



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



GUIDELINES ON TRIP TICKET SYSTEM FOR DISPOSAL OF CONSTRUCTION AND DEMOLITION MATERIALS IN PRIVATE SECTOR WORKS

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Preface

The Construction Industry Council (CIC) is committed to seeking continuous improvement in all aspects of the construction industry in Hong Kong. To achieve this aim, the CIC forms Committees, Task Forces and other forums to review specific areas of work with the intention of producing Guidelines, Codes of Practice and Codes of Conduct to assist participants in the industry to strive for excellence.

The CIC appreciates that some improvements and practices can be implemented immediately whilst others may take more time to complete the adjustment. It is for this reason that three separate categories of publication have been adopted, the purpose of which is as follows:

Guidelines	These are intended to guide industry participants to adopt new standards, methodologies or practices. The CIC strongly recommends the adoption of these Guidelines by industry stakeholders where appropriate.
Codes of Practice	The CIC expects all industry participants to adopt the recommendations set out in such Codes as soon as practicable and to adhere to such standards or procedures therein at all times.
Codes of Conduct	The CIC encourages the upholding of professionalism and integrity within the industry through self discipline. The Codes of Conduct set out the relevant principles that all industry participants are expected to follow.

The parties adopting the practices set out in this publication will normally be considered by the CIC in general as adopting good practices (where relevant) on the specific subjects. The parties using this publication should therefore seek appropriate advice from their professional advisers.

If you have attempted to follow this publication, we do urge you to share your feedback with us in order that we can further enhance them for the benefit of all concerned. On this basis the CIC Secretariat is in the process of developing a “feed-back” mechanism, whereby your views can be consolidated for such purposes. With our joint efforts, we believe our construction industry will develop further and will continue to prosper for years to come.

Terminology

In this document, unless the context otherwise requires:

1. "CHIT" Ticket, issued by the Environmental Protection Department, required for disposal of C&D materials at designated waste disposal facilities for the purpose of charging for the disposal
2. "C&D materials" Construction and Demolition Materials
3. "Consultant" Architect or Engineer as specified in the General Conditions of Contract, and the "Consultant's Representative" is construed accordingly
4. "DDF" Disposal Delivery Form as set out at Appendix B.1
5. "DRS" Daily Record Summary as set out at Appendix B.2
6. "Designated Waste Disposal Facilities" Collectively the public fill reception facilities, sorting facilities, outlying islands transfer facilities and landfills
7. "PFC" Public Fill Committee
8. "TTS" Trip Ticket System

1. Background

Since 2005, the Government has implemented the Trip Ticket System (TTS) in all public works contracts to track the disposal of construction and demolition (C&D) materials through the use of the Disposal Delivery Form (DDF). It aims to track the delivery of C&D materials to disposal facilities designated under the contract. The DDFs are registered at the site for compiling delivery records. Arrangement is made with the disposal facilities to collect the DDFs and compile reception records. By comparing the delivery records and the reception records, any instances of C&D materials not having been delivered to the intended destinations can be identified and followed up.

Particular measures have been introduced in the contracts to ensure that the system is properly implemented. For example, the contractor is required to appoint a senior staff member fully responsible for implementing and overseeing the operation of the TTS, and to provide experienced persons to man each site exit to check that every dump truck leaves the site with a CHIT. The site supervision staff of the Consultant spot-check trucks and conduct daily checks on the daily record summary submitted by the contractor against the CHITs issued as well as the reception records. The TTS has proven effective in ensuring proper disposal of C&D materials generated from public works projects.

The Construction Waste Disposal Charging Scheme under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N) came into operation on 1 December 2005. A “CHIT” issued by the Environmental Protection Department is required for disposal of C&D materials for the purpose of charging for the disposal at the designated waste disposal facilities as provided under the Waste Disposal (Designated Waste Disposal Facility) Regulation (Cap. 354L).

To further improve the TTS, additional measures are introduced by the Government through its “Technical Circular (Works) No. 6/2010”. In particular, to streamline the TTS, the DDF is no longer used for disposal of C&D materials at designated waste disposal facilities, namely the public fill reception facilities, sorting facilities, outlying islands transfer facilities and landfills, under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Instead, the CHIT is used to track the disposal of C&D materials at designated waste disposal facilities.

Given the success of the adoption of the TTS in public works to ensure proper disposal of C&D materials, it is considered that the arrangement can be applied also to private sector works.

2. Introduction

The “Guidelines on Trip Ticket System for Disposal of Construction & Demolition Materials in Private Sector Works” (the Guidelines) are aimed at encouraging the adoption of recommended good practices and a trip ticket system to monitor the disposal of construction and demolition materials generated from private sector construction projects.

The Guidelines set out the recommended actions to be taken by the Employer, the Consultant (architect, engineer or any other relevant professional) and the Contractor to track the disposal of construction and demolition materials generated from the construction works.

The Guidelines are prepared with reference to the “Technical Circular (Works) No. 6/2010 – Trip Ticket System for Disposal of Construction & Demolition Materials” prepared by the Development Bureau of the Government of Hong Kong Special Administrative Region.

The Guidelines should be read in conjunction with the Waste Disposal Ordinance and the corresponding Waste Disposal (Charges for Disposal of Construction Waste) Regulation. The Guidelines are applicable to construction works of contract with value of HK\$1 million or above and hence the requirements of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation on construction works of contract with value of HK\$1 million or above shall be followed when using the Guidelines.

General conditions of contracts referred in the Guidelines are the General Conditions of Contracts of the Development Bureau. Users of the Guidelines need to make adjustments appropriate to their own conditions.

3. Arranging for a Disposal Ground by the Consultant

In general, it is recommended that waste disposal facilities for the disposal of C&D materials should be designated in contracts. Disposal of materials for use at recycling facilities or other construction projects proposed by the Contractor is subject to the approval of the Consultant. Disposal of C&D materials on all private land, except private construction projects and recycling facilities approved by the Consultant, is prohibited and may be subject to enforcement/prosecution action.

