

**For information  
4 June 2009**

**Legislative Council Panel on Transport  
Subcommittee on Matters Relating to Railways**

**West Island Line  
Checking of Project Estimate**

**Purpose**

This note explains how the project estimate of the West Island Line (WIL) is checked.

**Checking of Project Estimate**

2. The Railway Development Office of Highways Department commissioned an independent engineering consultant (IEC) under Agreement No. RDO WIL 1/2007 in September 2008 to conduct an independent assessment to check the construction costs, operation & maintenance costs, project management costs, contingency and non-fare revenue of the West Island Line (WIL) project estimated by the MTR Corporation Limited (MTRCL) based on the scheme design developed at that time.

3. In order to identify the major constraints which might affect the construction method and the cost of the project, the IEC started off by thoroughly reviewing the relevant scheme design reports and deliverables from MTRCL's scheme design consultancies for the project.

4. Most of the cost data adopted by the MTRCL in the estimates were based on rates published in the MTR Project Cost Estimating for New Extensions document. The IEC found that the major rates adopted were

within the 3-5% reasonable range of her own independent cost assessment except on a few items. The IEC subsequently submitted the final report in January 2009 with the following major findings:-

- a) The proposed overall reduction to the MTRCL estimate was as follows:

	Items	IEC's proposed reduction
i	Civil and Supply Contracts	2.6%
ii	Building Services	0.3%
iii	System-wide E & M	0.3%
iv	Rolling Stock	0.3%
v	Design Costs	0.7%
vi	Project On-cost	0.6%
	Total ...	4.8%

- b) The major difference under civil and supply contracts was due to the consideration that some items have been over-estimated such as tunnel boring machine and compressed air equipments, instrumentation, removal of obstruction, ground freezing works and maintenance of information technology facilities, etc.
- c) The IEC was of the view that MTRCL has adopted a systematic approach to develop the estimated costs for building services installations.
- d) The IEC was of the view that the cost estimate for system-wide E&M works was, in general, of the right order of magnitude. However, minor reductions were suggested due mainly to the deletion of the unforeseen requirements for the signalling contract.
- e) The IEC considered that the design costs and project on-cost (project management cost) should be reduced marginally by 0.7% & 0.6% respectively.
- f) The IEC considered that the future operation & maintenance costs were, in general, appropriate.
- g) The IEC considered that the non-fare revenue was in order, with a minor suggested increase of 9%.

- h) The IEC concluded that the 13% contingency as proposed by MTRCL was reasonable and appropriate.

5. The IEC proposed in the report that the estimate prepared by the MTRCL should be reduced by 4.8% overall. The IEC & the MTRCL should have been relying upon different assumptions and cost databases and thus a difference in the final figure should be expected. In fact for such a massive project like the WIL, the difference of about 5% should be considered small. Given that MTRCL has to bear the risk of the ceiling for the funding support figure, for such a small difference, it would be unreasonable to force MTRCL to abandon her own professional assessment and accept IEC's assessment instead. Whether the tenderers will be submitting their bids in line with MTRCL's or IEC's assessed rates will be clarified in the forthcoming tendering exercise. This difference in the rates estimation will ultimately be removed, since the claw-back mechanism will be taking the actual award contract prices instead of the estimated prices in the future re-assessment of the funding support figure.

6. The IEC was also aware of the uncertainty of the global economy and the recent fall of material prices. Without knowing that the claw-back mechanism would be introduced, the IEC also suggested that Government should adopt a provisional funding support figure and pay to the MTRCL in stages, i.e. at the end of the detailed design stage, after the tender award of the major contracts and after finalization and completion of the final accounts of all construction contracts. Both staged funding and claw-back mechanism are in fact similar when they are targeted for removing the tendering & escalation risks. The differences after the finalization of the construction contracts will be rectified when all actual costs are known. However, the staged funding will certainly increase the total Government's contribution amount since later payments will necessarily include the interest element. Apart from that, the staged funding will complicate the funding process when the exact amount of staged payment will involve negotiations with the MTRCL on the appropriate

payment amount for the coming year together with the subsequent submission to PWSC/FC.

7. IEC's report contains cost sensitive information and hence is regarded as strictly confidential. One copy of the report has therefore been deposited with the LegCo Secretariat for Members' reference.

8. Members are invited to note the contents of this paper.

**Transport and Housing Bureau**

**June 2009**