

CWE-ZHEC JOINT VENTURE

WASTE MANAGEMENT PLAN

FOR

Contract No. CV2004/03
Maintenance and Repairs to Franchised and
Licensed Ferry Piers (2005-2008)

Construction of Yung Shue Wan Helipad –
Works Order No. YSWH/01/03

Certified by : 
(Environmental Team Leader)

23 August 2007	Revision 1	Edmund Wong	Alan Mong
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1 INTRODUCTION

1.1 OVERVIEW

This Waste Management Plan (WMP) has been prepared to set up a waste management programme during the construction works of this contract (Contract No.CV/2004/03).

The works description for this Contract comprises the followings:

1. Construction of a reinforced concrete helipad and emergency vehicular access with pile foundation.
2. E&M connection works with existing road
3. Environmental mitigation, monitoring and audit.
4. Other works associated with and incidental to all of the above.

1.2 PURPOSE OF THE PLAN

The purpose of this Waste Management Plan is to set up a waste management programme which includes the measures for avoidance, minimization, handling, recycling, storage, transportation, and disposal of waste from the works. The Programme aims to comply with the requirements as set out in the ETWB TCW No. 15/2003, Waste Management on Construction Sites and to minimize waste impacts by implementing the Plan. This WMP will be reviewed and updated on a monthly basis.

1.3 WASTE MANAGEMENT POLICY

It is the policy of CWE-ZHEC Joint Venture to ensure that all its construction activities are carried out in a manner that minimizes the amount of waste generated on site. The kinds of waste include Construction & Demolition (C&D) Materials, Chemical Waste & General Refuse. The Policy will be reviewed periodically for continuous improvement. The Company aims to:

- foster employees' awareness at all levels of their responsibilities for the environment and waste management;
- provide sufficient resources and facilities for the implementation of waste management;

- review the Company's performance in respect of waste management and strive for continual improvement.
- avoid and minimize the generation of waste through changing or improving practices and design;
- recover, reuse and recycle materials where practicable;
- provide waste management training to staff and
- comply with relevant legislative requirements and contract requirements.

The targets of ZHEC in waste management are to: -

- Minimize concrete wastage to 10% ;
- Minimize steel wastage to 5%
- Recycle 70 % of the used steels and timbers;
- Recycle 70 % of the used paper quarterly;
- Recycle all the recyclable printer toner cartridges;
- No legal conviction on waste management e.g. illegal dumping.

Approved by:



Managing Director

Issue: 0

Revision 0

Effective Date: July 2007

1.4 ORGANIZATION CHART FOR WASTE MANAGEMENT

The organization chart for waste management is attached in Appendix A.

Title	Name	Contact No.
Environmental Engineer	Lighting Chan	2512-4766
Section Agent	Edmund Wong	6401-7683
Site Agent	Alan Mong	6401-7681

1.5 RESPONSIBILITIES FOR WASTE MANAGEMENT

The responsibilities for implementation of the requirements of this Plan are detailed in the following paragraphs.

1.5.1 SITE AGENT (SA)

The Site Agent has the responsibility for overseeing the waste management and reporting on these to the board committee of the company and is ultimately responsible for all aspects of environmental issues within the project, which are managed with the WMP.

He is also responsible for ensuring commitment and assigning resources and facilities to provide an effective waste management program in the workplace.

1.5.2 SECTION AGENT

The responsibilities of the Section Agent are as follows:

- Ensure works are executed in accordance with the WMP;
- Monitor and control the works including those of subcontractors to ensure compliance with specified waste management requirements;
- Ensure appropriate waste management measures are properly implemented in accordance with the relevant procedures;
- Assist in handling any complaints received from the public as required; and
- Ensure remedial action to be taken immediately if there is a non-compliance of statutory or contractual requirements in respect of waste management issues.

1.5.3 SITE ENGINEER (S) / ASSISTANT ENGINEER (S)

The Site Engineers/Assistant Engineers have the following duties in relation to waste management:

- Assist the Section Manager(s) in implementing the WMP;
- Monitor and control the works including those of subcontractors to ensure compliance of both contractual and statutory requirements;
- Report to the Section Manager(s) regarding non-compliance of any waste management issues;
- Assist in the investigation of complaints received from public and carry out appropriate actions as required; and
- Ensure the waste management procedures are carried out as planned.

