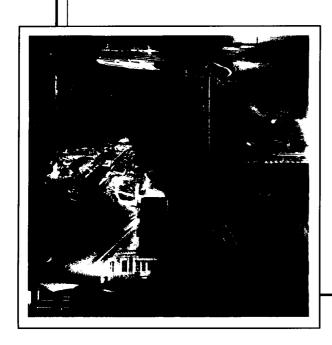
Contents



Proposed 1	heag	Widening	of Hine	Wah	Street -	Project	Profile
Proposed I	Roau	widening	Aurr in	, wan	Bucci	Tioject	

Co	'n	te	n	ts

		Page
SEC	TION 1 – BASIC INFORMATION	1
SEC	TION 2 -OUTLINE OF PLANNING AND IMPLEMNTATION PROGRAMME	3
SEC	TION 3 – PREVIOUSLY PREPARED ENVIRONMENTAL ASSESSMENT REPORTS	4
SEC	TION 4 – MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT	7
SEC'	TION 5 – POSSIBLE IMPACT ON THE ENVIRONMENT	9
5.1	Introduction	9
5.2	Operational Phase	10
5.3	Construction Phase	10
SEC'	TION 6 –ENVORNMENTAL PROTECTION MEASURES AND FURTHER	
ENV	TRONMENTAL IMPLICATIONS	12
6.1	Operational Phase	12
6.2	Construction Phase	13

- Appendix A Fortune Street UC Site Environmental Design Assessment Study, Draft Final Report, November 1996
- Appendix B Environmental Impact Assessment of Road Widening Works at Hing Wah Street Affecting Haking Wong Technical Institute,

 Draft Final Report, July 1998



Project Title

Proposed Road Widening of Hing Wah Street

Purpose and Nature of Project

Road widening and junction improvement works to increase the junction capacities of Hing Wah Street with Cheung Sha Wan Road, Lai Chi Kok Road and Tung Chau Street.

Project Proponent

Highways Department, Government of the HKSAR

Location and Scale of Project and History of Site

Hing Wah Street between Cheung Sha Wan Road and Lai Chi Kok Road is a one-way southbound road whereas Hing Wah Street between Lai Chi Kok Road and Tung Chau Street is a dual one-lane road at present. It is planned to widen it into a dual three-lane carriageway in future to tie in with the West Kowloon Reclamation road network system.

Under the Fortune Street housing development, Fortune Street is to be extended to connect Fat Tsueng Street with Hing Wah Street and a new road to the north of the Fortune Street Housing Site is to be built to connect Fat Tseung Street with Hing Wah Street. Besides, Housing Department will make way for the widening of the portion of Hing Wah Street immediately abutting the Fortune Street Housing Site to facilitate future construction of the road widening.

Owing to the widening of Hing Wah Street between Lai Chi Kok Road and Tung Chau Street cannot be carried out before relocating the existing Cheung Sha Wan Temporary Wholesale Poultry Market to the proposed Cheung Sha Wan Wholesale Food Market Phase II which is scheduled to complete in March 2004, an Interim Layout and a Permanent Layout have been proposed for the Hing Wah Street road widening as shown in Figures 1 and 2 respectively.

To cater for the traffic demand of Fortune Street housing development scheduled to complete by late 2000, Highways Department agreed to implement the Interim Layout for Hing Wah Street road widening subject to the provision of funding from Housing Bureau.

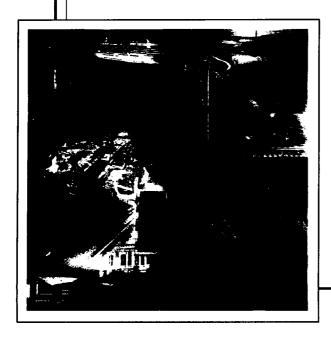
The proposed scope of the project include:

- Road widening of Hing Wah Street between Cheung Sha Wan Road and Lai Chi Kok Road to dual three-lane carriageway (Interim Layout);
- Road widening of Hing Wah Street between Lai Chi Kok Road and Tung Chau Street to dual three-lane carriageway (Permanent Layout);
- Associated junction improvement works at Cheung Sha Wan Road, Lai Chi Kok Road, Tung Chau Street, and other connected local roads;
- Associated construction of central divider and footpath; and
- Associated drainage, lighting, electrical and mechanical works.

