

## ***Appendix 18.1***

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### ***Key Assessment Assumptions and Methodologies***

## Appendix 18.1

## Key Assessment Assumptions and Methodologies

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities													
			EIA Study Brief Clause Reference	Relevant Documentation												
Air Quality Impact																
Construction Phase																
<p>The major potential air quality impact during the construction phase of the project will be dust arising from haul road emissions, open site erosion, excavation and filling activities. Civil works related to the demolition of existing structures and construction of infrastructure will also cause emissions. The concurrent works for the SCL, CKR, Road T2 project and Anderson Projects have also been taken into account in assessing the impacts.</p> <p>Quantitative assessment was conducted for determination of construction dust impact due to the Project. Fugitive Dust Model (FDM) (1993 version) was adopted to assess potential dust impact from the construction works. The 1-hour and 24-hour average TSP concentrations at representative discrete ASRs in the vicinity of the construction sites were predicted. The assessment level for ASRs were at 1.5m above ground.</p>	<p>Dusty construction activities and programme were based on information provided by the Engineer. Two scenarios which represent the worst case scenarios over the whole construction period of the Project were identified for assessment.</p> <p>As a conservative assessment approach, heavy construction emission rate was adopted for all types of construction activities in the assessment.</p> <table><tr><th>Construction Activities</th><th>Emission Rate (g/m<sup>2</sup>/s)</th><th>Remark</th></tr><tr><td>All construction work</td><td>E = 1.49684E-05</td><td><ul style="list-style-type: none"><li>- 50% of works area with active dust emitting construction activities</li><li>- 87.5% reduction by water suppression (watering eight times a day)</li><li>- USEPA AP-42 5<sup>th</sup> ED., S.13.2.3.3</li></ul></td></tr><tr><td>Barging point serving the Development at Anderson Road Project</td><td>E = 2.04236E-05</td><td><ul style="list-style-type: none"><li>- USEPA AP-42 5<sup>th</sup> ED., S. 13.2.4</li><li>- Information for emission rate calculation was provided by Anderson Road Project Engineer</li><li>- 75% reduction by water suppression for each unloading</li></ul></td></tr><tr><td>Wind Erosion for all construction work (including barge point)</td><td>E = 1.34767E-06</td><td><ul style="list-style-type: none"><li>- 50% of works area with active construction activities</li><li>- AP-42 5<sup>th</sup> ED., S.11.9 Table 11.9.4</li></ul></td></tr></table>	Construction Activities	Emission Rate (g/m <sup>2</sup> /s)	Remark	All construction work	E = 1.49684E-05	<ul style="list-style-type: none"><li>- 50% of works area with active dust emitting construction activities</li><li>- 87.5% reduction by water suppression (watering eight times a day)</li><li>- USEPA AP-42 5<sup>th</sup> ED., S.13.2.3.3</li></ul>	Barging point serving the Development at Anderson Road Project	E = 2.04236E-05	<ul style="list-style-type: none"><li>- USEPA AP-42 5<sup>th</sup> ED., S. 13.2.4</li><li>- Information for emission rate calculation was provided by Anderson Road Project Engineer</li><li>- 75% reduction by water suppression for each unloading</li></ul>	Wind Erosion for all construction work (including barge point)	E = 1.34767E-06	<ul style="list-style-type: none"><li>- 50% of works area with active construction activities</li><li>- AP-42 5<sup>th</sup> ED., S.11.9 Table 11.9.4</li></ul>	<p>Project still in planning stage. It is difficult to obtain the detail information for estimation of emission rates of different dusty construction activities, heavy construction emission rate which is higher emission rate was therefore adopted in the model run. The predicted dust concentrations at the ASRs may be higher than the actual situation.</p>	<p>S3.4.5.2 S3.4.5.3 (i) S3.4.5.3 (vi) (a) S3.4.5.3 (iii) (b)</p>	<p>N/A</p> <p>The assessment was accordance with Appendices B-1 to B-3 of EIA Study Brief</p> <p>The assumption for construction dust assessment was agreed with Project Proponent.</p>
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<p>The emission rates for different construction activities considered in the model were based on the USEPA Compilation of Air Pollutant Emission Factors (AP-42), 5<sup>th</sup> edition.</p>	<p>Agreed with the Project Proponent, 50% of work area would be active during construction and the working period at the construction site would be 12 hours per day and 26 working days per month. These two assumptions have been considered in the assessment. Wind erosion of open sites (i.e. 50% of work area) was assumed to take place over the whole day in the model.</p> <p>The requirement of the Air Pollution Control (Construction Dust) Regulation such as watering with complete coverage of active construction area eight times a day was considered in the assessment and 87.5% reduction of dust emission was assumed in the model with the implementation of this dust suppression measure in accordance with USEPA guideline.</p> <p>One year sequential meteorological data for the year 2006 from the South East Kowloon Weather Station were used to predict the 1-hour and 24-hour average TSP concentrations.</p> <p>The background pollutant values adopted for this assessment are derived based on EPD's "Guideline on Assessing the 'TOTAL' Air Quality Impacts". The annual average concentrations of the pollutants measured at EPD's Sham Shui Po and Kwun Tong air quality monitoring stations in the latest five years (Year 2002 to 2006) are adopted as the background air quality as their locations are within and adjacent to the Project area. As most of the monitoring data in Year 2002 at Kwun Tong air quality station was missing, therefore the data of Year 2002 recorded at this station has not been taken into account in the calculation of background concentration. The five years TSP average monitoring data recorded at EPD's Kwun Tong and Sham Shui Po</p>			

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	air quality monitoring stations are 78 g/m <sup>3</sup> and 79 g/m <sup>3</sup> respectively. For this assessment, 79 g/m <sup>3</sup> was taken as the TSP background concentration.			
Operational Phase (Vehicle Emission include open road and ventilation building)				
<p>Vehicular Emission Impact (open road sections) from the Project including open road emission and portal emissions, planned deckovers was assessed.</p> <p>HK-EMFAC Model was adopted to calculate the fleet average emission factors.</p> <p>Portal emissions were modelled in accordance with “Permanent International Association of Road Congress Report (PIAR, 1991).</p> <p>The cumulative air pollutant concentrations at ASRs were predicted using CALINE4 model and ISCST3 model. the predicted values from the CALINE4 and the ISCST3 models are added together with the background pollutant concentrations.</p> <p>The conversion factor from NO<sub>x</sub> to NO<sub>2</sub> for all roads and portal emissions of tunnels and ventilation building was based on the Ambient Ratio Method (assuming 20% of NO<sub>x</sub> to be NO<sub>2</sub>)</p>	<p>Traffic forecast Year 2031, the peak hour traffic flow within 15 years after operation of the Project, was adopted for assessment; the highest vehicle emission factors for different vehicle classes, Year 2016, were used in the model run.</p> <p>Meteorological conditions assumed in the CALINE4 model:</p> <ul style="list-style-type: none"> <li>• Wind speed : 1 m s<sup>-1</sup></li> <li>• Wind direction: 360 wind directions</li> <li>• Resolution: 1°</li> <li>• Wind variability : 24°</li> <li>• Stability class : D</li> <li>• Surface roughness : 1 m</li> <li>• Mixing height : 500 m</li> </ul> <p>A conversion factor of 0.4 was used to convert the 1-hour average concentrations to 24-hour average concentrations with reference to the “Screening Procedures for Estimating the Air Quality Impact of Stationary Source (EPA-454/R-92-019).”</p> <p><u>Emission from ventilation buildings</u></p> <p>As there is no detailed information for the proposed Road T2 &amp; CKR at the time of carrying out of this EIA, the following ventilation design was adopted for this study. On the KTD side, it is assumed that the 40% traffic emission from Road T2 Tunnel westbound would be expelled from the portal and another 60% would be</p>	<p>The highest traffic forecast year and the highest vehicle emission factor year were adopted in the model run. A very worst case scenario was considered in the assessment and may overestimate the vehicle emission impact (open road).</p>	<p>3.4.5.3 (v) (b) 3.4.5.3 (v) (c) S3.4.5.3 (vi) (a)</p>	<p>Acceptance memo was obtained from EPD (see Annex 18.1)</p> <p>The forecast traffic flow and speed fraction for year 2031 with 16 vehicle classes have been submitted to the Transport Department (TD) and received no objection from TD for using the forecasted traffic flow for the EIA.</p> <p>Annex 18.1 shown all the related documents.</p>

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<p>which is one acceptable approach as stipulated in EPD “Guidelines on Choice of Models and Model Parameters”.</p> <p>Secondary air quality impacts arising from implementation of roadside noise barriers/semi-enclosures were also incorporated in the air quality model.</p>	<p>extracted and discharged at the northern vent shaft of Road T2 Tunnel. On the southern portal side (Kwun Tong side), it is also assumed that 50% of the traffic emissions from Road T2 Tunnel eastbound would be expelled from the portal and another 50% emission would be extracted and discharged at the southern vent shaft of Road T2 Tunnel next to the Tunnel Administration Building.</p> <p>For the proposed CKR, the assumption of ventilation design was made reference to the approved SEKDCFS EIA Report. It has been assumed that all the tunnel emissions would be exhausted from the vent shafts and there would be no portal emission at the KTD exit. 50% of the total tunnel emission would be emitted from the East Vent Building in KTD. Letter from HyD (Ref. (6FU4) in HMW 461TH/1/7/7 dated 19 Feb 2008) mentioned no detailed ventilation information for CKR.</p> <p>For the emissions of Kai Tak Tunnel Ventilation Building, 50% of the traffic emissions from the tunnel would be expelled from the portal and 50% of the tunnel emissions would be extracted and discharged at the vent shaft of Kai Tak Tunnel Ventilation Building.</p> <p>One year sequential meteorological data for the year 2006 from the South East Kowloon Weather Station was adopted.</p> <p>The background pollutant values adopted for this assessment are derived based on EPD’s “Guideline on Assessing the ‘TOTAL’ Air Quality Impacts”. The annual average concentrations of the pollutants measured at EPD’s Sham Shui Po and Kwun Tong air quality monitoring stations in the latest five years (Year 2002 to 2006) are adopted as the background air quality as their locations are within and adjacent to the Project area. As most of the monitoring data in Year 2002 at Kwun Tong air quality station was missing, therefore the data of Year 2002 recorded at this station has not been</p>			

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	taken into account in the calculation of background concentration. For the purpose of this assessment, RSP, NO <sub>2</sub> and SO <sub>2</sub> concentration of 57, 67 and 24 g/m <sup>3</sup> respectively are taken as background concentration for the operational phase assessment.			
Operational Phase (In tunnel)				
<p><i>Air Quality inside Road L1 Tunnel and Deckover at Road D2</i></p> <p>The air quality under the Road L1 tunnel and deckover at Road D2 was calculated based on the empirical formulas of fluid dynamics. Two scenarios were considered for the deckover, i.e. normal traffic flow condition and congested traffic flow condition. The assessment results should achieve the EPD recommended standard of 1ppm NO<sub>2</sub> concentration</p>	Two scenarios were assessed, it was assumed that under normal traffic flow condition, the vehicles are at a speed of 50 kph, whereas under congested mode, the separation between vehicles is assumed to be 1 m.	There is no any structure wall between the Road D2. The air quality under the planned deckover would be mixed but not fully mixed due to large separate distance between the roads. However, the predicted air quality under the proposed deckover may be overestimated.	3.4.5.3 (v) (c)	N/A No ventilation system in Road L1 tunnel and Deckover at Road D2
Operational Phase (Cruise Emission)				
The Industrial Source Complex Short Term (ISCST3) dispersion model was used to predict the chimney emissions.	For the purpose of this assessment, berthing include all the manoeuvring motions of the cruise vessel from the navigation channel to near the cruise terminal (for a period of 15 minutes), final manoeuvring around the berth (for a period of 15 minutes) and 30 minutes hotelling before connecting to / after disconnecting from the on-shore power supply if required. It is assumed that the berthing of two cruise vessels will not happen concurrently. Based on the vessel track simulation results, the entire manoeuvring motions of cruise vessels between the navigation channel and the berth would be completed within 30 minutes including the necessary turn and berth motions. Besides, with reference to a	<p>An auxiliary load of 9.5MW for Panamax, Post-Panamax and Super Post-Panamax cruise vessels during hotelling was adopted for the air quality impact assessment as a reasonable and conservative estimate.</p> <p>A number of sensitivity tests to evaluate the worst case scenario. A worst case scenario was considered in the assessment.</p>	S3.4.5.2 S3.4.5.3 (i) S3.4.5.3 (vi) (a)	N/A The assessment was accordance with Appendices B-1 to B-3 of EIA Study Brief.

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	<p>literature “Going Cold Iron in Alaska, R.Maddison &amp; D.H. Smith”, connecting to on-shore power supply for vessels equipped with cold-ironing would normally be completed within 30 minutes.</p> <p>The emission rate estimation is based on Current Methodologies and Best Practices in Preparing Port Emission Inventories, Final Report, January 2006 prepared by ICF Consulting for USEPA and applied the correction factor of 1.41 for average 3.8% fuel oil sulphur content in Hong Kong.</p> <p>The emission rate estimation is based on the auxiliary engine power of cruise ship is estimated to be 9.5MW / 0.64 or equal to 14.8MW and applied the correction factor of 1.41 for average 3.8% fuel oil sulphur content in Hong Kong.</p> <p>In this assessment, it is also assumed that the cruise vessel will be assisted by two tug boats during the 30 minutes berthing in or berthing out motions. The emission rates of the tug boats were also estimated in accordance with the Current Methodologies and Best Practices in Preparing Port Emission Inventories, Final Report based on average engine power (1532kW) and load factor for tug boats (31%).</p>			
Operational Phase ( <i>Emission from typhoon shelter</i> )				
The Industrial Source Complex Short Term (ISCST3) dispersion model was used to predict the chimney emissions.	The loading/unloading are the major activities within typhoon shelters. Based on the site observation, around 40 & 20 barges were parking within Kwun Tong Typhoon Shelter and To Kwa Wan Typhoon Shelter, respectively. Around 20 barges have loading / unloading activities at Kwun Tong Typhoon Shelter. For those barges parked in the To Kwa Wan Typhoon Shelter, it was observed no loading / unloading activities and without started engine. For this assessment, we assumed 60 barges at both typhoon shelters for conservative assessment.	The loading/unloading are the major activities within typhoon shelters. This assessment assumed 60 barges at both typhoon shelters should be conservative side and would be overestimate.	S3.4.5.2 S3.4.5.3 (i) S3.4.5.3 (vi) (a)	N/A The assessment was accordance with Appendices B-1 to B-3 of EIA Study Brief.

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	The emission rates of air pollutants from the operation of the auxiliary engine of barges were estimated based on the approach stipulated in Current Methodologies and Best Practices in Preparing Port Emission Inventories, Final Report, January 2006 prepared by ICF Consulting for USEPA. The power rating of 82 kW for auxiliary engine and emission height of the barges were about 5m above water surface were adopted for this assessment.			
Operational Phase ( <i>Industrial Emission</i> )				
The Industrial Source Complex Short Term (ISCST3) dispersion model was used to predict the chimney emissions. Since the inventory of industrial chimneys cannot be obtained from EPD, it is extracted from the previous approved EIA report of SEKDCFS and verified by site survey.	<p>The industrial chimneys emissions were made reference to the approved report of SEKDCFS. The emission rate for those new chimneys not listed in the SEKDCFS EIA report, the averaged fuel consumption for those valid chimneys was adopted to assess the impacts from the industrial chimney emissions on the ASRs within the Project area.</p> <p>For the emission for Hong Kong &amp; China Gas Co. Ltd. at To Kwa Wan, the emission data was made reference to the Specified Process Licence.</p>	Since the inventory of industrial chimneys cannot be obtained from EPD, the emission rate may be overestimated based on the pervious approved SEKDCFS EIA report.	S3.4.5.2 S3.4.5.3 (i) S3.4.5.3 (vi) (a)	N/A The assessment was accordance with Appendices B-1 to B-3 of EIA Study Brief.
Operational Phase ( <i>Emission from Heliport</i> )				
The emission impact from the heliport was modelled as point source by employing the ISCST3 model. The emission rate was made reference to the approved HFMFT EIA report.	<ul style="list-style-type: none"> <li>• NO<sub>2</sub> Emission Rate: based on the HFMFT EIA Report (Register No.: AEIAR-095/2006)</li> <li>• SO<sub>2</sub> &amp; RSP Emission Rate: Helicopter Safety Advisory Conference (HSAC) 2001. Helicopter safety advisory conference (HSAC) Gulf of Mexico offshore helicopter operations and safety review</li> <li>• Flight frequency: Assume 4 flight/hr for both daytime and nighttime as a worst case scenario.</li> </ul>	At this stage, it would be hard to make the assumptions (e.g. frequency of flights, type of helicopters, etc.) of helicopter services for the assessment.	S3.4.5.2 S3.4.5.3 (i) S3.4.5.3 (vi) (a)	N/A The assessment was accordance with Appendices B-1 to B-3 of EIA Study Brief.