1.5.4 ENVIRONMENTAL ENGINEER

The Environmental Engineer will provide advice to project management in respect of any waste management issues including waste minimization, waste reduction, waste recovery, waste record and disposal etc.

The Site Agent/Section Agent with the assistance of the Environmental Engineer will assume waste management on site.

The Environmental Engineer will work in parallel with the engineering team and project management to ensure waste management procedures are fully considered during the planning and implementation stages.

He will also be responsible for the followings:

- Conduct routine site environmental inspections;
- Report to the Section Agent regarding non-compliance of any waste management procedures and ensure any non-compliance is handled in accordance with the Nonconformance Procedure;
- Ensure complaints are handled properly in accordance with the Complaints Handling Procedures;
- Provide training and assistance to the Site Engineers/Assistant Engineers with respect to environmental monitoring.

He will be responsible to keep/update the following records:

- This WMP;
- Register of all trained personnel in the site offices;
- All correspondences with EPD and complaints;
- Chemical wastes disposal record;
- Trip-tickets and receipts;
- Site inspection record;
- Waste Flow Table (monthly & yearly); and
- Summary table for work processes requiring timber for temporary works.

1.5.5 FOREMEN

Foremen are responsible for the following duties:

- Assist the Site Engineers/Assistant Engineers to implement the WMP;

- Control the works, including those of subcontractors, to fulfill waste management requirements;
- Report to the Section Manager any non-compliance of environmental protection and mitigation measures;
- Provide information as requested regarding complaints received from the public; and
- Carry out remedial actions or mitigation measures to rectify the non-compliance.

1.5.6 SITE SECRETARIES/CLERKS

Site secretaries / clerks with the assistance of the Environmental Engineer will be responsible for the waste management within the site office. They are responsible for the followings:

- Post up environmental signs such as “Save Paper” within the site office to remind staff to reduce waste production;
- Prepare recycling waste collection bins e.g. waste paper, aluminum cans, plastic bottles etc.;
- Arrange the collection of the above recycling wastes.

1.5.7 ENVIRONMENTAL WORKING TEAM

Environmental working team will consist of assistance engineers, foremen and labour. They are responsible for implementing environmental and waste management mitigation measures whenever necessary. They are also responsible to carry out rectification of any non-compliance after such occurs e.g. handling of contaminated soil etc.

1.5.8 OTHER EMPLOYEE (S)

Every employee on site and in the site office has the duty to carry out waste management programmes as instructed by the Site Engineers/Foremen and Environmental Engineer/Environmental Manager respectively.

Every employee will report promptly to Foremen any non-compliance of the waste management system and they will actively participate in and co-operate with the Project Management to achieve the Waste Management Policy.

1.5.9 SUB-CONTRACTORS

Sub-contractors are responsible for the implementation of waste management programme regarding to their works. They will be responsible for the sorting and

segregation of the C&D materials during their construction progress. They are also responsible to arrange licensed chemical collector for the disposal of their chemical waste (if any).

Sub-contractors involved in the trip-ticket system are responsible to return the ticket with receipt from the public fill/landfill in a timely manner.

They are also responsible to execute any instruction from the Company on waste management and to rectify the responsible non-conformances raised after site inspection.

2 WASTE GENERATION

2.1 TYPE OF CONSTRUCTION WASTES

The waste materials that will be generated during the construction phase include the following:

- Excavated materials (Public Fill);
- Slurry;
- Construction and Demolition (C&D) Waste i.e. concrete, cement; steel, iron etc.
- Chemical Waste; and
- Municipal Waste.

2.1.1 EXCAVATED MATERIALS (PUBLIC FILL)

- Excavated materials shall be segregated, such that topsoil is stored separately from fill and treated accordingly to avoid degradation;
- Where possible, inert materials will be reused on site (as long as they are suitable for reuse);
- Stockpiles shall be sited away from existing watercourse and suitably covered to prevent wind erosion.

2.1.2 SLURRY

Slurry will be excavated from within the pile casting during piling works of the project. It shall be handled properly to minimize contamination to the marine water and any exposed areas due to leakage or improper storage.