During the design stage of a construction project which will generate C&D materials it is suggested that the Consultant identify disposal grounds for the project in consultation with the relevant government departments.

a. Disposal ground for inert C&D materials

For all contracts that are expected to generate inert C&D materials (e.g. soil, broken rock, broken concrete, building debris etc.) requiring disposal from the site, it is suggested that the Consultant write to the Public Fill Committee (PFC) through the Secretary of the PFC at Fill Management Division, Civil Engineering and Development Department (CEDD) to request a designated disposal ground for incorporation in the tender documents. The Consultant should approach the PFC regarding the necessary information to be provided.

The PFC will designate public fill reception facilities, if available, for the contract. The PFC will also advise on the corresponding acceptance criteria (e.g. no mixing of construction waste, size of the materials to be less than 250 mm, etc.) for disposal of the C&D materials. The Consultant shall incorporate such designated public fill reception facilities and acceptance criteria in the tender documents.

b. Disposal of non-inert C&D materials

For contracts where the estimated amount of non-inert C&D materials requiring disposal at landfills or outlying islands transfer facilities equals or exceeds 50 m³, it is suggested that the Consultant seek confirmation from the Environmental Protection Department (EPD) as to whether landfills or outlying islands transfer facilities will be available for disposal of such materials. The EPD will designate landfills or outlying islands transfer facilities, if available, for the contract. The Consultant should approach the EPD (attention the Principal Environmental Protection Officer (Waste Facilities) (PEPO(WF)) directly regarding the necessary information to be provided.

The EPD will also advise on the acceptance criteria of the landfills or outlying islands transfer facilities. The Consultant shall specify such criteria in the tender documents.

If the designated waste disposal facilities specified by the relevant Government Departments become unavailable at the time the construction works are being carried out, the Contractor shall dispose of the C&D materials to any other designated waste disposal facilities in accordance with the Waste Disposal Ordinance (Cap. 354).

4. Tracking of Disposal

The purpose of the TTS is to track the disposal of C&D materials to prevent unauthorised disposal. Where tracking the disposal at prescribed facilities is concerned, the data collected by CHIT and DDF (previously adopted in public works contracts) overlap. To streamline the TTS, a CHIT will be accepted in lieu of a DDF for C&D material disposal tracking purposes at the designated waste disposal facilities, while a DDF will continue to be used in cases of disposal at other legitimate disposal grounds. Other legitimate disposal grounds, for which a DDF will continue to be used, include disposal grounds as designated in the Contract or as directed by the Consultant and recycling facilities/construction sites proposed by the Contractor and approved by the Consultant. A sample DDF is attached at **Appendix B.1**.

For disposal at designated waste disposal facilities, a 14-day (or any other period as specified by the EPD) record of the disposal will be posted at the EPD website, normally within three working days after the disposal, to facilitate checking.

These Guidelines also require contractual provisions to be incorporated into the Particular Specification (see Chapter 5) to provide additional safeguards against unauthorised removal of C&D materials from the site, including installation of a video recording system to monitor the vehicular exits/entrances of the site and checking of disposal records provided by disposal grounds against the survey records, if applicable.

5. Preparation of Tender Documents

In general, it is recommended that waste disposal facilities for the disposal of C&D materials should be designated in the Contract (refer to Chapter 3 for details). Disposal of materials for use at recycling facilities or other construction projects proposed by the Contractor is subject to the approval of the Consultant.

The Consultant should incorporate the following provisions in tender documents for construction works that are expected to generate C&D materials.

a. Notes for Tenderers

Include the following note:

“The unauthorised disposal of construction and demolition materials from the Site to any place other than that designated in the Contract or approved or directed by the Consultant is forbidden. The tenderer shall refer to the relevant part of the Particular Specification for detailed requirements on dealing with disposal of C&D materials.”

b. Special Condition of Contract

Incorporate the Special Condition of Contract (SCC) from **Annex A**, which sets out disposal grounds, if applicable.

c. Particular Specification

Incorporate the Particular Specification (PS) from **Annex B**, which sets out the requirement for the Contractor to draw up a site management plan for implementation of the TTS.

d. Particular Preamble to the Method of Measurement

Incorporate the Particular Preamble for civil engineering works from **Annex C**.

e. Bills of Quantities

i. For civil engineering works

In accordance with the Particular Preamble for civil engineering works two new items are to be included in the Bills of Quantities (BQ):

- Complete the site management plan for trip ticket system.
- Implementation of the site management plan for trip ticket system.

ii. For building works

Incorporate the Bills of Quantities for the site management plan for the trip ticket system from **Annex D**.

Preparation of Tender Documents

f. Definition of Site

The definition of "Site" in the General Conditions of Contract Clause 1(1) does not include public fill reception facilities, sorting facilities, outlying islands transfer facilities or landfills. Care should be taken in the preparation of tender documents not to indicate a contrary intention. If it is intended to include designated public fill reception facilities, sorting facilities, outlying islands transfer facilities and/or landfills as part of the Site, that needs to be specifically stated in the Drawings, Particular Specification or elsewhere in the tender documents.

For projects with an Independent Environmental Checker (IEC), the following should be included in the duty lists of the IEC in relevant contract documents or consultancy briefs:

1. The IEC shall check the records of disposal for the different types of C&D materials, including the Daily Record Summary (DRS) maintained by the Contractor, during the monthly environmental auditing. A sample of the DRS is in **Appendix B.2**.
2. The IEC shall also check the disposal records kept by the Consultant, especially the names of the designated public fill reception facilities, sorting facilities, outlying islands transfer facilities, landfills and/or alternative disposal grounds, and the times and dates of disposal.
3. Non-compliance with the trip ticket system observed during the environmental auditing should be properly recorded and promptly brought to the attention of the Consultant and the Contractor for follow-up action.