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Operational Phase ( <i>Odour Impact</i> )				
Odour impact were assessed using ISCST3 model. The predicted 1-hour average concentrations of odour at the receivers were converted to 5-second averaging time in accordance with Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales” published by the Department of Environment and Conservation, New South Wales, Australia (NSW Approved Method).	<p>Total four scenario were assumed:</p> <p><u>Mitigated Scenario A1:</u></p> <p>Decking of KTN within apron area + full mitigation of KTN and JVC headspace + desilting enhancement + localised maintenance dredging + 600m gap opening + in-situ bioremediation to achieve further 80% odour removal efficiency</p> <p><u>Mitigated Scenario A2:</u></p> <p>Decking of KTN within apron area + full mitigation of KTN and JVC headspace + desilting enhancement + localised maintenance dredging + 600m gap opening + in-situ bioremediation to achieve further 90% odour removal efficiency</p> <p><u>Mitigated Scenario B1:</u></p> <p>Reconstruct KTN into Kai Tak River within apron area + full mitigation of KTN and JVC headspace + desilting enhancement + localised maintenance dredging + 600m gap opening + in-situ bioremediation to achieve further 80% odour removal efficiency</p> <p><u>Mitigated Scenario B2:</u></p> <p>Reconstruct KTN into Kai Tak River within apron area + full mitigation of KTN and JVC headspace + desilting enhancement + localised maintenance dredging + 600m gap opening + in-situ bioremediation to achieve further 90% odour removal efficiency.</p> <p>Two desilting compounds are proposed for KTN (at Site 1D6 and Site 1P1) and a dry weather flow interceptor (DWFI) compound is proposed for JVC (at Site 3A3) to contain pollution in drainage systems entering the KTAC and KTTS by interception facilities until the ultimate removal of the pollution sources. It is noted that under the Project “Upgrading of Central &amp; East Kowloon Sewerage - Packages 1 to 4”, upgrading and</p>	It is difficult to obtain a quantitative value of odour reduction efficiency in future scenario for modelling run as it cannot ensure that no expedient connection to KTN after rectification. A conservative assumption for odour removal efficiency was therefore used in the assessment for future scenario.	3.4.5.3 (v) (d) S3.4.5.3 (vi) (a) S3.4.5.3 (vii)	Acceptance memo was obtained from EPD. (see Annex 18.1)

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	<p>construction of about 21km long sewers and associated sewerage works would be carried out for the central and east Kowloon region. This will include upgrading of the existing DWFI for the drainage catchment of KTN. It is expected that these existing DWFI at the upstream of KTN can effectively control the polluted flows after upgrading. In addition, under the “Kai Tak Approach Channel – Expedient Connection Survey Study”, surveys will be undertaken to identify expedient connections in public drains/sewers and domestic buildings in Kowloon City, Ngau Tau Kok, Kowloon Bay, Wong Tai Sin and Choi Hung, for subsequent rectification.</p> <p>Tidal barriers and desilting facilities will form part of the compounds to prevent any accumulation of sediment within the downstream section of KTN and JVC and hence fully mitigate the potential odour emissions from the headspace of KTN and JVC near the existing discharge locations. The odour generating operations within the proposed desilting compounds and DWFI compound will be fully enclosed and the odorous air will be collected and treated by high efficiency deodorizers before discharge to the atmosphere.</p> <p>Hourly meteorological data for the year 2006 (including wind speed, wind direction, air temperature, Pasquill stability class and mixing height) Hong Kong Observatory were employed for the model run. The study area is in an urban area, “Urban” model was adopted in the model.</p>			

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Noise Impact				
Construction Noise				
To assess the potential noise impacts due to the Project, the noise sources are identified and the impacts have been quantified. The assessment methodology follows Technical Memorandum on Noise From Construction Work other than Percussive Piling.	<p>Construction noise impact assessment has been carried out on a monthly basis and assessed on existing NSRs from the commencement of the Project. Cumulative noise impact was considered within 300m of the NSRs from the construction tasks of the Project taking place concurrently. Noise sources from the areas greater than this 300m distance have been excluded from this assessment.</p> <p>In accordance with the EIAO, the methodology outlined in the GW-TM has been used for this assessment of construction noise (excluding percussive piling). Sound power level (SWL) of the equipment was taken from Table 3 of TM and BS5228 was referenced for those without information provided.</p> <p>It was assumed that all PME items required for a particular construction activity would be located at the notional or probable source position of the segment where such activity is to be performed. The assessment is based on the cumulative SWL of PME likely to be used for each location, taking into account the construction period in the vicinity of the receiver location. To predict the noise level, PME was divided into groups required for each discrete construction task. The objective was to identify the worst case scenario representing those items of PME that would be in use concurrently at any given time. The sound pressure level of each construction task was calculated, depending on the number of plant and distance from receivers. The noise levels at NSRs were then predicted by adding up the SWLs of all concurrent construction tasks.</p>	<p>The prediction of construction noise impact was based on the methodology described in the GW-TM under the NCO. There would be limitations of the methodology such as the accuracy of the predictive base data for future (e.g. plant inventory for proposed construction works). Quantitative uncertainties in this assessment of impacts should be considered when drawing conclusions from the assessment.</p> <p>In carrying out the assessment, realistic worst case assumptions have been made in order to provide a conservative assessment of noise impacts. The construction noise impact was assessed based on conservative estimates for the types and quantities of plant and construction methods.</p>	<p>3.4.6.2 (i) 3.4.6.2 (iii) (b) 3.4.6.2 (iv) (a) 3.3.6.2 (v) (d)</p>	<p>Acceptance memo was obtained from EPD (See Annex 18.2)</p> <p>It was stated in EIA Report that the construction plant inventory has been vetted and confirmed by the Engineer as being practicable in completing the works within scheduled timeframe.</p> <p>The response letter from EPD on assessment methodology for ground-borne noise was obtained from EPD. (See Annex 18.2)</p>

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	<p>A positive 3 dB(A) façade correction was added to the predicted noise levels in order to account for the facade effect at each NSR.</p> <p>Appropriate on-time percentage for PMEs were reasonably assumed, such as poker vibrator, crane and excavator.</p>			
<i>Rail Noise</i>				
The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM.	<p>The proposed Shatin to Central Link (SCL) and its stations would be at the Site 1F (Kai Tak Station) and Site 2D (To Kwan Wan Station). The SCL line would be underground and hence operational railway noise impact is not expected.</p> <p>EFTS is proposed to be introduced to operate as a major internal mode of transport within Kai Tak Development. It is proposed to provide feeder services between SCL Kai Tak Station, SCL To Kwa Wan Station and the Tourism Node. The alignment of EFTS is shown in Figure 7.2. Several modes of EFTS, including light rail transit (LRT), trolley bus, automatic people mover (APM), monorails, and electric / LPG bus, were investigated during feasibility study. For conservative noise assessment, the rail base of EFTS was assumed for the assessment. Below are list out the tentative train operation mode.</p> <ul style="list-style-type: none"> <li>• Operation Hour: 6am to 12mid-night</li> <li>• Train frequency: 14 train/hr for peak hour and 4 train/hr for non-peak hour</li> </ul>	As no detailed specification for the proposed EFTS, the predicted buffer zone would be subject to the final decision on selection of EFTS.	3.4.6.2 (vi) (a1)	Acceptance memo was obtained from EPD. (see Annex 18.2)
<i>Road Traffic Noise</i>				
The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM.	The roads proposed under the Project are scheduled to open in 2016. Therefore, the traffic data for year 2031, which was agreed by Transport Department, was adopted for the assessment.	There would be some limitations of methodology such as the accuracy of the predictive base data for future (e.g. traffic flow forecast). Besides, traffic noise levels are predicted based on free flow condition. Traffic	3.4.6.2 (i) 3.4.6.2 (iii) (b) 3.4.6.2 (iv) (a)	Acceptance memo was obtained from EPD (see Annex

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Traffic noise was predicted using the methodology provided in the UK Department of Transport Calculation of Road Traffic Noise (CRTN) 1988. The assessment was based on projected peak hour flows for the worst year within 15 years after opening of the road.	<p>The existing noise screening structures and mitigation measures on the Prince Edward Road East and Kwun Tong Bypass was taken into account in the assessment.</p> <ul style="list-style-type: none"> <li>• Low noise surfacing on the existing Prince Edward Road East and Kwun Tong Bypass;</li> <li>• 4m high barrier along N/B of Kwun Tong Bypass and its slip road; and</li> <li>• Semi-enclosures along Kwun Tong Bypass near Richland Gardens and Choi Hung Estate.</li> </ul> <p>The building layout plan with mitigation measures (1.5m vertical fins) for Site 1A1 and 1B1 are provided by the Housing Department and to be adopted in this assessment as a unmitigated scenario.</p>	<p>congestion and hence reduced traffic speed are not taken into account in the noise model. Quantitative uncertainties in the assessment of impacts should be considered when drawing conclusions from the assessment.</p> <p>In carrying out the assessment, realistic worst case assumptions have been made in order to provide a conservative assessment of noise impacts. For the assessment of road traffic noise impact, peak hourly traffic flows representing the worst case scenario were adopted.</p>	3.4.6.2 (vi) (c1) 3.4.6.2 (vi) (c3)	18.2)  Transport Department's agreement on use of 2031 traffic data for this EIA is presented in Annex 18.1
<i>Fixed Noise Sources</i>				
The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM.	Calculate the maximum allowable Sound Power Level (SWL) as the compliance criteria for each fixed noise sources has been determined.	Fans and damper arrangement at each ventilation building may be refined in detailed design. The worst case condition that all duty exhaust fans are operated at each ventilation building was adopted for assessment. Screening corrections from other buildings / structures and directivity were excluded in the assessment.	3.4.6.2 (vi) (b2)	All noise matters (except Noise from open air entertainment activities) addressed in EIA report are included in Table 1A of Annex 5 of the TM.
Noise from Open Air Entertainment Activities				
Noise level from the activity (including set up, rehearsal, main event and stage dismantling etc.) should not be more than 5 dB(A) above the background noise level, as measured at one metre from the exterior building facade of the	Noise measurements from concerts in Hong Kong Stadium previously showed that the typical noise levels in Leq(15mins) of about 170 m away from Hong Kong Stadium was 73-75dB(A). It is likely that noise from the proposed stadium would affect nearby NSRs if mitigation measures such as retractable roof or enclosure were not adopted. The SEKDCFS EIA Report also	The location of loudspeaker and the roof design would be refined in detailed design stage. The worst case assessment was made reference to the noise measurement from concerts in Hong Kong Stadium. The correction of directivity was excluded in the assessment.	3.4.6.2 (vi) (b2)	Acceptance memo was obtained for the agreement of Noise from open air entertainment activities (Annex

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
most affected noise sensitive receivers, during day time and evening period, i.e. 0700 – 2300 hours. For the night time, i.e. 2300 – 0700 hours, noise should not be audible within nearby noise sensitive receivers	proposed retractable roof to mitigate the noise event and it can achieve about 25dB(A) reduction. For conservative approach, 10dB(A) reduction was adopted for assessment.			18.2)
<i>Helicopter Noise</i>				
The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM.	A number of SWL of helicopter have been reviewed and identified Eurocopter AS-332 L2 adopted or the worst case assessment. There will be no designated approach route and take-off route for the proposed helipad. The helicopters will generally fly along the coastline to approach the landing pad.	<p>The noise assessment was carried out based on the best available information. With reference to a number of EIA report, the measured Lmax for Eurocopter AS-332 L2 (Super Puma) was adopted for assessment. The assessment was undertaken based on the noise level associated with an AS 332 L2 helicopter as a conservative approach.</p> <p>At this stage, it would be hard to make the assumptions (e.g. frequency of flights, type of helicopters, etc.) of commercial helicopter services for noise assessment. However, in view of the considerable buffer distance between the NSRs and the helipad (i.e. about 700m), adverse helicopter noise impact would not be anticipated.</p>	3.4.6.2 (vi) (d1)	Noise matters addressed in EIA report are included in Table 1A of Annex 5 of the TM.
<i>Marine Traffic Noise Impact</i>				
The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM.	Noise impacts arising from operation activities on the moored vessels in typhoon shelters and manoeuvring of vessels at the proposed cruise terminal from the typhoon shelters may vary with the composition and type of the vessels. The potential noise impact is likely come from the engine noise and operation activities of individual vessel in operation. It is similar to noise from public place which vessels are free to move around and implementation control measures are not possible.	Marine traffic noise sources, such as marine traffic noise from operation activities on the moored vessels in typhoon shelters and manoeuvring of vessels including cruise vessels during operational phase of the proposed development. It is similar to noise from public place which vessels are free to move around and implementation control measures are not possible. It is not even possible to quantify accurately or compare to existing standard. No objective noise standard for marine traffic noise (include noise from typhoon shelters) in this EIA.	3.4.6.2 (vi) (e1)	Acceptance memo was obtained for the agreement of Noise from open air entertainment activities (Annex 18.2)

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
Water Quality				
<p>The water quality impact assessment for the Project follows Annex 6 and Annex 14 of the EIAO-TM.</p> <p>To assess the potential water quality impacts due to the Project, the sources and natures of water pollution to be generated have been identified and their impacts have been quantified using mathematical model.</p> <p>Appropriate mitigation measures have been recommended to minimize any adverse water quality impacts.</p>	<p>The maximum dredging rates, construction sequences, coastline configurations (including the layout of the proposed runway opening and pile deck configurations) assumed in the EIA were developed based on both engineering and environmental considerations.</p>	<p>Quantitative uncertainties in the modelling need to be considered when making an evaluation of the modelling predictions. The worst case conditions were adopted as model input to indicate the maximum extent of the potential environmental impacts. The input data tended to be conservative to provide a margin of tolerance. The maximum dredging rates were applied to the model continuously during the entire dredging period. In reality, the peak rates would not occur continuously and the average rates should be smaller. The following approach has been adopted to enhance the model performance:</p> <ul style="list-style-type: none"><li>• The computational grid of the detailed South East Kowloon (SEK) Model was refined along the coastline of KTAC, KTTS and Kowloon Bay to represent the coastal features under different construction and operational scenarios;</li><li>• Use of a fully calibrated and validated regional Update Model to provide boundary and initial conditions to the detailed SEK Model;</li><li>• The performance of the detailed SEK Model was extensively calibrated and validated with reference to the field data to ensure that reliable predictions of hydrodynamics are provided for the Study area.</li><li>• The simulation comprises a sufficient spin up period so that the initial conditions do not affect the results.</li><li>• The level of uncertainties on the water quality predictions inside the marine embayments would also depend on the accuracy of the pollution loading input into the embayed areas. The storm pollution loading discharged into the embayment areas along the coastline of KTD area including the KTAC, KTTS and Kowloon Bay was derived from detailed field investigation to provide accurate information for</li></ul>	<p>3.4.7.6 (g) 3.4.7.6 (h) 3.4.7.6 (p) Appendix D</p>	<p>Acceptance memo was obtained (other than water quality assessment methodology for accidental spillage). (Annex 18.3)</p>

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
		model input. The loading input to the water quality model under various future assessment scenarios has also taken into account the future development and population growth in order to provide conservative predictions.		
<b>Waste Management</b>				
<p>The method for assessing potential waste management impacts for the Project follow those presented in Annex 7 and Annex 15 of the EIAO-TM.</p> <p>Marine site investigation and laboratory testing were carried out to determine the level of contamination in the sediments within the proposed dredging area in accordance with ETWB TCW No. 34/2002 Management of Dredge/Excavated Sediment.</p> <p>Appropriate mitigation measures have been recommended to minimize any adverse waste impacts.</p>	<p>The waste quantities to be generated from the Project were estimated based on the engineering assessment and the information provided in the Construction and Demolition Material Management Plan (C&amp;DMMP) prepared for the Project.</p>	<p>The waste quantities estimated under this EIA are subject to further detailed site survey and design. However, further refinement of the estimated waste quantities would not affect the assessment conclusion provided that all the recommended mitigation measures are implemented properly.</p>	<p>3.4.7.6 (k) 3.4.9.2 (iii)</p>	<p>Acceptance memo was obtained for the agreement of Sediment Sampling and Testing Plan (SSTP) for VC1 and VC2 at public landing steps cum fireboat berth (Annex 18.4)</p>
<b>Land Contamination</b>				
<p>The approach for land contamination assessment for the Project follows those presented in ProPECC PN3/94, the Guidance Note and Annex 19 of the EIAO-TM as all the CAPs prepared under this EIA study were submitted and approved by the</p>	<p>In regard to Section 3.4.10.2 of the EIA Study Brief No. ESB-152/2006, the assessment area for land contamination impact has included all areas within the boundary of the former Kai Tak International Airport and all the developments proposed within the boundary of the Project.</p>	<p>None</p>	<p>3.4.10.1</p>	<p>None</p>





Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
	GFSA-22 at ex-GFS building have been estimated based on the approach of a 6m X 6m square centered at the sampling location. This approach for metal contamination was justified by considering the immobility of metals, the contamination level, and the spatial distribution of the sampling locations as well as the consultant's professional experience gained from other land contamination projects.			
<b>Hazard to life</b>				
Evaluation and assessment of potential risk impact was conducted in accordance with the criteria and guidelines specified in Annex 4 and Annex 22 of the EIAO-TM. The Methodology Statement of Hazard Assessment submitted in December 2007 was approved by EPD.	<p>List of Assumptions have been agreed upon by relevant parties and government departments for Ma Tau Kok Gas Works and its associated North Plant Facilities, Kwun Tong DG Vehicular Ferry Pier and Petrol cum LPG stations / dedicated LPG stations. The hazard assessments were carried out based on current best available information obtained from relevant parties and government authorities.</p> <p>Population estimation using 2003-based Territorial Population and Employment Data matrix (TPEDM) was adopted for the assessment based on prior agreement with Planning Department.</p>	<p>The hazard assessments conducted were based on the site survey data and current best available information provided by the relevant parties and government departments. Current situation may not apply to future scenarios in some cases.</p> <p>The individual risk and societal risk associated with all the hazardous installations were found to be acceptable in accordance with the criteria stipulated in Annex 4 of the EIAO TM except the risk level for the dedicated LPG filling station at Cheung Yip Street (Station 7) at Year 2021. The risk level of Station 7 at Year 2012 and Year 2016 would fall within "acceptable" but "As Low As Reasonably Practicable (ALARP)" at Year 2021. Given that the dedicated LPG filling station is an existing installation and has no agreeable mitigation measures currently, the risk is therefore considered to be tolerable.</p>	3.4.11.1	<p>Acceptance memo from EPD was obtained for the Methodology of Hazard Assessment dated 21 December 2007.</p> <p>(Ref (17_ in Ax(13) to EP2/K19/S3/10 Pt 5))</p> <p>(Annex 18.6)</p>
<b>Impact Cultural Heritage</b>				
Evaluation and assessment of potential impacts to cultural heritage resources was conducted in accordance with the Study Brief ESB 152/2006. The Study adhered to the requirements as listed in Annexes 10 and 19 of the TM (EIAO) and also the relevant guidelines for Cultural heritage Impact Assessment as issued by	The assessment was based on the existing information available from previous investigations in the study area and supplemented through built heritage and terrestrial archaeological field surveys.	Based upon the findings of previous surveys the archaeological potential of the study area was determined to not have been adequately examined in previous investigations. The terrestrial archaeological investigation of the current study was limited by the presence of water in the trenches and further archaeological investigation has been recommended with the provision that a more sophisticated water management programme be set up for the duration of the excavation.	N/A	N/A

