

Appendix M

Investigation Report for Exceedances

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Investigation Report of Environmental Quality Exceedance(s)

Ref. No.: W140207_SS

Date	7 February 2014
Time	--
Monitoring Location	I5
Parameter	Suspended Solids
Action / Limit Levels	<p>Action Level: 42.6 mg/L or 120% of upstream control station's SS of the same day (i.e. 6.6mg/L)</p> <p>Limit Level: 46.8 mg/L or 130% of upstream control station's SS of the same day (i.e. 7.2mg/L)</p>
Measured Level	<p>9mg/L</p> <p>(Limit level being exceeded - 130% of C3a)</p>
Possible reason for the exceedance	<p>Construction within proximity of the river channel is listed as follows:</p> <p><u>Box Culvert ID4</u> (refer to attached photos)</p> <ul style="list-style-type: none"> - Removal of formworks of outfall <p><u>Box Culvert ID5</u> (refer to attached photos)</p> <ul style="list-style-type: none"> - Backfilling Bays 2 and 3 <p>Construction works at the river stream are properly enclosed by a bund to avoid site runoff. No spillage is identified. (refer to attached photos)</p> <p>Muddy water observed at upstream of C3b during sampling. (refer to attached photos)</p> <p>For comparison, suspended solids levels at C3a and C3b on 7 February 2014 are 5.5mg/L and 4.5mg/L respectively. The results are very low when comparing against the baseline monitoring where the suspended level can be as high as 51mg/L and 88mg/L at C3a and at C3b respectively. Also, recorded suspended solids level at I5 has not exceeded the maximum recorded level of 47mg/L during baseline monitoring and significantly below the absolute action level of 42.6mg/L.</p> <p>As 9mg/L is considered low level, and proper mitigations were fully implemented as a preventive measure to ensure no adverse water quality impact to the river environment, it is unlikely that the</p>

	<p>construction works activities would be the possible sources and reasons of contamination.</p> <p>It is therefore considered that elevation of suspended solids would be due to natural fluctuation.</p>
Action taken / to be taken	<p>As the non-compliance was non-project related, no further investigation and remedial measure(s) would be required.</p> <p>Nonetheless, contractor has been reminded to closely monitor the mitigation measures and ensure no site-runoff into the river channel.</p>
Remarks	-

Construction works at ID4 (7 February 2014)



Construction works at ID5 (7 February 2014)



The construction works are properly protected with sand bags. (Date: 7 February 2014)



Muddy water observed at upstream of C3b. (Date: 7 February 2014)



Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Investigation Report of Environmental Quality Exceedance(s)

Ref. No.: A140222_24TSP

Date	22 February 2014
Time	--
Monitoring Location	SR77
Parameter	24-Hr Total Suspended Particulate
Action / Limit Levels	Action Level: 170.3µg/m ³ Limit Level: 260µg/m ³
Measured Level	185.1µg/m ³ (Action level being exceeded)
Possible reason for the exceedance	<p>It was noticed that there were construction works being undertaken by another Contractor (under Contract No. TP/2010/02) which occurred immediately next to the High Volume Sampler (HVS) of the air quality monitoring station at SR77 (refer to the attached photo).</p> <p>Such works mainly involved excavation of earth materials, operation of excavator (with exhaust emission), handling and moving of earth materials, etc. These construction works are anticipated to cause considerable suspended particulates impact that may lead to high TSP levels as have been measured by our HVS.</p> <p>The construction works are anticipated to be completed by the end of April 2014.</p> <p>Also, the HVS is located close to roadside. When there is traffic, the vehicles may cause disturbance to the nearby open excavation sites, generate dust impact and affect the TSP results recorded by the HVS.</p> <p>On the other hand, the construction works carried out during the monitoring period included backfilling works being carried out at northern side of the site and extension of box culverts, which were at a much farther distance from the air quality monitoring station at SR77 (refer to the attached location plan showing the works activities of the entrusted portion).</p> <p>As such, the exceedance was unlikely due to the construction works of the project.</p>

Action taken / to be taken	<p>As the exceedance was non-project related, no further investigation and specific remedial measure(s) would be recommended for the Entrusted Works.</p> <p>Nevertheless, the following mitigation measures had been implemented on-site for dust suppression:</p> <ol style="list-style-type: none"> 1. Exposed slopes near the river were covered with impervious sheets; 2. Any open stockpile of construction materials were covered with impervious sheet; 3. Sufficient watering was applied along the haul road.
Remarks	-

