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Handbook on Tree Management

Greening, Landscape and Tree Management Section
Development Bureau
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LIST OF ABBREVIATIONS

BMO	Building Management Ordinance
BRR	Brown Root Rot
DEVB	Development Bureau
DLO	District Lands Office
GLTMS	Greening, Landscape and Tree Management Section
HTM	Handbook on Tree Management
IPM	Integrated Pest Management
LandsD	Lands Department
PHC	Plant Health Care

GLOSSARY OF TERMS**Arboricultural services**

Engagement of qualified professionals to provide works related to trees, including but not limiting to tree survey, preparation of tree inventory, tree inspection, tree risk assessment, mitigation measure, planting, transplanting, tree surgery work and control of pest and disease.

Common parts

Apart from the parts specified for the exclusive use, occupation or enjoyment of an owner, all other parts of the building and those parts specified in Schedule 1 to the Building Management Ordinance, e.g. structural parts, lifts, clubhouses, gardens and lawns, are the common parts of the building. Owners may refer to the Deed of Mutual Covenant to ascertain the common parts of their building.

Integrated Pest Management

Method of controlling plant pests combining biological, cultural, and chemical controls.

Lot owner

The owner of any piece or parcel of ground demised under a Government lease.

Mitigation measures

Tree works as recommended in tree inspection or tree risk assessment to mitigate potential tree risk for protection of public safety. Mitigation measures include the removal of defective parts of tree, installation of support system, pest and disease control, etc.

GLOSSARY OF TERMS

Owner

A person who for the time being appears from the records at the Land Registry to be the owner of an undivided share in land on which there is a building and a registered mortgagee in possession of such share.

Plant Health Care

A holistic and comprehensive programme to manage the health, structure, and appearance of plants in the landscape.

Qualified Professional

A service provider or an individual with recognised qualifications and expertise to undertake arboricultural works.

Tree inventory

A tree database containing the latest tree and site information, including tree identity number, species, size, health and structural condition, number of each tree species, photo and location plan.

Tree owner

A person, who is the owner of a land, also owns the trees that are growing on that land. For the owner of an undivided share of a building, he / she also owns the trees that are growing on the common parts of the building.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.1****PURPOSE**

This “Handbook on Tree Management” (HTM) is developed by the Greening, Landscape and Tree Management Section (GLTMS) of the Development Bureau (DEVB). It provides the guidelines and standards of good practice in management of tree assets. The key objectives are:

- Raise public awareness of tree safety.
- Promote good standards of practice in arboricultural works.
- Enhance the quality of tree management works in private properties.

1.2**WHO IS THIS HANDBOOK FOR?**

This Handbook has been developed to assist Tree Owners, Property Managers and Qualified Professionals to better understand how to care for tree assets. Every management personnel or professional who is involved in tree management works should understand and incorporate proper arboricultural practice in planning and implementation of tree works.

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PART 1 – DUTY OF CARE OF TREE OWNERS**1.3****HOW THIS HANDBOOK CAN HELP****For Tree Owners**

- Understand your legal responsibilities for tree safety on your property.
- Understand the importance of routine tree inspections, quality tree maintenance and engaging Qualified Professionals to implement tree works.

For Property Managers

- Understand the role you play in tree management on behalf of your Tree Owners.
- Engage Qualified Professionals for undertaking tree works.

For Qualified Professionals

- Recognise your role and responsibilities in delivering quality tree works.
- Follow the HTM.
- Demonstrate competency and professionalism in your tree risk assessments and tree works.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.4 HANDBOOK STRUCTURE**

The Handbook comprises the following three parts, together with a list of supplementary appendices.

- **Part 1** highlights the legal provisions in tree management and essentials for Tree Owners to undertake proper tree management;
- **Part 2** provides the key steps in tree risk management, which includes knowing the tree stock, undertaking tree risk assessment, mitigating tree risk and keeping tree inspection records; and
- **Part 3** emphasises the importance of general tree care through appropriate tree planting practices and regular tree maintenance.

