

Study report on district minor works projects
Request for Provision of Book Sanitisers in Public Libraries
Working Group on District Minor Works Paper No. 29/2016 Annex VIII

In connection with the proposal on District Minor Works (DMW) projects put forth by Ms SIU Ka-yi in October 2016 and the request of provision of book sanitisers for self-service by readers of public libraries in the Central and Western District in the fourth meeting of Working Group on DMW, the Leisure and Cultural Services Department (LCSD) has conducted a research regarding the book sanitisers' functions, effectiveness and resources required. The report is as follows:

Existing arrangements in Hong Kong Public Libraries

2. To ensure the hygiene and cleanliness of all library facilities and reduce the transmission of bacteria, the Hong Kong Public Libraries (HKPL) has all along followed the guidelines of the Department of Health (DH) on hygiene and cleanliness in providing services and facilities. All libraries are regularly cleaned and measures are adopted to prevent the growth and spread of bacteria. Upon finding any books with stains or dirt, the library staff will remove the materials for separate processing and cleaning. To enhance library hygiene, alcoholic-based handrub dispensers are installed at the main entrances or near the service counters of public libraries for the public to clean their hands after touching public installations or equipment (including books, etc.).

Effectiveness of book sanitisers

3. With regard to the suggestion of providing book sanitisers, the LCSD has sought advice from the DH on the effectiveness of two models of "ultraviolet sanitiser for books" (book sanitiser) (see Annex 1) available in Hong Kong. Given that some of these sanitisers flaunt their functions of disinfection by ultraviolet (UV) irradiation, the DH believes that the UV light of a particular wavelength produced by such machines may kill the bacteria on the surfaces of books. To achieve the expected outcome, an abundant amount of UV light has to reach the exterior of a book, whereas pages not exposed to the rays will remain not disinfected. Despite the sterilisation, once the books are taken out of the machine, they are still subject to possible contamination from the user's hands and the external environment. Therefore, while the DH agrees that the book sanitisers may enhance the external cleanliness of books, it is essential that the public be reminded to maintain personal hygiene and wash hands frequently, particularly after touching public installations, so as to reduce the chance of the spread of bacteria. Also, should emphasis be put solely on the effectiveness of the book sanitisers, the public may be misled into thinking that precautions are unnecessary, thereby neglecting the importance of personal and hand hygiene.

4. We have also consulted the Electrical and Mechanical Services Department on

the configuration of book sanitisers with regard to public safety. Electrical products shall comply with the requirements under the Electricity Ordinance (Cap. 406, Laws of Hong Kong), especially the protection requirements for electricity supply and metal components. Book sanitisers should also be equipped with an interlocking feature to prevent UV exposure to users in case the machine is opened during operation. Besides, given that there may be blind spots of UV coverage inside the sanitisers allowing the growth of bacteria and viruses, the interior of book sanitisers should be sterilised regularly. Filters of book sanitisers, if any, should also be replaced on a regular basis. Suppliers/manufacturers concerned shall submit laboratory examination reports of their products to substantiate their sterilisation effectiveness.

Effectiveness of book sanitisers in public libraries

5. For the two models of book sanitisers available on the local market, each can sterilise 3 to 6 books each time. Based on the daily book lending rates of the three public libraries in the Central and Western District, it is estimated that the provision of a self-service book sanitiser at one of these public libraries will enable 15% to 25% of the books on loan to be sterilised each day. However, it is not possible for public libraries to provide a number of book sanitisers for readers' self-service due to limited space.

6. We agree with the DH that public cooperation is essential in preventing the spread of infectious diseases effectively. Members of the public should follow DH's guidelines to strengthen personal and hand hygiene. They should wash hands before touching the eyes, nose and mouth and after touching public installations or equipment. We will continue to follow DH's guidelines. We will clean library facilities regularly and advise members of the public to use alcoholic handrub provided by the libraries to enhance personal and hand hygiene. As such, we have no plan to provide book sanitisers in libraries at this stage.

