordance with the flow chart in Section 5 above with the exception of the veteran surveys which are managed with the assistance of Treework Environmental Practice, who retain the data for all the veteran trees on their system. The Arboricultural Officer will also update spreadsheets outlining overall inspection arrangements and progress and circulate these to staff as required.

11. Where a recommendation is made for a detailed investigation of decay or an aerial inspection i.e. further inspection, the subsequent report may change the final work recommendation for the tree. Recommendations for detailed investigations must be followed through and the final work recommendation added to the Arbortrack system.

12. Where appropriate the Arboricultural Officer will instruct consultants' surveys and detailed investigations by batch.

Adhoc/Routine Inspections

13. Various inspections are carried out on a recurring basis in all parks in addition to those commissioned by the Arboricultural Officer. These should be recorded by parks on the form included in Annex 3, or by identifying a similar level of detail and copied to The Arboricultural Officer.

LPA Conservation Area Notices (Section 211)

14. The Arboricultural Officer will make all requests to local authorities under planning legislation unless otherwise agreed with the respective Park Manager.

15. Under legislation in place from 2006, all Crown bodies need to apply for planning permission from their Local Planning Authority (LPA) for most tree work. The removal of crown exemption means that the controls included in the Town and Country Planning (Trees) Regulations 1999, which govern the use of Tree Preservation Orders (TPO) and Conservation Areas in respect of trees, are also applicable to TRP.

16. The Town and Country Planning Act 1990 also makes special provision for trees in conservation areas which are not the subject of a TPO. Under section 211, anyone proposing to cut down or carry out work on a tree in a Conservation Area is required to give the LPA six weeks' prior notice (a 'Section 211 notice') which is then placed on a public register. TRP have a part exemption in Westminster, in that it is recognised that there are so many tree works it would overburden both the LPA and TRP. Therefore here TRP should submit a list of works for determination in one or two notices per year, together with a general statement about the management of trees generally, to show that the trees are under 'good management'. The Arboricultural Officer will update and advise on arrangements for other boroughs.

17. The above obligations also apply to our Contractors. Carrying out relevant work without the appropriate consent can be a criminal offence.

18. It will not normally be necessary to obtain consent for any works required where there is an imminent danger, providing a record is retained of the works undertaken or the LPA are notified. However the burden of proof rests with TRP to show, on the balance of probability, that the tree was in fact dead, dying or dangerous. It cannot simply be stated that the tree works were required because the tree will become a hazard in the near future.

19. It is therefore vital that there is clear and accurate recording of tree works to enable Section 211 notices to be submitted.

Commissioning and supervision of Tree Work

20. As inspections are completed and following receipt of necessary external permissions the Arboricultural Officer will send batches of work to the respective Park Manager or their designated representative. Alternatively the works can be viewed on the system at each park office via Arbortrack.

21. Recommended works should normally be implemented by the Park Manager however should there be any works that are not considered appropriate, they should be discussed with Arboricultural Officer and/or Consultant at the earliest opportunity.

22. If the specified Arboricultural works are not to be undertaken then, following discussion with the inspector, the user (i.e. Park Officer) must make the relevant change on the system. By changing the recommendation under their user name, the recommendation record and date of the change will be amended to the user and stored in the audit history for the trees concerned.

23. Orders can be made directly using the "Tree Works Order" function in Arbortrack. The Arboricultural Officer will create these if requested by parks staff.

24. Park staff will normally instruct and supervise the tree work contractors.

25. Each Park is to sign off completed tree works on the Arbortrack system, or advise the Arboricultural Officer when works have been completed for the Arboricultural Officer to sign off.

Management of Programme/ Further Information

26. The Royal Parks 2007/08 Tree Management programme for the inspection of trees and population of Arbortrack is subject to ongoing review by the Arboricultural Officer to whom any requests for further information should initially be addressed.

ANNEX 2

BATS AND TREES IN THE ROYAL PARKS: A DRAFT CODE OF PRACTICE FOR THE INSPECTION OF TREES PRIOR TO CARRYING OUT TREE-WORKS

This document and its accompanying papers are for guidance only when planning tree-works and should not be interpreted as a statement of the law.

