

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Project Background	1
1.2	Objectives of the EIA Study	1
1.3	Consideration of Environmental Impact Assessment Ordinance	2
2	PROJECT DESCRIPTION	3
2.1	Project Location	3
2.2	Project Requirements, Scope and Benefits	3
2.3	Works Programme	4
2.4	Concurrent Projects	4
2.5	Interrelationship between the CWB & IECL, CRIII and WDII Projects	4
3	SUMMARY OF THE EIA	5
3.1	Introduction.....	5
3.2	Air Quality Impact	5
3.3	Noise Impact	7
3.4	Water Quality Impact	8
3.5	Construction Waste Management and Disposal	9
3.6	Landscape and Visual Impact	9
3.7	Environmental Monitoring and Audit (EM&A).....	11
3.8	Environmental Benefits, Designs, Key Protection Measures and Enhancements.....	11
4	OVERALL CONCLUSION	11

List of Tables

Table 2.1 Projects that may be Undertaken Simultaneously with the CWB & IECL Project

List of Figures

Figure 2.1 Location and Alignment of CWB & IECL
Figure 2.2 Project Relationship Key Plan (Sheet 1 of 3)
Figure 2.3 Project Relationship Key Plan (Sheet 2 of 3)
Figure 2.4 Project Relationship Key Plan (Sheet 3 of 3)
Figure 2.5 The Overall Construction Programme of the CRII,WDII and CWB & IECL Project
Figure 3.1 Locations of Key Sensitive Receivers for Air and Noise
Figure 3.2 Locations of Noise Mitigation Measures (Sheet 1 of 2)
Figure 3.3 Locations of Noise Mitigation Measures (Sheet 2 of 2)

1 INTRODUCTION

1.1 Project Background

1.1.1 Maunsell Consultants Asia Ltd. were appointed by Highways Department in July 1995 to undertake the Design and Construction of the Central – Wan Chai Bypass and Island Eastern Corridor Link (CWB & IECL) under Agreement No. CE 5/95. The Consultants have completed the Review Phase of the CWB & IECL Project (hereafter called the ‘Project’) and submitted a Design Review Report in October 1996.

1.1.2 Subsequent to the Design Review in 1996, the following changes have occurred:

- the form (including land use, road layout and extent of the reclamation) and the programme of the Central and Wan Chai Reclamation projects have been revised;
- the alignment for the CWB & IECL has been revised in accordance with the latest recommended layout for Central Reclamation Phase III (CRIII) and the findings of the Trunk Road Options (TRO) Study in Wan Chai Development Phase II (WDII);
- the revised programmes of the Central and Wan Chai Development projects lead to a delayed completion date of the Project and a revision to the previously assumed worst case scenario traffic flows for the EIA study; and
- the enactment of the EIAO requires the EIA to be carried out in accordance with the Technical Memorandum on Environmental Impact Assessment (EIAO-TM) (September 1997), which necessitates the remodelling and reassessment of air quality and noise and in particular requires a more detailed visual and landscape assessment of the Project.

1.1.3 In order to take account of the changes in the Central and Wan Chai Reclamation works, the operation of the EIAO, the changes in the alignment of the tunnel and other constraints imposed by the CRIII project, the findings of the WDII Trunk Road Options Study and the dual 3-lane CWB tunnel, Highways Department has commissioned Maunsell Consultants Asia Limited to update and review the design of the CWB & IECL.

1.1.4 With respect to the above, the alignment and layout of the whole of the CWB & IECL have been reviewed. The revised alignment and layout were circulated under the WDII study (section from the eastern limit of the CRIII area to the Island Eastern Corridor) and the CWB Project Review Study (section from Central up to the eastern limit of the CRIII area) in mid-April and end of May 2000, respectively.

