



Hong Kong Housing Authority

TERM TRAFFIC ENGINEERING CONSULTANCY 1996 - 1999

EIA OF
PUBLIC ROADS AT TIU KENG LENG
VOLUME IV

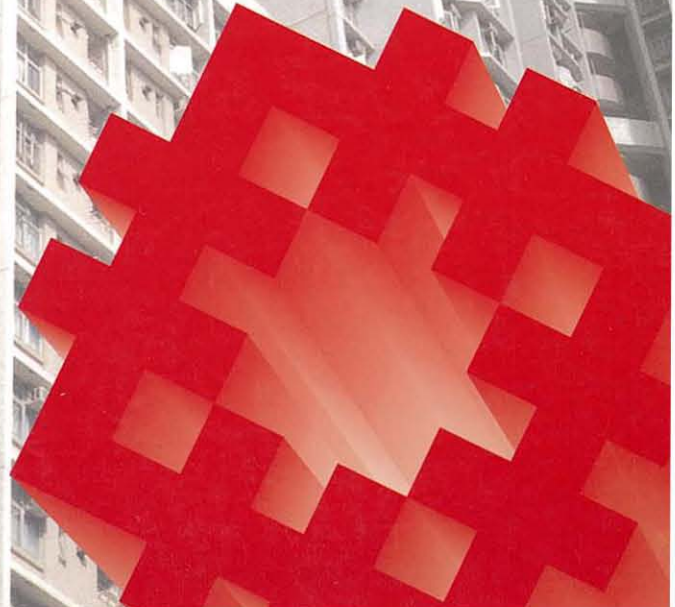
COMMENTS AND RESPONSES



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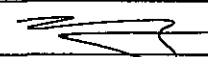

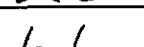
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**EIA OF
PUBLIC ROADS AT TIU KENG LENG
VOLUME IV**

COMMENTS AND RESPONSES

Project No.	10071/21
Version No.	1
Prepared for	Hong Kong Housing Authority

	Name	Title	Signature	Date
Prepared by	Kent Liang	Asst. Traffic Engineer		28 March 1998
Checked by	Kelvin Leung	Director		28 March 1998
Approved by	Kelvin Leung	Director		28 March 1998

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HOUSING AUTHORITY

EIA of Public Roads at Tiu Keng Leng Volume IV

Comments and Responses

March 1998

CES (Asia) Ltd.
Room 1201, Tai Yau Building
181 Johnston Road, Wanchai, Hong Kong
Tel: (852) 2893 1551 Fax: (852) 2891 0305
Email: CESAL@CEnvSci.com



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Fire Services Department	nil return
Architectural Services Department	nil return

Construction of Public Roads at Tiu Keng Leng, TKO
Environmental Impact Assessment (EIA) Study
Draft Final EIA Report and
Draft Environmental Monitoring & Audit (EM&A) Manual

COMMENT

RESPONSE

From: Highways Department (Senior Landscape Architect)
Ref: () in HyDT 12/13/32
Date: 10 December 1997

A. Draft Final EIA Report

- | | |
|---|--|
| (i) Please add the <u>Annexes 10 & 18 of the Technical Memorandum on EIA Process</u> which describe the criteria and guidelines for landscape & Visual Impact Assessment to the list of literature in Item 4.3 and Page 15. | Note. These will be referenced in the report. |
| (ii) Please add the Geotechnical Assessment on the proposed cut slopes into Lei Yue Mun Headland to Item 8.1.3 on Page 46. GEO of CED should be consulted with regard to the criteria and requirements of slope formation. | The geotechnical engineering assessment of the proposed cut slopes into Lei Yue Mun Headland has been carried out under the Tiu Keng Leng (TKL) site formation contract. The design stage of the assessment has been submitted and approved by GEO of CED for approval and included the criteria and requirements of the slope formation. The TKL site formation contract commenced in March 1997 and is scheduled for completion in July 2000. It should be noted that the site formation contract is completely separate from the public roads construction contract and that the public roads will be constructed on the cleared and formed site. |
| (iii) I do not concur with your landscape reinstatement proposal for the cut slopes as stated in Item 8.6.1 on Page 52. I recommend that the cut slopes should be terraced with several flights of natural stone retaining walls to accommodate plantings on each terraces for screening. A design layout plan showing the hard and soft landscape proposal for the cut slopes should be incorporated into the EIA Report for all members' consideration. | Please refer to Section 1.2 of the EIA Study Brief. The visual impact assessment makes some general points with regard to visual mitigation of the slopes. However, the detailed landscape design is covered under the general site formation works and is outwith the remit of this EIA study. |
| (iv) An Ecological Assessment on existing fauna and flora at the Lei Yue Mun Headland should be conducted in order to determine the scale and magnitude of the adverse ecological impacts by the slope works. For example, a Tree Survey should be carried out on site to identify the existing conditions of vegetations and their amenity values. | As the proposed road construction works are confined within the TKL site formation boundary, no significant ecological impact is anticipated. Also, a tree survey has been conducted before the commencement of the TKL site formation contract. The survey comprised an on-site assessment to identify the existing conditions of vegetation and their amenity value. This tree survey report has been submitted and approved by AFD. A copy of the relevant submissions and correspondence is attached for retention of SLA of HyD. |

- (v) Please add a new section to describe the adverse ecological impacts to be imposed by those cut slopes, and propose mitigation measures to minimise/compensate the environmental losses. Few more photographs of the Headland should be included in the EIA Report for members' review. All the photographs should be labelled and marked on a layout plan for easy reference. See response to A (iv).
- (vi) The typical widths of the planter and footpath should be indicated on Figure 8.6 for members' understanding of the spatial relationship and its quality. Noted. These will be provided.
- (vii) Please add new sections in Chapter 10 of the EIA Report to cover the EM&A requirements of the Ecological and Landscape & Visual Impacts. Landscape and visual impacts cannot be monitored and audited. However, the EM&A Manual will be amended to include a summary of the proposed mitigation. Also, there no significant ecological impact anticipated, therefore, proposals for ecological monitoring and audit will not be necessary.
- (viii) Please add new sections in Chapter 11 of the EIA Report to conclude the outstanding Geotechnical and Ecological Issues. There is a typing error being noted at Line 5 of Item 11.3.1 on Page 66, please clarify. See response to A (ii). The word "flandscape" will be amended to read "landscape".

