

**EIA report on
“South Island Line (East)”
A summary of issues discussed by the EIA Subcommittee
at the meeting on 13 September 2010**

The Environmental Impact Assessment (EIA) Subcommittee discussed the EIA report on “South Island Line (East)” (SIL) at its meeting on 13 September 2010. The issues discussed are summarized below.

Construction noise

2. Some Members were concerned that even with the implementation of mitigation measures, some noise sensitive receivers (NSRs) including locations for educational purposes would still be subject to airborne construction noise exceeding the criteria under the Technical Memorandum on Environmental Impact Assessment Process (TM). The project proponent explained that the EIA study adopted the worst-case scenario. Based on previous experience in railway projects, they were able to liaise closely with relevant parties such as schools and re-schedule the construction activities to avoid the highly sensitive periods such as school examination periods. Moreover, the predicted noise exceedance would be sporadic rather than constant over a period of time.

3. Regarding the Indirect Technical Remedies (ITR), the project proponent explained that these remedies referred to improved glazing and air-conditioning at their initiative as a last resort for NSRs still subject to construction noise impacts exceeding the TM criteria after implementation of mitigation measures. They would liaise closely with affected parties and mitigate the noise at source by cost-effective measures. If there were no other alternatives, they would employ the ITR at their own expenses for affected NSRs, including schools and residential premises.

4. On the mechanism to ensure that ITR could be provided at suitable timing before the commencement of construction works in view of the lead time required, the project proponent explained that they would work closely with the contractors on the use of powered mechanical equipment (PME) and construction methods to achieve better control of noise level at source. The employment of ITR, which would also cause disturbance to the NSRs, might not be required. In case ITR were required, they would provide them prior to the commencement of major construction works.

5. The project proponent quoted the experience of the West Island Line on the implementation of ITR. The contractors were required to carry out noise assessment based on the actual list of PME and construction methods to be used on site before the commencement of construction works. In case the predicted noise level at certain NSR locations still exceeded the criteria despite all efforts made, they would approach the NSRs for offering the ITR. There would be sufficient lead time for putting in place the glazing and air-conditioning installations. Experience showed that the employment of different construction methods and sequencing of works by the contractors could help minimize the noise impacts. For example, the conventional method of hammer technique for installing temporary retaining walls would generally be assumed under the worst-case scenario of the EIA study. However, the contractor would be able to use pressing technique which would be quieter.

6. Some Members noted that paragraph 3.1 of the Executive Summary of the EIA report stated that “the residual construction noise impacts of up to 7 dB(A) are predicted at 11 NSR locations”. However, the tables under section 3.4.1.5 of the EIA report showed that there were a total of 12 NSR locations where exceedance of the noise criteria was predicted.

(Note: The project proponent clarified after the meeting that the total number of NSRs predicted with exceedance should be 12. It should be noted that the number of NSRs predicted with exceedance solely due to the construction of the South Island Line (East) project should be 11 as summarized in Table 3.34 of the EIA report and Section 3.1 of the Executive Summary. The difference was that the exceedance predicted at NSR, Precious Blood Primary School (PBPS), was due to the cumulative impact from Essential Public Infrastructure Works as discussed in Section 3.4.1.6 and with results shown in Table 3.32 of the EIA report.)

7. On the ground-borne construction noise, some Members were concerned about the ground-borne noise impact during night-time as some tunneling works might be carried out 24 hours. The project proponent explained that the EIA study was based on the worst-case scenario. Ground-borne noise exceedance was predicted at two NSRs near Lei Tung. The condition of these two NSRs would be closely monitored and controlled through vibration monitoring during construction which would be conducted outside the EIA perspective. In addition, construction activities to be conducted in restricted hours would require a construction noise permit under the Noise Control Ordinance.

8. On the monitoring of vibration level of tunneling works, the project

proponent explained that monitoring of vibration level was not required under the EIA and high level vibration was not anticipated during the construction works. However, they would monitor the vibration level during the construction works.

