

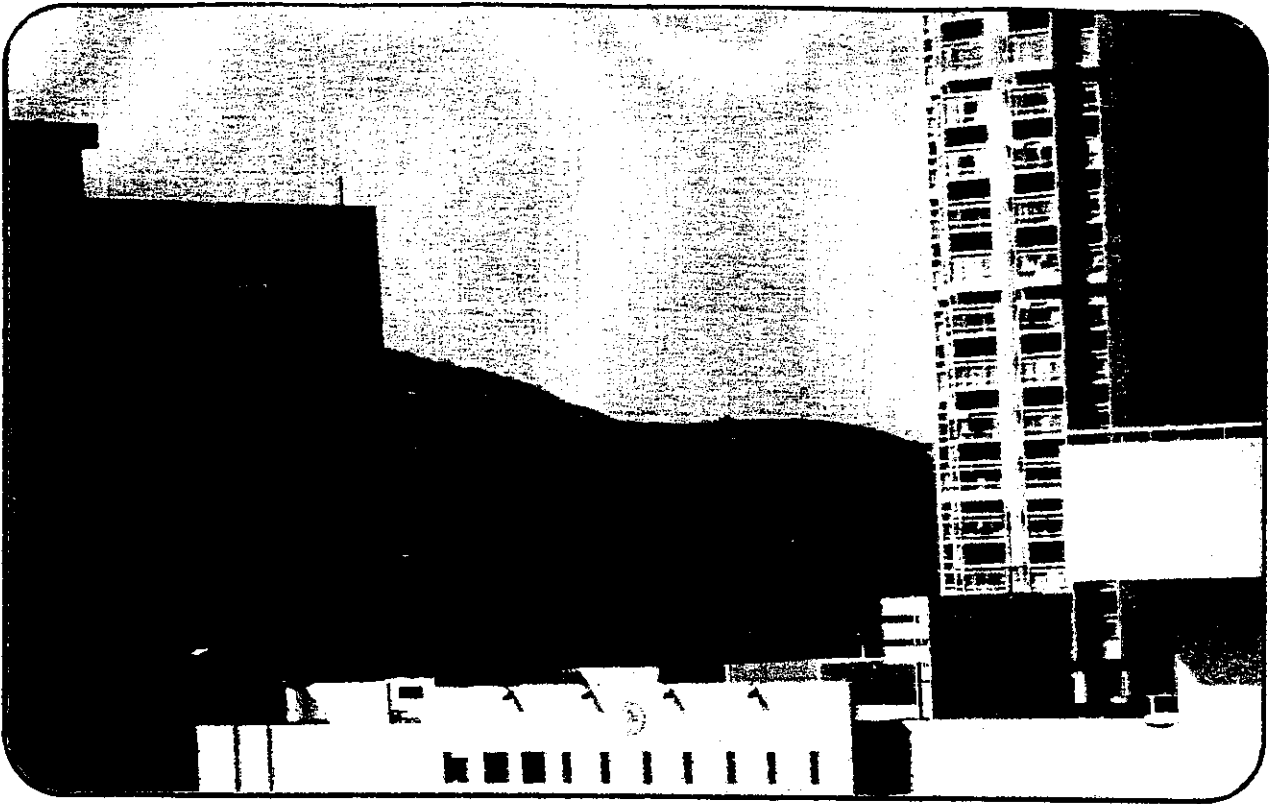
# Noise

## Chapter 8

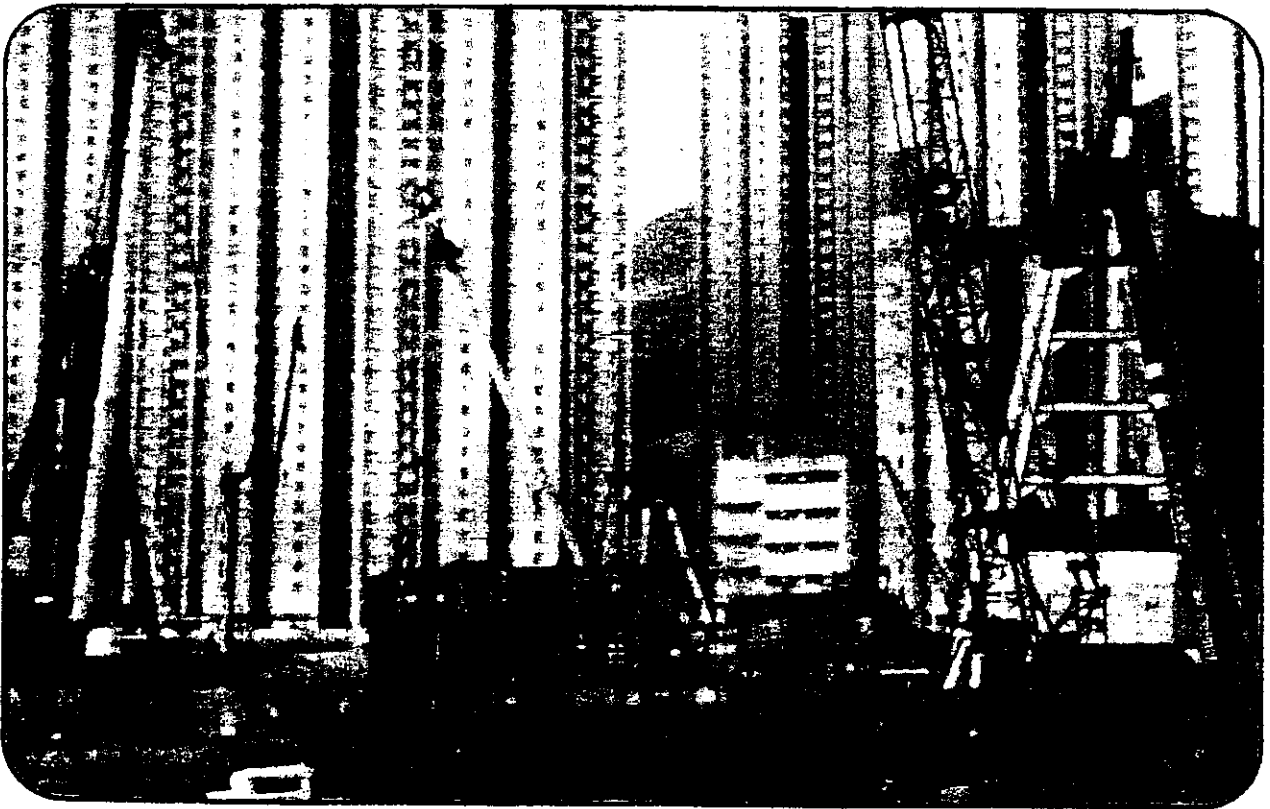


## CHAPTER EIGHT NOISE

1. In terms of control of noise pollution the Government have been successful in enacting the Noise Control Ordinance and its Technical Memoranda. However these tools should not be used as the solution to potential problems but rather in support of the planning process. In the HKPSG the overall policy objective for the control of noise includes the provision "to have due regard to noise in planning public development projects". In concert with this the TDS objectives include "to minimise or reduce noise impacts from major transport corridors and industrial sources".
2. Major noise sources which are likely to be associated with the development of the Preferred Options include construction noise which is temporary and of relatively short duration, road and rail traffic noise which is persistent although the intensity varies throughout the day, and noise associated with industrial, port and airport operations. The latter generates primarily off-site noise impacts which are more widespread in their effects and more difficult to assess and control than construction or traffic related noise impacts. It should be noted that neither cumulative noise assessments nor off-site noise impacts are within the scope of this Study but will require detailed study in future.
3. The baseline noise profile is included in Figure 8.1 which illustrates the locations of sensitive receivers (particularly in the NWNT and NENT). When considered in the context of the development proposals it is evident that there are particularly sensitive areas in the Border Area where traffic flows are forecast to increase over the next few years. Considering the figures given in Table 4.4 it is evident that goods vehicles (which are notorious of pollution sources) will be a major contributor to the elevated ambient noise levels forecast for the New Territories.