2.1.3 CONSTRUCTION AND DEMOLITION WASTE (C&D) WASTE

- Demolition debris includes broken concrete, bricks, steels and iron from existing seawall for connection joint to the proposed helipad;
- Steel and wood from site hoardings;
- Timber and steels from temporary works e.g. formwork and falsework;
- Equipment and vehicle maintenance parts;
- Paper/cardboard from materials and equipment wrappings/packages ;
- Unusable/surplus concrete from formwork;

- Unusable/surplus steelbars from formwork; and
- Damaged/contaminated/surplus construction materials.

Where materials cannot be used on site the Contractor will explore opportunities for recycling off-site.

2.1.4 CHEMICAL WASTE

Chemical wastes to be generated during construction are likely to be principally resulting from plant and vehicle maintenance and servicing. They can be classified into solid and liquid states:

- Solid waste include:
 - Empty fuel / lubricant drums; and
 - Used oil / air filters.
- Liquid wastes include:
 - Lubricants;
 - Spent mineral oils / cleaning fluids;
 - Waste oils / grease;
 - Spent solvents / detergents produced from cleaning activities;
 - Paint application / surplus paint; and
 - Used engine oils, hydraulic fluids and waste fuel.
 - Shutter release agents (chemical / oil bases emulsions)

2.1.5 MUNICIPAL WASTES

Site construction workers will generate municipal (solid/liquid) and sewage waste that has a potential to cause odour, health and water quality impacts. Municipal waste will be predominantly composed of food wastes, packaging and wastepaper.

2.2 MANAGEMENT HIERARCHY

There are various waste management options that can be categorized in terms of preference from an environmental viewpoint. The options considered to be more preferable have the least impact and are more sustainable in a long-term context. Hence, the hierarchy is as follows:

- Avoidance and minimization, that is, avoiding or not generating waste through changing or improving practices and design;
- Reuse of materials, thus avoiding disposal;
- Recovery and recycling, thus avoiding disposal;

- Treatment and disposal, according to relevant legislative requirements and codes of practice.

This hierarchy is used to evaluate waste management options, thus allowing maximum waste reduction and often reducing costs. For example, by reducing or eliminating over-ordering of construction materials, waste is avoided and costs are reduced both in terms of purchasing of raw materials and in disposing of wastes.

3 WASTE MANAGEMENT MEASURES

The generation of waste from the Works shall be minimized through changing or improving design and practices, careful planning and good site management. Where possible, construction waste materials, such as wood and metal should be separated from other wastes for reuse and recycling as much as possible. Waste Disposal Ordinance and its subsidiary will be observed and complied during works.

3.1 WASTE REDUCTION

- Avoid where possible the purchase of products with unnecessary or non-recyclable packaging.
- Use of water on washing and dust control etc. should be controlled
- Practice of recovery, recycling and reuse of suitable waste materials should be maximized.
- Avoid clearing site areas that do not affect the proposed construction works, thus reducing the waste vegetation and soil.

3.2 RECOVERY, RECYCLING AND REUSE OF SUITABLE WASTE

Whenever feasible, all recyclable materials should be segregated and stored in appropriate containers for reuse and recycling.

Recycle procedures

- Used steel and timbers will be cleaned manually and collected at a temporary segregation area, which will be within the site and not affecting the public. If the materials belong to the Sub-contractors, instruction will be given to them on the handling of recyclable wastes.
- If possible (e.g. adequate amount of waste is collected), the collected wastes will then be collected by an appointed collecting company regularly for recycling purpose.
- Inert C&D materials that are suitable for recycling will be identified and recovered for delivery to designated recycling facility at **Tuen Mun 38**.

Re-use procedures

- Excavated materials will be reused on site as far as possible;

- Steel used for the hoardings and formwork can re-use as for other construction activities;
- Metal will be recovered on site for collection by recycling contractors;
- Cardboard and paper packaging (for plant, equipment and materials) will be recovered on site, properly stockpiled in dry condition and covered to prevent cross contamination by other C&D materials.

