3.2 Operational Traffic Noise Monitoring

3.2.1 *General*

3.2.1.1 As the noise sensitive receivers within the SEKD would be exposed to traffic noise during the operational phase, a noise monitoring programme should be developed to include noise measurements at noise sensitive receivers during the peak traffic hour. The purpose is to determine the effectiveness of the proposed mitigation measures when they are implemented. The programme would be carried out by the EMT Leader and the monitoring data would be verified by EAT in order to ensure that the traffic noise levels are comparable to those predicted in the EIA under the full provision of the mitigation measures recommended.

3.2.2 *Noise Parameters*

3.2.2.1 The traffic noise level should be measured twice within the first year of the road opening. Measurements should be made in terms of the A-weighted L_{10} over 3 half hour periods during the peak traffic hour.

3.2.3 *Monitoring Equipment*

3.2.3.1 The requirements of the equipment are the same as for the construction noise monitoring.

3.2.4 *Monitoring Locations*

3.2.4.1 The locations for operational traffic noise monitoring should be at the sensitive façade of the receivers of the proposed mitigation measures. A group of monitoring stations can serve to monitor the noise impacts from a number of noise sources. The exact locations of monitoring stations should be proposed by the EMT Leader and agreed with EPD before monitoring commences.

3.2.4.2 The monitoring locations are to be selected according to the following criteria:

(a) They should be at NSRs in the vicinity of recommended indirect/direct technical remedies. Preferably, there should be one representative monitoring location near each type of noise screening element (i.e. vertical barrier, cantilever barrier and enclosure);

(b) One high floor and one medium floor monitoring points should be chosen at each location as far as possible ;and

(c) Selected monitoring locations should enable monitoring to be done twice within one year after implementation of the mitigation measures.

3.2.4.3 The status and locations of noise sensitive receivers may change after issuing this Manual. If such cases exist, the EMT Leader should propose updated monitoring locations and seek agreement from EPD.

3.2.4.4 When alternative monitoring locations are proposed, the monitoring locations should be chosen based on the following criteria:

(a) alternative location should be similarly exposed to potential noise impacts;
(b) it should be close to the noise sensitive receivers; and
(c) it should be located so as to cause minimal disturbance to the occupants.

3.2.4.5 The operation noise monitoring should be carried out at a distance of 1m from the openable window and 1.2m above the floor level of the noise sensitive receivers. The EMT Leader should agree with EPD on any necessary corrections adopted.

3.2.5 *Baseline Monitoring*

3.2.5.1 No baseline operational noise monitoring is required.

3.2.6 *Impact Monitoring*

3.2.6.1 Noise monitoring should be carried out at all the designated traffic noise monitoring stations. The following is an initial guide on the traffic noise monitoring requirements during the operational phase:

(a) one set of measurements at the morning traffic peak hour on normal weekdays (exact timing to be confirmed with Transport Department and agreed with EPD);
(b) one set of measurements at the afternoon traffic peak hour on normal weekdays (exact timing to be confirmed with Transport Department and agreed with EPD);
(c) a concurrent census of traffic flow and percentage heavy vehicle shall be conducted for the road and the existing road network in the vicinity of each measuring point;
(d) average vehicle speed estimates; and
(e) the two sets of monitoring data should be obtained within the first year of operation.

3.2.6.2 Measured noise levels should be compared with predicted noise levels by applying appropriate conversion/corrections to allow for the traffic conditions at the time of measurement.