4. The aim of the noise assessments was therefore to identify any constraints on proposed new road and rail proposals in connection with the overall development strategies. The predicted noise impacts associated with the development scenarios are outlined in Appendix E and have also been used in the component analysis (of transport links and industrial developments) in Chapters Thirteen and Fifteen. Assessment tables and details of the relative performance of each strategy and components thereof are given in Appendix E and were also used in Appendix K Transport Strategies.
5. Performance measures which were derived early in the TDS Study process were based upon interfaces between residential or other sensitive areas and road and rail lines, rail speeds and headways and noise generated from road based traffic. Predicted noise levels are given in Appendix E which also contains the details upon which the assessments have been made. It should be noted that estimates of the rolling stock, could not be used to differentiate between the options. Reference should be made to Appendix E, (Tables 1 and 2) which identify the volumes of rolling stock estimated by the Rail Development Study, in addition to the interfaces between residential areas and the proposed railway lines.
6. Recourse was made to the transport model which subdivides railways into LRT, MTR, and KCR lines for the assessment of the impacts of speeds and headways on the basis that the greater speeds and frequency would give rise to greater noise and (possibly vibration) impacts than lower speeds. Sections of track were extracted from the model results and the speeds and headways were identified for Scenarios A and B. From the very brief analysis, it was judged that the greatest elevation in background noise levels will be due to the speed and frequency of trains operated by the KCR.