Background

1. All species of bats and their roosts have full legal protection in England against damage, disturbance and destruction. There is a variety of relevant legislation and guidance as summarised in Appendix 1, the most recent being the Countryside and Rights of Way Act 2000 which came into force on 30th January 2001 and which added the word 'reckless' within offences under Section 9 (4) of the Wildlife and Countryside Act (WCA) . In brief, it is illegal to intentionally or recklessly to disturb, take (capture), injure or kill bats, or to damage, destroy or obstruct access to a bat roost (a place used by a bat for shelter or rest) whether or not bats are present.

2. Clearly it is important to understand how the word 'reckless' is defined in English law, following the case of R v Caldwell in 1982. This states that the prosecution will have to show one of two options:

- that a person deliberately took an unacceptable risk (recognised the risk but took it anyway)
- or that they failed to notice or consider an obvious risk (did not consider whether there was a risk)

The term 'reckless' does not apply to a person who makes a genuine error of judgement, for instance a person considers whether there is a risk, and honestly concludes there is no risk, even though their assessment is wrong (Childs, 2002: See Appendix 2).

3. A further defence formerly available was where "the act was the incidental result result of a lawful operation and could not reasonably have been avoided" (section 10(3)(c) of the WCA and R.40 (3)(c) of the Habitats Regulations). This defence was removed in 2007 and there is now no defence to the strict liability offence of damaging or destroying a breeding site or resting place of a bat, even by accident. For further information refer to Defra (2007)

4. Further information on bats and their protection may also be obtained from:

- Cowan, A. (2003) Guidance notes No. 1. Trees and Bats, Arboricultural Association. ISBN 0 90097 837 6
- Defra (2007) Guidance note on the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007: Changes to species protection provisions. <http://www.defra.gov.uk/wildlife-countryside/ewd/ewd-chang-spec-prot.pdf>
- Entwistle, A.C. et al. (2001) Habitat management for bats: a guide for land managers, land owners and their advisors. JNCC. ISBN 1 86107 528 6
- Mitchell-Jones, A.J. (2004) Bat mitigation guidelines. English Nature. ISBN 1 85716 781 3
- Mitchell-Jones, A.J. & A.P. McLeish (1999) The Bat Worker's Manual (Edn.2). JNCC. ISBN 1 86107 462 X
- Childs, J, (2002) Bats and the law: what to do when the law is broken. Bat Conservation Trust and the Royal Society for the Protection of Birds.
- Waters D. & Warren R. (2003) Bats. The Mammal Society. 32 pages. ISBN 0 906282 51 9

Aim of this document

5. The aim of this document is to provide a concise and straightforward Code of Practice for anyone planning to carry out tree works in the Royal Parks. Being able to demonstrate that you were following the protocols in this Code of Practice should assist in any defence against possible charges of recklessness (as above), because it demonstrates that reasonable steps were taken to comply with the law.

6. Those engaged in tree works should therefore carefully observe the following guidelines. It is important that the pro forma supplied in Appendix 3 (Bats in Trees Inspection Checklist) or an equivalent form is completed for each tree, retained as a record and copied to the Park Manager.

The Guidelines

7. When planning tree works, a Defra licence will be required for works on any tree known to be used by bats, or if the proposed activity is reasonably likely to result in an offence. Obtain further advice as necessary from English Nature or the Bat Conservation Trust. Consult with the Park Manager.

8. Consider:

- whether public safety obligations may be met by alternative action such as fencing-off a hazardous tree, or re-routing paths away from it.
- what would be the minimum surgery to make the tree safe. Consider major reductions or felling only as a last resort.

Seasonal issues

9. Whatever time of year, the potential for disturbance or damage to bats and their resting places must be assessed before work on trees commences. At least 15 of the 17 British species have been found to use tree roosts and 10 have a medium or high dependency on trees for either maternity roosts or hibernation roosts (Mitchell-Jones, 2004)

Table 1. Seasonal changes in bat activity

Grey shaded periods are times when the bats are most vulnerable to damage or disturbance from tree works.

