For discussion
on 25 February 2014

Legislative Council Panel on Development

43CG – Greening Master Plans for the New Territories

PURPOSE

This paper seeks Members’ support on our proposal to upgrade part of 43CG “Greening Master Plans for the New Territories” to Category A at an estimated cost of $351.1 million in money-of-the-day (MOD) prices to carry out priority greening works in South East and North West New Territories.

PROJECT SCOPE

2. The scope of 43CG comprises the implementation of greening works as recommended in the Greening Master Plans (GMPs) for the New Territories.

3. The part of 43CG which we propose to upgrade to Category A comprises –

   (a) planting and establishment of about 3 400 trees and 1 810 000 shrubs, which are classified as priority greening works in accordance with greening effect and public aspirations, including:

   (i) about 1 000 trees and 330 000 shrubs in Sha Tin;
(ii) about 700 trees and 330,000 shrubs in Sai Kung;

(iii) about 700 trees and 500,000 shrubs in Tuen Mun; and

(iv) about 1,000 trees and 650,000 shrubs in Yuen Long.

(b) ground preparation, soil improvement and installation of tree support systems;

(c) construction of associated raised/kerb planters and other landscape works; and

(d) ancillary works including irrigation facilities.

4. A plan showing the extent of the proposed works is at Enclosure 1.

5. We will retain the remainder of 43CG in Category B, which covers the implementation of remaining greening works as recommended/to be recommended in the GMPs for the New Territories. Funding for these works will be sought later when they are ready for upgrading to Category A.

6. Subject to funding approval of the Finance Committee, we plan to commence the implementation of priority greening works in October 2014 for completion in October 2017, followed by a one-year establishment period.

JUSTIFICATION

7. The Administration has been actively promoting greening in order to improve our living environment. There is in particular a close relationship between greening and improvement in air quality.
Green plants can help act as a sponge by sequestering carbon dioxide in the atmosphere while releasing oxygen. They can improve air quality by intercepting particulate matters and absorbing gaseous contaminants such as sulphur dioxide and nitrogen oxides in the atmosphere as well as help lower urban temperature. We therefore propose to develop and implement district-based GMPs to complement existing vegetation in local areas, thereby improving the quality of our environment.

8. A GMP seeks to define the overall greening framework of a district, and serves as a guide for all parties involved in planning, design and implementation of greening works. In addition to identifying planting locations, the GMP establishes the greening themes and proposes suitable planting species.

9. We have developed GMPs for all urban areas. We completed the greening works in Central and Tsim Sha Tsui in early 2007, and the greening works in Mong Kok, Yau Ma Tei, Sheung Wan, Wan Chai and Causeway Bay in end 2009. We also completed the greening works in the remaining urban areas in June 2011. The public has been supportive of the GMP projects and there is a strong demand to extend the GMPs to the New Territories. We commenced the development of GMPs for the New Territories progressively from May 2011.

10. We have completed the development of GMPs for South East and North West New Territories in January 2014. In view of the high public expectation on early implementation of greening measures under the GMPs for the New Territories, it is intended to implement the greening measures as recommended in the GMPs for South East and North West New Territories with relatively high greening effect and public aspirations as priority greening works in advance for early enjoyment of the public.
FINANCIAL IMPLICATIONS

11. We estimate the cost of the proposed works to be $351.1 million in MOD prices, made up as follows –

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost (in $ million)</th>
</tr>
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<tbody>
<tr>
<td>(a) Greening works</td>
<td>200.0</td>
</tr>
<tr>
<td>(i) planting and establishment of trees and shrubs</td>
<td>112.0</td>
</tr>
<tr>
<td>(ii) ground preparation, soil improvement and installation of tree support systems</td>
<td>34.6</td>
</tr>
<tr>
<td>(iii) construction of associated raised/kerb planters and other landscape works</td>
<td>39.8</td>
</tr>
<tr>
<td>(iv) ancillary works</td>
<td>13.6</td>
</tr>
<tr>
<td>(b) Consultants’ fees for</td>
<td>14.6</td>
</tr>
<tr>
<td>(i) contract administration</td>
<td>12.4</td>
</tr>
<tr>
<td>(ii) management of resident site staff</td>
<td>2.2</td>
</tr>
<tr>
<td>(c) Remuneration of resident site staff</td>
<td>53.4</td>
</tr>
<tr>
<td>(d) Contingencies</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>286.8</td>
</tr>
<tr>
<td>(in September 2013 prices)</td>
<td></td>
</tr>
<tr>
<td>(e) Provision for price adjustment</td>
<td>64.3</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351.1</td>
</tr>
<tr>
<td>(in MOD prices)</td>
<td></td>
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</tbody>
</table>
Due to insufficient in-house resources, we propose to engage consultants to undertake the contract administration and site supervision of the proposed works.

