For discussion on 13 February 2018

### Legislative Council Panel on Food Safety and Environmental Hygiene

### **Expansion of Wo Hop Shek Crematorium**

#### **Purpose**

This paper briefs Members on the Government's plan to provide two additional body cremators and one new service hall within the existing Wo Hop Shek Crematorium (WHSC) to meet the increasing public demand for cremation service.

#### **Background**

- 2. The Government is responsible for the overall planning, funding and construction of public cremation facilities in Hong Kong. At present, the Food and Environmental Hygiene Department (FEHD) manages 32 body cremators (10 in Cape Collinson, six in Diamond Hill, six in Wo Hop Shek, four in Fu Shan, four in Kwai Chung and two in Cheung Chau).
- 3. The existing WHSC was reprovisioned in February 2013, following completion of the project **13NB** "Reprovisioning of Wo Hop Shek Crematorium", with funding approved by the Legislative Council in February 2009. It comprises six body cremators, one bone cremator and three service halls. At its design stage, some areas have already been reserved for the addition of two body cremators and one service hall as and when required.

#### **Justifications**

4. At present, about 52 840 cremation sessions (sessions) are available each year under general operation of FEHD facilities.

5. With the growth in overall population and changes in demographic profile, the projected demand for cremation service in Hong Kong is expected to continue to increase steadily in the next twenty years. An overview is given below –

Period	Annual average number of deaths	Annual average number of cremations
1978 to 1997 (actual)	28 000	18 000
1998 to 2017 (actual)	40 000	35 000
2018 to 2037 (projection)	59 000	56 000

- 6. On the supply side, the serviceable life span of cremators is generally 15 to 20 years, or about 30 000 to 40 000 cremation cycles. cremators in the WHSC and the Cape Collinson Crematorium (CCC) are newly reprovisioned in 2013 and 2015 respectively. The cremators in the four crematoria in Cheung Chau, Kwai Chung, Fu Shan and Diamond Hill have been in use since 1991, 2003, 2004 and 2007 respectively. In the normal course, reprovisioning projects for crematoria need to be kicked off at suitable junctures. Between the decommissioning of an old facility and completion of a new one (typically three to four years), there will be a reduction in the total number of cremation sessions available. As an overall picture, we expect that there may be shortfall of cremation sessions from 2023 to 2026 due to the reprovisioning of cremators in Kwai Chung Crematorium and Fu Shan Crematorium. Furthermore, some geographically-convenient crematoria such as crematoria of Diamond Hill, Fu Shan and Kwai Chung were more popular and their usage rates exceeded 99% in 2017.
- 7. Given the increasing demand and the need for supply reprovisioning, planning is in place to take forward crematorium projects in a paced manner to ensure no service gaps. The next in the pipeline is the current expansion project to provide two new cremators at WHSC for commissioning in 2023, adding about 3 800 cremation sessions per annum.
- 8. The two new cremators will be built in accordance with the latest environmental standards, fully meeting the requirements set out in "A Guidance Note on the Best Practicable Means for Incinerators (Crematoria)" issued by the

Environmental Protection Department (EPD). The environmental performance of the new cremators will also be regulated by the Specified Process Licence of the Air Pollution Control Ordinance (Cap. 311). The design and operation of these new cremators will be fully computerised, using advanced technologies. They will be installed with an advanced flue gas filtering system to process and filter out waste gases and particles generated during the combustion process, and will also be fitted with a high temperature secondary combustion chamber to ensure completion of combustion during the cremation process.

9. The above design was adopted for the new cremators at our reprovisioning projects completed in recent years, including CCC and six existing cremators in WHSC, and has proven effective in reducing the emission of particles/waste gases and dark smoke as well as meeting the statutory environmental standards. The new cremators will be equipped with a computer system to record their emissions. The system is connected to EPD for real-time and comprehensive monitoring to ensure that waste gas emissions are in full compliance with the air quality standards.

## **Project Scope**

- 10. The expansion project will take place in an area reserved in WHSC. The scope of works includes the construction and provision of
  - (a) two new body cremators (with barcode coffin verification function; each can perform six cremations daily over a continuous period of eight hours at 170 kilogram capacity);
  - (b) one new multi-purpose service hall;
  - (c) a full range of ancillary facilities such as joss paper burner, toilets, refuse storage area, public announcement and intercom system, storeroom, etc.; and
  - (d) addition, alteration and modification works that are necessary for the additional cremators and service hall.

11. Upon completion of the expansion project, WHSC will have a total of eight body cremators, one bone cremator, four service halls and other ancillary facilities.

### **Financial Implications**

12. The proposed project was upgraded to Category B in 2016. The capital cost of the project is estimated to be about \$174.2 million in money-of-the-day (MOD) prices.

