Code of Practice on Handling the Environmental Aspects of Temporary Uses and Open Storage Sites

1. Background

1.1 Temporary uses (including Short Term Tenancy (STT) and Short Term Waiver (STW) cases), and Open Storage (OS) uses, under certain circumstances, can cause pollution complaints or adverse environmental impacts to residents, as described below.

1.2 In a recent STT case, the Ombudsman has stated that "The public interest in securing a reasonably clean, pleasant and comfortable living environment is so important that it ought not to be compromised or overridden lightly by economic concerns. Where use of STT sites may give rise to environmental pollution, the matter should be addressed and abatement measures suitable for the situation adopted." The Ombudsman has also concluded that environmental concerns should be addressed, if justifiable, even when the criteria in the Hong Kong Planning Standards & Guidelines (HKPSG) and the environmental ordinances are not violated.

1.3 Heavy vehicles to and from sites of temporary uses are not actionable under existing ordinances. Even though the traffic noise from vehicles does not exceed the HKPSG criterion, it might still cause noise nuisances to residents and lead to complaints. Noise nuisances, for example, can be due to traffic of heavy vehicles, which can be particularly disturbing during early morning or nighttime hours. The effective solution lies in proper planning for these sites and more environmentally conscientious decision making for these temporary uses.

1.4 The OS use is defined as open storage use comprising activities carried out on a site for which the greater part of the site coverage, generally assumed to be more than 50%, is uncovered and used for storage, repair or breaking other than container-related uses.

1.5 The types of OS uses shown in the left hand column of attached Annex I are mainly based on the OS cases handled previously. As further described below, for OS uses which will likely cause frequent noise nuisances, Lands Department (Lands D) should seriously consider NOT to approve the applications. For others, the environmental nuisances that may arise from these types of OS use could be avoided or alleviated by applying commonly adopted preventive measures such as paving the road with hard surface, providing enclosure for dusty operation, erecting boundary wall, and so forth.

2. Purpose

2.1 In light of the Ombudsman's recommendation, the Environmental Protection Department (EPD) has completed the review of the streamlined arrangement with Lands D on cases of temporary uses and OS uses, and concluded that in view of the limited resources, the most appropriate way to achieve the objective is to revise the Code of Practice (COP) on Open Storage previously prepared for the Black Spot Task Force's use, and to extend it to all

District Land Officers (DLOs), to deal with the granting or renewal of OS uses and temporary uses. If followed, this guideline will provide individual District Lands Officers (DLOs) a consistent approach to these applications without the need to consult EPD on individual cases.

2.2 This COP has provided a set of guidelines on handling the environmental aspects of temporary uses, for Lands D to safeguard and improve general environmental aspects of such cases, hence pre-empting or minimizing future pollution complaints or adverse environmental effects on residents.

2.3 Since OS can be temporary or permanent, this COP has also provided a separate set of guidelines on handling the environmental aspects of OS Sites.

3. New Recommendation by the Ombudsman

3.1 Subsequent to the issuance of the COP by EPD in January 2001, the Ombudsman, after reviewing another STT case in Tung Chung, suggested that EPD should review the COP and consider incorporating other environmental considerations in the COP, in particular those relating to dusty activities.

3.2 This revised COP aims at providing additional guidelines for DLOs to ensure that possible environmental nuisance arising from the proposed land uses are duly considered when processing STT and OS applications.

4. Guideline for Temporary Uses Including STT and STW (see attached Flow Chart 1)

4.1 The applicant for the temporary use should determine whether the proposal is a designated project under the Environmental Impact Assessment Ordinance (EIAO). If positive, the applicant shall follow the statutory procedures under the EIAO. Similarly, when Lands D receives an application for the temporary use, Lands D should also go through the same screening exercise, and, for the designated projects, advise the applicant to follow the statutory procedures under the EIAO.

4.2 If the proposal is not a designated project under the EIAO, Lands D should determine if

(a) (i) the proposal will generate traffic of heavy vehicles; AND

(ii) the subject site boundary is within 100m from the nearest residential building, or part/whole of the subject heavy vehicle traffic is expected to travel along any access road within 50m from the nearest sensitive uses.

OR

(b) (i) the proposal will generate dust nuisance in its operation; AND

(ii) The subject site boundary is within 100m from the nearest sensitive uses.

