

11 SCHEDULE OF ENVIRONMENTAL IMPACT ASSESSMENT

No.	EIA Ref.	Activity	Mitigation/EIA Recommendations	Responsibility for Implementation	Audit Method	Implementation Status/Date	Auditors Signature
1	Section 2	Operational Traffic Noise	<p>Provision of Low Noise Surfacing on all the new roads except the R9-CT9 sliproad</p> <p>Provision of a 3m barrier along the main carriageways of Route9/Route 16 at the LWI (Figure 2.2 illustrates)</p> <p>Provision of a 3m barrier on the Route 9/WKH link road – east bound (Figure 2.2 illustrates)</p> <p>Provision of a 5.1m high barrier with 2.8m cantilever on the CT9 slip road. (** see note for chainages and grids reference). The location, outline design and materials of the proposed mitigation measures shall be referenced to Figures 2.1, 2.2 and 2.3. Any subsequent changes to the proposed mitigation measures shall be subjected to re-submission according for the EIAO requirements/procedures.</p>	HyD	Design Approval Stage	Prior to operation	
2	Section 3	Operational Air Quality	Avoid air sensitive uses in areas where the AQO is exceeded in Area 6.	Housing Dept	Approval Structural Layout Plans	N/A	
3	Section 4	Operational Water Quality	Discharges should avoid the diverted stream at the eastern portal. Tunnel discharges should be connected to oil interceptors prior to discharging to the stormdrains.	HyD's Contractor	Design Approval Stage	N/A	
4	Section 5	Landscape and visual	<p>Compatible design of highway structures and associated works with the major adjoining highway infrastructure;</p> <p>Highway lighting design to minimise leakage of light and glare disturbance;</p> <p>Use of reflective paints and signage to reduce the highway lighting requirements;</p> <p>Visually unobtrusive design of portal structures and buildings;</p> <p>Location of the eastern Nam Wan Tunnel portals buildings between the portals or over the portal structures to reduce the platform area and associated slope works;</p>	HyD	Design Approval Stage	N/A	

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		Generators	All generators shall be placed within a bunded area. Any fuel spills shall be mopped up as necessary.				
		Material containers	All empty bags and containers shall be collected for disposal.				
		Worker generated litter and Waste	Litter receptacles shall be placed around the site. Litter shall be taken regularly to the refuse collection points. Chemical toilets (or suitable equivalent) should be provided for workers. Any canteens should have greasetraps.				
		Neighborhood nuisance	All complaints regarding construction works shall be relayed to the environmental team.				
		Legal requirements	Different types of waste should be segregated, stored, transported and disposed of in accordance with the relevant legislative requirements and guidelines				
		On-site separation	On-site separation of municipal solid waste and construction/demolition wastes should be conducted as far as possible in order to minimize the amount of solid waste to be disposed to landfill.				
		Temporary storage area	Separated wastes should be stored in different containers, skips, or stockpiles to enhance reuse or recycling of materials and encourage their proper disposal.				
		Record of wastes	Records of quantities of wastes generated, recycled and disposed (with locations) should be properly kept.				
		Trip-ticket system	To monitor the disposal of waste at landfills and control fly-tipping, a "trip-ticket" system for all solid waste transfer/disposal operations should be implemented. The system should be included as a contractual requirement, and monitored by the Environmental Team and audited by the Independent Checker (Environment).				

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		Water quality	<p>Provision of perimeter channels to intercept storm runoff from the site. These should be constructed in advance of site formation works and earthworks.</p> <p>Sediment removal facilities such as sand traps, silt traps and sediment basins should be provided to remove particles from runoff. These facilities should be properly maintained.</p> <p>Programming of the works to minimise soil excavation works during rainy season.</p> <p>Exposed soil and slope surfaces should be protected by shotcrete or hydroseeding as soon as possible to reduce the potential for soil erosion.</p> <p>Temporary access roads should be protected by crushed gravel.</p> <p>Trench excavation should be avoided in the wet season and if this is unavoidable then these should be excavated and backfilled in short sections.</p> <p>Open stockpiles of construction materials and tunnel spoil should be covered with tarpaulin during rainstorms.</p> <p>Septic tanks and chemical toilets should be provided for the work force. Grease traps should be provided for wastewater generated from canteens.</p> <p>Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor.</p> <p>Vehicle and plant servicing areas, vehicle wash bays, and lubrication bays should be located within roofed areas and the drainage in these areas should be connected to foul sewers via a petrol interceptor.</p> <p>Wheel wash should be provided at site exits and washwater should be reused as far as possible. Washwater should be disposed of in storm drains via a silt trap.</p>				
7	Section 8	Monitoring and Audit	To be carried out in accordance with the Schedule in the EM and A Manual	HyD*/Contractor/RSS	Environmental Workers Checker	N/A	

