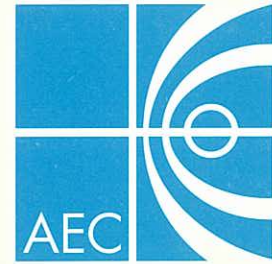


Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com



沛然環境評估
工程顧問有限公司

Our Ref: 849/11-0055

20 October 2011

By Post and Fax (2827 8700)

Drainage Project Division
Drainage Services Department
44/F., Revenue Tower
5 Gloucester Road
Hong Kong

Attn.: Mr. Patrick Chan

Dear Sir,

**RE: CONTRACT NO. DC/2006/11
DRAINAGE IMPROVEMENT IN SOUTHERN LANTAU
VERIFICATION OF THE PROPOSAL FOR POST-CONSTRUCTION PHASE MONITORING
WORKS (PHASE II)**

We refer to the finalized Proposal for Post-construction Phase Monitoring Works (Phase II) received from the Environmental Team on 18 October 2011 via emails accordingly. Please be advised that we have no further comment on the aforesaid proposal and hereby verify the same in accordance with Condition 4.1 of the Environmental Permit EP-237/2005/B.

Should you have any queries, please do not hesitate to contact the undersigned or our Miss Winnie Ma at 2815 7028.

Yours faithfully,

Grace Kwok
Independent Environmental Checker

GK/wm/rc

Cc IOW – Mr. Leung Wing Nin (Fax: 2984 1509)
Yick Hing – Mr. K C Liu (Fax: 2787 4890)
EPSL – Ms. Goldie Fung (Fax: 2856 2010)



DC/2006/11

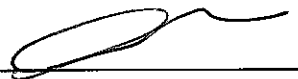
Drainage Improvement in Southern Lantau

Environmental Monitoring and Audit Programme

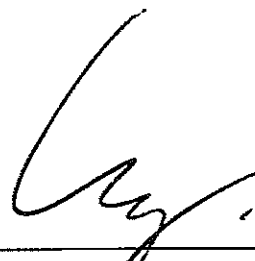
Proposal for Post-construction Phase Monitoring Works (Phase II)

**Prepared by
Environmental Pioneers and Solutions Limited
and
Ecosystems Limited
(Environmental Team)**

Prepared by:



Goldie Fung
ET leader



Vincent Lai
Ecologist Representative

A) Introduction

Yick Hing Construction Company Limited (hereafter as the Contractor) appointed Environmental Pioneers & Solutions Limited and Ecosystems Limited as Environmental Team (hereafter as ET) for implementation of Environmental Monitoring and Auditing (EM&A) Programme for the Drainage Improvement Works in Southern Lantau since March 2008 in accordance with the requirements laid down in Particular Specification (PS) Section 25.32 (1) of this Project.

As the major construction activities have been completed by the end of January 2011, the Project Proponent / Permit Holder, Drainage Services Department (DSD) has submitted the proposal of Phase I Post-construction monitoring works, which is water quality monitoring for EPD's approval. The details of Phase I post-construction monitoring works proposal submission are enclosed in the **Appendix A**.

EPD has reviewed and approved the proposal for Phase I post-construction monitoring works on 4 May 2011 (refer to the attachment in the **Appendix B**).

Hence, the Phase I post-construction monitoring works have been carried out on 5 May 2011 to 1 June 2011. The monitoring works exercised at the designated monitoring locations and continued for four weeks in the same manner as the impact monitoring. The Phase I post-construction monitoring has been completed on 1 June 2011.

This proposal will provide the details of phase II post-construction monitoring works, including Ecological Water Quality Monitoring (EWQM), Ecological Monitoring and Other Monitoring Works (noise monitoring, ET weekly site environmental audit and ET monthly site environmental audit)

B) Completion of Site Activities

As reported by the Contractor, major construction activities for drainage improvement along Pak Ngan Heung River, Tai Tei Tong River and Luk Tei Tong River were completed by the end of January 2011. And, land-based construction activities, such as defects rectification, landscaping works and site clearance have been finished on 27 April 2011. And therefore, the contractor expects that no environmental impacts would be arisen from construction activities.

The application for substantial completion by Contractor was approved and certified by DSD base on the following documents:

- (1) Substantial Completion for Section 1 of the works, Dated 25th August 2010
- (2) Substantial Completion for Section 3 of the Works, Dated 23rd December 2010
- (3) Relevant sections of Particular Specification of this Project

The above documents are attached in **Appendix C** for reference.

C) Proposed Change of EM&A Programme for Ecological Water Quality Monitoring

A joint site inspection with representatives from Environmental Protection Department (EPD), DSD, the main Contractor, Independent Environmental Checker (IEC) and ET was held on 27th January 2011 to check the site condition and tidiness to further confirm the commencement of post-construction phase water quality monitoring works.

During the inspection, it was noted that there was no river-based construction activities. Site photographs on January and February 2011 on the 3 rivers bed conditions was taken and shown as below.

Fig.1 – Condition of confluence area of PNHR, TTTR and LTTR



Fig.2 – Condition of PNHR (downstream area)



Fig.3 – Condition of PNHR, fish ladder section



Fig.4 – Condition of TTTR, downstream area

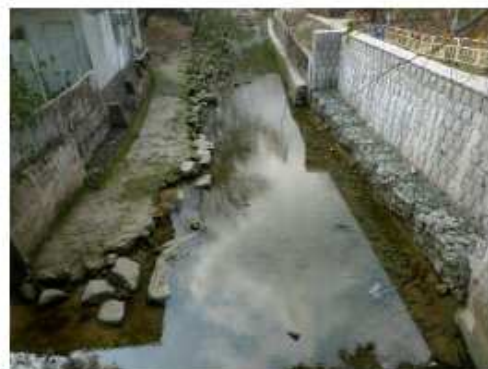


Fig.5 – Condition of TTTR, section nearby bottleneck B



Fig.6 – Condition of TTTR, section nearby bottleneck A



In accordance with EM&A Manual Section 6.2.29 and 6.2.31, commencement condition of post-construction ecological water quality monitoring works is consistent with commencement condition of post-construction water quality monitoring as mentioned in EM&A Manual Section 4.7.1. Hence, the Post- construction Ecological Water Quality Monitoring is proposed to start on 1 June 2011.

According to EM&A Manual Section 6.2.29 and 6.2.31, ET has reviewed the monitoring parameters as well as the EM&A programme.

Details of Post-construction Ecological Water Quality Monitoring Works

According to the EM&A Manual Section 6.2.29, post-construction ecological water quality monitoring for PNH and LTT Rivers should be conducted every two months a year for 4 years after the completion of works.

And, post-construction ecological water quality monitoring for LTT Bypass Channel should be conducted 6 times a year for 4 years after completion of works in accordance with EM&A Manual Section 6.2.32.

- Post-construction Ecological Water Quality Monitoring for PNH River, LTT River, LTT Bypass Channel and Reference Site are proposed to be taken in bi-monthly basis and started from 1 June 2011 to 30 September 2015.
- All relevant requirements of EM&A manual such as monitoring locations, methodology and parameters for PNH River and LTT River shall not be changed during the post-construction ecological water quality monitoring.
- The proposed monitoring locations for the LTT Bypass Channel and Reference Site are enclosed in **Appendix D**.
- Monitoring methodology of LTT Bypass Channel and Reference Site is consistent with the monitoring methodology of PNH River and LTT River and the monitoring parameters are complied with EM&A Manual Section 6.2.31 and

Section 6.2.32.

- The main Contractor of DC/2006/11 is responsible for 1 year monitoring in accordance with PS Section 25.32E (9) and up to 26 April 2012. The further and subsequent EWQM works will be under permit holder, DSD.

D) Proposed Change of EM&A Programme for Ecological Monitoring

Further to the joint site inspection with DSD and IEC on 25th August 2011, it was noted that there was no river and land based construction activities. All the mechanical plants had been removed off site. A set of site records photos has been taken and shown as below:

Pak Ngan Heung River



Tai Tei Tong River



Luk Tei Tong River



Site inspection and subsequent discussion among Project Proponent, Main contractor, IEC and ET were carried out on 25 August 2011. It was observed that the major site activities have been completed. The main Contractor has proposed Phase II Post-construction Ecological Monitoring Works.

The details of Phase II post-construction monitoring works are proposed as follow:

Details of Post-construction Ecological Monitoring

According to the EM&A Manual Section 6.2.29, post-construction ecological monitoring for PNH and LTT Rivers should be conducted every two months (bi-monthly) a year for 4 years after the completion of works.