The Consultant may also consider imposing additional requirements to suit specific project needs as necessary.

g. Notification to PFC and EPD at Contract Commencement and Completion

Subject to the recommendation that waste disposal facilities for the disposal of C&D materials should be designated in the Contract, upon the commencement of the contract, the Consultant should inform the PFC and the EPD at least 2 weeks prior to the commencement of disposal of C&D materials from the site and provide details including contact person(s) such as the Consultant's Representative and his/her (herein and after collectively "his") corresponding telephone number, fax number and email address(es). Should there be any subsequent changes to the information provided, the Consultant should immediately inform the PFC and the EPD. In addition, the Consultant shall copy to the PFC the maintenance certificate or final certificate for the Contract. The maintenance certificate or final certificate should also be copied to the EPD if the Consultant has applied for disposal of C&D materials at landfills or outlying islands transfer facilities to facilitate the efficient operation of the waste disposal facilities by the EPD.

h. Estimate of Quantity of C&D Materials Generated

Subject to the recommendation that waste disposal facilities for the disposal of C&D materials should be designated in the Contract, whenever the Consultant finds that the total quantity of inert C&D materials to be disposed of at public fill reception facilities is likely to be significantly different from the previously submitted estimate the Consultant should report the change to the PFC as soon as possible. Similarly, the EPD should be informed of the change in the quantity of C&D materials which are to be disposed

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of at outlying islands transfer facilities and/or landfills.

j. Duties and Responsibilities of Supervisory Staff in Enforcing the TTS

The duties and responsibilities of the Consultant's Representative and his site supervisory staff (collectively "supervisory staff") in enforcing the TTS are summarised below:

1. The supervisory staff should check that the Contractor [[editor's note: should this be "the Contractor or Contractor's appointed senior staff member" or similar?]] has completed Part 1 of the DRS in duplicate and then signs Part 1 of the DRS before departure of the truck, or to suit site operations at other time to be agreed between the Consultant's Representative and the Contractor.
2. The supervisory staff should keep a copy of the completed Part 1.
3. The supervisory staff should check that the Contractor [[editor's note: see note at 1. above]] has completed Part 2 and submits the entire DRS to the Consultant's Representative within 1 working day after the records are posted at the EPD website.
4. The supervisory staff should conduct daily checks on the DRS records submitted by the Contractor against disposal records available on the EPD website as described in Chapter 4 (or the DDF from other disposal grounds) during the period when surplus C&D materials are generated.
5. For construction works from which the estimated amount of surplus C&D materials to be generated exceeds 5 m³ per day, the supervisory staff should conduct the following checks during the period when C&D materials are being removed from the site:
 - daily spot checks on the Contractor staff manning each exit of the site (or on the Contractor's alternative method of control approved by the Consultant for term contracts, see Clause 6(a)(iii) of the Particular Specification in **Annex B**); and daily spot checks on the trucks carrying C&D materials leaving the site to see if they bear a duly completed CHIT/DDF and whether the Contractor [[editor's note: see note at 1. above]] has completed and signed Part 1 of the DRS before departure of the trucks.
 - surprise checks at least once a month on the disposal activities at the disposal ground proposed by the Contractor.
 - checks of the truckloads of materials removed off site against survey records for excavation/filling for interim payments, if applicable.
6. The Consultant's Representative should also:
 - report to the PFC (using the standard form provided in **Annex E**) any irregularities e.g. a CHIT has been issued but there is no disposal record at the designated disposal ground, or non-compliance with TTS requirements.
 - report irregularities promptly to the relevant authorities for possible regulatory and enforcement/prosecution action. Details of the reporting procedures for unauthorised disposal incidents are given in paragraph k of this Chapter.

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- where an approved alternative disposal ground is used (see clause (3) in **Annex B**), provide the PFC with details of the disposal ground such as the location and nature of the site, disposal programme, etc.
 - take steps to prevent disposal of C&D materials in any unauthorised sites.
7. The Consultant is responsible for overseeing the Contractor's performance in implementing the TTS. In this regard, the Consultant should:
- withhold the appropriate portion of the payment for disposal of the C&D materials until such materials have been delivered to the designated disposal ground to the satisfaction of the Consultant.
 - certify no payment to the Contractor for the BQ item "Implementation of site management plan for trip ticket system" for the month during which there is any improper disposal or non-compliance with TTS requirements under the contract.

k. Reporting of Unauthorised Disposal Incidents

Where the Contractor has disposed of C&D materials at an unauthorised disposal ground, the Consultant's Representative shall report the incident immediately to the relevant authorities (e.g. the EPD, relevant District Lands Office (DLO) and Planning Department) for possible enforcement/prosecution action and copy the report to the PFC (Attention: CE/FM) for information. The relevant e-mail addresses and telephone numbers for reporting of unauthorised disposal incidents are given in **Annex F**. The Consultant's Representative shall instruct the Contractor to take parallel action to arrange removal of the relevant materials and reinstatement of the site.

I. Request for Contractor to Return the Stamped CHIT/DDF

The return of the stamped CHIT/DDF is normally not required. However, under special circumstances where an irregularity is observed or suspected (e.g. a CHIT/DDF has been issued but there is no disposal record at the disposal ground), pursuant to Clause 10(f) in **Annex B**, the Consultant's Representative or his site supervisory staff should ask the Contractor to return the stamped CHIT/DDF. Such a request, if necessary, should be made as soon as possible and in any case within 6 months after the intended date of disposal.

Annex A - Special Condition of Contract

(1) The Contractor shall not dispose of construction and demolition materials generated by the Site at any place other than the disposal grounds designated in the Contract or directed by the Consultant or such alternative disposal grounds as proposed by the Contractor and approved by the Consultant in accordance with Particular Specification Clause [insert clause no.].

Disposal
Grounds

(2) Notwithstanding any other provisions in the Contract, the Consultant's approval or disapproval of any alternative disposal ground proposed by the Contractor shall not in any way relieve the Contractor of any duty or responsibility under the Contract nor entitle the Contractor to any additional payment or extension of time.

