

# Tree Management Practice Note No. 1 : 樹木管理作業備考第1號 :

## Tree Preservation during Construction 施工期間保育樹木的工作

### 1. Introduction (簡介)

Tree preservation is necessary because trees play an important role environmentally and culturally. It is an integral part of a development project and requires careful planning in all stages from planning, design, construction to post-construction. Preserving right trees and protecting them from damage can maintain greenery and minimise subsequent costs for the rehabilitation of a tree or its ultimate removal.

樹木對我們的環境及文化傳統十分重要，因此必須加以保育。此外，樹木是發展項目的重要一環，我們在規劃、設計、施工及完工後各個階段均需周詳考慮。保護合適的樹木免受損毀，能維持綠化景觀，並減少日後修復樹木或最終移除樹木的開支。

### 2. Objective (目的)

The focus of tree preservation during construction is on prevention of damage as there are few remedial treatments and the ability of a tree to recover from all construction injuries is generally limited. This Practice Note provides appropriate measures for preserving trees in a construction site.

在進行建築工程時，假如樹木受損，可補救治療的方法不多，而且樹木因工程而受損後，一般復原能力有限，因此保育樹木的重點是防止樹木受損。本作業備考提供適當措施保護工地內的樹木。

### 3. Avoiding Malpractice (避免不良作業方法)

Malpractices will damage or even kill the trees.

不良作業方法會令樹木受損甚至枯死。



Don't girdle a tree with wire  
切勿用繩纜纏繞樹木



Don't stockpile around a tree  
切勿在樹木周圍堆放物件



Don't top a tree  
切勿把樹木截頂



Don't undertake works within  
the tree protection zone  
切勿在樹木保護範圍內進行工程



Don't use trees as anchor  
切勿以樹木作支撐



Don't nail anything into a tree  
切勿在樹木釘上任何物件



Don't work with machines  
near a tree  
切勿在樹木附近使用機器



Don't sever the roots  
切勿切斷樹根



Don't pour machine petroleum  
or chemical into the root zone  
切勿把機器原油或化學品  
倒進根部範圍



Don't pour concrete  
into the root zone  
切勿把混凝土  
倒進根部範圍

### 4. Tree protection zone (TPZ) (樹木保護範圍)

a) Trees require sufficient space for the growth of canopy and root systems. TPZ is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. Methods generally used to determine a TPZ include:

樹木需有足夠空間讓樹冠和根系生長。樹木保護範圍是指一棵樹四周的最小範圍，其中有足夠樹根及根域維持樹木的生命；在該範圍內，保護樹根及泥土結構會視作首要考慮。一般採用確立樹木保護範圍的方法包括：

- 1) Dripline method – the entire area within the dripline of tree canopy.  
「滴水線法」— 樹冠滴水線內的整個範圍。
- 2) Tree height method – the circular area with the radius equal to the height of the tree.  
「樹木高度法」— 圓圈範圍的半徑相等於樹木的高度。
- 3) Trunk diameter method – multiplying the trunk diameter at 1.3m by 6 to 18 to determine the radius of the TPZ.  
「樹幹直徑法」— 在離地1.3米高的地方量度樹幹直徑，再乘以6至18，以決定樹木保護範圍的半徑等。

b) The 'dripline method' is commonly adopted in Hong Kong. However, for narrow canopied trees, the 'Tree height method' would be appropriate. The 'Trunk diameter' method would be suitable for trees which are leaning or of irregular conformation. 在香港一般會採用「滴水線法」。然而，若樹冠較狹窄，則宜採用「樹木高度法」。「樹幹直徑法」適用於傾斜或形態不規則的樹木。

c) Factors such as site conditions, technical issues and cost effectiveness etc. should be considered. The advice from the tree professionals has to be sought on tree protective measures and design.

場地條件、技術事宜及成本效益等，都是必須考慮的因素。在樹木保護措施及設計方面，須徵詢樹木專業人士的意見。

## 5. Tree preservation plan (TPP) (樹木保育計劃)

- a) TPP should be prepared to provide clear information on TPZ and the location, size and conditions of trees from the tree survey reports, and the location of protective fence.

應制定樹木保育計劃，提供明確資料顯示樹木保護範圍、樹木調查報告所載樹木的位置、大小及狀況，以及保護圍板的位置。

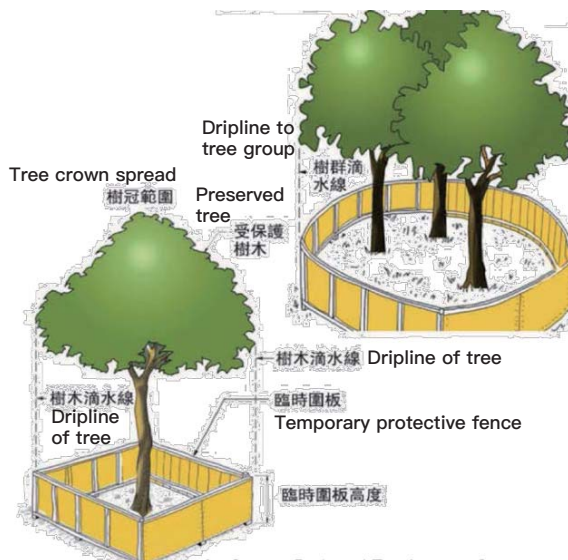
- b) The TPZ should be superimposed on a layout plan showing the spatial relationships between trees and the construction. Besides, the extent and type of ground protection or other measures to protect the roots from compaction should also be indicated.

