

6A WASTE MANAGEMENT IMPLICATIONS

Introduction

This section identifies the different types of wastes generated from the project and assesses the potential environmental impacts associated with the handling and disposal of the waste. Where appropriate, procedures for waste reduction and management are considered and environmental control measures for avoiding and minimising the potential impacts are recommended.

Construction Phase

Wastes expected from the construction works include excavated material, construction and demolition material, chemical wastes and general refuse.

Excavated Material

During the construction phase of this development project, the majority of excavated materials will be generated from construction of two separate sections of single lane eastbound underpasses beneath the existing Lei Yue Mun Road/Kai Tin Road roundabout and the new signalized control junction. The excavated material should be reused on site as backfill or for landscaping work as far as practicable. However, due to nature of the project, only limited amounts of excavated materials can be reused on site. Any surplus excavated material should be delivered to reclamation sites or to public filling areas available at that time. The disposal of public fill at public filling areas or reclamation sites is unlikely to raise any long term concerns because of its inert nature. A total of 65,000 m³ of excavated material is expected to generate from the site, of which 30% will be reused, leaving 45,500 m³ to be disposed offsite. Table 6A.1 provides the preliminary estimated quantities of excavated material expected from the construction works and their production schedule.

Table 6A.1 Estimated Quantities of Excavated Material Generated

Construction Period	Quantity (m ³)		
	Generated	Reused	Surplus
2005	9,000	2,700	6,300
2006	30,000	9,000	21,000
2007	26,000	7,800	18,200
Total	65,000	19,500	45,500

The disposal route of excavated material will depend on the final disposal site. Transportation either on land using dump trucks or a combination of land and marine transportation using dump trucks and barges is expected. Nevertheless, the marine mode of transport is preferred as it generated less environmental nuisance.

Designation of areas will be provided for separation and temporary storage of clean excavated materials. These materials will be covered with impervious sheeting to prevent the material from being washed off and airborne so that the environmental impacts from construction runoff and dust nuisance will be avoided. With the implementation of good site practices, waste reduction measures and mitigation measures, the potential environmental impact arising from the handling and disposal of the materials will not be significant.

Construction and Demolition Material

Construction and demolition material (C&DM) will be generated from construction of new road and footbridge, junction modification and road reconstruction works. These wastes can be minimized with the implementation of a good waste management plan. The contractors should incorporate all recommendations of the plan into all construction works. For instance, use of reusable non-timber formwork and temporary works, sorting of the C&DM into various categories and reuse and recycling of the C&DM on site.

With respect to the nature of the construction activities, the C&DM will consist of a mixture of inert (i.e. concrete, tiles, bricks, etc. which are classified as public fill) and non-inert (paper, plastic, wood, etc. which are classified as C&D waste) material. As no major demolition work is expected, the quantities of C&DM is expected to be small. The public fill should be re-used on site, as far as practicable. If on-site use is not practicable, the public fill should be delivered to reclamation sites or to public filling areas available at that time. The disposal of public fill at public filling areas or reclamation sites is unlikely to raise any long term concerns because of its inert nature.

Disposal of C&D waste to strategic landfills will not cause unacceptable environmental impacts. However, given the very limited landfill space which is available, it is important to minimise, wherever possible, the wastes being delivered to landfill. Government policy is not to accept C&D waste with more than 20% (by weight) inert material at landfill sites. Wherever, practical, the production of C&D waste should be minimised.

A trip-ticket system should be established in accordance with Works Bureau Technical Circular No 5/99 to monitor the disposal of C&DM and solid wastes at public filling facilities and landfills, and to control fly-tipping.

Chemical Waste

Small amounts of chemical waste such as oil and lubricant arising from the construction processes will be attributed to use of industrial solvent, generator and mechanical plant. Provided that all these wastes are handled and disposed of in accordance with the Waste Disposal (Chemical Waste) (General) Regulation and the Code of Practice on the Packaging, Labeling and Storage of Chemical Wastes, the potential environmental impacts arising from the handling, storage and disposal of a small amount of chemical waste generated from the construction activities will be negligible.

General Refuse

During the process of construction, small amounts of general refuse generated on site should be stored in litterbins with lids and separately handled from construction and chemical wastes. These wastes should be collected on a daily basis and disposed of at landfills so as to minimize the environmental impacts arising from odor, pests, vermin and other disease vectors.

Operation Phase

The operation of the eastbound underpasses, the road connecting Kai Tin road to the new signalized control junction and the footbridge for pedestrian crossing will not be associated with generation of municipal solid waste, chemical waste and sewage sludge. Therefore, operational waste impacts are not expected.

Conclusions

No significant waste impacts are envisaged provided that the wastes generated from the project are properly handled, recycled as far as possible, and disposed of in accordance with relevant requirements under the Waste Disposal Ordinance and its regulations.