

3 Summary of Major Comments and Responses

During the Stage 4 PE, various channels were established to collect the comments and opinion from the public and stakeholders on the Project. CLG meeting, and briefing sessions were also held to solicit comments and opinions. Moreover, consultation to T&TC and HEC of STDC were conducted to receive comments and opinions from the members.

The major comments received during the Stage 4 PE are categorized, summarized and responded as follows:

3.1 Major Comments

Effective Public Engagement and Mitigation Measures

- 3.1.1 There were appreciation on the public engagement activities conducted for promoting the Project and on the setting up of CLG. Commendation on a good communication between the project office and the local stakeholders was received. Measures in mitigating potential traffic impacts by constructing temporary steel bridge across A Kung Kok Street were also appreciated.

Environmental Impact Assessment (EIA)

- 3.1.2 There were questions on how the general public could have the access of the EIA report and the mechanism of auditing the implementation.
- 3.1.3 The personnel responsible for the environmental monitoring was enquired and the implementation of suitable mitigation measures was requested.
- 3.1.4 More specifically, there was enquiry about whether the environmental monitoring result from the station near NAACHM could be released to them.

Traffic Impact and Arrangement during Construction and Operation Stages

- 3.1.5 There were general enquiries about the estimated traffic flow of the construction vehicles loaded with excavated rock during construction stage.
- 3.1.6 Some stakeholders raised concerns about the compliance of the proposed temporary haul road with the relevant standards. Also, the traffic arrangement before the use of the temporary steel bridge was enquired.
- 3.1.7 There was suggestion that part of the temporary haul roads, cycle tracks, and footpath could be turned into permanent for public use after the completion of the Project.
- 3.1.8 Some stakeholders along A Kung Kok Shan Road raised concerns the construction works may overload the mini bus service along A Kung Kok Shan Road. Moreover, there were also concerns that the maneuvering of special service vehicles, such as fire engines and ambulances, would be blocked due to the construction vehicles parking outside the site entrance.
- 3.1.9 Moreover, some stakeholders along A Kung Kok Shan Road pointed out that the construction period of the renovation project of Bradbury Hospice would overlap with the Stage 1 Works of the Project. Hence, concern about the overloading of A Kung Kok Shan Road because of the construction vehicles of the projects was raised.

Air Quality Impact during Construction and Operation Stages

- 3.1.10 There were enquires about the possible air pollution problem and odour impact due to the operation of the ventilation shaft and the treatment facilities of the relocated STSTW.

- 3.1.11 There were enquires about the type of gases, other than Hydrogen Sulphide, that would be produced during the operation of the relocated STSTW and whether acid rain would be formed due to the emitted gases.

Operation Cost of the Relocated STSTW

- 3.1.12 There were enquiries about the operation cost of the relocated STSTW.

Construction Cost of the Relocated STSTW

- 3.1.13 There were enquiries about the total cost of the Project and construction cost of the Stage 1 Works.

Design of the Relocated STSTW

- 3.1.14 There were enquiries that whether the design capacity of the relocated STSTW could cope with the future population growth in Sha Tin District.
- 3.1.15 There were concerns about whether the fire services provisions in the relocated STSTW comply with the relevant requirements.
- 3.1.16 Some stakeholders raised enquiries about the reason for locating some ancillary buildings outside the caverns.
- 3.1.17 The principle and result of wind tunnel test in the laboratory for the Project was queried.

Possible Impacts due to Operation of Drill and Blast

- 3.1.18 There were enquiries about the operation of drill and blast and some stakeholders raised concern about whether the vibration in the vicinity induced by the drill and blast operation would affect the structural integrity of the nearby buildings.
- 3.1.19 There were also concerns from the stakeholders along A Kung Kok Shan Road that whether the drill and blast operation would lead to settlement of their buildings.
- 3.1.20 There were enquiries about the expected noise and vibration generated from the blasting operation and with what examples the impact could compare.
- 3.1.21 Some stakeholders expressed concern that the acceptance levels of vibration and noise of the patients along A Kung Kok Shan Road was lower than the average people and enquired about whether stricter noise and vibration limit would be set up for the patients.

Safety, Design and Operation of Explosives Magazine

- 3.1.22 Stakeholders along A Kung Kok Shan Road raised concerns about the safety of the temporary magazine site.
- 3.1.23 The safety precautions related to the magazine site were queried. Also, there were enquiries about the safety during transportation of the explosive to and from the magazine site.

Minimization of Removal of Trees

- 3.1.24 There were concerns on the number of trees to be removed due to the Project. There was a request for minimizing the number of trees removed and consulting the STDC for the arrangement of tree compensation.