3.3 STORAGE AND COLLECTION OF WASTE

- Slurry arising from piling works will be passed through de-silting tanks / sedimentation tanks to settle out soil particles from the wastewater. Temporary storage tanks will be available for the storage of this inert material.
- This inert material will be collected regularly for disposal;
- Sufficient space for the temporary storage of C&D materials will be identified to facilitate collection and/or sorting on the Site;
- Temporary storage tanks will be available for the storage of C& D waste on site;
- C&D waste will be removed as soon as practicable in order to optimise the use of the on-site storage space;
- A sufficient number of covered bins shall be provided on site for the containment of general refuse such as tissue paper and contaminated paper etc. to prevent visual impacts and nuisance to sensitive receivers. These bins shall be cleared daily and the collected waste disposed of to the refuse transfer station;
- Temporary storage area for domestic waste will also be available on site for the temporary storage for domestic wastes;
- Waste from the workers e.g. food wastes, aluminium cans etc will be collected daily. Sorting of aluminium cans, plastic bottles and waste paper will be carried out as far as possible before disposal;
- All chemical toilets shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal; and
- Arrangement with recycling contractors will be made to facilitate that recyclable materials sorted from the Site are collected with reasonable care.

3.4 ON-SITE SORTING OF C&D MATERIALS

Waste materials will be segregated and sorted into 3 categories:

- Inert C&D materials (e.g. concrete and rubble) for public fill disposal;
- Non-inert C&D Waste that cannot be re-used and/or recycled (e.g. degraded wood, glass and plastic) for landfill disposal.
- Recyclable and reusable materials (e.g. steel, wooden blocks and other metals);

Sorting System

The source of generation will be identified by the record of waste generation activities. Quantity of the wastes will then be estimated. An appropriate area with sufficient space will be identified on site for waste sorting. The sorting process will be done manually and carefully monitored to avoid mixing of the three categories. Different types of wastes will be stockpiled and stored in different containers or skips to enhance re-use or recycling of materials and their proper disposal.

Construction and Demolition (C&D) materials will be sorted into public fill (inert portion), C&D waste (non-inert portion) and reusable and/or recyclable materials. The public fill comprises inert materials including soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt will be reused in earth filling, reclamation, site formation works or delivered to the *Public Filling Barging at Tsueng Kwan O 137/ Yung Shue Wan Station / recycling facility as notified by the Engineer Officer's Representative.*

The excavated materials arising from the piling works will be stockpiled into the hopper of derrick lighter and then delivered to the *Public Filling Barging at Tsueng Kwan O 137/ Yung Shue Wan Station / recycling facility as notified by the Engineer Officer's Representative.*

The C&D waste together with the reusable and/or recyclable materials which comprise metal, timber, paper, glass, junk and general garbage will be reused or recycled and, as the last resort, disposed of at landfills.

All disposable C&D materials will be removed off site as soon as practicable. Reusable and/or recyclable materials will be collected by recycling contractors or removed off site *once per week.*

The general refuse will contain no observable inert or reusable/recyclable C&D materials before disposal to landfills. Sorted inert C&D materials for disposal to public filling outlets will contain no observable non-inert materials.

Separation of waste in the waste segregation area will be done according to the recommendation in Works Bureau Technical Circular 15/2003 -'On Site Sorting of Construction Waste on Demolition Sites'.

3.5 TRANSPORTATION OF WASTE

A trip ticket system will be used for the transportation of

- Inert waste to designated public filling facilities
- Non-inert waste to designated landfills

Trip-ticket System

- A Construction and Demolition Material Disposal Delivery Form, for each and every vehicular trip transporting C&D material off Site, i.e. Public Fill or C&D Waste, will be produced;
- Prior to the vehicle leaving the Site, the completed Form shall where appropriated be presented to the Engineer's Representative. The Engineer's Representative shall insert the Time of Departure and stamp the Form. The Engineer's Representative shall retain a copy of the Form and return the original to the Contractor. The Form shall be carried on board the vehicle at all times throughout the trip;
- For each vehicular trip, the Contractor shall present to the operator of the Designated Public Filling Facility/Landfill (the Operator) the stamped Form prior to the disposal of C&D material. The Operator shall stamp and return the Form to the Contractor together with a computer receipt. The Contractor shall submit the stamped Form and the original receipt to the Engineer's Representative within 2 working days of the vehicular trip.
- A mechanism for collection of the returned form together with the receipt from public filling areas or landfill sites after each vehicular trip will be established within the company according to the number of subcontractors on site after the commencement of work;
- A register for each vehicular trip to be ready for inspection will also be developed.