(3) In any event the disposal grounds specified by the Consultant being unavailable, the Contractor shall notify the Consultant and dispose of the construction and demolition materials at any other designated waste disposal facilities in accordance with the Waste Disposal Ordinance. No additional payment or extension of time will be granted under such situation.

Annex B - Particular Specification for Trip Ticket System

Disposal of Construction and Demolition Materials

1. The Contractor shall implement a trip ticket system (TTS) for tracking the removal of construction and demolition (C&D) materials from the Site to the disposal grounds. The inert portion of the C&D materials comprising soil, broken rock and concrete, etc. shall be disposed of at [specify public fill reception facilities as advised by the Public Fill Committee and/or other disposal grounds] or other disposal grounds as directed by the Consultant. The non-inert portion of the C&D materials that are not recyclable shall be disposed of at [specify landfills or outlying islands transfer facilities as advised by the EPD].
2. The Contractor shall inform the Consultant of the account number of the billing account for disposal of construction waste under the Waste Disposal (Designated Waste Disposal Facility) Regulation (Cap. 354L). This is to enable the Consultant to check the disposal records posted at the EPD website. The Consultant will provide the account number to the Civil Engineering and Development Department for overall monitoring of the trip ticket system, detecting and taking action to deal with malpractice such as overloading of dump trucks and improper covering of load, and compiling statistics as well as counting eligible trips for mechanical dump truck covered under the pay for safety and environment scheme/ pay for safety scheme.

Alternative Disposal Grounds Proposed by Contractor and Approval Procedures

3. In order to make use of C&D materials generated by the Site, the Contractor shall use his best endeavours to identify recycling facilities or other construction sites where such materials can be used. The Contractor should not propose as an alternative disposal ground a private construction site which is not administered by an authorised person as defined under the Buildings Ordinance (Cap. 123) ("Authorised Person"). Where the Contractor has identified such a recycling facility or a construction site which can be used as an alternative disposal ground, he shall obtain the written approval of the Consultant, who will process the Contractor's request expeditiously. In support of the request for such approval the Contractor shall provide relevant information including:
 - a) a detailed description of the alternative disposal ground, including location, lot number (where appropriate), location plan and photographs of the proposed alternative disposal grounds showing the surrounding environment and land use;
 - b) where the alternative disposal ground is a site for a private development project, a letter from each of the relevant authorities, such as the Agriculture, Fisheries and Conservation Department, to comment on the alternative disposal ground under their respective purview, and a letter from the Authorised Person of the development to confirm :
 - (i) the C&D materials for use in the development is acceptable;
 - (ii) the land/pond filling in the proposed alternative disposal ground and the use of land so formed by the C&D materials are in conformity with the statutory town plan/lease conditions;

- (iii) the Consultant's staff are allowed to enter the alternative ground to conduct inspections where necessary;
- c) where the alternative disposal ground is a private recycling facility, it is on the recyclers' list for C&D materials recognized by the EPD, as well as a letter from the operator to comment on whether the Consultant's staff are allowed to enter the recycling facility to conduct inspections where necessary;
 - d) where the alternative disposal ground is a construction site of Government (other than a government contract quarry), Hong Kong Housing Authority or Mass Transit Railway Corporation, a written consent from the respective owner or its project office of the alternative disposal ground to use the C&D materials generated from the Site;
 - e) where the alternative disposal ground is a government contract quarry, a written consent from the Mines Division of Civil Engineering and Development Department to import the C&D materials generated from the Site;
 - f) the estimated quantity and type of C&D materials to be used in the construction works/recycling and the approximate delivery programme, together with the name, post and specimen signature of the competent person to sign the Disposal Delivery Form (DDF);
 - g) A system for transmitting disposal records from the alternative disposal ground to the Consultant's Representative.
- 4. For illegal dumping of C&D materials or disposal of C&D materials at a disposal ground other than that designated in the Contract or directed or approved by the Consultant and where the disposal ground is within any private land constitutes a major improper disposal (as defined in **Clause 16** of the Particular Specification) for the purposes of assessing the performance of the Contractor, the Contractor may be subject to relevant enforcement/prosecution action.
 - 5. The Contractor's attention is drawn to Special Conditions of Contract Clause SCC [inert no.] on Disposal Grounds.

Site Management Plan for Trip Ticket System Implementation

- 6. The Contractor shall prepare a site management plan for implementation of the TTS for the Contract. The Contractor shall submit within 45 days of the date of the Employer's letter of acceptance of the Tender the site management plan to the Consultant for approval. If the Consultant is of the opinion that the site management plan does not meet the requirements of this Particular Specification, he shall request the Contractor to revise the plan by notice in writing. The Contractor shall then revise the plan and resubmit it within 7 days of the date of the notice. The Contractor shall review the site management plan on a monthly basis. The updated section of the plan (if any) should be submitted to the Consultant for approval. The plan shall include the following details:
 - a) Site organization and staff duties

A site organisation chart shows the manpower resources and duties of each

staff for implementation of the TTS. The Contractor shall:

- (i) appoint a senior staff member (with at least two years experience in site management) fully responsible for implementing and overseeing the operation of the TTS;
- (ii) appoint designated person(s) to fill in and sign Part 1 of the Daily Record Summary (DRS) properly before departure of the truck. A sample of the DRS is given at **Appendix B.2**; and
- (iii) appoint experienced person(s) to man each exit from the Site for the purpose of ensuring that every truck carrying C&D materials leaving the Site bears a duly completed CHIT/DDF. The CHIT shall be used for disposal of C&D materials at a designated waste disposal facility as defined under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). The DDF shall be used for disposal of C&D materials at other disposal grounds as designated in the Contract or as directed by the Consultant, or recycling facilities/construction projects proposed by the Contractor and approved by the Consultant. A sample of the DDF is given in **Appendix B.1**. The person(s) who man the exit(s) shall record the CHIT/DDF no., the vehicle registration no. and the departure time of every truck carrying C&D materials leaving the Site.

