

Environmental Monitoring and Audit for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation Agreement No. CE 4/2009(EP)

39th Monthly Progress Report for Contaminated Mud Pits at Sha Chau – September 2012

Revision 0

6 December 2012

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Client:		Project No:			
Civil Engineering and Development Department (CEDD)		0103262			
Summary:		Date: 6 December 2012			
This document presents progress of monitoring works on contaminated mud pits at Sha Chau in September 2012 under Agreement No. CE 4/2009 (EP).		Approved by:  Dr Robin Kennish Director			
0	39 th Monthly Progress Report for CMP	RC	JT	RK	6/12/12
Revision	Description	By	Checked	Approved	Date
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Agreement No. CE 4/2009 (EP)
Environmental Monitoring and Audit
for Contaminated Mud Pit at Sha Chau (2009-2013) - Investigation

39th MONTHLY PROGRESS REPORT
FOR CONTAMINATED MUD PITS AT SHA CHAU
September 2012

1.1 BACKGROUND

1.1.1 Since 1992, the East of Sha Chau area has been the site of a series of dredged contaminated mud pits (CMPs) designed to provide confined marine disposal capacity for contaminated mud arising from the HKSAR's dredging and reclamation projects. In September 2012, the following works were being undertaken at the CMPs:

- Capping was being undertaken at CMP IVc;
- Disposal of contaminated mud was taking place at CMP Va; and
- The dredging of CMP Vd was in progress.

1.1.2 The Environmental Monitoring and Audit (EM&A) programme for the CMPs at the East of Sha Chau area (ESC) presently covers the above operations.

1.2 REPORTING PERIOD

This *Monthly Progress Report* covers the monitoring period of September 2012.

1.3 DETAILS OF SAMPLING AND LABORATORY TESTING ACTIVITIES

1.3.1 The following monitoring activities have been undertaken for CMP V in September 2012:

- *Impact Water Quality Monitoring during Dredging Operations* was conducted for CMP Vd on 5 September 2012;
- *Pit Specific Sediment Chemistry* was conducted for CMP Va on 6 September 2012; and
- *Water Column Profiling* was conducted for CMP Va on 24 September 2012.

1.3.2 A summary of field activities are presented in Annex A.

1.4 **DETAILS OF OUTSTANDING SAMPLING AND / OR ANALYSIS**

1.4.1 No outstanding sampling and laboratory analysis remained from September 2012.

1.5 **BRIEF DISCUSSION OF THE MONITORING RESULTS FOR CMP V**

1.5.1 *Table 1.1* summarises the monitoring results that are presented in the current monthly report. All monitoring data collected for CMP V in September 2012 will be presented in this monthly report.

Table 1.1 *Monitoring activities in September 2012*

Monitoring activities	Date of Monitoring	Monitoring results presented in this report?
Impact Water Quality Monitoring during Dredging Operations of CMP Vd	5 September 2012	Yes
Pit Specific Sediment Chemistry Monitoring for CMP Va	6 September 2012	Yes
Water Column Profiling for CMP Va	24 September 2012	Yes

1.5.2 Brief discussion of the monitoring results is presented in this section. Detailed discussion will be presented in the corresponding *Quarterly Report*.

1.5.3 ***Pit Specific Sediment Chemistry of CMP Va – September 2012***

1.5.4 Monitoring locations for Pit Specific Sediment Chemistry for CMP Va are shown in *Figure 1.1*. A total of six monitoring stations were being sampled. Concentrations of metals at all stations in September 2012 were below the Lower Chemistry Exceedance Level (LCEL), with the exception of Arsenic (*Figures 1 and 2 of Annex B*). Concentrations of Arsenic exceeded the LCEL at Active Pit (NPDA), Pit-Edge (NEDA, NEDB) and Near-Pit (NNDA) stations in September 2012. It is important to note that relatively high natural levels of Arsenic are present in Hong Kong's marine sediments. Therefore, the slight exceedances of the LCEL for Arsenic are unlikely to be caused by the disposal operations at CMP Va but rather as a result of naturally occurring deposits.