B. Draft EM&A Manual

- (i) My above comment at A) vii also applies to this Manual. See response to A(vii).

Furthermore, it appears that my previous comments, dd 4.10.97, are not being responded. Please follow up the matter.

Housing Department will be responsible for presenting and providing drawings to the ACABAS for the construction of the footbridge linking the public housing development in TKO Areas 74 North and 73A, but the ACABAS submission will be made later under further HD's building contracts for TKO Area 74 North/73A.

From: Drainage Services Department
Ref: () in MS 11/SK/250
Date: 12 December 1997

I have no comment on the Draft Final Report and the EM&A Manual. Noted.

From: District Officer (Sai Kung)
Ref: (9) in SKGR 140/11/T8PT.1
Date: 15 December 1997

2. I understand that the Sai Kung Provisional District Board will be consulted on the above two reports in due course. Apart from this, I have no other comments. Noted.

From: Water Supplies Department
Ref: (5) in WSD 3053/107/91 Pt.6
Date: 15 December 1997

I refer to your above referenced letter dated 2.12.1997 and have no comments on the draft EIA report and draft EM&A Manual. Noted.

From: Regional Services Department
Ref.: (52) in RSD 1/HQ 712/91(4)II
Date: 16 December 1997

There is no comment from the Department. Noted.

From: Environmental Protection Department
Ref: (8) in EP2/N8/58
Date: 18 December 1997

2. For the EIA, you should exhaust all practicable direct measures on roads then explore other on-site mitigation measures such as disposition of buildings when direct measures on roads become impractical for various reasons. It is not sure if you have included a boundary wall for school sites. As a boundary wall of 3m high will be able to remove some exceedances. All practicable direct measures on roads were explored. The assessment of on-site mitigation measures is not included in the study brief and hence outside the remit of this EIA. Boundary walls on the school sites were not included.
3. Our specific comments on the draft EIA Report are as follows:
- (a) *Table 3.1 on page 12*
You may like to note that the Government has decided to provide deck-overs at Road D4 fronting Areas 65 and 67. Noted. This statement will be added to Table 3.1.
- (b) *Section 4.2 on pages 13 & 14*
The discussion of construction work in Designated Areas should be moved forward to merge with the discussion of general construction work. You should note that the "Technical Memorandum on Noise from Percussive Piling" has been revised and therefore Table 4.3 is outdated. Noted. The text will be amended.
- (c) *Table 5.1 on page 17*
Temple should also be considered as a NSR during daytime. The temple will be included as a day-time noise sensitive receiver.
- (d) *Section 6.1 on pages 32 & 33*
Please note that dump truck should be used in lieu of lorry. And concrete lorry mixer and excavator mounted breaker should also be included. Noted. The list of PME and impact assessment will be amended.
- (e) *Table 6.4 on page 34*
Exceedance is also identified in CN1 for activity Pavement (a). No comments were offered regarding noise levels at the temple as it was not previously considered a sensitive receiver. However, the table and text will be amended to include CN1 as an NSR.
- (f) *Section 7.2.1 on page 37*
Traffic flow figures for this portion of Road L731 (access to Area 74 North) are not given in Figure 7.1 and we are unable to check if the proposed barrier is required or not. The traffic flow figures will be added to Figure 7.1.
- Exceedance identified at points S9 & S10 of the primary school. These points located at the special room block of the school and exceedance identified at 6/F and 7/F. For a standard primary school, the special room block is only 2 to 3 storeys high. Will you please check and confirm. Noted. The text will be amended to include the following "The standard primary school layout has noise sensitive rooms on the 2nd and 3rd floors only. The noise levels at these NSRs are 65 dB(A). As there is no exceedance of the HKPSG limit direct mitigation is not recommended."

- For the secondary school, has the barrier and low noise surfacing material at Road P2 been taken into account? Yes. These have been included in the assessment.
- (g) *Section 7.2.2 on page 37*
Please check whether it is true that the Phase 1 secondary school is being affected by noise from Road P2 and has the mitigation effect of a school boundary wall been assessed. Further assessment to determine the noise contribution from Roads D8 and P2 will be provided. The mitigation effect of a school boundary wall was not assessed as it is not in the remit of this study to assess mitigation within development sites.
- For the Phase 2 primary school, the use of school boundary wall as noise barrier should also be addressed. The mitigation effect of a school boundary wall was not assessed as it is not in the remit of this study to assess mitigation within development sites.
- Same comment applies to other schools (receivers S67 to S83 and S101 to S116). The mitigation effect of a school boundary wall was not assessed as it is not in the remit of this study to assess mitigation within development sites.
- (h) *Section 7.2.3 on page 39*
Please also explore the feasibility of providing noise mitigation measures to the flyover at Road D4 across Road P2 (or is this an underpass?) This is a flyover. Further assessment, including mitigation on the flyover will be provided.
- (j) *Section 7.2.5 on page 39*
Since the layout of Area 73B West is yet to be fixed, the only exceedance at the northwestern corner should not be a problem. Noted. This will be added to the body text.
- Exceedance at one location of the special block of the primary school is identified. The number of classroom being affected depends on the height of this special block. And has the feasibility of using the school boundary wall as barrier being investigated? Noted. There are noise sensitive rooms on the 2nd and 3rd floors only. Therefore there are only 2 receivers (position S174) which are affected by noise levels greater than the 65dB(A) criteria. (i.e. 67dB(A)). This does not alter the conclusion that roadside barriers are not recommended. The mitigation effect of a school boundary wall was not assessed as it is not in the remit of this study to assess mitigation within development sites.
- (k) *Section 7.2.6 (first one) on page 40*
The deck-over at Road D8 is not recommended. Are there any other measures? No other measures are recommended.
- (l) *Section 7.2.6 (second one) on page 40*
Please clarify if location O34 be also included and the associated road should be Road L732 instead of Road L731. Correct. It should be Road L731, and location O34 has been included correctly as an NSR which receives noise levels in exceedance of 70 dB(A).
- (m) *Section 7.2.7 on pages 40 & 41*
Other measures like disposition of the layout of the affected school and the use of school boundary wall as barrier should be studied. The mitigation effect of a school boundary wall or disposition of the layout were not assessed as it is not in the remit of this study to assess mitigation within development sites.
- (n) *Section 7.2.8 on page 41*
Mitigation measures on Road D8 should also be explored and discussed. Noted. Further mitigation options will be discussed.