While the HTM has broad coverage, it cannot be a comprehensive list of all tree management considerations, as tree management practices continue to improve as new technology, management practices and resources develop. The HTM is not intended to undermine new techniques or approaches that aim to add value to existing tree practices.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.5 KNOW YOUR TREE ASSETS****1.5.1 Trees are Valuable Assets**

Effective tree management and maintenance is an investment for your property. Structurally stable and healthy trees can:

- Provide you a comfortable living environment.
- Add value to your property over time.
- Secure the safety of residents, owners and the public.
- Enhance our physical, emotional, intellectual and cultural well-being.
- Facilitate owners in procuring third party risks insurance and negotiating more favourable premium.

1.5.2 Trees are Living Organisms

Trees are living organisms that naturally grow and age with time. As trees grow, they may:

- Increase in size.
- Shed leaves and drop some branches.
- Deteriorate in health.
- Become susceptible to pest or disease and become weak.
- Be structurally damaged.
- Die.

Structural and health conditions of trees may deteriorate with age and change with surroundings. Poor management and improper arboricultural practices will accelerate their deterioration.

PART 1 – DUTY OF CARE OF TREE OWNERS

Favourable growing conditions are the key to ensuring healthy tree growth. The following examples will affect your trees:

- Bad design: mismatch of tree species and growing place
- Bad growing condition: such as confined root space
- Bad supply: poor stock quality
- Bad installation: planting too deep
- Bad management: poor assessment of tree health and tree risk
- Bad maintenance: cutting the main root; lack of water; bad pruning; damaged by construction.

To Tree Owners:

You can contribute to tree safety and enjoy a beautiful landscape by good management of your tree assets.

1.6 MANAGE TREE SAFETY

To ensure human safety, Tree Owners should:

- Undertake management diligently to keep trees in healthy and structurally sound condition.
- Recognise hazardous trees.
- Take proper mitigation measures in a timely manner to reduce tree risk.

PART 1 – DUTY OF CARE OF TREE OWNERS

1.7 LEGAL PROVISIONS FOR TREE MANAGEMENT**1.7.1 Common Law Duty of Care**

The Owner of a land has a common law duty of care to maintain his / her land, including trees growing on the land, so as to ensure that they will not pose danger to his / her neighbours and the public. The Owner can be held liable for personal injury and / or property damage arising from failure to observe the duty.

1.7.2 Building Management Ordinance (Chapter 344)

Where owners of a building have formed an owners' corporation (OC) under the Building Management Ordinance (BMO) (Chapter 344, Laws of Hong Kong), the responsibility for management of the common parts of the building, including gardens and trees, rests with the OC.

Under the BMO, an OC has a duty to maintain the common parts of the building in a state of good and serviceable repair and clean condition. Hence, an OC must properly manage and maintain landscape areas, such as lawns, gardens and trees, within the common parts of the building.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.7.3 Code of Practice on Building Management and Maintenance**

In performing its duties and exercising its powers under the BMO, an OC is guided by the “Code of Practice on Building Management and Maintenance” issued by the Secretary for Home Affairs under section 44(1)(b) of the BMO. The purpose of the Code of Practice is to give guidance and direction as to the standards and practices of management and safety in relation to the common parts of a building for OC to observe and follow. Failure to observe the Code of Practice may be relied upon as tending to establish or to negative any liability which is in question in a civil or criminal proceeding.

The HTM forms part of the Code of Practice (in progress). OCs are advised to follow the HTM to achieve effective tree management and maintenance.

1.7.4 Occupiers Liability Ordinance (Chapter 314)

In the event of tree failure causing injury or fatality to a third party, the Owner can be held legally liable for a breach of the Occupiers Liability Ordinance (Chapter 314, Laws of Hong Kong)¹.

¹ The Occupiers Liability Ordinance (Cap. 314) imposes on occupier of premises, that is the person in control of the premises, a duty to his visitors to take such care as is reasonable in the circumstances to see that his visitors will be reasonably safe in using the premises for the permitted purposes.

PART 1 – DUTY OF CARE OF TREE OWNERS

1.7.5 Provisions in Land Leases

In the sale or grant of a plot of land, the Lands Department (LandsD) executes a lease with the purchaser / grantee, who will then be the owner of the land and is required to comply with the lease conditions. Leases executed at different times contain different conditions prevailing at that time. Lot owners (including the above purchasers / grantees and their subsequent assignees) have to check and comply with the lease conditions.