Type of Designated Project

The proposed road widening work is considered as a major improvement to an existing district distributor (Hing Wah Street) in accordance with Schedule 1 of the Environmental Impact Assessment Ordinance and is thus classified as a Schedule 2 Designated Project requiring an Environmental Permit before the commencement of work.

Contact



OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

The construction work of the Interim Layout is scheduled to commence in mid 2000 and will last for twelve months. The Interim Layout is scheduled to complete in mid 2001. The construction work of the Permanent Layout is tentatively scheduled to commence in mid 2005 for completion in mid 2006.

Under this project, consultants will be commissioned to carry out the environmental impact assessment and traffic study while contractors will be employed for the construction of the proposed works. Highways Department will undertake the management and supervision of the project.



PREVIOUSLY PREPARED ENVIRONMENTAL ASSESSMENT REPORTS

Two related environmental assessment reports listed below were previously prepared to determine the environmental aspects in relation to the proposed road widening of Hing Wah Street. For easy reference, the two reports are included in Appendices A and B of this Project Profile.

- Fortune Street UC Site, Environmental Design Assessment Study, Draft Final Report, November 1996; and
- Environmental Impact Assessment of Road Widening Works at Hing Wah Street Affecting Haking Wong Technical Institute, Draft Final Report, July 1998

The first report (draft EDA Report) assessed the operational phase traffic noise impacts of the widened Hing Wah Street on the housing development at Fortune Street. The second report (draft HWTI EIA Report) assessed the operational phase and construction phase noise and air quality impacts of the proposed road widening of Hing Wah Street on Haking Wong Technical Institute (HWTI). Haking Wong Technical Institute is the nearest existing sensitive receiver to the widened Hing Wah Street. Seeing that Haking Wong Technical Institute is an educational institution, it is considered more sensitive to environmental impacts among the receivers in the vicinity of the widened Hing Wah Street. Therefore, the draft HWTI EIA Report provided a good indication on the potential environmental impacts of the proposed road widening of Hing Wah Street.





Outline of existing and planned sensitive receivers and sensitive parts of the natural environment which might be affected by the proposed project is presented in Table 4.1 below.

Table 4.1 Outline of Sensitive Uses

Sensitive Use	Remark		
Residential developments	Receiver Nos. 6, 9, 10, 11, 14, 15, 17, 18, 19, 20, 22, 23, 25 & 27 in Table 4.3		
Temporary housing areas	None		
Educational institutions, including schools, kindergartens & nurseries	Receiver Nos. 4, 13 and possibly 20, 21, 23, 24, 25, 26 & 27 in Table 4.3		
Health care facilities, including hospitals, clinics, and homes for the aged	Possibly in Receiver Nos. 20, 21, 23, 24, 25, 26 & 27 in Table 4.3		
Places of worship, including temples, churches, amphitheatre	Possibly in Receivers Nos. 20, 23, 25 & 27 in Table 4.3		
Agricultural areas	None		
Water courses, nullahs and confined bodies of water	None		
Beaches, gazetted or otherwise	None		
Water catchment areas and gathering grounds	None		
Ground-water resources	None		
Marine water resources including those for industrial uses, recreational uses or fisheries activities such as fishing grounds, shellfish harvesting / cultural areas, fish spawning and nursery areas or fish culture zones	None		
Industries which are sensitive to pollution	None		
Airsheds with limited capacity to disperse pollution	None		
Areas of conservation value, including Country Parks, Special Areas, Marine Reserves, Marine Parks, Ramsar Site, Sites of Special Scientific Interest and ecologically significant areas such as woodland, wetland and other wildlife habitats	None anticipated and will confirm with government departments / agencies during EIA study		
Places of high visual value	None anticipated and will confirm with government departments / agencies during EIA study		
Sites of cultural heritage	None anticipated and will confirm with government departments / agencies during EIA study		

Outline of major elements of the surrounding environment and existing and/or relevant past land use(s) on site which might affect the area in which the project is proposed to be located is presented in Table 4.2 below.