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
the AMO for Terrestrial Archaeological Impact Assessment, Marine Archaeological Impact Assessment and Built Heritage Impact Assessment.				
<b>Landscape and Visual Impact Assessment</b>				
Evaluation and assessment of potential impact on landscape resources, landscape character areas, visual sensitive receivers was conducted in accordance with the criteria and guidelines specified in Annex 10 and Annex 18, respectively, of the EIAO-TM.	Not Applicable	Not Applicable	Not required	Not Applicable
<b>Ecological Impact</b>				
Evaluation and assessment of potential impact on ecological resources was conducted in accordance with the criteria and guidelines specified in Annex 8 and Annex 16, respectively, of the EIAO-TM.	<p>Development programme as attached in Appendix 2.1. Proposed developments as depicted in Figure 1.1 and 1.2.</p> <p>The assessment and evaluation of ecological impact on terrestrial and marine habitats was undertaken based on the results of literature review, terrestrial reconnaissance surveys / marine ecological field surveys and water quality impact assessment results (for marine ecological impact assessment only).</p>	<p>Limitations and uncertainties of the water quality impact assessment stated under the Water Quality Impact.</p> <p>Results of terrestrial reconnaissance surveys (e.g. habitat / vegetation and terrestrial wildlife) and marine ecological field surveys (e.g. benthos sampling, intertidal survey, spot-check dive and REA) conducted for this Project are based on sampling / survey at several representative locations / transects in and within the vicinity of the Project area. In particular, the exact number of coral colonies to be directly affected by proposed dredging works is subjected to further detailed pre-translocation coral survey at the time of the detailed design phase of this Project. However, further refinement of the exact number of coral colonies to be directly impacted would not affect the assessment conclusion in this EIA, provided that all the recommended mitigation measures are implemented properly.</p>	Not required	Not Applicable

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities	
			EIA Study Brief Clause Reference	Relevant Documentation
Fisheries Impact				
Evaluation and assessment of potential impact on fisheries was conducted in accordance with the criteria and guidelines specified in Annex 9 and Annex 16, respectively, of the EIAO-TM.	Development programme as attached in Appendix 2.1. Proposed developments as depicted in Figure 1.1 and 1.2.  The assessment and evaluation of fisheries impact was undertaken based on the results of literature review and water quality impact assessment results.	Limitations and uncertainties of the water quality impact assessment are stated under the Water Quality Impact.	3.4.15.4 – Existing information regarding the assessment area shall be reviewed. Based on the review results, the study shall identify data gap and determine if there us any need for field surveys. If field surveys are considered necessary, the study shall recommend appropriate methodology, duration and timing for the field surveys. The proposed field survey shall be agreed with the Director of Agriculture and Fisheries or the Director prior to the commencement of the survey.	As stated in Section 15.3.1 of the EIA, no necessary field survey is identified and conducted in this assessment. Prior agreement with the Director of AFCD or the Director on details of proposed field survey was therefore not required.
Sewage and Sewage Treatment Implications				
The methodology for hydraulic assessment for sewerage system was conducted based on “Working Paper on Sewerage Impact Assessment methodology” issued in Nov 07 and “Working Paper on Assessment of Existing and Planned Sewerage, Sewage	The flow projections followed to the following manuals and guidelines: <ul style="list-style-type: none"><li>DSD Sewerage Manual (Volume 1 and 2)</li><li>EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF)</li></ul> The sewerage networks model was obtained from EPD	None	S3.4.8.2 (ix)	Annex 18.7

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities									
			EIA Study Brief Clause Reference	Relevant Documentation								
Treatment and Disposal Facilities” issued in May 07 under KTD project.	for the Central and East Kowloon sewerage catchments in March 2007 and Oct 2007. The sewerage model was used and trimmed to a simplified model which contains the network of the concerned trunk sewer for hydraulic assessment of the existing sewer at Hoi Bun Road.	The Simplified model approach for assessment of the existing trunk sewer is only applied for this case as advised by EPD. (i.e. Hoi Bun Road trunk Sewer).		N/A								
	The population data within KTPTW and TKWPTW excluding KTD adopted for design scenarios are stated as following table:	None										
	<table><tr><th>Scenario</th><th>Planning data</th></tr><tr><td>2016</td><td>TPEDM 2003-based Estimate – Scenario II</td></tr><tr><td>2030</td><td>HK2030: Planning Vision and Strategy (HK2030 Study)</td></tr><tr><td>Ultimate</td><td>HK2030 Study +5%</td></tr></table>	Scenario			Planning data	2016	TPEDM 2003-based Estimate – Scenario II	2030	HK2030: Planning Vision and Strategy (HK2030 Study)	Ultimate	HK2030 Study +5%	
	Scenario	Planning data										
	2016	TPEDM 2003-based Estimate – Scenario II										
2030	HK2030: Planning Vision and Strategy (HK2030 Study)											
Ultimate	HK2030 Study +5%											
The population data within KTD is based on the latest development schedule of Recommended Outline Development Plan (May 08)	None											
Catchment inflow factor was based on the GESF and revised according to the latest findings in the Final report on Flow & Load Projections issued in Mar08 under HATS project (Agreement No. CE8/2006).	As mentioned in GESF, the catchment inflow factor will be updated regularly by EPD. The catchment inflow factor used in HATS project was developed according to the recent survey.											
It is proposed to add an extra 10% contingency to the calculated ADWFs and peak flows. It is assumed that the 10% contingency for the uncertainties will be materialized linearly from year 2006 until 2030.	None.											

Assessment Methodologies	Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD/Other Authorities															
			EIA Study Brief Clause Reference	Relevant Documentation														
	<p>The Sewage to be collected from the cruise vessel is based on the number of passengers and crewmembers for different types of vessel to be berthed in the Cruise Terminal. For estimation of passengers and crewmemebers of cruise vessels, reference is made to the existing and being built vessels. The passengers and crewmembers adopted in flow projection are stated in below:</p> <table><tr><th rowspan="2">Population</th><th colspan="2">Vessel type</th></tr><tr><th>Super Panamax</th><th>Post-Panamax</th></tr><tr><td>Passengers</td><td>5,400</td><td>4,000</td></tr><tr><td>Crewmembers</td><td>2,000</td><td>1,500</td></tr><tr><td>Total</td><td>7,400</td><td>5,500</td></tr></table>	Population	Vessel type		Super Panamax	Post-Panamax	Passengers	5,400	4,000	Crewmembers	2,000	1,500	Total	7,400	5,500	None		
Population	Vessel type																	
	Super Panamax	Post-Panamax																
Passengers	5,400	4,000																
Crewmembers	2,000	1,500																
Total	7,400	5,500																



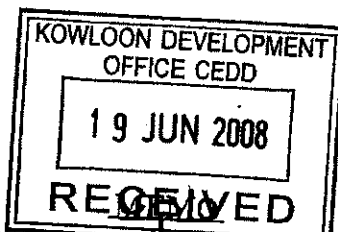
***Annex 18.1***

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***Prior Agreement on  
Air Impact Assessment  
From Government Authorities***







CE/KC, SE/H, E7

From Director of Environmental Protection  
Ref. (31) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 18 June 2008  
To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 3

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of EMFAC-HK model assumption and Fleet Average Emission Factors

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: IWLH:ALSC:qc:60022408 /08.3-1599 dated 4.6.2008 seeking our agreement on the captioned pursuant to the requirements under Clause 3.4.5.3(v)(b) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.5.3(v)(b) - "The air pollution impacts of future road traffic shall be calculated based on the highest emission strength from road vehicles within the next 15 years upon commencement of operation of the proposed road. The Applicant shall demonstrate that the selected year of assessment represents the highest emission scenario given the combination of vehicular emission factors and traffic flow for the selected year. The Fleet Average Emission Factors used in the assessment shall be agreed with the Director. If necessary, the Fleet Average Emission Factors shall be determined by a motor vehicle emission model such as EMFAC-HK model to be agreed with the Director prior to the commencement of the assessment (reference section 4.4.2(c) of the TM). All the traffic flow data and assumptions that used in the assessment shall be clearly and properly documented in the EIA report."

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak

Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation.

5. Subject to the caveats raised in paragraph 4 above, we agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirements stipulated in Clause 3.4.5.3(v)(b) of the EIA Study Brief No.ESB-152/2006 mentioned in paragraph 3 above.

6. Nevertheless, we have some minor technical comments in Annex A for your reference.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

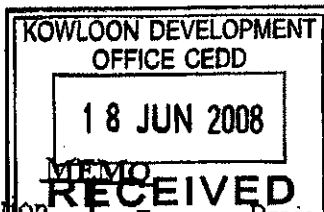
c.c.

MCAL (Attn: Mr. Igor Ho) fax: 2691 2649

Internal – S(SA)5

Minor Technical Comments on the EMFAC-HK model assumption and Fleet Average Emission Factors

- a) Section 1.1.3 3rd line - The ratio of Private Car using petrol and diesel and Motor Cycle should be 91.0% and 9.0% according to the vehicle statistics provided in this paragraph.
- b) Section 1.1.34 - For the revised speed limit from 80 kph to 70 kph for link no. 185 & 186, we accept that the change in the calculated fleet average emission factors would be very minimal and rerun of the EMFAC-HK model is not necessary. Having said that, we would like to remind the consultant to correctly apply the right FAEFs for speed limit of 70 kph to the said road links when preparing input data for running the CALINE4 model.



From Director of Environmental Protection To Project Manager (Kowloon), CEDD  
Ref. (29) in Ax(13) to EP2/K19/S3/10 Pt.8 (Attn.: Mr. C.B. Mak)  
Tel. No. 2835 1106 Your Ref. (53) in KD 2/25/4 Pt.1  
Fax. No. 2591 0558 dated 1.3.2007 Fax. No. 2369 4980  
Date 17 June 2008 Total Pages 3

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
Agreement of Odour Impact Assessment Methodology  
(including Scenario Study)

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study brief for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: IWLH:ALSC:qc:60022408 /08.2-1638 dated 16.6.2008 enclosing the responses to comments and revised Figure 9.7 of the Report on Odour Impact Assessment Methodology (including Scenario Study) seeking our agreement on the captioned pursuant to the requirements under Clauses 3.4.5.2, 3.4.5.3(v)(d) & 3.4.5.3(vii) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief as follows:

EIA Study Brief No. ESB-152/2006

S.3.4.5.2 – "The Applicant shall identify and assess air pollutants to include at least existing odour sources and the prevailing odour strength that may threaten the proposed new developments of the Project, in addition to dust and any air pollutant emissions that shall arise from the construction and operation of the Project and associated works, including their staged implementation. The Applicant shall assess air pollutants concentrations with reference to the relevant sections of the guidelines in Appendices B-1 to B-3 in this EIA study brief, or other methodology to be agreed by the Director (with reference to section 4.4.2(c) of the TM) prior to commencement of the assessment(s)."

S.3.5.4.3(v)(d) – "For odour impact assessment at the Kai Tak Approach Channel and the Kai Tak Nullah, the Applicant shall specify clearly the assumptions used for determining the reasonable worst case scenario and justify the assumptions adopted in the assessment. The

*Applicant shall also include an assessment on the odour generation mechanism with a view to reasonably determine the existing and future emission strength of the odour source(s). The assessment methodology of the odour assessment shall be agreed by the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."*

*S.3.4.5.3 (vii) – "The Applicant shall propose remedies and mitigating measures where the predicted air quality impact exceeds the criteria set in section 1 of Annex 4 in the TM. These measures and other associated constraints on future land use planning shall be agreed with the relevant government departments/authorities and be clearly documented in the EIA report. The Applicant shall demonstrate quantitatively that the resultant impacts after incorporation of the proposed mitigating measures will comply with the criteria stipulated in section 1 of Annex 4 in the TM. The Applicant shall also justify the assumptions adopted in the assessment for effectiveness of the proposed mitigation measures, in particular for odour assessment; address any uncertainty of the residual odour impact after mitigation by appropriate sensitivity test or scenario study; and initiate contingency methods and action plan under environmental monitoring and audit provisions for follow-up. The methodology of the sensitivity test or scenario study for odour assessment shall be agreed by the Director (with reference to section 4.4.2(c) of the TM)."*

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation.

5. Subject to the caveats raised in paragraph 4 above, we agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirements stipulated in Clauses 3.4.5.2, 3.4.5.3(v)(d) & 3.4.5.3(vii) of the EIA Study Brief No. ESB-152/2006 mentioned in paragraph 3 above. Please let us have two copies of the finalized Report on Odour Impact Assessment Methodology (including Scenario Study) for record.

6. Nevertheless, we have some further comments in Annex A on MCAL's responses which should be properly addressed in the EIA report.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor Ho) fax: 2691 2649

Internal – S(SA)5

Annex AFurther comments on the MCAL's responses

- a) Response to item 1 (a) - We note in Section 8 of the Odour Impact Assessment Methodology Report that containment of pollution in drainage systems entering the KTAC and KTTS by interception facilities (these include the desilting compounds and DWFI) is one of mitigation measures incorporated in addition to the localised maintenance dredging and improvement of water circulation to achieve the increased DO level. The containment of pollution is inherently included as a mitigation and should be described in Section 9.5.10 as well. Having said that, the assumed improved DO is a result of the containment of pollution by desilting compound and DWFI among other mitigations.

In addition, the odour emission rate over the whole length of Kai Tak River (mitigated scenarios B1 & B2) does take into account the effect of desilting compound and DWFI in containing further pollutions from entering KTN with descriptions of "full mitigation of KTN and JVC headspace" under the mitigated scenarios as mentioned in Section 9.5.11.

We therefore do not agree with the consultant's argument of "any improvement to the quality of the effluent discharging to KTAC due to these containment measures and hence possible reduction in odour emissions would not be accounted in the odour modelling as conservative assumption".

The various measures in relation to the containment of pollution should be described in the EIA report with responsible implementation parties and anticipated completion dates such that we will know when the ultimate mitigated scenario can be achieved.

- b) Response to item 1 (c) - The acceptability of odour impact imposed on nearby planned ASRs by the To Kwa Wan STW is still pending the confirmation from DSD on the committed mitigation programme.

Transport Department's agreement on use of 2031 traffic data for this EIA

To: Walter WY Leung/CEDD/HKSARG@CEDD  
cc: Alex HK TANG/EPD/HKSARG@EPD  
Anthony.Lok@maunsell.aecom.com  
CB Mak/CEDD/HKSARG@CEDD  
igor.ho@maunsell.aecom.com  
Peter PC Mok/CEDD/HKSARG@CEDD  
Peter-ct.lee@maunsell.aecom.com  
William.Cheung@maunsell.aecom.com  
Sau Ming CHAU/TD/HKSARG@TD  
Henry KN HUI/TD/HKSARG@TD  
Subject: Re: KTD Traffic Forecast for EIA - Comments from TD連結  
<Notes:///482568B30016FECB/38D46BF5E8F08834852564B500129B2C/C0F70902543652CB4825742B0011D29F>

Edms No.:01QF2 Doc. Src.:

Dear Walter

I refer to your mail dated 14.4.2008 and have no further comment on the 2031 forecast traffic flow submitted by the Consultants.

Regards  
RoyTse  
E/HP1/K,TD  
2399 2513

Walter WY Leung@CEDD

14/04/2008 11:42

To: Roy Mang Hin TSE/TD/HKSARG@TD  
cc: CB Mak/CEDD/HKSARG@CEDD  
Peter PC Mok/CEDD/HKSARG@CEDD  
igor.ho@maunsell.aecom.com  
"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com> William.Cheung@maunsell.aecom.com  
Peter-ct.lee@maunsell.aecom.com Alex HK TANG/EPD/HKSARG@EPD  
Subject: KTD Traffic Forecast for EIA - Comments from TD

Dear Roy,

I refer to your reply dated 7 April 2008 (attached below) and our telephone conversation this morning.

It is noted that you have no comment on the modelling approach and assessment methodology for traffic forecast for EIA. As required under the EIA Study Brief for Kai Tak Development (last paragraph of section 3.4.5.3(iii)(b) and section 3.4.6.2(iv)(a) refer), we should be grateful for your confirmation regarding validity of the assumptions adopted and the magnitude of the activities (e.g. traffic mix and volume on a road etc.) and traffic flow for the various assessments of the study.

Please let me know if you have any query.

Regards,

Walter LEUNG  
for Project Manager (Kowloon)  
Civil Engineering and Development Department  
(tel: 2301 1439)



Transport Department's agreement on use of 2031 traffic data for this EIA

From: Sau Ming CHAU [mailto:chausauming@td.gov.hk]  
Sent: Wednesday, June 04, 2008 2:27 PM  
To: Lok, Siu Chuen Anthony  
Cc: chausauming@td.gov.hk; Ho, Wai Luek Igor; Cheung, William  
Subject: Re: FW: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Lok,

With reference to your preceding mail 04/06/2008 12:04, agreement is confirmed.