b) Disposal programme

The Contractor shall prepare a monthly programme [*or bi-weekly programme as determined by the Consultant*] for disposal of C&D materials off the Site, and indicate the estimated quantities, types of the C&D materials and corresponding disposal grounds. The Contractor shall update the programme on a monthly basis and submit it to the Consultant for information by 15th day of each month or the next working day if it is a public holiday, Sunday or Saturday, or a later date as agreed by the Consultant.

c) Site procedures

The Contractor shall establish site procedures to ensure that each truckload of C&D materials leaving the Site will bear a duly completed CHIT/DDF and that Part 1 of the DRS has been filled in and signed properly before departure of the truck. The Contractor shall also establish a mechanism to ensure timely retrieval of the CHIT/DDF and/or receipt from the disposal grounds where irregularities are observed.

d) Surveillance

The Contractor shall establish a surveillance system within the Site and at any alternative disposal grounds to check that the disposal activities comply with the requirements as set out in the Particular Specification.

e) Recording system

The Contractor shall maintain a comprehensive register of the CHITs/DDFs issued, and make it available for inspection by the Consultant's Representative upon request.

f) Control measures to track internal movement of materials

Where trucks need to exit from and re-enter into the Site for delivery of C&D materials generated by the Site, the Contractor shall devise control measures to ensure that the C&D materials are not disposed of outside the Site in breach of the Contract.

g) Video recording system

The Contractor shall:

- (i) provide, operate and maintain, including all necessary cables, wirings, lightings and other accessories, a video recording system at each vehicular exit/entrance with **gate(s)** installed with the following essential features to record all trucks leaving the Site: The video cameras used in the system shall be of high resolution, lowlight and colour type; power backup shall be provided to cater for accidental breakdown of the power supply to the system; videos captured by the system shall be recorded continuously without break except with the agreement of the Consultant, or in the month during which there is no disposal of C & D materials off the Site for the entire month; videos shall be captured in a format acceptable to the Consultant; the registration number of each vehicle leaving the site shall be recorded; and the loading conditions of dump trucks including empty trucks shall be captured;
- (ii) securely protect the video cameras from being damaged or blocked;
- (iii) design and construct all necessary temporary works, including any supporting frames and protections, for mounting the video cameras and their accessories;
- (iv) provide software and hardware for capturing the vehicle registration number and the time and date, and for the Consultant's immediate viewing and taking a photograph of every truck leaving the Site and viewing the recorded videos.
- (v) keep the videos record for at least 60 days and the photographs until such time as instructed by the Consultant;
- (vi) post sufficient notices at conspicuous positions to notify workers, drivers and staff about the purpose of the video recording system in accordance with data protection principles set out in the Personal Data (Privacy) Ordinance (Cap. 486); and
- (vii) if a video camera system cannot be installed at the exit, propose alternative methods of control to the Consultant, who may accept such proposals if he is satisfied that the proposals are equally effective.

7. Recyclable materials such as metal, paper, plastics and milled bituminous materials etc., which have been sorted on the Site for the purposes of recycling, shall not be considered as C&D materials for the purposes of the Contract. For such sorted recyclable materials, the Contractor shall devise appropriate control measures to ensure that the materials are delivered to a proper recycling outlet for processing.

8. The Contractor shall obtain the approval of the Consultant for the site management plan before disposing any C&D materials from the Site.

Informing the Truck Drivers

9. The Contractor shall write to all truck drivers engaged for removal of C&D materials from the Site and draw their attention to the following particular points:
 - a) Each truck carrying C&D materials leaving the Site for a disposal ground must bear a duly completed CHIT/DDF, irrespective of the location and nature of the disposal ground;
 - b) The C&D materials must be disposed of at the disposal grounds stipulated in the Contract or directed by the Consultant or alternative disposal grounds approved by the Consultant;

General Procedures of the TTS and Record Keeping

10. The procedures for implementation of the TTS are as follows:
 - a) For each truckload of inert and non-inert C&D materials leaving the Site, the Contractor's truck driver must bear a duly completed CHIT/DDF.
 - b) The Contractor shall maintain a daily record of disposal of C&D materials from the Site including CHIT/DDF numbers, vehicle registration numbers, drivers' particulars, approximate volume, C&D materials types, designated disposal grounds, departure time from the Site, actual disposal grounds and arrival time at disposal ground. The Contractor should complete Part 1 of the DRS in duplicate and inform the Consultant's staff before departure of the truck. The Consultant's staff should sign Part 1 of the DRS before departure of the truck, or to suit site operations at other time to be agreed between the Consultant's Representative and the Contractor.
 - c) The truck shall proceed to the disposal ground as stipulated in the Contract or directed by the Consultant or alternative disposal ground approved by the Consultant. The Contractor's truck driver shall present the CHIT/DDF to the operator of the disposal ground. For a designated waste disposal facility, if the C&D materials accord with the acceptance criteria, disposal of the materials will be permitted and the facility operator will give the Contractor's truck driver a Transaction Record Slip and stamp the CHIT.
 - d) For disposal at a designated waste disposal facility, the Contractor shall check the information recorded in the DRS against available information including his own records and data from the EPD website. The Contractor should complete Part 2 of the DRS form for submission to the Consultant's Representative within 1 working day after the records are posted at the EPD website.
 - e) For disposal grounds other than designated waste disposal facilities, the Contractor shall ensure that the DDF is signed off by a competent person as agreed by the Consultant at the disposal ground to confirm completion of each trip. The Contractor shall also maintain a daily record with details of each disposal trip from the Site to the disposal ground. The Contractor should

complete Part 2 of the DRS form for submission to the Consultant's Representative within 3 working days after the date of disposal.