- (p) *Section 7.2.11 on page 41*
Please elaborate the latter half of this section in particular why mitigation measures are not proposed. Section 7.2.11 clearly states the reasons why mitigation on Roads D8 and L731 would be ineffective (dominance of Road P2 noise). This study Brief excludes mitigation on any road other than D4, D8, L731 and L732.
- (q) *Section 7.4.1 on page 42*
Is the underpass mentioned in the second paragraph should be a flyover? It cannot be comprehended that why the making of allowance of sight line for the junction of Roads D4 and D8 will affect the length of the deck-over. The master layout of Area 72 East should be confirmed with Planning Department so as to see if it is still necessary to maintain a site access. Yes, Road D4 is a flyover. The text will be amended to remove reference to the sight line issue. The requirement for a site assess opening will be checked with PlanD.
- (r) *Section 7.4.2 on page 42*
Please note that the 2.5m high barrier identified in the EAS for Area 73A is for the protection of the secondary school in Phase 1, of which the noise limit is 65 dB(A). See Section 7.2.2 as well. There are exceedances at receivers S41, S42 and S43, which are all affected by traffic noise on Road D8. Mitigation in the form of a 5m barrier was tested and as a result there was less than 1dB(A) reduction in noise levels, at these receiver positions. Therefore, barriers were considered to be ineffective and were not recommended. Further elaboration of this point will be added to the report.
- (s) *Section 7.4.3 on page 43*
The 7.5m high barrier identified in the EAS for Area 73A can also provide mitigation to the primary school in Phase 2. The provision of a 7.5m barriers would be contrary to the recommendations in NOMPRO. There are exceedances of the 65 dB(A) limit at receivers S58 - S60. A 3m barrier on Road L731 (maximum height of barrier recommended in NOMPRO) was tested and found to be ineffective (see 7.2.2).
- (t) *Figure 7.1*
Traffic flow for the portion of Road L731 to the east of Road D8 is missing. This figure is required for checking the proposed barrier in section 7.2.1. Noted. Figure 7.1 will be amended.
- The section of road between Roads P2 and D4 should be Road D8 (*not Road D3*). Noted. The text will be amended.
- (u) *Section 11 on pages 65 & 66*
The conclusions are to be amended as per the above comments. Noted.
- (v) *Appendix A*
Please ensure that all mitigation measures proposed in various studies are delineated in the relevant figures. For example, measures other than canopy are not shown in Appendix A1. Noted.
- (w) *Appendix B*
Exceedance should be highlighted for easy reference. Noted.
- (x) *Appendix C*
Please amend the calculation as per the comments in item (d) above. Noted.

(y) *Appendix D*
This is the QA Checking Calculations. A total of six points were done. However, pages D-1 and D-3 are identical. Out of the remaining 5 points, 3 come from Area 73A and all of them facing Road L732. Thus, are them representative? Furthermore, gradient are entered with 0% on all road sections. This should not be the case in at least one section, Link 1 facing NSR 72, which is the flyover along Road P2, at junction with Roads D8 and L463. Noted. Further calculation checks will be made.

4. Our comments on the Draft EM&A Manual are as follows:

(a) *Section 1.4 on page 3*
Please add "and the Environmental Protection Department (EPD)" after "the ER" at the last sentence. Noted. The text will be amended.

(b) *Table 2.2 on page 10*
Please add one more item as underlined below into the block for "Limit Level - ET Leader or ER": Noted. The text will be amended.

- "1. Notify Contractor
- 2. Notify EPD
- 3. Required contractor mitigation effectiveness."

(c) *Section 4.2 on page 16*
Please revise lines 3 & 4 as underlined below:

"Monitoring Report shall be submitted to each of the four parties : the Contractor, the ER, the Client Department and the EPD." Noted. The text will be amended.

5. Would you please urgently to consolidate the comments from all ESMG members and provide your response by 30-Dec-97. By copy of this letter, would other ESMG members please immediately provide your comments (including nil) to the consultants and copy to us and others. Noted.

From: Housing Authority
Ref: HD(CE) 45/113/26
Date: 18 December 1997

a) Draft Final EIA Report

i) Some of the page numbers shown on the contents are not in correct order. Please check it again. Noted. The contents page will be amended.

ii) The dates of roadworks completion shown in Figure 1.2 are not the most up to date one. The sketch no. 1 depicting the correct dates of roadworks completion is attached for your amendment. Please also update the roadworks completion dates in item 2.2 on page 5. Noted. The text will be amended.