S M Chau  
SE/HP, TEK  
Transport Department  
Tel: 2399 2500  
Fax: 2397 8046

"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com>  
04/06/2008 12:04

To: <chausauming@td.gov.hk>  
cc: "Cheung, William" <William.Cheung@maunsell.aecom.com>  
"Ho, Wai Luek Igor" <Igor.Ho@maunsell.aecom.com>  
Subject: FW: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Chau

Please find attached the replacement page with the speed for links 185 and 186 amended to 70 km/hr for your further review.

As per EPD's comment, we should be grateful if you would confirm by today that TD agree to use the 2031 traffic forecasts, including the speed fraction, submitted via our letter ref. IWLH:SYH:cssk:60022408/08.3-1288 dated 19 March 2008 amended by the replacement page attached to this email, in the EIA Study for KTD.

Thank you very much for your assistance!

Regards,  
Anthony Lok  
Engineer  
Maunsell Consultants Asia Ltd  
10/F Grand Central Plaza Tower 2  
138 Shatin Rural Committee Road, Shatin, Hong Kong  
T (852) 2170 6454

---

From: Sau Ming CHAU [mailto:chausauming@td.gov.hk]  
Sent: Wednesday, June 04, 2008 11:51 AM  
To: Cheung, William  
Cc: Lok, Siu Chuen Anthony; chausauming@td.gov.hk; Ho, Wai Luek Igor  
Subject: Re: KTD - Traffic Forecast for EIA (Speed Fraction)

Transport Department's agreement on use of 2031 traffic data for this EIA

Dear Mr. Cheung,

Please note that in our discussion, all the "speed" we are referring to are the speed limits currently in force. As regards its relationship with your operating speed, I shall leave it to you.

S M Chau  
SE/HP, TEK  
Transport Department  
Tel: 2399 2500  
Fax: 2397 8046

"Cheung, William" <William.Cheung@maunsell.aecom.com>  
04/06/2008 11:32

To: <chausauming@td.gov.hk>  
cc: "Ho, Wai Luek Igor" <Igor.Ho@maunsell.aecom.com>  
"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com>  
Subject: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Chau,

Further to our teleconversation this morning, we understand that TD has no major comments on the speed fraction of the submitted EIA traffic forecasts except for the links 185 and 186. Their operating speed should be 70km/hr instead of 80km/hr according to TD's record. As such, we would amend it accordingly and send it to you again for endorsement by lunch today (4 June 08).

Thank you very much for your kind and prompt assistance.

Best regards,

William

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***Annex 18.2***  
***Prior Agreement on***  
***Noise Impact Assessment***  
***From Government Authorities***

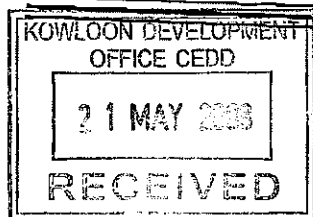


KD2/25/4  
CE/KC, LE/H, 27

## MEMO

From Director of Environmental Protection  
Ref. (4) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 21 May 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 5



Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)**  
**- Agreement of Noise Assessment Area, Noise Assessment Points and Road Traffic**  
**Noise Model Data Structure**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC:qc: 60022408/08.2-1452 dated 23.4.2008 (received on 28.4.2008) seeking our agreements on the captioned pursuant to the requirements under Clauses 3.4.6.2(i), 3.4.6.2(iii)(b) & 3.4.6.2(vi)(c1) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(i) – "Determination of Assessment Area - The area for noise impact assessment shall generally include all areas within 300m from the boundary of the scope of the EIA study as defined in sections 1.2 and 3.2. Subject to the agreement of the Director, the assessment area could be reduced accordingly if the first layer of noise sensitive receivers (NSRs), closer than 300m from the boundary of the Project, provides acoustic shielding to those receivers at further distance behind. Similarly, subject to the agreement of the Director, the assessment area shall be expanded to include NSRs at distance greater than 300m from the boundaries of Project which are noise sensitive if they may be affected by the construction and operation of the Project."

Clause 3.4.6.2(iii)(b) – "Identification of Noise Sensitive Receivers - The Applicant shall select assessment points to represent all identified NSRs for carrying out quantitative noise

assessment described below. The assessment points shall be agreed with the Director prior to the quantitative noise assessment. A map showing the location and description such as name of building, use, and floor of each and every selected assessment point shall be given. For planned noise sensitive land uses without committed site layouts, the Applicant can use the relevant planning parameters to work out representative site layouts for operational noise assessment purpose. However, such assumptions together with any constraints identified, such as setback of building, building orientation, extended podium, shall be agreed with the relevant responsible parties including Planning Department and Lands Department in accordance with section 6.3 of Annex 13 of the TM."

Clause 3.4.6.2(vi)(c1) - "The Applicant shall provide input data sets of traffic noise prediction model adopted in the EIA study as requested by the Director for the following scenarios :

- (1) unmitigated scenario at the assessment year;
- (2) mitigated scenario at the assessment year; and
- (3) prevailing scenario for indirect technical remedies eligibility assessment.

The data shall be in electronic text file (ASCII format) containing information on road segments, barriers and noise sensitive receivers. The data structure of the above file shall be agreed with the Director. CD-ROM(s) containing the above data shall be attached to the EIA report."

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Noise Control Ordinance.

5. Subject to the above caveats, we agree that the submissions identified in paragraph 2 above has partially fulfilled the specific requirements stipulated in Clause 3.4.6.2(i) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above with respect to Noise Assessment Area. However, we have comments on MCAL's submission in relation to Noise Assessment Points and Data Structure for Road Traffic Noise Model as stipulated in Annex A & Annex B respectively.

6. In views of our comments in Annexes A & B, the Noise Assessment Points and Data Structure for Road Traffic Noise Model are yet to be agreed as per the requirements under Clauses 3.4.6.2(iii)(b) & 3.4.6.2(vi)(c1) of the EIA Study Brief No.ESB-152/2006.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

Annex AComments on Identification of Noise Sensitive Receivers (NSRs) and Noise Assessment Points

- (a) For the planned noise sensitive land uses within Kai Tak Development without committed site layouts, it is stated that the representative site layouts based on those shown in the Draft PLUD Report dated 23.4.2008 have been used for operational noise assessment. However, please note the explicit requirements stipulated in S.3.4.6.2(iii)(b) of the Study Brief that "*such assumptions (on representative site layouts) together with any constraints identified, ..., shall be agreed with the relevant responsible parties including Planning Department and Lands Department in accordance with section 6.3 of Annex 13 of the TM.*". Please state clearly in the submission that the representative site layouts have been agreed with the relevant parties and provide documentary proof of such agreements. *h of*
- (b) As a general principle, the noise assessment points may be varied subject to the latest information available during the course of the EIA study. Please note that according to Para. 4.2.1 of EIAO Guidance Note No. 12/2005<sup>1</sup>, the area may be reduced or extended in accordance with the prevailing situation.

Sheet 1 of 11

- (c) A portion of the CDA site to the south of Diamond Hill MTR Station is within the assessment area and has direct line-of-sight to the proposed new link roads from/to Kai Tak Development but no assessment point is assigned.
- (d) Canossa Primary School (San Po Kong) has direct line-of-sight to the proposed new link roads from/to Kai Tak Development. Since the noise standards for educational institutions are more stringent than domestic premises, the noise impact on the school cannot be represented by domestic NSRs at Rhythm Garden.
- (e) Block 9 of Rhythm Garden is closer to the proposed new link roads from/to Kai Tak Development and the proposed landscaped elevated walkway than NSR N10.
- (f) PN1 – SHK Project (Rhine Garden under construction) has no figure on building height.
- (g) N7 – Luk Ching House of Choi Hung Estate is being hid under the legend.

Sheet 2 of 11

- (h) Holy Trinity Church at Ma Tau Chung Road has direct line-of-sight to Olympic Avenue, part of the proposed Road D1. An assessment point shall be added as the road traffic noise standard for places of public worship is more stringent than domestic premises.

Sheet 3 of 11

- (i) N6 – Richland Gardens is in Kowloon Bay instead of Ngau Chi Wan.

<sup>1</sup> EIAO Guidance Note No. 12/2005 on EPD's website at <http://www.epd.gov.hk/eia/hb/materials/GN12.doc>



Sheet 4 of 11

- (j) While PN66 – Site 5A4 is a planned NSR, it is also an existing NSR (for construction noise impact assessment if there are proposed construction works within 300m).

Sheet 8 of 11

- (k) PN92 – Site 3D4 proposed for commercial use with domestic plot ratio of 5.0. Depending on the proposed site layout, an assessment point facing the existing public cargo working area shall be added.

Annex BComments on Data Structure for Road Traffic Noise Model

- (1) The data sets only include the "unmitigated scenario at the assessment year" as stipulated in S.3.4.6.2(vi)(c)(c1) of the Study Brief. While we have no problem on the data structure for this part, you are required to provide input data sets of traffic noise prediction model for "mitigated scenario at the assessment year" and "prevailing scenario for indirect technical remedies eligibility assessment" as per the requirements stipulated in S.3.4.6.2(vi)(c)(c1) of the Study Brief.
- (2) As stipulated in Section S.3.4.6.2(vi)(c)(c1) of the Study Brief, the ELA report shall contain sample calculations and input parameters for 10 assessment points as requested by the Director. In this connection, please be advised to provide in the ELA report one sample calculation for a representative NSR at each of the following 10 sites:
- |                    |   |                    |
|--------------------|---|--------------------|
| 1A1 - Housing,     | 1A3 - School,                               | 1B1 - Housing,     |
| 1E1 - "OU(mixed)", | 1F1 - "OU(mixed)",                          | 1L3 - Residential, |
| 2B6 - Residential, | 3D4 - "Commercial" with Domestic P.R. 5.0   |                    |
| 5A4 - "CDA",       | CDA Site to the south of Sung Wong Toi Road |                    |
- (3) Moreover, since you have included the proposed hospital at Site 3C1 as planned NSR, you are reminded to investigate whether this NSR will have direct line-of-sight to the section of the proposed Road D4 under a landscaped elevated walkway along the runway. This situation has to be catered for in the noise model as necessary.

100-12/14  
100-12/17

○

**MEMO**

From Director of Environmental Protection  
Ref. (24) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 13 June 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 3

**Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction**

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Noise Assessment Points and Road Traffic Noise Model Data Structure**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC:qc: 60022408/08.2-1597 dated 3.6.2008 seeking our agreements on the captioned pursuant to the requirements under Clauses 3.4.6.2(iii)(b) & 3.4.6.2(vi)(c1) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

**EIA Study Brief No. ESB-152/2006**

Clause 3.4.6.2(iii)(b) – "Identification of Noise Sensitive Receivers - The Applicant shall select assessment points to represent all identified NSRs for carrying out quantitative noise assessment described below. The assessment points shall be agreed with the Director prior to the quantitative noise assessment. A map showing the location and description such as name of building, use, and floor of each and every selected assessment point shall be given. For planned noise sensitive land uses without committed site layouts, the Applicant can use the relevant planning parameters to work out representative site layouts for operational noise assessment purpose. However, such assumptions together with any constraints identified, such as setback of building, building orientation, extended podium, shall be agreed with the relevant responsible parties including Planning Department and Lands Department in accordance with section 6.3 of Annex 13 of the TM."

Clause 3.4.6.2(vi)(c1) – "The Applicant shall provide input data sets of traffic noise prediction model adopted in the EIA study as requested by the Director for the following scenarios :

- (1) unmitigated scenario at the assessment year;
- (2) mitigated scenario at the assessment year; and
- (3) prevailing scenario for indirect technical remedies eligibility assessment.

The data shall be in electronic text file (ASCII format) containing information on road segments, barriers and noise sensitive receivers. The data structure of the above file shall be agreed with the Director. CD-ROM(s) containing the above data shall be attached to the EIA report."

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Noise Control Ordinance.
5. Subject to the above caveats and the agreement to the representative site layouts from the relevant responsible parties, we agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirements stipulated in Clauses 3.4.6.2(iii)(b) & 3.4.6.2(vi)(c1) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above.
6. Nevertheless, we have some observations on the entries of the road traffic noise model as given in Annex A. You are advised to tidy up the model for submission together with the EIA report.



(David COX)  
Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

## Observations on the entries of the road traffic noise model

### Road Classification, Extent and Configuration

- (a) In the EIA report, the classification of roads, i.e., either expressway, trunk road, primary distributor road or district distributor road, should be agreed with TD. In particular, whether Road L2, which is part of the ring road system linking Road D1 and Road D2, be classified as a district distributor road; and whether the link roads to and from San Po Kong be classified as part of the district distributor Road D1.
- (b) For CKR and Road T2, the key assumptions on their extent and configuration (like tunnel sections, enclosure at portal and road network at interchanges) should be sound and adequate. Involvement or agreement of relevant parties like TD, HyD or the other project team of CEDD should be clearly documented in the EIA report.

### Traffic Forecast Data

- (c) The traffic forecast data should also be agreed with TD and clearly documented in the EIA report.

### Traffic Speed

- (d) The existing speed limit at some sections of Kwun Tong Bypass seems to be 70 km/h instead of 80 km/h. E.g. from road segments No. 1211 to 1214 and from road segments No. 2225 to 2234 in the mitigated scenario.

### Noise Screening Structure

- (e) Some of the existing noise screening structures on Kwun Tong Bypass (e.g. between International Trade & Exhibition Centre and Richland Gardens) seem to be louvres instead of solid screens. According to "Calculation of Road Traffic Noise", the noise screening effect of these louvres can be determined by using the method of "equivalent barrier segment".

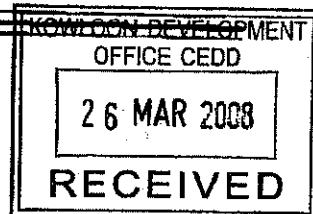
KD 2/2/4  
CE/KZ, SE/H, Z/

## MEMO

From Director of Environmental Protection  
Ref. (18) in Ax(13) to EP2/K19/S3/10 Pt.6  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 25 March 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 3

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction



EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Assessment Methodology for Ground-borne Noise

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH.MPLL:cssk:60022408/08.2-1216 dated 5.3.2008 seeking our agreement on the captioned pursuant to the requirements under Clauses 3.4.6.2(v)(d) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(v)(d) - *"If tunneling works will be involved, noise impact (including air-borne noise and ground-borne noise) associated with the operation of powered mechanical equipment, in particular tunnel boring machine or equivalent, shall be assessed. If tunnel boring machine is used and it is likely that ground-borne noise will affect NSRs, the criteria and assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."*

4. It is clearly stated in the concerned EIA study brief clause, only if tunnel boring machine is used and it is likely that ground-borne noise will affect NSRs, then the criteria and assessment methodology shall be agreed with us. However, it is noted that your consultant is of the view that "Given larger separation distance can attenuate the ground borne noise levels, the ground borne noise impact arising from TPM is not anticipated". On this basis, I presume that you are NOT seeking our prior agreement to the criteria and assessment methodology for ground-borne noise. In fact, your consultant has not proposed any criteria nor any concrete assessment methodology for our agreement.

5. Nevertheless, as outlined in Section 1.3 of the Study Brief, the Project includes various individual designated projects (DP) defined under Schedule 2 of the EIAO, including at least some new distributor roads. You have to identify: (i) those DPs which he intends to apply for environmental permits by referring to the EIA report to be prepared under this Project; and (ii) those DPs which separate EIAs will be conducted, either by CEDD or by others.

7. For those DPs under (i), like new distributor roads, you shall clarify whether or not TBM will be used for any tunnel sections. If affirmative, you shall assess the noise impact in accordance with Section 3.4.6.2(v)(d) of the Study Brief. For those DPs under (ii), like Shatin to Central Link with a separate Study Brief No. ESB-106/2002 issued, since detailed assessments are to be conducted separately, we have no adverse comment on your consultant's proposed approach of screening out some of the NSRs from quantitative noise assessment based on a certain horizontal separation distance from TBM operation. Nevertheless, you shall still note the relevant comments given in the Annex A.