PUBLIC CONSULTATION

12. In developing the GMPs for South East and North West New Territories, we followed the Enhanced Partnering Approach whereby the District Councils (DCs), Rural Committees (RCs) and the local communities were closely involved. In general, the relevant DCs and RCs formed a District Participation Group (DPG) to partner with the Civil Engineering and Development Department (CEDD), from inception to finalisation of the GMPs. In addition, community forums were organised jointly by the DPGs and CEDD to collect the views of the public and major stakeholders such as the Hong Kong Housing Society, the Link Management Limited and the professional bodies.

13. The GMPs obtained the support of the respective DCs at the following meetings –

   (a) Sha Tin DC’s Health and Environment Committee meeting on 7 March 2013;

   (b) Sai Kung DC’s District Facilities Management Committee meeting on 12 March 2013;

   (c) Tuen Mun DC’s District Facilities Management Committee meeting on 5 February 2013; and

   (d) Yuen Long DC’s meeting on 26 February 2013.

14. After the consultation as mentioned above, the following themes have been adopted –

   (a) Sha Tin - Floral Riverbanks, Verdant Hills (沙田聳翠)

   (b) Sai Kung - Fragrant Blossom Paths (萬彩千香)
15. A plan showing the major planting locations and the details of proposed greening themes as described in paragraph 14 are at Enclosure 1 and Enclosure 2 respectively.

ENVIRONMENTAL IMPLICATIONS

16. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). It will not cause long-term adverse environmental impact. We have included in the project estimate the cost to implement suitable mitigation measures to control short-term environmental impacts.

17. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in works contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to prevent dust nuisance.

18. At the planning and design stages, we have considered minimisation of the volume of soil excavation to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities. We will encourage the contractor to maximise

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1 Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public
the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further minimise the generation of construction waste.

19. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

20. We estimate that the project will generate in total about 136,520 tonnes of construction waste. Of these, we will reuse about 10,000 tonnes (7.3%) of inert construction waste on site and deliver 124,000 tonnes (90.8%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of the remaining 2,520 tonnes (1.9%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be $3,663,000 for this project (based on an unit cost of $27 per tonne for disposal at public fill reception facilities and $125 per tonne at landfills).

HERITAGE IMPLICATIONS

21. The project will not affect any heritage sites, i.e. all declared monuments, proposed monuments, graded historic fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

\(^2\) This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $90 per m\(^3\)), nor the cost to provide new landfills (which is likely to be more expensive), when the existing ones are filled.
sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

22. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

23. We upgraded 43CG to Category B in January 2008.

24. In view of the large area of the New Territories, we engaged consultants in May 2011 for the development of GMPs for South East and North West New Territories and carrying out the site investigation works. We charged the costs for South East and North West New Territories of about $19.2 million and $16.1 million respectively under block allocation Subhead 5101CX “Civil engineering works, studies and investigations for items in Category D of the Public Works Programme”. We completed the detailed design of the proposed works described in paragraph 3 above.

25. No Old and Valuable Tree is identified on site. The proposed works will not involve any tree removal.

26. We estimate that the proposed works will create about 173 jobs (136 for labourers and another 37 for professional/technical staff) providing a total employment of 7 505 man-months.