- iii) Item 2.4.9 on page 7 - The development of TKO Area 67 has been transferred to a Sandwich Class Housing Project. However, at the time of preparation of this report, there were no architectural layout plans available for assessment purposes. The layout plan prepared by HD can be used as reference, but the text should be amended to reflect the actual situation. This information will be added to the report but no additional modelling work with new layouts will be carried out.
- iv) Item 2.4.10 on page 8 - The development of TKO Area 57 North is a HOS development rather than a private development. This HOS development consists of three 40-storey high Harmony 1 domestic blocks and a carpark building. Noted. The text will be amended.
- v) Item 2.4.12 on page 8 - TKO Area 59 rather than TKO Area 48/59 should be used throughout the text such as Figures 1.2, 5.1 & 5.9, Tables 2.1, 5.2 & 11.1 and item 7.2.9, etc.. Noted. The text, tables and figures will be amended.
- vi) Item (viii) of Figure 2.1 - The "Southern Section of Road D4 (L731 to 732)" should read "Southern Section of Road D8 (L731 to L732)". Noted. The text will be amended.
- vii) Table 5.1 on page 17 - TKO Area 57 (S) is a private development rather than a HOS development. Therefore, the occupation date of CN4 is not in Dec. 1998. Please liaise with PD to confirm the programmed date of occupation. Noted. The text will be amended.
- viii) There are some numbering errors of the NSR locations in Figures 5.2, 5.3 and 5.4. Please check it again. Noted. The figures will be checked and amended.
- ix) Table 6.3 on page 33 - The distances of Roads D8(i) and Road D8(ii) from CN1 seem to be 181m and 157m respectively. Similarly, the distances in Table 6.4 on page 34 should be amended accordingly. Noted. The text will be amended.
- x) Items 7.4.2 and 7.4.3 on pages 42 and 43 - The findings of the mitigation measures required deviate from that of the previous EAS for TKO Area 73A conducted in Sept. 1997. A more detailed explanation of such deviation in the report should be provided. The findings and recommendations differ in this EIA because the study is based upon different traffic data and development layout designs. This will be stated at the end of sub-sections 7.4.2 and 7.4.3.
- xi) Since there is a limit to which the study can respond to changes in traffic generation data and blocks layout, please add a paragraph into the report to specify the base cut-off date to minimise any further EIA work necessitated by intensification of Control List sites in Tiu Keng Leng and by finalisation of outstanding housing layouts. It would be inappropriate to state a base cut-off date in this report, because this EIA report was based upon the most up to date information at the time of issue of the Draft Final Report. Should there be any substantial change to the components (such as to; the planned population; intensification of traffic flows; and/or intensification of development proposals) the EIA findings and recommendations should be reviewed.
- b) Draft EM&A Manual
In view of my above comments, please amend Table 1.1 and Figures 1.3, 1.4 & 2.1 accordingly. Noted.

From: Education Department
Ref: (36) in ED(BS) 29/3911/51 II
Date 24 December 1997

Please be advised that I have no comment on the above draft Report and Manual. Noted.

From: Planning Department
Ref: (17) in SKT 3/2/14 Pt.2
Date: 24 December 1997

2. EIA Report

a) Section 2.4.3, Page 6 and Figure 5.4

To increase flat supply, the housing site in TKO Area 73A will be intensified and Housing Department (HD) is currently reviewing the planning parameters and the design for the development. In this connection, the description in this section as well as the layout shown in Figure 5.4 may need to be revised. Please contact HD for the latest details.

Noted. However, at the time of issue of the Draft Final Report the information provided in the report was the most up to date, as advised by HD. Therefore, no amendments are proposed.

b) Section 2.4.5, Page 7

There are two schools (not three) proposed in TKO Area 73B west.

Noted. The text will be amended. The assessment was, however, based upon two schools not three. (See Figure 5.5)

c) Section 2.4.6, Page 7

There are two schools (not three) proposed in TKO Area 72 (east) - G/IC Sties.

Noted. The text will be amended. The assessment was, however, based upon two schools not three. (See Figure 5.8)

d) Section 2.4.9, Page 7

The housing site in TKO Area 67 will be used for sandwich Class Housing Development by the Hong Kong Society (HKHS) instead of for PSPS development by the Housing Authority. In this connection, the relevant information in Table 5.1 on page 17 and Table 11.1 on page 65, the proposed layout shown on Figure 5.12, and the impacts described in Section 7.2.12 on pages 41 may need to be revised. Please contact Mr Donald Hughes of HKHS at 2839 7741 for the latest details.

Noted. The new layout will be included in Appendix C of the Final Report and Section 7.2.12 will be amended to state that the noise assessment was based upon the most up to date layout available at the time of issue of the Draft Final Report. The new layout (made available after the issue of the DFR) incorporates changes which result in residential tower block (T1) being closer to Road P2. Hence, the noise levels will be higher compared with the previous layout shown on Figure 5.12. Therefore, because of a greater degree of dominance of noise from Road P2 mitigation on the proposed new roads will be ineffective and thus no change is made to the assessment findings or recommendations based on the new layout.

e) Table 5.2, Page 18 and Table 11.1, Page 65

To facilitate HD to maximise flat production in TKO Area 73B west, this office is looking into the feasibility of swapping the proposed secondary school in TKO Area 73B west with the proposed primary school in TKO Area 72 west.

Noted. As no fixed proposals have been made no change to the report will be made. However, it should be noted that, as a result of this change, there is unlikely to be any alteration to the findings of this study.

f) Section 5.2.2, Page 19

'dependant' in line 2 of the 2nd subsection should read 'dependent'.

Noted. This typographical error shall be amended.