If conditions of (a) and/or (b) are true, it is environmentally undesirable to allow such nuisances to begin or continue to affect residents, and Lands D should seriously consider NOT to grant or renew the temporary use application.

4.3 If paragraph 4.2 does not apply, the following measures are applicable. First, if the application involves construction works, EPD's Recommended Pollution Control Clauses (RPCC) for Construction Contracts in Annex II should be incorporated in the relevant works contracts. Second, if the temporary use is also a form of open storage, Lands D should incorporate paragraphs 5.5 and 5.6 below.

5. Guideline for Open Storage (see attached Flow Chart 2)

5.1 OS can be permanent or temporary. In either case, the applicant for the OS use should determine whether the proposal is a designated project under the EIAO. If positive, the applicant shall follow the statutory procedures under the EIAO. Similarly, when Lands D receives an application for OS, Lands D should also go through the same screening exercise, and, for the designated projects, advise the applicant to follow the statutory procedures under the EIAO. If the proposal is not a designated project under the EIAO, steps below in paragraphs 5.2 to 5.6 should be taken.

5.2 OS uses which will cause traffic of heavy vehicles are "Vehicles, Earth Moving Equipment & Bulldozer", "Unlicensed Vehicles", "Public Car & Lorry Parks", "Vehicles & Spare Parts", "Vehicle Parks & Tyre Repairing", "Construction Machinery, Vehicle & Car Repairing", "Vehicles for Sale & Car Repairing, Vehicle for Stripping & Dismantling", and "Trucks & Workshops". For OS uses not causing traffic of heavy vehicles, paragraphs 5.4 to 5.6 below are applicable. Among OS uses causing traffic of heavy vehicles, if

(a) the subject site boundary is within 100m from the nearest residential building; or
(b) part/whole of the subject heavy vehicle traffic is expected to travel along any access road within 50m from the nearest residential building.

Lands D should seriously consider NOT to grant or renew the OS application. If both (a) and (b) are not true, paragraphs 5.4 to 5.6 below are applicable.

5.3 OS uses which may cause significant dust nuisance include "Vehicles, Earth Moving Equipment & Bulldozer", "Timber and Wooden Plate", "Wood Parts, Planks, Plastic Materials & Wooden Chicken Cage", "Marble", “Stone bars, Steel Reinforcement & I-bar”, and “Transportation and/or Storage of Dusty Construction Materials”. Among OS uses causing significant dust nuisance, if the subject site boundary is within 100m from the nearest sensitive uses, Lands D should seriously consider NOT to grant or renew the OS

application. Otherwise, paragraphs 5.4 to 5.6 below are applicable. For OS uses not causing significant dust nuisance, paragraphs 5.4 to 5.6 below are applicable.

5.4 If the application involves construction works, EPD's Recommended Pollution Control Clauses (RPCC) for Construction Contracts in Annex II should be incorporated.

5.5 The OS uses shall incorporate the environmental measures for both the design and operation according to Annex I.

5.6 Besides, the OS site users should also observe the statutory requirements under relevant pollution control ordinances.

5.7 Enquiries about the application of this COP should be made to the Regional Assessment Group, Environmental Protection Department (Telephone:28351868, Facsimile:25910558).

Environmental Assessment Division
Environmental Protection Department
August 2005

Annex I Environmental measures for incorporation into open storage sites

Types of Open Storage Uses	Environmental Measures (refer to the notes below)
Vehicles, Earth Moving Equipment & Bulldozer	A(1); N(1);S((1) and S(3).
Unlicensed Vehicles	
Vehicle Parks & Tyre Repairing	
Public Car & Lorry Parks	
Construction Machinery, Vehicle & Car Repairing	A(1), A(3); N(1); S(1); S(3), S(4) & S(5).
Vehicles for Sale & car Repairing, Vehicle for Stripping tripping & Dismantling	
Trucks & Workshops	
Vehicles & Spare Parts	A(1); N(1); S(1), S(3) & S(5).
Electricity Generators & Compressors with Maintenance Work	A(1), A(3); N(1); S(1) & S(3).
Scaffolding Equipment	A(1); N(1); S(1) & S(3).
Forklift Trucks	A(1); S(1) & S(3).
Metal Materials	
Construction Hookers	
Plants & Machineries & Building Materials	A(1), A(2), A(4);S(1) & S(3).
Building Tiles	
Timber & Wooden Plate	A(1), A(2); S(1) & S(3).
Wood Parts, Planks, Plastic Materials & Wooden Chicken Cage	
Marble	
Stone Bars, Steel Reinforcement & I-bar	
Scrap Metal & Steel	A(1); S(1), S(3) & S(5).
Kerosence & Chemical Storage use	A(1), A(5); S(1), S(2), S(3) & S(4).
Transportation and/or Storage of Dusty Construction Materials	A(1), A(2), A(4), N(1)