Handling of Excavated Rock from Relocated STSTW

- 3.1.25 There were enquiries about the handling of excavated rock during the construction of cavern and whether adequate dust suppression facilities would be installed in the rock-carrying construction vehicles.

Handling of Sludge from Relocated STSTW

- 3.1.26 There were enquiries about the method of treatment of sludge generated from the relocated STSTW and whether the transportation of sludge would pass through A Kung Kok Street.

Construction Programme

- 3.1.27 Some stakeholders along A Kung Kok Shan Road queried about the time required for the construction of access road into the ventilation shaft.
- 3.1.28 There were also enquiries about the time, number and duration of blasting each day during the construction of caverns. Also, the programme of the construction of cavern was also enquired.

Supervision Level of Works

- 3.1.29 There were enquiries about the supervision level of the construction of the Project.

Land Use

- 3.1.30 There were enquiries about the possibility of reducing the land requirement in Area 73 so that more space could be provided for public's use.

Other Community's and Stakeholders' Aspirations/ Concerns

- 3.1.31 There were concerns about the possible breeding of mosquitoes and the presence of wild animals nearby the construction site in A Kung Kok Shan Road.
- 3.1.32 There were enquiries about whether the insurance of the contracts would cover the adjacent communities/buildings.
- 3.1.33 There were concerns that whether there are any pre-exist bombs and whether they would be uncovered during excavation of caverns.
- 3.1.34 The security measures of preventing crimes in sites are enquired.
- 3.1.35 There were enquiries that whether notice would be provided to Shatin Hospital before the commencement of construction of Stage 1 Works.
- 3.1.36 Some stakeholders along A Kung Kok Shan Road conveyed that the patients living there were more sensitive to the change in air quality, noise and vibration and requested for some mitigation measures and monitoring system in Stage 1 Works.
- 3.1.37 There were concerns from the stakeholders that the works nearby their private lots and the grave would block their access to the land.

3.2 Responses to Major Comments on Relocation Project

Appreciation on the Effective Public Engagement

- 3.2.1 DSD always keeps close contact with and listen the opinions and comments of the community especially the stakeholders. The project team will continue to communicate with the public through the CLG, newsletter and the timely update of the project website.

Environmental Impact Assessment (EIA)

- 3.2.2 The EIA report and the corresponding Environmental Monitoring & Audit (EM&A) manual for the Project were approved on 28 November 2016, and the environmental permit was granted on 31 March 2017. Relevant documents can be found in EPD's website. The proposed environmental mitigation measures will be implemented strictly.
- 3.2.3 An environmental team (ET) will be employed to systematically collect and analyze the environmental data, where an independent environmental checker (IEC) will audit the provision of necessary recommendations. A monthly EM&A report will be compiled and certified by the ET leader and verified by the IEC. The report will then be submitted to the EPD for perusal before publishing in the project website.

Traffic Impact and Arrangement during the Construction and Operation Stages

- 3.2.4 During the peak construction period of the Project, there would be in average 2.6 number of construction vehicles loaded with excavated rock running in and out from the construction site per minute.
- 3.2.5 No blasting will be involved in the initial stage of the Project and hence the estimated traffic flow generated due to construction would be small. During that time, the construction vehicles will use A Kung Kok Street but will avoid the AM and PM peak hours. It was anticipated that the temporary steel bridge would be completed shortly after the first year after the commencement of works.
- 3.2.6 The project team will maintain a close liaison between the Consultants and Transport Department (TD) during the course of Works in formulating the temporary traffic schemes and measures on road safety, including the provision of sightline.
- 3.2.7 Relevant contract terms will be incorporated into the contract in order to avoid the minibus services of A Kung Kok Shan Road from being affected.
- 3.2.8 It is anticipated that the work sites at A Kung Kok Shan Road would have enough space for temporary parking of construction vehicles. As a result, disruption to the other road users is not expected.
- 3.2.9 The traffic generated from the renovation project of Shatin Hospital had been considered in the traffic impact assessment (TIA) of the Project, which indicated that the accumulated effect was minimal. The Consultants will continue in communicating with the hospital during construction stage.

Air Quality Impact during the Construction and Operation of the Project

- 3.2.10 One of the major benefits of the relocation project is the better control of odour generated from the treatment plant due to the complete coverage of the sewage treatment plant by rock cavern. The wind tunnel analysis has been utilized in determining the position of the ventilation shaft. The result shows that the wind speed and direction in the position of the ventilation shaft will be beneficial to the control of odour. Also, there are multiple measures to be adopted in the relocated STSTW to control the odour including the installation of odour removal system and the provision of negative pressure inside the cavern.