- g) Figure 5.1
'Area 55' should be amended to 'Area 72'. The box annotating 'CN5 - Area 67 Block 9' may need to be revised in view of the latest proposal of Area 67. Noted. Figure 5.1 will be amended, but no change will be made to the CN5 reference. (See response to 2(d)).
- h) Figures 5.3 and 5.8 and Table 11.1
The land use proposals in Area 72 east (G/IC sites) are currently being revised to take into account the changing circumstances. While the area concerned still would be developed to accommodate various G/IC uses, the locations of the two proposed secondary schools may be different from those shown in Figure 5.3 and 5.8 after the revision. Noted. At the time of issue of the Draft Final Report the information provided was the most up to date, as advised by HD. Therefore, no changes in these figures and table are proposed. It is recommended that at the impacts at these sites are reviewed at the detailed design stage when the proposed layouts are finalised.
- i) Figure 5.5
The proposed layout as shown on Figure 5.5 is subject to further revision and, as mentioned in para (e) above, consideration is being given to swapping the proposed secondary school in TKO Area 73B West with the proposed primary school in TKO Area 72 west. Noted. See response to (e).
- j) Figure 5.7
"Area 55 under the title box should be amended to "Area 72". Noted, the Figure will be amended.
- k) Section 7.1.2, Page 36
For clarity, please add "north" after "Area 67" in line 5 of the first sub-section. Noted. The text will be amended.
- l) Section 7.2.7, Page 40 and Table 11.1, Page 65
As mentioned in para (e) above, this site would be for secondary school development instead of primary school development. Noted. See response to (e).
- m) Section 8.1.1, Page 46
It seems that some words are missing after "The study area is shown in" in line 1 of the second sub-section. Noted. These words will be deleted.
- n) Figure 8.4
For clarity and completeness, it is suggested that other proposed footbridges in the study area also be indicated. Noted. This Figure will be amended.
- o) Section 9.4, Page 61
It is suggested that the more updated Tseung Kwan O Outline Development Plan No. D/TKO/1C (instead of D/JB/3) be used as a general reference. Noted. The text will be amended.
- 3 EM&A Manual
- a) Table 1.1, Page 2 and Figure 2.1
The description of CN5 may need to be revised in view of the latest proposal in TKO Area 67. Noted. The text will be amended to reflect the latest proposal.
- b) Figure 2.1
"Area 55" should be amended to "Area 72". Noted. The text will be amended.

RESPONSES TO FURTHER COMMENTS
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Highways/N.T. Region	4
Architectural Services Department	nil return
Education Department	nil return
Fire Services Department	nil return
Housing Authority	nil return
Regional Services Department	nil return
Territory Development Department/(PM/NTE)	nil return

Construction of Public Roads at Tiu Keng Leng, TKO
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Draft Environmental Monitoring & Audit (EM&A) Manual
Responses to Further Comments

COMMENT	RESPONSE
<p>From: Water Services Department Ref: (11) in WSD 3053/107/91 Pt.6 Date: 2 January 1998</p> <p>No comments.</p>	<p>Noted.</p>
<p>From: District Officer (Sai Kung) Ref: (17) SKGR 140/11/18 Pt.1 Date 2 January 1998</p> <p>No comments.</p>	<p>Noted.</p>
<p>From: Highways Department (Senior Landscape Architect) Ref: () in HyDT 12/13/32 Date: 10 December 1997</p>	
<p>2. Having reviewed the said responses, I found them generally acceptable, except that I did not concur with the Consultant's statement of "Landscape and Visual Impacts cannot be monitored and audited".</p>	<p>Noted.</p>
<p>3. Attached please find two examples of the EM&A requirements regarding landscape and visual impacts prepared by the HyD's Consultants for your information and necessary action.</p>	<p>Noted. Relevant paragraphs will be included in the EM&A Manual in a new chapter outlining Landscape and Visual Impact monitoring and audit.</p>
<p>4. I would also like to take this opportunity to offer more specific comments on Chapter 8 of the Draft Final EIA Report as follows:</p>	
<p>(i) All the existing and planned visually sensitive receivers (VSRs) should be identified and marked on a layout plan with analysis of the impact severities.</p>	<p>Noted. <u>Existing VSRs</u>: - There are no existing VSRs on the site platform (as most is yet to be reclaimed) and include only the high level viewpoints from the Lei Yue Mun headlands (see Section 8.1.5). Therefore, we will amend Figure 8.5 to include labelling of the various hills together with brief notes of the impacts. <u>Planned VSRs</u>: - Section 8.1.5 lists the VSRs and Section 8.5.5 details the major viewpoints and the impacts to each. An additional figure showing planned VSRs will be provided and referenced in Section 8.5.5 (page 51).</p>
<p>(ii) Photomontages showing the existing visual quality from the VSRs should be incorporated into the Report for member's reference.</p>	<p>Note. However, as the site formation works have not been completed a photomontage is not possible, and because of this an artists impression of the proposals in context was provided (see Figure 8.2 - page 56) as an alternative.</p>
<p>(iii) Landscape Masterplans/layout plans showing the proposed planting design along the new roads should be included in the Report for members' review/comments.</p>	<p>Noted. A landscape layout plan will be provided (B1 size format) for inclusion in the Final Report. However, the landscape masterplan is currently unavailable, but will be provided to HyD when detailed designs are completed.</p>

- (iv) Lists of proposed plant materials should be indicated for the maintenance/concerned authorities consideration and approval. Noted. However, these are not currently available, but will be provided to HyD when detailed designs are completed.
- (v) Perspective sketches illustrating the proposed landscape mitigation measures to the new roads should be provided for members' easy understanding of the visual effectiveness of the planting design. Noted. Perspective sketches extracted from the TKO Town Centre Central illustrating the concept of landscape mitigation measures will be provided and referenced in Section 8.6. Also, a sentence will be added to section 8.6 to state that this figure is provided for reference purposes only, and sketches will be provided on completion of the detailed design when the planting details will be known.

