

Agreement No. SP 05/2012 Environmental Audit for Sewerage Works at Pik Shui Sun Tsuen

Monthly Environmental Audit Report No. 17 – April 2015 Ref: 322036/ENL/02/17/A

> May 2015 Drainage Services Department





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May 2015

Drainage Services Department

44/F, Revenue Tower 5 Gloucester Road Wan Chai Hong Kong

Agreement No. SP 05/2012 Environmental Audit for Sewerage Works at Pik Shui Sun Tsuen Environmental Monthly Audit Report (April 2015)



Pursuant to Condition 2.2 of Environmental Permit No. EP-435/ 2011/A, this Monthly Environmental Audit Report has been reviewed and

certified by the Independent Checker (IC)

Certified by:

Terenče Kong () Independent Checker Mott MacDonald Hong Kong Limited

Date

11 May 2015





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### Executive Summary

On 3 May 2013, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Drainage Services Department (DSD) under Agreement No. SP 05/2012 to undertake the Independent Checker (IC) services for the Sewerage Works at Pik Shui Sun Tsuen (The Project).

The Environmental Permit (EP) No. EP- 435/2011 for the "Sewerage Works at Pik Shui Sun Tsuen" was granted by the Environmental Protection Department (EPD) on 20 December 2011. The construction works was carried out Welcome Construction Co Ltd. (the Contractor), commenced on 26 August 2013.

In accordance with Section 5.1 and 5.3 of the Brief for the Project and Condition 2.2 of the EP, a Monthly Environmental Audit Report shall be prepared and submitted at monthly intervals to confirm in writing the full implementation of the mitigation measures recommended in the Project Profile (PP) (Register No. PP-454/2011) during and upon completion of the construction works.

When construction of the sewerage works at Pik Shui Sun Tsuen commenced, objections from the local residents were encountered. Therefore, the sewerage works were temporarily suspended. DSD arranged meetings with the local residents and tried to resolve the objections. However, there were still majority amongst the local residents showing their objections to the proposed works in a meeting held on 18 January 2014. In March 2014, DSD and the client office SIG of EPD decided to curtail the proposed sewerage works at Pik Shui Sun Tsuen from the construction contract.

Regarding the sewerage work on University Road, some sewer alignments were revised subject to actual condition. Therefore, DSD submitted the application for variation of environmental permit for the sewerage works at Pik Shui Sun Tsuen to EPD on 16 July 2014 and the amended Environmental Permit (No. EP-435/2011/A) was issued by EPD to DSD on 29 July 2014.

This is the 17<sup>th</sup> Monthly Environmental Audit Report covering the period from 1 April 2015 and 30 April 2015 (the reporting month).



## 1. Environmental Status during the reporting month

#### **1.1 Construction Programme**

Site preparation works was conducted in this reporting month. No construction work was conducted during this reporting month.

The construction works programme of the Project is provided in <u>Appendix A.</u> A layout plan of the Project is provided in <u>Figure 1.1.</u>

#### **1.2** Key Issues for the reporting month

No construction work was conducted during this reporting month.

#### **1.3 Project Organisation**

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in <u>Appendix B</u>.

#### **1.4 Environmental Mitigation Measures - Implementation Status**

No construction work was conducted during this reporting month. Therefore, no environmental site audit was conducted during this reporting month. The checklist of implementation status of the environmental mitigation measures is provided in <u>Appendix C.</u>



## 2. Environmental Site Inspection

#### 2.1 Site Inspection

No construction work was conducted during this reporting month. Therefore, no environmental site audit was conducted during this reporting month.

#### 2.2 Advice on the Solid and Liquid Waste Management Status

The Contractor has been applied for a bill account for disposal. No waste was disposed of in this reporting month.

The waste flow table is present in Appendix D.

#### 2.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period is summarised in **Table 2-1**.

Statutory Reference	Description	Permit /Reference No.	Status
EIAO	Environmental Permit	EP- 435/2011	Valid
APCO	Notification of Construction Work under APCO	355015	Valid
WPCO	Discharge License	WT00016437-2013	Valid
	Discharge License	WT00016957-2013	Valid
WDO	Bill Account for disposal	7016760	Valid

Table 2-1: Status of Environmental Submissions, Licenses and Permits

Legend: EIAO – Environmental Impact Assessment Ordinance APCO – Air Pollution Control Ordinance WPCO – Water Pollution Control Ordinance WDO – Waste Disposal Ordinance



## 3. Report on Complaints, Notifications of Summons and Successful Prosecutions

#### 3.1 Record on Environmental Complaints Received

No environmental complaint was received this month. The cumulative statistics on complaints were provided in <u>Appendix E.</u>

#### 3.2 Record on Notifications of Summons and Successful Prosecution

No notifications of summons or successful prosecution were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in <u>Appendix E.</u>

## **3.3 Review of Reasons for and Implications of Non-compliance, Complaints, Summons and Prosecutions**

Not applicable.