- f) Where an irregularity is observed or where requested by the Consultant's Representative under special circumstances (e.g. a CHIT/DDF has been issued but there is no disposal record at the disposal ground), the Contractor shall submit to the Consultant's Representative within 5 working days after the recorded date of disposal the supporting evidence such as duly stamped CHIT/DDF and/or the Transaction Record Slip (where relevant) to confirm proper completion of the delivery trip in question, or within 2 working days after the Consultant's Representative has requested for such evidence, whichever is later. A fax copy of the CHIT/DDF or Transaction Record Slip is acceptable, unless otherwise directed by the Consultant.

Performance Monitoring

11. The following items shall be included in the agenda for discussion, if any, at every Site Safety and Environmental Management Committee meeting, and Site Safety and Environmental Committee meeting, or other established channels for performance monitoring as agreed by the Consultant's Representative:
 - a) review the site management plan and implementation of the TTS, and identify areas for improvement;
 - b) audit the quantity of C&D materials removed from the Site (based on the DRS and survey records) against the quantities of C&D materials delivered to the disposal ground designated in the Contract (e.g. based on the EPD website) or directed or approved by the Consultant;
 - c) review incidents of non-compliance and discuss the necessary follow-up actions; and
 - d) monitor the follow-up action on defects and deficiencies identified

Removal of C&D Materials from Unauthorised Disposal Grounds

12. Where C&D materials from the Site have been dumped at a place other than that designated in the Contract or directed or approved by the Consultant, the Contractor shall at his own cost undertake the following remedial action:
 - a) remove the dumped C&D materials from the unauthorised disposal ground to a disposal ground designated in the Contract or directed or approved by the Consultant to his satisfaction; and
 - b) reinstate the unauthorised disposal ground to the condition before dumping of the C&D materials, or a condition considered satisfactory by the Authority as required under the relevant legislation where appropriate.
13. Where the unauthorised disposal ground is a private property, the Contractor shall be responsible for obtaining the landowner's consent before removal of the dumped C&D materials.
14. Should the Contractor fail to remove the C&D materials from the unauthorised disposal ground or fail to reinstate the unauthorised disposal ground as set out in

Clause 12 above, the Employer may in accordance with Clause 82 of General Conditions of Contract instruct another contractor to perform the work and the Employer shall be entitled to recover such costs from the Contractor, and may but shall not be bound to deduct such costs either in whole or in part, in accordance with the provisions of Clause 83 of General Conditions of Contract.

Improper Disposal and Major Improper Disposal

15. The following shall constitute an “improper disposal”:
 - a) A Contractor’s truck loaded with C&D materials having left the Site without a CHIT/DDF or the DRS not completed in accordance with this Particular Specification;
 - b) Disposal of C&D materials at a disposal ground other than that designated in the Contract or directed or approved by the Consultant; or
 - c) The Contractor fails or is unable to produce the stamped CHIT/DDF in accordance with **Clause 10(f)** of this Particular Specification.
16. The following shall constitute a “major improper disposal”:
 - a) Illegal dumping of C&D materials; or
 - b) Disposal of C&D materials at a disposal ground other than that designated in the Contract or directed or approved by the Consultant, and where the disposal ground is within any private land. For the purpose of this Clause, “private land” has the same meaning as it has in the Mining Ordinance (Cap. 285).
17. The Contractor shall also note that the Employer takes a very serious view of any non-compliance with TTS requirements. The Contractor’s performance in implementing the TTS will be fully reflected in the report on the Contractor’s performance.

Compliance with the Personal Data (Privacy) Ordinance (Cap. 486)

18. The Contractor shall comply with the provisions of the Personal Data (Privacy) Ordinance (Cap. 486) in relation to personal data collected under the TTS.

Appendix B.1 – Disposal Delivery Form

Sample of the Disposal Delivery Form (DDF) for Disposal of C&D Materials at Disposal Grounds (Other than Designated Waste Disposal Facilities) as Designated in the Contract or Directed by the Consultant, or Alternative Disposal Grounds Proposed by the Contractor and Approved by the Consultant

Serial no. xxxxxxxxxxxx Date of Use: 使用日期: _____	Construction and Demolition Materials Disposal Delivery Form 拆建物料運載記錄票	Serial no. xxxxxxxxxxxx
Disposal Ground : 接收設施: _____	Contract No: 合約編號: _____	Contract Title: 合約名稱: _____
Vehicle Registration Number. : 車牌號碼: _____	Date of Use: Time of departure from site: Vehicle Registration Number: 使用日期: _____ 離開地盤時間 : _____ 車牌號碼: _____	
Issued By: 簽發: _____	Disposal Ground: 接收設施: _____	
(This part retained by Disposal Ground) (此部分由接收設施保留)	Arrival Time/Date: 抵達日期/時間: _____ (This part retained by Contractor/ Driver) (此部分由承建商/司機保留)	
Chop of Disposal Ground 接收設施蓋印	Chop of Disposal Ground 接收設施蓋印	Chop of Consultant's Representative 顧問代表蓋印

Appendix B.2 – Daily Record Summary

“Daily Record Summary” (DRS) to record daily disposal of construction & demolition (C&D) materials from the Site

“運載記錄撮要” 記錄每日由地盤所傾卸的拆建物料

(1) Contract no. & title 合約編號及名稱 : _____

(2) Date of disposal 傾卸日期: _____

(3) Disposal ground (s) designated in the Contract or directed by the Consultant: (a)

(b)

Others 其它

(4) Approved alternative disposal grounds 另可接受的接收設施 _____

CHIT/ DDF no. 載運入 帳票/拆 建物料 運載 記錄票 編號	Vehicle registration number 車輛登記 號碼	Approx. vol (e.g. Full/Three Quarter/ Half/One quarter) 大約承載量(例如 全、3/4、半、1/4)	C&D material type (e.g. inert or non-inert) 建築廢料種類 (例如惰性 或非惰性)	Disposal ground 接收設施	Signature & name of the Contractor's designated person before departure 於離開地盤 前，承建商的 指定人士 姓名及簽名	Departure time from Site 離開地盤 時間	Signature & name of Consultant's staff before departure or other time as agreed between Consultant's Representative and Contractor 於離開地盤前或其他 經承建商與顧問代表 同意的時間，顧問監 管人員姓名及簽名	Actual disposal ground 真正接收 設施	Arrival time at disposal ground 抵達接收設施 時間	Remarks 備註