From: Environmental Protection Department
 Ref: (14) in EP2/N8/58
 Date: 6 January 1998

2. We have the following further comments on the responses (using the Consultant's nomenclature):-

- (i) Item2
 The assessment of the on-site mitigation measures is not included in the Study Brief, the Consultants should consider to recommend the use of solid boundary walls at the schools where it would help in reducing the traffic noise. Noted. As acknowledged in this comment the assessment of mitigation within site boundaries is not included in the requirements of the Study Brief, which was agreed by Government Departments prior to the commission of this project. However, we will recommend, in the Final Report, that noise assessments be carried out for each school site to determine the extent of noise mitigation required. Also, it will be stated that HD and the PSPS developers are (or are committed to) conducting Environmental Reviews of schools in Area 73A and Area 73B respectively.
- (ii) Item 3(f)
 For Road P2, 2m high barriers and low noise road surfacing were recommended in the "EIA of TKO Town Centre North - Roads, Bridges and Subways" [see section 3.2.3 on Page 10]. Under the paragraph "Impacts on School Receivers" in Section 7.2.1, it was stated that "At both schools the exceedances are at upper levels, and because of this the construction of roadside barriers will not provide protection. Therefore, as barriers are not effective .." this implies that the originally proposed 2m barrier is not constructed. Now, the Consultants responded that their calculations had taken into account the noise reduction effect arising from the provision of noise barrier and low noise surfacing. The Consultants should therefore clarify which one is correct. Noted. The EIA Study Brief including the analysis of impacts arising from the proposed new roads only, and not from Road P2. Section 7.2.1 (schools) only refers to the possibility of mitigation on Roads DB and L731 only. Thus , it is proposed to amend the sentence to "At both schools the exceedances are at upper levels, and because of this the construction of roadside barriers on the new roads (Road D8 and L731) will not provide protection. Therefore, as barriers are not effective .."
This does not imply that the 2m barrier and low noise road surfacing on Road P2 are not to be constructed. (See assumptions of the noise assessment in Section 7.1.2).
- (iii) Item 3(l)
 Receiver O34 should be facing Road L732, rather than L731. Please see Figure 5.7. The previous response to you comment should have read " Correct. It should be Road L732, and location O34 has been included correctly as an NSR which receives noise levels in exceedance of 70 dB(A)".

- (iv) Item 3(p)
The Consultants should quantify the shielding effect on the traffic noise at the "new roads" that would arise from the buildings in Area 74S, rather than just saying that "it is considered that when the site is developed, the noise contribution from the new roads will be shielded." Noted. However, no layout plans or even general concept drawings are available of this site. In the absence of any information such as: locations, numbers and dimensions of buildings, the shielding effect cannot be quantified.
- (v) Item 3(r)
It is noted that the disposition of the secondary school in phase 1 of Area 74A as appears in Figure 5.4 is different from Figures 3.1 or 3.2 of the "Environmental Assessment Study of Tiu Keng Leng Public Housing Development Area73A - September 1997". As pointed out in Planning Department's Letter dated 24.12.97, the layout shown in Figure 5.4 may need to be revised, we reserve our comment until the layout is finalised. Noted. Figure 5.4 indicates the most up to date layout available at the time of issue of the Draft Final Report, as advised by HD. Therefore, no amendments are proposed.
- (vi) Item 3(s)
Taller barriers could be erected if they are within the HD's boundary. Noted. However, the Scope of this EIA Brief does not include the assessment of noise mitigation within individual site boundaries.
3. We understand that PlanD has given their comments dated 24.12.97. The Consultants should immediately provide their responses. The letter from PlanD was not received by CES until 5 January 1998.
4. By copy of this memo, would all ESMG members please urgently provide further comments, if any to the consultants direct and copy to other members. If there is no reply received after 9 January 1998 we would assume that you have no further comment. Noted.

From: Drainage Services Department
Ref: () in MS 11/SK/250
Date: 7 January 1998

No comments. Noted.

From: Transport Department
Ref: () in NR 182/190-53
Date: 12 January 1998

No comments. Noted.

From: District Lands Officer (Sai Kung)
Ref: DLO/SK 587/SGS/59
Date: 14 January 1998

No comments. Noted.

From: Planning Department
Ref: SKT 3/2/14
Date: 15 January 1998

No comments. Noted.

From: Highways/ N.T. Region
Ref: () in HNT 703/SK/78
Date: 12 January 1998

No comments

Noted.

Construction of Public Roads at Tiu Keng Leng, TKO
Environmental Impact Assessment (EIA) Study
Draft Final EIA Report and
Draft Environmental Monitoring & Audit (EM&A) Manual
Responses to Comments (Dated 4/2/98)

COMMENT

RESPONSE

From: Environmental Protection Department
Ref: (21) EP2/N8/58 II
Date: 4 February 1998

2. Please note the following comments on the consultants' responses.

iv. Item 3(p)
Is it possible that PlanD could supply information such as Plot ratio, max domestic floor areas etc. to the consultants such that he could make an estimate accordingly;

Plan D to comment. Also, to estimate the shielding effect other factors such as building locations, elevations and density on the site are required. (PlanD to comment on availability of such information)

vi. Item 3(s)
After all practical noise mitigation measures to be applied on the road have been exhausted, the consultants could perhaps recommend measures/outline constraints for individual sites.

All practical noise mitigation measures, which can be applied on the road have been exhausted. Furthermore, we have identified the schools which will suffer from HKPSG noise criteria exceedances and in these cases we have already recommended the installation of special glazing and air conditioning.

It is proposed, however, that the report will be revised by the addition of statements in all sub-sections of the report which discusses exceedances of the HKPSG criteria at schools sites. This statement shall read "It is recommended that a further noise assessment at the school site(s) be undertaken. This assessment should include the assessment of the feasibility of on-site mitigation such as;

- erection of site boundary wall(s);
- orientation of building structures; and/or
- installation of special glazing/air conditioning."