  
(Alex TANG)

Ag. Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

**Annex A**

1. We have no adverse comment on your consultant's proposed approach of making reference to the approved EIA reports in the EIAO Register regarding potential ground-borne noise impacts from TBM. Nevertheless, the Project Proponent shall, in accordance with Section 11 of the TM, state in the EIA report whether or not:
  - the relevant findings of the approved reports are still valid;
  - the project is covered by those reports, or is similar in nature, scale and locational characteristics of projects covered by those reports; and
  - necessary additions, amendments and adjustments have been made to take into account any changes in the environment, assessment criteria and methodologies, or in the nature, scale, location and design of the project.
2. The Project Proponent shall clarify whether or not TBM will be used for any other tunnel sections within the boundary of the Project, like Central Kowloon Route, Road T2 or some local distributor roads. If affirmative, he shall assess the noise impact in accordance with Section 3.4.6.2(v)(d) of the Study Brief.
3. If TBM is used and it is likely that ground-borne noise will affect NSRs, the Project Proponent shall state the assessment criteria to be adopted in the assessment and then assess the construction ground-borne noise impact from TBM operation accordingly.
4. According to the provided Drawing No. SCL/SK357B for the SCL alignment at the Kai Tak area, two sections are marked as "TBM tunnel". One of the sections is located between Site 1A (residential use) and Site 1E (mixed use with residential element) hence the potential noise impact from operation of TBM on both sites has to be discussed. The other section is along To Kwa Wan Road which the Project Proponent has to clarify whether or not this section is within the "Assessment Area" of the Project.
5. While we have no adverse comment on your proposed approach of screening out some of the NSRs from quantitative noise assessment based on a certain horizontal separation distance from TBM operation, his assumption, "The TBM will be at least 25m away from the sensitive receiver (Site 1A)", is however not sound and adequate. In order to substantiate your assumption, you shall include in the EIA report layout plans of suitable scale showing the locations of the concerned NSRs and the construction sites (e.g. tunnel alignment). You shall also state clearly that detailed noise assessment will need to be addressed in further detailed EIA study (as stipulated in Section 2.1(xiii) of the Study Brief).
6. The Project Proponent shall include in the EIA report a programme showing whether or not the planned NSRs concerned will be occupied before, during or after operation of TBM.
7. As a general requirement, the assessment shall be based on the best and latest information available during the course of the EIA study. (Section 3.4.1 of Study Brief)



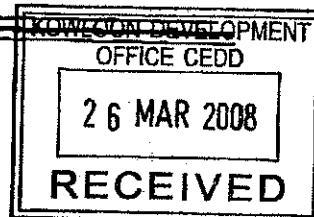
KB2/24/4  
CE/CE, ESB/H. 27

## MEMO

From Director of Environmental Protection  
Ref. (19) in Ax(13) to EP2/K19/S3/10 Pt.6  
Tel. No. 2835 1114  
Fax. No. 2591 0558  
Date 25 March 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 3

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction



EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Assessment Methodology for Rail Noise

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:MPLL:cssk:60022408/08.2-1218 dated 5.3.2008 seeking our agreement on the captioned pursuant to the requirements under Clause 3.4.6.2(vi)(a)(a1) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

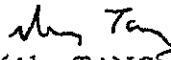
EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(vi)(a)(a1) - " *The Applicant shall assess the impacts due to the operation of the proposed Shatin-to-Central Link and the associated facilities within the "Assessment Area" in the course of the EIA study, with respect to the acceptable levels contained in Table 1A in Annex 5 in the TM. The assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment.* "

4. Our views below on the rail noise assessment methodology are only provided for the fulfilment of the specific requirements stipulated in said Clauses in the EIA Study Brief No.ESB-152/2006 and shall not pre-empt our future decision to the EIA report approval process for the Kai Tak Development and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation including the Noise Control Ordinance.

5. Based on the information provided in MCAL's letters and subject to caveats raised in paragraph 4 above, our views are:

- For the proposed Shatin to Central Link (SCL) with a separate Study Brief No. ESB-106/2002 issued, since detailed assessments are to be conducted separately, we have no adverse comment on the proposed qualitative assessment, saying, "The SCL line would be underground and hence operational railway noise impact is not expected". Nevertheless, you shall still note the relevant comments given in the Annex A.
- For the proposed EFTS assuming a rail based option, you have to indicate forefront whether you intent: (i) to apply for environmental permits by referring to the EIA report to be prepared under this Project, or (ii) a separate EIA will be conducted, either by CEDD or by others. In the event of (i), you shall assess the noise impact in detail in accordance with Section 3.4.6.2(vi)(a) of the Study Brief. In the event of (ii), since detailed assessments are to be conducted separately, we have no adverse comment on the proposed approach of screening out NSRs from quantitative noise assessment based on a horizontal separation of 25m from the rail line. Nevertheless, you shall still note the relevant comments given in the Annex A.

  
(Alex TANG)

Ag. Senior Environmental Protection Officer  
for Director of Environmental Protection

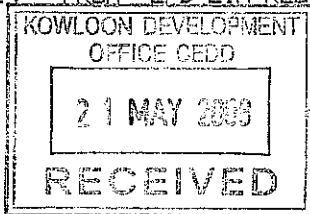
c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal – S(MA)4

**Annex A**

1. We have no adverse comment on your proposed approach of making reference to the approved EIA reports in the EIAO Register regarding potential noise impacts from railway operation in urban area. Nevertheless, the Project Proponent shall, in accordance with Section 11 of the TM, state in the EIA report whether or not:
  - the relevant findings of the approved reports are still valid;
  - the project is covered by those reports, or is similar in nature, scale and locational characteristics of projects covered by those reports; and
  - necessary additions, amendments and adjustments have been made to take into account any changes in the environment, assessment criteria and methodologies, or in the nature, scale, location and design of the project.
2. While we have no adverse comment on your proposed qualitative assessment, saying, "The SCL line would be underground and hence operational railway noise impact is not expected", you shall substantiate your assumption by including in the EIA report layout plans of suitable scale showing the underground alignment of SCL. You shall also state clearly that detailed noise assessment will need to be addressed in further detailed EIA study (as stipulated in Section 2.1(xiii) of the Study Brief).
3. While we have no adverse comment on your proposed approach of screening out NSRs from quantitative noise assessment based on a horizontal separation of 25m from the rail line, your assumption, "The shortest horizontal distance between the rail line and NSR is 25m", is however not sound and adequate. In order to substantiate your assumption, you shall include in the EIA report layout plans of suitable scale showing the locations of the concerned NSRs and the rail line.
4. As a general requirement, the assessment shall be based on the best and latest information available during the course of the EIA study. (Section 3.4.1 of Study Brief)
5. As a related issue, railway stations and railway depots are fixed noise sources. The assessment criteria and methodology for fixed noise sources are stipulated in Section 3.4.6.2(vi)(b)(b1) of the Study Brief.



KD 2/25/4  
ce/ce, se/H 27

## MEMO

<b>From</b> Director of Environmental Protection <b>Ref.</b> (5) in Ax(13) to EP2/K19/S3/10 Pt.8 <b>Tel. No.</b> 2835 1106 <b>Fax. No.</b> 2591 0558 <b>Date</b> 21 May 2008	<b>To</b> Project Manager (Kowloon), CEDD <b>(Attn.:</b> Mr. C.B. Mak <b>Your Ref.</b> (53) in KD 2/25/4 Pt.1 <b>dated</b> 1.3.2007 <b>Fax. No.</b> 2369 4980 <b>Total Pages</b> 2
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**Agreement No. CE 35/2006 (CE)**  
**Kai Tak Development Engineering Study cum**  
**Design and Construction of Advance Works**  
**- Investigation, Design and Construction**

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)**  
**- Agreement of Noise Criteria for Noise from Open Air Entertainment Activities**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.3-1503 dated 7.5.2008 requesting for our agreement on the captioned pursuant to the requirements under Clause 3.4.6.2(vi)(b)(b2) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(vi)(b)(b2) - "The Applicant shall present the noise levels in Leq (30 min) at the NSRs at various representative floor levels (in m P.D.) on tables and plans of suitable scale. A quantitative assessment at the NSRs for the fixed noise source(s) shall be carried out and compared against the criteria set out in Table 1A of Annex 5 of the TM. For noise matters not fully listed in Table 1A of Annex 5 of the TM, the criteria and assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."

4. Please note that our comments below on the Noise Criteria for Noise from Open Air Entertainment Activities are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clause 3.4.6.2(vi)(b)(b2) and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Noise Control Ordinance.

5. Subject to the above caveats, we agree the proposed noise criteria for noise from open air entertainment activities stipulated in the submission identified in paragraph 2 pursuant to the specific requirement in clause 3.4.6.2(vi)(b)(b2) of the EIA Study Brief No ESB-152/2006 mentioned in para.3.

6. Nevertheless, you are reminded that the assessment methodology shall be agreed with the Director if it is not fully listed in Table 1A of Annex 5 of the ELAO-TM in accordance with the requirement under Clause 3.4.6.2(vi)(b)(b2) of the EIA Study Brief No.ESB-152/2006.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

## MEMO

From Director of Environmental Protection  
 Ref. (13) in Ax(13) to EP2/K19/S3/10 Pt.8  
 Tel. No. 2835 1106  
 Fax. No. 2591 0558  
 Date 2 June 2008

To Project Manager (Kowloon)  
 (Attn.: Mr. C.B. Mak)  
 Your Ref. (53) in KD 2/25/4  
 dated 1.3.2007 Fax. No. 2369 4980  
 Total Pages 2

Maunsell Consultants Asia Ltd.	
Received 02 JUN 2008	
Reg. No.	3907
Proj. No.	60022408/
ISD <input checked="" type="checkbox"/> ML CW AKWL <input checked="" type="checkbox"/> MCP SAR FSKY SHRS <input checked="" type="checkbox"/> TKH <input checked="" type="checkbox"/> YV HTS	Sign Off
WCH JIL GWN PMC	
Project Eng.	IWLH
Others	
Copied To	
Reply Date	

**Agreement No. CE 35/2006 (CE)  
 Kai Tak Development Engineering Study cum  
 Design and Construction of Advance Works  
 - Investigation, Design and Construction**

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
 - Agreement of Assessment Methodology for Noise from Open Air Entertainment  
 Activities**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.2-1562 dated 23.5.2008 requesting for our agreement on the captioned pursuant to the requirements under Clause 3.4.6.2(vi)(b)(b2) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(vi)(b)(b2) – *"The Applicant shall present the noise levels in Leq (30 min) at the NSRs at various representative floor levels (in m P.D.) on tables and plans of suitable scale. A quantitative assessment at the NSRs for the fixed noise source(s) shall be carried out and compared against the criteria set out in Table 1A of Annex 5 of the TM. For noise matters not fully listed in Table 1A of Annex 5 of the TM, the criteria and assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."*

4. Please note that our comments below on the Assessment Methodology for Noise from Open Air Entertainment Activities are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clause 3.4.6.2(vi)(b)(b2) and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area

under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Noise Control Ordinance.

5. Subject to the above caveats, we agree the proposed assessment methodology for noise from open air entertainment activities stipulated in the submission identified in paragraph 2 pursuant to the specific requirement in clause 3.4.6.2(vi)(b)(b2) of the EIA Study Brief No ESB-152/2006 mentioned in para.3.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

# MEMO

From Director of Environmental Protection  
Ref. (20) In Ax(13) to EP2/K19/S3/10 Pt.6  
Tel. No. 2835 1114

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)

Your Ref. (53) In KD 2/25/4 Pt.1

dated 1.3.2007 Fax. No. 2369 4980

Total Pages 4

Fax No. 2591 0558  
Date 25 March 2008

Received 26 MAR 2008  
Reg. No. 3280

File No. 60022408/

TS	DLO	EMSC	ML	CW	Sign
AKWL	MCP	SAR	FSKY	OFF	
SHRS	TKH	TKST	YY	HTS	
WCKH	JYL	CWN	PMC		

Project Eng. IWLH

Others

Copied To ENSR - Peter Lee

Reply Date

## Agreement No. CE 35/2006 (CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Assessment Methodology for Helicopter Noise

Mr. Chan	AYK	FCCM	Sign
	TYUT	JLAM	Off
Env. Consultant			
Others			
Reply Date			

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:MPLL:cssk:60022408/08.2-1217 dated 5.3.2008 seeking our agreement on the captioned pursuant to the requirements under Clause 3.4.6.2(vi)(d)(d1) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

### EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(vi)(d)(d1) - "The Applicant shall carry out assessment of the noise impacts arising from the operation of the proposed heliport and related off site facilities with respect to the criteria set in Table 1A of Annex 5 of the TM. The impact shall cover helicopter operation at the heliport and during its approach and departure from the heliport. Where applicable, noise contours should be provided to facilitate appreciation of the extent of the potential noise impacts. The Applicant shall evaluate the reasonable worst-case scenarios in terms of flight types, flight paths, flight frequency and flight hours. For noise matters not fully listed in Table 1A of Annex 5 of the TM, the criteria and assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."


4. Our views below on the helicopter noise assessment methodology are only provided for the fulfilment of the specific requirements stipulated in said Clauses in the EIA Study Brief No.ESB-152/2006 and shall not pre-empt our future decision to the EIA report approval process for the Kai Tak Development and any future related EIA studies within the Kai Tak Development EIA study area under



+852 2147 0894

the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation including the Noise Control Ordinance.

5. Based on the information provided in MCAL's letters and subject to caveats raised in paragraph 4 above, we have no adverse comment on your proposed approach of making reference to the approved EIA reports in the EIAO Register regarding potential noise impacts from helicopter operation in urban area. Nevertheless, you shall still note the relevant comments given in the Annex A.

  
(Alex TANG)

Ag. Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal – S(MA)4

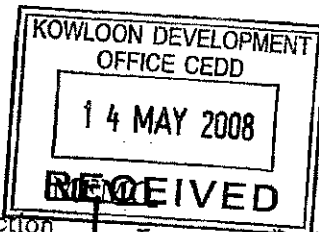
Annex A

1. As stipulated in Section 2.1(xiii) of the Study Brief, the Project Proponent shall identify any individual project(s) that fall under Schedule 2 of the EIAO and to ascertain whether the EIA study has adequately addressed the environmental impacts of those projects; and, where necessary, to identify the outstanding issues that need to be addressed in any further detailed EIA study. Hence, the Project Proponent shall forefront identify whether or not the proposed heliport itself is a designated project under Schedule 2 of the EIAO.
2. In the event that the Project Proponent identifies that the proposed heliport itself is a designated project under Schedule 2 of the EIAO, he has to indicate whether he intends: (i) to apply for environmental permits by referring to the EIA report to be prepared under this Project, or (ii) a separate EIA will be conducted, either by himself or by others.
3. We have no adverse comment on your proposed approach of making reference to the approved EIA reports in the EIAO Register regarding potential noise impacts from helicopter operation in urban area. Nevertheless, the Project Proponent shall, in accordance with Section 11 of the TM, state in the EIA report whether or not:
  - the relevant findings of the approved reports are still valid;
  - the project is covered by those reports, or is similar in nature, scale and locational characteristics of projects covered by those reports; and
  - necessary additions, amendments and adjustments have been made to take into account any changes in the environment, assessment criteria and methodologies, or in the nature, scale, location and design of the project.
4. Your assumption, saying, "the closest residential NSR is about 700m", shall be substantiate by including in the EIA report layout plans of suitable scale showing the recommended land uses in the vicinity of the proposed heliport.
5. While the Project Proponent has pointed out that the criteria for helicopter noise is L<sub>max</sub> 90 dB(A) for offices and L<sub>max</sub> 85 dB(A) for domestic premises, hotels, etc. during 0700-1900 hours, he has not addressed in his proposed assessment methodology whether or not any offices, hotels, etc. in the vicinity of the proposed heliport do rely on opened windows for ventilation. If they do, the noise impact on those premises shall be assessed quantitatively.
6. Moreover, the Project Proponent has not addressed in his proposed assessment methodology whether or not the operation hours of the proposed heliport do fall within the period from 0700 to 1900 hours, such that the criteria set in Table 1 of Annex 5 of the TM are applicable.
7. As a general requirement, the assessment shall be based on the best and latest information available during the course of the EIA study. Any assumptions to be adopted are to be sound and adequate. The operational parameters of the proposed helicopter shall be defined or confirmed by relevant authorities like Director of Civil Aviation. The Project Proponent shall evaluate the reasonable worst-case scenarios in terms of flight types, flight paths, flight frequency and flight hours. (Section 3.4.1, 3.4.6.2(iv)(a) and 3.4.6.2(vi)(d)(d1) of Study Brief)

8. The assumption on termination of helicopter landing/take-off near the existing building of Hong Kong Aviation Club on or before 2012 shall be sound and adequate. In this respect, the Project Proponent shall seek advice from Director of Lands on related matters, like the land status of the existing helipads, or expiry date or termination clause of any existing agreements between the Government and Hong Kong Aviation Club on using the existing helipads. In the event that the said assumption is not sound and adequate, the scenario of having the existing helipads in use continuously has to be assessed accordingly.
9. The assessment shall be based on the best and latest information available during the course of the EIA study. In this respect, the Project Proponent shall note the development of any proposal for continuation of the current use as helipads at the existing location near Hong Kong Aviation Club<sup>1</sup> or any proposal for re-provisioning of those helipads within Kai Tak. (Section 3.4.1 of Study Brief)

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<sup>1</sup> See Agenda Item 4 of Minutes of 367<sup>th</sup> Meeting of the Metro Planning Committee held on 1.2.2008 available on the website of Town Planning Board



KD2/25/4  
CE/KC, SE/H, 27

From	Director of Environmental Protection		To	Project Manager (Kowloon), CEDD	
Ref.	(9)	In	Ax(13) to EP2/K19/S3/10 Pt.7	Attn.:	Mr. C.B. Mak
Tel. No.	2835 1106		Your Ref.	(53)	in
Fax. No.	2591 0558		dated	1.3.2007	Fax. No.
Date	13 May 2008		Total Pages	3	

**Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction**

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Assessment Methodology for Marine Traffic Noise (including noise from  
typhoon shelters)**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: TWLH:ALSC: qc:60022408/08.3-1500 dated 7.5.2008 requesting for our agreement on the captioned pursuant to the requirements under Clause 3.4.6.2(vi)(e)(e1) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.6.2(vi)(e)(e1) – "The Applicant shall assess marine traffic noise impacts including at least noise from operation activities on the moored vessels in typhoon shelters and manoeuvring of vessels including cruise vessels during operational phase of the proposed development. For noise matters not fully listed in Table 1A of Annex 5 of the TM, the criteria and assessment methodology shall be agreed with the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."

4. Please note that our comments on the Assessment Methodology for Marine Traffic Noise are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clause 3.4.6.2(vi)(e)(e1) and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Noise Control Ordinance.

5. Subject to the above caveats, we agree the proposed assessment methodology for marine traffic noise stipulated in the submission identified in paragraph 2 pursuant to the specific requirement in Clause 3.4.6.2(vi)(e)(e1) of the EIA Study Brief No ESB-152/2006 mentioned in para.3.

6. Nevertheless, please note our advisory comments in Annex A about the discussions of the marine traffic noise impact provided in the submission.