Table 4.2 Summary of Major Surrounding Elements and Existing and Past Land Uses

Element	Remark		
Existing pollution blackspots	Industrial area in Cheung Sha Wan to the west of the project site		
Nearby existing and/or discontinued industrial operations	Industrial area in Cheung Sha Wan to the west of the project site		
Nearby trunk roads, and primary or secondary distributors	Cheung Sha Wan Road, Lai Chi Kok Road, and West Kowloon Corridor		
Nearby noisy commercial, community or recreational activities	None		
Aircraft noise, helicopter noise, rail noise	None		
Existing or planned waste handling, treatment and disposal facilities	None		
Potentially hazardous installations	None		
Noisy or dusty open storage uses	None		
Existing and past land uses of the project site and environs	Existing Hing Wah Street and the adjacent footpath, and part of the open area of the existing Cheung Sha Wan Poultry Market. No sign of any existing or historical land contamination.		

It is anticipated that noise and air quality impacts during the construction and operational phases of the project are the major environmental impacts of concern. All the existing and future sensitive receivers located within 300m from the project site which will be subjected to potential noise and air quality impacts of the project are presented in Table 4.3. Locations of the sensitive receivers are shown in Figure 3.

Table 4.3 Summary of Noise and Air Quality Sensitive Receivers

Receiver No.	Name	Туре	Existing / Future	N = Noise sensitive A = Air Sensitive
1	Cheung Sha Wan Temporary Wholesale Poultry Market	Market	Existing	Α
2	Cheung Sha Wan Poultry Market	Market	Existing	Α
3	Government Supplies Department Mainland Headquarters	Office / warehouse	Existing	A
4	Haking Wong Technical Institute	Educational	Existing	N, A
5	Sham Shui Po Sports Ground	Recreational	Existing	A
6	Fortune Street Housing Site	Residential	Future	N, A
7	Trade Square	Commercial	Existing	Α
8	MTR Vent Shaft	Vent shaft	Existing	Α
9	Staff quarters of fire station	Residential	Existing	N, A
10	Residential High-rise on Cheung Sha Wan Road	Residential	Future	N, A
11	Residential blocks on Cheung Sha Wan Road	Residential	Existing	N, A
12	Cheung Sha Wan Indoor Games Hall	Recreational	Existing	А
13	Cheung Sha Wan Catholic Secondary School	Educational	Existing	N, A
14	Residential blocks on Hing Wah Street	Residential	Existing	N, A
15	Un Hong House	Residential	Existing	N, A
16	Football Field next to Un Hong House	Recreational	Existing	A
17	Harmony Blocks of Un Chau Street Estate Redevelopment	Residential	Future	N, A
18	Block 4 of Un Chau Street Estate	Residential	Existing	N, A
19	Planned residential development at the junction of Hing Wah Street and Tung Chau Street	Residential	Future	N, A

Receiver No.	Name	Type	Existing / Future	N = Noise sensitive A = Air Sensitive
20	Planned CDA development at previous Cheung Cha Wan Shipyard site	CDA	Future	N, A
21	Planned G/IC use along Hing Wah Street	G/IC	Future	N, A
22	Planned residential development at the junction of Hing Wah Street and Sham Mong Road	Residential	Future	N, A
23	Planned CDA development at the junction of Hing Wah Street and Sham Mong Road	CDA	Future	N, A
24	Planned G/IC use facing the junction of Hing Wah Street and Tung Chau Street	G/IC	Future	N, A
25	Planned CDA development facing the junction of Hing Wah Street and Tung Chau Street	CDA	Future	N, A
26	Planned G/IC use at the junction of Hing Wah Street and Sham Mong Road	G/IC	Future	N, A
27	Planned CDA development at the junction of Hing Wah Street and Sham Mong Road	CDA	Future	N, A



5.1 <u>Introduction</u>

The environmental impacts or issues that may arise during the construction and operational phases of the project are summarized in Table 5.1 below.