Construction of Public Roads at Tiu Keng Leng, TKO
Environmental Impact Assessment (EIA) Study
Draft Final EIA Report and
Draft Environmental Monitoring & Audit (EM&A) Manual
Responses to Comments (Dated 9/2/98)

COMMENT

RESPONSE

From: Environmental Protection Department
Ref: (21) EP2/N8/58 II
Date: 9 February 1998

2. We suggest to amend Item 3 (a) the first bullet point as follows:
"Erection of solid site boundary wall(s) of appropriate height,"
- Noted. The text will be amended.

Construction of Public Roads at Tiu Keng Leng, TKO
 Environmental Impact Assessment (EIA) Study
 Draft Final EIA Report and
 Draft Environmental Monitoring & Audit (EM&A) Manual
 Responses to Comments on 2nd Issue of DFR
 (this supersedes the response to comments (ref: f:\data\projects\C230\wp\response.RC5))

COMMENT

RESPONSE

From: Environmental Protection Department
 Ref: (30) in EP2/N8/58
 Date: 19 February 1998

2. To address the noise impact in the Area 74 South, the EIA report recommends either:
 (i) to build a 12m high podium; or
 (ii) to erect 3m barriers on local Road L731 and 5m barriers on the distributor Roads D4 and D8.

Correct.

3. Would you please urgently check with DPO/SKIs whether there is a planning intension of providing the 12m podium. By copy of this memo, would DPO/SKIs please offer your advice to HD and copy to us. If DPO/SKIs cannot confirm the planning intension at this stage, then you should include the mitigation measures of noise barriers as 2 (ii) above into the project.

DPO have confirmed that there no development plans /intensions available of Area 74 South and are unable to confirm whether a 12m high podium will be included in the proposed plans.

We believe that it would be impractical to include noise barriers all around Area 74 south without assessing the actual need for such structures. We are of the opinion that the most prudent approach should be for the project proponent of Area 74 South to conduct a traffic noise assessment to determine what mitigation if any will be required to be included on-site, and as stated in the Final Report HA should allow space, in their design, for the erection of road side barriers.

4. We also refer to your fax dated 19.2.98 attaching the revised page 16 of Section 4.4. We would like to clarify that the ACE does not select the captioned project for discussion. To avoid the misinterpretation of Section 4.4, we suggest to delete this section.

Noted. Section 4.4 will be deleted.

From: Environmental Protection Department
 Ref: (1) in EP2/N8/58(III)
 Date: 20 February 1998

2. In general, the amended pages have incorporated most of our comments and the Consultant's responses exchanged since the issuance of the last version. However, many areas could be further refined to remove the ambiguities. The following are our further comments. In view of the tight schedule, we suggest that a meeting be held with you and you consultants so as to resolve all the outstanding issues:

Noted. A meeting was held on 24 February 1998 2:30 pm.

- (a) Section 4.2 on pages 13 & 14
 Substantial arrangement of the paragraphs here is required. The Consultant is advised to contact me direct for details. Paragraphs on Noise Emission Labels (for air compressors, hand held percussive breakers) and percussive piling are to be reinstated.

Noted. No paragraphs have been deleted from the first issue of the DFR have been deleted.

- (b) Table 6.1 on page 34
The SWL for "quieter" air compressor is even higher than that in the relevant TM. The Consultants should also ensure that the PMEs listed in Table 6.1 are available in the local market, otherwise, they should not be used in the assessment.
- (c) Table 6.2 on Page 35
Vibratory compactor or vibratory roller should be used for backfilling of drainage trenches (instead of road roller) and vibratory roller should also be included for laying of flexible pavement.
- (d) Section 7.2.1 on Page 39
It is difficult to comprehend why noise from Roads D8 and L731 will lead to exceedances at receivers S26 to S33 of the secondary school, in particular, the angle of view on Road D8 and L731 is very limited.
- (e) Section 7.2.2 on Page 40
The disposition of the Phase 1 secondary school adopted in this EIA is different from that in the EAS for TKO Area 73A, it is therefore inappropriate to conclude that the 2.5m high barrier recommended in the EAS "Should not be required"
- Should the "Road D8" mentioned in the third sentence under the paragraph "Impact on Phase 2 primary school" be Road L731?
- For both the Phase 1 secondary school and Phase 2 primary school, the Consultant had tested the effectiveness of a barrier in reducing the noise impact and in both cases, they were found to be ineffective. However, it should be clearly stated in the text that the barriers under test were located on the footway, while the effectiveness of the same within the school boundary subject to further assessment of the feasibility of on-site mitigation.
- (f) Section 7.2.3 on Page 42
The context of the penultimate paragraph is not clear and needs re-writing.
- (g) Section 7.2.6 on Page 44
Other forms of mitigation measures e.g. deckover, at Road L732 should be explored.
- (h) Section 7.2.8 on Page 45
- Noted. Table 6.1 will be amended. However, the SWL of 104 dB(A), sourced from the TM, was used in the assessment (See Table 6.2). Furthermore, the equipment listed in the report are used generally available and are not for special uses. Therefore, should be easily available.
- Noted. Table 6.2 and the assessment will be amended to incorporate this change. Note that this change does not alter the findings or recommendations.
- Noted. The assessment has been revised based upon there being a hypothetical development on Area 74 south and Area 73B. This resulted in predicted noise levels being lower than the HKPSG criteria of 65 dB(A).
- Noted. The text will be amended.
- Also the first bullet point of the second paragraph relating to the phase 1 secondary school will be amended as follows
- "erection of solid site boundary wall(s) of appropriate height and in particular the feasibility of the 2.5m high barrier as recommended in the *EAS of Tiu Keng Leng Public Housing Development Area 73A (September 1997)*."
- Affirmative, the text will be amended.
- Noted. This statement will be added to the Final Report.
- This paragraph was added in response to EPD's earlier comment to include the assessment of deck-over and barriers on the Road D4 flyover.
- This ssection will be re-written based upon the an assessment including development on Area 74 south.
- Noted, this will be carried out.