1.2 Objectives of the EIA Study

1.2.1 The EIA Report has been prepared to comply with the requirements of the EIAO. The objectives of the EIA are:

- to describe the Project and associated works together with the requirements for carrying out the Project;
- to identify and describe the elements of the community and environment likely to be affected by the Project, and/ or likely to cause adverse impacts upon the Project,

including both the natural and man-made environment;

- to identify and quantify emission sources and determine the severity of impacts on sensitive receivers and potential affected uses;
- to identify and quantify any environmental impacts associated with the Project and recommend appropriate mitigation measures;
- to identify existing landscape and visual quality in the Study Area so as to evaluate the landscape and visual impacts of the Project;
- to propose mitigation measures to minimise pollution, environmental disturbance and nuisance during construction and operation of the Project;
- to identify, predict and evaluate the residual (that is, after practicable mitigation) environmental impacts and cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;
- to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate these impacts and reduce them to allowable levels within established standards / guidelines;
- to identify and justify the need for environmental monitoring and audit and to define the scope of the requirements necessary to ensure the implementation and the effectiveness of the environmental protection and pollution control measures adopted;
- to investigate the extent of side-effects of proposed mitigation measures that may lead to other forms of impact;
- to identify constraints associated with the mitigation measures recommended in this EIA; and
- to identify any additional studies necessary to fulfil the objectives to the requirements of this EIA Study.

1.3 Consideration of Environmental Impact Assessment Ordinance

1.3.1 The proposed CWB & IECL is a trunk road project that is considered as a Designated Project under Schedule 2 “Designated Projects Requiring Environmental Permits”, Part I, A.1. No other DPs are involved under the Project. An Environmental Permit (EP) is required for the construction and operation of the Project.

2 PROJECT DESCRIPTION

2.1 Project Location

2.1.1 The proposed CWB & IECL is a trunk road that connects Rumsey Street Flyover Extension (Route 7) in Central and Island Eastern Corridor (IEC) (Route 8) in Causeway Bay to form an east-west strategic route along the Central and Wan Chai Reclamation (Figure 2.1).

2.2 Project Requirements, Scope and Benefits

Requirements and Benefits of the Trunk Road

2.2.1 The CWB and IECL were planned under the Central and Wanchai Reclamation Feasibility Study (1989). The proposed trunk road has the following requirements and benefits:

- to relieve the existing main east-west route (that is, Connaught Road – Harcourt Road – Gloucester Road) on the north shore;
- to provide access to the Hong Kong Convention and Exhibition Centre (HKCEC) Area and neighbouring areas being developed as part of the reclamation schemes; and
- to serve the additional traffic to be generated by the developments on the Central and Wan Chai Reclamation.

Scope of the CWB & IECL

2.2.2 The scope of the CWB includes:

- an interchange (the Central Interchange) with slip roads to the distributor road system on the Central Reclamation Phase I (CRI);
- a dual three-lane trunk road tunnel approximately 2.3 km in length between Central and Causeway Bay forming the Central – Wan Chai Bypass, with an eastbound exit (the Slip Road F Tunnel) to the HKCEC Extension;
- two separate two-lane single-way tunnels around 0.7 km in length from the HKCEC area to Causeway Bay forming the Wan Chai Bypass;
- tunnel control buildings, ventilation buildings, operations areas and operation, maintenance and recovery vehicles;

2.2.3 The scope of the IECL includes:

- a dual four-lane trunk road about 1 km in length linking the CWB and the Island Eastern Corridor;
- slip roads from the trunk road connecting to Victoria Park Road and Hing Fat Street;
- realignment of Victoria Park Road eastbound and provision of road connections to the reclamation area;
- associated road lighting, road signing, traffic control and surveillance systems.

2.3 Works Programme

2.3.1 Some of the works of the CWB & IECL will be constructed on land reclaimed under Territory Development Department's (TDD) CRIII and WDII projects. In order to minimise the construction interface with these projects, the construction of a tunnel box structure within the CRIII and WDII areas is proposed to be entrusted to TDD's CRIII and WDII projects respectively. Apart from the entrusted works, the works of the CWB & IECL will be divided into three works packages and constructed by Highways Department's contractors. All works packages for the CWB & IECL are summarised as follows:

- Entrusted Works in CRIII Area
- Entrusted Works in WDII Area
- Central Interchange
- IECL
- Tunnel Building, E&M Installation and Ancillary Works

2.3.2 The construction of the Project will commence in CRIII area (entrusted CWB tunnel works) in March 2004 and the Project will be completed in February 2012.

