

**Recommended Native Plant Species for Use  
in Soil Erosion Control Planting on Natural Hill Slopes**

*(Information in this Appendix is modified from  
CEDD Landscape Guidance Note No. 1/2006)*

CEDD has been implementing soil erosion control planting programme in the urban fringe of new towns and new development areas. The main purpose is to control soil erosion by re-establishing vegetative cover on bare and badly eroded land. Fast growing species with pioneering characteristics, i.e. those that can establish themselves on eroded land rapidly, are usually used to stop soil erosion early and effectively.

2. Some exotic species and a few native species have been demonstrated to have promising pioneering characteristics. In comparison, most native species have relatively limited pioneering characteristics. Though erosion control planting requires the use of more exotic species for their effectiveness in stabilizing degraded land, it is necessary to give due consideration to native species to allow creation of wildlife habitats and enhancement of biodiversity with the ultimate goal of establishing ecologically sustainable forest.

3. A selection of a right combination of plant species for planting depends largely on the specific site conditions prevailing at the time. For instance, the exotic species could be planted along ridges and exposed slopes while the native species could be planted in valleys and more sheltered locations. The planting design should avoid intense competition between the native species and exotic species or the former would be out-competed by the latter. The native species can be planted in groups instead of inter-planting between the exotic species. The site conditions and the recommended planting mix associated with them can be generally categorized as follows:

<b>Site Condition</b>	<b>Recommendation</b>
Severely eroded and exposed	A mix of species with pioneering characteristics only
Moderately eroded and exposed	A mix of largely species with pioneering characteristics and a small proportion of native species
Moderately eroded and sheltered	Equal proportion of species with pioneering characteristics and native species

4. On severely eroded and exposed site, the land is usually barren and the soil quality is poor. For the plant to grow under these conditions, plant species with pioneering characteristics such as nitrogen fixing capability, resistance to wind and tolerance to drought should be selected for planting. Silvicultural works such as pruning and selective thinning of exotic species<sup>1</sup> and enrichment planting with native species may be carried out at a later stage in order to accelerate the process of natural succession (see paragraph 7 below). If the site is near coastal area or prone to frequent hill fires, a minor adjustment of species composition may be made to include species suitable for coastal planting, such as *Casuarina equisetifolia*, *Hibiscus tiliaceus*, *Thespesia populnea* etc, and species with the ability to regenerate after fire, such as *Acacia confusa*, *Lophostemon confertus*, *Schima superba*, *Schima wallichii* etc.

5. On moderately eroded and exposed site where sign of progressive deterioration of soil surface is obvious, a planting mix of up to 75% of species with pioneering characteristics is recommended. Native species can make up the remaining composition. Again, if the site is near coastal area or prone to frequent hill fires, a minor adjustment of species composition may be made to include species suitable for coastal planting and species with the ability to regenerate after fire.

6. On moderately eroded and sheltered site, the objective is to establish a lush woodland with the long term goal of achieving an ecologically sustainable forest. Native species can play a greater role in the planting composition. Apart from planting species with pioneering characteristics, the choice of species can be widened to include some native broadleaf species to facilitate ecological succession.

7. On previously afforested or rehabilitated sites, different degree of natural regeneration should have occurred depending on the type of planting mix used and the degree of site improvement after rehabilitation planting. Silvicultural works such as pruning and selective thinning of exotic species may be carried out in order to accelerate the process of natural succession. Where natural regeneration is sparse, underplanting of native species, especially those shade tolerant species, may be planted so that the understorey formed can be enriched with a wider range of native species.

8. A list of species with pioneering characteristics and a list of native

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<sup>1</sup> The operation of selective thinning of exotic species should be carefully administered to avoid misunderstanding by the general public as the operation might involve tree removal by way of felling.

species recommended for use in erosion control planting are shown in **Table 1** and **Table 2** respectively. Officers should also attempt to use other available native species on a trial basis besides using those with record of proven success.