Notes to Annex I

Air

A(1) The subject site particularly the access area at the site frontage and 5m strip of the area beyond the access gate should be properly paved or hard-surfaced to avoid any fugitive dust impacts due to vehicle movements.

A(2) Dusty operations including cutting, grinding, polishing, loading, unloading or transfer of dusty construction materials, etc, are not permitted at the open area of the subject site as these activities, unless to be carried out in purposely-built enclosures and appropriate dust suppression measures are provided, would have potential environmental impacts on the present and future occupants in the surrounding area.

A(3) Paint-spraying activities are not permitted at the open area of the subject site (in order to avoid aerial impact on the surrounding environment (i.e. dispersing of paint mists from spraying).

A(4) If storage materials would generate dust to the surrounding environment, they should be kept inside enclosures. Otherwise, appropriate dust suppression measures such as water spraying, tarpaulin covering, etc. should be taken to mitigate the dust impact.

A(5) Any organic liquid and fuel should be stored in totally enclosed containers

Sewage

S(1) Sewage discharge from the site should be directed to nearby public sewer. In case of unavailability of public sewer, a septic tank and soakaway pit should be provided.

S(2) Bunds should be provided to contain any spillage of chemical storage and the chemical storage area should be properly hard-paved.

S(3) Measures such as waste minimization, recycling or reuse of effluent should be implemented as far as practicable on the subject site.

S(4) Drainage channels and an oil interceptor should be installed to reduce pollutants from the site run-off.

S(5) Materials stored in the open area which may leak out oil or chemical waste should be placed on the non-slip heavy duty membrane and properly covered with water proofing sheet to avoid any soil contaminations.

Noise

N(1) Noise generating activities should be located away as far as possible from any noise sensitive receivers. In addition, the following measures should be adopted as far as practicable in order to minimize the noise nuisance:-

i. the erection of 2.5m solid boundary wall; and
ii. prohibition of any noisy operations during sensitive hours (i.e.11pm to 7am).

Annex II Recommended Pollution Control Clauses for Construction Contracts

The Recommended Pollution Control Clauses (RPCC) are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. Some modifications may be necessary to suit specific site conditions.

1. GENERAL

1.1 The Contractor shall undertake environmental protection measures to reduce the environmental impacts arising from the execution of the Works. In particular, he shall arrange his method of working to minimise the effects on the air, noise, water quality as well as nuisance of waste within and outside the Site, on transport routes and at the loading, dredging and dumping areas.

1.2 The Contractor shall observe and comply with relevant environmental protection and pollution control ordinances. He shall maintain on site, and provide one copy for the Engineer, with copies of the relevant enacted ordinances and their regulations, which shall include but not be limited to the following :

i. Air Pollution Control Ordinance (Cap 311);
ii. Waste Disposal Ordinance (Cap 354);
iii. Water Pollution control Ordinance (Cap 358);
iv. Noise Control Ordinance (Cap 400);
v. Dumping at Sea Ordinance (Cap 446);
vi. Environmental Impact Assessment Ordinance (Cap 499);
vii. Factories and Industrial Undertakings Ordinance (Cap 59);
viii. Buildings Ordinance (Cap 123);
ix. Buildings Ordinance (Application to New Territories) Ordinance (Cap 123);
x. Public Health and Municipal Services Ordinance (Cap 132);
xi. Public Cleansing and Prevention of Nuisances (Regional Council) By-Laws (Cap 132);
xii. Public Cleansing and Prevention of Nuisances (Urban Council) By-Laws Cap 132);
xiii. Summary Offences Ordinance (Cap 228);
xiv. Merchant Shipping (Oil Pollution) (Hong Kong) Order;
xv. Waste Disposal (Chemical Waste) (General) Regulation;
xvi. Air Pollution Control (Open Burning) Regulation;
xvii. Air Pollution Control (Construction Dust) Regulation;
xviii. Air Pollution Control (Furnaces Ovens and Chimneys) Installation and Alteration Regulation.