(David COX)  
Senior Environmental Protection Officer  
for Director of Environmental Protection

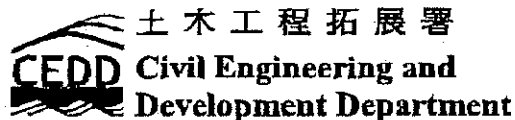
c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)4

Annex AAdvisory Comments on the discussions of the marine traffic noise impact

- (a) While we agree with your proposed assessment methodology for marine traffic noise which is consistent with the methodology adopted for the previous SEKDCFS EIA study having similar issue, you should, in accordance with Section 11 of the TM, state in the EIA report whether or not:
- (i) the relevant findings of the approved reports are still valid;
  - (ii) the project is covered by those reports, or is similar in nature, scale and locational characteristics of projects covered by those reports; and
  - (iii) necessary additions, amendments and adjustments have been made to take into account any changes in the environment, assessment criteria and methodologies, or in the nature, scale, location and design of the project.
- (b) Re. noise from marine traffic, in the EIA report, the discussion on noise from various kinds of vessel manoeuvring shall also include "cruise vessels", which is explicitly stipulated in Section 3.4.6.2(vi)(e)(e1) of the Study Brief
- (c) Re. the 1st paragraph on P.2 of MCAL's letter, please note that the existing Kwun Tong Typhoon Shelter is located to the southeast of Site 3D4.
- (d) Re. noise from To Kwa Wan typhoon shelter, besides the existing NSR (i.e. Holy Carpenter Primary School), the EIA report should also discuss the potential noise impact from the typhoon shelter on a representative planned residential NSR in the vicinity.



Web site 網址 : <http://www.cedd.gov.hk>  
 E-mail 電子郵件: [cbmak@cedd.gov.hk](mailto:cbmak@cedd.gov.hk)  
 Telephone 電話 : (852) 2301 1455  
 Facsimile 傳真 : (852) 2369 4980  
 Our reference 本署檔號: (16) in KD 2/25/4 pt 14  
 Your reference 來函檔號: IWLH:ALSC:qc:60022408/08.2-1620

Maunsell Consultants Asia Ltd  
 8/F Grand Central Plaza, Tower 2  
 138 Shatin Rural Committee Road  
 Shatin, N.T.  
 Hong Kong

(Attn: Mr. Igor HO)

Dear Sirs,

九龍拓展處  
 Kowloon Development Office

香港九龍尖沙咀麼地道 68 號  
 帝國中心 7 樓

7/F, Empire Centre,  
 68 Mody Road,  
 Tsim Sha Tsui,  
 Kowloon, Hong Kong

Maunsell Consultants Asia Ltd.		Tsim Sha Tsui, Kowloon, Hong Kong	
Received	20 JUN 2008		
Reg. No.	4074		
File No.	600224081		
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AKWL	MCP	SAR	FSKY Off
SHRS	TKH	TKST	YY HTS
WCKH	JYL	CWN	PMC
Project Eng. IWLH/ALSC			
Others			
Copied To ZWSR - Peter Lee			
Reply Date			

20 June 2008

**Agreement No. CE 35/2006(CE)**  
**Kai Tak Development Engineering Study**  
**cum Design and Construction of Advance Works**  
**- Investigation, Design and Construction**

**EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)**  
**- Confirmation on Validity of Construction Plant Inventory**

I refer to your letter dated 10 June 2008.

Given the proposed construction plant inventories are considered reasonable for the purpose of the above EIA study, I would like to confirm my agreement on the validity of the construction plant list.

Yours faithfully,

(C B MAK)

for Project Manager (Kowloon)  
 Civil Engineering and Development Department

Transport Department's agreement on use of 2031 traffic data for this EIA

To: Walter WY Leung/CEDD/HKSARG@CEDD  
cc: Alex HK TANG/EPD/HKSARG@EPD  
Anthony.Lok@maunsell.aecom.com  
CB Mak/CEDD/HKSARG@CEDD  
igor.ho@maunsell.aecom.com  
Peter PC Mok/CEDD/HKSARG@CEDD  
Peter-ct.lee@maunsell.aecom.com  
William.Cheung@maunsell.aecom.com  
Sau Ming CHAU/TD/HKSARG@TD  
Henry KN HUI/TD/HKSARG@TD  
Subject: Re: KTD Traffic Forecast for EIA - Comments from TD連結  
<Notes:///482568B30016FECB/38D46BF5E8F08834852564B500129B2C/C0F70902543652CB4825742B0011D29F>

Edms No.:01QF2 Doc. Src.:

Dear Walter

I refer to your mail dated 14.4.2008 and have no further comment on the 2031 forecast traffic flow submitted by the Consultants.

Regards  
RoyTse  
E/HP1/K,TD  
2399 2513

Walter WY Leung@CEDD

14/04/2008 11:42

To: Roy Mang Hin TSE/TD/HKSARG@TD  
cc: CB Mak/CEDD/HKSARG@CEDD  
Peter PC Mok/CEDD/HKSARG@CEDD  
igor.ho@maunsell.aecom.com  
"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com> William.Cheung@maunsell.aecom.com  
Peter-ct.lee@maunsell.aecom.com Alex HK TANG/EPD/HKSARG@EPD  
Subject: KTD Traffic Forecast for EIA - Comments from TD

Dear Roy,

I refer to your reply dated 7 April 2008 (attached below) and our telephone conversation this morning.

It is noted that you have no comment on the modelling approach and assessment methodology for traffic forecast for EIA. As required under the EIA Study Brief for Kai Tak Development (last paragraph of section 3.4.5.3(iii)(b) and section 3.4.6.2(iv)(a) refer), we should be grateful for your confirmation regarding validity of the assumptions adopted and the magnitude of the activities (e.g. traffic mix and volume on a road etc.) and traffic flow for the various assessments of the study.

Please let me know if you have any query.

Regards,

Walter LEUNG  
for Project Manager (Kowloon)  
Civil Engineering and Development Department  
(tel: 2301 1439)



Transport Department's agreement on use of 2031 traffic data for this EIA

From: Sau Ming CHAU [mailto:chausauming@td.gov.hk]  
Sent: Wednesday, June 04, 2008 2:27 PM  
To: Lok, Siu Chuen Anthony  
Cc: chausauming@td.gov.hk; Ho, Wai Luek Igor; Cheung, William  
Subject: Re: FW: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Lok,

With reference to your preceding mail 04/06/2008 12:04, agreement is confirmed.

S M Chau  
SE/HP, TEK  
Transport Department  
Tel: 2399 2500  
Fax: 2397 8046

"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com>  
04/06/2008 12:04

To: <chausauming@td.gov.hk>  
cc: "Cheung, William" <William.Cheung@maunsell.aecom.com>  
"Ho, Wai Luek Igor" <Igor.Ho@maunsell.aecom.com>  
Subject: FW: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Chau

Please find attached the replacement page with the speed for links 185 and 186 amended to 70 km/hr for your further review.

As per EPD's comment, we should be grateful if you would confirm by today that TD agree to use the 2031 traffic forecasts, including the speed fraction, submitted via our letter ref. IWLH:SYH:cask:60022408/08.3-1288 dated 19 March 2008 amended by the replacement page attached to this email, in the EIA Study for KTD.

Thank you very much for your assistance!

Regards,  
Anthony Lok  
Engineer  
Maunsell Consultants Asia Ltd  
10/F Grand Central Plaza Tower 2  
138 Shatin Rural Committee Road, Shatin, Hong Kong  
T (852) 2170 6454

---

From: Sau Ming CHAU [mailto:chausauming@td.gov.hk]  
Sent: Wednesday, June 04, 2008 11:51 AM  
To: Cheung, William  
Cc: Lok, Siu Chuen Anthony; chausauming@td.gov.hk; Ho, Wai Luek Igor  
Subject: Re: KTD - Traffic Forecast for EIA (Speed Fraction)

Transport Department's agreement on use of 2031 traffic data for this EIA

Dear Mr. Cheung,

Please note that in our discussion, all the "speed" we are referring to are the speed limits currently in force. As regards its relationship with your operating speed, I shall leave it to you.

S M Chau  
SE/HP, TEK  
Transport Department  
Tel: 2399 2500  
Fax: 2397 8046

"Cheung, William" <William.Cheung@maunsell.aecom.com>  
04/06/2008 11:32

To: <chausauming@td.gov.hk>  
cc: "Ho, Wai Luek Igor" <Igor.Ho@maunsell.aecom.com>  
"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com>  
Subject: KTD - Traffic Forecast for EIA (Speed Fraction)

Dear Mr. Chau,

Further to our teleconversation this morning, we understand that TD has no major comments on the speed fraction of the submitted EIA traffic forecasts except for the links 185 and 186. Their operating speed should be 70km/hr instead of 80km/hr according to TD's record. As such, we would amend it accordingly and send it to you again for endorsement by lunch today (4 June 08).

Thank you very much for your kind and prompt assistance.

Best regards,

William

DISCLAIMER: This e-mail and any attachments to it may contain privileged or confidential information that is intended only for the original addressees. If you have received these in error, please notify the sender immediately, delete any digital copies and destroy any paper copies. Any unauthorized use or dissemination is prohibited. Maunsell accepts no liability for any errors or omissions in the context of this message as a result of transmission over the Internet. Any information contained herein that is not transmitted via secure, tamper-proof technology shall not be construed as being a formal disclosure or commitment and relied upon unless advised or agreed in writing by an authorized representative of Maunsell.

**Food and Health Bureau agreement on the proposed hospital site will provide with window insulation and air conditioning**

From: Almaz TY LEUNG [mailto:atyleung@fhb.gov.hk]  
Sent: Monday, June 16, 2008 2:29 PM  
To: Lok, Siu Chuen Anthony  
Cc: Gloria PK CHUNG; dypli@ha.org.hk  
Subject: RE: EIA Report for Kai Tak Development  
Importance: High

Dear Anthony,

Please note that all our new hospitals /clinics are provided with central air-conditioning and the windows are normally kept closed all the time. However, I should be grateful if you would advise whether we still need to lay out the noise sensitive uses to avoid them facing the major traffic noise source. Our preference obviously would be to keep maximum planning flexibility at this stage.

Thanks,  
Almaz

"Lok, Siu Chuen Anthony" <Anthony.Lok@maunsell.aecom.com>  
10/06/2008 11:19

To "Almaz TY LEUNG" <atyleung@fhb.gov.hk>  
cc "Gloria PK CHUNG" <gpkchung@fhb.gov.hk>  
Subject RE: EIA Report for Kai Tak Development

Dear Almaz,

As requested, we are pleased to enclose the relevant section of the EIA Report for Kai Tak Development together with the associated figures for your comment.

In view of the tight EIA programme, we shall be grateful to receive your comment by 12 Jun 08. Should you have any technical queries, please do not hesitate to contact our Mr. Peter Lee on 3105 8297.

Thank you very much for your assistance!

Regards,  
Anthony Lok  
Engineer  
Maunsell Consultants Asia Ltd  
10/F Grand Central Plaza Tower 2  
138 Shatin Rural Committee Road, Shatin, Hong Kong  
T (852) 2170 6454

***Annex 18.3***

---

***Prior Agreement on  
Water Quality Assessment  
From Government Authorities***



## MEMO

Maunsell Consultants Asia Ltd.	
Received	27 MAY 2008
(Kowloon), CEDD	
File No.	60022408/
IS DLO	ENSC ML GW
AKWL	MCP SAR FSKY
2009-10-01	YY HTS
WCKH	JYL CWN PMC
Project Eng.	JWH
Others	ALSC
Copied To	ZNSR - Peter
Reply Date	

From Director of Environmental Protection  
 Ref. (7) in Ax(13) to EP2/K19/S3/10 Pt.8  
 Tel. No. 2835 1106  
 Fax. No. 2591 0558  
 Date 27 May 2008

To Project Manager  
 (Attn.: Mr. C.B. Mak  
 Your Ref. (53) in KD 2/25/4 Pt.1  
 dated 1.3.2007 Fax. No.  
 Total Pages 3

Agreement No. CE 35/2006 (CE)  
 Kai Tak Development Engineering Study cum  
 Design and Construction of Advance Works  
 - Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
 - Water Quality Assessment Methodology

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.3-1502 dated 7.5.2008 seeking our agreement on the captioned pursuant to the requirements under Clauses 3.4.7.6(h), 3.4.7.6(p) and Appendix D of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

EIA Study Brief No. ESB-152/2006

- (a) Clause 3.4.7.6(h) - "Assessment of the cumulative impacts due to other related concurrent and planned projects, activities or pollution sources within a boundary around the study area to be agreed by the Director prior to commence of the assessment, that may have a bearing on the environmental acceptability of the Project. This shall include the potential cumulative construction and operational water quality impact arising from, inter alia, the associated works of the Project, the activities and planned projects to be approved by the Director when the programme of the Project and associated works can be confirmed by the Applicant."
- (b) Clause 3.4.7.6(p) - "Predication and quantification of cumulative impacts due to other dredging, filling or dumping activities within a boundary around the Study Area to be agreed by the Director prior to commence of the assessment."

- (c) Appendix D, under heading "Model details – Simulation", Item 2 – *"The sediment transport module for assessing impacts of sediment loss due to marine works shall include the processes of settling, deposition and re-erosion. The values of the modelling parameters shall be agreed with the Director. Contaminants release and DO depletion during dredging and dumping shall be simulated by the model."*
- (d) Appendix D, under heading "Model details – Simulation", Item 4 – *"The models shall at least cover the Hong Kong waters, the Pearl Estuary and the Dangan Channel to incorporate all major influences on hydrodynamic and water quality. A fine grid model may be used for detailed assessment of this study. It shall either be linked to a far field model or form part of a larger model by gradual grid refinement. The coverage of the fine grid model shall be properly designed such that it is remote enough so that the boundary conditions would not be affected by the waterway and the proposed disposal ground. The model coverage area shall be agreed with the Director."*
- (e) Appendix D, under heading "Model assessment", Item 4 – *"If assessment of accidental spillage is required, potential locations, quantities and rates of spill shall be identified and quantified. The spill modelling shall cover combinations of different tides, wind and season conditions. The methodology for modelling spill and scenarios to be covered should be agreed with the Director (with reference to Section 4.4.2(c) of the TM)."*
- (f) Appendix D, under heading "Model assessment", Item 7 – *"Cumulative impacts due to other projects, activities or pollution sources within a boundary to be agreed with the Director shall also be predicted and quantified."*

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Water Pollution Control Ordinance.

5. Subject to the above caveats, we agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirements stipulated in Clauses 3.4.7.6(h), 3.4.7.6(p) and Appendix D of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3(a) to 3(d) & 3(f) above.

6. However, for the specific requirement regarding spill modelling in Appendix D (under heading "Model assessment", Item 4) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3(e) above, we have not seen the findings of the Consultant's review and the spill response plan and therefore cannot agree that spill modelling is not required. In this regard, you are advised to provide necessary information for our consideration. Nevertheless, you are reminded that should spill modelling is considered necessary, the methodology for modelling spill and scenarios to be covered should be agreed with us.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)5



**MEMO**

From Director of Environmental Protection  
 Ref. (36) in Ax(13) to EP2/K19/S3/10 Pt.3  
 Tel. No. 2835-1106  
 Fax No. 2591-0558  
 Date 8 June 2007

To Project Manager (Kowloon), CEDD  
 (Attn.: Mr. C.B. Mak)  
 Your Ref. (53) in KD 2/25/4 Pt.1  
 dated 1.3.2007 Fax No. 2369 4980  
 Total Pages 2

**Agreement No. CE 35/2006 (CE)**  
**Kai Tak Development Engineering Study cum**  
**Design and Construction of Advance Works**  
**- Investigation, Design and Construction**

**Kai Tak Development Environmental Impact Assessment (EIA) Study Brief No. ESB-152/2006 and Dredging Works for Proposed Cruise Terminal at Kai Tak EIA Study Brief No. ESB-159/2006**

**Sediment Sampling and Testing to Determine Dredging Sediment Contamination Level**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: PMC.NWHF:cthy: 60022408/09.5-0344 dated 28.5.2007 seeking our confirmation that the Revised Sediment Sampling Proposal (RSSP) (Revision 2) is still applicable for the revised dredging extent as indicated in drawing no.1 attached in MCAL's letter with reference to the specific requirements under Clauses 3.4.7.6(k) & 3.4.9.2(iii) of the EIA Study Brief No.ESB-152/2006 and Clauses 3.4.7.5(viii) and 3.4.8.2(ii)(a) of the EIA Study Brief No.ESB-159/2006.

3. For avoidance of doubt, I have reproduced the relevant requirements of the concerned EIA study brief clauses as follows:

**EIA Study Brief No.ESB-152/2006**

S.3.4.7.6(k) - *"The ranges of parameters to be analyzed; the number, location, depth of sediment, type and methods of sampling; sample preservation; and chemical laboratory test methods to be used shall be subject to the approval of the Director"*

S. 3.4.9.2(iii) - *"The ranges of parameters to be analyzed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be agreed with the Director (with reference to Section 4.4.2(c) of the TM) prior to the commencement of the tests"*

**EIA Study Brief No.ESB-159/2006**

S. 3.4.7.5(viii) - *"The ranges of parameters to be analyzed; the number, location, depth of sediment, type and methods of sampling; sample preservation; and chemical laboratory test methods to be used shall be subject to the approval of the Director"*

S. 3.4.8.2(iii)(a) - *"The ranges of parameters to be analyzed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be agreed with the Director (with reference to Section 4.4.2(c) of the TM) prior to the commencement of the tests"*

4. Please note that our views below are only provided for the fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clauses and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA, Dredging Works for Proposed Cruise Terminal at Kai Tak EIA and any future related EIA studies within the Kai Tak Development under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Dumping at Sea Ordinance.