November - March	Bats are in hibernation. However bats may come out of torpor and briefly become active during warm spells.
March-April	Increased activity as the weather becomes warmer, but return to torpor in cold spells.
May	Full activity. Females search for suitable maternity sites. Females may congregate in particular sites in large numbers.
June to August	Young born late May-June and suckled in the maternity roost. Females feed actively often covering large distances to feeding areas. Young independent by the end of August.
September-October	Bats active around mating sites while the weather remains warm, but gradually becoming torpid for longer periods and searching for suitable hibernation sites.

10. There is no truly 'safe' season for bats in which to conduct tree-works. In the Spring and Summer, bats may use trees as occasional resting places, individual or communal roosts, maternity roosts and as hibernation sites in the winter. See Table 1.

11. The least vulnerable time in which to carry out tree-works is **during warm spells** in Spring (March, April) and Autumn (September, October, November) – the grey-shaded periods in table 1. During these periods, minimise risk to bats by avoiding working in cool weather when bats may be less active and may become torpid. At these times and during hibernation, bats are particularly vulnerable to injury because they cannot fly away should they be disturbed by tree-works.

Checking a Tree

12. Searching for new roosts, observing or counting bats outside roosts, or checking a single bat box that is not already known to contain any bats, does not require a licence (Mitchell-Jones & McLeish, 1999 pp.11-12). Prior to conducting works on any tree, carry out the following checks:

History of use of this tree by bats

13. If the tree is a known roost site, past or present, a licensed bat worker will need to be present when inspecting the tree. It will be necessary to consult with a Statutory Nature Conservation Organisation – in this case English Nature.

Inspection of the tree

14. A thorough survey for potential bat resting sites. In some cases this may be possible from the ground with the aid of binoculars, but many trees, especially mature specimens with a complex structure, may require the use of a hoist or a climbing inspection. During inspection, the use of a bat detector tuned to around 25kHz is a recommended additional detection aid to pick up communication calls of roosting bats, and an early warning of disturbance.

15. The inspection should note:

- a. The presence of any rot hole, cavity, split or crack, woodpecker hole, bark flap, nest box or bat box, cavity under root buttress, ivy clad trunk and branches.
- b. The presence of droppings below a potential roost site or in the base of a cavity. These may be hard to find amongst leaf litter and are usually washed off the trunk by rain. Bat droppings are dull dark brown and look rather like mouse droppings but crumble easily into a fine powder of insect remains. There may be a smell of bats and flies may be attracted to the odour.
- c. Dark staining around a hole (from the bats' greasy fur). The hole edges may also be smoothed.
- d. Dark staining below a hole.
- e. A maze of tiny claw scratches around the hole (close inspection required).
- f. An accumulation of the wings of moths and other insect prey below a potential roost site or in the base of a cavity.
- g. Any noise (squeaking or chittering) coming from a hole, especially on a hot day or at dusk. Use a bat detector with earphones to aid detection if possible, especially where it is noisy (e.g. from traffic).

16. Notes of caution:

- a. Bats may be anywhere in a hole. Do not probe cavities without first satisfying yourself that no bats are present. Inspect the hole as thoroughly as possible e.g. using a mirror on a rod with a light, or (if available) an endoscope. Bats rarely hang free within a roost space; they typically wedge themselves into tight spaces, sometimes as small as 8mm x 15mm or less. They have been found using all parts of the tree – high rot holes right at the ends of branches, cracks, splits and crevices in the trunk or larger branches, under bark plates and ivy, and even in cavities formed under buttress roots.

- b. There may be little or no external signs of bat occupation – if there is any doubt whether it is a roost, delay work and seek further advice. It may be necessary to check for bats emerging at nightfall or returning at dawn.
- c. When using a bat detector with earphones, take care that your hearing is not impaired to the extent that it may compromise your safety. Consider using a single earpiece.

If signs of bats, or bats are found during an inspection

17. A Defra licence will be required before further work can take place. Stop work immediately to prevent further disturbance. Make the area safe and consult with and the Park Manager and English Nature.