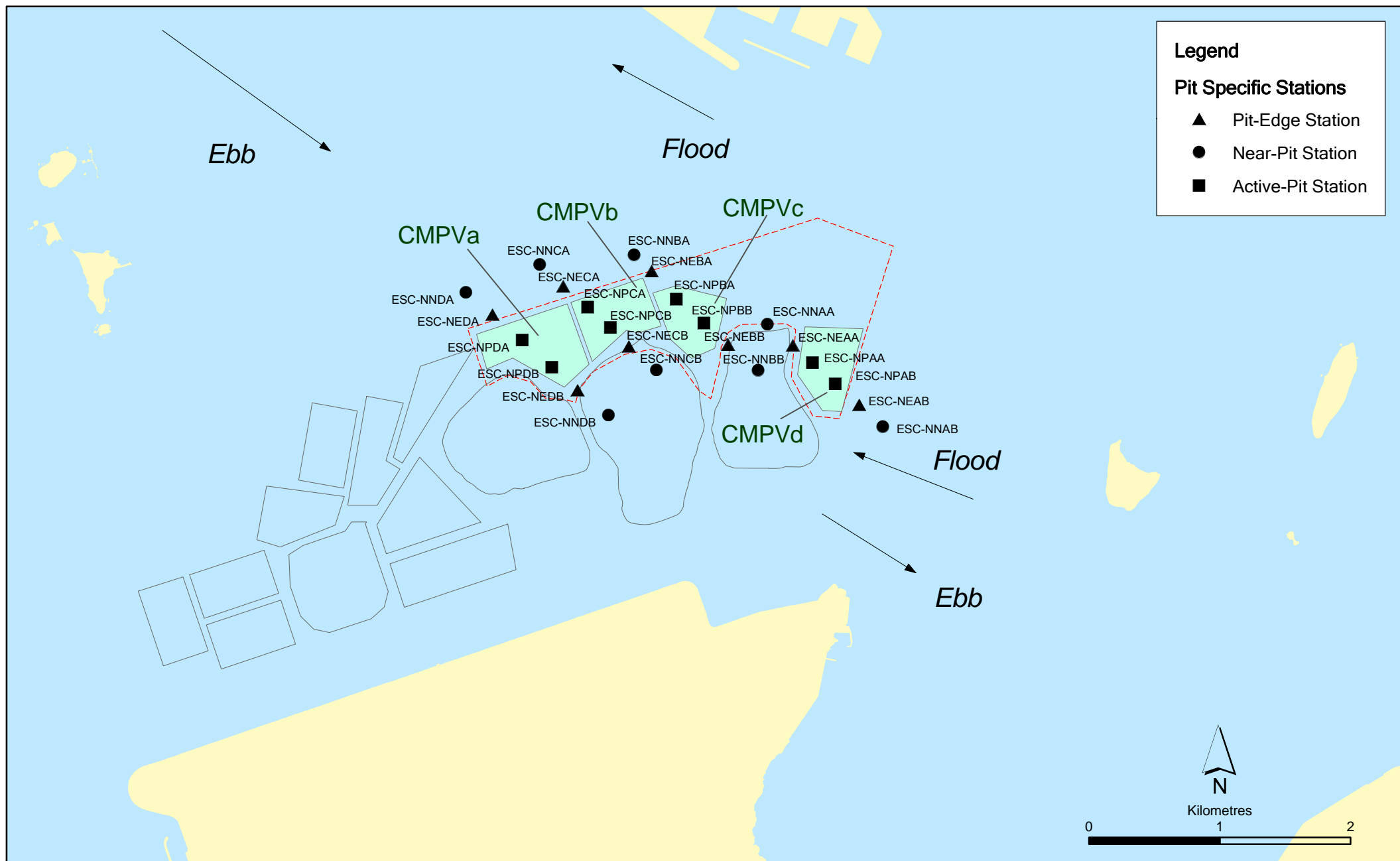


Figure 1.1

Pit Specific Sediment Quality Monitoring Stations for CMPV

File: CMPV\0103262_SQMS_pit specific.mxd
Date: 29/10/2009

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- 1.5.5 For organic contaminants, Total Polychlorinated Biphenyls (PCBs), Total DDT and 4,4'-DDE were below the limit of reporting at all stations in September 2012. Total Organic Carbon (TOC) concentration was similar amongst all stations (*Figure 3 of Annex B*). TBT concentration was the highest at Active Pit station NPDB in September 2012 when compared to other stations (*Figure 4 of Annex B*). Low and High Molecular Weight Polycyclic Aromatics Hydrocarbons (Low and High M.W. PAHs) were higher than the limit of reporting at the Active Pit station NPDB and Near-Pit station NNDA for September 2012.
- 1.5.6 It should be noted that the Action Pit stations are located within CMP Va which were receiving contaminated mud during the reporting month. Therefore, the higher concentrations of contaminants recorded at the Action Pit stations alone are not considered as indicating any dispersal of contaminated mud from CMP Va and thus not considered as indicating any unacceptable environmental impacts from the mud disposal operations. Nevertheless, detailed analysis will be presented in the *Quarterly Report* to reveal any trend of increasing sediment contaminant concentrations towards CMP Va.
- 1.5.7 Overall, there is no evidence indicating any unacceptable environmental impacts to sediment quality as a result of the contaminated mud disposal operations at CMP Va during this monthly period.
- 1.5.8 ***Impact Water Quality Monitoring during Dredging Operations of CMP Vd – September 2012***
- 1.5.9 *Impact Water Quality Monitoring during Dredging Operations of CMP Vd* was conducted on 5 September 2012. On the survey day, sampling was conducted during both mid-ebb and mid-flood tides at two Reference (Upstream) stations upstream and five Impact (Downstream) stations downstream of the dredging operations at CMP Vd (*Figure 1.2*). Monitoring was also conducted at the Ma Wan station. At each station, *in-situ* measurements of water quality parameters as well as water samples were taken from three depths in the water column (ie surface: 1 m below sea surface, mid-depth and bottom: 1 m above the seabed).
- 1.5.10 Monitoring results are presented in *Table C1 of Annex C*. Levels of Dissolved Oxygen (DO), Turbidity and Total Suspended Solids (TSS) generally complied with the Action and Limit Levels set in the Baseline Monitoring Report ⁽¹⁾.

(1) ERM (2009) Baseline Monitoring Report. Environmental Monitoring and Audit for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation. Agreement No. CE 4/2009(EP). Submitted to EPD in September 2009.

