Annex D

EIA Reports related to HZMB
Supplementary Information on Further Comments and Questions

	Comments/questions raised by EIASC Members	Response from project proponent
(A) Air quality impact to local sensitive receivers		
1.	The project proponent claimed that the pollutants created by vehicles by the (HZMB) bridge was a small amount when compared to the regional emissions. It is doubted whether the amount will be small when considering the local sensitive receivers.	We would like to clarify that the comparison in the supplementary information was based on the emission inventory (i.e. the annual emission amount) from the project as compared to the emission inventory in HKSAR and PRD area. The purpose of the comparison was to illustrate the fact that, ozone (O_3) concentration is mainly influenced by regional emission sources and would not be significantly affected by the projects. On the other hand, the impacts (i.e. the pollution concentration for nitrogen dioxide (NO_2)) on the receivers due to these emission sources would depend on a number of factors including but not limited to separation distance, meteorological conditions (wind speed, wind direction, temperature etc.). As explained in the supplementary information sent to Members earlier, this is the reason why EPD's PATH model has been used for assessing the long range propagation and impacts, taking into account of entire regional emission inventory (including those from PRD and HKSAR). Other than this long range prediction model, local prediction models have also been used (such as CALINE4/ISCST3 as explained in the EIA Report) to simulate pollution dispersion for receivers close to the roads on Lantau. The prediction concentrations for the receivers presented in the EIA are the combined effect of the long range pollution concentration and the near field pollution concentrations. As such, we have assessed NO_2 in our EIA even the emission amount is small (nitrogen oxides (NO_x) from project constitute 0.09% of regional total or 0.6% of Hong Kong Total) when compared to the PRD region. The results showed that they could meet the current AQO requirements.

	Comments/questions raised by EIASC Members	Response from project proponent
(B) Consideration of the impact of ozone on local sensitive receivers		
2.	Basically, the assessment is for NO_2, not O_3. For Tung Chung, most of the days with the worst air quality, i.e. API over 100, were contributed by O_3, not NO_2 or NO_x.	Regarding comments 2 and 3, as explained in the Supplementary Information sent to Members earlier, it is considered more appropriate to assess NO_2 rather than O_3.
3.	The supplementary information stressed that the air pollutants in the assessed area come from regional PRD emissions. Is it the case for all the situations when Tung Chung's APIs are greater than 100?	The API is a composite index for a number of air pollutants including NO_2, sulphur dioxide (SO_2), O_3, carbon monoxide (CO), total suspended particulates and respirable suspended particulates. According to a number of EPD's publication and researches (e.g. Study of Air Quality in the Pearl River Delta Region – Final Report (Agreement No. CE 106/98), Study of Visibility Reduction and its Causes in Hong Kong (Tender Ref. AS 01-286), J.P. Wang, C. H. Fung, K. H. Lau, Integrated processes analysis and systematic meteorological classification of ozone episodes in Hong Kong, Air Quality in Hong Kong 2008, by EPD, HKSAR Government), the ozone episode is due to the long-range transport which is the contribution from regional emission source, not a local road project. Of the API air pollutants, we have assessed nitrogen dioxide and respirable suspended particulates for operational phase in the EIA assessment which are related to our projects. In fact, the majority of these air pollution problems are from the PRD region rather than a local road project. The results of the assessment are all within the requirements of the current AQO.
4.	The duration of O_3 formation is relatively short compared with other pollutants, which may cause the API to exceed 100 for one to three hour in the day. However, these few hours will cause serious adverse health impacts to the public. Therefore, it is meaningless to assess the impacts of O_3 based on the predicted "average" value. The model should present the duration of high O_3 concentration that exceeds AQO.	As explained in the Supplementary Information sent to Members earlier, it is considered more appropriate to assess NO_2 rather than O_3 since a) our project would not emit O_3 directly; b) O_3 is a regional issue rather than a local issue; c) the formation of O_3 is largely attributable to the cumulative effects of all the emission sources within the PRD and the amount of VOC generated by the vehicles would have little effect on the O_3 generation locally; d) NO_x generated from vehicles would quickly react with the O_3 in the background to form NO_2. In fact, in the PATH model, we have assessed the air quality for the whole year, 365 days and 24 hours each day which equivalent to a total of 8,760 times of assessment. O_3 is also taken into account in model assessment. The average O_3 value presented in the Supplementary Information is for information only and to state that the transformation from NO_x to NO_2 in the presence of O_3 has been taken into consideration in the air quality assessment.

Comments/questions raised by EIASC Members		Response from project proponent
(C) Potential impact of alignment Option A for the middle section of HKLR on sensitive receivers in North Lantau		
5.	For Option A, the project proponent should guarantee that no lands on the North Lantau shore should be occupied or used by the proponent(s), its contractors or subcontractors for work area, vehicle parking, equipment storage, and any other related activities, permanently and/or temporarily, especially in Sham Wat, Sha Lo Wan, Hau Hok Wan and San Tau.	The proposed HKLR will span over the Sha Lo Wan headland and will not encroach to the North Lantau shore. There would be no works area in Sham Wat, Sha Lo Wan, Hau Hok Wan and San Tau.