3.6 WASTE DISPOSAL

3.6.1 SLURRY

- After passing the slurry through de-silting tanks / sedimentation tanks to settle out soil particles from the wastewater, the inert sediment will be disposed of at the public filling barging point at ***Tseung Kwan O 137 / Tuen Mun 38 / Yung Shue Wan Station.***
- The resulting wastewater will be discharged at licensed area after obtaining the discharge license issued under the Water Pollution Control Ordinance (WPDO).

3.6.2 C&D WASTE

- Dumping Licenses issued by CED will be applied for all C&D materials vehicles.
- All C&D wastes (e.g. timber, bamboo, plastic, etc) will be disposed of at ***WENT or NENT*** Landfills.
- All non-recyclable public fill will be disposed of at the public filling barging point at ***Tseung Kwan O 137 / Tuen Mun 38 / Yung Shue Wan Station.***
- Chemical waste will be disposed of via a licensed waste collector at a facility licensed to receive chemical waste and be a reuser of the waste, under approval from EPD.

3.6.3 SEWAGE TREATMENT

- Chemical toilets or sewage holding tanks will be provided on site to control the sewage generated by site construction workers. Licensed waste collectors will be employed to collect the sewage regularly.
- If feasible, sewage generated from the toilets and pantry of the site offices will be discharge through the localized sewage drainage system. Sewage treatment tanks shall be provided on site if necessary.

3.7 WASTE RECORD AND SUBMISSION MANAGEMENT

Waste Flow Table - Monthly

Record of the quantities of C&D materials generated each month will be maintained using the monthly summary "Waste flow Table "(WFT) (Appendix B). The Company will complete and submit the monthly summary WFT to the Engineer's Representative by not later than the 15th day of each month follows the reporting month, or if it is a General Holiday, the day following the General Holiday.

Waste Flow Table – Half-Yearly

In addition, the Company will provide estimated quantities of C&D materials that will be generated each year from the site, using the half-yearly summary WFT (Appendix C). the WFT will be updated on a half-yearly basis and submitted to the Engineer's Representative by not later than 1st of June and December of each year, or if it is a General Holiday, the day following the General Holiday, throughout the construction period in order to account for the revised works programme and latest outturn on the quantities of C&D materials generated from the site.

Summary Table - Timber Usage

To avoid, reduce and minimize the use of timber in temporary works construction, where the company has to use timber for temporary works construction for one process/activity with an estimated quantity exceeding 5cu.m, a method statement will be submitted to the Engineer. The Company will also provide a summary table (Appendix C) containing the description, justification and the estimated quantity for every work process/activity requiring the use of timers for temporary works construction irrespective of the quantity of timer used. The Company will update the summary table and submit it to the Engineer's Representative together with the monthly summary WFT for monitoring and review. This process/activity for which the estimated quantity has been revised will be highlighted in the summary table.

3.7.1 TRAINING TO WORKERS

Prior the commencement of construction works, training will be provided to all site personnel. The training will promote the concept of general site cleanliness and will explain the appropriate waste management procedures. The objective of this training is to encourage personnel to reduce, reuse and recycle wastes.

4 CHEMICAL WASTE CONTROL

4.1 INTRODUCTION

- The Management Hierarchy in Section 2.2 will be followed.
- The Waste Disposal (Chemical Waste) (General) Regulation will be observed and complied.
- When chemical waste is produced, registration as chemical waste producer under the Waste Disposal (Chemical Waste)(General) Regulation will be applied.
- All the chemical waste will be properly stored, labelled, packaged and collected before transportation to disposal facilities.

4.2 CHEMICAL WASTE REUSE / RECYCLING

Whenever possible, recycling or reprocessing opportunities for certain chemical wastes (i.e. oils, lubricates and detergents) will be identified to reduce overall volumes.

4.3 CONTAINERS

Types: Drums and jerrycans are the preferred types as they are commonly available and suitable for a wide range of wastes.

Size: consideration will be given on the quantity and frequency of chemical waste arising in determining the size of containers to be used. Space and access within the premises will also be considered.

Materials: plastics and steel are the most common types of materials. The materials used for container body, closures and fittings will be compatible with the contents to be stored.

Containers used for storage of chemical wastes should also:

- Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;
- Have a capacity of less than 450L unless the specifications have been approved by the EPD; and
- Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.

4.4 STORAGE AREA

The storage area for chemical wastes should:

- Be clearly labelled and used solely for the storage of chemical waste;
- Be enclosed on at least 3 sides.
- Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.
- Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary).
- Be arranged so that incompatible materials are adequately separated.