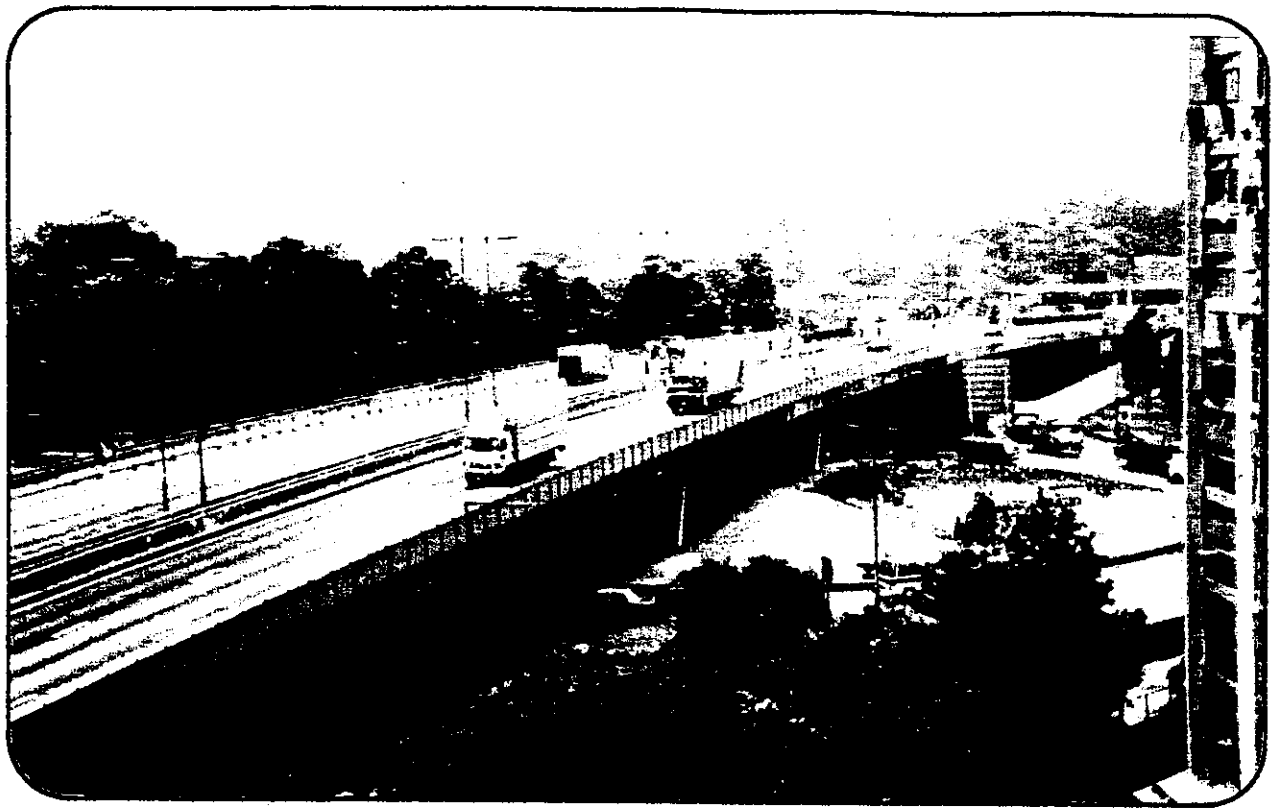


Noise sensitive uses around a container storage area



Residential blocks in proximity to noisy port activities

7. Interfaces between major new roads and residential areas was also used as a performance measure with the results that the greatest potential interfaces exist in the Metro area. Other areas where such interfaces are likely to occur are in the NWNT (from 2001) which is also illustrated in Figure 8.1. It should be noted that detailed assessments of these areas will be required at a district level when feasibility studies and preliminary/detailed engineering designs are carried out. At the detailed planning stage consideration can be given to ways to minimise noise by, for example orientation of the developments, provision of set backs from noise sources or by including buffer uses at sites which are most severely impacted. The present assessment focused upon the variations between Scenarios A and B and the methods for addressing the issues arising from development of the Refined Preferred Options.
8. In addition to interfaces between residential uses and transport corridors noise could also cause problems in terms of various land uses such as established agricultural lands, Country Parks, Sites of Special Scientific Interest (SSSIs) and Conservation Areas. In both the medium and long term strategies, the overall impacts in terms of interface problems are similar in extent, although some differences do exist in terms of the location (Refer to Appendix E.) Areas where interface problems most likely arise are in the NWNT (7.5km under Scenario A and 6.6km under Scenario B) especially in the Country Parks and where new transport links transect conservation areas. In NWNT and NENT the interface problems were identified between roads and agricultural lands, Country Parks and Conservation areas especially by the year 2011.
9. As identified in Chapter One, baseline noise profiles which were established in the Hybrid Options were used in the comparative evaluations of the Preferred Options and related to the different time horizons. The results from transport model indicate that in Metro area there is a slight reduction (<1dB(A)) forecast in many areas between 2001 and 2006 under Scenario