

Legislative Council
Subcommittee on Matters Relating to Railways
Special meeting on 6 July 2018

Supplementary information on waste management plan
in respect of the usage of inert excavation materials and construction
waste generated during new railway projects

At the special meeting of the Subcommittee on Matters Relating to Railways on 6 July 2018, in relation to the use of backfill materials at To Kwa Wan Station (“TKW”) under the Shatin to Central Link (“SCL”) project, Members requested the Corporation to provide information about waste management plan on the usage of inert excavation materials and construction waste generated during the construction of new railway projects. Below is the supplementary information for Members’ perusal.

Environmental Impact Assessment

2. During the design and construction of new railway projects including the SCL, any impact on the environment will be carefully examined. We strive to keep the design and construction of railways eco-friendly as far as practicable.
3. Under the Environmental Impact Assessment Ordinance, the Corporation, as the Project Manager, is required to conduct Environmental Impact Assessment (“EIA”) for each railway project. Independent consultants are appointed to carefully assess the possible environmental impacts arising from the construction covering water quality, noise, dust and waste management, and to recommend mitigation measures under the EIA process. All necessary measures will be implemented as far as practicable to minimise the project's impact on the public and the environment. These EIA reports are submitted to the Environmental Protection Department for approval.

Waste management plan of SCL

4. As regards waste management of the SCL project, the EIA report includes information on the estimated quantity and timing for the generation of waste during the construction phase. Suitable measures, including the opportunity for on-site sorting, reusing excavated fill materials, etc, have been incorporated in the construction methodology to minimise the surplus materials to be disposed off-site. The EIA report also mentions that the Contractor should recycle the Construction and Demolition (“C&D”) materials on-site as far as possible. Where practicable, crushed concrete and masonry can be used as fill materials.

5. Besides the EIA report, there are general guidelines within the Corporation which are applicable to its railway projects including the SCL. Fill material shall be obtained from excavation within the site, encouraging the re-use of C&D materials as a good practice. Specifically for SCL, a plan to manage C&D materials is also submitted to and approved by Environmental Protection Department under the Environment Permit of the SCL. Measures are identified to maximise the re-use of C&D materials generated. Inert C&D material may be re-used as backfill material in reinstatement works for the SCL project itself.

6. As seen from the above, the use of excavated materials generated on-site for backfilling is a good practice to be encouraged.

Benefits of using inert materials for backfill

7. As an environmentally-friendly initiative, using inert C&D materials generated on-site reduces the need to dispose of these materials and reduce the amount of new backfill materials required. The amount of C&D material such as broken concrete fragments to be transported to landfills, the pollution generated and occupation of fill bank space can be minimised.

Backfill at TKW Station: eco-friendly and cost-effective

8. In the design of TKW Station, some areas in the lower levels are designed to be backfilled with mass concrete to offset the buoyant force on the station due to the effect of groundwater. During the construction of the station, some inert C&D material including broken concrete fragments are generated. Of the 8,000 cubic metres of space which required backfilling at TKW Station, around 18% of the space was backfilled with broken concrete fragments with the rest being filled by fresh concrete. This is an eco-friendly initiative and achieved cost savings for the SCL.

9. Technically, backfilling of the space concerned did not involve any station structural elements, and thus would not affect the structural integrity or safety of the station.

Conclusion

10. The Corporation will continue to uphold the principle of sustainable development and adopt environmental-friendly measures as far as practicable in taking forward the SCL project.

MTR Corporation

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