For lease of a private lot containing a tree preservation clause, the lot owner has to, except in an emergency situation, obtain written consent from LandsD for tree removal and severe pruning works. The application shall meet the requirements specified in the Lands Administration Office Practice Note No. 7/2007 or its subsequent updated version – Tree Preservation and Tree Removal Application for Building Development in Private Projects or its subsequent updated version. In granting a written consent, the relevant District Lands Office of LandsD (DLO) may impose conditions such as transplanting, compensatory landscaping or replanting as deemed appropriate.

PART 1 – DUTY OF CARE OF TREE OWNERS

For the sake of public safety, emergency tree pruning or removal within a private lot can first be carried out by Qualified Professional(s) appointed by the lot owner if the tree within the lot is considered to pose an imminent danger where public safety is at risk after assessment by a professional employed by the lot owner meeting the requirements of the Lands Administration Office Practice Note Issue No. 7/2007 or its subsequent updated version. The lot owner or his / her representative has to submit a detailed report prepared by the professional to LandsD within 21 days after the pruning or removal of the tree. Submission of compensatory planting proposal should also be submitted to LandsD for approval. Maintenance of compensatory planting is including but not limited to conducting tree risk assessment at appropriate time to facilitate proper tree management and maintenance. Section 2.4.2 in this handbook is relevant.

In accordance with the lease conditions, if a lot owner is found in breach of the tree preservation clause without the prior consent of LandsD, appropriate action will be taken by DLO upon detection. Such action includes issuing warning letters to the lot owner, requiring the lot owner to carry out compensatory planting and / or pay a premium.

The information in this Section is for general reference only and should not be relied on as professional legal advice. Tree Owners are advised to seek assistance from your lawyers should you have doubts about your duties and liabilities in your specific case.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.8 ESSENTIALS OF GOOD TREE MANAGEMENT****1.8.1 Engage Qualified Professionals for Tree Works**

Tree inspection, tree risk assessment and mitigation works involve arboricultural knowledge and require professional input. Tree Owners should:

- Engage Qualified Professionals to advise, supervise and handle all matters in relation to tree works.
- Select Qualified Professionals with good reputation and demonstrated experience for quality results.

Appendix 1 – Requirements of Qualified Professionals for Arboricultural Works

Appendix 2 – Sample Brief for Procurement of Arboricultural Services

1.8.2 Follow Standards and Best Practices

The GLTMS promulgates good standards in tree management and promotes professionalism of the arboriculture industry. Tree Owners should:

- Follow the GLTMS guidelines on tree management.
- Attend public talks and seminars on tree management arranged by the GLTMS or other professional associations.
- Visit the GLTMS website at www.greening.gov.hk to get up-to-date information on tree management.

PART 1 – DUTY OF CARE OF TREE OWNERS**1.8.3 Perform Routine Tree Inspection**

Routine tree inspection can help to identify early symptoms of deterioration in trees. Tree Owners should:

- Carry out regular tree inspection as part of day-to-day tree maintenance work.
- Undertake tree inspection after inclement weather to ensure tree stability.
- Undertake tree risk assessment before the onset of the wet season every year.

1.8.4 Purchase Third Party Risk Insurance

Section 28 of the BMO requires an OC to procure and keep in force in relation to the common parts of the building a policy of third party risks insurance to protect the interests of owners and third parties.

Owners of buildings with other building management bodies (e.g. owners' committee) should also as far as possible procure third party risks insurance to reduce their risks in times of accidents.

For details on Building Management (Third Party Risk Insurance) Regulation, please refer to the website on building management of the Home Affairs Department at www.buildingmgt.gov.hk

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.1****EFFECTIVE TREE RISK MANAGEMENT**

Tree Owners are required to undertake proper tree risk assessment and mitigation measures to minimise risk of tree failure. This requires engagement of suitable Qualified Professionals for arboricultural works. The following table illustrates the steps to be taken by Tree Owners for effective tree risk management.