4.5 CHEMICAL WASTE DISPOSAL

Chemical waste will be disposed of:

- Via a licensed waste collector.
- All chemical wastes will be disposed of to the Chemical Treatment Centre (CWTC) at Tsing Yi or other licensed chemical treatment centre.

4.6 WASTE COLLECTOR

- Licensed chemical waste collector will be engaged for the collection and removal of chemical waste.
- The duty to arrange for the proper disposal of the chemical waste will be discharged to the waste collector by consigning the waste to such a waste collector.
- A form, known as a "trip-ticket", will be completed in triplicate before the waste to be accepted for collection from his premises.
- The steps to be taken by a chemical waste producer are set out below:
 - Record on a trip ticket and its copies all the necessary particulars and information required.
 - Ensure that the waste to be delivered is correctly classified, described, quantified and labelled.
 - Certify on the trip ticket that all the information provided by him is correct.
 - Retain a copy of the trip ticket for at least 12 months following consignment of the waste.

- A waste collector should deliver collected wastes to a reception point within 48 hours of collection. Any subsequent transfer of waste from a reception point would also need to follow the same trip-ticket requirements.

5 SITE INSPECTION, PERFORMANCE MONITORING AND TRAINING

Site inspections provide a direct means to trigger and enforce the specified environmental protection and pollution control measures. Site inspection will be undertaken weekly by the Project Environmental Engineer and the Site Agent to inspect the Site to ensure satisfactory performance on compliance with this Waste Management Plan.

5.1 WEEKLY SITE INSPECTION

A sample of comprehensive checklist for the use of weekly inspections on waste management is shown in Appendix E. This checklist will be modified according to the construction activities on site after the commencement of work. Immediately after the weekly inspection, the summary table of follow-up actions will be agreed and signed by both the Project Environmental Engineer and the Engineer Representative. The Company will take prompt action to rectify the deficiencies identified and will report the status of action taken before the forthcoming weekly inspection.

5.2 REFERENCE DOCUMENTS FOR MONITORING

Reference made for monitoring during inspections:

- Waste management programme in this Waste Management Plan.
- Works progress and the master programme;
- Individual works methodology proposals (which shall include proposal on noise control measures);
- The contract specifications on environmental protection;
- The Waste Disposal Ordinance;
- Environmental Review documents; and
- Previous site inspection results.

5.3 PERFORMANCE MONITORING

In order to monitor the performance of the waste management system described in this Plan, in the Site Safety and Environmental Committee Meeting, the followings will be included in the Agenda:

- Review the WMP including the quantities and types of C&D materials generated, reused and disposed of off-site; the amount of fill materials imported to the site and quantity of timber used in temporary works for each construction process/activity;
- Monitor the achievement of the WMP to assess its effectiveness; and
- Monitor the follow-up action on defects and deficiencies identified.