5. Subject to caveats raised in paragraph 4 above, we agree that the RSSP (Revision 2) submitted by your Consultant "Meinhardt Infrastructure and Environment Limited" via their letter ref: HJC/HYH/91039.304/3219/qn dated 16.3.2007 is still applicable for the revised dredging extent as indicated in drawing no.1 attached in MCAL's letter with reference to the specific requirements under Clauses 3.4.7.6(k) & 3.4.9.2(iii) of the EIA Study Brief No.ESB-152/2006 and Clauses 3.4.7.5(viii) and 3.4.8.2(iii)(a) of the EIA Study Brief No.ESB-159/2006.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Peter Cheek) fax: 2691 2649

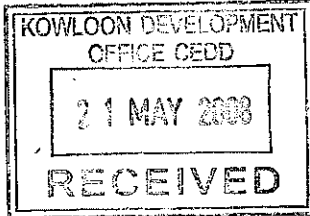
Internal – S(MA)5, S(RA)4, E(MA)23  
File: EP2/K19/C/19

KD 2/25/4  
C4/KC, 32/H, 27

## MEMO

From Director of Environmental Protection  
Ref. (3) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 21 May 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 2



Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Water Quality Assessment Methodology

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.2-1397 dated 9.4.2008 seeking our agreement on the captioned pursuant to the requirements under Clause 3.4.7.6(g) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.7.6(g) – “Prediction and quantification by mathematical modelling or other technique approved by the Director, of the impacts on the water system and the sensitive receivers due to those alterations and changes identified in (e) and the pollution sources identified in (f). Existing and likely future pollution reduction due to drainage/sewerage improvement, drainage/sewerage mis-connection rectification, enhancement of treated effluent discharges, and dry weather flow interception to be agreed by the Director shall be estimated and taken into account in the impact prediction. The mathematical modelling requirements are set out in Appendix D of this Study Brief. The prediction shall take into account and include likely different construction stages or sequences, and different operational stages.”

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clause mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA

study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Water Pollution Control Ordinance.

5. Subject to the above caveats, we agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirement stipulated in Clause 3.4.7.6(g) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(MA)5

2/KE  
CE/H . 27

## MEMO

From Director of Environmental Protection  
Ref. (30) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 17 June 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 2

KOWLOON DEVELOPMENT  
OFFICE CEDD

18 JUN 2008

RECEIVED

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Water Quality Assessment Methodology

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.2-1622 dated 10.6.2008 seeking our agreement on the captioned pursuant to the requirements in Appendix D, under heading "Model assessment", Item 4 of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

EIA Study Brief No. ESB-152/2006

Appendix D, under heading "Model assessment", Item 4 – *"If assessment of accidental spillage is required, potential locations, quantiles and rates of spill shall be identified and quantified. The spill modelling shall cover combinations of different tides, wind and season conditions. The methodology for modelling spill and scenarios to be covered should be agreed with the Director (with reference to Section 4.4.2(c) of the TM)."*

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clauses mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Water Pollution Control Ordinance.

5. Subject to the above caveats, we note the Consultant's justification in the submission identified in paragraph 2 above and their opinion that no spill assessment and modelling is necessary. Therefore, the agreement to the methodology for modelling spill and scenarios stipulated in Appendix D (under heading "Model assessment", Item 4) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above is not required.

6. Nevertheless, the Consultant's justification and opinion mentioned in the submission should be included in the EIA report.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal – S(MA)S



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***Annex 18.4***  
***Prior Agreement on***  
***Waste Management Implications***  
***From EPD***





**MEMO**From Director of Environmental ProtectionRef. (62) In EP2/K19C/19To Project Manager (Kowloon), CEDD(Attn.: Mr. C.B. Mak)Your Ref. (53) In KD 2/25/4 Pt.1dated 1.3.2007 Fax. No. 2369 4980Total Pages 2

Tel. No. 2835 1100  
 Management, Construction Ltd.  
 Fax. No. 2391 0558  
 Received 17 APR 2007  
 Date 16 April 2007  
 File No. 60022408

TO	AYK	TJC	Sign
BY	JLAM	TYUR	Off
Env. Consultant	<i>JE</i>	<i>JE</i>	<i>MC</i>
Others	<i>JE</i>	<i>JE</i>	<i>MC</i>
Copied To	<i>JE</i>	<i>JE</i>	<i>MC</i>

**Agreement No. CE 35/2006 (CE)**  
**Kai Tak Development Engineering Study cum**  
**Design and Construction of Advance Works**  
**- Investigation, Design and Construction**

**Sediment Sampling and Testing Plan (SSTP)**

Reply Date: I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: PMC:NWHF:cthy:60022408/09.5-0177 dated 30.3.2007 (enclosing a copy of the captioned SSTP) and MCAL's subsequent letter ref: PMC:NWHF:cthy:60022408/09.5 and 09.9-0212 dated 11.4.2007 (enclosing the revised page one of the SSTP) seeking our agreement under Clauses 3.4.7.6(k) & 3.4.9.2(iii) of the EIA Study Brief No.ESB-152/2006, Clause 3.4.7.5(viii) of the EIA Study Brief No.ESB-159/2006 and Clause 3.4.6.3(a) of the EIA Study Brief No.ESB-160/2006

3. For avoidance of doubt, I have reproduced the relevant requirements of the concerned EIA study brief clauses as follows:

**EIA Study Brief No.ESB-152/2006**

S.3.4.7.6(k) - "The ranges of parameters to be analyzed; the number, location, depth of sediment, type and methods of sampling; sample preservation; and chemical laboratory test methods to be used shall be subject to the approval of the Director"

S. 3.4.9.2(iii) - "The ranges of parameters to be analyzed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be agreed with the Director (with reference to Section 4.4.2(c) of the TM) prior to the commencement of the tests"

**EIA Study Brief No.ESB-159/2006**

S. 3.4.7.5(viii) - "The ranges of parameters to be analyzed; the number, location, depth of sediment, type and methods of sampling; sample preservation; and chemical laboratory test methods to be used shall be subject to the approval of the Director"

EIA Study Brief No.ESB-160/2006

S. 3.4.6.3(a) - *"The ranges of parameters to be analyzed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be agreed with the Director (with reference to Section 4.4.2(c) of the TM) prior to the commencement of the tests"*

4. Please note that our views below on the SSTP are only provided for the fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clauses and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA, Dredging Works for Proposed Cruise Terminal at Kai Tak EIA, Decommissioning of the Former Kai Tak Airport other than the North Apron EIA and any future related EIA studies within the Kai Tak Development under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Dumping at Sea Ordinance.

5. Subject to caveats raised in paragraph 4 above, we have no further comment on the SSTP with the revised page 1 and agree that the submission identified in paragraph 2 above has partially fulfilled the requirements mentioned in paragraph 3 above.

6. Nevertheless, I must emphasize that our agreement on the SSTP is based on the information provided in the submission, in particular your current proposal that the piles for fuel dolphin be cut at seabed level and that the abandoned pipeline be plugged. I believe that you would secure agreements of your current proposal from relevant parties (eg. Marine Department). In case if there is any changes of the proposal, please be reminded to seek our agreement on the revised SSTP accordingly. Moreover, please be advised to seek prior agreement from the Marine Filling Committee (MFC) for the sediment disposal arrangement.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Stanley Chong /Peter Cheek) fax: 2691 2649

Internal – S(MA)5, S(RA)4, E(MA)23

File: Ax(13) to EP2/K19/S3/10

File: Ax(5) to EP2/K19/PT2/05

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***Annex 18.5***  
***Prior Agreement on***  
***Land Contamination Impact Assessment***  
***From EPD***



## MEMO

From Director of Environmental Protection  
 Ref. (34) in Ax (13) to EP2/K19/S3/10 Pt.5  
 Tel. No. 2835 1106  
 Fax No. 2591 0558

To Project Manager (Kowloon), CEDD  
 (Attn.: Mr. C.B. Mak)

Your Ref. (53) in KD 2/25/4 Pt.1  
 dated 1.3.2007 Fax No. 2369 4980

Total Pages 2

ENSP Asia (128) January 2008

Received	30 JAN 2008
Reg. No.	8013022
File No.	60022408/3
M Chan	AYK TYUT JLAM
Env. Consultant	ELK JWU
Others	LTSH LTML
Copied To	
Reply Date	

Agreement No. CE 35/2006 (CE)  
 Kai Tak Development Engineering Study cum  
 Design and Construction of Advance Works  
 - Investigation, Design and Construction  
 Kai Tak Development Environmental Impact Assessment (EIA)  
 (EIA Study Brief No. ESB-152/2006) Section 3.4.10.4  
 Contamination Assessment Plan (CAP) for Hong Kong Aviation Club

File No.	60022408/
TS DLD	EMSO ML CW
AKWL	MCP SAR FSKY
SHRS	TKH TKS YY HTS
WCKH	JYL CWN PMC
Project Eng.	IWLH
Others	Study MPLL
Copied To	
Reply Date	

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: IWLH:MPLL:cask: 60022408/08.4-1001 dated 9.1.2008 seeking our agreement to the captioned CAP (Rev.1) under Section 3.4.10.4 of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clause as follows:

EIA Study Brief No. ESB-152/2006

S.3.4.10.4 – "During the course of the EIA study, the Applicant shall submit a contamination assessment plan (CAP) to the Director for agreement prior to conducting the contamination impact assessment of the relevant land or site(s) suspected to contain land contaminant(s) that shall require remediation. The CAP shall include proposals with details on representative sampling and analysis required to determine the nature and the extent of the contamination of the relevant land or site(s)."

4. In addition, you should also be aware that Section 3.4.10.2 of the EIA Study Brief No.ESB-152/2006 clearly defines that "Assessment Area for land contamination impact shall include all areas within the boundary of the former Kai Tak International Airport as described in section 3.2.1 (of the brief)." The subject CAP submission is only for the Hong Kong Aviation Club area and you are reminded that CAPs for other areas within the Assessment Area shall be submitted in due course for our agreement prior to conducting the contamination impact assessment of the relevant land or site(s) suspected to contain land contaminant(s) that shall require remediation in accordance with Section 3.4.10.4 of the EIA Study Brief No.ESB-152/2006.

5. Please note that our comments below on the CAP are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clause and for the Hong Kong Aviation Club area only and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Waste Disposal Ordinance.

6. Subject to the above caveats, we agree that the submission identified in paragraph 2 above, with incorporation of the two textural amendments below, has partially fulfilled the specific requirement for the Hong Kong Aviation Club area stipulated in Section 3.4.10.4 of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above:

- (i) Provide the detection limits for both soil and groundwater samples testing in Table 4.2.
- (ii) Provide the TCLP limits for each of the parameters in Table 4.3.

7. Please provide two copies of the amended CAP for our record.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal - S(RA)4

**MEMO**

From Director of Environmental Protection  
Ref. (33) In Ax(13) to EP2/K19/S3/10 Pt.5  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 28 January 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) In KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 2

**Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction**

**Land Contamination Assessment – Validity of Previous Studies**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. EIA study briefs for the captioned study for our agreement.

Received <u>29 JAN 2008</u>	
Reg. No. <u>2842</u>	
File No. <u>60022408/</u>	
TS DLO (MS) ML CW Sign	AKWL MCP SAR FSKY OFF
SHRS TKH (TKS) YY HTS	WCKH JYL CWN PMC
Project Eng. <u>IWLH</u>	
Others <u>MPLL</u>	
Copied To <u>ENSR - Peter Lee</u>	

2. In this connection, we have received MACL's letters ref: IWLH:cssk:60022408/09.5-1008 dated 10.1.2008 seeking our confirmation under S.3.4.10.2 of the EIA Study Brief No.ESB-152/2006 on whether the information and findings of the land contamination assessment in the "Decommissioning of the Former Kai Tak Airport other than the North Apron EIA (EIAO Register No: AEIAR - 114/2007)" are still relevant and valid for the captioned EIA study.

3. For avoidance of doubt, I have extracted the subject Clause as follows:

**EIA Study Brief No.ESB-152/2006**

S.3.4.10.2 - "If the land contamination impact of a certain part of the development area has been adequately assessed in any approved environmental impact assessment reports in the EIA Ordinance Register or any contamination assessment reports/ remediation action plans approved by the Director in accordance with the relevant Practice Note for Professional Persons or guidelines issued by the EPD, the Applicant shall make reference to such reports and confirm with the Director whether the information and findings of such reports are still relevant and valid for the EIA study."

4. Please note that our views below are only provided for the partial fulfilment of the specific requirements for confirmation/ agreement stipulated in the above-mentioned EIA study brief clause and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Waste Disposal Ordinance.

ENSR Asia (HK) Ltd.	
Reg. No. <u>8013023</u>	
File No. <u>60022408</u>	
M Chan AYK TYUT JLAM	
Env. Consultant <u>ACT ELK JWCW</u>	
Others	
Copied To	



5. Subject to caveats raised in paragraph 4 above, we confirm that information and findings of the land contamination assessment in the "Decommissioning of the Former Kai Tak Airport other than the North Apron EIA (EIAO Register No: AEIAR - 114/2007)" are still valid for the captioned EIA study.

6. Please be reminded that, according to Section 3.2.2(viii) of the EIA Study Brief No. ESB-152/2006, the possibility of land contamination at other sites within the study area boundary but outside the former Kai Tak Airport boundary should also be assessed.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor Ho) fax: 2691 2649

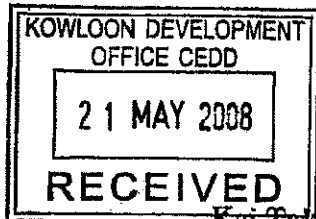
Internal - S(RA)4

KD 2/25/4  
Cefkz, sel/H. 27

## MEMO

From Director of Environmental Protection  
Ref. (1) in Ax(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 20 May 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 2



Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

Kai Tak Development Environmental Impact Assessment (EIA) Study  
(EIA Study Brief No. ESB-152/2006) Sections 3.4.10.4 & S.3.4.10.5  
Revised Contamination Assessment Plan (CAP) and Contamination Assessment Report  
(CAR) for the Radar Station

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: IWLH:ALSC:qc: 60022408/08.2-1477 dated 30.4.2008 seeking our agreements to the revised CAP (Rev.3) and CAR (Rev.1) for the captioned under Sections 3.4.10.4 & 3.4.10.5 of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

EIA Study Brief No. ESB-152/2006

S.3.4.10.4 – "During the course of the EIA study, the Applicant shall submit a contamination assessment plan (CAP) to the Director for agreements prior to conducting the contamination impact assessment of the relevant land or site(s) suspected to contain land contaminant(s) that shall require remediation. The CAP shall include proposals with details on representative sampling and analysis required to determine the nature and the extent of the contamination of the relevant land or site(s)."

S.3.4.10.5 - "Based on the CAP agreed with the Director, the Applicant shall conduct a land contamination impact assessment. If land contamination is confirmed, a remedial action plan (RAP) shall be prepared to formulate necessary remedial measures."

4. As we have already pointed out previously, S.3.4.10.5 does not require any submission of the CAR/RAP for our agreement. The CAR/RAP should form part of the EIA Report for approval submission under the EIAO. It is not legitimate for us to provide any form of partial agreement(s) of CAR/RAP in advance of the EIA Report approval.

5. Please note that our comments below on the revised CAP are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief S.3.4.10.4 and for the radar station area only and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Waste Disposal Ordinance.

6. Subject to the above caveats, we agree that the revised CAP (Rev.3) identified in paragraph 2 above, with incorporation of the amendments below, has partially fulfilled the specific requirement for the Radar Station area stipulated in Section 3.4.10.4 of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above:

- (i) In the responses to comments [item (7)(b)(iii)], the Consultant is of the opinion that *"Since the ground of remaining areas were generally well paved with concrete and thus the contamination problem within the building area, if any, were considered to be surmountable"*. Please add this opinion in Section 3.6.1 of the CAP.

7. Please incorporate the above amendments and provide two copies of the amended CAP for our record.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor HO) fax: 2691 2649

Internal – S(RA)4

2008/2/27

**MEMO**

<b>From</b> Director of Environmental Protection	<b>To</b> Project Manager (Kowloon), CEDD
<b>Ref.</b> (23) in Ax(13) to EP2/K19/S3/10 Pt.8	<b>(Attn.)</b> Mr. C.B. Mak
<b>Tel. No.</b> 2835 1106	<b>Your Ref.</b> (53) in KD 2/25/4 Pt.1
<b>Fax. No.</b> 2591 0558	<b>dated</b> 1.3.2007 <b>Fax. No.</b> 2369 4980
<b>Date</b> 13 June 2008	<b>Total Pages</b> 2

**Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction**

**Kai Tak Development Environmental Impact Assessment (EIA) Study  
(EIA Study Brief No. ESB-152/2006) Section 3.4.10.4  
Revised Contamination Assessment Plan (CAP) for Ex-GFS Building (Rev.3)**

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MACL's letter ref: IWLH:ALSC:gc: 60022408/08.2-1583 dated 30.5.2008 seeking our agreement to the captioned CAP under Section 3.4.10.4 of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

**EIA Study Brief No. ESB-152/2006**

**S.3.4.10.4 – "During the course of the EIA study, the Applicant shall submit a contamination assessment plan (CAP) to the Director for agreement prior to conducting the contamination impact assessment of the relevant land or site(s) suspected to contain land contaminant(s) that shall require remediation. The CAP shall include proposals with details on representative sampling and analysis required to determine the nature and the extent of the contamination of the relevant land or site(s)."**

4. Our views on the CAP are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the above-mentioned EIA study brief clause and for the Ex-GFS Building area only and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation, including the Waste Disposal Ordinance.

5. Subject to the above caveats, we have no comment on the revised CAP for the Ex-GFS Building (Rev.3) and agree that the submission identified in paragraph 2 above has partially fulfilled the specific requirement for the Ex-GFS Building area stipulated in Section 3.4.10.4 of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

MCAL (Attn: Mr. Igor Ho) fax: 2691 2649

Internal - S(RA)4

***Annex 18.6***

---

***Prior Agreement on  
Hazard to Life  
From Government Authorities***



## MEMO

From Director of Environmental Protection  
 Ref. (17) In Ax(13) to EP2/K19/S3/10 Pt.5

To Project Manager (Kowloon), CEDD

(Attn.: Mr. C.B. MAK

Your Ref. (53) In KD 2/25/4 P

dated 1.3.2007

Fax No. 2369 4980 2642

Total Pages 3

File No. 60022408/

Tel. No. 2835 1106  
 ENSR Asia (HK) Ltd.