2.4 Concurrent Projects

2.4.1 The proposed CRIII and WDII will provide land for the CWB & IECL. They will be constructed concurrently with the Project (Table 2.1).

Table 2.1 Projects that may be Undertaken Simultaneously with the CWB & IECL Project

Project	Year of Construction	Nature of Project	Remark
Central Reclamation Phase III (CRIII)	August 2002 – March 2007	Roadworks and infrastructural developments	Construction of the CWB within CRIII will be entrusted to a CRIII contract
Wan Chai Development Phase II (WDII)	March 2004 – February 2010	Roadworks and infrastructural developments	Construction of the CWB within WDII will be entrusted to a WDII contract
Causeway Bay Flyover	May 2003 – February 2006	Roadworks	-

2.5 Interrelationship between the CWB & IECL, CRIII and WDII Projects

2.5.1 The CWB & IECL, CRIII and WDII projects will be implemented over the time period from 2002 to 2012. These projects all lie along the north shore of Hong Kong Island: CRIII and WDII are contiguous projects which will provide land for key transport infrastructure, while the CWB & IECL project forms a new trunk road from Central to Causeway Bay which will straddle both the CRIII and WDII projects.

2.5.2 The interrelationship between these three projects is essentially a function of their overlapping implementation programmes and the physical overlapping of both the CRIII and WDII projects by the CWB & IECL project. This overlapping is clearly demonstrated in Figures 2.2, 2.3 and 2.4. The overall construction programmes of these three projects is shown in Figure 2.5.

2.5.3 With respect to the assessment of environmental impacts for the CWB & IECL Project, the key indicators of air quality and noise will be influenced by the cumulative effects of overlapping programmes of construction works and by the contiguous project areas. These cumulative effects can be summarised as follows:

- For the overlapping period of the CWB & IECL, CRIII and WDII projects (that is, from the start of CWB & IECL construction to the end of CRIII construction), air quality and noise impacts will arise due to the construction works in the CWB & IECL, CRIII and WDII project areas. Within the area of influence at the interface of CWB & IECL / CRIII / WDII, there will be cumulative air quality and noise impacts caused by each project on the other.
- During the operational stage of all three projects, air quality and noise impacts may arise due to the cumulative traffic on the WDII roads, the CRIII roads and on the CWB & IECL (the new Trunk Road). These cumulative impacts will prevail over the operational impacts of the individual projects.

2.5.4 The effects of these cumulative impacts have been accounted for in the environmental assessments by presenting worst case scenarios with due recognition of the contributions to the impacts at any sensitive receiver from all concurrent works, no matter from which project. The EIA Reports of all three projects present the cumulative air and noise impacts during both the construction and operation stages, insofar as they affect the respective project areas. Mitigation measures proposed under all three projects have been taken into account in the assessments of residual impacts. In so doing, environmental impacts are addressed in a comprehensive manner, such that the overall picture of potential environmental conditions can be obtained over the whole north shore area.

3 SUMMARY OF THE EIA

3.1 Introduction

3.1.1 The following sections summarise the nature and extent of the key environmental impacts and outcomes arising from the construction and operation of the Project and related activities taking place concurrently. Section 3.8 also provides a summary of key environmental impacts avoided and protection and benefits afforded to sensitive environmental resources and populations.

3.2 Air Quality Impact

Construction Phase

3.2.1 During the construction of the CWB & IECL, ground excavation, material handling, truck haulage on unpaved site roads, ventilation building construction as well as tunnel construction would generate a large amount of dust. The concurrent reclamations and road works by TDD for the Central Reclamation Phase III and the Wan Chai Development Phase II would also generate dust impacts.

