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**(ACE 47/95)**  
**for Advice**

### **Report of the EIA Subcommittee:** **the 13th Meeting on 4 September 1995**

The Subcommittee considered one EIA report at its meeting on 4 September 1995. One other EIA report was circulated to Members for consideration before the meeting.

#### **Detailed EIA for Route 3 Tai Lam Tunnel and Yuen Long Approach - Southern Section**

2. Highways Department completed the EIA for the preliminary design of Route 3 Tai Lam Tunnel and Yuen Long Approach in 1994 and the EIA study was endorsed with conditions. The operator, Route 3 Construction Consortium (R3CC), was required to carry out a detailed EIA for the works. The detailed EIA is to be submitted in two stages. The Southern Section covers works south of the Kam Sheung Access Road, including the roadwork and the temporary conveyor system while the Northern section covers the remainder of the works.
3. The current study which covers the Southern Section, has identified direct and indirect noise mitigation measures so that the level of noise generated will comply with the requirements in the Hong Kong Planning Standards and Guidelines. Mitigation measures are recommended for the construction and operational impacts of construction of the conveyor system so as to comply with the established criteria. R3CC is required under the contract to institute a ventilation system to meet the tunnel air quality guidelines of the Environmental Protection Department. The study also recommended ecological impact avoidance and habitat loss mitigation measures. Off-site compensation planting of native woodlands permanently lost by the works at the ratio of 3:1 will be carried out. R3CC has undertaken to implement all the recommendations in the detailed EIA.
4. Members of the Subcommittee were generally satisfied with the study, however, in order to satisfy themselves that the loss of wetland and its compensation had received adequate consideration, they considered that a review of the total wetland loss due to the Project, and the draft four seasons ecological survey report intended for later submission, would be necessary. After the Subcommittee meeting, two Members met the consultants on 6 September 1995 to discuss the draft ecological report, which was made available shortly after the meeting. Copies of the reports were circulated to other Members for consideration.
5. After consideration of the ecological report, no consensus could however be reached. Two members have recommended not to endorse the report, two would endorse with conditions, one without condition, and one would only note the report. The Chairman of the Subcommittee has therefore recommended that this report be brought to the attention of the full Council. In order to facilitate Members' consideration, a summary of the views of Subcommittee Members is attached.

6. The Subcommittee Members have also asked for a written confirmation to be submitted to the full Council that the projections of traffic volume are acceptable to Transport Department. A copy of the submission from the Highways Department is attached.

**Improvement to Castle Peak Road from Siu Lam to So Kwun Tan Noise Impact Assessment Study**

7. Highways Department proposes to upgrade the section of Castle Peak Road from Siu Lam Interchange to So Kwun Tan from a single 7.3m wide carriageway to a dual two lane carriageway to meet the predicted traffic demand. An Environmental Review for the project identified the need for a Noise Impact Assessment.

8. The Noise Impact Assessment concludes that a combination of direct and indirect technical remedies are required to mitigate the traffic noise impact from the project. Highways Department has undertaken to implement all the mitigation measures recommended in the study.

9. The report was circulated to Members of the Subcommittee for consideration. All Members agreed to endorse the report.

**Advice Sought**

10. Members are requested to consider the detailed EIA for Route 3 Tai Lam Tunnel and Yuen Long Approach - Southern Section as recommended in paragraph 5 above and to endorse the recommendation of the Subcommittee in paragraph 8 above.

**Planning, Environment and Lands Branch  
September 1995**



**WWF\*** World Wide Fund For Nature Hong Kong  
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**URGENT BY FAX** (10 pages total)

Our Ref.: (6) SHK/ORG 41/95

12 September 1995

Dr. LAM Kin-che  
Chairman, ACE EIA Sub-Committee  
C/O: Department of Geography  
The Chinese University of Hong Kong  
Shatin  
N.T.

Dear Dr. Lam,

### **ROUTE 3 - SOUTHERN SECTION - WETLAND MITIGATION**

Following the meeting of the ACE EIA Sub-committee on 4 September 1995, Lisa Hopkinson and I met with representatives of the R3CC and their consultants on 6 September 1995 to further discuss the issues relating to wetland loss and mitigation associated with the Route 3 Project.