Table 5.1 Summary of Environmental Impacts or Issues

Environmental Impacts or Issues	Remark		
Gaseous emissions	Traffic emissions during operational phase		
Dust	Fugitive dust emissions during construction phase		
Odour	Not anticipated		
Noisy operations	Noise from the use of powered mechanical equipment during construction phase and traffic noise during operational phase		
Night-time operations	Not anticipated		
Traffic generation	Traffic will be increased on the widened Hing Wah Street		
Liquid effluents, discharges, or contaminated runoff	Surface runoff and wastewater from site facilities during construction phase		
Generation of waste or by-products	General construction waste will be generated during the construction phase		
Manufacture, storage, use, handling, transport, or disposal of dangerous goods, hazardous materials or wastes	Possible use during construction phase		
Risk of accidents which would result in pollution or hazard	Not anticipated		
Disposal of spoil material, including potentially contaminated material	Disposal of spoil material during construction phase		
Disruption of water movement or bottom sediment	Not anticipated		
Unsightly visual appearance	Not anticipated		
Ecological impacts	Not anticipated		

As summarized in Table 5.1, the environmental key issues of concern are the traffic noise and traffic emission impacts during the operational phase of the project. Other environmental issues of concern are the construction phase impacts of the proposed road widening works including noise, dust, water quality and solid waste impacts. These environmental impacts are discussed in the following sub-sections.

5.2 Operational Phase

5.2.1 Traffic Noise Impacts

The assessment results of the draft EDA Report and the draft HWTI EIA Report indicate that unmitigated noise level would exceed the HKPSG limit of 70 dB(A) $L_{10(peak\ hour)}$ at the sensitive receivers of Fortune Street Housing Site and 65 dB(A) $L_{10(peak\ hour)}$ at the HWTI. Noise impacts at these sensitive receivers are mainly due to high traffic flow on the widened Hing Wah Street.

5.2.2 Traffic Air Quality Impacts

The assessment results of the draft HWTI EIA Report indicate that the air quality impacts due to traffic emissions from the widened Hing Wah Street and other nearby road network would not cause adverse air quality at the HWTI which is located at less than 10m from the widened section of Hing Wah Street. Worst-case impact is predicted at the G/F of HWTI with highest hourly nitrogen dioxide concentration of 213 µgm⁻³ (about 71% of AQO). Exceedance of the statutory AQOs at other sensitive receivers from traffic emissions due to the road widening is not expected.

5.3 Construction Phase

5.3.1 Construction Noise Impacts

Construction noise impacts are likely to arise from the use of powered mechanical equipment required for the site preparation and road widening works. Under the existing provisions, there is no legal restriction on noise generated by construction activities (other than percussive piling) between the hours of 07:00 and 19:00 on normal weekdays. However, *Annex 5 of the Technical Memorandum on Environmental Impact Assessment Process* stipulated noise standards for daytime construction activities of 75 dB(A) L_{eq(30 min)} at the facades of dwellings, and 70 dB(A) L_{eq(30 min)} at the facades of schools (65 dB(A) during examinations). It is understood that all construction works would be carried out during normal daytime hours (07:00 to 19:00), and would therefore fall outside statutory control by Construction Noise Permit under the Noise Control Ordinance.

The assessment results of the draft HWTI EIA Report indicate that the unmitigated noise level would exceed the TM noise standard at the HWTI at the facades facing the road widening works (from G/F to 4/F). Elevated noise impact is mainly due to the close proximity (less than 10m) of the construction works to the sensitive receivers.

5.3.2 Construction Dust Impacts

The major potential air quality impacts during the construction phase of the project will result from dust arising from various construction activities including road surface breaking, excavation and filling, open site erosion and so on. Vehicle and plant exhaust emissions from the site are not considered to constitute a significant source of air pollutants.

Site preparation and roadworks for this project will generate dust emissions. In particular, the construction works will involve breaking of the existing road surface, widening of road alignment and resurfacing works. However, a typical open cut section is likely to be only 100m long by 10m wide, with a depth of approximately 0.3m. Thus the quantity of the excavated material is unlikely to be large enough to cause a dust nuisance. With proper dust suppression measures, adverse dust impacts due to the construction works of road widening is not expected.