3.2.2 Exceedances of Air Quality Objectives (AQO) for both 1-hour and 24-hour Total Suspended Particulates (TSP) are predicted at almost all air sensitive receivers (ASRs) (as

shown in Figure 3.1) from Sheung Wan to Causeway Bay. Maximum predicted 1-hour and 24-hour TSP at the HKCEC Extension are $3,371 \mu\text{g m}^{-3}$ and $1,753 \mu\text{g m}^{-3}$, respectively.

3.2.3 Since exceedance of both TSP guideline and AQO is predicted at most of the ASR locations, dust suppression measures are required. In order to achieve the air quality objectives, the following mitigation measures are proposed for CWB & IECL Project (excluding works entrusted to TDD) managed by HyD, CWB entrusted works managed by TDD under WDII project, and CWB entrusted works managed by TDD under CRIII project:

- strictly limit the truck speed on site to below 10 km per hour and spray water to keep the haul roads in wet condition;
- twice daily watering of the work site with active operations when the weather and the work site are dry;
- watering during excavation and material handling;
- provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and
- tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.

3.2.4 With the above mitigation measures, good site practices and comprehensive dust monitoring and audit, no adverse cumulative construction dust impact is predicted at the air sensitive areas. The maximum predicted 1-hour and 24-hour TSP at the HKCEC Extension are $394 \mu\text{g m}^{-3}$ and $251 \mu\text{g m}^{-3}$, respectively. Therefore, there will be no adverse residual air quality impact due to the CWB & IECL construction activities.

Operational Phase

3.2.5 The dispersion of nitrogen dioxide (NO_2), respirable suspended particulates (RSP) and carbon monoxide (CO) arising from the combination of background pollutant levels within and adjacent to the CWB & IECL, vehicle emissions from open road networks, tunnel portal and ventilation building emissions from the CWB & IECL, tunnel portal emissions from the Cross Harbour Tunnel, and portal emissions from the existing underpasses and the planned deckovers were modelled.

3.2.6 The 1-hour average NO_2 , 24-hour average NO_2 , 24-hour average RSP and 1-hour average CO concentration at 1.5 m above ground are predicted to range from 114 to $291 \mu\text{g m}^{-3}$, 79 to $150 \mu\text{g m}^{-3}$, 62 to $130 \mu\text{g m}^{-3}$ and 1,820 to $6,621 \mu\text{g m}^{-3}$, respectively.

3.2.7 The highest predicted 24-hour average NO_2 concentration, at the planned hotel in the vicinity of the existing Cross Harbour Tunnel (CHT) at 1.5 m above ground, approaches the AQO. However, as the planned hotel will be centrally air-conditioned with the fresh air intakes at a high level, the air quality at the planned hotel is considered acceptable.

3.2.8 To summarise, no adverse cumulative air quality impact is predicted at the air sensitive areas. Therefore, no mitigation measures are required.

3.2.9 For the air pollution within the tunnel section of the CWB & IECL, monitoring of tunnel air quality should be undertaken to ensure the acceptability of the tunnel air quality criteria.

3.3 Noise Impact

Construction Phase

3.3.1 This assessment has predicted the construction noise impacts associated with the construction works of the proposed Project and other concurrent projects including the CRIII, the WDII and the Causeway Bay Flyover. The predicted unmitigated noise levels at all representative noise sensitive receivers (NSRs) range from 55 – 93 dB(A). With the use of silenced equipment, movable noise barriers, reduction in the number of some powered mechanical equipment (PMEs) and adjustment of PMEs percentage on-time for some construction tasks at some specific locations, the predicted noise levels at most of the residential representative noise sensitive receivers (NSRs) (as shown in Figure 3.1) and Hong Kong Academy for Performing Arts Open Arena would comply with the EIAO-TM construction noise criteria in the range of 55 – 75 dB(A). Noise exceedances of 65 dB(A) criterion are still predicted at City Hall, Art Centre and HKCEC Extension. However, as these NSRs are equipped with central air-conditioning system and good noise insulation facilities, and they do not rely on openable windows for ventilation, so adverse noise impacts are not expected inside these NSRs.