According to the EM&A Manual Section 6.2.32, monitoring of the LTT Bypass Channel and Reference Site should be conducted 6 times a year for 4 years after the completion works.

- Post-construction Ecological Monitoring is proposed to be taken in bi-monthly basis and started from 1 November 2011 to 31 October 2015
- Post-construction Ecological monitoring is proposed to be carried out at LTT River, PNH River and all relevant requirements of EM&A Manual such as sampling locations, methodology and parameters shall not be changed during the post-construction ecological monitoring. It is proposed to be started on 1 November 2011 to 31 October 2015.
- Post-construction Ecological Monitoring is also proposed to carry out within LTT Bypass Channel and Reference Site. It is proposed to start on 1 November 2011 to 31 October 2015 and the monitoring location of Reference Site is enclosed in **Appendix E**. The monitoring parameters and methodology will be complied with EM&A Manual Section 6.2.31 and Section 6.2.32.
- The main Contractor of DC/2006/11 is responsible for 1 year monitoring in accordance with PS Section 25.32E (9) and up to 26 April 2012. The further and subsequent ecological monitoring works will be under permit holder, DSD.

E) Proposed Change of EM&A Programme for Noise

Monitoring

As the construction works have been completed, no construction activities will cause the noise impact. The noise monitoring programme is proposed as follows:

Details of Post-construction Noise Monitoring

- ET weekly noise monitoring is proposed to be terminated on 31 October 2011.
- All relevant requirements of EM&A Manual such as sampling locations, methodology and parameters shall not be changed during the post-construction noise monitoring.

F) Proposed Change of EM&A Programme for Weekly and

Monthly Site Environmental Audit

As the construction works have been completed, a change in the frequency of the site environmental audit programme is proposed as follows:

Details of Post-construction Weekly and Monthly Site Environmental Audit

- Weekly site environmental audit is proposed to be terminated on 31 October 2011.
- Monthly site environmental audit with IEC is maintained and will be terminated on 30 April 2012.

G) Proposal of EM&A Programme for Vegetation Control

According to the EM&A Manual Section 6.2.15, vegetation control would be required within the LTT Bypass Channel during operation phase.

Details of Vegetation Control

- Vegetation control is proposed to be conducted once per year.
- The first Vegetation control is proposed to be carried out in March 2012 and subsequent vegetation control will be conducted on an annual basis.
- Vegetation control should be under permit holder, DSD
- The details and findings will be included in the EM&A report.

H) Conclusion

According to the site inspections on 25 August 2011, it was noted that the river and land-based construction activities for the contract DC/2006/11 have been completed. The Phase I post-construction monitoring works have been carried out on 5 May 2011 and completed on 1 June 2011. Hence, the phase II post-construction monitoring works including EWQM, Ecological monitoring, Noise Monitoring, Weekly and Monthly Site Environmental Audit are proposed to commence. The proposed programme for Phase II post-construction monitoring works is enclosed in the **Appendix F**.

According to the EM&A Manual Section 6.2.30, reports on the findings of each monitoring trip should be submitted to Agriculture, Fisheries and Conservation Department (AFCD) and the Environmental Protection Department (EPD).

According to the EM&A Manual Section 6.2.30, Section 6.2.31 and Section 6.2.32, a final report summarizing the EWQM and Ecological Monitoring results over 4 years will be submitted.

Lastly, for the further consideration, the post-construction monitoring may be extended if unsatisfactory result is recorded.

Appendix A

DSD's Submission of Memo for

Phase I Post-construction Monitoring Works

Urgent by Post

MEMO

From Chief Engineer/Drainage Projects, DSD
Ref. () in DP/8/4128CD/DC0611/17
Tel. No. 2594 7464
Fax. No. 2827 8700
Email
Date 2 March 2011

To Director of Environmental Protection
(Attn.: Mr. Matthew W C CHAN)
Email
Your Ref. () In EP2/N9/I/97 III
dated Fax. No. 2591 0558
Total Pages 1 + attachment

PWP Item No. 4128CD
Drainage Improvements in Southern Lantau

**DC/2006/11 – Drainage Improvement in Southern Lantau
and Construction of Mui Wo Village Sewerage Phase 1**

**Environmental Impact Assessment (EIA) Ordinance, Cap. 499
Environmental Permit No. 237/2005/B**

Proposal of Post-construction Phase Environmental Monitoring

We refer to the captioned environmental permit (EP).

2. The construction works for Section 1 (i.e. drainage improvement works at Tai Tei Tong River) and Section 3 (i.e. drainage improvement works Pak Ngan Heung River and Luk Tei Tong River) of the captioned Contract have been substantially completed.
3. In accordance with Clause 25.32E of the Particular Specifications, our contractor, Yick Hing Construction Company Limited submit herewith their proposal of "Post-construction Phase Environmental Monitoring". The submission has been certified by the Environmental Team Leader and verified by the Independent Environmental Checker (IEC). Please note that one copy of the proposal has also been sent to D of AFC direct.
4. For the environmental auditing to be carried out by our IEC, Allied Environmental Consultants Limited, there will be no change to the auditing procedure and frequency. They will continue to carry out regular as well as random site inspections and submit the monthly IEC reports until the end of the 12-month maintenance period of the whole Contract.


(W H CHAN)

for Chief Engineer/ Drainage Projects
Drainage Services Department

c.c. EPD - Environmental Compliance Division, Regional Office (South), Islands
(Attn: Miss Connie H Y Wong) (with enclosure)
D of AFC (Attn: Ms. Josephine KY Yang) (with enclosure)

Internal

IOW/D4 (Mr. LEUNG Wing-nin) (with enclosure) (via E/D4)



益興建築有限公司

Yick Hing Construction Company Limited

香港九龍佐敦道5號至秀商業大廈2樓

2nd Floor, Ultragrace Commercial Building, 5 Jordan Road, Kowloon, Hong Kong.
Tel : (852) 2394 4988 Fax : (852) 2787 4890

Quality Management
Certified to ISO 9001
Environmental Management
Certified to ISO 14001
Occupational Health and
Safety Management
Certified to OHSAS 18001

Our Ref: DC/2006/11/1B/L1700

22 February 2011

By Post

The Engineer's Representative
Drainage Project Division
Drainage Services Department
44 / F Revenue Tower
5 Gloucester Road,
Wan Chai, Hong Kong

→ GR

Attention: Mr. W. H. Chan

Dear Sir,

**Contract No. DC/2006/11 – Drainage Improvement in Southern Lantau and
Construction of Mui Wo Village Sewerage Phase I
Request for Post-Construction Phase Monitoring for Environmental Monitoring and
Audit Programme**

We would write to request for the Post-Construction Phase Monitoring for Environmental Monitoring and Audit Programme since the major works of this contract has been substantial completed especially for Pak Ngan Heung River, Tai Tei Tong River and Luk Tei Tong River.

Hence, we would submit herewith the Proposal for Post-construction Phase Monitoring prepared by our Environmental Team, Environmental Pioneers and Solutions Limited and Ecosystems Limited for your acceptance. Besides, please noted that Allied Environmental Consultants Limited has already verified and have no further comments to this proposal as per enclosed reference letter 849/11-0011 dated 21 February 2011.

We would propose to commence this post-construction monitoring for water on 7 March 2011 if you have no objection. Thank you for your attention.

Yours faithfully,
For and on behalf of
Yick Hing Construction Co., Ltd.


James Law

Site Agent

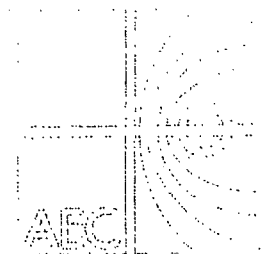
JL/cw

Encl.

| | | | |
|------|--|-----|------------------|
| c.c. | Mr. W.N. Leung (IOW/DSD) | w/e | By Hand |
| | Mr. K.C.Liu (SPM/Yick Hing) | w/e | By Hand |
| | Ms. WONG Ho-ying Connie, EPD | w/e | By Fax 2960 1760 |
| | Ms. Patricia Chung & Mr. Jimmy Cheng, EPSL | w/e | By Fax 2856 2010 |

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com



沛然環境評估
工程顧問有限公司

Our Ref: 849/11-0011

21 February 2011

By Post and Fax (2827 8700)

Drainage Project Division
Drainage Services Department
44/F., Revenue Tower
5 Gloucester Road
Hong Kong

Attn.: Mr. Patrick Chan

Dear Sir,

**RE: CONTRACT No. DC/2006/11
DRAINAGE IMPROVEMENT IN SOUTHERN LANTAU
VERIFICATION OF THE PRELIMINARY PROPOSAL FOR POST CONSTRUCTION PHASE
MONITORING**

We refer to the Preliminary Proposal for Post Construction Phase Monitoring from your Environmental Team received on 8 and 18 February 2011 via emails accordingly. Please be advised that we have no further comment on the aforesaid proposal and hereby verify the proposal in accordance with Condition 4.1 of the Environmental Permit EP-237/2005/B.