Precautions during tree works after proper inspection has found no bat signs

18. When cutting, cut as far away as possible from any cavity or other potential resting site as possible.

19. Bats may be inside cracks held open by the weight of a branch which may close when weight is taken off. Search such cracks for bats before removing limbs and consider wedging open the split.

20. When felling ivy-clad trees, once felled, allow a 24 hours rest period before de-limbing and removing ivy.

If bats, or signs of bats are unexpectedly found during tree works

21. **IMPORTANT:** Do not handle bats. Although bats are not normally dangerous to humans, they may bite when handled. There is a risk that some bats may carry rabies, an infection that may be fatal to humans. All bat workers are advised by the Department of Health to have a rabies vaccination. Always wear stout protective gloves when carrying out inspections. If you or anyone is bitten or scratched by a bat, contact a doctor at once to discuss whether post-exposure vaccination is required. It may be necessary to capture the bat so that it can be tested for rabies – however once captured, immediate advice should be sought regarding its proper care.

22. If the roost is still safely attached to the tree and bats have not been injured, work should cease immediately. Seek advice as soon as reasonably possible.

23. If the timber is felled, the roost is not exposed and the bats appear to be uninjured, temporarily seal (e.g. tie a thin cloth over the hole) and isolate the roost and seek help. If help is not readily available, position the roost off the ground (if possible); re-open it to allow the bats to fly away to a new location.

24. If the roost has been exposed, cover it and isolate it as above and seek urgent help. Do not be tempted to handle the bats, even if injured.

25. Ensure that you keep an accurate and full record of events. This is not only important for the revision and improvement of procedures in future, but also may provide vital evidence for use in any legal proceedings that result.

26. If any dead bats are found, inform the Park Manager and English Nature at once. All dead bats will need to be sent by first class mail to the Central Veterinary Laboratory as soon as possible (but not on a Friday) along with full details of the circumstances of its discovery. If there is to be a delay in posting, keep in a refrigerator (4-6°C) until the bat can be collected or posted. Packaging must comply with the Post Office regulations for pathological material. Carcasses should be packed in a tightly sealed container and surrounded by absorbent material. This should be securely fastened and placed in a stout envelope or padded bag. The package must be marked "Pathological specimen: Fragile with Care", a large red "R" must be marked next to the address, and the package sent by first class post to: Rabies Diagnostics, Central Veterinary Laboratory, Woodham Lane, New Haw, Addlestone, Surrey, KT15 3NB. (Source: Mitchell-Jones & McLiesh, 1999)

Licensing work on trees with bats

27. To carry out tree works on one or more trees that may damage or disturb roosting bats or their habitats, whatever the reasons for the work a licence must first be obtained from Defra. Applications may take some time, highlighting the need for timely inspections.

28. There are three tests that must all be satisfied before a Defra licence can be granted.

- a. 'to preserve public health, or public safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.'
- b. 'there is no satisfactory alternative' to the action proposed, and
- c. the action proposed 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'

29. If there is an imminent threat to public safety that cannot be temporarily removed, and there is evidence of bats in the tree, English Nature must be contacted immediately and advised of the urgent need for work to be carried out.

Essential Contacts for Advice

English Nature (London Office), Natural England, 20th Floor, Portland House
Stag Place, London SW1E 5RS Tel: 0207 932 5800, Fax: 0207 932 5811
Email: london@naturalengland.org.uk

Bat Conservation Trust, 15 Cloisters House, 8 Battersea Park road, London SW8 4BG
Tel. 020 7627 2629, Web site: www.bats.org.uk

The National Health Service: NHS Direct Tel. 0845 4647. Web site: www.nhs.uk

Royal Parks Arboricultural Officer: Mike Turner. Mobile Tel. 07813 035682.
E-mail: mturner@royalparks.gsi.gov.uk

Royal Parks Community Ecologist. Nigel Reeve. Mobile Tel. 07976 209282.
E-mail: nreeve@royalparks.gsi.gov.uk

Acknowledgements

This document has been developed from a number of publications plus guidance notes produced by the Bat Conservation Trust. I am also grateful to Jonathan Hazell, Director of Arboriculture, Glendale Countryside from whose work I have adapted some of the text.

ANNEX 3

TREE INSPECTION FORM

