



**Drainage Services Department**  
The Government of the Hong Kong Special Administrative Region

**Contract No. DC/2019/03**

**Revitalisation Works of Jordan Valley Nullah and  
Minor Drainage and Sewerage Works in Urban Area and New  
Territories – Provision of Trunk Sewer to 3 Villages in Tai Po:  
Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk in Tai Po**

**Waste Management Plan**

(EP-556/2018 Condition 2.3)

Document No.

ASCL	/	200168084	/	WMP	/	4
Publisher		Project Code		Sequential No.		Revision Index

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Date:	4 November 2020	4 November 2020	4 November 2020

## REVISION HISTORY

<b>REV.</b>	<b>DESCRIPTION OF MODIFICATION</b>	<b>DATE</b>
0	First Issue for Comments	8 May 2020
1	Revised according to DSD's and IEC's Comments	29 June 2020
2	Revised according to DSD's and IEC's Comments	16 July 2020
3	Revised according to EPD's Comments	9 October 2020
4	Revised according to EPD's Comments	4 November 2020

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## **1. INTRODUCTION**

### **1.1. BACKGROUND**

Best Build Construction Co., Ltd. (the Contractor) is contracted to carry out the Revitalisation Works of Jordan Valley Nullah and Minor Drainage and Sewerage Works in Urban Area and New Territories under Contract No. DC/2019/03, where Provision of Trunk Sewer to 3 Villages in Tai Po: Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk in Tai Po (the Project) is included in the scope of the Contract.

Acuity Sustainability Consulting Limited (ASCL) is commissioned by the Contractor to undertake the Environmental Team (ET) services as required in the Particular Specification for the Project; and to carry out the Environmental Monitoring and Audit (EM&A) programme in fulfillment of the Project's EM&A requirements under the Project Profile (PP) for Provision of Trunk Sewer to 3 Villages: Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk in Tai Po (Register No. PP-563/2018) and Contract No. DC/2019/03 Particular Specification requirements.

Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Environmental Permit (EP) (No. EP-556/2018) to Drainage Service Department (DSD) for the Project.

### **1.2. PROJECT DESCRIPTION**

The works to be executed under the Project include:

- Erection of temporary accommodation
- Ground investigation fieldwork
- Road and drainage works
- Pipe laying by trenchless method
- Supply of bituminous pavement materials
- Road marking

### **1.3. PURPOSE OF THE PLAN**

Pursuant to condition 2.3 of the EP, this Waste Management Plan (WMP), which sets out in detail the approach Best Build Construction Co., Ltd. to adopt in managing and controlling waste streams generated from work activities and for meeting all relevant legal and contractual requirements, shall be deposited to EPD no later than 4 weeks before the commencement of construction of the Project.

This management plan will present the project organization in Section 2; present the company management approach in Section 3; present the legal and other requirements in Section 4; present the waste management strategy in Section 5; present the details of response procedures for environmental emergency in Section 6; present the corrective and preventive actions in Section 7;

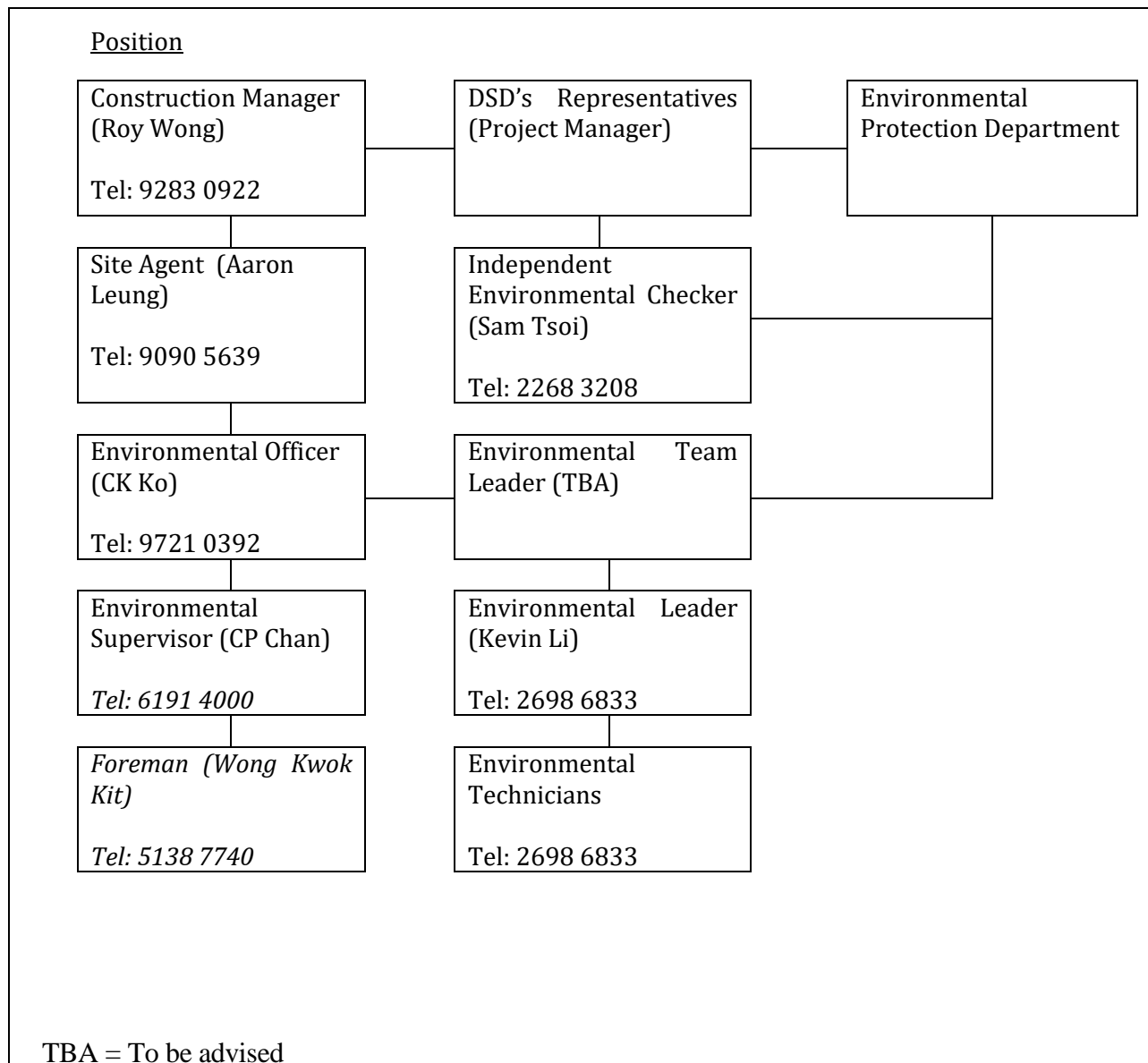
present the maintenance of environmental records in Section 8; present the complaint handling procedures in Section 9; present the performance monitoring in Section 10; and present the environmental promotion for workers in Section 11.

## 2. PROJECT ORGANIZATION

### 2.1. OVERVIEW

Figure 2.1 presents the organization structure of the Project. It identifies the key members of the Project Team with environmental responsibilities, and illustrates their lines of communication. Responsibilities of the key Project Team members are described below.