3.3.2 Exceedance of 9 dB(A) over the noise criterion (75 dB(A)) is also predicted at the Peoples' Liberation Army (PLA) Headquarters, predominantly due to construction noise from the CRIII project. According to the noise mitigation measures for CRIII construction works presented in the EIA Report of the CRIII project, movable noise barriers would be adopted for the Extended Overrun Tunnel, North Island Line (NIL) Protection Works and road / drainage works immediately to the north of the PLA Headquarters. These would reduce noise levels by at least 5 dB(A). It should, however, be noted that the PLA Headquarters are already provided with air conditioning and therefore the noise levels predicted after the adoption of quiet PMEs and movable noise barriers would not result in adverse noise impacts to the indoor environment of the buildings. A construction noise EM&A is recommended to check compliance with the noise criteria.

Operational Phase

3.3.3 The potential road traffic noise impacts have been assessed for the worst-case traffic flows in 2027. The predicted unmitigated traffic noise levels at the representative NSRs range from 56 to 83 dB(A). Most of the noise sensitive receivers are predicted to exceed the EIAO-TM traffic noise criteria. Direct mitigation measures such as vertical barriers, cantilevered barriers and semi-enclosure have been proposed on the new roads to alleviate the traffic noise impacts. Extents of these direct mitigation measures are shown in Figures 3.2 and 3.3. The assessment results show that the exceedances of traffic noise criteria are dominantly due to existing roads. With the implementation of all recommended practicable direct mitigation measures, exceedances of 1 – 13 dB(A) are still predicted at most of the NSRs, dominantly due to existing roads. As all direct mitigation measures are exhausted, eligibility assessment for the provision of indirect technical remedies has been undertaken for these NSRs as well as other NSRs.

- 3.3.4 According to the eligibility assessment results, no NSRs are eligible for the consideration of indirect technical remedies in the form of window insulation and air-conditioning.
- 3.3.5 Assessment has been undertaken for fixed plant noise arising from the proposed tunnel ventilation buildings. The ventilation shaft noise levels at the NSRs in the vicinity of ventilation buildings are predicted to comply with the EIAO-TM if silencers are provided at all exhaust fans for the three ventilation buildings. According to the findings in WDII EIA Report, no adverse cumulative fixed noise impact from the East Ventilation Building and the NIL ventilation shaft at Tonnochy Road, is expected at the Causeway Centre, which is the closest NSR to these two ventilation shafts.

3.4 Water Quality Impact

- 3.4.1 As no reclamation will be undertaken directly for the CWB & IECL, the primary concern with regard to water quality will be the control of runoff during construction. This could potentially contain elevated concentrations of suspended solids, and could impact upon the flushing and cooling water intakes located along the Victoria Harbour waterfront, identified as potential sensitive receivers. However, the potential water quality impacts could be controlled to comply with the standards of Water Pollution Control Ordinance by implementing the recommended mitigation measures, including provision of drainage facilities, oil and silt removal facilities and good site practices. No unacceptable residual water quality impact is anticipated.
- 3.4.2 Mitigation measures, including road drainage with silt traps and petrol interceptors, with adequate maintenance are also recommended to remove oil and grease from the road runoff during operation. No unacceptable residual water quality impact is expected.

3.5 Construction Waste Management and Disposal

- 3.5.1 Provided that waste arisings from the construction of the CWB & IECL are handled, transported and disposed of using approved methods as recommended in the EIA Report, and that no solid or liquid wastes enter nearby marine waters, no unacceptable environmental impacts are envisaged. In most cases, the inert construction and demolition (C&D) material can be reused within the project or at reclamation or public filling areas, whilst the non-inert C&D material will be disposed of to landfill.
- 3.5.2 The estimated total quantity of excavated material from the Central Interchange, IECL and tunnel buildings is about 259,200 m³ and out of which 35,130 m³ will be reused on-site and 224,070 m³ will be required to be disposed off-site. As the construction works for the CWB & IECL project mainly comprise highway structural works for the trunk road tunnel, bridges and at-grade slip roads, the capacity to receive excavated material on-site is limited. It should be noted that according to current planning the WDII reclamation works will still be in progress at the time the surplus material from Central Interchange will need to be disposed off-site. As such, it may be possible that the surplus material from the Central Interchange identified to be disposed off-site could be used as fill material in WDII, depending on the programme of works that will actually take place at that time. The estimated total quantity of excavated material from the entrusted works at CRIII and WDII areas is about 1,009,000 m³ and out of which 789,000 m³ will be reused on-site and 220,000 m³ will be required to be disposed off-site.

