

# Enhancement of Vegetated Slopes

(Phased Replacement of Senescent *Acacia*)



HIGHWAYS DEPARTMENT  
LANDSCAPE UNIT

## Replanting Proposal



# CONDITION OF

# ACACIA

*Acacia confusa*, a pioneer tree species\*<sup>1</sup>, have now reached their senescent stage. Overmature trees are more susceptible to drought, compaction and secondary pathogens when injury occurs.

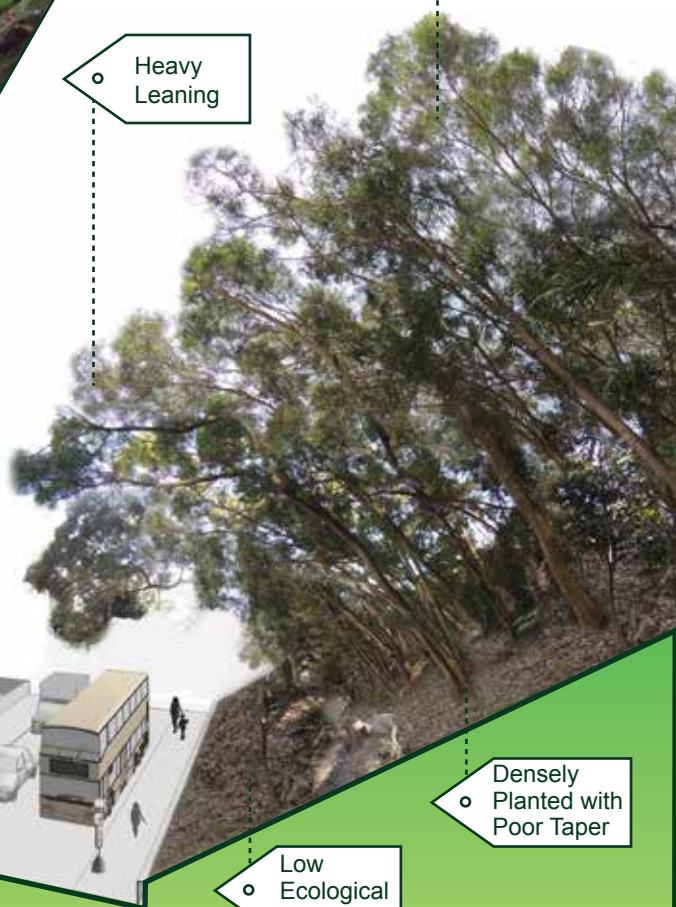


*Acacia confusa*  
(台灣相思)

Exotic Species

Poor Wind Resistance

Heavy Leaning



Densely Planted with Poor Taper

Low Ecological Value

#### Footnote\*:

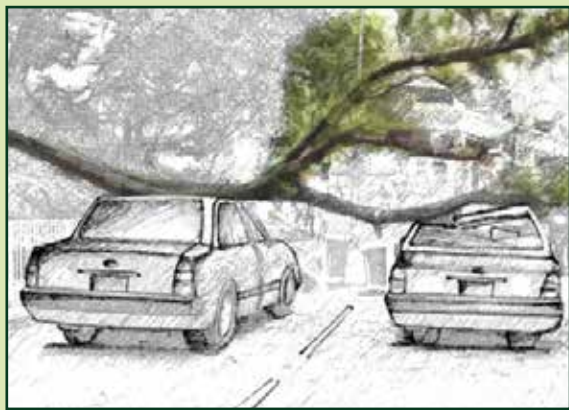
1. During the past half-century, Hong Kong's population has grown exponentially along with the rapid economic and infrastructure development. Many man-made slopes associated with infrastructure were formed to support development. *Acacia confusa*, a pioneer tree species that grows fast and establishes well in hostile slope environment, was chosen in the former plantation scheme for soil erosion control, slope stabilization and quick establishment of vegetation cover.