#### 3.4 Follow-up Actions Taken

Not applicable.



## 4. Future Key Issues

#### 4.1 Major Site Works for the Coming Month(s)

The major site works scheduled to be commissioned in the coming month include:

Site preparation works

#### 4.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

- Generation of dust from construction and demolition works;
- Noise impact from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste; and
- Management of chemicals and avoidance of oil spillage on-site.



## 5. Conclusion and Recommendation

#### 5.1 Conclusion

No construction activity was conducted during the reporting month.

#### 5.2 **Recommendations**

With consideration on the construction activities in the next reporting month, recommendations on mitigation measures for impacts on air quality, noise, water quality and waste were provided.

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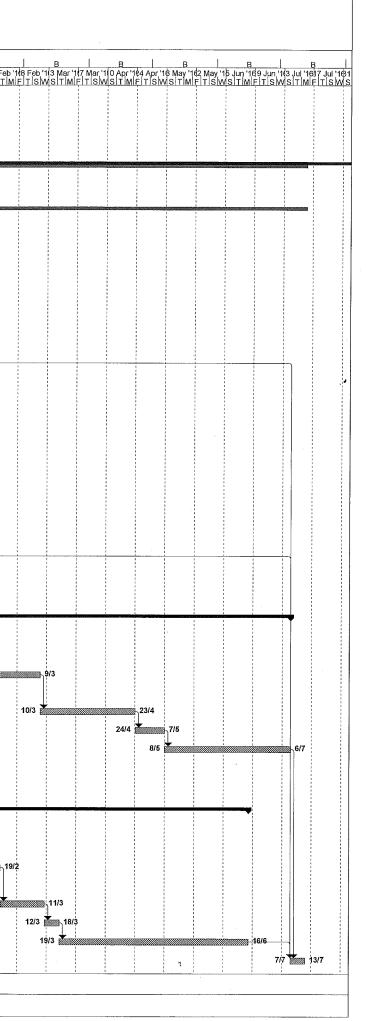


## Appendix A. Tentative Construction Programme

Welcome Constuction Co Ltd. Contract No. DC/2012/06 Sewerage at Clear Water Bay Road, Pik Shui Sun Tsuen and West of Sai Kung Town Detailed Program for Sewerage Works at University Road, Clear Water Bay Road, Hiram's Highway and Chuk Kok Road