I regret to advise you that on the basis of information made available to me at present I am NOT able to support the endorsement of the EIA for the southern Section of Route 3 due to the inadequacy of the proposed measures for mitigation of wetland loss.

### **ROUTE 3 DETAILED EIA**

#### **R3 SOUTHERN SECTION EIA**

The Final Detailed EIA, Vol. 1. The Main Line, notes that:

*'The mitigation strategy specified in the Construction Requirements (Clauses 9.3.2. and 9.3.3.) requires RC33 to restore all ponds required temporarily for construction but not part of the permanent works to be reinstated to their original condition including provision of suitable enhancements to improve their ecological value. Ponds that fall within the works limits but are not required for construction must be returned to their original condition.'* (Section 7.8.9 refers).

This requirement involves:

- Definition of "ecological value"
- Identification of measures which would enhance ecological value but not compromise fish production potential, thereby discouraging pond operators from taking up leases.

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**服務公司秘書:** MCP Secretarial Services Ltd.  
**商務律師:** 孖士打律師行  
**建築師:** 羅賓遜行  
**顧問:** 梅德義先生  
**計劃管理機構**

Recommended conservation clauses for post-construction operation of this pond should be based on results of the Planning Department study of the ecological value of fish ponds which was commissioned in early 1995. Characteristics of fish ponds which support the greatest abundance and diversity of flora and fauna should be incorporated into fish pond lease contracts as performance criteria for construction (by the Route 3 contractor) and operation (by the fish pond lessee) of the pond. Performance under the "conservation lease" should be monitored by the Environmental Monitoring and Audit contractor upon completion of construction and annually thereafter by AFD to determine compliance.

The pond shown in Figure 7.8 in the *Final DEIA Vol. 1* would be suitable for imposition of conservation clauses following completion of Route 3 construction. In principle, pond banks could be contoured to slopes of 1:10 (vertical to horizontal) or less (Kentula *et al.* 1992). This would facilitate establishment of bank vegetation over a broad zone, and encourage use by water birds for feeding purpose.

The pond discussed as suitable for conservation would be very small (0.06 ha). Because of the small size of the pond and the fact that its primary function would be commercial fish production, it is unlikely that conservation measures for species other than waterbirds could be successfully implemented.

The *Environmental Monitoring and Audit Manual* suggests the following mitigation measure:

*'establishment of conservation management regimes in 2 fish ponds which will be partially lost through construction, to increase carrying capacity for water birds' (Section 2.4.5 refers).*

The *Executive Summary*, however, states that R3CC is committed to the following impact avoidance and habitat loss mitigation measures:

*'Establish conservation management regimes in a pond partially lost to the highways projects'. (sic)*

*'Restore additional ponds lost during temporary works to commercial fish production, thereby restoring the pre-disturbance function'. (Section 9 refers).*

**There is considerable inconsistency between these three documents to the extent that it is unclear exactly what is proposed.**

Discussion with the R3CC on 6 September 1995 and subsequent conversations with Highways Department and District Lands Officer Yuen Long, on 8 September 1995 confirmed that:

- i) only one pond (0.06 ha) will be available for possible conservation management, and no management plan has yet been prepared for that pond;
- ii) ponds which are taken over for temporary works have been resumed for temporary occupation only, and will be returned to the land owner following completion of construction.

Clause 9.3.2. of the Construction Requirements states:

*'The Franchisee shall be responsible for maintaining during the Construction Period those portions of ponds which form part of the Works Area and are not required for construction of the Works. Government is to hand these portions of ponds back to their former owners on completion of the Construction Period and the Franchisee is required to return the ponds to their original condition including water quality.'*

Clause 9.3.3. of the Construction Requirements states:

*'The Franchisee shall be responsible for maintaining during the Construction Period all other ponds within the Works Sites which are not required for the Works. Ponds required temporarily during construction of the Works but not required for the on-going maintenance and operation of the Constructed Facilities shall be reinstated to their original conditions including provision of suitable enhancements to improve their ecological value as determined by the Detailed Environmental Impact Assessment. As part of his Construction Proposals the Franchisee shall also design and re-provide access equivalent to that in existence at the date of the execution of the Project Agreement, to these ponds at his own cost.'*

Once ponds are returned to the owners there is no guarantee that they will retain them as ponds. Indeed, they may even decline to accept them back if they are restored as ponds. As the land is licensed for agriculture the ponds could be used for a variety of 'agricultural' uses - it should be noted, however, that this potential loss of fish pond to other agricultural uses is a problem which existed prior to the temporary resumption for Route 3.

## DISCUSSION

While R3CC have managed to reduce the total area of wetland lost, there remains a net loss of 3.9 ha from the Southern Section, and c.13 ha from the Northern Section.

To compensate for the permanent loss of 3.9 ha in the South Sector it is proposed to undertake 'enhancement management' of one 0.06ha pond. This gives a ratio of 0.015:1 for wetland managed:wetland lost (Table 1). This is in marked contrast to the situation in the USA where wetland enhancement management ratios are usually 2:1 or 3:1, depending on various factors such as the timing of the mitigation activity (early implementation of management is preferred), and the confidence with which it can be undertaken.

In view of the fact that in the R3 project enhancement management work will not be undertaken until after substantial completion of the works and that there is considerable uncertainty over the likelihood of success of management (see below), the precautionary principle would indicate that a ratio of 3:1 should be adopted. In light of this the proposed 0.015:1 is woefully inadequate.

The R3 Detailed EIA report contains no information regarding the proposed 'enhancement management' of the mitigation site, yet the Sub-committee briefing document notes that the report has been endorsed by the SMG and that the ecological mitigation measures are supported by the Agriculture and Fisheries Department. I find this more than a little surprising since the Agriculture and Fisheries Department has been vociferous in its criticism of proposed residential housing projects in wetland areas in the Northwest New Territories which have not supplied detailed management plans. This smacks of double standards.

Without information on the proposed management of the mitigation site it is not possible to assess the likely value of the proposed measures. **It would set a very dangerous precedent to endorse the Report without such information being provided and a commitment from the proponent that adequate management would be undertaken.**

The report notes that 2 ponds, required for temporary works, will be reinstated. This is welcome, but clearly has nothing to do with mitigation for the permanent loss of wetlands which will result from the project. Indeed, although it is noted in Section 7.8.9. of the DEIA that there is a need to define 'ecological value' and to identify means which would enhance ecological value but not compromise fish production potential, apparently this has yet to be done. The Detailed EIA report contains no information regarding 'suitable enhancements to improve their ecological value', as required under Construction Requirement 9.3.3. **Since the Construction Requirement has not been complied with, I consider that it would be wrong to endorse the report as it stands.** It is very surprising that the SMG appears to have endorsed the report in view of the lack of information on these topics.

The suggestion regarding 'conservation leases' in Section 7.8.9. is welcome, but seems to be redundant in the circumstances. Had Government not resumed the land for temporary occupation but permanently, there would have been an opportunity to let the restored ponds after completion of the works and this could have been done under a 'conservation lease'. Such an arrangement would have ensured that the ponds would have been retained as wetland areas. Such a move would have been in accordance with Article 3.1 of the Ramsar Convention, to which Hong Kong is a Party through the United Kingdom, which states:

*'The Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List [Mal Po/Inner Deep Bay], and as far as possible the wise use of wetlands in their territory.'*

Route 3 is now *fait accompli*. R3CC are subject to the Construction Requirements under which they bid for the project, and indeed they have indicated that they will

comply - although it must be noted that Construction Requirements detailed in clauses 9.3.2. and 9.3.3. have NOT been met in the DEIA for the Southern Section. The real problem is that Government refused to give serious consideration to wetland conservation issues when drafting the Construction Regulations. Referring to the reply given by the Highways Department, wetland compensation or off-site restoration was considered *'not viable under this project [Route 3] since suitable land is not easy to identify and if land resumption were involved this would be both expensive and time consuming'* (Annex 3 of the ACE paper 35/94). This reply was made without discussion with ACE EIA-subcommittee before it was put forward.