3.5.3 The mitigation measures recommended in the EIA Report should be incorporated into contract specifications to ensure that environmental nuisance does not arise from the storage, transport and disposal of various types of waste arising from the construction of the CWB & IECL. These recommendations should form the basis of the site Waste Management Plan to be developed by the Contractor at the construction stage.

3.6 Landscape and Visual Impact

3.6.1 Key issues relating to the impact on the landscape and visual context of the proposed road include the loss of existing vegetation, the addition of infrastructure associated facilities (i.e. ventilation and administration buildings), associated works (i.e. portals, wing walls and abutments), elevated road sections and noise abatement elements including noise barriers and semi-enclosures.

3.6.2 Field and desktop surveys have been carried out to establish the existing landscape and visual baseline of the Project site. The assessment of the significance of impacts is based upon a systematic evaluation of the baseline condition and the predicted impacts during and after the construction of the Project.

3.6.3 The Project site contains substantial engineering works and any landscape and visual impacts are to be mitigated through quality design solutions. The proposed built components of the Project should be designed as an integrated design system that establishes a unique quality within the context of their purpose. The guiding objectives for landscape mitigation design include the following:

- To establish a coherent language within the overall landscape character and ancillary buildings and built elements.
- To integrate connections with adjoining open space areas.
- To attempt to reduce the divisionary character of the road system from the harbour.
- To establish low maintenance amenity planting areas through species selection which will ensure rapid vegetation cover, seasonal interest and species diversity whilst maintaining continuity.

3.6.4 The potential impacts during the construction phase are:

Residual Landscape Impacts

Moderate adverse impacts would occur through vegetation removal at the eastern and western above ground sections of the CWB & IECL. Within the 554 number of trees surveyed, 61 number of trees are proposed to be felled, 132 number to be retained and 361 number to be transplanted. Trees to be felled are those which are considered not worthy of transplanting, or are of poor form and for reasons of safety. Constraints on the road alignment and the requirements for construction working space have necessitated that a number of trees will be felled. Approval for felling and transplanting is required from the Leisure and Cultural Services Department. Significant adverse impacts would occur through close proximity to the construction works at Royal Hong Kong Yacht Club (RHKYC), Police Officers' Club (POC), Causeway Bay Typhoon Shelter and Promenade; their quality of recreation use will be significantly affected.

Residual Visual Impacts

Significant adverse impacts would occur along the majority of the CWB & IECL length from buildings with a harbour outlook, especially in the Causeway Bay, Tin Hau and Tai Hang districts. Moderate / significant adverse impacts on near or adjoining open space and recreation areas such as Victoria Park, RHKYC, POC, and Causeway Bay Typhoon Shelter and Promenade. Moderate adverse impacts on visually sensitive receivers (VSRs) with distant views from Tsim Sha Tsui waterfront.

- 3.6.5 Residual impacts are taken at Year 10 after Day 1 of operation. It is assumed that the works under other contracts have been completed and tree planting matured to provide adequate screening. The potential residual impacts during the operational phase are:

Residual Landscape Impacts

Due to the elevated road structures of IECL dominating the landscape, significant adverse impacts would occur at RHKYC and Causeway Bay Typhoon Shelter and moderate / significant adverse at the future WDII waterfront open space. Moderate adverse impacts would occur at the POC, and Victoria Park and Victoria Park Road due to the dominance of the elevated IECL. The extended Rumsey Street Flyover and its associated elevated slip road are located further west from the proposed Central waterfront promenade. Thus, they have negligible impact to the planned waterfront promenade.