5.3.3 Water Quality Impacts

The construction work of the project will be land based, thus no direct impact on marine water in Victoria Harbour is anticipated. During construction phase, the major water quality impact will be related to surface runoff which could carry out high suspended solids. Wastewater may also be generated from site facilities. With the implementation of standard mitigation measures on construction site drainage, the residual impact should be low.

5.3.4 Solid Waste Impacts

During the construction phases, various types of wastes will be generated including hard and soft spoil derived from site preparation, waste derived from construction materials and processes, general refuse from workforce, and waste generated from plant and equipment maintenance. Nevertheless, in view of the small scale of this project, the quantity of solid waste generated will be small and the associated impacts are not considered to be an insurmountable environmental constraint.



6.1 Operational Phase

6.1.1 Traffic Noise Impacts

Potential Direct Technical Remedy and Indirect Technical Remedy for the traffic noise impacts from the widened Hing Wah Street are recommended in the draft EDA Report and the draft HWTI EIA Report and are summarised below.

With reference to the findings of the draft EDA Report, provision of openable well-gasketted windows of 6mm pane together with air-conditioner is recommended to the two Home Ownership Scheme (HOS) blocks of the Fortune Street Housing Site to mitigate traffic noise impacts. The two HOS blocks are the outmost residential blocks of the Fortune Street Housing Site facing the widened Hing Wah Street. With the recommended noise mitigation measures, exceedance of the HKPSG noise limit at the sensitive receivers of Fortune Street Housing Site is not be expected.

As shown by the results of the draft HWTI EIA Report, mitigation measures will be required to reduce the traffic noise impacts at HWTI. However, in view of the likely land problem arising out of the roadside noise barrier, noise barrier is considered impracticable on the road. Indirect mitigation measures in the form of openable well-gasketted windows are therefore recommended for the affected rooms of HWTI. A recent communication with the Vocational Training Council (VTC) indicates that VTC will be happy to carry out the window improvement work if available funding is provided.

Nevertheless, it is suggested that traffic noise impacts should be assessed at noise sensitive receivers in the vicinity of the widened Hing Wah Street. Details of any mitigation measures should also be further assessed in the EIA of this project.

6.1.2 Traffic Air Quality Impacts

The findings of the draft HWTI EIA Report indicate that there would be no exceedance of the statutory AQOs at HWTI due to traffic emissions after the road widening. Mitigation measures for traffic air quality is therefore not required for HWTI.

HWTI is the nearest sensitive receiver to the widened Hing Wah Street. The predicted worst-case hourly nitrogen dioxide level at HWTI is only 71% of the corresponding AQO with reference to the draft HWTI EIA Report. Therefore, elevated traffic air quality impacts due to the proposed road widening at other sensitive receivers are not expected. However, traffic air quality impact assessment may be carried out for other sensitive receivers in the vicinity of the site to confirm the conclusion.

6.2 Construction Phase

6.2.1 Construction Noise Impacts

In view of the close proximity of the road widening works to the nearby sensitive receivers, in particular HWTI, noise mitigation measures will be required to reduce the construction noise impacts. The use of quieter plant is an effective approach to noise reduction and should be implemented for this project. In order to reduce the noise level further, it is recommended that the contractor should observe the following good site practices:

- Noisy equipment and activities should be sited by the contractor as far from sensitive receivers as is practical. Temporary site offices (and other similar structures) should be located, as far as is possible, such that sensitive receivers are screened from the line of sight of the construction areas.
- Intermittent noisy activities should be scheduled to minimise exposure of nearby sensitive receivers to high levels of construction noise. For example, noisy activities could be scheduled at times coinciding with periods when the HWTI and the Cheung Sha Wan Catholic Secondary School is likely to be unoccupied. Prolonged operation of noisy equipment close to HWTI and the secondary school should be avoided.
- Idle equipment should be turned off or throttled down. Noisy equipment should be properly
 maintained and used no more than is necessary.
- Construction activities should be planned so that parallel operation of several sets of equipment close to a given receiver is avoided.
- Where possible, the numbers of concurrently operating items of plant should be reduced through sensitive programming.
- Construction plant should be properly maintained and operated. Construction equipment often has silencing measures built in or added on, e.g., compressor panels, and mufflers. Silencing measures should be properly maintained and utilised.