The failure of Government to seriously address the issue of wetland loss is very worrying, especially in view of the requirement of Article 3.1 of the Ramsar Convention regarding 'wise use' of wetlands (c.f. Annex 4 of the ACE paper 35/94).

Since the technical requirements of the DEIA for the Southern Section (as detailed in the Construction Requirements) have not been met, I **do not support endorsing the report as it stands**. Either the issues relating to wetlands should be removed from the report and the whole wetland issue be addressed in the DEIA for the Northern Section, or R3CC should be required to submit a supplementary report addressing the missing wetland issues before endorsement is considered. I do not support endorsement of this report subject to conditions (e.g. a satisfactory supplementary report on wetland mitigation in due course) since Government and R3CC were all aware of the sensitivity of the wetland issues and have had ample time to address them. For too long ACE has been unduly lenient to project proponents who have not met expectations, and a line must be drawn somewhere.

In view of the much greater extent of wetland loss in the Northern Section of R3 I think that it is very important that ACE should make it perfectly clear to Government and R3CC that a full report will be expected for that Section - if this is not forthcoming I would be unwilling to attend an EIA Subcommittee meeting to discuss the project.

Furthermore, noting ~~the~~ that the route for the new Western Railway Corridor will soon be finalised I think that ACE must now make it clear that it will not tolerate further loss of wetlands without adequate long-term compensation.

The proposed 'conservation lease', which would allow reinstatement and subsequent economic use of ponds for fish culture, should be addressed. It might be helpful to ask the Administration to produce a paper on this topic - discussion with Lands Department today indicates that there would seem to be no reason in theory why such leases could not be issued - indeed the SMG for the Shenzhen River Regulation Project has endorsed similar measures for that project, although this is still subject to confirmation by the policy branch.

The broader issues of wetland loss still need to be addressed.

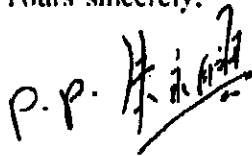
The earlier response by SPEL in Annex 4 to paper ACE 35/94 is clearly inadequate, especially in light of what actually happened in terms of follow-up (or lack of it) to R3.

I am still awaiting a reply from SPEL to my letter of 14 July 1994 (copied to you) regarding compensation for wetland loss.

Now that the Mai Po/Inner Deep Bay area has been designated as a Wetland of International Importance (i.e. Ramsar Site), Hong Kong should be seen to be implementing Article 3.1 of the Convention. The fact that this is urgently needed is indicated by the decline in populations of both breeding and wintering egrets and herons which appears to be related to loss of fish ponds, which are known to be important feeding habitats (Figures 1 and 2).

The Administration must be made to realise that the continued loss of wetlands without any appreciable effort to compensate is unacceptable. I regret that I will be unable to attend the ACE meeting of 18 September 1995 - I wish you all well!

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'P.P. Melville', with a stylized flourish at the end.

David S. Melville  
Member, ACE EIA-subcommittee

encl.

C.C. Dr. Richard Jack  
Dr. Ng Cho-nam  
Dr. Ho Kin-chung  
Ms. Lisa Hopkinson  
Mr. Paul Fan Chor-ho



Updated on 13 Sept. 1995

TABLE 1.

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SUMMARY OF WETLAND LOSS AND PROPOSED MITIGATION FOR ROUTE 3  
COMPARED TO SOME APPLICATIONS FOR RESIDENTIAL DEVELOPMENT IN  
THE NW NEW TERRITORIES

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**R3 Southern Section**

Area permanently lost	3.9 ha
Proposed mitigation area	0.06 ha
Ratio of enhancement management:area lost	0.015:1

**R3 Northern Section**

Area permanently lost	13.09 ha
Proposed mitigation area	1.7 ha*
Ratio of enhancement management:area lost	0.13:1

**Total R3**

Area permanently lost	16.99 ha
Proposed mitigation area	1.76 ha*
Ratio of enhancement management:area lost	0.103:1