Estimated expenditure on book sanitisers

7. Proposal for the provision of book sanitisers involves launching of new facilities and services. In addition to the expenditure on procurement of such facilities, daily repair and parts replacement, the proposal involves additional expenditure arising from the need to cope with new services, including additional manpower for meeting daily operation arrangements. The preliminary estimated expenditure for the first year broadly ranges from \$151,000 to \$187,000 (see Annex II).

8. According to the guidelines of implementation of DMW programme, the funds of DMW mainly cover minor building works, fitting out works and minor alterations, additions and improvement works including furniture and equipment replacement incidental to such works, and slope inspections and minor slope improvement works. If the funds of DMW are to be used in the provision of book sanitisers in public libraries, the working group should clarify whether the funds can cover the expenditure on procurement of such facilities and additional expenditure arising from the new services.

Recommendation

9. In relation to information and opinions regarding book sanitisers and their effectiveness in public libraries provided by various departments in paragraphs 3 to 5 above, the LCSD has provided in paragraphs 7 and 8, the estimated expenditure for the working group to consider the proposal for provision of book sanitisers for public libraries in the district.

Leisure and Cultural Services Department
January 2017

Summary of Basic Features of Book Sanitisers

(Information provided by local agent)

	Book sanitiser (desktop model))	Book sanitiser (pillar model)
Dimensions:	59cm (H) x 47cm(W) x 36cm (D)	131cm (H) x 55cm(W) x 50cm (D)
Technology:	<ul style="list-style-type: none"> ● UV wave ● 3 nos. of 42W UV lamps, respectively positioned at the centre of the base platform, on the base platform near the back of the sanitiser, and near the door at the top of the sanitiser. ● cross-irradiating the exterior of books by multiple UV lamps 	<ul style="list-style-type: none"> ● UV wave ● 3 nos. of 36W UV lamps, respectively positioned in the front part of the sanitiser (on the left, on the right and in the upper part)
Sterilisation time:	About 40 to 50 seconds	About 30 seconds
Sterilisation capacity:	6 books	3 books
Function:	<ol style="list-style-type: none"> 1. Eliminate the bacteria on the exterior of books by means of UV light 	<ol style="list-style-type: none"> 1. Eliminate the bacteria on the exterior of books by means of UV light 2. Blow to turn over the pages and remove the dust for UV irradiation
Equipped with:	<ol style="list-style-type: none"> 1. Buzzer to give off signals 2. Viewing glass panel 3. Recording of use count 	<ol style="list-style-type: none"> 1. Light indicator to signal sterilisation process 2. LCD signal function on machine door 3. Viewing glass panel 4. Dust collection filter 5. Light indicator to signal replacement of UV lamp or dust collection filter when necessary 6. Storage compartment for release of aroma
Noise output	<ol style="list-style-type: none"> 1. Audio signal upon completion of sterilisation process 	<ol style="list-style-type: none"> 1. Running noise of parts during machine operation until completion of sterilisation process

Estimates of expenditure on provision of a book sanitiser

Expenditure items	Estimates of first-year expenditure
1. Purchase of book sanitisers (accessories inclusive):	\$30,000 or \$63,000 / each sanitiser (depending on the model selected)
2. Recurrent repair and maintenance expenditure (accessories inclusive):	\$8,000 or \$17,000 / each sanitiser (depending on the model selected)
3. Hire of engaging agency assistants: <ul style="list-style-type: none"> ● Switch on and test the equipment before opening hours to ensure normal operation ● Respond to verbal enquiry, advice or complaints from members of the public ● Crowd control (especially during peak hours) ● Assist members of the public in using the equipment and demonstrate the operation ● Report mechanical failure and arrange suspension of the service ● Follow up on quotations for accessories and maintenance arrangements ● Record the number of users by session 	\$97,000
4. Purchase of tables	\$6,000 / each sanitiser (for desktop model only)
5. Electricity charges:	\$2,100/ sanitiser
6. Publicity and printing: (posters, notices, leaflets, etc.)	\$8,000
Total expenditure: ^{**}	\$151,000 to \$187,000

^{**}The actual expenditure (except for electricity charges) shall be based on the tender prices. Expenditures on replacement of equipment in the future are subject to the funding approval by the Central and Western District Board.