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8	Section 9	Risk Assessment	<p>Construction cranes and piling rigs and any use of explosives to be controlled to avoid accidental collapse or projection onto the Shell mounded facility which is close to Sai Tso Wan Road.</p> <p>It will be necessary to provide procedures and event action plans to cover rapid cessation of construction activities.</p> <p>The design of Route 9 in the vicinity of the terminals to avoid or minimise factors likely to contribute to collision such as sudden speed reduction or queuing.</p> <p>Emergency escape provision and emergency vehicles access to be provided.</p> <p>Placement of concrete BLEVE wall could be considered after evaluation of cost implications and design and construction constraints.</p> <p>A traffic study of the Shell and Caltex terminals exits, Sai Tso Wan Road and the Sai Tso Wan Road and Tsing Yi Road junction, to determine whether traffic flows at the depot exits need to be improved to reduce risks and due LPG tanker movements, should be considered.</p>	<p>The future Contractor will be responsible for controlling the construction activities under the monitoring of the Engineer for the contract. HyD will include such requirement in the contract.</p> <p>During the detailed design stage of the Route 9 project, HyD will work out the procedures and event action plans in consultation with the concerned parties including TD, the Police, FSD, EMSD and oil terminal operators.</p> <p>The future Contractor will be responsible for implementing the procedures and event action plans under the monitoring of the Engineer for the contract. HyD will include such requirement in the contract.</p> <p>During the detailed design stage of the Route 9 project, HyD will work out such details in consultation with TD and the Police.</p> <p>During the detailed design stage of the Route 9 project, HyD will work out such details in consultation with the concerned parties including TD, the Police & FSD.</p> <p>During the detailed design stage of the Route 9 project, HyD will investigate in detail whether or not the concrete BLEVE wall should be provided and the extent of such provision, if necessary.</p> <p>During the detailed design stage of Route 9 project, HyD will carry out the traffic study in consultation with concerned parties including TD and the Police. HyD is responsible for implementing any recommendation or improvement measures resulting from the traffic study.</p>			

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			<p>The detailed design of Route 9 should incorporate features which would allow it to be closed and cleared quickly in case of emergency.</p> <p>In case of a major accident at an oil terminal, suitable liaison should be established between FSD, the oil terminals and Route 9 Control Room.</p>	<p>During the detailed design stage of the Route 9 project, HyD will work out and incorporate the features in consultation with the concerned parties including TD, Police, FSD, EMSD and the PHI operators.</p> <p>During the detailed stage of the Route 9 project, HyD will work out the emergency response plans in consultation with the concerned parties including Security Bureau, TD, Police, FSD, EMSD and the oil terminal operators. The plan shall include traffic management measures to close Route 9 quickly in case of emergency.</p> <p>TD will undertake, with the assistance of the Route 9 operator and the Police, the implementation of traffic management measures to facilitate the rescue actions and the minimise inconvenience caused to the public.</p>		Prior to operation	

* Normally undertaken by a specialist monitoring team employed directly by the proponent and audited by the Environmental Works Checker.

** Chainage and approximate grid reference for barrier locations

Road Link	Chainage		Grid Reference		Type
	Start	Finish	Start	Finish	
R9 Road Link NB	NA	Interface with Route 16	E832.590 N821.150	Interface with Route 16	3 m barrier
R9 Road Link SB (eastern side of carriageway)	0+493	Interface with Route 16	E832.942 N821.355	Interface with Route 16	3m barrier
Ramp G	7+500	8+015	E832.943 N821.354	E833.420 N821.152	3m barrier
Route 9/CT9 Slip Road (Section 1)	0+600	0+450	E829.033 N822.211	E829.960 N822.362	5m barrier + 2m cantilever
Route 9/CT9 Slip Road (Section 2)	0+370	0+290	E829.088 N822.441	E829.138 N822.500	5m barrier + 2m cantilever