Nº	Steps
1	Engaging suitable qualified professionals
2	Knowing your tree stock
3	Undertaking tree risk assessment
4	Mitigating tree risk
5	Keeping records

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PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.2****KNOWING YOUR TREE STOCK**

A good tree inventory can facilitate Tree Owners to establish a maintenance programme and prepare budget estimation for maintenance works.

Nº	Actions
1	Ascertain the extent of areas with trees on the property.
2	Engage Qualified Professional to prepare a tree inventory to include: <ul style="list-style-type: none"> ▪ Basic tree information, such as tree identity number, species, size, health and structural condition; and ▪ Site information, such as number of each tree species, photos and location plan.
3	For new tree planting, request the designer to prepare a tree inventory or as-built planting record as part of design service.
4	Check for completeness and accuracy of the tree inventory.
5	Update the tree inventory regularly every year and as required.

Appendix 3 - Sample Format of Tree Inventory

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.3 UNDERTAKING TREE RISK ASSESSMENT**

The purpose of tree risk assessment (TRA) is to identify potential tree risks and carry out mitigation measures in a timely manner to reduce the risks.

Nº	Actions
1	Ensure all the trees on your property are included in TRA.
2	Plan and conduct TRA before the onset of the wet season for trees on target areas ² , such as footpaths, children play areas, sitting out areas and vehicular access, etc.
3	Undertake emergency inspection ³ by management staff of property management company or landscape / arboricultural contractor to inspect the obvious damage, tree stability and immediate hazard (e.g. fallen tree, broken branches, uprooting, etc.) posing to the public soon after inclement weather such as rainstorm and typhoon.
4	If any obvious defects are observed in the inclement weather inspection, Qualified Professional can be engaged to undertake a detailed tree inspection and mitigation measures as necessary.

² Target areas are frequently used areas where tree failure will pose a hazard to public safety, damage to property or cause disturbance to human activity.

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.3.1****Identify Target Areas**

Nº	Actions for Identifying Target Areas
1	Identify the target areas within / adjacent to your property according to the intensity and frequency of use.
2	Property managers and Qualified Professionals to agree on delineation of target areas.
3	Allocate resources to undertake tree risk assessment for trees within the target areas.

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.3.2 Undertake Tree Risk Assessment on Tree Basis**

Nº	Actions for Form 1
1	<p>Make reference to the latest edition of “Guidelines for Tree Risk Assessment and Management Arrangement” (www.greening.gov.hk/filemanager/content/pdf/tree_care/TRAM_2015_R8-Guidelines_for_TRAM_Arrangement.pdf) issued by the GLTMS in Appendix 4 for carrying out Tree Group Inspection (Form 1).</p>
2	<p>Undertake Tree Group Inspection (Form 1) to facilitate an initial screening of trees within target areas.</p>
3	<p>Undertake mitigation measures for trees with major defects that merit attention.</p>
4	<p>Identify trees that require for detailed Individual Tree Risk Assessment (Form 2).</p>
5	<p>Record all the findings in Form 1: Tree Group Inspection Form.</p>

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT

Nº	Actions for Form 2
1	Make reference to the latest edition of “Guidelines for Tree Risk Assessment and Management Arrangement” (www.greening.gov.hk/filemanager/content/pdf/tree_care/TRAM_2015_R8-Guidelines_for_TRAM_Arrangement.pdf) issued by the GLTMS in Appendix 4 for carrying out individual tree risk assessment (Form 2).
2	Make reference to GLTMS guidelines and “Examples of Common Tree Defects” in Appendix 5 for tree risk assessment.
3	Rate the tree hazard with recommendations on follow-up mitigation measures to address the identified defects and tree problems.
4	Record all the findings in Form 2: Tree Risk Assessment Form.