1.3 The Contractor shall design, construct, operate and maintain pollution control measures to ensure compliance with the contract provisions as well as the environmental ordinances and their regulations. The Contractor shall also conduct compliance monitoring following a programme as agreed with the Engineer, and submit the monitoring results to the Engineer.

1.4 General mitigation measures shall include, but not be limited to the following :

1. The Contractor shall take every precaution to prevent earth, rock or debris from depositing on public or private rights of way as a result of his operations including any deposits arising from the movement of plant or vehicles. In the event of any earth, rock or debris from construction works being deposited on public or private rights of way then all such earth, rock or debris shall be immediately removed and the affected rights of way restored to their original state by the Contractor to the satisfaction of the Engineer.
2. In the event of any spoil or debris from construction works being deposited on adjacent land or seabed or any silt washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land or seabed and areas restored to their natural state by the Contractor to the satisfaction of the Engineer.

1.5 The Contractor shall make due allowance in his rates and in his programme for the carrying out of the Works in compliance with the environmental protection control requirements under the Contract.

2. WATER POLLUTION COTROL

2.1Water pollution control - general requirements

2.1.1The Contractor shall observe and comply with the Water Pollution Control Ordinance and its subsidiary regulation.

2.1.2The Contractor shall carry out the Works in such a manner as to minimise adverse impacts on the water quality during execution of the works. In particular he shall arrange his method of working to minimise the effects on the water quality within and outside the Site, on the transport routes and at the loading, dredging and dumping areas.

2.1.3The Contractor shall follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in the Professional Persons Environmental Consultative Committee Practice Note (ProPECC PN) 1/94 "Construction Site Drainage" issued by the Director of Environmental Protection. The design of the mitigation measures shall be submitted by the Contractor to the Engineer for approval.

2.2Marine Plant and Equipment

2.2.1Two weeks before commencement of any marine works, the Contractor shall submit to the Engineer for approval the proposed methods of working and the marine plant and equipment to be used.

2.2.2 The marine plant and equipment to be used on the Works shall meet the requirement in Clauses 2.3.1 and 2.3.3 and shall be operated to achieve the water quality requirements. The Contractor shall provide all necessary facilities to the Engineer for inspecting or checking such plant and equipment and shall not use such plant and equipment for the execution of the Works without the agreement of the Engineer. The Engineer may require the Contractor to carry out trials of any plant and equipment to prove their suitability.

2.2.3 After commencement of the Works, if the plant and equipment or work methods are in the opinion of the Engineer causing unacceptable adverse impacts which can be checked against the Technical Memorandum on Effluent Standards issued under the Water Pollution Control Ordinance, then the Engineer may notify the Contractor in writing and the Contractor shall immediately initiate remedial measures so as to halt such deterioration. If the Contractor fails to initiate remedial measures, the Engineer may stop the Works. Where such remedial measures include the use of additional or alternative plant and equipment such plant and equipment shall not be used on the Works until agreed by the Engineer. Where remedial measures include maintenance or modification of previously approved plant and equipment, such plant and equipment shall not be used on the Works until such maintenance or modification is completed and the adequacy of the maintenance or modification is demonstrated to the satisfaction of the Engineer.

2.2.4 The Contractor shall comply with the conditions of dumping permits obtained from the Director of Environmental Protection. The permits shall be prominently displayed in the Chinese and English language on site and also on the dredgers and barges.

2.3 Avoidance of pollution during dredging, transporting and dumping of marine mud

2.3.1 Pollution avoidance measures shall include but not be limited to the following :

a. all equipment shall be designed and maintained to minimise the risk of silt and other contaminants being released into the water column or deposited in locations other than designated location;
b. mechanical grabs shall be designed and maintained to avoid spillage and shall seal tightly while being lifted;
c. where trailing suction hopper dredgers for dredging of marine mud are in use, overflow from the dredger and the operation of lean mixture overboard systems shall not be permitted unless expressly approved by the Engineer in consultation with the Director of Environmental Protection;
d. cutterheads of suction dredgers shall be suitable for the material being excavated and shall be designed to minimise overbreak and sedimentation around the cutter;
e. all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by

turbulence from vessel movement or propeller wash;

f. all pipe leakages shall be repaired promptly and plant shall not be operated with leaking pipes and all pipe leakages shall be repaired promptly;