**Figure 2.1 Organization Structure and Lines of Communications of the Period Contract for Environmental Management**



## **2.2. DUTIES AND RESPONSIBILITIES**

Best Build Construction Co., Ltd. is the Main Contractor of this Project and has the overall responsibility for the Project management. Best Build Construction Co., Ltd. will be responsible for the following:

- Comply with and observe all Ordinances, by-laws, regulations governing the control of any form of pollution, including air, noise, water and waste pollution, and will implement environmental controls and mitigation as set out in this WMP as well as any additional measures necessary for compliance with the environmental control standards; and
- Follow any reasonable directions and corrective actions given by DSD.

Duties and responsibilities of other key contact persons are provided below.

### **2.2.1. CONSTRUCTION MANAGER (CM)**

Overall control over the Project and oversees the implementation of the environmental requirements. Specifically, he is responsible for ensuring that adequate resources are provided for the implementation of mitigation and management measures detailed in the WMP. The Construction Manager assigns the Environmental Officer to assist in the supervision and enforcement of the environmental mitigation measures. The Construction Manager directly communicates to DSD on all environmental matters.

### **2.2.2. SITE AGENT (SA)**

The SA is the key contact person for environmental issues associated with the Project. SA is responsible for the day-to-day overview of the site construction practices in relation to environmental control and implementation of mitigation measures. SA will assign designated personnel to assist SA in the day-to-day supervision and enforcing the implementation of the required mitigation measures.

Reporting directly to the CM, the SA oversees the day-to-day implementation of the WMP in consultation with the EO. The SA is also responsible for managing environmental emergency and preventive measures/corrective actions in cases of non-compliance, exceedances or complaints throughout the Project period. The SA coordinates with the Foreman (GF) and all related sub-contractors and/or their representatives (Sub-contractors) for the required implementation of mitigation measures and the associated preventive/corrective actions as necessary.

In addition, the SA ensures that the measures set out are effectively and efficiently implemented on site. The SA is also responsible for the proper documentation of the activities required in the WMP and maintenance of the WMP documents.

### **2.2.3. ENVIRONMENTAL OFFICER (EO)**

The EO will be full time on the contract in dealing with environmental matters arising from the Project. He will oversee the daily implementation of the environmental management plan and



reports directly to the SA. He will be responsible for maintaining environmental records required for the Project and managing environmental emergency and preventive/corrective action measures in case of occurrence of non-compliance, complaints or exceedances throughout the contract period. He will also coordinate with the PD/PM and SA to ensure proper implementation of mitigation measures and preventive/corrective actions on environmental issues.

The EO assigned in this Project will have adequate qualification as stipulated in the PS. The EO will be responsible for monitoring the implementation of the WMP, carrying out surveillance and weekly environment walks on site, the retention of original copies of the environmental related documents, attend Site Environmental Management Committee (SEMC) and Site Environmental Committee (SEC) meetings, as well as providing environmental training to staff at all levels. In case of any serious non-compliance of statutory regulations or contract requirements or infringement of WMP, he will take urgent appropriate actions. The EO will work closely with the PD and SA to ensure that the Project is carried out in compliance with all environmentally related contractual and legal requirements.

Duty of Environmental Officer also includes the following items:

- Prepare, implement and update the Environmental Management Plan;
- Advise on measures to be taken in the interest of environmental protection, and implement such measures;
- Liaise on all matters relating to environmental monitoring and auditing;
- Carry out inspections of the Site for identifying potential hazards to the environment, and to report findings with recommendations for corrective actions;
- Participate in the weekly environmental walks (whether this is combined with the weekly safety walk or otherwise) with the nominated site staff of the Project Manager, and to supervise and monitor the environmental performance on the Site;
- Check and ensure that any polluting or potentially polluting situation is promptly rectified;
- Attend Site Environmental Management Committee (SEMC) meetings and Site Environmental Committee (SEC) meetings;
- Compile the monthly environmental report for submission to the Supervisor at least five working days before the SEMC meetings;
- Arrange and provide the environmental training including the site specific induction training and toolbox talks for the staff and workers on the Site, and to organize environmental promotional activities;
- Advise the Contractor on the implementation of an environmental management system;
- Updating monthly summary of Waste Flow Table and Use of Timber in Temporary; and
- Liaising with EPD and IEC on environmental issues.

#### **2.2.4. ENVIRONMENTAL SUPERVISOR (ES)**

The Environmental Supervisor(s) (ES) will assist the EO in the day-to-day management of environmental issues associated with the Project and provide prompt rectification and technical assistance in the case of any non-compliance. He will also assist the EO in overseeing the on-site environmental management and liaison with all concerned parties in order to ensure that all required environmental commitments are properly and successfully implemented on site. In

in addition, the ES will provide toolbox talks as necessary to site staff and/or sub-contractors on general environmental requirements. He will report directly to EO. The ES assigned in this Project will have adequate qualification as stipulated in the PS.

Duty of Environmental supervisor also includes the following items:

- Assist the Environmental Officer carrying out his duties;
- Carry out daily site environmental inspections based on a checklist approved by the Project Manager's Representative, and to ensure that follow-up action is taken promptly to rectify defects and deficiencies identified;
- Advise the Environmental Officer on the upkeeping of environmental performance and standards of the Site;
- Attend the weekly environmental walk if required;
- Supervise and promote the execution of environmental protection works by the workers on the Site;
- Attend SEMC meetings and SEC meetings; and
- Conduct toolbox talks as assigned by the Contractor's agent after acquiring the necessary qualifications.

#### **2.2.5. FOREMAN (GF)**

- Shall check that timely implementation of mitigation measures on site;
- To carry out environmental monitoring of various aspects such as noise, air quality and water quality as required by DSD and the regulations;
- Undertakes environmental site inspection regularly;
- Prepare the monthly environmental inspection report.

### **2.3. IMPLEMENTATION OF ENVIRONMENTAL MITIGATION AND MANAGEMENT MEASURES**

For this Project, Best Build Construction Co., Ltd. will deploy sufficient resources to implement all necessary mitigation and management measures required by environmental legislation; all measures stipulated in the contract between DSD and Best Build Construction Co., Ltd. The mitigation and management measures are described in subsequent chapters of this WMP.

### **3. COMPANY MANAGEMENT APPROACH**

#### **3.1. ENVIRONMENTAL POLICY**

Best Build Construction Co., Ltd. has established an Environmental Policy, which identified multiple environmental aspects including waste management, conserve of resources and recycling of material, for implementation for the Project.

The Director of Best Build Construction Co., Ltd. is responsible for approving the Environmental Policy. The Construction Manager and Environmental Officer is responsible for preparing the Environmental Policy and ensuring that the Policy is relevant, kept up-to-date and reviewed periodically as part of the project review process.

The Environmental Officer will ensure that an up-to-date version of the Environmental Policy is communicated to all levels of persons involved in the works.

The Environmental Officer will be responsible for the management of the Policy. Specifically, the Environmental Supervisor is responsible for ensuring hard copies of the Environmental Policy are available for distribution to all staff and sub-contractors.

The Environmental Policy is presented in Figure 3.1.

