

For discussion on  
8 January 2019

## **Legislative Council Panel on Security**

### **Installation of electric locks security system in Pik Uk Correctional Institution**

#### **PURPOSE**

This paper consults the Panel on the proposal to install the electric locks security system (ELSS) in the Pik Uk Correctional Institution (PUCI).

#### **BACKGROUND**

2. The Correctional Services Department (CSD) is committed to providing a secure, safe, humane, decent and healthy environment for persons in custody (PICs). Most of the correctional facilities in Hong Kong are either aged or converted from buildings originally used for other purposes. CSD has been implementing various measures to improve and convert existing facilities to cater for the custodial and rehabilitation needs of PICs.

3. Gates installed with manually-operated mechanical locks in correctional institutions are one of the facilities that require improvement. These gates have to be locked and unlocked by keys manually, and involve complicated and extensive procedures of safe keeping, collection, return and distribution of keys etc. due to security reason. Moreover, the manual locking or unlocking processes are more time-consuming.

4. To address the problems associated with the locking/unlocking processes of the old system of manually-operated mechanical locks, CSD completed a study in 2012 and decided to replace the existing manually-operated locks with ELSS in various institutions by phases in accordance with the respective security and actual operational need. CSD completed the installation of ELSS in Lo Wu Correctional Institution and Tai Lam Centre for Women in 2014 and 2016 respectively, while the expansion works of ELSS in Stanley Prison commenced in 2018 and is still underway.

5. CSD proposes to install ELSS in PUCI, with facial recognition function to verify the identity of staff<sup>1</sup>, with a view to enhancing the efficiency of prison management and level of security.

## **PROPOSED INSTALLATION OF ELSS**

6. The ELSS proposed to be installed in PUCI is an electro-mechanical locking system operating in conjunction with closed-circuit television (CCTV) cameras, facial recognition function, intercoms and call buttons. When a CSD staff member presses a call button to request for the unlocking of a gate operated under ELSS, the facial recognition function of the CCTV will verify the identity of the staff and transmit the call button signals to the control room. After receiving the relevant visual and audio signals, the staff in the control room will confirm the identity of the requesting staff through the intercom and CCTV system before unlocking the gate. Institutional security is thus enhanced by such dual identity-verification arrangement.

7. CSD proposes to install the abovementioned ELSS in most of the passageways, cells and facilities in PUCI in order to enhance the security level and operational efficiency of the penal institution. The installation works will be carried out by the Electrical and Mechanical Services Trading Fund (EMSTF) under the Electrical and Mechanical Services Department. The works project will involve modification of server rooms and installation of about 380 gates with electric locks, about 960 CCTV cameras (some of which will be equipped with facial recognition function), around 480 intercoms, electro-mechanical locking devices, server and associated parts, uninterrupted power supply system and charging devices, etc.

## **JUSTIFICATIONS FOR INSTALLING THE PROPOSED ELSS**

8. CSD proposes to install ELSS in PUCI to replace the old system of manually-operated locks for the following justifications –

(i) Speeding up emergency support

For security reason, all keys of the gates with mechanical locks

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<sup>1</sup> In her 2018 Policy Address, the Chief Executive put forward the use of innovation and technology to enhance the capabilities of law enforcement agencies, including developing smart prisons. CSD plans to introduce smart elements in prisons to modernise correctional facilities, with a view to enhancing the efficiency of prison management and level of security. Introducing facial recognition function in ELSS is in line with the policy direction in the Policy Address.

are kept in specific locations which are relatively far away from the custodial areas of PICs. In case of emergency (such as self-harm acts by PICs), it takes time for CSD staff to collect the keys from the concerned locations and rush to the scene to unlock the relevant gates.

After installing the ELSS, the locking/unlocking of gates will be centrally processed and controlled by the control room. The staff at the scene will only have to press the call button and the staff in the control room will unlock the gates according to standard procedures. This can save the time required for staff to collect the keys and get to the scene in case of emergency, and will hence allow prompt rescue and support actions.