6.2.2 <u>Construction Dust Impacts</u>

In order to ensure that dust emission is minimised during the construction phase of the road widening works, relevant dust control requirements set out in Parts III and IV of Schedule 1 of the Air Pollution Control (Construction Dust) Regulation should be met. The site agent is required to adopt dust reduction measures while carrying out construction works. In particular, the mitigation measures listed below should be adopted where applicable. With the implementation of effective dust control measures, adverse dust impacts from the construction works of the project is not expected.

- Use of regular watering to reduce dust emissions from exposed site surfaces.
- Use of frequent watering for particularly dusty static construction areas and areas where construction operations are taking place.
- Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be employed to aggregate fines.

- Tarpaulin covering of all dusty vehicle loads transported to, from, and between site locations.
- Vehicle wheel and body washing should be carried out at the exit points of the site, combined with cleaning of public roads where necessary.
- Instigation of a control program to monitor the construction process in order to enforce controls and to modify methods of work if dusty conditions arise.

6.2.3 Water Quality Impacts

In order to minimise the water quality impacts during the construction phase of the project, practice for dealing with various type of construction discharges provided in EPD's ProPECC Note PN 1/94 Construction Site Drainage should be adopted. Practices relevant to this project are reproduced in the following paragraphs. With the implementation of good construction site drainage practices, the residual impacts should be low.

Surface Runoff

- Surface runoff from construction sites should be discharged into storm drains via separately designated sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept storm runoff from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of earthworks.
- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.
- Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil could not be avoided in these months or at any time of year rainstorm are likely, for the purpose of preventing soil erosion, temporarily exposed soil surfaces should be covered, for example, by tarpaulin. Intercepting channels should be provided to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate protection measures can be safely carried out well before the arrival of rainstorm.
- Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.
- Measures should be taken to minimise the ingress of rainwater into trenches. If excavation
 of trenches in wet seasons is necessary, they should be dug and backfilled in short sections.
 Rainwater pumped out from trenches or foundation excavations should be discharged into
 storm drains via silt removal facilities.

- Open stockpiles of construction materials (for example, aggregates, sand and fill material)
 on sites should be covered with tarpaulin or similar fabric during rainstorms. Measures
 should be taken to prevent the washing away of construction materials, soil, silt or debris
 into any drainage system.
- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm runoff from getting into foul sewers. Discharge of surface runoff into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.

Wheel Washing Water

All vehicles and plant should be cleaned before they leave a construction site to ensure no
earth, mud, debris and the like is deposited by them on roads. A wheel washing facility
should be provided at every site exit if practicable and wash-water should have sand and silt
settled out or removed before discharging into storm drains.

Wastewater from Site Facilities

Sewage from toilets and similar facilities should be discharged into a foul sewer. For sites
where there are only toilet wastes arising, the use of chemical toilets may also be
considered.

6.2.4 Solid Waste Impacts

To minimise the impacts from solid waste, the following points should be taken into consideration:

- Waste generation may be avoided or minimised through refinement of the design and
 construction methods. Wastes materials can be reused or recycled in other construction
 activities and better management practices can be adopted on site to reduce cross
 contamination and promote waste segregation during construction.
- Different types of construction waste generated from the site should be segregated, stored, transported and disposed of separately in accordance with EPD's required procedures. It is important that the sorting of wastes should be done on-site.
- It will be the contractors' responsibility to disposal of excavated spoil and construction wastes. The contractors should make use of excavated spoil as much as possible to minimise off-site fill material requirements and disposal of spoil. During road transportation of excavated spoil, vehicles should be covered to avoid dust impact.
- The storage, transportation and disposal of chemical waste generated, if any, should comply with the Waste Disposal Ordinance and its regulations. Chemical waste should be collected and delivered by licensed contractors to Tsing Yi Chemical Waste Treatment Facility and disposed of in accordance with the Chemical Waste (General) Regulation.