5.4 TRAINING

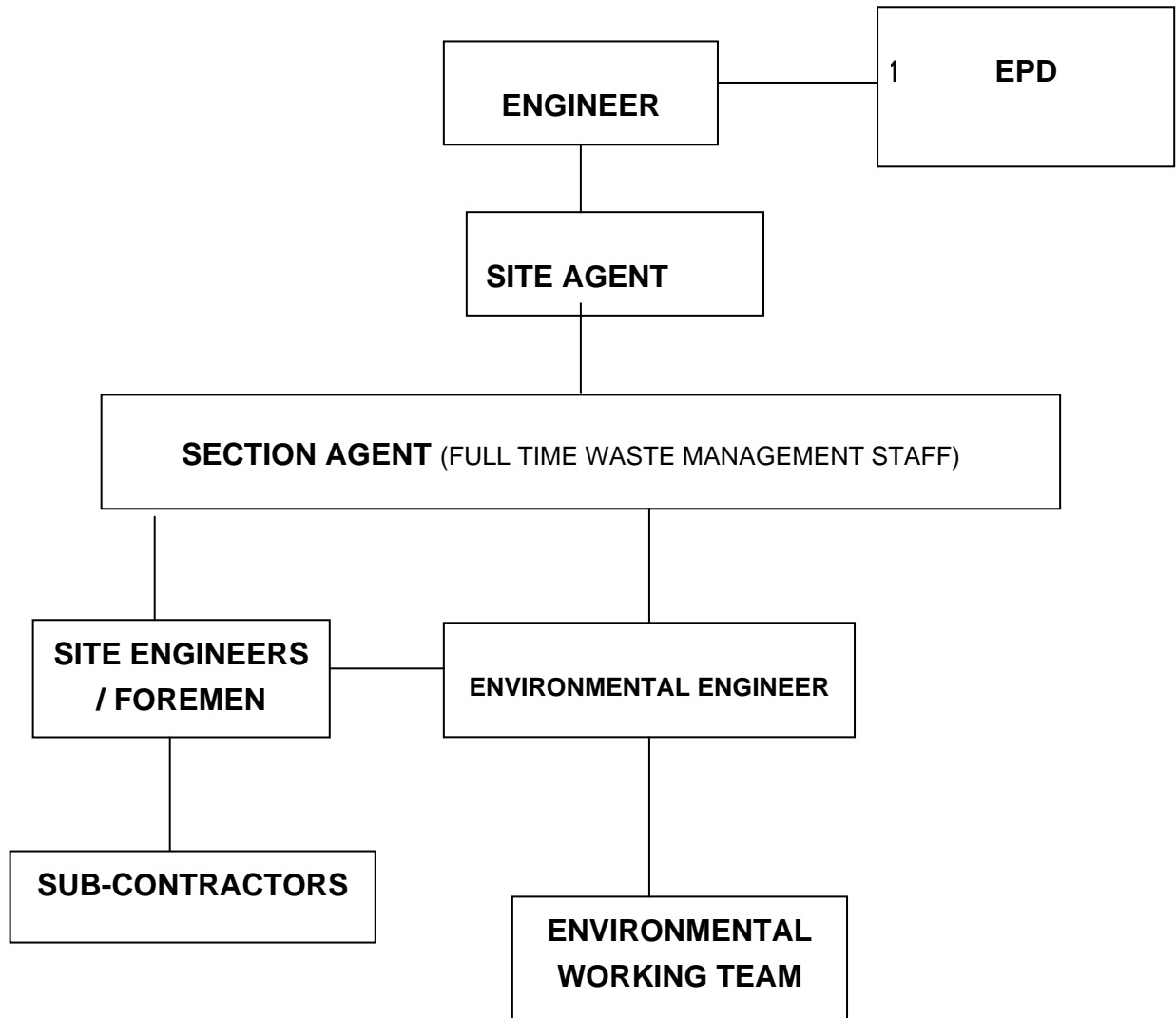
The Company will provide training on waste management in the site-specific environmental training and its refresher training for all the Company staff and the sub-contractors. The training will cover the waste management policy, targets, measures for on-site sorting of C&D materials and measurement on waste management performance on the Site.

Training on waste management will be given to Site agent and section agent by our company's environmental manager who has experienced and qualifications on waste management. Training materials will be available for the inspection of Engineer. If further required by Engineer, trainings organized by training institutes or organizations as considered appropriate by the ER will be arranged.

APPENDIX A

ORGANIZATION CHART

Organization Chart for Waste Management



APPENDIX B

MONTHLY SUMMARY - WASTE FLOW TABLE

(Sheet 1 of 1)

Name of Department: CEDD

Contract No. : CV/2004/03

Monthly Summary Waste Flow Table

(Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Broken Concrete (see Note 4)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan										
Feb										
Mar										
Apr										
May										
June										
Sub-total										
July										
Aug										
Sept										
Oct										
Nov										
Dec										
Total										

APPENDIX C

HALF-YEARLY SUMMARY - WASTE FLOW TABLE

Name of Department: CEDD

Contract No. : CV/2004/03

Yearly Summary Waste Flow Table

Year	Estimated Annual Quantities of Inert C&D Materials (in '000m ³)										Estimated Annual Quantities of C&D Wastes									
	Total Quantity Generated		Broken Concrete (see Note 4)		Reused in the Contract		Reused in other Projects		Disposed as Public Fill		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Others, e.g. general refuse	
	(a)		(b)		(c)		(d)		(a-b-c-d)		(in '000 kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m ³)	
	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.
2003																				
2004																				
2005																				
2006																				
2007																				
2008																				
2009																				
2010																				
2011																				
2012																				
Grand Total																				