\* estimated area of wetland (water/marsh surface) - subject to revision

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Applications for residential development (all of which it is understood are opposed by Government)

***Nam Sang Wai***

Area permanently lost	98 ha
Proposed mitigation area	40 ha
Ratio enhancement management: area lost	0.4:1

***Wing Kei Tsuen***

Area permanently lost	19 ha
Proposed mitigation area	3.45 ha
Ratio enhancement management: area lost	0.18:1

*Pak Hok Chau*

Area permanently lost	9.75 ha
Proposed mitigation area	5.62 ha
Ratio enhancement management: area lost	0.57:1

*Fung Lok Wai*

Area permanently lost	40 ha
Proposed mitigation area	40 ha
Ratio enhancement management: area lost	1:1

*Lin Barn Tsuen*

Area permanently lost	26.5 ha
Proposed mitigation area	11.5 ha
Ratio enhancement management: area lost	0.43:1

### R3 CHRONOLOGY

The EIA for R3 Country Park Section: Tai Lam Tunnel and Yuen Long Approach Road was discussed at the 3rd. Meeting of the ACE EIA Subcommittee on 5 July 1994.

The minutes of that meeting state:

*'40. ...HyD responded that they would have to seek policy direction on this matter [off-site compensation for wetland loss]. Members asked the Administration to consider their obligation to protect the wet lands and provide a statement at the next ACE meeting on the Administration's position on this issue. The Secretary agreed to co-ordinate.'*

The report of that meeting to Council (ACE 35/94) states:

*'9. The Subcommittee accepted the EIA report and recommends the Council to endorse the EIA report subject to the following conditions:*

- an additional ecological survey be conducted before commencement of work;*
- off-site compensatory planting at a ratio of no less than three to one;*
- the future detailed EIA be submitted to this committee for consultation; and*
- off-site restoration of wetland.'*

The project was discussed at length at the 7th Meeting of the Advisory Council on the Environment on 15 August 1994, at which two papers were circulated. Annex 3 to ACE 35/94 detailed 'Highways Department Response to the recommendations of the EIA Sub-committee'. Annex 4 was an 'Information note for ACE. Environmental impacts of development projects and off-site compensation for wetland loss'.

Annex 3 states:

*'d) Off-site restoration of wetland is not viable under this project since suitable land is not easy to identify and if land resumption were involved this would be both expensive and time consuming. However the franchisee will be required, on completion of the construction works, to reinstate areas of fish ponds within his work site which are not required as part of the construction, operation and maintenance of the permanent works. These areas will be identified and reinstatement measures will be proposed as part of the detailed EIA. However neither the franchisee nor Highways Department will be able to undertake the longer term management and maintenance of these wetland, nor will they provide funds for others to undertake these functions.'*

Annex 4 states:

*'Route 3 Country Park Section Project*

5. *As stated above, while it is not our general policy to provide "environmental compensation" schemes for development projects as such, we do try to extend and enhance our conservation areas as far as possible. The Highways Department, with the assistance of the Agriculture and Fisheries Department, is also looking into possible off-site mitigation measures, e.g. planting and wetland conservation, in relation to the project itself.'*

The minutes of the meeting record that:

*'42. The EIA study for the project was endorsed on the conditions recommended by the Subcommittee. [i.e. including the condition for 'off-site restoration of wetland']'*

**It is thus apparent that members of ACE understood that Highways Department, with the assistance of the Agriculture and Fisheries Department was 'looking into possible off-site mitigation measures', notwithstanding their view that 'off-site restoration is not viable'.**

The ACE EIA-subcommittee met on 3 April 1995 to discuss the Information Paper submitted by the R3CC regarding the preliminary works of the Route 3 project. There was a long discussion on wetland compensation and although several members did not want to endorse the paper, it was agreed that it would be endorsed subject to a satisfactory interim report of on the additional ecological survey (see the minutes). The important points emerged relating to wetland compensation were as follows:

