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 <a href="https://www.greening.gov.hk">www.greening.gov.hk</a>.

#### **CONTENT**

- 3.1 Right Tree Right Place
- 3.2 Quality Nursery Stock
- 3.3 Suitable Growth Environment
- 3.4 Providing Establishment Maintenance
- 3.5 Regular Tree Maintenance
- 3.6 Performing Good Tree Pruning Practices
- 3.7 Pest And Disease Control
- 3.8 Tree Protection
- 3.9 Maintenance Records

# 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

# 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" ( <a href="www.greening.gov.hk/filemanager/content/images/tree-care/">www.greening.gov.hk/filemanager/content/images/tree-care/</a> <a href="mailto:select_and_Plant_Good_Specimens_e.jpg">Select_and_Plant_Good_Specimens_e.jpg</a> ) in Appendix 9.

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

# 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.

Nº	References
1	"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 G
	rowth Of Canopy e.jpg) in Appendix 10.
2	"Proper Planting Practice - Provide Sufficient
	Growing Space between Trees and Adjacent
	Buildings / Structures" ( <u>www.greening.gov.hk/</u>
	filemanager/content/images/tree care/
	Provide Sufficient Growing Space Between Tree
	s and Adjacent Buildings Structures e.jpg)
	in Appendix 11.
3	"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 th
	e Base of Trees e.ipg) in Appendix 12.
4	"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.

**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

# 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" ( <a href="www.greening.gov.hk/filemanager/content/images/tree_care/">www.greening.gov.hk/filemanager/content/images/tree_care/</a> <a href="mailto:Staking">Staking and Guying of Trees e.jpg</a> ) in Appendix 14.

# 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	Professionals.  References
<b>№</b> 2	

# 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.

Nº	References
1	"General Guidelines on Tree Pruning" ( <a href="www.greening.gov.hk/filemanager/content/pdf/tree_care/guideline_e.pdf">www.greening.gov.hk/filemanager/content/pdf/tree_care/guideline_e.pdf</a> ) in Appendix 17.
2	"Do's and Don'ts in Pruning (Factsheet)" ( <a href="www.greening.gov.hk/filemanager/content/pdf/tree_care/factsheet_e.pdf">www.greening.gov.hk/filemanager/content/pdf/tree_care/factsheet_e.pdf</a> ) in Appendix 18.
3	"Do's and Don'ts in Pruning (Leaflet)" ( <a href="www.greening.gov.hk/filemanager/content/pdf/tree">www.greening.gov.hk/filemanager/content/pdf/tree</a> 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)

# 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.

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.

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
IV-	References
1	"Guidelines on Brown Root Rot Disease" (www.greening.gov.hk/filemanager/ content/pdf/knowledge_database/ Guidelines_on_Brown_Root_Rot_Disease (version_for_the_general_public)EN.pdf) in Appendix 20.

Appendix 20 - Guidelines on Brown Root Rot Disease

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

# 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" ( <a href="www.greening.gov.hk/filemanager/content/pdf/tree_care/">www.greening.gov.hk/filemanager/content/pdf/tree_care/</a> <a href="mailto:Guidelines_on_Tree_Preservation_during_Development_e.pdf">www.greening.gov.hk/filemanager/content/pdf/tree_care/</a> <a href="mailto:Guidelines_on_Tree_Preservation_during_Development_e.pdf">Guidelines_on_Tree_Preservation_during_Development_e.pdf</a> ) 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" ( <a href="www.greening.gov.hk/filemanager/content/pdf/tree_care/">www.greening.gov.hk/filemanager/content/pdf/tree_care/</a> Guideline on Pavement Renovation Works and <a href="mailto:Tree_Stability_e.pdf">Tree_Stability_e.pdf</a> ) in Appendix 24.

**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

# 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	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