A. In the intervening years between 2006 and 2011 the changes (both small increases and decreases) in forecast noise levels are also less than 1 dB(A). In general noise levels are high, except in some of the small streets, (where in reality the noise from delivery vans loading and unloading can be perceived to be as great a nuisance as high volumes of traffic) the forecast noise levels in Metro area are unacceptably high.
10. While the HKPSG recommend noise levels for planning purposes, it may be necessary to review the acceptable noise levels in both the HKPSG and the Noise Control Ordinance (and its Technical Memoranda) to seek to lower these recommended levels to try to protect the living and working environment from the effects of future development. This is particularly pertinent in connection with the development proposals for the NWNT under both Scenarios A and B. Areas of particular concern in this connection include Fanling (Station 5003) where the proposed development results in increases of 2-3dB(A) between 2001 and 2011.
11. In addition to the foregoing, increases in ambient noise levels are anticipated as a result of the developments proposed under the port and open storage strategies. Port back-up areas and open storage facilities are noise generators per se and as these areas are proposed to be located in rural areas the contribution to the background noise climate could be significant at a local level. In addition to which the off site impacts associated with the transport of containers and goods to and from site could create significant impacts which will need to be examined in detail at a local level. Consideration may also need to be given to developing freight yards and container/open storage areas in Shenzhen rather than in Hong Kong if it is found that the carrying capacities of the traffic and environmental systems are exceeded.
12. Cross border vehicle movements will also need to be studied in great detail to ensure the impacts associated with the development of these facilities on the environment are minimised as far as practicable. The aim to maintain or reduce the ambient noise levels presently



Roadside barriers and noise reducing road surfacing used in the section of flyover next to Choi Yuen Estate



