

## 3. Principles and Strategies

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The Government has committed to develop Hong Kong into a sustainable and enjoyable place to live and work through the promotion of resilient and adaptive landscapes, enriching vegetation diversity, applying robust urban forestry principles, and enhancing blue and green eco-services networks. In response to policy initiatives and action plans set out in CAP, Hong Kong 2030+ and BSAP, 3 considerations guiding the decision making in street tree selection have been identified. They are summarised in **Figure 4-1**. Details are listed as follows:

#### **RIGHT TREE (ensuring the suitable tree species are selected)**

- Build a sustainable, resilient and adaptive urban forest – A healthy, biodiverse urban ecology is more resilient to climate change and potential pest outbreaks due to the widened gene pool. A rich vegetation diversity can support a higher diversity of fauna by providing a variety of different food and habitats for urban wildlife. With a smart selection of tree species mix and CVCM combined with proper planting and management practices, urban forest can help the city to cope and adapt with potential environmental challenges in the future.
- Minimise risk of tree failure – Trees should be assessed if they are high risk trees (Black or Red Category under TRIAGE, Tree Risk Assessment and Management Arrangement) or have reached the end or near the end of their ULE. High risk trees have high potential of tree failure and should be replaced as soon as feasible especially if targets are identified. For other trees, an assessment of the ULE should be conducted. This includes analysing the tree maintenance costs and the tree benefits provided in terms of monetary value. A tree is deemed to have reached the end of its ULE and ready for tree replacement when the tree maintenance costs outweigh the tree benefits provided.
- Improve vegetation and soil health by planting species that can coexist within the same niche – CVCM can further support similar fauna in terms of increased variety of food and habitat. Some CVCM can even aid in decreasing soil erosion and improve urban soil health through nitrogen fixation that will be beneficial to adjacent trees. Proper selection is required to ensure the CVCM do not overly compete with the tree for nutrients.
- Select planting species that can tolerate, mitigate and adapt to future climatic extremes and weather events – As reported by Hong Kong Observatory (HKO), there is evidence that local Hong Kong weather is already affected by climate change. Effects of climate change include summers becoming increasingly hot and for longer periods, higher average temperatures, higher annual rainfall and fiercer typhoons. Temperature changes can affect potential pests' life cycle or widen the pests' geographical range, enabling pest and disease dispersal via new flight routes or vectors. New pests and diseases, previously not found in Hong Kong, may also occur. Similarly, higher temperatures may cause foliage and trunk scorch in some tree species. Fiercer typhoon may cause a higher frequency of tree uprooting. As such, the tree species selection for the urban forest should give priority to trees with higher resistance to potential pest and pathogens outbreak and be able to tolerate the changing climate and extreme weather.

### **RIGHT PLACE (ensuring the planting place is suitable)**

- Promote place-based landscape – Landscape is more than planting vegetation. Landscape encompasses all aspects of the outdoor environment including hard and soft elements such as landform, water, water bodies and vegetation. Moreover, landscape must consider making “places for people”. The planning and design of our outdoor environment including street shall address human life in our city, with respect to the site context including physical environmental, social and cultural considerations, and relationship with adjacent land uses and building structures. Proper street design with appropriate planting is one of the important elements in creating an attractive place identity and sustainable landscape within our urban environment.
- Select plants adaptable to multiple urban street functions with a focus on walkability – Planting trees in tree pits may be preferable for certain street environs to maximise available open space at ground level for other street functions. Overhead space (e.g. signage, traffic lights, traffic sightlines) should also be studied for site specific considerations before selecting the appropriate tree species. To enhance walkability, a pleasant microclimate is crucial. With the increasingly hot summers in the city and the urban heat island effect, trees that cast shade in summer should be given priority in more heavily trafficked streets.
- Strengthen blue-green corridors – Identifying streets for possible blue-green corridor transformation or enhancing existing corridors with appropriate planting can greatly decrease the effects of habitat fragmentation. Planting tree species of higher ecological value and maintaining larger size trees in these blue-green corridors can increase habitat attractiveness to urban wildlife and facilitate wildlife movements.
- Maximise opportunities for blue-green infrastructure – Blue-green infrastructure aims to mimic natural water cycle through infiltration, evaporation and transpiration to capture rain, control flood and reuse stormwater. Stormwater can be captured and reused for street planting. Harvesting stormwater for landscape should be considered in the early stages of urban planning and in the planter design for successful incorporation into the maintenance and management program.

### **FOR US (ensuring the function of the tree is reached)**

- Design for safety and liveability – Planting conducted under the “Right Tree, Right Place” principle with proper maintenance and management practices adopted should minimise tree risk failure, thus, making the streets safer. Improved liveability of a city can be achieved through appropriate street-level design that maximises human comfort, encourage outdoor activities and social interaction. Particular to the Hong Kong context, this includes maximising shade cast by trees in summer heat to create a more comfortable street micro-climate.
- Respect local identity – Appropriate tree selection, CVCM and streetscape design would strengthen and enhance the character of the district. The local environment, history, social dynamics and cultural specificities of the community can build a stronger relationship between the people and place and therefore promote place-ecology.

## Street Tree Selection Guide

- Raise public awareness and understanding – Street trees are a valuable asset of our community. The Government will continue to foster an attitude of care of trees across the territory by the community and to cultivate proper values and attitude towards protecting the environment, including the protection of our street trees with the urban forests.