

Environmental Management of Works Sites of Government Projects

Purpose

This paper briefs the Advisory Council on the Environment (ACE) on the environmental management and measures adopted or to be adopted on construction sites of public works projects to ensure contractors comply with the environmental standards and minimize the possible adverse impact on the environment during construction stage.

Background

2. In the past, environmental management on construction sites is mainly governed by the legislative framework, whereby contractors are to abide by the legislation, or liable to face any sanction under the law should there be any contravention.

3. With the increasing expectation from the public, additional measures are introduced to improve the environmental performance of public works construction sites through the promulgation of technical circulars. It is a policy of the Environment, Transport and Works Bureau (ETWB) to ensure that public works projects are delivered in an environmentally responsible manner with minimum nuisance to and adverse impact on the environment during construction.

4. The three major areas for improving the environmental management and performance on site during construction stage are: -

- (a) waste management
- (b) site cleanliness and tidiness
- (c) nuisance abatement (e.g. air, noise and water pollution)

The measures for each area are given in the ensuing paragraphs.

Waste Management

5. Public works contractors have been required since 2001 to take concrete steps to reduce the generation of construction and demolition (C&D) materials on construction sites through the preparation and implementation of a waste management plan (WMP). Due to the critical shortage of public fill and landfill space, additional measures were introduced in May 2003 to enhance waste management on construction sites.

6. In this connection, an enhanced specification has been introduced requiring contractors of public works projects to advise in the WMP details such as: waste management policy, manpower resources, duties and responsibilities, types and estimated quantities of wastes to be generated, measures to minimize wastes, sorting of C&D materials, assignment of a designated area for temporary storage of wastes on site, collection of recyclable materials by specialist contractors, recording of wastes removed from site, etc..

7. To encourage contractors to put more effort on waste management, the then existing framework for the “Pay for Safety Scheme” to monitor and control the contractors’ performance on site safety has been extended to cover *waste* management (and ultimately to *environmental* management) and renamed as “Pay for Safety and Environment Scheme” (the Scheme).

8. To facilitate monitoring and control, the contractor’s effort on waste management will be paid under the Scheme as a pre-priced BQ item provided in the contract on weekly basis subject to the satisfactory performance by the contractor as assessed in inspections jointly conducted by the Employer’s and the contractor’s representatives.

9. If the contractor’s performance is not satisfactory as revealed by the inspections, the contractor concerned, apart from receiving no payment under the respective item, will be warned. Furthermore, repeated non-compliance will be reflected in the contractor’s performance report which will affect his opportunities in future tenders. Detailed procedures and requirements of the regime are given in ETWB’s Technical Circular (Works) No. 15/2003 which can be viewed at ETWB’s website.

10. To control dumping off site, a trip ticket system is in place and implemented in contracts for public works projects under ETWB TCW No. 21/2002 to ensure proper dumping of C&D wastes at approved locations.

Site Cleanliness and Tidiness

11. There is a public concern over rubbish and debris generated by construction activities left to accumulate on or adjacent to construction sites. To address this, contractors are required to carry out “Daily Cleaning” and “Weekly Tidying”, besides the works areas themselves, the public areas on the periphery outside the barriers or hoardings of the sites for all public works contracts awarded after mid 2002. A separate BQ item is provided in the contract for paying the contractor’s effort and to monitor his performance on site cleaning and tidying.

12. After the outbreak of SARS, further measures were introduced to enhance cleanliness and control mosquito breeding on construction sites through the promulgation of ETWB TCW No. 22/2003 in August 2003. Under the technical circular, site supervisory staffs are required to take a proactive approach to advise/instruct contractors on measures to improve cleanliness and control mosquito breeding on construction sites. Poor performance of a contractor despite verbal and written warnings by site supervisory staffs will result automatically in a mandatory “adverse” report on the contractor’s performance. The monitoring and control regime for waste management as mentioned in paragraph 9 above is simultaneously applicable. Furthermore, regulating action will be taken against contractors with repeated convictions on mosquito breeding offences under section 27 of Public Health and Municipal Services Ordinance (Cap. 132).

Environmental Nuisances and Pollution

13. Contractors have a general obligation to abide by the environmental control legislation, including the Air Pollution Control Ordinance, Noise Control Ordinance and Water Pollution Control Ordinance. However, so far, it is up to the contractor to decide how to comply with these Ordinances on construction sites and there is no detailed specification in the contract on abatement of environmental nuisances and pollution to enhance site performance. Under the competitive tendering environment, the contractor has no incentive to provide better equipment or plants for pollution control and nuisance abatement after contract award.

14. To address this, consideration is being given to enhance the specification on the requirements of anti-pollution and nuisance abatement measures to uplift the environmental performance of construction sites. For example, certain operations, such as bore piling, which generate a lot of muddy water during the process, should be properly and sufficiently treated before discharge. To enhance the capability of

contractors catering for wide fluctuations in the effluent generated from the ground, we plan to provide separate BQ items in the contract for provision on wastewater treatment facilities in standardized units, so as to allow the contractor to expand his facilities where necessary to comply with the relevant legislation. Similarly, nuisance abatement measures on noise and air pollution, such as the use of quieter plant and equipment at work, provision of water wagon for dust suppression, paving of ground for vehicular access on site etc. will be specified in the contract where appropriate.

15. The contractors' performance in providing and maintaining the pollution control and nuisance abatement measures will be monitored and controlled through the regime of the "Pay for Safety and Environment Scheme" as mentioned in paragraphs 8 and 9 above. For example, no payment shall be made to the contractor if the discharge of wastewater to drains exceeds the specified limits set by EPD, or if quieter plants and equipment are not used at work, or working outside permissible working hours without noise permits etc.. Furthermore, regulating action will be taken against contractors for repeated convictions on environmental offences on construction sites in accordance with ETWB TCW No. 2/2003.

Advice Sought

16. Members are welcomed to comment and advise on the pollution control and nuisance abatement measures on site during construction stage.

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