Appendix 4 - Guidelines for Tree Risk Assessment and Management and Arrangement

Appendix 5 - Examples of Common Tree Defects

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.3.3 Mitigate Tree Risk**

Nº	Actions
1	Undertake appropriate mitigation measures as recommended in tree risk assessment in a timely manner.
2	<p>Mitigation measures include:</p> <ul style="list-style-type: none">▪ Cordon off the tree fall zone before mitigation works take place.▪ Apply pest and disease control.▪ Pruning of broken or dead branches.▪ Install supporting or cabling system.▪ Continuous monitoring of defect, e.g. cavity with wounded wood development.▪ Arrange tree removal.
3	Ensure mitigation measures are undertaken properly and under supervision of Qualified Professionals.

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT

2.4 TREE REMOVAL, EMERGENCY RESPONSE AND SAFETY PRECAUTIONS**2.4.1 Tree Removal Procedures and Compensatory Planting**

If tree removal is recommended after tree risk assessment, the Tree Owner is required to submit an application for tree removal to LandsD for approval if there is a tree preservation clause in the lease concerned. LandsD may impose conditions such as transplanting, compensatory planting or replanting as deemed appropriate. Section 1.7.5 in the handbook is relevant.

2.4.2 Emergency Tree Removal / Pruning due to Natural Cause

For emergency tree removal or pruning in a private lot with a tree preservation clause in lease, the Lot Owner concerned must report the case to LandsD within 21 days after the tree pruning or removal. Section 1.7.5 in this handbook is relevant.

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT

Nº	Actions
1	Follow requirements stated in the “Lands Administration Office Practice Note No. 7/2007” or its subsequent updated version to carry out emergency tree removal / severe pruning work due to natural cause, or under other fully justified emergency situations.
2	Take full photographic record on the concerned tree(s) before removal or severe pruning of the damaged tree(s) due to natural causes or emergency situations where safety is at stake.
3	Photograph taking and tree removal / severe pruning can be carried out in parallel for expeditious emergency action if considered necessary.
4	In any case, inform LandsD within 21 calendar days after the incident supporting with a tree report of the concerned trees, photographic record and compensatory planting proposal, where applicable.
5	Upon approval of the compensatory planting proposal, carry out compensatory planting in accordance with the requirements as stated in the Lands Administration Office Practice Note No. 7/2007 or subsequent updated version.

2.4.3 Emergency Tree Failure Incident

Call 999 for assistance in emergency situation if a tree poses imminent danger of collapse and threat the human safety.

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.4.4 Safety Precautions in Tree Works**

Nº	Actions
1	Follow the requirements in Occupational Safety and Health Ordinance (Chapter 509) to ensure the safety and health at work of all employees / contractors.
2	Verify that all contractors have qualified safe work policies and implementation procedures.
3	Provide a safe access for carrying out tree works, especially for trees located on slopes and retaining walls.
4	Make reference to the “Guidelines on Safe Access for Slope Maintenance” (www.cedd.gov.hk/eng/publications/geo_reports/doc/er136/er136.pdf) issued by the Geotechnical Engineering Office of the Civil Engineering and Development Department.
5	Refer to the “Guidelines on Arboriculture Occupational Safety and Health” (www.greening.gov.hk/filemanager/content/pdf/tree_care/OSH_Guidelines_2012_Dec_Issue_e.pdf) issued by the GLTMS to implement adequate occupational safety and health measures in carrying out the tree works.

Appendix 6 - Guidelines on Arboriculture Occupational Safety and Health

PART 2 – KEY STEPS IN TREE RISK MANAGEMENT**2.5****KEEPING RECORDS**

Complete comprehensive and retrievable records of tree inspection results and mitigation measures can demonstrate that Tree Owners have taken reasonable care in tree management.

Nº	Actions
1	Keep a complete set of both hardcopy and softcopy of tree inspection findings and recommendations properly and systematically.
2	Records on tree works include: <ul style="list-style-type: none"> ▪ Tree inventory. ▪ Records of tree risk assessment. ▪ Records of maintenance inspections; and maintenance works. ▪ Recommended mitigation measures and actions taken. ▪ Photo records.
3	Make reference to the “Sample of Master List of Documents and Record of Tree Works” in Appendix 7.