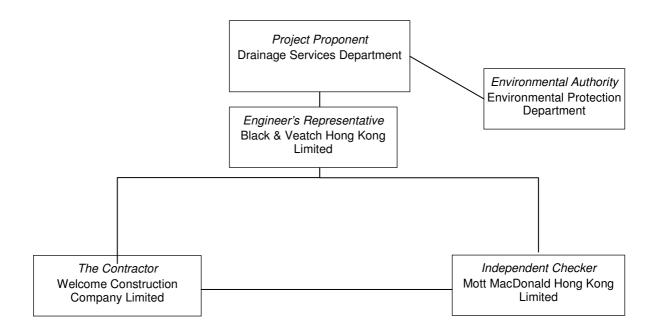
ID	Task Name	Duration	Start	Finish
	Programme for University Road from E. MH No. PSST149 to Ex. MH S5	1 day?	Wed 11/2/09	Wed 11/2/
-				n, maa amaa ahaa ahaa ahaa ahaa ahaa
() ()	Sewerage at University Road, Clear Water Bay Road,Hiram's Highway Slip Road & Chuk Kok Road	505 days	Mon 1/6/15	Mon 17/10/1
	Sewerage at University Road, Clear Water Bay Road,Hiram's Highway Slip Road & Chuk Kok Road (Phase 1)	0 days	Mon 1/6/15	Mon 1/6/*
	MH No.PSST154 to Ex. MH S5	232 days?	Mon 1/6/15	Mon 18/1/1
	Mobilization & set up of Jacking Pit at MH No. PSST154	60 days?	Mon 1/6/15	Thu 30/7/1
-	Mobilization & set up of Receiving Pit at Ex. MH S5	30 days?	Tue 16/6/15	Wed 15/7/1
_	Install segmental Sleeve Pipeline from MH No PSST154 to Ex MH S5 (54m)	70 days	Fri 31/7/15	Thu 8/10/1
	Install sewer pipeline(54m)	21 days	Fri 9/10/15	Thu 29/10/1
	Infill grout between sleeve pipe and VC pipe	7 days	Fri 30/10/15	Thu 5/11/1
	Reinstate receiving pit at EX MH S5	45 days	Fri 6/11/15	Sun 20/12/1
	Sewerage at University Road, Clear Water Bay Road , Hiram's Highway Slip Road & Chuk Kok Road  (Phase 2)	0 days	Mon 1/6/15	Mon 1/6/1
-	Ex. MH No.PSST149 to MH No. PSST150	248 days	Mon 1/6/15	Wed 3/2/1
†	Mobilization & set up of Jacking Pit at Ex. MH No. PSST149	60 days	Thu 16/7/15	Sun 13/9/1
	Mobilization & set up of Receiving Pit at MH No. 150	60 days	Fri 31/7/15	Mon 28/9/1
	Install segmental Sleeve Pipeline from Ex. MH No PSST149 to MH No. PSST150 (54m)	70 days	Mon 14/9/15	Sun 22/11/1
	Install sewer pipeline(54m)	21 days	Mon 23/11/15	Sun 13/12/1
	Infill grout between sleeve pipe and VC pipe	7 days	Mon 14/12/15	Sun 20/12/1
1	Reinstate receiving pit at EX MH No.PSST 149	45 days	Mon 21/12/15	Wed 3/2/1
	Sewerage at University Road, Clear Water Bay Road , Hiram's Highway Slip Road & Chuk Kok Road (Phase 3)	0 days	Mon 1/6/15	Mon 1/6/1
	MH No.PSST154 to MH No. PSST151	244 days	Fri 6/11/15	Wed 6/7/1
	Mobilization & set up of Jacking Pit at MH No. PSST154	21 days	Fri 6/11/15	Thu 26/11/1
╎	Mobilization & set up of Receiving Pit at MH No. 151	60 days	Fri 27/11/15	Mon 25/1/1
	Install segmental Sleeve Pipeline from Ex. MH No PSST154 to MH No. PSST151 (81m)	110 days	Sat 21/11/15	Wed 9/3/1
	Install sewer pipeline(81m)	45 days	Thu 10/3/16	Sat 23/4/1
	Infill grout between sleeve pipe and VC pipe	14 days	Sun 24/4/16	Sat 7/5/1
	Construct MH and reinstate receiving pit at MH No. PSST154	60 days	Sun 8/5/16	Wed 6/7/1
	Sewerage at University Road, Clear Water Bay Road , Hiram's Highway Slip Road & Chuk Kok Road (Phase 4)	0 days	Fri 4/12/15	Fri 4/12/1
	MH No.PSST150 to MH No. PSST151	179 days	Mon 21/12/15	Thu 16/6/1
t	Mobilization & set up of Jacking Pit at MH No. PSST150	21 days	Mon 21/12/15	Sun 10/1/1
1-	Mobilization & set up of Receiving Pit at MH No. PSST151	7 days	Mon 11/1/16	Sun 17/1/1
	Install segmental Sleeve Pipeline from Ex. MH No PSST150 to MH No. PSST151 (29m)	40 days	Mon 11/1/16	Fri 19/2/1
+	Install sewer pipeline(29m)	21 days	Sat 20/2/16	Fri 11/3/1
	Infill grout between sleeve pipe and VC pipe	7 days	Sat 12/3/16	Fri 18/3/1
	Construct MH and reinstate Pit at MH No. PSST150 & 151	90 days	Sat 19/3/16	Thu 16/6/1
-	Site Clearance and Demobilization offsite	7 days	Thu 7/7/16	Wed 13/7/1

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## Appendix B. Project Organization



Company / Department	Position	Name	Telephone / Mobile
Drainage Services Department	Project Proponent	Mr Chow Sui Ping	2594 7453
Black & Veatch Hong Kong Limited	Engineer's Representative	Mr Eugene Chan	6075 8606
Mott MacDonald Hong Kong Ltd.	Independent Checker	Mr Terence Kong	2828 5919
Welcome Construction Company Limited	Project Director	Mr Sunny Ngan	6109 5569
Welcome Construction Company Limited	Site Agent	Mr William Lam	5195 1758
Welcome Construction Company Limited	Assistant Enviromental Officer	Mr Alex Wong	6336 8997

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## Appendix C. Environmental Mitigation Measures- Implementation Status