**Figure 3.1 Environmental Policy of Best Build Construction Co., Ltd**

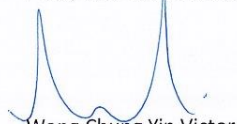
## Environmental Policy

Best Build Construction Co., Ltd. is engaged in civil engineering construction works. Recognizing the increasing importance placed on environmental protection, this Policy identifies the principles of environmental management to be adopted by Best Build Construction Co., Ltd. in establishing its project procedures, methodology and management practices for implementation on all projects.

Best Build Construction Co., Ltd. is committed to:

- Protecting the environmental by controlling the environmental impacts to acceptable levels in compliance with all applicable environmental statutory requirements and licensing standards in Hong Kong including obtaining and renewing the necessary environmental licenses, registrations and permits as well as all relevant environmental requirements as may be stipulated in the Contract;
- Using environmentally-friendly materials and technologies, promote economic recycling of materials, reduce carbon emission and conserve resources
- Handling, using and storing all the dangerous goods and chemicals in an environmental responsible manner;
- Conducting routine environmental monitoring and/or audit throughout the project period in order to ensure that this Policy is implemented and identify areas of possible improvement;
- Providing sufficient resources and facilities for the implementation on environmental nuisance abatement and waste management for the project.
- Should any non-conformance be identified, corrective and preventative actions will be formulated and implemented accordingly so as to continually improve our environmental performance throughout the Project period; and

We require all our site staff and the sub-contractors to implement and maintain this Policy and will communicate it to them.



Wong Chung Yin Victor  
Director

02 September 2019

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### 3.2. RAISING ENVIRONMENTAL AWARENESS

The Construction Manager will ensure that all concerned site staff including sub-contractors are aware of the environmental requirements under relevant environmental legislation and this WMP. Best Build Construction Co., Ltd. will provide key site staff and staff of sub-contractors, at the level of supervisor and above, with copies of relevant environmental documents, which include but not limited to the following:

- the Environmental Policy; and
- the WMP.

Best Build Construction Co., Ltd. will seek to promote environmental awareness among employees and sub-contractors through the following mechanisms;

- Posting of the Environmental Policy at site office, if applicable;
- Environmental briefing and training for all site staff, including sub-contractor sand workers; and
- Implementation of good environmental practices within the site including material reuse and recycling and energy conservation.

Training events and briefing sessions will be organized for site managerial staff and site supervisory staff by the Environmental Officer regularly. These sessions, to be conducted by the Environmental Supervisor, would explain environmental and waste management and mitigation measures. This will include, but not be limited to, air pollution control, wastewater management, noise pollution mitigation measures, chemicals handling, resource management and waste management.

## 4. LEGAL AND OTHER REQUIREMENTS

### 4.1. LEGAL REQUIREMENTS

Best Build Construction Co., Ltd has identified for this Project the relevant environmental requirements as stipulated in the Hong Kong legislation. These requirements are summarized in Table 4.2.1. Best Build Construction Co., Ltd. will deploy the necessary resources to take all the requisite measures to ensure that the environmental issues of the Project are in compliance with all such requirements.

### 4.2. OTHER REQUIREMENTS

In addition to the legal requirements stated in Table 4.2.1, Best Build Construction Co., Ltd. also undertakes to fulfil all the environmental requirements as stipulated in the Particular Specifications and General Specifications of this Project.

**Table 4.2.1 Register of Legal Requirements**

Ordinance/ Regulations	Applicable Activities	Summary of Requirements
Waste Disposal Ordinance (WDO)	Waste arising from the construction site including both solid waste and chemical waste including	The WDO prohibits any person from using any land for the disposal of wastes unless authorization has been obtained and a license from the waste disposal authority has been granted.
Waste Disposal (Chemical Waste) (General) Regulation	Chemical Waste: - spent lube oil - spent chemicals - chemical containers - contaminated rags	The Regulation requires chemical waste producers to be registered with EPD. Registration is a one-off requirement. Each registered water producer has the obligation to inform EPD of any change in the particulars of the registration as soon as practicable.
Waste Disposal (Charges for Disposal of Construction Waste) Regulation	Construction Waste: - Inert - rock, sand, concrete, etc - Non-inert - paper, wood, plastic, metal, etc	This Regulation sets charges for the disposal of construction waste at landfills, sorting facilities and public fill reception facilities.

<b>Ordinance/ Regulations</b>	<b>Applicable Activities</b>	<b>Summary of Requirements</b>
Public Health and Municipal Services Ordinance (PHMSO)	General activities at the construction site. Including waste storage	The PHMSO makes provision for urban services and public health. This includes control of nuisance caused by emissions of dust and fumes, control of the discharge of hazardous materials to sewers, and for the control of littering. The Ordinance places restrictions on the storage of wastes in buildings.

## 5. WASTE MANAGEMENT STRATEGY

### 5.1. ENVIRONMENTAL ISSUE, REGULATION & MITIGATION MEASURES

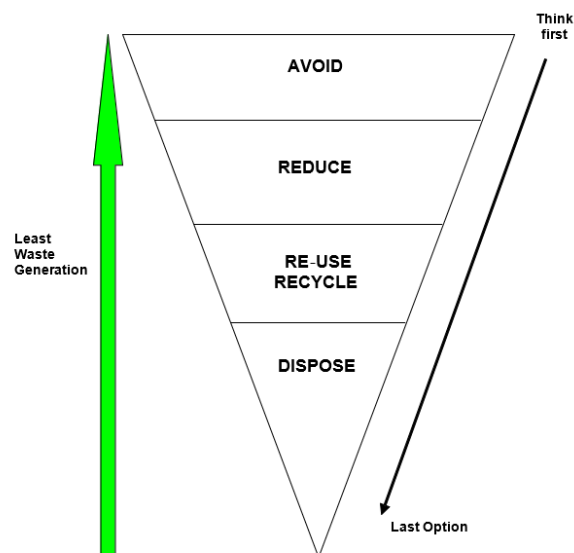
In order to comply with the identified legal requirements and maintain sound environmental performance during Project implementation, Best Build Construction Co., Ltd will adopt appropriate waste management strategies as necessary to prevent and control potential pollution arising from the Project activities. The Construction Manager, supported by the Environmental Officer, will ensure that appropriate measures are implemented as and when necessary. The Environmental Officer will review the mitigation measures according to the site situation, where necessary.

The proposed mitigation and operational controls with respect to waste management are described in the following sections and summarized in an implementation schedule in Appendix A. All mitigation measures recommended and requirements specified in the Plan and the implementation schedule shall be fully implemented.

### 5.2. WASTE MANAGEMENT

Best Build Construction Co., Ltd. will adopt an “inverted cone” waste management strategy, as illustrated in Figure 5.1 to minimise waste generation. That strategy shall also be communicated through our internal training to staff and the workforce.

**Figure 5.1 Waste Management Strategy**



Our strategy for waste management will be to minimise the quantity of material disposed to either the public fill bank or landfill by maximising reduction and recycling efforts. Disposal of waste shall only be adopted as the last resort. The most significant waste aspect will result from the excavated



material arising from foundation work. As opportunities for the avoidance or reduction of waste from those activities will be limited, the waste management strategy will be to maximise the re-use, recovery and recycling of that surplus material.