g. before moving the vessels which are used for transporting dredged materials excess material shall be cleaned from the decks and exposed fittings of vessels and the excess materials shall never be dumped into the sea except at the approved locations;

h. adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action;

i. the Contractor shall monitor all vessels transporting material to ensure that no dumping outside the approved location takes place. The Contractor shall keep and produce logs and other records to demonstrate compliance and that journey times are consistent with designated locations and copies of such records shall be submitted to the Engineer;

j. all bottom dumping vessels shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material;

k. loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water, and vessels shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation; and

l. the Engineer may monitor any or all vessels transporting material to check that no dumping outside the approved location nor loss of material during transportation takes place. The Contractor shall provide all reasonable assistance to the Engineer for this purpose.

2.3.2 The Contractor shall be responsible for obtaining all necessary dumping permits as stipulated in the Works Branch Technical Circular No. 22/92 "Marine Disposal of Dredged Mud." The dredged marine mud shall be deposed of at a disposal site as designated in the dumping permit.

2.3.3 When dredging, transporting and disposing of contaminated marine mud, the Contractor shall implement adequate measures for the avoidance of pollution which shall include but not be limited to the following :

a. dredging of contaminated marine mud shall be undertaken by a suitable grab dredger using closed watertight grab;

b. transport of contaminated marine mud shall be by split barge of not less than 750 m3 capacity, well maintained and capable of rapid opening and discharge at the disposal site;

c. the material shall be placed into the disposal pit by bottom dumping;

d. discharge from split barges shall take place within a radius of 100 metres of centre of the area allocated for the disposal of contaminated marine mud;

e. discharge shall be undertaken rapidly and the hoppers shall then immediately be closed, material adhering to the sides of the hopper shall not be washed out of the hopper and

the hopper shall remain closed until the barge next returns to the disposal site; and

f. the dumping vessel shall be anchored throughout the dumping operation.

2.3.4 The Contractor shall ensure that all marine mud is disposed of at the approved locations. He shall be required to ensure accurate positioning of vessels before discharge and shall be required to submit proposals for accurate position control at disposal sites to the Engineer for approval before commencing dredging and dumping.

2.3.5 The Contractor shall ensure that all unsuitable material is disposed of at the approved landfill or other designated location.

2.3.6 The Contractor shall only employ vessels equipped with automatic self-monitoring devices as specified by the Director of Environmental Protection for disposal operation, and shall co-operate with and facilitate the Director of Environmental Protection to inspect the device and retrieve the record stored in the device on a regular basis.

2.3.7 The Contractor shall provide experienced full time personnel on board all dumping vessels to ensure that appropriate methods to minimise pollution are implemented.

2.4 Protection of Water Quality at Water Intakes

2.4.1 When dredging mud or placing fill in the vicinity of water intakes, the Contractor shall protect the water intake by surrounding it with a suitable silt screen to prevent excessive suspended solids from entering the intake. The silt screen shall be designed to ensure that the concentration of suspended solids entering the intake meets intake user requirements.

2.5 Silt Curtains

2.5.1 If silt curtains shall be used to contain sediment losses during dredging and placing fill, the Contractor shall be responsible for the design, installation and maintenance of the silt curtains to minimize the impacts on the water quality and the protection of water quality at water intakes as described in Clause 2.4.1. The design and specification of the silt curtains shall be submitted by the Contractor to the Engineer for approval.

2.5.2 Silt curtains shall be formed from tough, abrasion resistant, permeable membranes, suitable for the purpose, supported on floating booms in such a way as to ensure that the sediment plume shall be restricted to within the limit of the works area.

2.5.3 The silt curtain shall be formed and installed in such a way that tidal rise and fall are accommodated, with the silt curtains always extend from the surface to the bottom of the water column. The removal and reinstallation of such curtains during typhoon conditions shall be as agreed with the Director of Marine.

2.5.4 The Contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic. Any damage to the silt curtain shall be repaired by the Contractor promptly and the works shall be stopped until the repair is effected to the satisfaction of the Engineer.

2.6 Refuse containment booms and floating refuse

2.6.1 The Contractor shall provide and install refuse containment booms before commencing public dumping to confine the floating debris arising within the site as a result of public dumping. Details of the refuse containment booms shall be submitted to the Engineer for approval before their use on site.