Appendix 7 - Sample of Master List of Documents and Record of Tree Works

PART 3 – GENERAL TREE CARE

Prevention is always better than cure. Proper tree care can help to promote healthy tree growth and structure which can reduce development of hazardous tree defects. A holistic Plant Health Care (PHC) programme can help Tree Owners to monitor tree health and evaluate growing conditions of trees. Tree Owners should engage Qualified Professionals to carry out tree planting, maintenance and arboricultural works to keep trees in healthy and structurally sound conditions.

An overview of proper tree care for tree selection, daily maintenance as well as long term plant monitoring is provided in this section. More detailed information on tree care can be found in the GLTMS website at www.greening.gov.hk.

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PART 3 – GENERAL TREE CARE**3.1****RIGHT TREE RIGHT PLACE**

Selecting the right tree at the right place is the basic principle in tree selection.

Nº	Checklist: Tree Selection
1	Understand the ultimate size of tree, tree characteristics and growing requirements.
2	Consider design intention.
3	Consider site constraints and local environment condition.
4	Adopt the “Right Tree Right Place” principle in tree selection.
Nº	Reference
1	“Right Tree Right Place Quick Reference Guide” (www.greening.gov.hk/filemanager/content/pdf/knowledge_database/newsletters/Greening_2015_AUTUMN_ENG.pdf) in Appendix 8.

Appendix 8 – Right Tree Right Place Quick Reference Guide

PART 3 – GENERAL TREE CARE**3.2****QUALITY NURSERY STOCK**

Substandard nursery materials can cause tree health and structural problems in future. Tree Owners should only accept high quality nursery stock.

Nº	Checklist: High Quality Nursery Stock
1	Have a central leader with good taper and free of co-dominant stems.
2	Have a strong form with well-spaced and firmly attached branches.
3	Have a balanced canopy with normal foliage and good live-crown ratio.
4	Have a trunk with no wound or damage.
5	Have a good quality root system with sufficient size and no defect.
Nº	Reference
1	“Proper Planting Practice - Select and Plant Good Specimens” (www.greening.gov.hk/filemanager/content/images/tree_care/Select_and_Plant_Good_Specimens_e.jpg) in Appendix 9.

Appendix 9 - Proper Planting Practice - Select and Plant Good Specimens

PART 3 – GENERAL TREE CARE**3.3 SUITABLE GROWTH ENVIRONMENT**

Sufficient space and quality soil is the key to support healthy tree growth.

Nº	Checklist: Suitable Growth Environment
1	Allow sufficient space both above and below ground for tree growth.
2	Allow adequate distance between trees and adjacent structures.
3	Provide sufficient quality soil with suitable texture, structure, pH value, and water-holding capacity for roots to anchor and obtain water, oxygen and nutrients from soil.
4	Ensure planting works are implemented in accordance with proper planting practice.
5	Keep the area around the base of tree trunk clear of vegetation, excessive soil and mulch fill.

PART 3 – GENERAL TREE CARE

Nº	References
1	<p>“Proper Planting Practice - Provide Adequate Growing Space for Future Growth of Canopy” (www.greening.gov.hk/filemanager/content/images/tree_care/Provide_Adequate_Growing_Space_For_Future_Growth_Of_Canopy_e.jpg) in Appendix 10.</p>
2	<p>“Proper Planting Practice - Provide Sufficient Growing Space between Trees and Adjacent Buildings / Structures” (www.greening.gov.hk/filemanager/content/images/tree_care/Provide_Sufficient_Growing_Space_Between_Trees_and_Adjacent_Buildings_Structures_e.jpg) in Appendix 11.</p>
3	<p>“Proper Planting Practice - Keep Sufficient Space Clear of Vegetation at the Base of Trees” (www.greening.gov.hk/filemanager/content/images/tree_care/Keep_Sufficient_Space_Clear_of_Vegetation_at_the_Base_of_Trees_e.jpg) in Appendix 12.</p>
4	<p>“Proper Planting Practice - Do Not Plant Too Deep” (www.greening.gov.hk/filemanager/content/images/tree_care/Do_Not_Plant_Too_Deep_e.jpg) in Appendix 13.</p>

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Appendix 10 - Proper Planting Practice - Provide Adequate Growing Space for Future Growth of Canopy

Appendix 11 - Proper Planting Practice - Provide Sufficient Growing Space between Trees and Adjacent Buildings / Structures

Appendix 12 - Proper Planting Practice - Keep Sufficient Space Clear of Vegetation at the Base of Trees

Appendix 13 - Proper Planting Practice – Do Not Plant Too Deep

Appendix 14 - Proper Planting Practice - Staking and Guying

PART 3 – GENERAL TREE CARE**3.4****PROVIDING ESTABLISHMENT MAINTENANCE**

For newly planted trees, appropriate establishment works have to be carried out by the landscape contractor for at least 12 months after tree planting.