#### 5.2.1. WASTE MANAGEMENT HIERARCHY

- Avoidance and minimization - to avoid and minimize waste through practices or design.
- To devise a system of on-site sorting of C&D materials, including the identification of the source of generation, estimated quantity, arrangement for on-site sorting and/or collection, temporary storage areas, frequency of collection by recycling contractors or frequency of removal off the Site, which facilitate the below three waste management methods:
  - Reuse of materials - to reuse construction waste such as uncontaminated soil and ferric materials.
  - Recovery and recycling - to undertake on-site or off-site waste recycling. This should include requesting/requiring take-back of packaging or spent materials by suppliers.
  - Treatment and disposal - to properly treat or dispose of waste materials according to relevant regulations, guidelines and good practices.

#### 5.2.2. WASTE TARGET FOR THE PROJECT

- excavated materials to be sorted for recovering the inert portion of C&D materials for reuse on the site or disposal to designated outlets:
  - Tuen Mun Area 38 Fill Bank and the Tseung Kwan O Area 137 Fill Bank (TKOFB) are designated as the public fill reception facilities for disposing inert construction waste generated from the Project.
  - The North East New Territories (NENT) Landfill is designated to receive C&D materials for the Project.
- metallic waste to be recovered for collection by recycling contractors;
- cardboard and paper packaging to be recovered, properly stockpiled in dry and covered condition to prevent cross contamination;
- chemical wastes to be collected and properly disposed of by specialist contractors; and
- make arrangements with potential recycling contractors to facilitate that recyclable materials sorted from the site are collected with reasonable care.
- The materials from this project, mainly broken platform queuing boxes will be transported to other construction sites of Best Build Construction Co., Ltd. for re-use proposes or disposed to designated public filling areas in Hong Kong.
- Estimated quantity of inert C&D materials for reuse on site or for recycling : 740 m<sup>2</sup>
- Estimated quantity of inert C&D requiring disposal off site : 590 m<sup>2</sup>

### **5.2.3. THE PROPOSED MITIGATION MEASURES TO AVOID OR MINIMISE THE QUANTITY OF CONSTRUCTION AND DEMOLITION MATERIAL AND OTHER GENERAL WASTE GENERATED DURING THE PROJECT**

As adopted from the conclusion of the Project Profile (No. PP-563/2018), the Contract Specification and the Company Policy, the below mitigation measures to avoid or minimise the quantity of construction and demolition material and other general waste generated during the project will be implemented:

- identify work processes or activities that will generate construction and demolition (C&D) materials during the works;
- identify measures to reduce/minimize the generation of C&D materials for the project through proper planning of works and good site management such as minimizing over-ordering, avoiding cross contamination to reusable and/or recyclable materials collected, and well organizing and arrangement for removal, storage and collection of disposal materials;
- pre-identify reusable/recyclable materials, such as hard rocks, broken concrete, metallic waste, paper/cardboard packaging etc, to carry out on-site sorting of materials;
- Storage, collection and transport of waste should be carefully planned and implemented to minimize adverse impact on the environment;
- Except for those inert C&D materials to be reused on the Site, remove all other C&D materials off the Site as soon as practicable in order to optimize the use of the on-site storage space;
- Only licensed waste haulers will be used to collect and transport wastes to licensed disposal points;
- Ensure that wastes are stored properly in designated storage points to avoid possible loss or leakage;
- Ensure that wastes are removed in a timely manner;
- Ensure that the waste storage areas should be cleaned regularly;
- Ensure that wastes are covered in enclosed containers to minimize windblown litter and dust during transportation as far as practicable;
- Reuse or recycle construction/demolition waste with recyclable values, as much as possible. Examples of such waste are steel mesh, Where practicable, Best Build Construction Co., Ltd should arrange to segregate these wastes on site. Different areas should be designated for such segregation and storage depending on site-specific conditions. These wastes should either be reused on site or collected by outside licensed waste recycling agents. Suppliers should be encouraged to take back additional transportation/packaging material;
- Construction/demolition waste containing less than 20% inert material by volume should be disposed of at designated landfill sites;
- Consideration will be taken during design stage to minimize the generation of inert C&D materials by maximizing its re-use as backfill materials on site. Before excavation, the total filling material needed will be designed in consideration with the amount of estimated inert C&D materials that will be generated, a design with practically lowest generation will be adopted;

- Best Build Construction Co., Ltd will sort all C&D materials into inert and non-inert categories. The inert C&D materials will be reused on site as far as practicable or disposed at public fill reception facilities (PFRF);
- The non-inert C&D materials will be transferred to recycling facilities or landfills as the last resort. The transfer of C&D materials will be subject to trip ticket system as stipulated in Development Bureau Technical Circular (Works) (DEVB TC(W)) No. 6/2010 《Trip Ticket System for Disposal of Construction & Demolition Materials 》 to prevent unauthorized disposal;
- Rapid and effective collection of site wastes will be required to prevent waste materials being blown around by wind or flushed into the watercourses;
- The waste storage area should be well maintained and cleaned regularly so as to prevent attracting pests and vermin and creating any odour nuisance to the work sites;
- Disposal of refuse at sites other than approved waste transfer or disposal facilities shall be prohibited;
- The maximum number of construction worker to be employed and worked concurrently is estimated to be approximately 20 workers. Based on a general rate of 0.65kg per worker per day (referenced from the IWMF EIA report EIA-201/2011), the maximum daily arising of general refuse during the construction period will be approximately 13kg;
- The following legislation related to the handling, treatment and disposal of wastes in the Hong Kong and has been used in reviewing potential impacts:
  - Waste Disposal Ordinance (Cap. 354);
  - Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
  - Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
  - Public Health and Municipal Services Ordinance (Cap. 132) – Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK);
  - Land (Miscellaneous Provisions) Ordinance (Cap. 28);
  - Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes;
  - ETWB TC(W) No. 19/2005 Environmental Management on Construction Sites; and
  - DEVB TC(W) No. 6/2010 Trip Ticket System for Disposal of Construction & Demolition Materials etc.
- Remove the surplus materials off site as soon as practicable to minimize temporary stockpiling on the site;
- Stockpiled materials should be properly covered and stored within the paved area of Wun Yiu Road;
- Reusable materials should be properly stockpiled in dry and covered conditions to avoid contamination by other materials;
- Identify and provide sufficient space for temporary storage of materials to facilitate collection and/or sorting on site;
- Maintain plants and vehicles in good condition;
- Containers used for storage of chemical wastes will: (1) be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; (2)

have a capacity of less than 450L unless the specifications have been approved by the EPD; and (3) display a label in English and Chinese in accordance with instructions;

- General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes;
- The waste storage area should be well maintained and cleaned regularly;
- Collect the site waste effectively; and
- Due to the varying active site location along the routing, designated disposal location of all work sites shall be kept in view and be clearly updated in Site Management Plan for Trip Ticket Implementation and identified to all workers in the Site. For the works in Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk, Slurry and Bentonite will be disposed in Tseung Kwan O Area 137 Fill Bank(TKOFB); other inert construction waste will be disposed in the Tuen Mun Area 38 Fill Bank; Non-inert materials will be disposed in North West New Territories (NENT) Landfill.