#### **Public Consultation**

- 13. In March 2008, we consulted the District Minor Works and Environmental Improvement Committee (DMW&EIC) of the North District Council (NDC) on the proposal to construct eight technologically advanced new body cremators to replace four old ones. The meeting agreed that a phased-approach would be adopted for the installation of the new cremators. While six cremators would be constructed in the first phase (Project 13NB), it was agreed that the planning works for the remaining two body cremators would be initiated at a suitable juncture.
- 14. Accordingly, on 18 September 2017, we sought views from DMW&EIC of NDC regarding the current expansion project. Some members of the DMW&EIC were concerned about the flue gas emissions with the provision of additional cremators. We assured members that air emissions from the new cremators would be kept under close monitoring and emission samples would be taken regularly for testing to ensure that they meet the stringent and up-to-date requirements as approved. Members of the DMW&EIC generally supported the proposed project and suggested that FEHD should also brief the Fanling District Rural Committee (FDRC) together with relevant village representatives. As follow up, FEHD met with the FDRC and its stakeholders on 8 December 2017, who raised no objection to the proposed project.

### **Environmental Implications**

- 15. Project **13NB** and the current project formed a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) and an environmental permit (EP) is required before commencement of its construction and operation. In June 2008, the relevant EIA report was approved under the EIAO, covering the scenario with nine cremators (seven cremators commissioned in 2013 and two cremators to be completed in this project). The EIA report concluded that the environmental impact of the project can be controlled to within the criteria under EIAO and the Technical Memorandum on EIA Process. An EP was issued by EPD covering Project 13NB and the current project.
- 16. We will implement the measures recommended in the approved EIA report and stipulated in the EP. The key measures include equipping the cremators with the latest technology for flue gas filtering and emission monitoring system that would meet the emission requirements as set out in "A Guidance Note on the Best Practicable Means for Incinerators (Crematoria)" issued by EPD. We have included the cost of implementing the environmental mitigation measures in the overall project estimate.