2.6.2 It is expected that public dump material may contain refuse, timber debris, or oil contamination and these shall be removed by the Contractor. The Contractor shall segregate all inert construction waste material suitable for reclamations. All non-inert construction waste material shall be disposed of at a public landfill.

2.6.3 Plastic buoys for the refuse booms will be provided by the Employer. The plastic buoys shall be collected from and returned to the Civil Engineering Department Technical Services Division's Store at North Point after use and cleaning.

2.6.4 The Contractor shall provide adequate sinker blocks and lit marker buoys to ensure that the booms are visible above the water line and securely anchored. The lights on the marker buoys shall be quick flashing yellow light visible all round the horizon at a distance of at least 2 km and details shall be submitted to the Engineer for approval. The maximum spacing between the flashing yellow light shall be 30 metres. The Contractor shall properly maintain and operate the booms to the satisfaction of the Engineer throughout the progress of public dumping of the Site and shall replace the same if necessary when they are under repair or beyond repair.

2.6.5 The Contractor shall deploy sufficient sampans and labour for collecting floating refuse and preventing floating refuse within the Site from drifting into public waters. The frequency of collecting floating refuse shall be as agreed by the Engineer. Floating refuse collected shall be disposed of off Site by the Contractor.

2.6.6 The Contractor shall make due allowance in programming the public dumping for the provision, installation, operation and maintenance of the refuse booms and the regular collection of the floating refuse throughout the progress of the reclamation work.

2.6.7 The Contractor's attention is drawn to the SCC Clause No. ( ) on the Employer's power to carry out the work by person other than the Contractor if the Contractor shall fail to carry out

any work required under this Particular Specification Clause.

2.7Surface Runoff

2.7.1The Contractor shall contain within the Site all surface runoff generated from foundation works, dust control and vehicle washing, etc.

2.8Discharge into sewers and drains

2.8.1The Contractor shall not discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water without the prior written consent of the Engineer in consultation with the Director of Environmental Protection and Director of Water Supplies, who may as a condition of granting his consent require the Contractor to provide, operate and maintain at the Contractor's own expense to the satisfaction of the Engineer suitable works for the treatment and disposal of such trade effluent or foul or contaminated or cooling or hot water. [The design of such treatment works shall be submitted to the Engineer for approval not less than one month before the commencement of the relevant works.]

2.8.2If any office, site canteen or toilet facilities is erected, foul water effluent shall be directed to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means approved by the Engineer.

3. NOISE CONTROL

3.1Noise control - general requirements

3.1.1The Contractor shall observe and comply with the Noise Control Ordinance and its subsidiary regulations.

3.1.2The Contractor shall ensure that all plant and equipment to be used on the Site are properly maintained in good operating condition and noisy construction activities shall be effectively sound-reduced by means of silencers, mufflers, acoustic linings or shields, acoustic sheds or screens or other means, to avoid disturbance to any nearby noise sensitive receivers.

3.1.3For carrying out any construction work other than percussive piling during the time period from 0700 to 1900 hours on any day not being a general holiday (including Sundays), the Contractor shall comply with the following requirements

The noise level measured at 1m from the most affected external facade of the nearby noise

sensitive receivers from the construction works alone during any 30 minute period shall not exceed an equivalent sound level (Leq) of 75dB(A).

The noise level measured at 1m from the most affected external facade of the nearby schools from the construction works alone during any 30 minute period shall not exceed an equivalent sound level (Leq) of 70 dB(A) [65 dB(A) during school examination periods]. The Contractor shall liaise with the schools and/or the Examination Authority to ascertain the exact dates and times of all examination periods during the course of the contract.

Should the limits stated in the above sub-clause(a) and (b) be exceeded, the construction shall stop and shall not re-commence until appropriate measures acceptable to the Engineer that are necessary for compliance have been implemented.

The Contractor shall adopt, where necessary, the use of quiet construction equipment (QCE) and/or shall employ the quietest practicable working methods when carrying out demolition works, and/or road opening works during restricted hours.

Diesel hammers are not to be used for percussive piling works.

Blasting should not be carried out during 7 p.m. to 7 a.m. and any time on a general holiday, including Sunday, to avoid noise impact at sensitive hours.

3.1.4 Before the commencement of any work, the Engineer may require the methods of working, plant equipment and sound-reducing measures to be used on the Site to be made available for trial demonstration inspection and approval to ensure that they are suitable for the project.