9. A Member expressed reservation on the project proponent's approach in providing mitigation measures to reduce noise impacts as he considered that the commitment made by the project proponent had yet to inspire confidence. While the worst-case scenario was adopted in the EIA report, the implementation of mitigation measures had to depend on the actual situation during the construction.

10. Some Members noted that the project proponent highlighted that the EIA study was based on the worst-case scenario but the employment of mitigation measures had to depend on the PME and construction methods used on the site as the actual noise level generated might not reach the worst-case scenario and some mitigation measures might not be required. To address the concern, the project proponent could be required to submit a plan on the construction noise mitigation measures, including ITR, for the NSR locations with EIA predicted exceedance on construction noise impact having regard to the PME and construction methods to be used on site.

11. On the monitoring of parameters during the construction and operational phases in the context of the worst-case scenario assumed in the EIA study, EPD advised that it was a requirement for the project proponents to employ independent environmental checkers to conduct EM&A and submit the reports to EPD in accordance with the EM&A Manuals.

12. On the criteria of noise level for schools, EPD advised that the noise criteria for schools was at 70 dB(A) which was 5 dB(A) lower than that for residential premises.

Operational noise

13. On the use of special trackforms as noise abatement measure for the viaduct section, the project proponent explained that resilient trackforms were used to minimize the amount of energy released into the ground by the friction between train wheels and the rail. Resilient trackforms had been used in some railway projects such as the West Rail. In the Wong Chuk Hang section of SIL, appropriately selected resilient baseplate trackforms would be used which, together with the noise barriers, would be sufficient to achieve noise abatement purpose in meeting the noise criteria for the viaduct section.

14. Regarding the impacts of viaduct section along the Wong Chuk Hang

Nullah, the project proponent explained that with the implementation of mitigation measures, no noise exceedance was predicted during the railway operation of the viaduct on NSRs. In terms of visual impacts, aesthetic design with responsive colour scheme would be adopted for the viaduct.

15. On the predicted noise level in Wong Chuk Hang depot, the project proponent explained that the main source of noise would be the fixed plant noise from machinery which would be fully mitigated to meet relevant standards by proper design, such as by using silencers for ventilation shafts. Moreover, the depot would be operated in an enclosed environment with residential and commercial development on top of the depot. With the adoption of the aforesaid design considerations, no exceedance of noise level was predicted.

Ecological impacts

16. On the habitat compensation of not less than 0.43 ha for permanent loss of woodland in Wong Chuk Hang Nullah and north of Sham Wan Towers near Ap Lei Chau portal, the project proponent confirmed that habitat compensation which would cover the permanent loss of woodland would be implemented in the existing shrubland and grassland areas. Table 4.13 of the EIA report showed the proposed planting schedule for habitat reinstatement or habitat compensation of the woodland. The recommended plant species were based on those recorded in existing woodlands within the assessment area and surrounding areas. Experience in the West Rail showed that larger plots of compensated wetland could achieve a much better performance in terms of habitat reconstruction for wildlife and enhancement of biodiversity. They would avoid fragmentation as far as possible for the woodland compensation under the SIL.

17. On the planting strategy, some Members noted that some valuable species were identified in the degraded site and suggested that these species be preserved and planted in the compensated habitat. Moreover, more fruit-bearing species could be planted in the compensated habitat to attract more wildlife and enhance biodiversity.

18. On the loss of roosting habitat for some common birds such as ardeid, the project proponent explained that the compensatory planting at the lower course of Wong Chuk Hang Nullah would be provided after completion of construction works. The result of an extensive review on roosting patterns of the ardeid for over one year concluded that they would return to the roosting habitat.

19. On the possibility of providing the compensatory planting before the

construction works to minimize impacts on the ardeids, AFCD advised that the Wong Chuk Hang Nullah was a night roosting site, rather than nesting site, mainly for the wintering population. Studies showed that the roosting population varied significantly throughout the year. Shifting of location of roosting sites could occur naturally. The ardeids should have sufficient alternative night roosting sites along the Nullah and the neighbouring areas during the construction period.