Fax No. 2591 0558

Date 21 December 2007

File No. 60022408/

M Chan AYK FCCM  
 TYUT JLAM

Sign  
 Off

Env. Consultant

Others

Copy To

Reply Date

Agreement No. CE 35/2006(CE)  
 Kai Tak Development (KTD) Engineering Study  
 Cum Design and Construction of Advance Works  
 - Investigation, Design and Construction

Submission of the Methodology Statement of Hazard Assessments for the KTD

ARWE	MO	SPR	ESKY	OFF
SHRS	TKH	TKST	YY	HRS
WCKH	JYL	CWN	(PMC)	
Project Eng. IWLH				
Others				
Copy To				
Reply Date				

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received a letter from MACL ref: IWLH:MPL:cask: 60022408/08.2-0882 dated 4.12.2007 enclosing a Methodology Statement of Hazard Assessments for the KTD. As indicated in S.1.3 of the document, the submission aims to seek agreement and approval under Clause 3.4.11.1 of the EIA Study Brief (No. ESB-152/2006).

3. For avoidance of doubt, I have reproduced Clause 3.4.11.1 of the EIA Study Brief No.ESB-152/2006 as follows:

*"The Applicant shall follow the criteria for evaluating hazard to life as stated in Annex 4 of the TM. The methodology of hazard assessment shall be agreed and approved by the Director (with reference to section 4.4.2(c) of the TM) prior to the commencement of the assessment."*

4. In addition, please also note the requirements in Clause 3.4.16 of the EIA Study Brief No.ESB-152/2006 that "To facilitate efficient retrieval, a summary to include the assessment methodologies and key assessment assumptions adopted in this EIA study, the limitations of these assessment(s) methodologies/assumptions, if any, plus all relevant prior agreement(s) with the Director or other Authorities on individual environmental media assessment components. The proposed use of any alternative assessment tool(s) or assumption(s) have to be justified by the Applicant, with supporting documents based on cogent, scientific and objectively derived reason(s) before seeking the Director's agreement. This summary and all related supporting documents shall be provided in the form of an Appendix to the EIA study report."

Our views on the Methodology Statement of Hazard Assessments are only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clause mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak



Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation.

6. Noted from your response to our previous comment, presumably, you have obtained agreements from PlanD, LandsD & TD regarding the population to be adopted for the forthcoming hazard assessment. In this regard, please let me have the copies of the relevant correspondences showing their agreements for our record.

7. Taking into account the advice from other relevant authorities, we have the following minor comments on the Methodology Statement of Hazard Assessments:

- (a) S.3.3.15 - Population inside High Rise Buildings, the approach should be in line with your "Responses to Comments" addressing our previous comments on S.2.3.16 (i.e. the risk assessment will include the population of the whole building).
- (b) S.5.2.3, typo error - "DG Warehouse" should be amended to "LPG Filling Stations".
- (c) S.5.4.4 & S.5.5.2, as "Ref. 4" has been deleted from the Reference in section 5.7, please delete [Ref 4] in the text accordingly.
- (d) S.5.6.1, in accordance S.5.2.3, the risk levels at 2012 and 2016 scenarios should also be included.
- (e) In accordance with your response to comment regarding the exclusion of QRA for petrol hazardous scenarios for petrol cum LPG filling station, please include explicit statements for petrol cum LPG stations in Section 5, e.g. S.5.2.1(2) and 5.5.6, that hazardous scenarios arising from petrol will be identified and assessed.
- (f) In accordance with your response to comment regarding the estimate future traffic growth for assessment years 2012, 2016 and 2021, please include your response [ie. the future traffic growth for assessment years 2012, 2016 and 2021 will be forecasted based on the 2004-based Base District Traffic Models (BDTMs) provided by TD with necessary updating and fine tuning] in the text of the S.2.3.9, S.3.3.8, S.4.3.11 and S.5.3.9.

8. Subject to the caveats in para.5 and based on our understanding in para.6, we agree that the submission identified in paragraph 2 with incorporation of the minor amendments suggested in para.7 has partially fulfilled the specific requirement stipulated in Clause 3.4.11.1 of the EIA Study Brief No ESB-152/2006 mentioned in para.3. In this regard, please let us have four copies of the amended Methodology Statement of Hazard Assessments for record.

9. Nevertheless, Table 1.1 & S.1.1.3 of the Methodology Statement indicate that the chlorine dock at Kowloon Bay will be relocated prior to the commission of the Cruise Terminal and no explosives will be used for the construction activities and thus hazard assessment for these two hazardous sources will not be carried out in the KTD EIA. In this regard, we have yet to receive the programme of the chlorine dock relocation and your confirmation that there will not any new population intake in KTD earlier than the Chlorine Dock relocation, please action accordingly. Lastly but not the least, I would remind you once again the requirements of hazard assessment stipulated in Clauses 3.4.11.3 & 3.4.11.5 of the EIA Study Brief No ESB-152/2006.

Yours faithfully,



(Mr. David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

DEMS	(Attn: Mr. Sai-king HO)	fax: 2890 6081
DFS	(Attn: Mr. CHIU Wai-biu)	fax: 2739 8775
D of Marine	(Attn: Mr. M K CHAN)	fax: 2581 1765
D of Plan	(Attn: Mr. Kelvin CHAN)	fax: 2894 9502
D fo Lands	(Attn: Ms. LEE Po King)	fax: 2782 5061
AC for T/Urban	(Attn: Mr. TSE Mang-hin)	fax: 2397 8046
DWS	(Attn: Mr. Simon WONG)	fax: 2802 2579
C for Tourism	(Attn: Mr. Anthony LO)	fax: 2801 4458
MCAL	(Attn: Mr. Igor HO)	fax: <del>2605 6262</del>

2691 2699

Internal - S(RA)5



地政總署  
九龍東區地政處  
DISTRICT LANDS OFFICE,  
KOWLOON EAST  
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。  
We strive to achieve excellence in land administration.

九龍上海街二百五十號油蔴地停車場大廈十一樓  
10TH FLOOR, YAUMATEI CARPARK BUILDING,  
250 SHANGHAI STREET, KOWLOON

網址 Web Site: [www.info.gov.hk/landsd](http://www.info.gov.hk/landsd)

電話 Tel: 2300 1718  
圖文傳真 Fax: 2782 5061 / 2374 2709  
電郵地址 Email:  
本署檔號 Our Ref: (20) in LND KE PD/103/13 (XI)  
來函檔號 Your Ref: IWLH:MPLL:cssh:60022408/08.2-0992

Maunsell Consultants Asia Ltd.  
8/F., Grand Central Plaza, Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, New Territories

(Attn.: Mr. Igor HO)

Dear Sir,

Asia (HK) Ltd.	
23 JAN 2008	
8012414	
60022403	
AYK (FCOM)	Sign Off
TYUT JIAM	
Env. Consultant	
Others	
Copied To	
Reply Date	

By Fax (2691 2649) & Post

17 January 2008	
Maunsell Consultants Asia Ltd.	
Received	23 JAN 2008
Reg. No.	2783
File No.	60022408/
TS DLO (EMSC) ML CW	Sign Off
AKWL MCP SAR FSKY	
SHRS TKH (TKST) YY HTS	
WCKH JYL CWN PMC	
Project Eng.	IWLH
ers	
ed To	ENSR - Peter Lee
y Date	

Agreement No. CE 35/2006(CE)  
Kai Tak Development Engineering Study  
cum Design and Construction of Advance Works  
- Investigation, Design and Construction  
Population Estimation in Hazard Assessment

I refer to your letter dated 8 January 2008 regarding the captioned issue.

I would like to advise that this office does not have the information or expertise to comment on the population data provided in the said letter. You may wish to consult the relevant government departments for any necessary input, please.

Yours faithfully,

(Spencer LAU)  
for District Lands Officer/Kowloon East

c.c. PM/K, CEDD (Attn: Mr. Walter Leung)

Fax: 2369 4980



運輸署

Transport Department

(Fax : 2691 2649)

本署檔號 Our KR 182/112-42

來函檔號 Your PMC/NWHF : tkk :60022408/08.2-610

電話 Tel.: 2399 2513

24 September 2007

Maunsell Consultants Asia Ltd  
8/F, Grand Central Plaza, Tower 2  
138 Shatin Rural Committee Road  
Shatin New Territories  
(Attn : Peter Cheek)

Dear Sir,

**Agreement No. CE35/2006 (CE)**  
**Kai Tak Development Engineering Study**  
**cum Design and Construction of Advance Works**  
**- Investigation, Design and Construction**  
**Submission of the Methodology Statement of Hazard Assessments**  
**for the kai Tak Development**

I refer to your letter dated 3.9.2007 and have no comments on the captioned submission from traffic engineering point of view.

Yours faithfully,

(TSE Mang-hin)  
for Assistant Commissioner  
for Transport/Urban

Maunsell Consultants Asia Ltd.	
Received	25 SEP 2007
Reg. No.	2063
File No.	60022408/08.2
TS DLO (EMSC) ML CW	Sign
AKWL MCP SAR FSKY	Off
SHRS TKH (TKST) YY HTS	
WCKH JYL CWN (PMC)	
Project Eng.	JWH / NWHF
Others	
Copied To	
ENSE - Peter Lee ✓ 25/9	
Reply Date	

From: tswong@pland.gov.hk [mailto:tswong@pland.gov.hk]  
Sent: Friday, January 04, 2008 2:57 PM  
To: Tse, Ching Yee Carol  
Cc: Kung, Ann Yue Benita; ksyyuen@pland.gov.hk; aymcheung@pland.gov.hk  
Subject: Re: Population Estimation in Hazard Assessment for Kai Tak Development

Dear Carol,

Thanks. Please see my responses marked in red in your e-mail below. If you require any clarifications, please contact me at 2231 4641.

TS

"Tse, Ching Yee Carol" <Carol.Tse@ensr.aecom.com>

2008/01/04 12:01

To

<tswong@pland.gov.hk>

cc

"Kung, Ann Yue Benita" <Benita.Kung@ensr.aecom.com>

Subject

Population Estimation in Hazard Assessment for Kai Tak Development

---

Dear Mr. TS Wong,

Further to the discussion between you and our Benita Kung, please find below further clarifications and relevant data on the population of KTD hazard assessment for your review:

1. The TPEDM data of Year 2016 and 2021, Scenario I will be adopted for the assessment. Noted
2. Population data at year 2012 would be estimated by extrapolation method based on the TPEDM data of year 2011 and 2016, assuming the population would increase/decrease uniformly over the 5-year period. This is considered as the most appropriate estimation approach to the best of our knowledge. There is problem in using extrapolation method to derive the population data of 2012 based on our 2011 and 2016 data. For instance, if the number of residential proposals within a particular PVS remains the same during the period from 2011 to 2015 but additional residential proposals are included in 2016, then the population in 2011 and 2012 should be the same and should not increase as extrapolated. As we are not able to suggest

any better method, we'll leave it to you and your client to decide whether the methodology is acceptable. However, you may wish to refer to the recently released set of Projections of Population Distribution, 2007-2016 prepared by the Working Group on Population Distribution Projections (WGPD) which covers population projection of year 2012. The whole report (in PDF format) and the statistical tables contained in the report (in Excel format) are available for free download on the website of PlanD

([http://www.pland.gov.hk/info\\_serv/statistic/index\\_e.html](http://www.pland.gov.hk/info_serv/statistic/index_e.html))

3. As stated in "Note c" of each table (see attached excel s/sheet), the population figure of each OZP is derived either from the original PVS value of 2003-based TPEDM Scenario 1 data (see attached methodology), or from the Recommended Outline Development Plan (RODP) of Kai Tak Development project or site observation. Note that TPEDM data would only be used when RODP (project specific population analysis) is NOT available. Noted

4. As per your suggestion, individual landuse population data used in the hazard assessment is summed up and tabulated as percentage proportion relative to the total PVS population for your comparison. Please refer to the attached excel tables in yellow highlighted for reference. The total population and employment of the PVSs in your attached excel tables are in order.

Please feel free to call me at 3105 8514 should you need further clarifications. Appreciate if you could comment on the population derivation methodology and advise alternative methods (if any) as you see fit. Otherwise, we would be grateful if you could reply (either by return email or fax), indicating that no other methods could be suggested and the current methodology is the only available approach for our analysis at the discretion of the Client. Thanks very much for your kind attention and assistance.

Regards,

Carol Tse

T: +(852) 3105 8514

ENSR Asia (HK) Ltd  
11/F Grand Central Plaza, Tower 2  
138 Shatin Rural Committee Road, Shatin, Hong Kong  
T: +(852) 2893 1551 F: +(852) 2891 0305

[www.ensr.aecom.com](http://www.ensr.aecom.com)      [www.maunsell.aecom.com](http://www.maunsell.aecom.com)

ENSR Asia comprises the Asia Operation of ENSR and the environmental management arm of Maunsell AECOM. As an integral part of both ENSR and Maunsell AECOM, ENSR Asia has 12 offices and over 200 staff in providing environmental management services to our clients throughout Asia Pacific.

ENSR is a global environmental management company with over 2,000 employees, and Maunsell AECOM is a multi-disciplinary engineering and associated consulting company with over 2,300 employees in Hong Kong, mainland China and the rest of Asia. ENSR and Maunsell AECOM are part of AECOM, a global 30,000 person company providing professional and management services in the transportation, facilities and environmental markets.

[attachment "Pop Cal Reference.pdf" deleted by TS WONG/PLAND/HKSARG] [attachment

"LPG7 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG1 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG3 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG4 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG2 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG5 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "LPG6 with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "MTK Gas Work with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "Kerry DG Warehouse with % sum.xls" deleted by TS WONG/PLAND/HKSARG] [attachment "Kwun Tong DGVFP with % sum.xls" deleted by TS WONG/PLAND/HKSARG]

***Annex 18.7***

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***Prior Agreement on  
Sewerage and Sewage Treatment Implications  
From Government Authorities***





MEMO

From Director of Environmental Protection  
Ref. (25) in AX(13) to EP2/K19/S3/10 Pt.8  
Tel. No. 2835 1106  
Fax. No. 2591 0558  
Date 13 June 2008

To Project Manager (Kowloon), CEDD  
(Attn.: Mr. C.B. Mak)  
Your Ref. (53) in KD 2/25/4 Pt.1  
dated 1.3.2007 Fax. No. 2369 4980  
Total Pages 2

Agreement No. CE 35/2006 (CE)  
Kai Tak Development Engineering Study cum  
Design and Construction of Advance Works  
- Investigation, Design and Construction

EIA for Kai Tak Development (EIA Study Brief No. ESB-152/2006)  
- Agreement of Relevant Development arising from the Action Plan for Tackling Water-Related Pollution Problems at the Kai Tak Approach Channel by Relevant Departments [Sewerage Infrastructure Related]

I refer to your MUR confirming that you have instructed MCAL to prepare and submit, on behalf of CEDD, assessment methodologies and key assessment assumptions, etc. as required in the EIA study briefs for the captioned study for our agreement.

2. In this connection, we have received MCAL's letter ref: IWLH:ALSC: qc:60022408/08.2-1582 dated 30.5.2008 seeking our agreement on the captioned pursuant to the requirements under Clause 3.4.8.2(ix) of the EIA Study Brief No.ESB-152/2006.

3. For avoidance of doubt, I have extracted the relevant requirements of the concerned EIA study brief clauses as follows:

EIA Study Brief No. ESB-152/2006

Clause 3.4.8.2(ix) – *"take note and agree with the Director any relevant development arising from the Action Plan for Tackling Water-Related Pollution Problems at the Kai Tak Approach Channel by relevant department(s) [Sewerage Infrastructure Related] during the course of the EIA study"*

4. Please note that our comments below on the submission only provided for the partial fulfilment of the specific requirements for agreement stipulated in the EIA study brief clause mentioned in para.3 above and shall not pre-empt our future decisions to the EIA report approval process for the Kai Tak Development EIA and any future related EIA studies within the Kai Tak Development EIA study area under the EIA Ordinance. Moreover, our views below shall not absolve your responsibility to fulfil requirements in other statutory legislation.

5. Subject to the above caveats, we agree that the submission identified in paragraph 2, with incorporation of the amendments below, above has partially fulfilled the specific requirements stipulated in Clause 3.4.8.2(ix) of the EIA Study Brief No ESB-152/2006 mentioned in paragraph 3 above.

- (i) Combining the three project items for Upgrading of Central and East Kowloon Sewerage Package 1, Packages 2 & 3 and Package 4 into a single item entitled 4344DS "Upgrading of Central and East Kowloon Sewerage - Packages 1 to 4" and amend the scope of works to "upgrading and construction of about 21km long sewers and associated sewerage works in Kwun Tong, Ngau Tau Kok, Yau Tong, Kowloon Bay, Choi Hung, Wong Tai Sin, San Po Kong, Kowloon City, To Kwa Wan, Ma Tau Kok, Hung Hom and Tsim Sha Tsui; and upgrading of some existing dry weather flow interceptors in Central and East Kowloon".
- (ii) The "Kai Tak Approach Channel - Expedient Connection Survey" covers Kowloon City, Ngau Tau Kok, Kowloon Bay, Wong Tai Sin and Choi Hung areas. The five areas should be mentioned in the scope of works for clarity. Moreover, the target completion date should be "2009".

6. Please incorporate the above amendments and provide six copies of the amended Action Plan for our record.



(David COX)

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

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