Residual Visual Impacts

Significant and moderate / significant adverse impacts on VSR's would generally occur in the Tin Hau, Tai Hang, Causeway Bay and Wan Chai districts where numerous existing and future residential and hotel buildings and amenity areas command open views of the Island Eastern Corridor. The Central area will have one significant adverse impact VSR – the residential units at Shun Tak Centre. Moderate / significant adverse impact would occur at the RHKYC, the POC, the Causeway Bay Typhoon Shelter and Promenade, Airport Railway Hong Kong Station Northern Site Development, future waterfront open space within WDII, and future waterfront related commercial and leisure uses within WDII due to the close view of the elevated road structures.

- 3.6.6 Receivers having negligible impact are generally not affected by the CWB & IECL works but by the reclamation works under CRIII and WDII.
- 3.6.7 The overall residual landscape and visual impact after the implementation of the recommended mitigation measures will be moderate adverse. In the context of Annex 10 of the EIAO-TM, the landscape and visual impacts are considered acceptable with mitigation measures.
- 3.6.8 Residential receivers in Causeway Bay and Tin Hau will incur significant adverse visual impact due to the proposed elevated IECL and the associated vertical noise barriers which will become an imposing feature to the residential flats facing the harbour. The Project will pose a key concern on the issue of visual impact to these localised areas. The mitigation measures proposed at these areas including the aesthetic design of the elevated road and noise barriers have limited potential to reduce the scale of the impact. Future developments and landscape proposals undertaken within adjoining projects at the WDII project area and the design of IECL ancillary structures may, however, alleviate some adverse impacts by offering a high quality alternative view.

3.7 Environmental Monitoring and Audit (EM&A)

3.7.1 As detailed in the Project EM&A Manual, the EIA has recommended an EM&A programme comprising monitoring before construction and monitoring and audit during both construction and operation of the Project for air quality, noise, water quality and waste management. An independent environmental checker is also recommended to oversee the performance of the contractor and environmental team during the EM&A programme.

3.8 Environmental Benefits, Designs, Key Protection Measures and Enhancements

3.8.1 The key benefit associated with the Project will be the provision of a new trunk road network relieving the heavy traffic congestion between Central and Causeway Bay. Additional environmental protection measures arising from the Project include:

- the existing air sensitive receivers from Sheung Wan to Causeway Bay will be protected from adverse construction air quality impact by the recommended dust control measures during construction phase;
- the existing noise sensitive receivers from Sheung Wan to Causeway Bay, including Korea Centre, Causeway Centre, Elizabeth House, Riviera Mansion, Mayson Garden Building, Belle House and Victoria Centre will be protected from adverse construction noise impact by the recommended noise mitigation and control measures during construction phase; and
- the recommended noise mitigation measures will effectively alleviate the road traffic noise impacts arising from the proposed new roads on the existing residential noise sensitive receivers at Riviera Mansion, Macro Polo Mansion, Viking Garden, Victoria Court, Mayson Garden Building, Gordon House and Belle House near the IECL during operational phase. Exceedances of noise criterion at the Victoria Centre, predominantly due to proposed new roads, are predicted even though direct mitigation measures are exhausted. Eligibility assessment for the provision of indirect technical remedies has been undertaken for these NSRs. Indirect technical remedies would not be provided at Victoria Centre as it does not fulfil the eligibility criteria.

4 OVERALL CONCLUSION

4.1.1 The findings of the EIA have provided information on the nature and extent of environmental impacts arising from the construction and operation of the Project. The EIA has, where appropriate, identified mitigation measures to ensure compliance with environmental legislation and standards.

4.1.2 Overall, the EIA Final Report for the development of CWB & IECL has predicted that the Project will comply with environmental standards and legislation after the proposed construction and operational stage mitigation measures are implemented. The EIA has also demonstrated the general acceptability of the residual impacts from the Project and the protection of the population and environmentally sensitive resources. Environmental monitoring and audit mechanisms have been recommended before and during construction and operation, where necessary, to verify the accuracy of the EIA predictions and the effectiveness of recommended mitigation measures.