20. On the possibility of further enhancing the tree planting ratio to compensate for the tree loss, the project proponent explained that the planting ratio of at least 1:1 in terms of quantity and quality was in compliance with the relevant Technical Circular. With limited available areas, increasing the number of trees would reduce the distance between them and thus affect their chance of survival and growth.

(Note: On the distance between the trees, the project proponent provided information after the meeting that approximately 2,000 new trees were proposed to be planted in general roadside and planting areas adjacent to proposed stations and above ground structures and within reinstated public open spaces and a combination of semi-mature to standard sized stock would be utilized (as discussed in Section 6.7.5 of the EIA report). These new tree planting might not be evenly spaced due to different planting theme along the alignment and the exact location and spacing of these tree planting which was subject to compensatory planting plans of the tree removal applications to be approved by relevant authorities. As a general guideline, planting distance for landscape planting on flat area was recommended to be about 3 to 5 m. As for whip planting on gentle slope, a planting distance of about 1.5 m was recommended. As regards the compensatory plantation at the lower course of the Wong Chuk Hang Nullah for the loss of ardeid night roost, the planting distance was recommended to be about 3 m.)

Air quality

21. On the possible emission of black smoke and obnoxious smell from PME in view of the close proximity of some work sites to residential blocks, the project proponent explained that they would closely monitor the work sites and PME used by the contractors. The contractors would be required to maintain the PME in good conditions. Response to this kind of complaints could normally be handled within 72 hours. Moreover, the contractors would also be required to use ultra low sulphur diesel as the fuel for all diesel fuelled construction plant.

Ventilation shafts

22. Some Members noted concerns of local residents over the potential environmental impacts of ventilation shafts. The project proponent explained that monitoring data demonstrated that exhaust from ventilation shafts had no adverse air quality impacts. In terms of design, efforts would be made to maximize the distance of the shafts from residents and institutions, minimize the size of the shafts and their noise impacts. However, the shafts had to be located in close proximity to the station. There was continuous dialogue with relevant parties to enhance communication. From their contacts with local residents, the concern was more a perception problem. To clarify their doubts, discussions as well as visits to existing ventilation shafts were conducted. Efforts would continue to be made to enhance communication.

23. On the possibility of beautifying the ventilation shafts to enhance visual impacts, the project proponent explained that attention would be paid to the design of the shafts with a view to minimizing their size and greening them as far as possible. There were examples of integrating the shafts with the station entrances to disguise their presence or designing them as a piece of art work or functional elements such as a clock tower. Some Members considered that greening the shafts and beautifying them with colourful flowers or plants would help much in changing the perception of local residents on the adverse impacts of the shafts.

Barging point

24. Some Members noted concerns over the potential environmental impacts related to the barging point at Telegraph Bay. The project proponent explained that a number of possible barging point locations had been considered and there were extensive discussions with parties concerned. One of the key considerations in the selection of barging point location was the possibility of using existing facilities as far as possible to minimize disturbance to the seabed and foreshore. There were three barging points for the SIL project for transporting construction and demolition materials from and to different locations in order to release the burden on only one barging point. Before deciding the barging point at Telegraph Bay, consideration had been given to other alternative locations, such as Aberdeen Typhoon Shelter and Tai Shu Wan, but they were considered not suitable due to technical or safety reasons. The barging point at Telegraph Bay was an existing facility. They were addressing the concerns of local residents in planning the routing and scheduling of the trucks.

Public involvement

25. On the setting up of community liaison groups to enhance communication and trust with the community, the project proponent explained that extensive public consultation was launched since the early planning and design stage of the project, including consultation on the feasibility study and two-stage consultation during preliminary design. Public consultation programme, including public forums, meetings with residents and regular briefings at District Council meetings, was on-going. Moreover, they had volunteered a simplified version of EIA on the website to enhance transparency and communication. Experience showed that it was beneficial to have in-depth public consultation at an early stage. There would be liaison meetings with affected parties throughout the construction phase.

Conclusion

26. After discussion, Members agreed to recommend to the full Council that the EIA report could be endorsed with some proposed conditions. The meeting also agreed that there was no need to invite the project proponent to attend the full Council meeting.