- 3.2.11 Hydrogen Sulphide would be the major source of odour in a sewage treatment plant and the use of activated carbon in the relocated STSTW could remove more than 95% of Hydrogen Sulphide. Moreover, the odour problem in the vicinity was expected to be insignificant due to the fact that the horizontal distance between the ventilation shaft and the nearest occupied facility is about 240 m and the wind speed and direction is beneficial to odour control. In fact, the expected odour in the nearby facilities, such as Cheshire Home Shatin, Breakthrough Youth Village and Neighbourhood Advice-Action Council Harmony Manor, is lower than the requirement in Environmental Impact Assessment Ordinance (EIAO) of 5 OU.
- 3.2.12 The main sources of acid rain are Sulphur Dioxide and Nitrogen Oxides emitted from the burning of fossil fuel. Since no anaerobic digestion will be carried out in the relocated STSTW, it will not generate a large amount of Sulphur Dioxide and Nitrogen Oxides and hence there will be a rare chance of forming acid rain due to the relocated STSTW.

Operation Cost of the Relocated STSTW

- 3.2.13 The cost of lighting and ventilation is higher in the relocated STSTW. However, a more efficient sewage treatment technology was being investigated to be adopted in the relocated STSTW, for example Moving Bed Biofilm Reactor (MBBR). Various energy saving measures, such as the reuse of treated effluent for cooling, are being considered in the relocated STSTW. Meanwhile, further energy and cost saving measures will be investigated in the future detailed design and operation stages of the Project.

Construction Cost of the Relocated STSTW

- 3.2.14 Since the detailed design of the Project is still on going and the construction cost is influenced by various factors, the exact construction cost is still under revision. For the construction cost of the Stage 1 Works, the estimated price is 2 billion Hong Kong dollars in money-of-the-day. The exact figure of the construction cost of the Stage 1 Works will be shown in the documents of the Legislative Council in future.
- 3.2.15 The Project would be delivered through separate contracts in order to control the cost and to better manage the risks. By delivering the Project through stages of contracts according to the disciplines of works, more eligible contractors could be involved in the bidding process, which could reduce the construction cost.

Design of the Relocated STSTW

- 3.2.16 The Consultants has considered the latest planning information and planned development in determining the treatment capacity, which is 340,000 m³ per day of the relocated STSTW. As a result, the design capacity would be able to cope with the need of future development in the Sha Tin District.
- 3.2.17 The relocated STSTW will be installed with adequate ventilation and fire services systems working under a systematic monitoring system. During the design of the relocated STSTW, there was regular meetings between the Consultants and the Fire Services Department (FSD) about the design rationalization and minimization of the construction cost.
- 3.2.18 Because of the unique environment of caverns, there will be no anaerobic sludge digestion system but only a mechanical sludge dewatering system will be installed inside the cavern to avoid the production of inflammable methane gas.
- 3.2.19 Since the internal space of the caverns will be occupied with many electrical and mechanical facilities, and with the consideration of occupational health and safety, it would be more suitable to locate the administration buildings outside the cavern.

- 3.2.20 Due to the modification of the position of the ventilation shaft, DSD carried out a laboratory wind tunnel test to analyze the wind speed and direction and a revised wind rose is plotted. The result of the revised wind rose was consistent with the wind rose obtained in the feasibility study stage and that of the Hong Kong Jockey Club Sha Tin Racecourse Stand plotted by the Hong Kong Observatory.
- 3.2.21 Based on the result of the revised wind rose, odour impact was re-assessed. The assessment result showed that the expected odour concentration in the sensitive receivers in the vicinity of the relocated STSTW would be within the limit required under the EIAO.

Possible Impacts due to Operation of Drill and Blast

- 3.2.22 The drill and blast operation adopted in the construction of cavern is a product of the modern blasting technology and monitoring techniques. The mitigation measures adopted could effectively contain the noise and vibration produced during careful planning of the drill and blast operation.
- 3.2.23 According to the result of the preliminary blasting assessment during the design stage, the expected vibration level is far lower than the acceptable limit of the structures in the vicinity because most of the blasting operation will be carried out deep inside the rock mass of Nui Po Shan. It is expected that no adverse impact will be induced on the structural integrity of the buildings in the vicinity from the result of the blasting assessment.
- 3.2.24 Although the expected impact of noise and vibration will be very small, in order to alleviate the public's concerns, regular monitoring will be carried out by independent ET and IEC.