#### 5.2.4. SPECIAL MEASURES FOR WORKS AT WATER GATHERING GROUNDS (WGG):

- All surplus spoil shall be removed from gathering grounds as soon as possible.
- Provision of temporary toilet facilities is to be subject to the approval of the Director of Water Supplies.
- Best Build Construction Co., Ltd shall limit the gross weight of the vehicles imposed on the waterworks access to 5 tonnes and the axle load to 3 tonnes. He shall apply to WSD with details of his vehicles for using the access.

#### 5.2.5. HANDLING OF GENERAL REFUSE

- Environmental Officer will ensure that general refuse from the site is stored in waste skips and garbage bins with proper cover, which should be provided at designated locations and separated from construction and chemical wastes for regular removal. Environmental Officer should also ensure that refuse burning on site is not practiced.
- Best Build Construction Co., Ltd. will encourage site staff to use reusable rather than disposable dishware by displaying appropriate notice/posters on site.
- Paper waste should be segregated for collection by waste recycling firms if the volumes are large enough to warrant such collection.
- Best Build Construction Co., Ltd. is to employ a licensed contractor to collect general refuse for disposal on a weekly basis or as necessary.

#### 5.2.6. USE OF TIMBER

- Use of timber in temporary works construction will be avoided, reduced or minimized as far as possible. Wherever use of timber is necessary for a temporary works construction process/activity with an estimated quantity exceeding 5m<sup>3</sup>, the site agent will submit a method statement to DSD for agreement prior to commencement of the relevant temporary works.

- The method statement should include the justification for and the measures taken to minimize the use of timber in the said temporary works. In addition, the EO will provide a summary table containing the description, justification and the estimated quantity for every work process/activity requiring the use of timber for temporary construction irrespective of the quantity of timber used (Appendix K).
- Timber waste generated on site will be stored at the general construction waste storage area and removed with them.

### **5.3. MANAGEMENT OF CHEMICALS**

An inventory account of chemicals and the administration of the inventory will be established when chemicals are used on site.

In general, the following measures should be adopted when handling chemicals/dangerous goods:

No smoking is allowed in or near areas where chemicals/dangerous goods are used or stored.

Where necessary, chemicals/dangerous goods should be used in accordance with the instructions given in Material Safety Data Sheets (MSDS). These documents are to be kept by the Environmental Officer and all workers can request to access these documents.

Where necessary, personal protective equipment and clothing, such as gloves and goggles should be worn while dispensing or using chemicals.

#### **5.3.1. MITIGATION MEASURES IN GENERAL FOR MANAGEMENT OF CHEMICALS**

- Storage locations should be properly marked or identified.
- Chemical goods storage areas should be well lit and ventilated.
- No open flame, smoking or any type of localized heat is permitted near the chemical /dangerous goods storage area.
- Mixing of chemicals/dangerous goods is to be performed outside of the storage area.
- Containers of chemicals should be kept below eye level.
- Enough space should be given to avoid overcrowding.
- All empty bottles should be removed from stock room shelves.
- Storage containers should be inspected regularly for rust, corrosion or leakage.
- Spill kit and drip tray should be provided for chemicals/dangerous goods storage.
- A log of chemicals/dangerous goods should be maintained.
- Any incompatible chemicals/dangerous goods should be physically separated from each other when storing.
- Plant and vehicle maintenance will likely be the primary source of chemical wastes during the construction period. The majority of chemical waste produced is therefore expected to consist of waste oils and solvents. The volume of chemical waste will depend upon the total number of plant / vehicles and how much maintenance is actually carried out on site.

However, it is unlikely that volumes of chemical wastes will exceed 450 litres / month considering the small scale of proposed works.

- Chemical waste will be disposed of via a licensed waste collector and to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage container. Typical wastes may include the following: -
  - solid wastes (empty fuel/lubricant drums, used oil/air filters, scarp batteries, vehicle parts); and
  - liquid wastes (waste oils/grease, spent solvents/detergents and possibly spent acid/alkali from batteries maintenance).

#### 5.3.2. MANAGEMENT OF CHEMICALS AT WATER GATHERING GROUNDS (WGG)

- No earth, building materials, fuel, oil or toxic materials and other materials which may cause contamination to the gathering grounds are allowed to be stockpiled or stored on site.
- Any construction plant which causes pollution to the gathering grounds due to leakage of oil or fuel shall be removed off site immediately.
- Any soil contamination with fuel leaked from plant shall be removed off site and the voids arising from removal of contaminated soil shall be replaced by suitable material to the approval of the Director of Water Supplies.

#### 5.4. ENVIRONMENTAL SITE INSPECTION

Environmental site inspection will be undertaken by the Environmental Officer and Environmental Supervisor weekly and before SEMC and SEC upon completion of all construction works. Such site inspection will be conducted for the purposes of:

- Evaluating the environmental performance of the Project;
- Ensuring compliance with all legal and contractual environmental requirements, specified in relevant legislation and this WMP;
- Identifying non-compliance against established performance criteria, and deficiencies in site practices;
- Assessing the effectiveness of implemented management and mitigation measures; and
- Identifying additional management and mitigation measures, improvement to implemented measures, remedial actions if and when these are required.
- An Environmental Site Inspection checklist will be developed for the use in the inspections, and a Report will be prepared for recording any non-conformance issues. These reports will be made available to DSD for inspection on request. The proposed checklist is attached in appendix C for reference.

Immediately after the weekly site environmental walk, the summary table (Appendix E) shall be signed by the EO or his delegate (if specified) and a copy shall be kept in the project filing system.

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---

We will take prompt action to rectify any deficiencies identified and shall report the status of rectification actions in the following weekly site environmental walk.

## **6. RESPONSE PROCEDURES FOR ENVIRONMENTAL EMERGENCY**

Best Build Construction Co., Ltd. will, where necessary, revise the emergency preparedness and response procedures applicable to this project, in particular, after the occurrence of accidents or emergency situations.

After the occurrence of emergency situations, Best Build Construction Co., Ltd. will prepare a detailed report on the accident, clean up actions taken, any pollution problems, and preventive measures to be implemented to guard against similar accidents. The report will then be submitted to DSD.

### **6.1. SPILLAGE/LEAKAGE OF CHEMICALS, AND CHEMICAL WASTES**

Depending on the type of construction activities undertaken on site, chemicals, chemical wastes spillage/leakage drills may need to be conducted to test and enhance the emergency preparedness and response of site personnel.

In the event that spillage or leakage of fuels/chemicals/chemical wastes occurs, the following response procedures will be followed:

- (i) The person discovering the spillage or leakage will immediately check if anyone is injured and will then inform Environmental Officer.
- (ii) Environmental Officer will ensure any injured persons are treated and assess the nature of the spill/leak.
- (iii) Environmental Officer will arrange trained staff with appropriate protective clothing to clean up the material, by:
  - a. Soaking with sawdust (if the quantity of spilled or leaked material is small) or sand bags (if the quantity is large); and/or
  - b. Removing topsoil (if the spillage or leakage occurs on bare ground).
- (iv) The spilled or leaked chemicals/chemical waste must not be flushed down to nearby drainage.
- (v) The sawdust/sandbag soaked with chemicals/chemical waste will be disposed of as chemical waste (refer to Section 6.4.3 of this Plan).