3.1.5 The Contractor shall devise, arrange methods of working and carry out the Works in such a manner so as to minimise noise impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.

3.1.6 Notwithstanding the requirements and limitations set out in Clause 3.1.3 above and subject to compliance with Clauses 3.1.2 and 3.1.5 above, the Engineer may upon application in writing by the Contractor, allow the use of equipment and the carrying out of any construction activities for any duration provided that he is satisfied with the application which, in his opinion, is considered to be of absolute necessity and adequate noise insulation has been provided to the schools to be affected, or of emergency nature, and not in contravention with the Noise Control Ordinance in any respect.

3.1.7 The Contractor shall, when necessary, apply for a construction noise permit in accordance with the Noise Control (General) Regulations prior to the commencement of the relevant part(s) of the works, display the permit as required and provide a copy to the Engineer.

3.1.8 Measures that are to be taken to protect adjacent schools and other adjacent noise sensitive receivers, if necessary, shall include, but not be limited to, adequate noise barriers. The barriers shall be of substantial construction and designed to reduce transmission of noise (simple plywood hoarding will not be sufficient). The barriers shall be surmounted with baffle

boxes designed to reduce transmission of noise. The barriers shall be designed to BS 5228(1984). The location and details of the barriers shall be submitted to the Engineer for approval before works commence adjacent to schools and other noise sensitive receivers.

4. AIR POLLUTION CONTROL

4.1 Air pollution control - general requirements

4.1.1 The Contractor shall observe and comply with the Air Pollution Control Ordinance and its subsidiary regulations, particularly the Air Pollution Control (Open Burning) Regulation and Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Smoke) Regulation.

4.1.2 The Contractor shall undertake at all times to prevent dust nuisance and smoke as a result of his activities.

4.1.3 The Contractor shall ensure that there will be adequate water supply/storage for dust suppression.

4.1.4 The Contractor shall devise, arrange methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.

4.1.5 For better smoke control, the Contractor shall not use diesel hammer for percussive piling

4.1.6 Before the commencement of any work, the Engineer may require the methods of working, plant, equipment and air pollution control system to be used on the site to be made available for inspection and approval to ensure that they are suitable for the project.

5. WASTE MANAGEMENT

5.1 General requirements

The Contractor shall observe and comply with the Waste Disposal Ordinance and its subsidiary regulations.

5.2 Waste Minimisation

5.2.1 The Contractor shall submit to the Engineer for approval a waste management plan with

appropriate mitigation measures including the allocation of an area for waste segregation and shall ensure that the day-to-day site operations comply with the approved waste management plan.

5.2.2 The Contractor shall minimise the generation of waste from his work. Avoidance and minimisation of waste generation can be achieved through changing or improving design and practices, careful planning and good site management.

5.2.3 The Contractor shall ensure that different types of wastes are segregated on-site and stored in different containers, skips or stockpiles to facilitate reuse/recycling of waste and, as the last resort, disposal at different outlets as appropriate.

5.2.4 The reuse and recycling of waste shall be practised as far as possible. The recycled materials shall include paper/cardboard, timber and metal etc.

5.2.5 The Contractor shall ensure that Construction and Demolition (C&D) materials are sorted into public fill (inert portion) and C&D waste (non-inert portion). The public fill which comprises soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The C&D waste which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills.

5.2.6 The Contractor shall record the amount of wastes generated, recycled and disposed of (including the disposal sites).

5.2.7 The Contractor shall use a trip ticket system for the disposal of C&D materials to any designated public filling facility and/or landfill.

5.2.8 Training shall be provided for workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recylcing.

5.3 Waste Nuisance Control

5.3.1 The Contractor shall not permit any sewage, waste water or effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any waste matter [or refuse] which is not part of the final product from waste processing plants to be deposited anywhere within the Site [or onto any adjoining land]. He shall arrange removal of such matter from the site [or any building erected or to be erected thereon] in a proper manner to the satisfaction of the Engineer in consultation with the Director of Environmental Protection.