(ii) Strengthening institutional security

Upon the implementation of ELSS, the staff in the control room will only unlock the gates after verifying the identity of the requesting staff through the CCTV cameras of the system. With the support of the facial recognition technology, the staff in the control room can promptly confirm the identity of the staff pressing the call button and unauthorised access to restricted areas or leaving of designated areas can be prevented. Moreover, the security system will automatically record the time whenever someone enters or leaves a gate, the number of people involved, and information regarding the entering/leaving staff. As such, in case of emergency, the staff in the control room can quickly establish the identity of the staff present at the scene of the incident. As PUCI is a maximum security prison, there is a need for installing ELSS to enhance the level of security.

(iii) Enhancing management efficiency

Upon the implementation of ELSS, procedures can be streamlined by removing the need to keep, collect or return keys and make corresponding records. Moreover, staff will no longer have to keep keys to prison cells while on duty, and gates will no longer need to be unlocked manually by staff, thus saving time spent on waiting for staff on gate-keeping duty to arrive at the scene to unlock the gate. After the application of the system, institutional management can deploy human resources more effectively by redeploying staff originally performing gate-keeping duty to other posts, with a view to enhancing operational and management

efficiency.

## FINANCIAL IMPLICATIONS

9. The estimated total non-recurrent cost of installing ELSS is \$219.4 million. The detailed breakdown is as follows –

	<b>\$ million</b>
(a) Security system <sup>2</sup>	80.4
(b) Builder and building services works <sup>3</sup>	80.0
(c) Builder and building services consultancy <sup>4</sup>	15.0
(d) EMSTF project management services <sup>5</sup>	28.0
(e) Contingencies (about 10% of (a) and (b) above)	16.0
<b>Total</b>	<b>219.4</b>

10. The estimated cash flow requirement is as follows –

<b>Year</b>	<b>\$ million</b>
2019 - 20	11.0
2020 - 21	17.5
2021 - 22	26.3
2022 - 23	32.9
2023 - 24	43.9
2024 - 25	87.8
<b>Total</b>	<b>219.4</b>

11. We estimate that the annual recurrent cost after implementing the ELSS, including expenses on corrective maintenance and equipment spare parts, will be around \$37.2 million.

## IMPLEMENTATION PLAN

12. The implementation timetable as planned will be as follows –

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<sup>2</sup> The security system includes electric locks, electro-mechanical locking devices, server and associated parts, CCTV camera (some of which will be equipped with facial recognition function), uninterrupted power supply system and charging devices, etc.

<sup>3</sup> The builder and building services works include provision/modification of around 12 Local Equipment Rooms, installation and modification of relevant gates and grille partition, and associated builders works.

<sup>4</sup> The builder and building services consultancy includes the consultancy services for builder and building services works.

<sup>5</sup> The EMSTF project management services include preparation of tender documents, tender evaluation, approval of contractors' design submissions, monitoring of contractors' installation, acceptance tests, and co-ordination with various government departments and contractors.

<b>Activity</b>	<b>Expected Completion Date</b>
(a) Engagement of builder/building services consultant	May 2020
(b) Project planning, system design/tender preparation	March 2021
(c) Tendering and award of contract	May 2021
(d) Approval of system design	August 2021
(e) Equipment manufacturing, delivery and site work preparation	November 2021
(f) Installation and building services works <sup>6</sup>	
(i) Stage 1 works (Hall A and Hall C)	November 2022
(ii) Stage 2 works (Hall A, Hall B and Dining Hall B)	October 2023
(iii) Stage 3 works (Hall A, Reception Office, Hospital, Main Dining Hall and Workshop Block)	September 2024
(g) Acceptance test and training	January 2025
(h) System commissioning	March 2025

13. The above schedule was drawn up with reference to previous experience and the advice of the EMSTF. As PUCI was built over 40 years ago, some facilities will need to be refurbished and/or modified before the ELSS can be installed. Moreover, the works will cover the whole institution, hence the whole project is expected to take longer, requiring around five and a half years to complete. To expedite the progress of the project, installation and modification works will be carried out by phases, while works in certain areas will be taken forward concurrently. During the works period, CSD will ensure that the operation of PUCI will not be affected.

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<sup>6</sup> The order of relevant installation and building services works may be suitably adjusted taking into account the actual operation of the institution.

## **ADVICE SOUGHT**

14. Members are invited to comment on the proposal. Subject to the views of the Panel, we will seek funding for the proposal from the Legislative Council according to the established mechanism.

**Security Bureau  
Correctional Services Department  
December 2018**