樹木保護範圍亦應在平面圖上註明，以顯示樹木與建築工程在空間上的關係。另外亦應顯示保護泥土的範圍及方式或其他措施，以保護樹根免受擠壓。

## 6. Tree protection fences (樹木保護圍板)

- a) TPZ must be surrounded by strong fences sturdy enough to withstand impacts from the construction activities including vehicles and machinery at the beginning of contract as well as site investigation works before the construction on site. The fences should be rigid and complete and its foundation should avoid contact with the structural roots. Weak fencing such as nylon netting is not appropriate for protecting trees.

樹木保護範圍四周必須設置堅固的圍板，足以抵禦建築工程的影響，包括在合約生效時操作車輛及機械，以及在工地施工前進行工地勘測等工作造成的影響。圍板必須堅固完整，而圍板基部則應避免接觸結構根。不堅固的圍板(例如尼龍圍網等)並不適宜保護樹木。



- b) At where the erection of protective fencing is not practicable or the preserved tree grows on a retaining structure, alternative tree protective measures such as temporary protective plank armouring should be considered. If necessary, coverings should be laid on top of the temporary protective mulching to provide additional protection from soil compaction due to passage of vehicles, equipment or machinery.

在不能設置保護圍板的地方，又或獲保留的樹木是生長在護土構築物上的，便應考慮採取其他樹木保護措施，例如以夾板作臨時保護。如有需要，應在用作臨時保護的護根覆蓋層上再鋪上覆蓋物，以提供額外保護，避免車輛經過或設備、機械等令泥土受擠壓。

- c) Warning signs and notices are to be installed at the fences denoting the 'tree protection zone' to prohibit the entry of equipment or construction activities.

在圍板位置必須設置警告牌及告示，顯示該處是「樹木保護範圍」，禁止攜帶設備進入或進行建築工程。

## 7. Treatment of trees damaged during construction (治療工程期間受損的樹木)

Despite the best intentions and most stringent tree protection measures, trees may still be damaged during construction. Construction damage can often be irreversible. The following maintenance care should be taken into consideration.

雖然我們致力保育樹木，並已採取最嚴格的樹木保護措施，但樹木仍可能在施工期間受損。工程對樹木造成的損害，往往無法復原。我們應考慮採取以下護養措施：

- a) Remove branches that are split, broken, diseased or dead. 移除裂開、折斷、染病或枯死的樹枝。
- b) Install cables or other means of supports for branches or tree trunks if necessary. 如有需要，為樹枝或樹幹安裝纜索或採用合適的支撐方法。
- c) Apply adequate but not excessive irrigation to help the trees to recover from stresses. 適度灌溉，但不可過量，有助樹木受壓後恢復過來。
- d) Add mulch covering the root system to enhance root growth. 鋪設覆蓋根系的覆蓋物，有助促進樹根生長。
- e) For a wound spotted on the tree trunk, carefully cut the loose bark to form a clean, smooth surface of healthy wood and bark. 如在樹幹上發現破損，應小心切去鬆脫的樹皮，以露出由健康木質及樹皮組成的清潔平滑表層。
- f) Applying herbicides/fungicides/insecticides if necessary. 必要時使用除草劑 / 殺菌劑 / 殺蟲劑。
- g) Apply air excavator for vertical mulching and radial trenching to improve soil aeration for compacted soil. 使用氣動挖掘機進行垂直覆蓋和採用放射式挖坑技術，以改善受擠壓泥土的透氣度。

- h) Remove polluted soil with hand tools. 用手動工具清除受污染的泥土。

## 8. Monitoring (監察)

- a) Site inspections are needed to maintain the integrity of the TPZ. The purpose is to verify that all tree protection measures are in place, followed and observed during the construction works.

為了令樹木保護範圍保持完好，必須視察工地，以核實有關方面已制訂各項樹木保護措施，並在工程施工期間遵循該等措施。

- b) Trees should be inspected on a regular basis to watch for signs of stresses, such as dieback, leaf loss, or general decline in tree health or appearance and to look for and prevent tree damage with symptoms of construction injury.

應定期檢查樹木，以查看有沒有受壓迹象，例如枯萎、落葉、健康狀況或外觀普遍變差，以及察看樹木有沒有因工程而受損的徵象，並加以預防。

- c) Monitoring and moderating the construction activities is essential for the success of the project. Site meetings and reporting are necessary in order to keep all parties in the construction team informed about tree related activities and to reinforce the importance of tree protection activities. Any foreseeable damage should be reported through the prescribed chain of command and corrected as soon as possible.

要成功推行工程項目，必須監察和協調建築工程。舉行工地會議和匯報有助施工隊伍各方知悉與樹木有關的工作，並再次提醒他們樹木保護工作的重要。如預計工程會令樹木受損，便應按既定架構盡快向上級匯報和糾正問題。

## 9. Enquiry and Feedback (查詢和反映意見)

Any enquiry and feedback should be directed to the Greening, Landscape and Tree Management Section of Development Bureau. (E-mail Address : gltms@devb.gov.hk)

如有查詢及意見，請與發展局綠化、園境及樹木管理組聯絡 (電郵地址: gltms@devb.gov.hk)

## 10. Reference (參考資料)

Handbook on Tree Management of Development Bureau (<https://www.greening.gov.hk/en/home/index.html>)

發展局《樹木管理手冊》

(<https://www.greening.gov.hk/tc/home/index.html>)