Safety, Design and Operation of Explosives Magazine

- 3.2.25 The storage, transport, and use of explosives are regulated under the Dangerous Goods Ordinance and under the strict supervision of the Mines Division of the Civil Engineering and Development Department (CEDD). In fact, the use of explosives for the purpose of construction is a safe method.
- 3.2.26 The detonation of explosives requires the physical contact of a detonator and the explosive. As one of the safety precautions, the detonator and the explosives are transported separately to the site.
- 3.2.27 Moreover, the design of the temporary site explosive magazine would be under the approval and licensing of the Mines Division of the CEDD and the operation of the magazine would be under the supervision of qualified personnel to check for the compliance of the operation with the relevant regulations and international standards.
- 3.2.28 For the site security of the temporary site explosive magazine, security guards would be provided to the site 24-hour a day. The provision of a minimum 2.5 m high security fence topped with outward overhang of razor wire, gates with locks of closed shackle design and a closed circuit television (CCTV) system for 24-hour a day monitoring and recording would be included.

Minimization of the Removal of Trees

- 3.2.29 The Environmental Impact Assessment Report approved by the EPD has indicated the extent of tree removal based on a board brush tree survey and proposed approach for tree compensation. Communication with Community Liaison Group will be carried out on the tree compensation.

Handling of Excavated Rock from Relocated STSTW

- 3.2.30 It is expected that most of the excavated material is granitic rock, which is a useful construction material. We will reuse some of them on site as fill material and for the construction of road base and drainage layer. The rest of the granitic rock will be transported to other places, such as Lam Tei Quarry, for reuse as aggregates in concrete or bitumen.

- 3.2.31 Various measures in reducing the construction dust as suggested in the EM&A Manual would be adopted. We will also look into various method/technology that can effectively reduce the generation of dust.

Handling of Sludge from the Relocated STSTW

- 3.2.32 Anaerobic sludge digestion technology is being adopted in the existing STSTW. Meanwhile, in order to avoid the generation of methane gas, another mechanical method will be adopted to dewater the sludge to the desired water content. Dewatered sludge will be transported by trucks to the sludge treatment facility in Tuen Mun through A Kung Kok Street. Taking into account of the increase of population, it is anticipated that there will have approximately 25 number of sludge trucks per day in the future, which is a very small number comparing with the daily traffic flow of A Kung Kok Street.

Construction Programme

- 3.2.33 The access road to the ventilation shaft would be completed in 2 – 3 years after the commencement of Stage 1 Works of the Project. After the erection of hoardings, the works would be carried inside the hoardings and hence minimal traffic disruption would be induced in A Kung Kok Shan Road.
- 3.2.34 There will be only 1 – 2 blasting carried out in each blast face each day and it is anticipated that there will be not more than 8 blast faces during construction peak.

Supervision of Works

- 3.2.35 DSD had employed the Consultants, which is AECOM Asia Co. Ltd., to supervise the construction of the contractors. Also, DSD would employ an Environmental Team to conduct environmental monitoring according to the procedures outlined in the Environmental Monitoring and Auditing Manual of the project. An Independent Environmental Checker would also be employed to audit the monitoring of the Environmental Team and to check and audit the EM&A report.

Land Use

- 3.2.36 Part of the Area 73 would be used as construction works area and there would be no permanent use on the Area 73 according to the latest design. Taking into consideration on other use of Area 73, the works area in Area 73 has been reduced and the possibility of further reduction would be investigated.

Other Community's and Stakeholders' Aspirations/ Concerns

- 3.2.37 The contractor would be required to carry out mosquito preventive and control measures such as applying larvicidal oil around the construction sites in accordance with the relevant terms in the contract. Also, the contractor would also assist NAACHM in controlling the breeding of mosquitoes.
- 3.2.38 Contractor will purchase third-party insurance for the contract. Although the insurance policy would not specify NAACHM as the insured parties, the insurance policy will have coverage on all the third-parties who suffer from loss or damaged due to the construction activities of the contract.
- 3.2.39 According to the aerial photos from the government, majority of the site area is a natural terrain. The fact that the site area was not built up by man-made methods was further confirmed by an extensive amount of site investigation. It was expected that the possibility of uncovering wartime bombs in the site was remote. The reason of frequent discovery of wartime bombs in the construction site in Wan Chai these days was that the sites concerned were located in reclamation area but not in natural terrain.

- 3.2.40 There are a set of specifications requiring the Contractor to keep the site safety. Resident Site Staff (RSS) will also inspect the site every day to observe any safety risk and remind the Contractor to improve. DSD's safety division will also arrange regular audits to monitor the performance.
- 3.2.41 The name of the Contractor would be provided to Shatin Hospital upon the commencement of the construction. Moreover, a Community Liaison Centre will be set up to provide the latest information related to the construction works and to serve as a hub to collect opinions from the public.
- 3.2.42 According to the opinion of the doctor in NAACHM, the effect of change in air quality, noise and vibration generated from the Project on the patients is minimal. The doctor would have special arrangements, such as swapping patients' rooms, for those patients who are more sensitive to the change in air quality, noise and vibration.
- 3.2.43 Access to the private lots and the grave would be provided during the construction and operation stage of the Project to the stakeholders.