In accordance with Figure 5.8 in the Previous Report, the two secondary schools in Area 72 west should be screened by other buildings from Road P2; and noise from Road D8 would become dominant. Will the Consultants please critically review their calculations and re-investigate the effectiveness of mitigation measures at Road D8?

Noted. However, at the time of reporting there were no development plans, or planning parameters, available for the buildings adjacent to the school sites. Therefore, the shielding affect of buildings of noise from Road P2 cannot be determined. Nevertheless, mitigation on Road D8 (south of D4) will be tested.

(i) Section 7.4.2 on page 47
Please refer to item (e) above for the 2.5 m high barrier at Road D8.

Noted. The text will be amended.

(j) Table 11.1 on Page 70
The recommendations here should tie in with the context of the report. For example the provision of the 3m and 5m high barrier at Area 74 South is not included, further assessment of on-site mitigation measures at schools is also missing, etc.

Noted the text will be amended.

(k) In this advanced copy, the revised calculation is not forwarded with the amended text. However, by reading the text, there are many illogical findings resulted from the calculations. Will the consultants please critically review the software being used for the calculations of road traffic noise?

Noted. See draft report issued to you on 19/2/98 for sample QA Calculations.

We are not aware of any illogical statements in the text. Would EPD please specify their opinions more precisely. We do not consider there to be any faults in the software used for this project.

Construction of Public Roads at Tiu Keng Leng, TKO
Environmental Impact Assessment (EIA) Study
Draft Executive Summary

COMMENT

RESPONSE

From: Chief Arch/CMB, Arch S D
Ref: ASD 10/92051/TEC/EPD
Date: 27 February 1998

We have no comment on the Draft Executive Summary noting that the use of mass noise barriers has been re-considered to reduce visual impacts. Noted.

From: Chief Engineer/Planning Water Supplies Department
Ref: (11) in WSD 3053/107/91 Pt.7
Date: 27 February 1998

No comment

From: Traffic Engineering (NTE) Division
Transport Department
Ref: NR 182/190 - 53
Date: 27 February 1998

The SW corner of Area 74N will be a commercial building cum carpar and a major junction with at-grade crossing. It is not clear why a 3m high barrier should be provided thereat.

The recommendation was that the 3m barrier should be erected adjacent to blocks 2 and 3, but the recommendations of the noise assessment have been changed to account for development plans of Area 74 S being available for assessment. This barrier is no longer thought to be effective and will not be recommended in the final report.

From: DPO/SKIs
Ref: () in SKT3/2/14 (II)
Date: 2 March 1998

I suggest that the following additional recommendation be included in Table 6.1 (Summary of Operational Phase Noise Impacts) for Area 74 south:

"..... at each block. However, sufficient land should be reserved for the erection of a 3m barrier in case the podium option is not pursued."

Noted. this text will be amended, but the text will read " erection of a 3m barrier on Road L731 and 5m barriers on Road D8 and Road D4 in case"

From: Director of Education
Ref (59) in ED(BS) 29/3911/51 II
Date: 3 March 1998

2. Appropriate noise mitigation measures should be provided for the schools in the Captioned Area. I should be grateful if you would advise me which party/parties will be responsible for the funding and development of the noise mitigation measures for the schools during the construction period and the operation period of the roads.

During the construction period of public roads at Tiu Keng Leng, the noise sensitive receivers do not embrace the schools in the study area. Therefore, no noise mitigation measures is required for the schools.

As regards the noise impact during the operation of public roads, it is understood that the project proponent for the construction of schools should be responsible for the funding and development of the recommended noise mitigation measures. It means that HD will be responsible for its funding and development for two schools in TKO Area 74 North and four schools in TKO Area 73A, while I presume that ASD should be responsible for its funding and development for other schools in the study area

From: District Officer (Sai Kung)
 Ref: SKGR 140/11/18 Pt.1
 Date: 3 March 1998

No comment

Noted.

From: Chief Engineer/Mainland South
 Drainage Services Department
 Ref: () in MS 11/SK/250
 Date: 4 March 1998

No comment

Noted

From Director of Regional Services
 Ref: (45) in RSD 1/HQ 712/91(4)III
 Date: 5 March 1998

No comment

Noted

From: Highways /NT Region
 Ref: (15) in HNT 703/SK/78 (II)
 Date: 9 March 1998

- 2 No comment

Noted

From: Senior Landscape Architect -
 Highways Department
 Ref: HYDT 12/13/32
 Date: 9 March 1998

2. My comments on Paragraph 6.3 of the Report are as follows:

- a Followed by two major landscape and visual impacts including extensive slope cutting and noise barriers identified in the Study, the conclusive paragraph should give clear direction and state more clearly the mitigation measures recommended for further development in the detailed design stage; and

Noted this will be provided in the ES

- b Landscape rehabilitation of the cut slopes should be considered essential as a prescriptive measure to the landscape impact in a long run. Hard surfacing treatment of slope face in particular shotcreting should be avoid as much as possible. As regard how far is the cutting back of slopes in order to reduce slope gradient for landscaping and the resulted extent of existing vegetation to be removed, it should be considered and assessed further in detailed design stage. Noted this will be stated in the ES.

MVA ASIA Limited

3rd Floor, East Town Building, 41 Lockhart Road, Wanchai, Hong Kong
Tel : 2529 7037 Fax : 2527 8490