## 7. CORRECTIVE AND PREVENTIVE ACTIONS

Non-conformance in the implementation of mitigation and management measures described in the previous sections may be identified by:

- Environmental Site inspection undertaken on a regular basis by the Environmental Officer, Environmental Supervisor and
- Any site staff during daily work activities.
- Inspection before SEMC and SEC meeting

In the event that a non-conformance is identified, corrective and preventive action procedures as detailed below will be followed:

- (i) The person who has identified the non-conformance will inform the Environmental Officer who is responsible to the respective construction project. The person will fill in Part A of the Corrective and Preventive Action Request (CPAR), attached in Appendix B, and submit this Request to the Environmental Officer.
- (ii) The Environmental Officer will within 3 working days upon receipt of the CPAR:
  - a. investigate the cause of the non-conformance;
  - b. recommend appropriate corrective actions and where necessary preventive actions;
  - c. estimate the time required for implementing the corrective/preventive actions; and
  - d. fill in Part B of the CPAR and submit this to the Construction Manager.
- (iii) The Construction Manager will check to ensure that the actions are implemented within the specified time frame and are effective. The Construction Manager will then fill in Part C of the CPAR and file the completed CPAR.
- (iv) If the Construction Manager concludes that the recommended actions have not been implemented, he will instruct the Environmental Officer to immediately commence implementation. If the Construction Manager concludes that the recommended actions are ineffective, he will instruct the Environmental Officer to re-submit alternative corrective/preventive actions within two working days.
- (v) The Environmental Officer will maintain a CPAR Logbook to record and track every corrective/preventive actions taken.

## 8. MAINTENANCE OF ENVIRONMENTAL RECORDS FOR WASTE MANAGEMENT

In the course of executing this WMP, a variety of environmental records for waste management will be generated. The Environmental Officer will keep these records throughout the Project. Key environmental records to be maintained for waste management are described in Table 8.1.

**Table 8.1 Key Environmental Records**

Category	Environmental Record
General	<ul style="list-style-type: none"> <li>• Environmental training/briefing records on waste management (Appendix J)</li> <li>• Construction programs</li> <li>• Site inspection records/reports</li> <li>• Correspondence with DSD, EPD and other parties in relation to waste management matters</li> <li>• Minutes of meeting on waste management issues</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>• Waste disposal records</li> <li>• Monthly Waste Flow Table (Appendix G)</li> <li>• Trip Ticket System for Disposal of Construction &amp; Demolition Materials (Appendix I)</li> </ul>
Chemical Waste Storage	<ul style="list-style-type: none"> <li>• Drawings of stores</li> <li>• Material Safety Label</li> <li>• A log of chemical waste generation and disposal (Appendix H)</li> </ul>
Complaints	<ul style="list-style-type: none"> <li>• Complaint records, Notifications of Complaint, investigation reports, records of actions taken and/or mitigation measures implemented, correspondence with relevant parties (Appendix F)</li> </ul>
Environmental Emergency	<ul style="list-style-type: none"> <li>• Emergency Incident Reports</li> </ul>
Corrective and Preventive Actions	<ul style="list-style-type: none"> <li>• Corrective and Preventive Action Requests (Appendix B)</li> <li>• Corrective and Preventive Action Requests Logbook</li> </ul>

## **9. COMPLAINT HANDLING PROCEDURES**

Environmental complaints will be referred to Best Build Construction Co., Ltd. and passed on to the Environmental Officer for carrying out complaint investigation procedures. The following procedures will be undertaken by the Environmental Officer upon receipt of the complaints:

- (i) Investigate the complaint to determine its validity, and to assess whether the source of the problem is due to works activities;
- (ii) If a complaint is valid and due to works, identify mitigation measures in consultation with the Construction Manager;
- (iii) If mitigation measures are required, advise appropriate personnel accordingly;
- (iv) Review response on the identified mitigation measures, and the updated situation;
- (v) Report the investigation results and the subsequent actions to the Construction Manager and DSD and subsequently to the complainant; and
- (vi) If mitigation measures are identified in the investigation, Best Build Construction Co., Ltd. will promptly carry out the mitigation.

The Environmental Officer will be responsible for the complaint investigation and ensuring the implementation of any mitigation measures.

## **10. PERFORMANCE MONITORING**

The Site Agent, Environmental Officer, Environmental Supervisor and Site Foreman will frequently inspect the Site in order to monitor the environmental performance of the Site and to ensure that all the requirements states in the contract, licenses or permits were complied with. A checklist (Appendix C) was developed and would be completed after inspection.

Best Build Construction Co., Ltd has prepared a checklist for use in weekly environmental walk and pre-inspection of SEMC / SEC for assessing the environmental performance of the Site. A sample of the checklist is attached in Appendix C. Any defects or deficiencies identified in the weekly environmental walk will be duly recorded in a summary table. Environmental Officer / Environmental Supervisor will take prompt action to rectify the defects or deficiencies identified and will report the status of rectification actions in the forthcoming weekly environmental walk or the SEMC meeting.

## **11. ENVIRONMENTAL PROMOTION FOR WORKERS**

Best Build Construction Co., Ltd will promote and maintain the awareness on environmental nuisance abatement and waste management amongst all persons on the Site. Environmental notice board will be erected in the Best Build Construction Co., Ltd's site office. The environmental policy, the environmental organization chart, the minutes of the SEC meeting and posters will be posted on the notice board.

The EO will collect bulletins or leaflets from the Environmental Protection Department (EPD) or other government departments and distribute them to all site personnel in order to draw their attention to particular environmental issues.

Promoting campaign will be established to recognize or commend those site personnel with good performance on environmental nuisance and waste management, in order to encourage all site personnel to improve their performance.

## APPENDIX A

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# Mitigation Measures Implementation Schedule for Waste Management

Contract No. DC/2019/03  
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 Yuen Tun Ha and Lo Lau Uk in Tai Po  
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WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
<b>Waste Management</b>							
S2.2	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilisation/ During construction	Contractor(s)		Y		-
S2.2	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the construction works.	Contract mobilisation/ During construction	Contractor(s)		Y		-
S5.2.3	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		Y	Y	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S5.2.3	Appropriate measures to reduce windblown litter and dust transportation of waste by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		Y		DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S5.2.3	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	During Construction	Contractor(s)		Y		DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S5.2.3	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	During Construction/ During operation	Contractor(s)		Y		WBTC 32/92, The Use of Tropical Hard Wood on Construction Site

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WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
S5.2.3	Encourage collection of aluminium cans and waste paper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	During Construction	Contractor(s)		Y		ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock
S5.2.3	Prior to disposal of construction waste, wood, steel and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		Y		DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S5.2.3	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		Y		-
S5.2.3	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		Y		-
S5.2.3	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilisation/ During construction	Contractor(s)		Y		Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
S5.2.3	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilisation/ During construction	Contractor(s)		Y		DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S5.4	The EO, IEC and ET will conduct regular inspection of the waste management	All area/ During construction	Contractor(s)/ Independent		Y		ETWB TC(W) No. 19/2005, Environmental