Should you have any queries, please do not hesitate to contact the undersigned or our Miss Winnie Ma at 2815 7028.

Yours faithfully,

Grace Kwok
Independent Environmental Checker

GK/wm

Cc IOW – Mr. Leung Wing Nin (Fax: 2984 1509)
Yick Hing – Mr. K C Liu (Fax: 2787 4890)
EPSL – Ms Patricia Chung (Fax: 2856 2010)

FAXED
DATE: 21/2/2011



DC/2006/11

Drainage Improvement in Southern Lantau

Environmental Monitoring and Audit Programme

Proposal for Post-construction phase monitoring

Prepared by

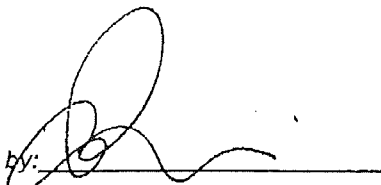
Environmental Pioneers and Solutions Limited

and

Ecosystems Limited

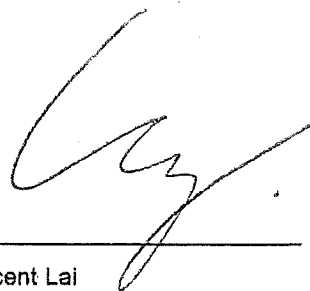
(Environmental Team)

Prepared by:



Patricia Chung

ET leader



Vincent Lai

Ecologist Representative

Introduction

Yick Hing Construction Company Limited (hereafter as the Contractor) appointed Environmental Pioneers & Solutions Limited and Ecosystems Limited as Environmental Team (hereafter as ET) for implementation of Environmental Monitoring and Auditing (EM&A) Programme for the Drainage Improvement Works in Southern Lantau since March 2008 in accordance with the requirements laid down in Particular Specification (PS) Section 25.32 (1)S of this Project.

As major construction activities will be completed by the end of January 2011, the application for substantial completion submitted by the contractor has been approved by the Project Proponent / Permit Holder, Drainage Services Department (DSD). Based on the abovementioned issues, the post construction phase monitoring for the Project should be commenced.

Future Site Activities to be Carried out

As reported by Contractor, major construction activities for drainage improvement along Pak Ngan Heung River, Tai Tei Tong River and Luk Tei Tong River were finished. Only land-based construction activities, such as defects rectification, landscaping works and site clearance will be continued. And therefore the contractor expects that the water quality impacts arising would be reduced substantially as no river-based activities will be carried out in the future.

The application for substantial completion by Contractor was approved and certified by DSD base on the following documents:

- (1) Substantial for Section 1 of the Works, Dated 25th August 2010
- (2) Substantial for Section 3 of the Works, Dated 23rd December 2010
- (3) Relevant sections of Particular Specification of this Project

The above documents are attached in Appendix A for reference.

A joint site inspection with representatives from Environmental Protection Department (EPD), DSD, Contractor, Independent Environmental Checker (IEC) and ET was held on 27th January 2011 to check the site condition and tidiness to further confirm the commencement of Post-construction phase monitoring. No river-based construction activities were observed during inspection.

Photos taken for the site conditions during recent routine site inspections carried out in January 2011 and February 2011 were shown at the following for information.

Fig.1 – Condition of confluence area of PNHR, TTTR and LTTR

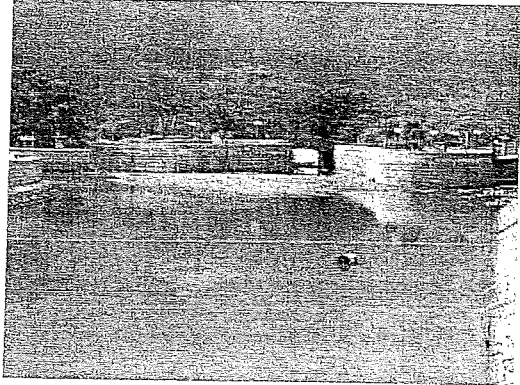


Fig.2 – Condition of PNHR (downstream area)

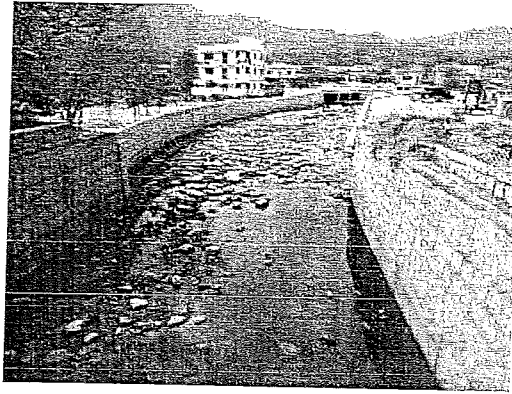


Fig.3 – Condition of PNHR, fish ladder section

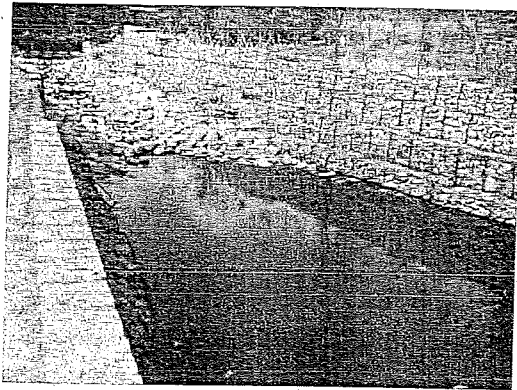


Fig.4 – Condition of TTTR, downstream area

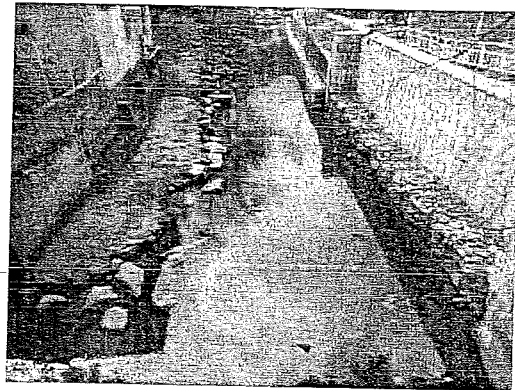


Fig.5 – Condition of TTTR, section nearby bottleneck B

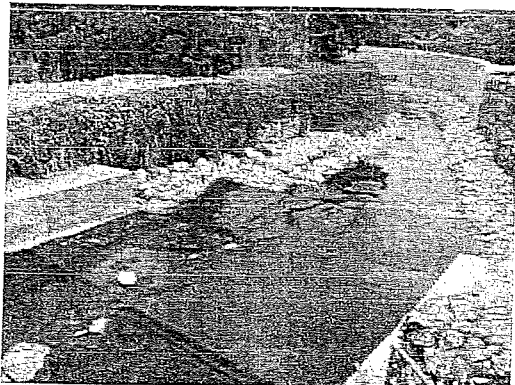


Fig.6 – Condition of TTTR, section nearby bottleneck A

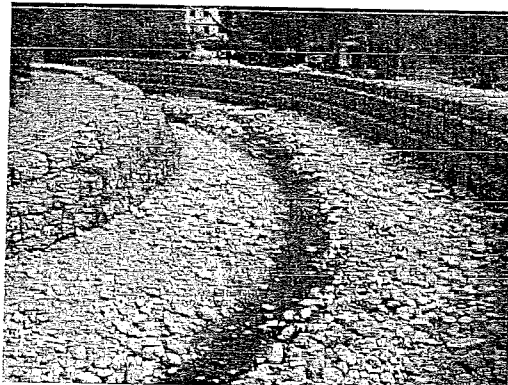
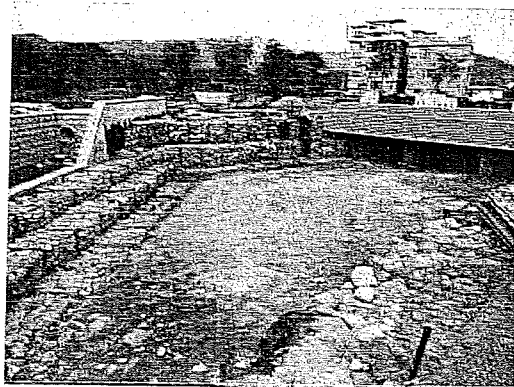


