

5 WASTE MANAGEMENT

5.1 Introduction

5.1.1 This section comprises an assessment of the potential waste impact related to the proposed installation. The types of waste that may be generated during the construction and operation phase of the proposed installation were described in this section. Appropriate waste management mitigation measures were recommended, where necessary, for proper waste handling, storage, transportation and disposal.

5.2 Legislation and Standards

5.2.1 The *Waste Disposal Ordinance* (Cap. 354) (WDO) stipulates requirements for storage, handling and transportation of all types of wastes, and set outs subsidiary legislation such as the *Waste Disposal (Charges for Disposal of Construction Waste) Regulation* and the *Waste Disposal (Chemical Waste) (General) Regulation*. Besides, the following documents are applicable to waste management and disposal for the proposed installation:

- Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C)
- Waste Disposal (Charges for Disposal of Chemical Waste) Regulation (Cap. 354J)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap.354N)
- Land (Miscellaneous Provisions) Ordinance (Cap.28)
- Public Health and Municipal Services Ordinance (Cap.132BK) – Public Cleansing and Prevention of Nuisances Regulation
- Building Department Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP No. ADV-19) Construction and Demolition Waste
- Building Department Practice Notes for Registered Contractors (PNRC 17), Control of Environmental Nuisance from Construction

5.3 Construction Phase

5.3.1 Major sources of waste from construction works would comprise the following:

- Inert Construction and Demolition (C&D) materials, such as soil and bricks
- Non-inert C&D materials, such as wood and plastics, and general refuse from workers at site
- Chemical wastes, such as spent lubricants and used batteries

5.3.2 The construction period of the proposed installation is expected to be approximately six (6) months. During the construction phase, waste disposal shall adhere to the trip ticket system and meet all legal requirements, such as:

- Application and set-up of a billing account in accordance with the *Waste Disposal (Charges for Disposal of Construction Waste) Regulation* under WDO.

- Register as a Chemical Waste Producer and ensure proper handling, storage, transportation and disposal of the chemical waste in accordance with the Waste Disposal (Chemical Waste) (General) Regulation under WDO.

C&D Materials

- 5.3.3 Sources of C&D materials from construction activities include site clearance, excavation and concrete works. Generated C&D materials shall be sorted into inert C&D materials and non-inert C&D materials.
- 5.3.4 Inert C&D materials such as concrete, earth and rubble could be used for land reclamation as they do not decompose. And non-inert C&D materials are those which can decompose such as leaves, vegetation, packaging waste and other organic material which makes them unsuitable for land reclamation.
- 5.3.5 The C&D materials may be mainly the excavated soils and broken concrete generated from the excavation works carried out for the duct section along the pedestrian walkways. As advised by the Applicant, the estimated total volume of excavated materials within the whole Project Site is about 340m³, including both inert C&D materials and non-inert C&D materials.
- 5.3.6 With reference to Plate 2.12 of *EPD's Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2022*, 92% of construction wastes was either reused on-site or sent to the public fill reception facilities, implying that such construction wastes should be inert C&D materials. Therefore, it is assumed that the excavated materials comprise 313m³ (i.e. 92% x 340m³) inert C&D materials and 27m³ (i.e. 8% x 340m³) non-inert C&D materials.

Inert C&D Materials

- 5.3.7 It is assumed that 70% of inert C&D materials will be temporarily stockpiled and backfilled in-situ after installation of the cable landing ducts, draw pits and beach manholes. Surplus 94m³ (313m³ x 30%) inert C&D materials should be reused on-site or recycled off-site as far as practicable according to the good site practices and mitigation measures recommended in **Section 5.5**. If there will still be any remaining materials, they should be delivered to public fill reception facilities, Fill Bank at Tuen Mun Area 38 and Fill Bank at Tseung Kwan O Area.

Non-inert C&D Materials

- 5.3.8 Regarding 27m³ of non-inert C&D materials, they would be sorted and recycled as far as possible and landfill disposal should only be adopted as the last resort.
- 5.3.9 In conclusion, about 94m³ or 169 tonnes (assuming the density of inert C&D materials is 1,800kg/m³) of inert C&D materials, and 27m³ or 43 tonnes (assuming the density of non-inert C&D materials 1,600kg/m³) of non-inert C&D materials will be generated and disposed off-site during the construction phase, respectively.