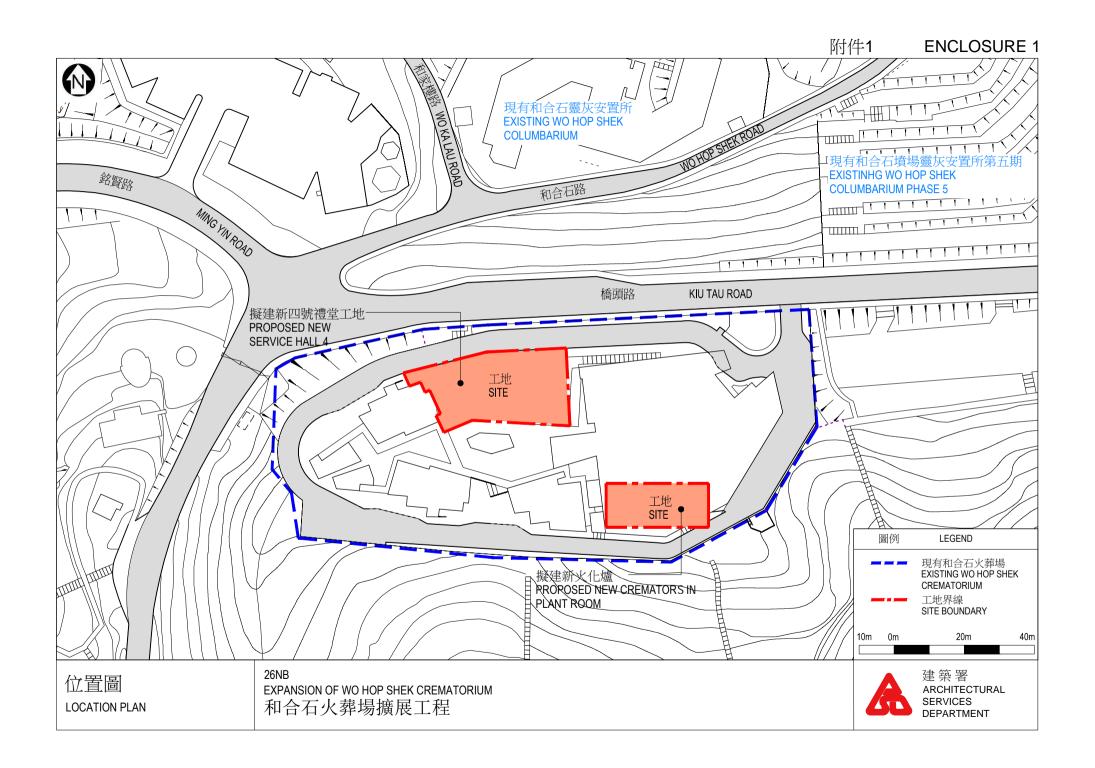
#### **Implementation Plan**

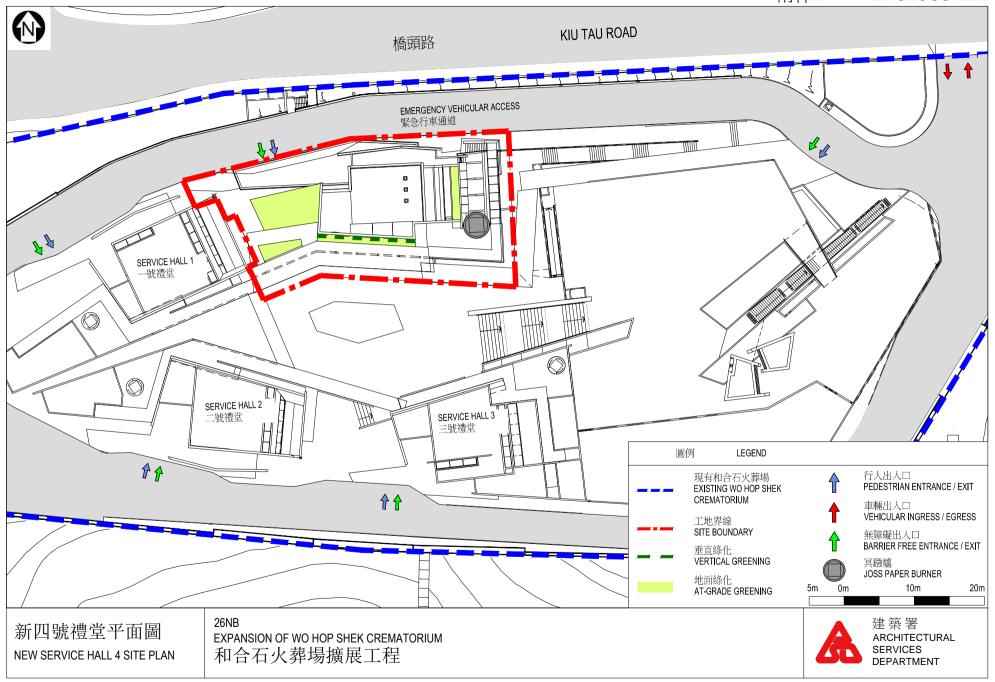
17. We plan to seek funding approval from the Public Works Subcommittee and then the Finance Committee within this legislative session. Subject to funding approval by the Finance Committee within this legislative session, the proposed works are expected to commence in the fourth quarter of 2018 for completion by the first quarter of 2023. Throughout the construction period, WHSC will be kept in normal operation. A location plan, one site plan, one floor plan and an artist's impression for the project are at **Enclosures 1** to **4**.

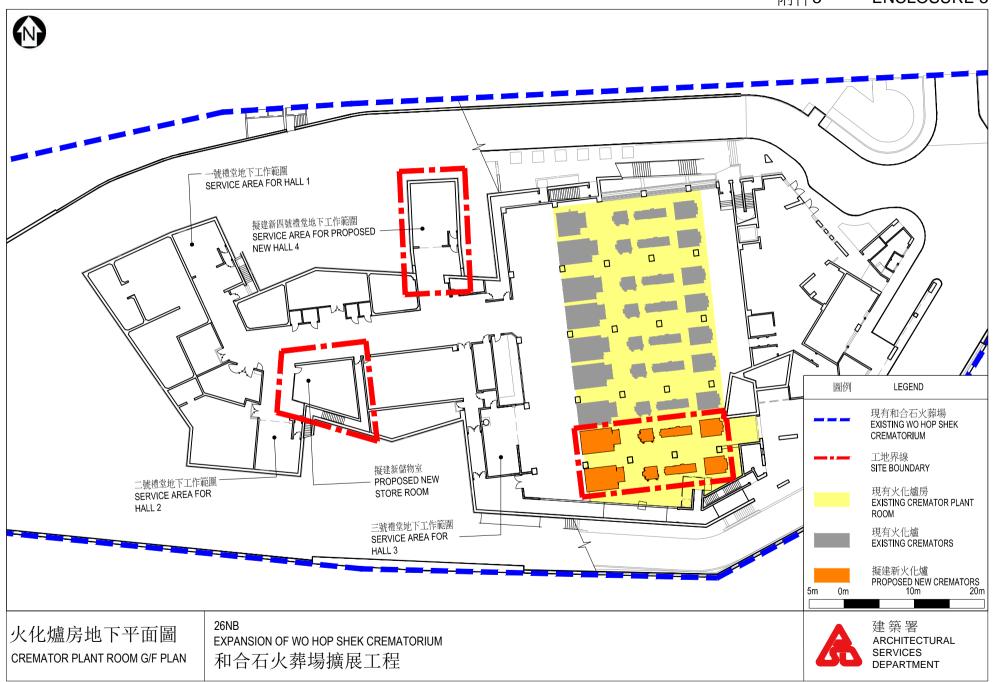
# **Advice Sought**

18. Members are invited to support the proposed project.

Food and Health Bureau Food and Environmental Hygiene Department February 2018









PERSPECTIVE VIEW FROM NORTHERN DIRECTION (ARTIST'S IMPRESSION)

從北面望向新四號禮堂的構思圖

構思圖 ARTIST'S IMPRESSION 26NB EXPANSION OF WO HOP SHEK CREMATORIUM 和合石火葬場擴展工程