Fig.7 – Condition of LTTR, downstream area



Fig.8 – Condition of LTTR, inlet of bypass channel



Outstanding works being / to be carried out

Fig.9 - Landscaping works at PNH, fish ladder section

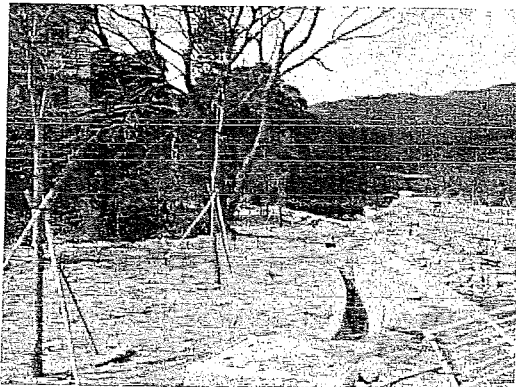


Fig.10 – Landscaping works at LTTR, downstream area

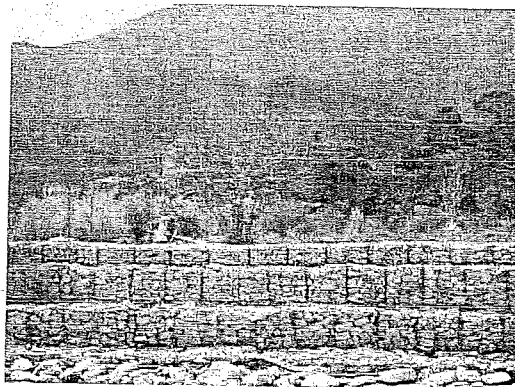


Fig.11 – Site clearance to be carried out at PNH maintenance ramp



Fig.12 – Site clearance to be carried out at inlet of LTT bypass channel

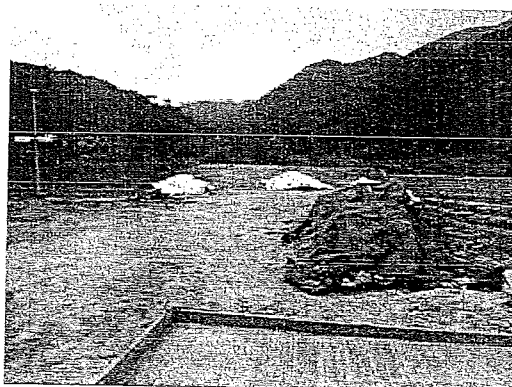
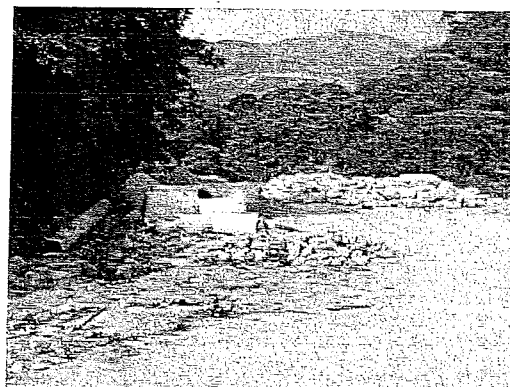


Fig.13 – Site clearance to be carried out at TTTR bottleneck A



Fig.14 – Site clearance to be carried out at PNH fish ladder



Proposed Changes of EM&A Programme

After the joint site inspection with EPD, DSD and IEC on 27th January 2011, ET has prepared this proposal for their further considerations.

According to PS Section 25.32E (8) and EM&A manual Section 4.7.1, ET has reviewed the monitoring parameters as well as the EM&A programme. It is suggested that changes of the programme would be mainly focused on conducting water quality monitoring for 4 weeks during post-construction phase to ensure the restoration of ambient water quality in the rivers. The other parts of the programme would be maintained unchanged. As informed by the contractor, the remaining land-based site activities are expected to be finished by early March 2011 including:

- Landscaping works;
- rectification for public access, at section of PNH river (on top of box culvert);
- and removal of wastes and excessive construction materials for evacuation.

The post-construction phase water quality monitoring is suggested to start from March 2011. All relevant requirements of EM&A manual such as sampling locations, methodology, event / action plan as well as the action / limit levels for water quality monitoring shall not be changed during the post-construction phase monitoring.

Another joint inspection is proposed to be held at the end of March 2011 to review for any further change of EM&A programme that should be made due to completion of remaining works. Proposal for such changes will be prepared by ET and , verified by IEC for submission EPD for their approval.

Appendix A

**Letter Correspondent for
Substantial Completion of Project Works**



Drainage Services Department
Drainage Projects Division
44/F, Revenue Tower, 5 Gloucester Road,
Wan Chai, Hong Kong

渠務署
排水工程處
香港灣仔告士打道5號
稅務大樓44樓

來函編號 Your Ref:

本署編號 Our Ref: () in DP/8/4128CD/DC0611

電話 Tel: (852) 2594 7450

傳真 Fax: (852) 2827-8700

1159

Urgent by Post

August 2010

Yick Hing Construction Company Limited
2/F, Ultragrace Commercial Building
5 Jordan Road
Kowloon, Hong Kong

(Attn: Mr. Edward Yuen)

Dear Sirs,

Contract No. DC/2006/11
Drainage Improvement in Southern Lantau
and Construction of Mui Wo Village Sewerage Phase 1

Substantial Completion for Section 1 of the Works

In accordance with Clause 53 of the General Conditions of Contract, I hereby certify that Section 1 of the Works was substantially completed on 1 December 2009.

Yours faithfully,

(CHAN Kin-kwong)
The Engineer

Drainage Projects Division
Drainage Services Department

Encl.

- c.c. D of A
- CTA(F), DEVB
- AD/P&D, DSD
- SE/CA, DSD
- STA, DSD
- SSO(Q)
- Acct. Sec.
- IOW/D4 (Mr. LEUNG Wing-nin) By fax 2984 1509
- Yick Hing site agent (Mr. James Law) By fax 2984 9703
- SE/DP5, E/D4 - to note in file only

我們的抱負是提供世界級的污水和雨水處理排放服務，以促進香港的可持續發展。

Our mission is to provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong.





Drainage Services Department
Drainage Projects Division
44/F, Revenue Tower, 3 Gloucester Road,
Wan Chai, Hong Kong

渠務署
排水工程部
香港灣仔告士打道5號
稅務大樓44樓

1228

oh
W

來函編號 Your Ref: DC/2006/11/1B/L1640
本署編號 Our Ref: DP/8/4128CD/DC0611/
電話 Tel: (852) 2594 7400
傳真 Fax: (852) 2827 3710

Yick Hing Construction Company Limited
4/F, Ultragrace Commercial Building
5 Jordan Road
Kowloon, Hong Kong

Urgent by Fax (2787 4890)

23 December 2010

(Attn: Mr. Edward Yuen)

Dear Sirs,

Contract No. DC/2006/11
Drainage Improvement in Southern Lantau
and Construction of Mui Wo Village Sewerage Phase 1

Substantial Completion for Section 3 of the Works

In accordance with Clause 17 of the General Conditions of Contract, I hereby certify that Section 3 of the Works was substantially completed on 31 October 2010.

Yours faithfully,

(CHAN Kin-kwong)

The Engineer

Drainage Projects Division
Drainage Services Department

- c.c. D of A
- CIA(F), DEVB
- AD/P&D, DSD
- SE/CA, DSD
- STA, DSD
- SSO(Q)
- Acct. Sec.
- IOW/D4 (Mr. LEUNG Wing-ming) E, fax 2984 1509
- Yick Hing site agent (Mr. Jeffrey LAU) E, fax 2984 5163
- SE/DP5, E/D4 -- to note in file only

- (f) Construction of about 350m drainage improvement works at Cheung Sha Sheung Tsuen and Lo Uk Tsuen, and about 85m flood wall at Pui O Ham Tin San Tsuen; and
- (g) the construction of peripheral drainage system associated with items (a) – (f) above;

Sewerage Works

- (h) Construction of approximately 3.3 kilometres gravity sewers of diameter ranging from 160mm to 400mm diameter at Tung Wan Tau, Chung Hau, Tai Tei Tong and Pak Ngan Heung.