General Refuse

- 5.3.10 General refuse from site workers including packaging and organic materials, is similar to domestic waste. The number of workers will depend on the contractor and the construction

disposing of all chemical wastes, such as disposing of at the Chemical Waste Treatment Centre (CWTC) in Tsing Yi or other EPD's approved facility.

Summary

- 5.3.19 The type of waste and their estimated quantities generated during the construction phase are summarised in **Table 5-1**.

Table 5-1 Estimation of Waste Generation During Construction Phase

| WASTE TYPE | ESTIMATED QUANTITY (TONNES) | SOURCES OF WASTE | TREATMENT |
|-------------------------|-----------------------------|--|---|
| Inert C&D Materials | 169 | Site preparation; Excavation works | <ul style="list-style-type: none"> Off-site reuse/recycle Disposal of at public fill reception facilities |
| Non-inert C&D Materials | 43 | Vegetation clearance | <ul style="list-style-type: none"> On-site sorting for reuse/recycle Disposal of at landfill |
| General Refuse | 1.3 | Construction workers | <ul style="list-style-type: none"> On-site sorting for reuse/recycle Disposal of at landfill |
| Chemical Waste | <1 | Waste batteries, lubricating oil and etc. | <ul style="list-style-type: none"> All to be collected by the licensed chemical waste collector and treated in the CWTC. |

5.4 Operation Phase

- 5.4.1 Since the proposed installation will only involve the installed cable landing ducts with draw pits, and two beach manholes for future submarine cable landing during operation, there will be no generation of waste from the proposed installation during operation phase.

5.5 Mitigation Measures

Construction Phase

- 5.5.1 Waste management during the construction phase shall follows the contractual and statutory requirements.
- 5.5.2 Prior to the commencement of any construction works, the Contractor should prepare the Waste Management Plan (WMP) based on the requirement of Building Department's *Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers: No. ADV-19 Construction and Demolition Waste* and submit to Architect/Engineer for approval. The WMP should include the identification of any potential environmental impacts due to the generation of waste at the Project Site; appropriate recommendation of waste handling, collection, sorting, disposal and recycling measures; and categorisation and permit segregation of C&D materials where practicable (i.e. inert C&D materials/non-inert C&D materials) for treatment and disposal.

existing vehicular road. In the 1980s, construction activities were observed at the east of Chung Hom Kok Peninsula. After completion of the construction activities, some building blocks were erected in the vicinity of the Site, which are the existing telecommunication buildings at east of Chung Hom Kok Peninsula. The bare slope previously affected by the construction activities had returned to vegetation. No stressed vegetation was observed.

- 6.4.3 Thereafter, no major change on the land use was observed. The historical land uses of the Project Site based on the aerial photographic records is summarised in **Table 6-1** and aerial photographs are provided in **Appendix A**.

Table 6-1 Historical Land Uses of the Project Site

| PHOTO ID | HISTORICAL LAND USES |
|---------------|--|
| 1963_6678 | Natural Terrain with vegetation |
| 1976_15582 | Natural terrain and footpath |
| 1979_26480 | Natural terrain and access road |
| 1980_32660 | Construction site and access road |
| 1990_A20570 | Natural terrain and pedestrian walkway |
| 2001_A51676 | No major change on the land use |
| 2011_CW89363 | No major change on the land use |
| 2023_E200528C | No major change on the land use |

Site Walkover

- 6.4.4 Besides, a site walkover was conducted on 29 November 2023 to understand the existing conditions of the Project Site and the adjacent areas. The site walkover checklist is provided in **Appendix B**.
- 6.4.5 As observed during the site inspection, the Project Site is partly a paved pedestrian and vehicular road while the rest are natural terrain and vegetation (see **Figure 6-1**). No stains, stressed vegetation and land contamination activities on the Site were observed. Therefore, there is no potential land contamination as per site appraisal.

6.5 Conclusion

- 6.5.1 A detailed investigation of the past and present land-use of the Site was carried out. Based on historical records and the site walkover, no potential land contamination issue from the past and existing land use activities was identified. As such, steps 1 to 6 of **paragraph 6.3.2** are not required. Hence, further site investigation is considered not necessary.