Part 1¹甲部

Part 2²乙部

Submitted by 呈交 : _____ [Name of Contractor's Designated Person] 承建商的指定人士姓名

Signature 簽名 : _____

Date 日期 : _____

Received by 接收 : _____ [Name and signature of the Consultant's staff] 顧問監管人員姓名及簽名

Post 職位 : _____

Date & Time 日期及時間 : _____

¹ Part 1 甲部- The Contractor shall complete Part 1 in duplicate and a copy should be kept by the Consultant's Representative. 承建商填寫甲部兩份，副本由顧問代表持有

² Part 2 乙部- The Contractor shall complete Part 2 and submit the whole DRS to the Consultant's Representative within 1 working day after the records are posted at the EPD website.

承建商填寫乙部及將整份運載記錄撮要於記錄上載在環境保護署網頁後 1 個工作天內呈交給顧問代表

Annex C - Particular Preamble to Amend the Standard Method of Measurement to Introduce the “Pay for Site Management Plan for Trip Ticket System”

Section (XX) – Site Management Plan for Trip Ticket System

IMPLEMENTATION OF SITE MANAGEMENT PLAN FOR TRIP TICKET SYSTEM

xx.01 Rates appearing in this Section shall be deemed to allow for the value of work in connection with meeting all statutory and contractual obligations in ensuring proper disposal of construction and demolition (C&D) materials generated from the Site to designated disposal grounds under the Contract or other disposal grounds approved or directed by the Consultant, and any other related obligations, liabilities, risks and profit. In the event that the rates are insufficient or where there are any aspects where the methods provided hereunder do not measure any item or exclude the measurement of any item or part thereof, the difference in value shall be deemed to have been included in the rates inserted elsewhere in the Bills of Quantities.

SITE MANAGEMENT PLAN FOR TRIP TICKET SYSTEM

- | | |
|--------------------|--|
| <i>Units</i> | xx.02 The units of measurement shall be : |
| | <ul style="list-style-type: none"> (i) complete site management plan for trip ticket system item. (ii) implementation of site management plan for trip ticket system month. |
| <i>Measurement</i> | xx.03 The item for “complete site management plan for trip ticket system” shall be measured once for the whole Contract when the Consultant approves the site management plan. |
| | xx.04 The measurement of the “implementation of site management plan for trip ticket system” shall be the period of time commencing from the date of approval by the Consultant of the site management plan until all C&D materials have been removed from the Site, or an earlier or later date notified by the Consultant. |
| | xx.05 No measurement shall be made for the “implementation of site management plan for trip ticket system” for any month during which there is any incident of improper disposal or major improper disposal as defined in Particular Specification for Trip Ticket System Clauses [15] & [16], or late submission of the records as required in Particular Specification Clause [10], or there is no disposal of C&D |

materials off the Site during the month.

- Itemisation* xx.06 Separate items shall be provided for the site management plan for the trip ticket system in accordance with General Preambles paragraphs 3 and 4 and the following :

Group	Feature
I	<ol style="list-style-type: none"> 1. Complete site management plan for trip ticket system 2. Implementation of site management plan for trip ticket system
<i>Complete Site Management Plan for Trip Ticket System</i>	<p>xx.07 The item for “complete site management plan for trip ticket system” shall, in accordance with General Preambles paragraph 2, include for :</p> <ol style="list-style-type: none"> a) Prepare the site management plan for trip ticket system to the satisfaction of the Consultant; b) distribute or inform all relevant parties details of the site management plan for trip ticket system; and c) inform truck drivers engaged in the disposal of C&D materials the requirements under the trip ticket system.

- Implementation of Site Management Plan for Trip Ticket System* xx.08 The item for the “implementation of site management plan for trip ticket system” shall, in accordance with General Preambles paragraph 2, include:
- a) review, update and revise the site management plan for trip ticket system taking into account comments made by the Consultant or any other parties;
 - b) assign staff and provide/operate/maintain/remove a video recording system and other necessary facilities/equipment for overseeing and implementation of site management plan for trip ticket system;
 - c) implement measures to ensure that trucks carrying C&D materials from the Site proceed to the disposal grounds designated in the Contract or directed or approved by the Consultant to his satisfaction;

Item Coverage

- a) review, update and revise the site management plan for trip ticket system taking into account comments made by the Consultant or any other parties;
- b) assign staff and provide/operate/maintain/remove a video recording system and other necessary facilities/equipment for overseeing and implementation of site management plan for trip ticket system;
- c) implement measures to ensure that trucks carrying C&D materials from the Site proceed to the disposal grounds designated in the Contract or directed or approved by the Consultant to his satisfaction;

- d) devise and implement appropriate measures to ensure that the sorted recyclable materials, which are sorted on the Site for the purpose of recycling such materials, are delivered to a proper recycling outlet for processing;
- e) compile, submit and maintain disposal records;
- f) investigate and report on incidents of improper disposal and non-compliance with the trip ticket system;
- g) monitor performance of trip ticket system and implement improvement measures;
- h) implement additional measures to control disposal of C&D materials to alternative disposal grounds which the Consultant has approved;
- i) distribute revisions of the site management plan for trip ticket system to all relevant parties including the truck drivers engaged in delivery of C&D materials for disposal; and
- j) other requirements for implementation of the trip ticket system as stipulated in Particular Specification for Trip Ticket System.

Note: The sample is based on the Hong Kong Government Standard Method of Measurement for Civil Engineering Works. For Bill of Quantities based on other standard methods of measurement, appropriate amendments shall be made.