Others

- (i) provisioning of hard and soft landscaping works to the above works;
- (j) the implementation of environmental mitigation measures;
- (k) reprovisioning of footpath and emergency vehicular access;
- (l) archaeological monitoring;
- (m) The construction of other ancillary works associated with items (a) to (l) above.

- (2) The Site is divided into the following Portions (the exact portioning of Site refers to the relevant contract Drawings):

-
- (a) Portion D1 – Area along Pak Ngan Heung River
 - (b) Portion D2 – Area at Ling Tsui Tau
 - (c) Portion D3 – Area at Ling Tsui Tau
 - (d) Portion D4 – Area along Tai Tei Tong River
 - (e) Portion D5 – Area at Luk Tei Tong
 - (f) Portion D6 – Area near Pui O River at Ham Tin San Tsuen
 - (g) Portion D7 – Area along South Lantau Road near Lo Uk Tsuen
 - (h) Portion D8 – Area near Cheung Sha Sheung Tsuen
 - (i) Portion D9 – *Part* of the emergency vehicular access (EVA) at Mui Wo as shown in Drawing No.

DDN/128CD2/1002

- (j) Portion S1 – Area in Chung Hau, Mui Wo
 - (k) Portion S2A – Area in Tai Tei Tong, Mui Wo
 - (l) Portion S2B – Area in Tai Tei Tong, Mui Wo
 - (m) Portion S3A – Area in Tung Wan Tau, Mui Wo
 - (n) Portion S3B – Area in Tung Wan Tau, Mui Wo
 - (o) Portion S4 – Area in Pak Ngan Heung, Mui Wo
 - (q) Portions WS-A and WS-B – Works Area A (i.e. WA5 plus WA7 as shown in Appendix 1.6) and Work Area B (i.e. WA3 as shown in Appendix 1.6)
- (3) During the course of the Contract, works may be carried out by others on the same Site including but not limited to the following:-
- (a) Watermain connection and diversion by Water Supplies Department. In particular, the watermains replacement works at Tai Tei Tong;
 - (b) Telephone and electricity supply diversion works;
 - (c) Public lighting works;
 - (d) Paving work within and in vicinity of Portion S3A and Portion S3B of the Site at Tung Wan Tau, Mui Wo by Civil Engineering and Development Department;
 - (e) Construction and diversion works by other utility undertakings; and

The Contractor is required to provide attendance on these other contractors working concurrently on the Site as stipulated in the Contract Documents. The detailed requirement of such attendance shall be agreed by the Engineer.

- (4) The Contractor's attention is drawn in particular to the following in association with the above works:
- (a) The requirement for environmental control, mitigation and monitoring measures as stipulated in the PS Clauses;
 - (b) Waste management;
 - (c) Settlement monitoring for construction of embankment and the requirements for embankment filling according to monitoring results as stipulated in the PS Clauses;

- (d) Temporary works for excavation to form the embankment of the main drainage channels adjacent to existing structures and watercourses;
- (e) Requirements for water diversion and implementation of interim flood protection measures; and
- (f) Maintenance of existing flows of all rivers, drainage systems, nullahs, watercourses and village sewerage.

SECTIONS OF WORKS

Sections of Works

1.57

The Works shall be divided into the following Sections:

SECTION 1



- (1) Completion of Section 1 of the Works means completion of the Works within Portions D2, D3 and D4 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.

SECTION 3



- (2) Completion of Section 2 of the Works means completion of the Works within Portions D6, D7 and D8 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.
- (3) Completion of Section 3 of the Works means completion of the main drainage improvement works including the drainage channels, box culverts, retaining walls, gabion walls and embankments within Portions D1 and D5 of the Site, excluding the landscaping works.
- (4) Completion of Section 4 of the Works means completion of the remaining Works within Portions D1 and D5 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.
- (5) Completion of Section 5 of the Works means completion of the Works within Portion S1 of the Site.
- (6) Completion of Section 6 of the Works means completion of the Works within Portion S2A and Portion S2B of the Site.
- (7) Completion of Section 7 of the Works means completion of the Works within Portions S3A and Portion S3B of the Site.
- (8) Completion of Section 8 of the Works (Section subject to Excision) means completion of the Works within Portion S4 of the Site.
- (9) Completion of Section 9 of the Works means completion of the preservation and protection of existing trees, pursuant to GS/PS Section 26.

Appendix B

**Specific Conditions in Particular Specification and
Environmental Monitoring and Audit Manual**

more frequent monitoring as specified in the Event and Action Plan in the EM&A Manual shall be carried out. This additional monitoring shall be continued until the recorded levels are rectified or proved to be irrelevant to the construction activities.

- (3) The ET shall conduct noise monitoring in accordance with the EM&A Manual at the designated monitoring stations on weekly basis when noise generating activities are underway.
- (4) The ET shall conduct water quality monitoring in accordance with the EM&A Manual at the designated monitoring stations three days per week during the course of construction works.
- (5) The ET shall carry out a specific monitoring of improved sections of Pak Ngan Heung and Luk Tei Tong Rivers on a monthly basis to provide data on the aquatic/riparian communities in the channels during the construction phase, in accordance with procedures and requirements as stipulated in the EM&A Manual.
- (6) The ET shall carry out a specific monitoring of the White-shouldered Starlings at disused Watchtowers on monthly basis during construction phase in accordance with the procedures and requirements as stipulated in the EM&A Manual.
- (7) The ET shall carry out specific vibration monitoring of the existing retaining wall and associated structures of the Yuen Compound during the construction of rubble seawall and retaining wall at the Luk Tei Tong River. Archaeological watching brief shall be carried out during excavation works of the proposed U-channel at Ling Tsui Tau Village. The detailed monitoring requirements are stipulated in PS clauses 25.37 and 25.38.

*Environmental
monitoring –
post-construction
phase monitoring*

25.32E (8)

Upon completion of construction works of the rivers, the Contractor shall conduct a post-construction water quality monitoring for four weeks in the same manner as the impact monitoring to confirm the restoration of ambient water quality in the rivers.

(9)

A specific ecological monitoring programme of improved sections of Pak Ngan Heung and Luk Tei Tong Rivers shall be conducted every two months for a period of 1 year to provide data on the re-establishment of aquatic/riparian communities in the channels, and allow an assessment of the relative success of mitigation measures to be made. Ecological

monitoring of the Luk Tei Tong Bypass Channel and along a strip of existing marsh habitat adjacent to the Channel alignment (i.e. as Reference Site) shall also be conducted 6 times a year for 1 year after the completion of the construction works to confirm that the proposed Channel design has provided suitable compensation for impacts to Luk Tei Tong Marsh. The monitoring shall be made in accordance with the procedures and requirements as stipulated in the EM&A Manual. If the post-construction phase monitoring demonstrates that re-colonization is unsuccessful, the Contractor shall implement the contingency plan in accordance with the EM&A Manual at his own cost.

- | | | | |
|---|--------|-----|---|
| <i>Environmental audit – legal and contractual requirements</i> | 25.32F | (1) | The Contractor shall comply with all contractual and legal requirements for environmental and pollution control. The Contractor shall submit construction method statements to ET Leader for review if sufficient provision of environmental protection and mitigation measures has been included. |
| <i>Reporting of EM&A</i> | 25.35 | (1) | The ET shall be responsible for preparing monthly EM&A Report for submission to the Contractor, Engineer, IEC and EPD. The EM&A Report shall be in a format agreed by the Engineer and meet the requirements as set out in the EP and EM&A Manual, as detailed in PS Appendices 25.1 and 25.2. |
| | | (2) | The Contractor shall, within 6 weeks after the commencement of construction of the Works, set up a dedicated Internet web site and notify EPD in writing the Internet address where the environmental monitoring data and project information is to be placed. All environmental monitoring data described in Condition 5.1 of the EP shall be made available to the public via the abovementioned dedicated Internet web site in the shortest possible time and in any event no later than 2 weeks after the relevant environmental monitoring data are collected or become available, unless otherwise agreed with EPD. |
| <i>Environmental Permit</i> | 25.36 | (1) | The proposed works at Pak Ngan Heung River, Ling Tsui Tau, Tai Tei Tong River, Luk Tei Tong River and Luk Tei Tong (2) By-pass River is classified as a Designated Project under the Environmental Impact Assessment Ordinance (Cap.499) (EIAO). Its construction and operation shall be governed by an Environmental Permit (EP) issued by Environmental Protection Department (EPD). The Contractor shall |