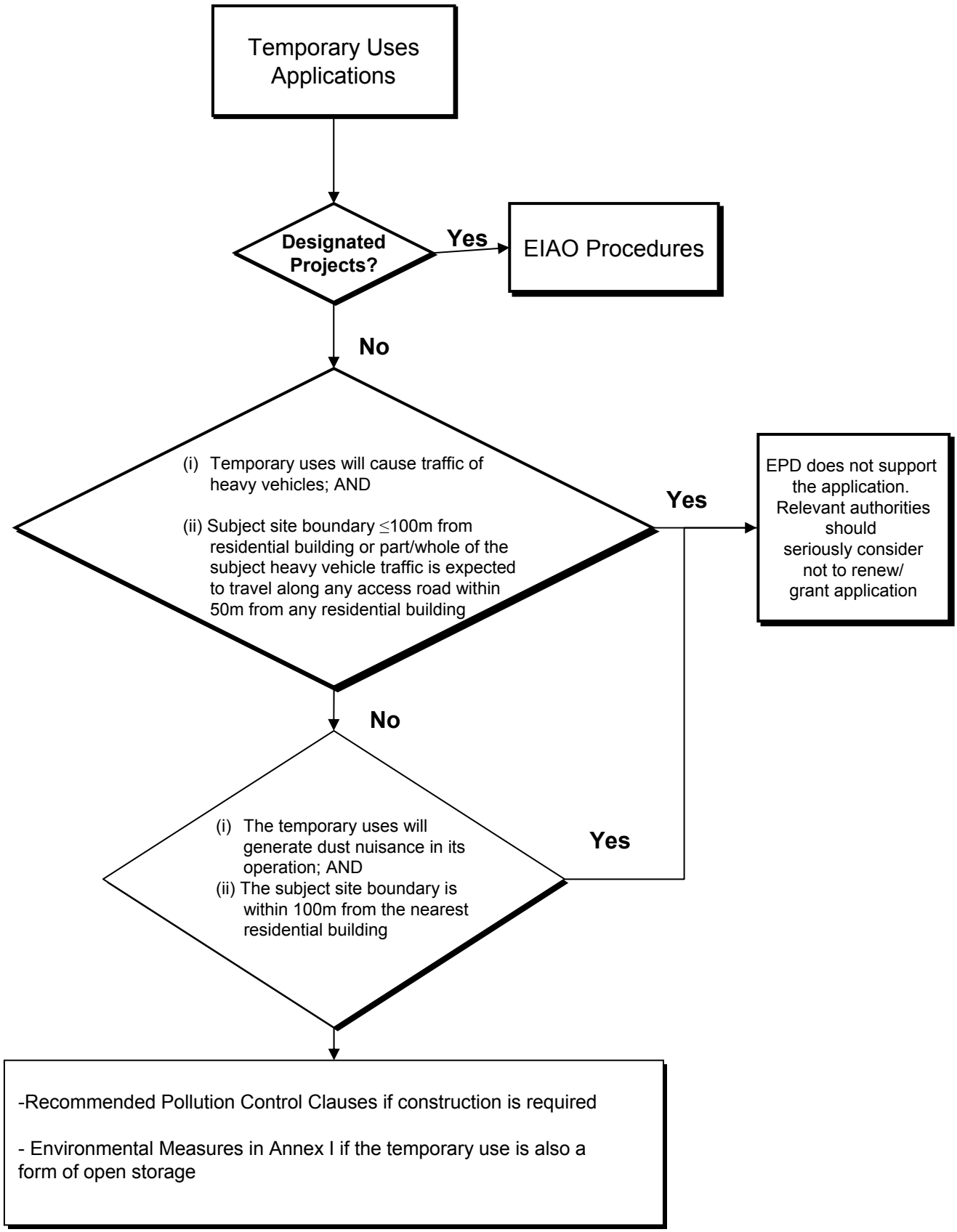
5.4 Chemical Waste Control

5.4.1 The Contractor shall observe and comply with the Waste Disposal (Chemical Waste) (General) Regulation.

5.4.2 The Contractor shall apply for registration as chemical waste producer under the Waste Disposal (Chemical Waste) (General) Regulation when chemical waste is produced. All chemical waste shall be properly stored, labelled, packaged and collected in accordance with the Regulation.

Environmental Assessment Division
Environmental Protection Department
The Government of the Hong Kong Special Administrative Region
27/F, Southorn Centre, 130 Hennessy Road
Wan Chai, Hong Kong
Last updated : July 2005

Flow Chart 1 – Handling of Temporary Uses



Flow Chart 2 – Handling of Open Storage (OS) Sites