13. CONCLUSION

13.1 Noise

Noise during construction phase of the Project would impact the surrounding environment. Unmitigated construction activities associated with the Project would cause exceedances of daytime construction noise standards stipulated in EIA O TM at most of the nearby NSRs. Noise exceedances in the range of 1 to 12 dB(A) have been predicted at Yuen Long. NSRs at Tin Shui Wai and Tuen Mun Centre would also be adversely impacted by the works, with predicted exceedances of up to 18 dB(A) and 16 dB(A) respectively. The critical noisy construction activities identified were excavation works during various construction stages and road paving in road construction.

Adequate control measures would be required for construction works to meet the EIA O TM daytime construction noise criteria. Mitigation measures including good site practices, use of quiet plant, installation of temporary noise barriers, reduce the percentage of time of noisy equipment in operation, avoidance of simultaneous construction activities on sites and substitution of particular noisy equipment were recommended. Regular monitoring of noise at NSRs would be required during the construction phase of the Project in order to ensure the environmental performance of the works.

With the adoption of appropriate measures as stated above and the implementation of an effective monitoring exercise which would draw the contractor's attention to any excessive impact and to trigger appropriate corrective actions, it is expected that the residual impacts can be reduced to acceptable levels in accordance with the EIA O TM requirements.

Operational road traffic noise impact is a key issue raised by this EIA Study. Based upon the worst case traffic forecasts of year 2018, unmitigated noise impacts would be likely at most of the identified NSRs within the locality of the Project although the majority of these are already adversely affected prior to the opening of the EPIWs. The use of direct technical remedies including roadside barriers and low noise road surfacing for the proposed scheme has been considered in Yuen Long and Tin Shui Wai, taking account of existing and potential engineering constraints for each site, and other controlling factors including visibility splay at junctions, presence of drainage reserve and proposed footbridge.

With an exhaustive research of direct measures being completed, the residual noise impacts have been assessed against the noise insulation criteria. The Study finds that there will be three residential developments in Yuen Long (Sun Yuen Long Centre, residential development in CDA 12 and CDA15) and two schools in Tin Shui Wai (the proposed primary school in Area 3 and QE School Old Student's Association Primary School) eligible to be considered for noise insulation. Type I and II noise insulation are

required for the EPIWs and the existing/proposed noise insulation works under other projects will need to be reviewed in order to satisfy this requirement.

13.2 Air Quality

Dust would be the major air pollutants during the construction phase. The major dust generating activities have been identified to be materials handling, top soil removal and wind erosion. It is envisaged that as the volume of material to be handled on site and the excavation rate for road construction would be low, adverse dust impacts on the nearby Air Sensitive Receivers are not expected. However, mitigation measures have been recommended to ensure there is no exceedance of dust criteria.

There is the potential for cumulative construction dust impacts to occur especially as a result of the West Rail (Phase I) construction works taking place concurrently with the EPIW related works. However, this potential source of impact has been assessed and it is predicted that the cumulative impact will be within the required dust criteria at all the air sensitive receivers located in the vicinity of each of the EPIW worksites. As a consequence, no adverse cumulative air quality impacts are predicted to affect the local community.

The operational air quality impact assessment for the EPIWs concludes that the air quality levels at the identified ASRs would be within the AQO criteria.

13.3 Water Quality

No insurmountable water quality impacts are likely during the construction and operation of the EPIWs provided that the recommended mitigation measures are implemented.

13.4 Landscape and Visual Impact

13.4.1 Yuen Long Station

Primary sources of landscape and visual impacts will be the alignment of Roads L1 and L2 across open area north and east of the Sun Yuen Long Centre, and a new junction at Castle Peak Road and a 3m noise barrier east of Nam Pin Wai . Residual impacts will be the loss of open grassland, including an area of mature trees and a children's playground, and mature roadside tree planting. Opportunities are available for comprehensive landscape and visual mitigation through replanting schemes within both areas and the reprovisioning of the playground to an adjacent open area. The proposed noise barrier can be mitigated through sensitive design and planting.

It is considered that the landscape and visual impacts are acceptable with the recommended mitigation strategies.

13.4.2 Tin Shui Wai Station

Primary landscape impacts will be the loss of mature trees and shrubs to embankments west of the Tin Fuk Road/Ping Ha Road junction. The impacts are residual in nature though opportunities exist for replanting to the edges of the revised road and LRT/West Rail alignments. An additional source of residual landscape impact will be the loss of palm trees from the central median areas at Tin Fuk Road and Ping Ha Road (there is insufficient space to reinstate the planting).

Visual impacts will be highest among sensitive receivers located along the northern edge of the Tin Fuk Road/Ping Ha Road corridor. The 4.5m and 5 m and 7m high noise barriers recommended under this Study, (located respectively along the southern boundary of the proposed primary and secondary schools west of the road junction, and along the southern boundary of Tin Yin Estate), and the 4m high barrier proposed by TDD (also along the southern boundary of the proposed primary and secondary schools west of the road junction) will be the primary sources of impact. These barriers will give rise to moderate to very substantial residual visual impacts.

It is considered that the landscape and visual impacts are acceptable with the recommended mitigation strategies.

13.4.3 Tuen Mun

Primary landscape impacts will be the loss of mature vegetation and seating areas adjacent to housing at Pui To Road and on the edge of Deacon Chui Park. The most sensitive visual receivers will be pedestrians and cyclists and users of a riverside park and Tuen Mun Town Park. Impacts are assessed as moderate to very slight. Opportunities exist for street and screen planting to mitigate impacts and if these are implemented the residual impacts will be negligible.

It is considered that the landscape and visual impacts are acceptable with the recommended mitigation strategies.

13.5 Waste Management

The potential impacts of waste arising from the construction and operational phases of the EPIWs have been assessed. Key issues include the need for effective waste management planning during the construction phase, effective management of chemical/industrial and other potentially hazardous wastes, and the strong preference for reuse of clean surplus material rather than disposing of it at public filling areas. Potential impacts can be avoided and controlled to acceptable levels provided that the recommended waste management methods and practices are implemented.

13.6 Cultural Heritage

Other than the Tsui Shing Lau Pagoda in Tin Shui Wai, no other archaeological or cultural resources are known or likely to be within the boundary or the immediate

adjacent areas to the works. Provided that the recommended mitigation measures are adopted during the construction phase, no impacts to the Pagoda are likely.