WAY FORWARD

27. Subject to Members’ support, we plan to seek the Public Works Sub-committee’s endorsement for upgrading part of 43CG to Category A in March 2014 with a view to seeking funding approval from the Finance Committee in May 2014.
List of Enclosure

Enclosure 1 – Greening Master Plans for the New Territories South East and North West – Priority Greening Works

Enclosure 2 – Details of proposed greening themes
建議綠化主題  Proposed Greening Theme

綠化主題「沙田聳翠」的構思源自《瀝源九約竹枝詞》裡的「迴環聳翠多奇景」，以表達沙田這片臨海的平原，是由多元化的景色，包括周邊的奇山峻嶺，及遊人眾多的城門河水組成，點出香港一處獨特的地貌。

The "Floral Riverbanks, Verdant Hills" theme highlights the distinctive landscape of Sha Tin, comprising green mountains, waterfront flat land and the Shing Mun River.
<table>
<thead>
<tr>
<th>品種</th>
<th>Callistemon viminalis</th>
<th>Liquidambar formosana</th>
<th>Terminalia mantaly</th>
</tr>
</thead>
<tbody>
<tr>
<td>串錢柳 (E)</td>
<td>楓香 (N)</td>
<td>小葉欖仁 (E)</td>
<td></td>
</tr>
</tbody>
</table>

(N): Native Species 本地品種
(E): Exotic Species 外來品種
西貢市及鄰近地區有「香港的後花園」之稱，將軍澳北為新發展的居住區，南面有工業設施。「萬彩千香」旨為西貢區建立悠閒、環保和百花齊放新型城市的形象。建議以有花或芳香的植物為主題品種，例如Elaeocarpus balansae大葉杜英和各種Michelia spp含笑屬的樹種（Michelia x alba白蘭，Michelia chapensis樂昌含笑及Michelia maudiae深山含笑等），綠化西貢區，營造一個舒適的居住環境。

The greening theme “Fragrant Blossom Paths” reflects the relaxing atmosphere of Sai Kung Town and its surrounding environment, known as the “Leisure Garden of Hong Kong”; as well as the sustainable, dynamic urban character of Tseung Kwan O, comprising mainly newly developed residential areas to the north and industrial estates to the south. The use of fragrant, flowering species, such as (Elaeocarpus balansae 大葉杜英 and Michelia spp 含笑屬 (Michelia x alba 白蘭, Michelia chapensis 樂昌含笑, Michelia maudiae 深山含笑等), in the greening theme is designed to enhance greening and create quality living environment in Sai Kung District.
**Theme Species**

**Trees 喬木**

- **Elaeocarpus balansae** 大葉杜英 (E)
- **Michelia chapensis** 樂昌含笑 (N)
- **Michelia x alba** 白蘭 (E)
- **Michelia maudiae** 深山含笑 (N)

*(N): Native Species 本地品種 *(E): Exotic Species 外來品種
Inspired by the Flame of the Forest in Tuen Mun Park and the renowned Castle Peak, the theme “Ruby Flowers, Emerald Mountain” implies beautification of Tuen Mun with bright and colorful flowering plants.

Proposed Greening Theme 建議綠化主題

主題的靈感來自屯門公園美麗奪目的鳳凰木，及稱頌古今的南粵名山─青山。綠化設計盼以顏色鮮艷的賞花植物（「映照」）襯托屯門的崇山峻嶺（「青瑤」），來達致美化屯門之目的。
Theme Species 主題品種

Trees 喬木

- Liquidambar formosana 楓香 (N)
- Delonix regia 鳳凰木 (E)
- Terminalia catappa 欖仁樹 (E)

(N) : Native Species 本地品種
(E) : Exotic Species 外來品種
元朗區由許多自然景觀，古物古蹟和傳統鄉村所組成，更擁有以觀賞日落聞名的下白泥，建議以「彩鳥映霞」為綠化主題，以反映元朗獨有特色。除了盡量栽種本土植物和鄉村常見的植物外，還重點種植擁有落霞色彩的開花喬木、灌木和草本植物。

Yuen Long District covers many natural scenic spots, historic icons, traditional villages and the famous sunset view at Ha Pak Nai. The theme “Golden Sunset” is proposed to reflect the unique local characters. The planting scheme for this area will adopt native species and species commonly found in villages where appropriate. Also, there is a desire for more colourful species in this district to reflect the local sunset scenery.
主題品種 Theme Species

喬木 Trees

*Cinnamomum burmannii*
陰香 (N)

*Melaleuca cajuputi subsp. cumingiana*
白千層 (E)

*Tabebuia impetiginosa*
風鈴木 (E)

(N) : Native Species 本地品種
(E) : Exotic Species 外來品種