- 4.6.3 In exceptional cases when insufficient baseline monitoring data or questionable results are obtained, the ET Leader shall seek approval from the IC(E) and EPD on an appropriate set of data to be used as baseline reference.
- 4.6.4 Baseline monitoring schedule shall be faxed to EPD one week prior to the commencement of baseline monitoring.
- 4.7 **Impact Monitoring**
- 4.7.1 During the course of the construction works, impact monitoring shall be undertaken three days per week, at ebb tides, with sampling / measurement at the designated monitoring stations. Upon completion of the construction works, the monitoring exercise at the designated monitoring locations shall be continued for four weeks in the same manner as the impact monitoring.
- 4.7.2 Two consecutive measurements of DO concentration, DO saturation and turbidity will be taken at mid-depth at each location. The monitoring probes shall be retrieved out of water after the first measurement and then redeployed for the second measurement. Where the difference in value between the first and second readings of DO or turbidity is more than 25% of the value of the first reading, the reading shall be discarded and further readings shall be taken. Water samples for SS measurement shall be collected at the same mid-depth.
- 4.7.3 The water quality monitoring schedule shall be faxed to EPD on or before the first day of the monitoring month. EPD shall be notified immediately of any changes in schedule by fax.
- 4.8 **Event and Action Plan for Water Quality**
- 4.8.1 The water quality criteria, namely Action and Limit levels, are shown in Table 4.1. These criteria should be applied to ensure that any deterioration of water quality is readily detected and timely action is taken to rectify the situation. Should the monitoring results of the water quality parameters at any designated monitoring station exceed the water quality criteria, the actions in accordance with the Event and Action Plan in Table 4.2 shall be carried out.

Table 4.1 Action and Limit Levels for Water Quality

| Parameters | Action | Limit |
|------------------------------|---|--|
| DO in mg/L (mid-depth) | 5 %-ile of baseline data | 4 mg/L |
| SS in mg/L (mid-depth) | 95 %-ile of baseline data or 120% of control station's SS on the same day of measurement | 99 %-ile of baseline or 130% of control station's SS on the same day of measurement |
| Turbidity in NTU (mid-depth) | 95 %-ile of baseline data or 120% of control station's turbidity on the same day of measurement | 99 %-ile of baseline or 130% of control station's turbidity on the same day of measurement |

- Notes: 1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

Appendix B

EPD's Approval Memo for

Phase I Post-construction Monitoring Works

Urgent by Fax**MEMO**

| | |
|--|---|
| From Director of Environmental Protection Ref. (9) In EP2/N9/I/97 Pt.10 Tel. No. 2835 1153 Fax. No. 2591 0558 Email simonho@epd.gov.hk Date 4 May 2011 | To CE/DP, DSD (Attn.: Mr. W.H. CHAN) Your Ref. () In DP/8/4128CD/DC0611/17 Dated 2.3.2011 Fax. No. 2827 8700 Total Pages 1 |
|--|---|

**Environmental Impact Assessment (EIA) Ordinance (Cap. 499)
 Environmental Permit No. EP-237/2005/B
 Drainage Improvement in South Lantau**

**(DC/2006/11 – Drainage Improvement in South Lantau
 and Construction of Mui Wo Village Sewerage Phase 1)**

Proposal of Post-construction Environmental Monitoring


I refer to your memo dated 2 March 2011 enclosing a proposal to conduct post-construction phase environmental monitoring for water for the captioned Project pursuant to the environmental monitoring and audit (EM&A) requirements under the Environmental Permit No. EP-237/2005/B.

2. With respect to requirements of post-construction water quality impact monitoring, section 4.7.1 of the Final EM&A Manual states that "*Upon completion of the construction works, the monitoring exercise at the designated monitoring locations shall be continued for four weeks in the same manner as the impact monitoring.*"

3. A joint site visit was carried out by EPD, DSD, AFCD, Environmental Team and Independent Environmental Checker on 19 April 2011. It was observed during the site visit that construction works at or near the waterbodies for the captioned Project have been substantially completed although two broken gabion meshes were observed at Bottleneck A of Tai Tei Tong River. Subsequently, you have confirmed in your email dated 29 April 2011 that the two broken gabion have been repaired.

4. Based on the above, I have no objection to your proposal to proceed with conducting the post-construction water quality monitoring for the captioned Project in accordance with the requirements of the EM&A Manual.

5. I would also like to reiterate that DSD is required to obtain an environmental permit for operational phase of the Project before completion of construction works to avoid non-compliance with statutory requirements of the EIA Ordinance.


 (Simon M K Ho)
 Environmental Protection Officer
 for Director of Environmental Protection

c.c. Internal – E(RS)52

Appendix C

Letter Correspondent for

Substantial Completion of Project Works



Drainage Services Department
Drainage Projects Division
44/F, Revenue Tower, 5 Gloucester Road,
Wan Chai, Hong Kong

渠務署
排水工程處
香港灣仔告士打道5號
稅務大樓44樓

來函編號 Your Ref:

本署編號 Our Ref: () in DP/8/4128CD/DC0611

電話 Tel: (852) 2594 7450

傳真 Fax: (852) 2827-8700

1159

Urgent by Post

✉ August 2010

Yick Hing Construction Company Limited
2/F, Ultragrace Commercial Building
5 Jordan Road
Kowloon, Hong Kong

(Attn: Mr. Edward Yuen)

Dear Sirs,

Contract No. DC/2006/11
Drainage Improvement in Southern Lantau
and Construction of Mui Wo Village Sewerage Phase 1

Substantial Completion for Section 1 of the Works

In accordance with Clause 53 of the General Conditions of Contract, I hereby certify that Section 1 of the Works was substantially completed on 1 December 2009.

Yours faithfully,

(CHAN Kin-kwong)
The Engineer

Drainage Projects Division
Drainage Services Department

Encl.

- c.c. D of A
- CTA(F), DEVB
- AD/P&D, DSD
- SE/CA, DSD
- STA, DSD
- SSO(Q)
- Acct. Sec.
- IOW/D4 (Mr. LEUNG Wing-nin) By fax 2984 1509
- Yick Hing site agent (Mr. James Law) By fax 2984 9703
- SE/DP5, E/D4 - to note in file only

我們的抱負是提供世界級的污水和雨水處理排放服務，以促進香港的可持續發展。

Our mission is to provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong.





Drainage Services Department
Drainage Projects Division
44/F, Revenue Tower, 3 Gloucester Road,
Wan Chai, Hong Kong

渠務署
排水工程處
香港灣仔告士打道5號
稅務大樓44樓

來函編號 Your Ref: DC/2006/11/1B/L1640
本署編號 Our Ref: DP/8/4128CD/DC06/11/
電話 Tel: (852) 2594 7400
傳真 Fax: (852) 2827 3710

1228

Yick Hing Construction Company Limited
4/F, Ultragrace Commercial Building
5 Jordan Road
Kowloon, Hong Kong

Urgent by Fax (2787 4890)

23 December 2010

(Attn: Mr. Edward Yuen)

Dear Sirs,

Contract No. DC/2006/11
Drainage Improvement in Southern Lantau
and Construction of Mui Wo Village Sewerage Phase 1

Substantial Completion for Section 3 of the Works

In accordance with Clause 17 of the General Conditions of Contract, I hereby certify that Section 3 of the Works was substantially completed on 31 October 2010.

Yours faithfully,

(CHAN Kin-kwong)

The Engineer

Drainage Projects Division
Drainage Services Department

- c.c. D of A
- CIA(F), DEVB
- AD/P&D, DSD
- SE/CA, DSD
- STA, DSD
- SSO(Q)
- Acct. Sec.
- IOW/D4 (Mr. LEUNG Wing-ming) E, fax 2984 1509
- Yick Hing site agent (Mr. Jeffrey LAU) E, fax 2984 5163
- SE/DP5, E/D4 -- to note in file only

- (f) Construction of about 350m drainage improvement works at Cheung Sha Sheung Tsuen and Lo Uk Tsuen, and about 85m flood wall at Pui O Ham Tin San Tsuen; and
- (g) the construction of peripheral drainage system associated with items (a) – (f) above;

Sewerage Works

- (h) Construction of approximately 3.3 kilometres gravity sewers of diameter ranging from 160mm to 400mm diameter at Tung Wan Tau, Chung Hau, Tai Tei Tong and Pak Ngan Heung.