Annex D - Items to be Included in the Bills of Quantities for Site Management Plan for Trip Ticket System

(In accordance with Hong Kong Standard Method of Measurement of Building Works - Fourth Edition issued by The Hong Kong Institute of Surveyors)

[Index Number]. SITE MANAGEMENT PLAN FOR TRIP TICKET SYSTEM

INFORMATION PROVIDED					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
1. Generally						D.1 C & D materials means construction and demolition materials generated from the Site		
CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
Site Management Plan for Trip Ticket System	1. Complete site management plan for trip ticket system		Item		M.1 The item for "complete site management plan for trip ticket system" shall be measured once for the whole Contract when the Consultant approves the site management plan.		C.1 This work is deemed to include: (a) prepare the site management plan for trip ticket system to the satisfaction of the Consultant (b) distribute or inform all relevant parties details of the site management plan for trip ticket system (c) inform truck drivers engaged in the disposal of C&D materials the requirements under the trip ticket system	
	2. Implementation of site		Month		M.2 The measurement of the "implementation of site"		C.2 This work is deemed to include:	

	management for trip ticket system				<p>management plan for trip ticket system" shall be the period of time commencing from the date of approval by the Consultant of the site management plan until all C&D materials have been removed from the Site, or an earlier or later date notified by the Consultant.</p> <p>M.3 No measurement shall be made for the "implementation of site management plan for trip ticket system" for any month during which there is any incident of improper disposal or major improper disposal as defined in Particular Specification for Trip Ticket System Clauses [number] & [number], or late submission of the records as required in Particular Specification Clause [number], or there is no disposal of C&D materials off the Site during the month.</p>		<ul style="list-style-type: none"> (a) review, update and revise the site management plan for trip ticket system taking into account the comments made by the Consultant or any other parties (b) assign staff and provide/operate/maintain /remove video recording system and other necessary facilities/equipment for overseeing and implementation of site management plan for trip ticket system (c) implement measures to ensure that trucks carrying C&D materials from the Site proceed to the disposal grounds designated in the Contract or directed or approved by the Consultant to his satisfaction (d) devise and implement appropriate measures to ensure that the sorted recyclable materials, which are sorted on the Site for the purpose of recycling such materials, are delivered to a proper recycling outlet for processing (e) compile, submit and maintain disposal records (f) investigate and report on 	
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							incidents of improper disposal and non-compliance with the trip ticket system (g) monitor performance of trip ticket system and implement improvement measures (h) implement additional measures to control disposal of C&D materials to alternative disposal grounds which the Consultant has approved (i) distribute revisions of the site management plan for trip ticket system to all relevant parties including the truck drivers engaged in delivery of C&D materials for disposal (j) other requirements for implementation of the trip ticket system as stipulated in Particular Specification clauses for Trip Ticket System	
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Annex E - Report on Irregularity of Disposal of C&D Materials

(To be submitted within 2 weeks after the date of disposal)

To : Secretary, Public Fill Committee,
Civil Engineering and Development Department

Fax : 2714 0113

Contract No. _____

After checking against the “Disposal Records” at the website
[<http://www.epd.gov.hk/epd/misc/cdm/scheme.htm#j.>], I note the following irregularities pertaining to disposal(s) made on _____ :

PART A No. of CHIT/DDF issued : _____

No. of disposals recorded at the “Disposal Records” : _____

PART B CHIT/DDF issued but Disposal Trip not found in the “Disposal Records”

Vehicle Licence Plate No.	Production of evidence (i.e. stamped CHIT/DDF and/or transaction record slip) by the Contractor/truck driver upon request of Consultant’s Representative (please tick the appropriate box).		If ticked “NO”, please give the actual location that the disposal was made.
	“YES”	“NO” (See Note below)	

PART C CHIT/DDF not issued but disposal trip found in the “Disposal Records”

Vehicle Licence Plate No. (in column “REG_Mark” in “Disposal Records” file)	Transaction Reference No. (in column “REF_NO” in “Disposal Records” file)

Remarks (e.g. root cause of the non-compliance and corrective actions taken by the Contractor)

Signature of Consultant’s Representative: _____

Name of Consultant’s Representative: _____

Consultant: _____

Telephone No.: _____ Fax.: _____ Date: _____

Note :

The Consultant is reminded to take follow-up action in case of non-compliance with the trip ticket system in accordance with the Guidelines on Trip Ticket System for Disposal of Construction & Demolition Materials in Private Sector Works. Usually, a “NO” entry in Part B constitutes a non-compliance with the trip ticket system. The Secretary of the Public Fill Committee will only provide a formal reply to the report upon request.

Annex F - Enforcement Authorities for Illegal Disposal of Construction and Demolition Materials

	Enforcement authorities	E-mail	Tel no.
(i)	EPD		
	Customer Services Centre	hq-hotline@epd.gov.hk	2838 3111
(ii)	Relevant DLOs:		
	Hong Kong East	dlohke@landsd.gov.hk	2835 1684
	Hong Kong West & South	dlohks@landsd.gov.hk	2835 1711
	Kowloon East	dloke@landsd.gov.hk	2300 1764
	Kowloon West	dlokw@landsd.gov.hk	2300 1764
	Islands	gendlois@landsd.gov.hk	2852 4265
	North	lnddlon@landsd.gcn.gov.hk	2675 1809
	Sai Kung	gendlorsk@landsd.gov.hk	2791 7019
	Sha Tin	gendlost@landsd.gov.hk	2158 4700
	Tuen Mun	lnddlotm@landsd.gcn.gov.hk	2451 1176
	Tai Po	gendlotp@landsd.gov.hk	2654 1263
	Tsuen Wan & Kwai Tsing	gendlotwkt@landsd.gov.hk	2402 1164
	Yuen Long	gendloyl@landsd.gov.hk	2443 3575
(iii)	PlanD	ceppd@pland.gov.hk	2158 6070