New railway proposals should avoid interface with sensitive uses

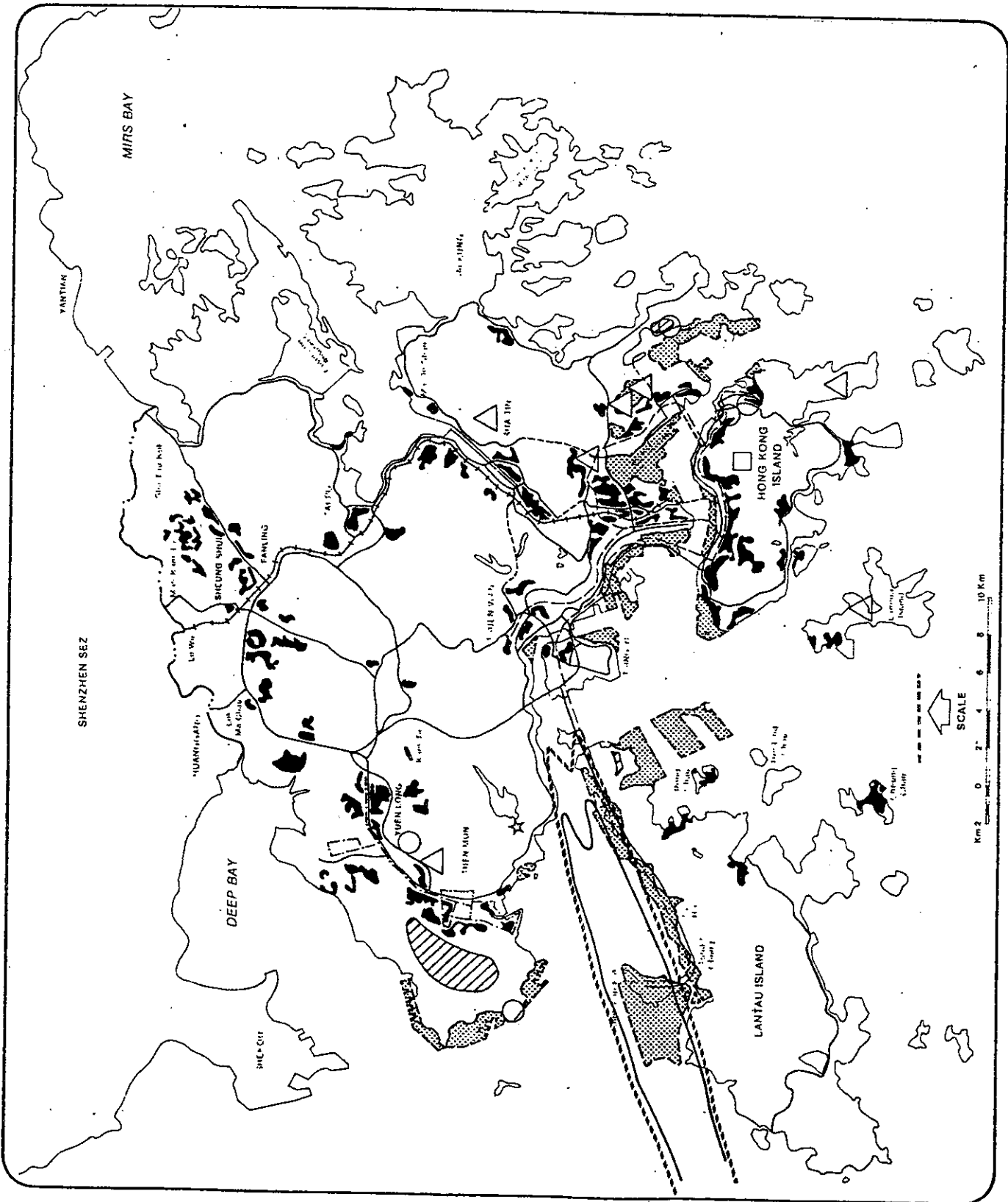
experienced will be a key stone of the integrated transport-environment proposals and comprehensive studies will need to be carried out to ensure these goals are achieved in order to make Hong Kong a better place in which to live and work.



Open storage areas are common noise generators  
in rural New Territories

**LEGEND**

- △ Contract Quarry
  - Government Quarry
  - ☆ Rock Crushing Site
  - Site Crusher
  - ▨ Land Based Source Area
  - ▩ Major Engineering Projects
  - Sensitive Receivers
- EXISTING/COMMITTED TRANSPORT**
- Main Highway
  - + Freight/Passenger Railway
  - - Heavy Rail
  - · - Light Rail
- NOISE EXPOSURE FORECASTS**
- 25 NEF (Year 2000)
  - - - 25 NEF (Year 2030)



TERRITORIAL DEVELOPMENT STRATEGY REVIEW ENVIRONMENTAL PROFILES  
NOISE POLLUTION