Nº	Checklist: Establishment Works
1	Prepare a maintenance schedule for establishment works.
2	Conduct periodic inspection.
3	Apply appropriate irrigation.
4	Maintain drainage system in good working order.
5	Conduct regular weeding and cleaning operations.
6	Adjust ties and supports as necessary.
7	Apply appropriate mulch around tree base to control weed growth, retain moisture and relieve soil compaction.
8	Undertake pest and disease control as necessary.
9	Replace dead / disease tree as necessary.
No.	Reference
1	Refer to “Proper Planting Practice - Staking and Guying” (www.greening.gov.hk/filemanager/content/images/tree_care/Staking_and_Guying_of_Trees_e.jpg) in Appendix 14.

PART 3 – GENERAL TREE CARE**3.5****REGULAR TREE MAINTENANCE**

Following establishment, a tree should continue to be maintained to ensure its long term health. Many tree failure incidents are the result of the lack of regular maintenance, poor tree maintenance practices and other malpractices in tree care.

Nº	Checklist: Regular Maintenance
1	Prepare an annual tree maintenance programme to include regular tree maintenance operation, routine tree inspection and tree risk assessment.
2	Follow guidelines and best practice to carry out regular tree maintenance properly to upkeep the trees in healthy and structurally sound conditions.
3	Undertake regular tree maintenance operation, such as proper watering, weeding, pruning, fertilising, mulching, staking, pest and disease control, soil aeration and amelioration, etc. by skilled workers and under supervision of Qualified Professionals.
Nº	References
1	Refer to “Management Guidelines for Mature Trees” (www.greening.gov.hk/filemanager/content/pdf/tree_care/Paper_Mature_Trees_(finalised_and_issued)_e.pdf) in Appendix 15.
2	Refer to “Management Guidelines for Stonewall Trees” (www.greening.gov.hk/filemanager/content/pdf/tree_care/Guilelines_for_stone_wall_trees_e.pdf) in Appendix 16.

PART 3 – GENERAL TREE CARE**3.6****PERFORMING GOOD TREE PRUNING PRACTICES**

Pruning is the most common maintenance operation in tree care. Improper tree pruning is detrimental to the appearance and healthy growth of trees and may result in irrecoverable damage to the structure of trees.

Nº	Checklist: Quality Pruning
1	Undertake pruning with a clear purpose.
2	Prepare a pruning proposal that corresponds to the purpose.
3	Follow the pruning proposal to undertake pruning correctly and in line with best practice.
4	Undertake pruning by skilled workers and under supervision of Qualified Professionals.
5	Follow requirements stated in the “Lands Administration Office Practice Note No. 7/2007” or subsequent updated version to carry out emergency pruning work due to natural cause.

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Nº	References
1	“General Guidelines on Tree Pruning” (www.greening.gov.hk/filemanager/content/pdf/tree_care/guideline_e.pdf) in Appendix 17.
2	“Do’s and Don’ts in Pruning (Factsheet)” (www.greening.gov.hk/filemanager/content/pdf/tree_care/factsheet_e.pdf) in Appendix 18.
3	“Do’s and Don’ts in Pruning (Leaflet)” (www.greening.gov.hk/filemanager/content/pdf/tree_care/leaflet.pdf) in Appendix 19.

Appendix 15 - Management Guidelines for Mature Trees**Appendix 16 - Management Guidelines for Stonewall Trees****Appendix 17 - General Guidelines on Tree Pruning****Appendix 18 - Do’s and Don’ts in Pruning (Factsheet)****Appendix 19 - Do’s and Don’ts in Pruning (Leaflet)**

PART 3 – GENERAL TREE CARE**3.7****PEST AND DISEASE CONTROL**

Pests are organisms which adversely affect tree health, structure and appearance resulting in damage. Integrated Pest Management (IPM) approach combining both preventive and control tactics should be considered to control pest and disease.