- i) Whilst AFD acknowledged that it would be difficult to create to create new wetlands, they would expect the project proponent to propose plans for enhancement and restoration (para 14 of the minutes refers).
- ii) The paragraph 16 of the minutes note that R3CC *'would work closely with AFD to develop mitigation measures to create appropriate habitat... to improve the ecological diversity of the ponds. ...More details on this aspect would be provided in the detailed EIA.'*
- iii) Whilst it was suggested in the EIA-subcommittee that wetland enhancement plan in areas outside the work areas should be considered, AFD advised that PELB were reviewing the issue. Paragraph 17 of the minutes noted that the *'Subcommittee agreed that the issue be referred to PELB for consideration'.*

However, since the meeting of 3 April 1995, there has been no response from PELB, and no update on their wholly inadequate 'policy' on off-site compensation.

ax to:  
Ms Eva Yam  
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# Friends Of The Earth 地球之友

Chairman, ACE EIA Sub-Committee,  
Department of Geography,  
The Chinese University of Hong Kong,  
Sha Tin

13 September 1995

Attn: Dr Lam Kin-che

Dear Dr Lam,

## Route 3 Southern Section Detailed EIA

I would like to add my support to Mr David Melville's letter of 12 September advising that he is unable to support the endorsement of the above-captioned EIA. Having spent some considerable time reviewing the various documents and past meeting minutes the following points emerge:

1. One of the original conditions for ACE endorsement of the project was that off-site compensation be provided for loss of wetlands.
2. The Administration, whilst stating the difficulty in finding suitable sites for off-site compensation, did agree to continue to search for such sites.
3. The Administration also agreed to review WWF's suggestion of enhancement of areas outside the works area.
4. The consultants agreed to provide details of measures to improve the ecological diversity of ponds.

Neither the original condition for ACE's endorsement has been met, nor has the Administration provided details of any site search for possible off-site areas or a report on the proposal of enhancement of existing wetland areas. Mr Melville's letter gives ample discussion on the lack of information in the DEIA on mitigation and restoration measures.

In view of the above and the continuing failure to address wetland loss in Government policy, I hope that we can request a response to the outstanding issues at the next meeting.

Yours sincerely,

*Lisa Hopkinson*  
Lisa Hopkinson

c.c Mr David Melville  
Dr Richard Jack  
Dr Ng Cho-nam  
Dr Ho Kin-chung  
Mr Paul Fan Chor-ho

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## **Summary of Views of Other Members of the Subcommittee**

Two members recommended the endorsement of the report on the following conditions:

- (i) the administration should immediately review and formulate policies on wetland management and off-site compensation measures; and
- (ii) the issue of wetland loss and its compensation will be detached from the present report and to be considered together with the wetland loss from the Northern Section in the DEIA for the Northern Section.

One member suggested that the proponent should prepare a supplementary report to address the views of Mr. David Melville. The report should be discussed in the ACE EIA Subcommittee meeting for recommendation.

### **Additional information on traffic assumptions adopted in Southern Section DEIA**

MVA Asia Ltd., on behalf of the Franchisee, undertook a detailed review of the likely traffic volumes and vehicle mix on the Route 3 Country Park Section. The review of the vehicle mix was described in the Traffic Study Report. In summary, the predicted vehicle mix was based on the analyses of:-

- a) the existing vehicle mix on Tolo Highway and Tuen Mun Road;
- b) the current vehicle mix of Cross Border traffic.

2. Predictions of Cross Border and "local" traffic were made for the Route 3 Country Park Section, and an estimation was made of the different vehicle categories (including container vehicles). The resultant vehicle mix and traffic flow forecasts were used for the DEIA study.

3. In the PDS2EA, traffic figures from Transport Department were used which are somewhat different from MVA's prediction, mainly due to differences in the design assumptions listed as follows:-

- a) population and employment assumptions;
- b) GDP assumptions;
- c) Vehicle type proportions;
- d) Vehicle fleet size assumptions;
- e) Cross border traffic projections.

4. The difference between TD's forecasts in PDS2EA and MVA's current prediction of heavy vehicles is considered to be within acceptable limits, in view of the large number of assumptions made in the traffic forecasting process and the differences in forecasting methodology.