Table 1 - Recommended list of species with pioneering characteristics for soil erosion control planting in Hong Kong

<u>Botanical name</u>	<u>中文名稱</u>
<i>Acacia auriculiformis</i> *	耳果相思
<i>Acacia confusa</i> *	台灣相思
<i>Acacia mangium</i> *	大葉相思
<i>Castanopsis fissa</i>	鰲蒴錐
<i>Casuarina equisetifolia</i> *	木麻黃
<i>Eucalyptus robusta</i> *#	大葉桉
<i>Eucalyptus tereticornis</i> *#	細葉桉
<i>Eucalyptus torelliana</i> *#	毛葉桉
<i>Gordonia axillaris</i>	大頭茶
<i>Lophostemon confertus</i> *	紅膠木
<i>Schima superba</i>	木荷
<i>Schima wallichii</i> *	紅荷

\* Exotic species

# Eucalyptus species should not be used on planting site prone to frequent fires.

Table 2 - Recommended list of native species for erosion control planting in Hong Kong

Botanical name	中文名稱
<i>Alangium chinense</i>	八角楓
<i>Aporosa dioica</i> <sup>+</sup>	銀柴
<i>Bridelia tomentosa</i> <sup>+</sup>	土密樹
<i>Bischofia javanica</i>	秋楓
<i>Castanopsis fabri</i>	羅浮錐
<i>Castanopsis fissa</i> <sup>+</sup>	鬘蒴錐
<i>Celtis sinensis</i>	朴樹
<i>Choerospondias axillaris</i>	南酸棗 / 酸棗
<i>Cinnamomum parthenoxylon</i>	黃樟
<i>Cyclobalanopsis edithiae</i> <sup>+</sup>	華南青岡
<i>Cyclobalanopsis neglecta</i>	竹葉青岡
<i>Diospyros morrisiana</i>	羅浮柿
<i>Elaeocarpus chinensis</i>	中華杜英
<i>Elaeocarpus sylvestris</i>	山杜英
<i>Endospermum chinense</i>	黃桐
<i>Eriobotrya fragrans</i>	香花枇杷
<i>Ficus microcarpa</i>	細葉榕
<i>Gordonia axillaris</i> <sup>+</sup>	大頭茶
<i>Ilex rotunda</i> var. <i>microcarpa</i> <sup>+</sup>	小果鐵冬青
<i>Liquidambar formosana</i>	楓香
<i>Lithocarpus harlandii</i>	港柯
<i>Litsea cubeba</i> <sup>+</sup>	木薑子 / 山蒼樹
<i>Litsea glutinosa</i> <sup>+</sup>	潺槁樹
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	豺皮樟
<i>Macaranga tanarius</i>	血桐
<i>Machilus breviflora</i> <sup>+</sup>	短序潤楠
<i>Machilus chekiangensis</i> <sup>+</sup>	浙江潤楠
<i>Machilus pauhoi</i>	刨花潤楠
<i>Machilus thunbergii</i> <sup>+</sup>	紅楠
<i>Mallotus paniculatus</i> <sup>+</sup>	白楸
<i>Melastoma candidum</i> <sup>+</sup>	野牡丹
<i>Melastoma sanguineum</i> <sup>+</sup>	毛捻
<i>Microcos paniculata</i>	破布葉

Table 2 - Recommended list of native species for erosion control planting in Hong Kong (Cont'd)

Botanical name	中文名稱
<i>Myrica rubra</i>	楊梅
<i>Ormosia emarginata</i> <sup>+</sup>	凹葉紅豆
<i>Phyllanthus emblica</i> <sup>+</sup>	餘甘子 / 油甘子
<i>Psychotria asiatica</i>	九節
<i>Reevesia thyrsoidea</i> <sup>+</sup>	梭羅樹
<i>Rhaphiolepis indica</i> <sup>+</sup>	石斑木 / 車輪梅
<i>Rhodomyrtus tomentosa</i> <sup>+</sup>	桃金娘 / 崗檢
<i>Sapium discolor</i> <sup>+</sup>	山烏柏
<i>Sapium sebiferum</i>	烏柏
<i>Schefflera heptaphylla</i> <sup>+</sup>	鴨腳木 / 鵝掌柴
<i>Schima superba</i> <sup>+</sup>	木荷
<i>Scolopia chinensis</i>	刺柃
<i>Sterculia lanceolata</i> <sup>+</sup>	假蘋婆
<i>Symplocos glauca</i>	羊舌樹
<i>Syzygium hancei</i> <sup>+</sup>	韓氏蒲桃
<i>Syzygium levinei</i>	山蒲桃
<i>Tutcheria spectabilis</i>	石筆木
<i>Viburnum odoratissimum</i> <sup>+</sup>	珊瑚樹

- + Core species commonly used in projects: Core species are plant species that are selected to formulate the plant mix for planting under various site conditions. The core species list enables the supply market to plan and make available adequate stock of these plant seedlings for planting schemes.