Nº	Checklist: IPM Strategy
1	Understand the nature of the pest / disease.
2	Avoid harmful effects of treatment on non-target organisms.
3	Minimise impact on tree health.
4	Cause minimal disturbance to environment.
5	Understand characteristics and maintenance requirements of trees.
6	Perform good maintenance practices to minimise plant health problems.
7	Apply registered pesticides in accordance with all safety instructions.

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Attention should be particularly drawn to the pests or fungal disease which may affect the tree structural stability. In Hong Kong, termites and Brown Root Rot (BRR) disease are the two of the significant pest and fungal disease that impact on our trees.

Nº	Termites
1	An indicator of wood decay.
2	Some species actively consume wood and can cause significant impact to structural stability.
3	Engage pest control professional to treat the infestation promptly.

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Nº	Brown Root Rot (BRR) Disease
1	Prevalent in tropical and subtropical areas.
2	Highly pathogenic and infectious.
3	No direct remedy for BRR infected trees.
4	Cause rapid root decay and may lead to tree collapse.
5	Early detection of BRR signs and symptoms can help to control the disease through timely removal of the infected trees.
Nº	References
1	“Manual on the Management of Brown Root Rot Disease” (https://www.greening.gov.hk/filemanager/content/pdf/tree_care/handbook_TM/HTM_Appendix_20.pdf) in Appendix 20.
2	“Note on Common Wood Decay Fungi on Urban Trees of Hong Kong” (www.greening.gov.hk/filemanager/content/pdf/tree_care/Note_on_Common_Wood_Decay_Fungi_on_Urban_Trees_of_HK(May2015)_e.pdf) in Appendix 21.

Appendix 20 - Manual on the Management of Brown Root Rot Disease

Appendix 21 - Note on Common Wood Decay Fungi on Urban Trees of Hong Kong

PART 3 – GENERAL TREE CARE**3.8****TREE PROTECTION**

During development or improvement works, construction activities can cause serious impacts to trees.

Nº	Checklist: Tree Protection Work
1	Plan in advance for tree protection before works.
2	Follow guidelines in design of tree protection zone.
3	Erect protection fence to prevent physical damage to trees, including canopy, trunk and roots.
4	Perform regular inspection on tree protection works.
Nº	References
1	“Guidelines on Tree Preservation during Development” (www.greening.gov.hk/filemanager/content/pdf/tree_care/Guidelines_on_Tree_Preservation_during_Development_e.pdf) in Appendix 22.
2	“Design for Tree Protection Zone” (www.greening.gov.hk/filemanager/content/images/tree_care/Design_for_Tree_Protection_Zone_e.jpg) in Appendix 23.
3	“Guideline on Pavement Renovation Works and Tree Stability” (www.greening.gov.hk/filemanager/content/pdf/tree_care/Guideline_on_Pavement_Renovation_Works_and_Tree_Stability_e.pdf) in Appendix 24.

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Appendix 22 - Guidelines on Tree Preservation during Development

Appendix 23 - Design for Tree Protection Zone

Appendix 24 - Guideline on Pavement Renovation Works and Tree Stability

PART 3 – GENERAL TREE CARE**3.9****MAINTENANCE RECORDS**

All inspection and maintenance records, including maintaining record of emergency tree removal or pruning works, and all record of consent granted by LandsD for tree removal or pruning works, have to be documented properly.

Nº	Purpose
1	<ul style="list-style-type: none"> Facilitate the monitoring of tree condition. Assess the effectiveness of treatment. Decide alternative follow up measures. Demonstrate Tree Owners have taken reasonable care in proper tree management.

Nº	Checklist: Maintenance Record
1	Date of operation.
2	Person responsible for the works.
3	Relevant tree information.
4	Operation details.
5	Photographic records showing the trees before and after treatment.

Appendix 25 - Sample of Tree Maintenance Record