APPENDIX D

TIMBER USAGE SUMMARY TABLE

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

Contract No. : CV/2004/03

Works Order : Construction of Yung Shue Wan Helipad

Item No.	Description of Works Process or Activity	Justifications for Using Timber in Temporary Construction Works	Est. Quantities of Timber Used (m³)	Actual Quantities used (m³)	Remarks
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		Total Estimated Quantity of Timber Used			

APPENDIX E

WASTE MANAGEMENT INSPECTION CHECKLIST

Contract No. CV/2004/03
Waste Management Inspection Checklist

檢查日期: _____ 時間: _____
 Inspection Date: _____ Time: _____
 地盤: _____ 檢查員: _____
 Site: _____ Inspector: _____

1 General refuse/Municipal refuse 普通廢物	Compliance 遵守			Remarks 備註
	Y	N	N/A	
1.1 Is accumulation of waste being 能防止廢物積聚?				_____
1.2 Are there enough refuse collection tanks /bins available on 地盤範圍放置足夠廢物箱/籃				_____
1.3 Waste disposed of regularly 廢物定時及恰當清理?				_____
1.4 Do site workers co-operate in 地盤工人能合作恰當處理廢				_____
1.5 Is sewage from chemical toilet / sewage holding tank 於化學廁或化糞池的污水能定期處理?				_____

2 Chemical Waste 化學廢物	Compliance 遵守			Remarks 備註
	Y	N	N/A	
2.1 Is chemical waste should be packed and stored in suitable containers in accordance with specified standards? 化學廢物應按照指定的標準,裝載及貯存於合適的容器內.				_____
2.2 Does each container of chemical waste should bear an appropriate label? 所有化學廢物容器均有標籤.				_____
2.3 Is a warning panel or notice displayed at each storage area? 於每處存放地點貼出警告牌或告示.				_____
2.4 Container have a capacity of more than 450L should be approved by EPD. 若所用容器容量超過450升,必須經環保署批准.				_____
2.6 Stored properly? 化學廢物安全存放?				_____
2.8 Is chemical waste disposed of properly? 化學廢物處理恰當?				_____
2.9 Is foam, oil, grease, litter or other objectionable matters in water of nearby 能防止含有化學物的污水排入公共污水渠/雨水渠/河道或其他水體之				_____
2.10 Is a licensed chemical waste collector engaged for removal chemical waste 能定期交由化學廢物收集者處理?				_____

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3 Construction and Demolition Waste 建築及拆卸廢料	Compliance 遵守	Remarks 備註
	Y N N/A	
3.1 Avoid the purchase of products with unnecessary or non-recyclable materials? 盡量避免購買使用不必要或不能再做物料包裝的貨物?	_____	_____
3.2 Is use of water for washing and dust control adequately controlled? 適當控制用水(如清洗或塵埃控制所需的水量)?	_____	_____
3.3 Is used steel being reused when practicable? 能循環再用舊鋼材?	_____	_____
3.4 Are used timbers being reused when practicable? 能循環再用舊木材?	_____	_____
3.5 Are other materials (surplus concrete, damaged construction materials) being re-used where practicable ? 於其他工序循環再用其餘有用物料(如多餘石屎,破裂建築物料等)?	_____	_____
3.6 Is sorting process of public fill from C&D wastes had been done properly on site? 廢物分類能適當運作?	_____	_____
3.7 Is trip-ticket system being followed when necessary? 有需要時能適當使用運載紀錄系統?	_____	_____

Item Rectification from Last Inspection / 上一次檢查之項目糾正

Note 1: Rectified	<input type="checkbox"/>	Outstanding	<input type="checkbox"/>	Remarks	_____
Note 2: Rectified	<input type="checkbox"/>	Outstanding	<input type="checkbox"/>	Remarks	_____
Note 3: Rectified	<input type="checkbox"/>	Outstanding	<input type="checkbox"/>	Remarks	_____
Note 4: Rectified	<input type="checkbox"/>	Outstanding	<input type="checkbox"/>	Remarks	_____
Note 5: Rectified	<input type="checkbox"/>	Outstanding	<input type="checkbox"/>	Remarks	_____
Remarks / 備註					_____

	Project Representative	Inspector
Name	_____	_____
Signature	_____	_____
Position	_____	_____
Date	_____	_____