### Appendix

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WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
	measures implemented on site as described in the Waste Management Plan.		Environmental Checker (IEC)/ Environmental Team (ET)				Management on Construction Sites
S5.2.3	Areas will be designated for such segregation and storage for collection.	All area/ During construction	Contractor(s)		Y		-
S5.2.3	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	During Construction, particularly dry season	Contractor(s)		Y		Air Pollution Control (Construction Dust) Regulation (Cap 311R)
S5.2.3	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		Y	Y	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S5.2.3	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		Y	Y	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
S5.2.3	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		Y	Y	-
S5.2.3	Recycling bins will be provided at strategic locations within the Site to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) from the Site. Materials recovered will be sold for recycling.	All area/ During construction/ During operation	Contractor(s)/ DSD		Y	Y	-

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WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
S5.2.3	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		Y		-
-	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		Y		Air Pollution Control Ordinance (Cap 311)
S5.3.1	Mitigation Measures in General for Management of Chemicals: <ul style="list-style-type: none"> <li>• Storage locations should be properly marked or identified.</li> <li>• Chemical goods storage areas should be well lit and ventilated.</li> <li>• No open flame, smoking or any type of localized heat is permitted near the chemical /dangerous goods storage area.</li> <li>• Mixing of chemicals/dangerous goods is to be performed outside of the storage area.</li> <li>• Containers of chemicals should be kept below eye level.</li> <li>• Enough space should be given to avoid overcrowding.</li> <li>• All empty bottles should be removed from stock room shelves.</li> <li>• Storage containers should be inspected regularly for rust, corrosion or leakage.</li> <li>• Spill kit and drip tray should be provided for chemicals/dangerous goods storage.</li> <li>• A log of chemicals/dangerous goods should be maintained.</li> <li>• Any incompatible chemicals/dangerous goods should be</li> </ul>	All area/ During construction	Contractor(s)		Y		-

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WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
	<p>physically separated from each other when storing.</p> <ul style="list-style-type: none"> <li>• Plant and vehicle maintenance will likely be the primary source of chemical wastes during the construction period. The majority of chemical waste produced is therefore expected to consist of waste oils and solvents. The volume of chemical waste will depend upon the total number of plant / vehicles and how much maintenance is actually carried out on site. However, it is unlikely that volumes of chemical wastes will exceed 450 litres / month considering the small scale of proposed works.</li> <li>• Chemical waste will be disposed of via a licensed waste collector and to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage container. Typical wastes may include the following: -                             <ul style="list-style-type: none"> <li>○ solid wastes (empty fuel/lubricant drums, used oil/air filters, scarp batteries, vehicle parts); and</li> <li>○ liquid wastes (waste oils/grease, spent solvents/detergents and possibly spent acid/alkali from batteries maintenance).</li> </ul> </li> </ul>						

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 Waste Management Plan



WMP ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Implementation Timing & Location	Implementation Agent	Implementation Stage			Relevant Legislation & Guidelines
				D	C	O	
S5.3.2	Management of Chemicals at Water Gathering Grounds (WGG): <ul style="list-style-type: none"> <li>No earth, building materials, fuel, oil or toxic materials and other materials which may cause contamination to the gathering grounds are allowed to be stockpiled or stored on site.</li> <li>Any construction plant which causes pollution to the gathering grounds due to leakage of oil or fuel shall be removed off site immediately.</li> <li>Any soil contamination with fuel leaked from plant shall be removed off site and the voids arising from removal of contaminated soil shall be replaced by suitable material to the approval of the Director of Water Supplies.</li> </ul>	All area/ During construction	Contractor(s)		Y		-
Remarks: D= Design stage C= Construction Stage O= Operation stage							

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## APPENDIX B

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# Corrective and Preventive Action Request Form

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**CORRECTIVE AND PREVENTIVE ACTION REQUEST**

CPAR No.: \_\_\_\_\_

**PART A REQUEST** (to be filled by the person who identifies the non-compliance or deficiency)

Description of the Non-compliance or Deficiency : (Please Specify How, When, Where and What)

Requested by :

Date :

**PART B CORRECTIVE AND PREVENTIVE ACTION** (to be filled by the Environmental Officer)

Causes of Non-compliance or Deficiency:

Corrective / Preventive Action:

Target Completion Date:

Proposed By :

Date:

**PART C REVIEW OF CORRECTIVE AND PREVENTIVE ACTION** (to be filled by the Construction Manager)

Actual Completion Date:

Reviewed By :

Date :

Appendix

## APPENDIX C

---

# Checklist for Environmental Inspection

## Site inspection check list - Environmental walk

Date of inspection : \_\_\_\_\_ Time : \_\_\_\_\_  
 Weather condition : \_\_\_\_\_

Inspected by : \_\_\_\_\_  
 DSD : \_\_\_\_\_ Contractor : \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Item no	Description	N/A or not observed	Yes	No
1 - General				
1.1	Is the most updated Environmental Permit displaced at the place of works	_____	_____	_____
1.2	Is there any Asbestos related work	_____	_____	_____
1.3	Remove site rubbish and debris from public roads and footpaths	_____	_____	_____
1.4	Tree protection – protection – protect the branch structure, crown and root zone with fencing as required	_____	_____	_____
1.5	Protection to adjoining property – protect adjoining footpaths, walls, fencing and paving	_____	_____	_____
1.6	Disposal of rubbish – site and the works kept clean and tidy with rubbish and debris removed as they accumulate	_____	_____	_____
1.7	Storage of plant and materials – store materials properly in designated area	_____	_____	_____
1.8	Contractors Site Accommodation	_____	_____	_____
1.9	Meets the specified provision standard	_____	_____	_____
1.10	Maintained in clean and tidy condition and in good repair.	_____	_____	_____
1.11	Prevention of Mosquito Breeding	_____	_____	_____
1.12	Posters displayed	_____	_____	_____



1.13	Standing water removed or treated with larvicidal			
1.14	Water receptacles covered, emptied or prevented from collecting water			
2 - Water Quality				
2.1	Keep excavation and trenches free from water			
2.2	Provide and maintain temporary channels, catch pits, silt pits & traps and drainage work			
2.3	Provide adequate means to prevent storm water runoff into water courses and adjacent land			
2.4	No polluting effluents to discharge into drains, sewers or sea			
2.5	Comply with drainage diversion systems and temporary storm water drainage routing			
Item no	Description	N/A or not observed	Yes	No
2.6	Is pondings found on site			
3 - Air Quality				
3.1	No bonfires on site			
3.2	Sprinkle dusty areas with water			
3.3	Provide levelled, well- drained and maintained hard-standing ground for materials handling and storage. Cover dusty stockpiles and devris with sheeting or place in shelter			
3.4	Are the designated roads regularly sprayed with water to prevent dust generation			