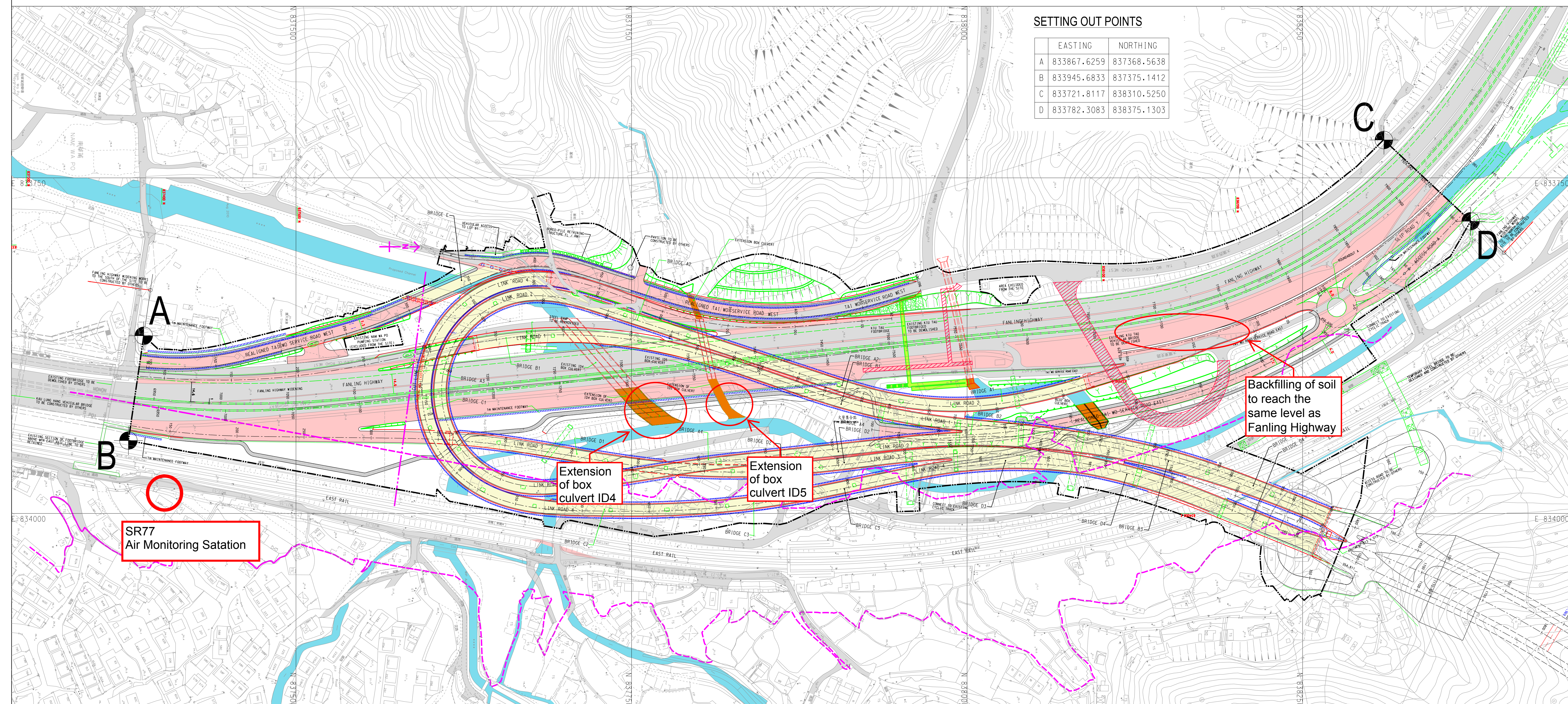
Construction works observed within close proximity of SR77 (Date: 22 February 2014)





俊和建築工程有限公司

	EASTING	NORTHING
A	833867.6259	837368.5638
B	833945.6833	837375.1412
C	833721.8117	838310.5250
D	833782.3083	838375.1303



Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Investigation Report of Environmental Quality Exceedance(s)

Ref. No.: A140228_24TSP

Date	28 February 2014
Time	--
Monitoring Location	SR77
Parameter	24-Hr Total Suspended Particulate
Action / Limit Levels	Action Level: 170.3µg/m ³ Limit Level: 260µg/m ³
Measured Level	221.5µg/m ³ (Action level being exceeded)
Possible reason for the exceedance	<p>It was noticed that there were construction works being undertaken by another Contractor (under Contract No. TP/2010/02) which occurred immediately next to the High Volume Sampler (HVS) of the air quality monitoring station at SR77 (refer to the attached photo).</p> <p>Such works mainly involved excavation of earth materials, operation of excavator (with exhaust emission), handling and moving of earth materials, etc. These construction works are anticipated to cause considerable suspended particulates impact that may lead to high TSP levels as have been measured by our HVS.</p> <p>The construction works are anticipated to be completed by the end of April 2014.</p> <p>Also, the HVS is located close to roadside. When there is traffic, the vehicles may cause disturbance to the nearby open excavation sites, generate dust impact and affect the TSP results recorded by the HVS.</p> <p>On the other hand, the construction works carried out during the monitoring period included backfilling works being carried out at northern side of the site and extension of box culverts, which were at a much farther distance from the air quality monitoring station at SR77 (refer to the attached location plan showing the works activities of the entrusted portion).</p> <p>As such, the exceedance was unlikely due to the construction works of the project.</p>

Action taken / to be taken	<p>As the exceedance was non-project related, no further investigation and specific remedial measure(s) would be recommended for the Entrusted Works.</p> <p>Nevertheless, the following mitigation measures had been implemented on-site for dust suppression:</p> <ol style="list-style-type: none"> 1. Exposed slopes near the river were covered with impervious sheets; 2. Any open stockpile of construction materials were covered with impervious sheet; 3. Sufficient watering was applied along the haul road.
Remarks	-

Construction works observed within close proximity of SR77 (Date: 28 February 2014)





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A	833867.6259	837368.5638
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D	833782.3083	838375.1303