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- (i) provisioning of hard and soft landscaping works to the above works;
- (j) the implementation of environmental mitigation measures;
- (k) reprovisioning of footpath and emergency vehicular access;
- (l) archaeological monitoring;
- (m) The construction of other ancillary works associated with items (a) to (l) above.

- (2) The Site is divided into the following Portions (the exact portioning of Site refers to the relevant contract Drawings):

-
- SECTION 1 OF WORKS
- SECTION 3 OF WORKS
- (a) Portion D1 – Area along Pak Ngan Heung River
 - (b) Portion D2 – Area at Ling Tsui Tau
 - (c) Portion D3 – Area at Ling Tsui Tau
 - (d) Portion D4 – Area along Tai Tei Tong River
 - (e) Portion D5 – Area at Luk Tei Tong
 - (f) Portion D6 – Area near Pui O River at Ham Tin San Tsuen
 - (g) Portion D7 – Area along South Lantau Road near Lo Uk Tsuen
 - (h) Portion D8 – Area near Cheung Sha Sheung Tsuen
 - (i) Portion D9 – *Part* of the emergency vehicular access (EVA) at Mui Wo as shown in Drawing No.

DDN/128CD2/1002

- (j) Portion S1 – Area in Chung Hau, Mui Wo
 - (k) Portion S2A – Area in Tai Tei Tong, Mui Wo
 - (l) Portion S2B – Area in Tai Tei Tong, Mui Wo
 - (m) Portion S3A – Area in Tung Wan Tau, Mui Wo
 - (n) Portion S3B – Area in Tung Wan Tau, Mui Wo
 - (o) Portion S4 – Area in Pak Ngan Heung, Mui Wo
 - (q) Portions WS-A and WS-B – Works Area A (i.e. WA5 plus WA7 as shown in Appendix 1.6) and Work Area B (i.e. WA3 as shown in Appendix 1.6)
- (3) During the course of the Contract, works may be carried out by others on the same Site including but not limited to the following:-
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 - (b) Telephone and electricity supply diversion works;
 - (c) Public lighting works;
 - (d) Paving work within and in vicinity of Portion S3A and Portion S3B of the Site at Tung Wan Tau, Mui Wo by Civil Engineering and Development Department;
 - (e) Construction and diversion works by other utility undertakings; and
- The Contractor is required to provide attendance on these other contractors working concurrently on the Site as stipulated in the Contract Documents. The detailed requirement of such attendance shall be agreed by the Engineer.
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 - (c) Settlement monitoring for construction of embankment and the requirements for embankment filling according to monitoring results as stipulated in the PS Clauses;

- (d) Temporary works for excavation to form the embankment of the main drainage channels adjacent to existing structures and watercourses;
- (e) Requirements for water diversion and implementation of interim flood protection measures; and
- (f) Maintenance of existing flows of all rivers, drainage systems, nullahs, watercourses and village sewerage.

SECTIONS OF WORKS

Sections of Works

1.57

The Works shall be divided into the following Sections:

SECTION 1



- (1) Completion of Section 1 of the Works means completion of the Works within Portions D2, D3 and D4 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.

SECTION 3



- (2) Completion of Section 2 of the Works means completion of the Works within Portions D6, D7 and D8 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.

- (3) Completion of Section 3 of the Works means completion of the main drainage improvement works including the drainage channels, box culverts, retaining walls, gabion walls and embankments within Portions D1 and D5 of the Site, excluding the landscaping works.

- (4) Completion of Section 4 of the Works means completion of the remaining Works within Portions D1 and D5 of the Site, including the landscape softworks, landscape hardworks but excluding establishment works.

- (5) Completion of Section 5 of the Works means completion of the Works within Portion S1 of the Site.

- (6) Completion of Section 6 of the Works means completion of the Works within Portion S2A and Portion S2B of the Site.

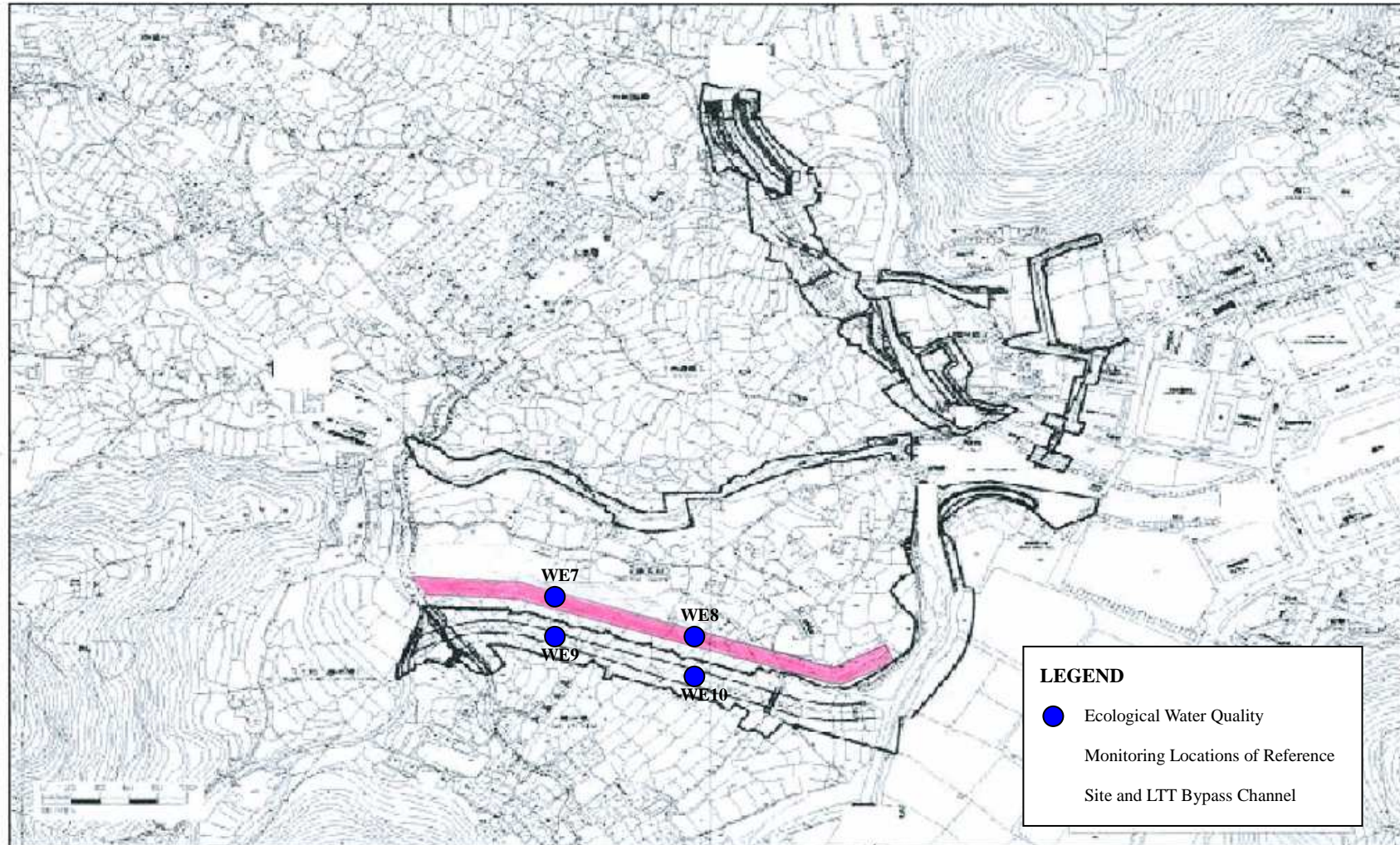
- (7) Completion of Section 7 of the Works means completion of the Works within Portions S3A and Portion S3B of the Site.

- (8) Completion of Section 8 of the Works (Section subject to Excision) means completion of the Works within Portion S4 of the Site.

- (9) Completion of Section 9 of the Works means completion of the preservation and protection of existing trees, pursuant to GS/PS Section 26.