Table C1:	Construction Noise – Recommended Mitigation Measures	
* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.6	<ul> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works.</li> </ul>	N/A
	<ul> <li>Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> </ul>	N/A
	<ul> <li>Plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from nearby NSRs.</li> </ul>	N/A
	<ul> <li>Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction works.</li> </ul>	N/A
	• Mobile plant should be sited as far away from NSRs as possible.	N/A
*5.2.2, 5.2.6	Use of temporary noise barrier, mobile barrier	N/A
*5.2.6	<ul> <li>Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities</li> </ul>	N/A
*5.2.6	<ul> <li>Noisy construction activities such as road breaking, should be scheduled to less sensitive hours during the day</li> </ul>	N/A
*5.2.6	• Liaise with the affected noise sensitive receivers on the anticipated construction activities, possible impacts, expected duration and communication channel with the project office.	N/A
*5.2.1,*Table 6.1	Adoption of quiet powered mechanical equipment (QPME) during construction	N/A
*5.2.4, ^2.3	<ul> <li>For the sewer works located less than 15 m away from Cheng Chek Chee Secondary School, construction works can only be conducted after school hours or during school breaks. For the sewer works located between 15 m – 30 m away from the School, the contractor should liaise with the school and/or the Examination Authority to ascertain the exact dates and times of all examination periods and to avoid noisy construction activities during these periods.</li> </ul>	N/A

Table C2: Air Quality – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.8, ^1.2	<ul> <li>Comply with the control measures in the Air Pollution Control (Construction dust) Ordinance.</li> </ul>	N/A
*5.2.8	<ul> <li>Excavated dusty materials should be covered by impervious sheeting or sprayed with water to keep the entire surface wet.</li> </ul>	N/A
*5.2.8	<ul> <li>Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> </ul>	N/A

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Table C3:	Water Quality – Recommended Mitigation Measures	
* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.10, * Table 6.1	<ul> <li>Follow the guidelines in ProPECC PN 1/94 "Construction Site Drainage".</li> </ul>	N/A
	<ul> <li>Silt removal facilities should be provided according to the guidelines stipulated in EPD's ProPECC PN 1/94.</li> </ul>	N/A
	Cover open stockpiles of construction materials with tarpaulin or similar fabric during rainstorms.	N/A

Table C4:	Waste Management – Recommended Mitigation Measures							
* PP / ^ EP ref:	Recommended measures	Implementation Status						
*5.2.12, *Table 6.1	<ul> <li>Sort all C&amp;D materials and waste into different categories for reuse on site, recycling and disposal at designated public fill reception facilities or landfills.</li> </ul>	N/A						
	<ul> <li>C&amp;D material and excavated materials should be reused on-site as fill material as far as possible.</li> </ul>	N/A						
	<ul> <li>Disposal of C&amp;D materials should be managed through the trip ticket system for disposal of C&amp;D materials.</li> </ul>	N/A						
*5.2.12	<ul> <li>All Chemical waste should be handled, stored and disposed of in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	N/A						

Table C5:	Landscape and Visual Impact – Recommended Mitigation Measures	
* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.14, *Table 6.2	<ul> <li>Retain and protect existing trees near works site.</li> </ul>	N/A
	<ul> <li>Erect site hoarding compatible with the surrounding environment for the pumping station works area</li> </ul>	N/A
	<ul> <li>Maintain site cleanliness and tidiness in accordance with the requirements stipulated in DEVB TCW No. 8/2010.</li> </ul>	N/A
	<ul> <li>Properly manage construction waste in the works area.</li> </ul>	N/A
	Minimize the number and size of temporary works area.	N/A
	<ul> <li>Promptly reinstate each section of the trench upon completion of the sewer works.</li> </ul>	N/A
	<ul> <li>Control of night-time security lightning to minimize night-time glare to nearby village.</li> </ul>	N/A



Table C6:	Others	
* PP / ^ EP ref:	Recommended measures	Implementation Status
^1.5	• A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations. If the Permit Holder surrenders a part or whole of the Permit, the notice he send to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).	N/A
n/a	The required licenses should be obtained by the Contractor (including CNP (if any), WPCO license, etc.)	$\checkmark$

#### Legend:

$\checkmark$	Implemented
×	Not implemented
Р	Partially implemented
N/A	Not applicable
N/O	Not observed



## Appendix D- Waste Flow Table

#### Monthly Summary Waste Flow Table for April 2015

		Actual Quanti	ties of Inert C&D	Materials Gene	rated Monthly	Actual Quantities of C&D Wastes Generated Monthly					
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Yr 2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Yr 2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Yr 2015											
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May											
Jun											
Sub-total											
July											
Aug											
Sep											
Oct											
Nov											
Dec											
total											



# Appendix E- Cumulative statistics on complaints, notifications of summons and successful prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 26 August 2013) to the end of the reporting month and are summarized in the **Table E1** below.

Table E1:	Statistics for complaints, notifications of summons and successful prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting month	0	0	0
From 26 August 2013 to end of the reporting month	0	0	0