# BACKGROUND

# WHY

## Why is the replacement works of *Acacia confusa* necessary on slopes?

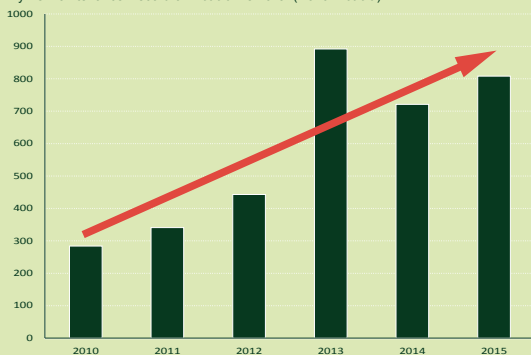
### Potential Risk



Just like all other living organisms, trees are subject to the laws of nature and go through the natural life cycle of birth, ageing, illness and death. With the life expectancy of approximately 50 to 60 years, the majority of *Acacia* have now reached their senescent stage. Their ageing and deteriorating health problem and declined structural stability have been posing a significant threat to public safety.

### Tree Management

HyD's Maintenance Record on *Acacia* Removal (No. of *Acacia*)



The Highways Department (HyD) manages trees on some roadside man-made slopes and expressways. With reference to the HyD's maintenance record, the number of *Acacia* with poor health and structure that required removal by the department every year has been increasing steadily. In order to safeguard the public, there is a need to develop a well-planned replacement programme which includes carrying out a detail systematic survey, prioritizing *Acacia* sites for implementation, and then carrying out replacement works with the right plant species.

# OBJECTIVE

# WHAT

## What are the objectives of the Replacement Planting Programme?

# 1



### Public Safety

To better safeguard public safety by reducing risk of *Acacia* failure on roadside slopes.

# 2



### Sustainability

To promote the long-term sustainability of tree management and enhance urban ecology by replanting diverse and native plant species.

# 3



### Biodiversity

To enrich biodiversity of highways landscape by replacing the densely planted pioneer species, *Acacia confusa*, with native plant species of higher ecological value. *Acacia confusa* has a lower ecological value than native species and hindered growth of native plants due to light blockage and release of detrimental biochemical (allelopathy) to the understorey plants.



# PROPOSAL

# HOW

How to improve the slope environment?

Before



2011

Original condition of senescent *Acacia* trees

Replacement



2012

To carry out replacement and replanting works on site

After



2015

The environment and ecological habitat are significantly improved by replacing the senescent *Acacia* with suitable plants

Trial Site  
at Pui Man Street

## Disclaimer:

1. This proposal is only applicable to the roadside slopes maintained by Highways Department.
2. The images shown in this leaflet are used for illustration and demonstration only. The detailed proposals for individual sites, including the scale and timing of the Replacement and Replanting Programme are subject to actual environment (i.e. slope conditions), traffic impact, visual impact and site sensitivity, etc.

Replacement planting design is developed in accordance with the principle of "Right Trees at the Right Place"<sup>2</sup>. Native species and some localized species<sup>3</sup> would be extensively used in order to establish an urban forest of higher ecological value.

*Reevesia thyrsoidea* (梭羅樹)



*Ligustrum sinense* (山指甲)



*Rhapsiolepis indica*  
(車輪梅)



*Rhododendron pulchrum*  
(錦繡杜鵑)



*Duranta repens*  
(假蓮翹)



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**Footnotes\*:**

2. The principle of appropriate planting promoted by the Greening, Landscape and Tree Management Section of Development Bureau, including considerations of spatial factors, design theme, function of planting, plant species, and maintenance requirements, etc.
3. Native species refer to the plants naturally grow in Hong Kong/ Southern China. Localized species refer to the plants that were introduced from other countries and have been established locally for many years (such as *Rhododendron pulchrum* var. *phoeniceum*, *Hibiscus rosa-sinensis*, and *Duranta repens*, etc.). In order to establish an urban forest of higher ecological value, both native and localized species are selected for replanting the roadside slopes.