3.5	Is the public road around the site entrance keep clean and free from dust	_____	_____	_____
4 - Noise				
4.1	Prosess valid Construction Noise Permit	_____	_____	_____
4.2	No noise levels at 1m from the most affected external façade of the nearby noise sensitive receivers from the construction works alone during any 30 minutes period no more than (Leq) of 75dB (A)	_____	_____	_____
4.3	Do not permit noise levels generated in any construction operato exceed 70dB (A) during normal school hours if there is a school nearby	_____	_____	_____
4.4	Adopt 65 dB (A) as the noise level limit during school examination hours (Contact School to verify times)(Noise levels to be measured over any 30 minutes period)	_____	_____	_____
4.5	Provide noise suppressors on all operating noisy plant and equipment.	_____	_____	_____
5 - Waste				
5.1	Waste material properly sorted, stored and labelled for re use, recycle or disposal	_____	_____	_____
5.2	Properly store and dispose of hazardous wastes and dangerous goods	_____	_____	_____
5.3	Verify receipts obtained from operator of Public Fill Site or Landfill for each vehicular trip transporting C &D Waste off site	_____	_____	_____

5.4	Monitoring Waste Management Plan (WMP)	/			
5.5	Estimated types of waste with quantities				
5.6	List of materials proposed to be re-used or recycled with quantities				
5.7	Measures to reduce, salvage, re-use or recycle waste on or off-site.				
5.8	Method statement of implementing Trip Ticket System				
5.9	Location, layout and details of designated sorting area				

## APPENDIX D

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# Inventory of Licences, Registration, Particulars and Permits

## Inventory of Licenses, Registration and Permits

Licences / Registration / Permit	Issuing Authority	Status	Date of Issue	Expiry Date
Billing Account of Waste Disposal				
Chemical Waste Producer				
Wastewater Discharge				

## APPENDIX E

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# Inspection Reports for Weekly Environmental Walks

**Appendix 25.09**

**Weekly Environmental Walk Inspection Report**

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**Appendix 25.09**  
**Weekly Environmental Walk Inspection Report**

**Summary of Follow-up Actions**

**Part I :**

Contract No. \_\_\_\_\_ Contract Title \_\_\_\_\_

Date of Inspection \_\_\_\_\_ Time \_\_\_\_\_

Persons making the inspection:

- | <u>Name in Block Letters</u> | <u>Designation</u>   | <u>Signature</u> |
|------------------------------|--|------------------|
| 1.                           | <i>Contractor's Agent (or his representative if agreed by the Supervisor)</i>          |                  |
| 2.                           | <i>Environmental Officer (or Environmental Supervisor if agreed by the Supervisor)</i> |                  |
| 3.                           | <i>Supervisor's nominated site representative</i>                                      |                  |

Item No.	Location	Situation Requiring Follow-up Action	Agreed Due Date for Completion	Date Completed	Remarks
1.					
2.					
3.					
4.					
5.					

**To be signed at the end of inspection:**

**The Contractor's performance on nuisance abatement and waste management \*is/is not to the satisfaction of the Supervisor's nominated site representative at the time of inspection. (\* delete as appropriate)**

Supervisor's nominated site representative \_\_\_\_\_

Contractor's Agent or his representative \_\_\_\_\_

**Part II :** (To be countersigned after ALL actions are completed)

Contractor's \*Environmental Officer/Assigned Person \_\_\_\_\_

Supervisor's Representative \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

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## APPENDIX F

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# Inventory of Complaints

## Summary of Environmental Complaints

### **Complaint from Environmental Protection Department**

Date of received	Subject

### **Complaint from local residents**

Date of received	Subject

### **Abatement Notices**

Date of received	Subject

### **Offences Spotted**

Date of received	Subject

## APPENDIX G

---

# Monthly Waste Flow Table

**APPENDIX G**

**MONTHLY SUMMARY WASTE FLOW TABLE**  
**[P.S. CLAUSE 25.20A(40(a))]**

Name of Department : DSD

Contract No. : DC/2019/03

**Monthly Summary Waste Flow Table for 2020 (year)**

Month	Actual Quantities of Inert C&D Material Generated Monthly						Actual Quantities of C&D Waste Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (See Note 3)	Chemical Waste	Other, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub - total											
Jul											
Aug											
Sept											
Oct											
Nov	0	0	0	0	0	0	0	0	0	0	
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

Contract No. DC/2019/03  
 Provision of Trunk Sewer to 3 Villages in Tai Po: Ta Tit Yan,  
 Yuen Tun Ha and Lo Lau Uk in Tai Po  
**Waste Management Plan**

Forecast of Total Quantities of C&D Materials to be Generated from the Project*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (See Note 3)	Chemical Waste	Other, e.g. general refuse
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
1.41	0.02	0.74	0	0.59	0	0.01	0.01	0.01	0.01	0.02

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Project to be imported for use at the Sites.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

## APPENDIX H

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# Summary Record of Chemical Waste Disposal



## Summary record of Chemical Waste Disposal

### Chemical Waste

item	Type of Chemical Waste	Quantity

## APPENDIX I

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# Summary Record of Trip Ticket System

### Appendix

Summary record of trip ticket system**Disposal of C&D Material**

<u>Month</u>	<u>Total Number of Truck of Inert Material</u>	<u>Total Number of Truck of Non-inert</u>	<u>Total Number of Overload Truck</u>
April 2020			
May 2020			
June 2020			
July 2020			
August 2020			
September 2020			
October 2020			
November 2020			
December 2020			
Total			

**Details of Overload Truck**

<u>Date</u>	<u>Vehicle Number</u>	<u>Weight in (Tonne)</u>	<u>Weight Overloaded (Tonne)</u>	<u>Gross Vehicle Weight (Tonne)</u>	<u>Overloaded Percentage</u>

## APPENDIX J

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# Records of Environmental Training

## Summary of Environmental Training Records

(Monthly)

### **Environmental Tool-box Talk**

Date	Topic	Trainer	No. of attendant

### **Summary of Environmental Tool-box Talk**

Accumulated no. of tool-box talk	Accumulated no. of attendant

## APPENDIX K

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# Records of Timber Usage

**APPENDIX 25.13**

**SUMMARY TABLE FOR WORK PROCESSES OR ACTIVITIES REQUIRING TIMBER FOR  
TEMPORARY WORKS**

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**Appendix 25.13**

**Summary Table for Work Processes or Activities Requiring Timber for Temporary Works**

Contract No.: \_\_\_\_\_

Contract Title: \_\_\_\_\_

<b>Item No.</b>	<b>Description of Works Process or Activity</b> [see note (a) below]	<b>Justifications for Using Timber in Temporary Construction Works</b>	<b>Est. Quantities of Timber Used (m<sup>3</sup>)</b>	<b>Actual Quantities used (m<sup>3</sup>)</b>	<b>Remarks</b>
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
<b>Total Estimated Quantity of Timber Used</b>					

- Notes:
- (a) The *Contractor* shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.
  - (b) The summary table shall be submitted to the *Supervisor* monthly together with the Waste Flow Table for review and monitoring in accordance with the [PS Clause 25.34\(4\)](#) and [Appendix 25.12](#).

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## APPENDIX L

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# Information on Key Contact Persons for Emergency

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**INFORMATION ON KEY CONTACT PERSONS**

<b><u>Name</u></b>	<b><u>Position</u></b>	<b><u>Phone No.</u></b>	<b><u>Priority</u></b>
C.K. Ko	Environmental Officer	9721 0392	First
Wong Kwok Kit	Foreman	5138 7740	Second
Aaron Leung	Site Agent	9090 5639	Third

Appendix