Appendix D

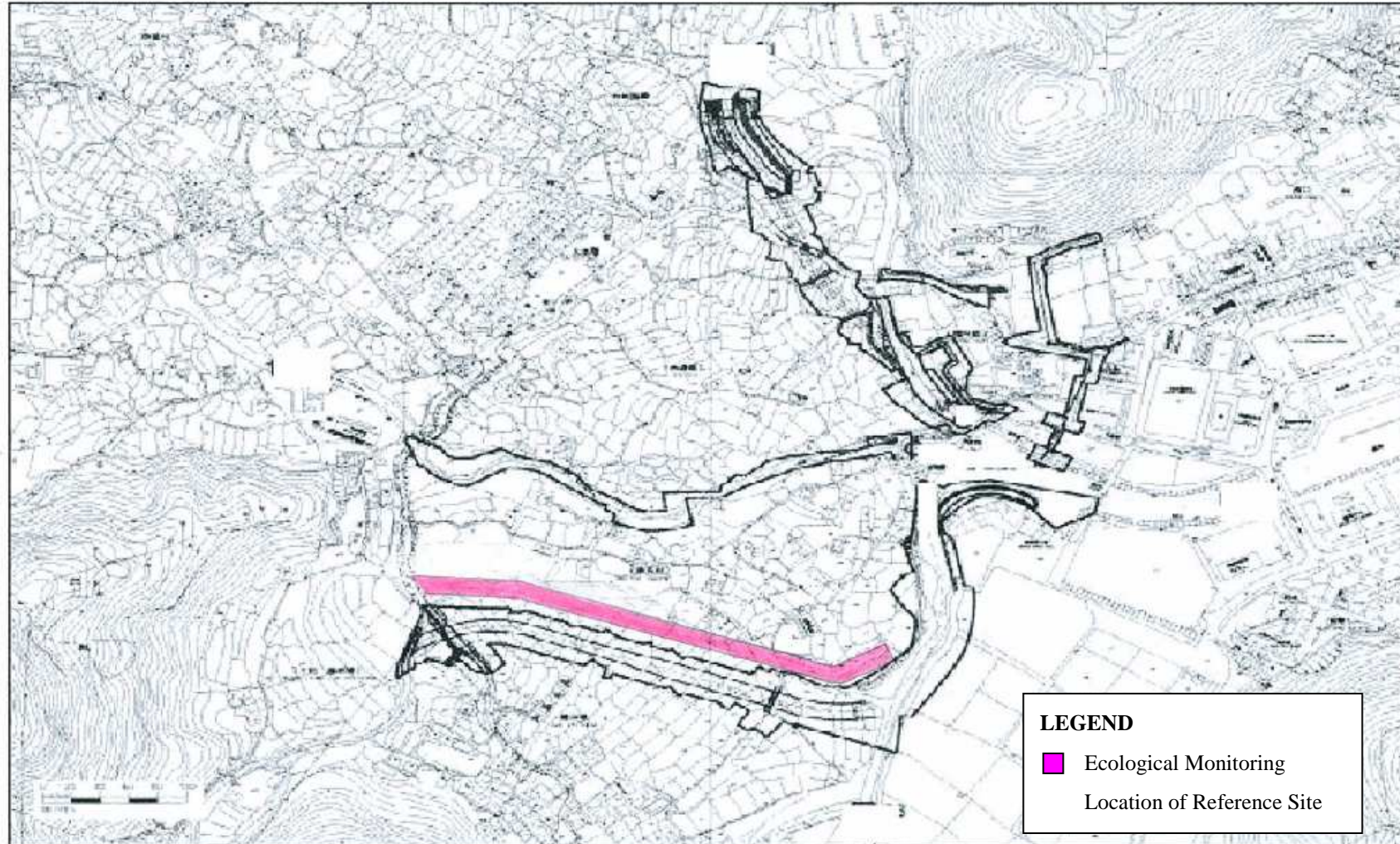
Proposed Ecological Water Quality Monitoring Locations for
Reference Site and LTT Bypass Channel



Appendix E

Proposed Ecological Monitoring Location for

Reference Site






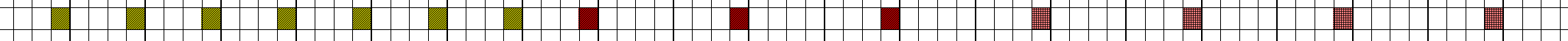


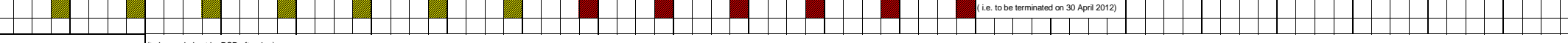
Appendix F

Proposed Schedule for

EM&A Programme (Post-construction Phase I and Phase II)

Contract No.: DC/2006/11
 Contract Name.: Drainage Improvement Works In Southern Lantau and Construction of Mui Wo Village Sewerage Phase I
Proposal of EM&A Programme for Phase II Post-Construction Monitoring (Data dated 7 October 2011)

Legend:
 Original Monitoring Works
 Phase I - Monitoring Works
 Phase II - Monitoring Works
 DSD's subsequently Monitoring Works (under Permit Holder)

| Item | (Water-Based) | | | | | | | | | | | | (Ecological and Land Based) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----|----|--------|----|----|--------|----|----|--------|----|----|-----------------------------|----|----|--------|----|----|--------|----|----|---------|----|----|---------|----|----|---------|----|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|--------------|----|--------------|----|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | Year 2011 | | | | | | | | | | | | Year 2012-Year 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month : | 3/2011 | | | 4/2011 | | | 5/2011 | | | 6/2011 | | | 7/2011 | | | 8/2011 | | | 9/2011 | | | 10/2011 | | | 11/2011 | | | 12/2011 | | | 1/2012-2015 | | 2/2012-2015 | | 3/2012-2015 | | 4/2012-2015 | | 5/2012-2015 | | 6/2012-2015 | | 7/2012-2015 | | 8/2012-2015 | | 9/2012-2015 | | 10/2012-2015 | | 11/2012-2015 | | 12/2012-2015 | | | | | | | | | | | | | | | | | | | | | | | | |
| Week No.: | W1 | W2 | W3 | W4 | W5 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 |
| (1) Phase I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) WQM Water Quality Monitoring (water-based) |  (i.e. has been carried out continuously for 4 weeks and completed) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (2) Phase II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * (a) Vegetation Control (EM&A Manual section 6.2.15) |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ** (b) Ecological Water Quality Monitoring (water-based) (EM&A Manual Section 6.2.29 & 6.2.31) |  (i.e. to be started on 01 June 2011) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *** (c) Ecological Monitoring (EM&A Manual Section 6.2.29 & 6.2.31) |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) Noise Monitoring |  (i.e. to be terminated on 31 October 2011) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (e) ET Weekly Site Environmental Audit |  (i.e. to be terminated on 31 October 2011) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (f) ET Monthly Site Environmental Audit |  (i.e. to be terminated on 30 April 2012) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (g) Final Report (after 4 yrs) (EM&A Section 6.2.30 & 6.2.32) | (to be carried out by DSD after 4yr.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes :-

- 1) According to the Contract's Maintenance Period, the EM&A monitoring works should be carried out up to 26 April 2012. Further and the subsequent EM&A monitoring works shall be under the Permit Holder, DSD.
 - 2) The IEC Monthly Inspection shall be taken according to DSD's agreement to IEC.
 - 3) Based on the Monthly EM&A Inspection on 25 August 2011 among representative of DSD, IEC, ET and Yick Hing, it was noted that no mechanical equipments on site. All the equipments such as backhoes, generators & air-compressor etc have been removed off site.
 - 4) During the maintenance period, establishment of landscaping works will be taken.
- * Vegetation control should be under permit holder, DSD and conducted on an annual basis.
- ** Monitoring Parameters for PNH and LTT river including water flow, dissolved oxygen, pH, conductivity, salinity, BOD, suspended sediments, ammonia, nitrate and phosphate concentrations
- *** Monitoring Parameters for LTT Bypass Channel including water flow, water depth, dissolved oxygen, pH, conductivity, salinity, BOD, suspended sediment, ammonia, nitrate and phosphate concentrations.
- **** Monitoring Parameters for PNH and LTT river including avifauna species and densities, aquatic macroinvertebrate community species composition and abundance, fish community species composition and abundance, adult odonate community species composition and abundance, aquatic, emergent and riparian vegetation community species composition and abundance.
- ***** Monitoring Parameter for LTT Bypass Channel including avifauna species and densities, aquatic macroinvertebrate community species composition and abundance, fish community species composition and abundance, herpetofauna community species composition and abundance, adult odonate community species composition and abundance, aquatic, emergent and riparian vegetation community species composition and abundance.