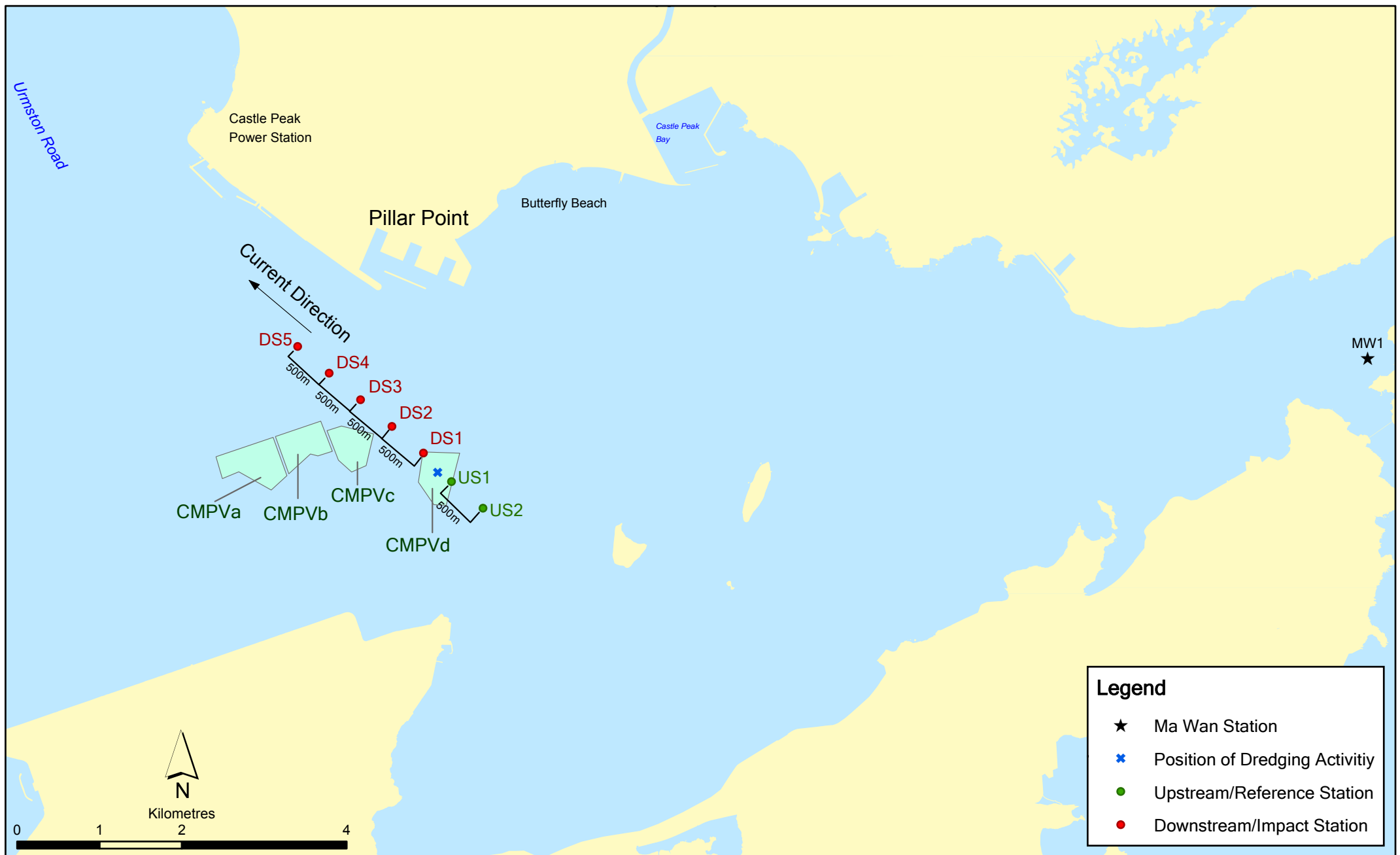


Figure 1.2

Indicative Dredging Impact Sampling Stations for CMPVd

Note: The locations of sampling stations will be determined on site based on current direction and position of dredging activities.

- 1.5.11 Levels of Turbidity and TSS exceeded the Limit and Action Levels in the downstream station DS3 during the mid-flood tide, respectively. Station DS3 is located even further away from the works area of CMP Vd than DS1 and DS2, and the compliance of Action and Limit Levels at other downstream stations (i.e. DS1, 2, 4 and 5) outside the works area would indicate that there is no evidence of any unacceptable adverse water quality impacts arising from the dredging operations of CMP Vd (please refer to *Figure 1.2*) for the indicative locations of the monitoring stations).
- 1.5.12 Overall, there appears to be no unacceptable water quality impacts causing by the dredging operations at CMP Vd and no additional measures are thus considered required except for those stated in the Environmental Permit (EP-312/2008).
- 1.5.13 ***Water Column Profiling for CMP Va – September 2012***
- In-situ Measurements*
- 1.5.14 Water Column Profiling was undertaken at a total of two sampling stations in September 2012. The water quality monitoring results have been assessed for compliance with the Water Quality Objectives (WQOs) set by EPD. This consists of a review of the Environmental Protection Department (EPD) routine water quality monitoring data for the wet season period (April to October) of 1999-2010 from stations in the Northwestern Water Control Zone, where CMPs are located. For Salinity, the average value obtained from the upstream station was used for the basis as the WQO. Graphical presentation of the monitoring results is provided in *Annex B*.
- 1.5.15 Analyses of results for September 2012 indicated that levels of Salinity, pH and Dissolved Oxygen (DO) all complied with the WQOs at both Upstream and Downstream stations (*Figures 5 – 7 of Annex B*). DO and Turbidity complied with the Action and Limit Levels set in the *EM&A Manual* ⁽¹⁾.
- Laboratory Measurements for Total Suspended Solids (TSS)*
- 1.5.16 Analyses of data obtained in September 2012 indicated that the TSS levels at both Upstream and Downstream stations exceeded the WQO (*Figure 8 of Annex B*). However, TSS levels measured in September 2012 complied with the Action and Limit Levels set in the *EM&A Manual*.
- 1.5.17 Overall, the results indicated that the mud disposal operation at CMP Va did not appear to cause any deterioration in water quality during this reporting period.

(1) ERM (2009). Draft Second Review of the EM&A Manual. Prepared for CEDD for EM&A for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation Agreement No. CE 4/2009 (EP).

1.6 *ACTIVITIES SCHEDULED FOR THE NEXT MONTH*

1.6.1 The following monitoring programmes will be conducted for CMP V in the next monthly period of October 2012:

- *Pit Specific Sediment Chemistry* for CMP Va;
- *Routine Water Quality Monitoring* for CMP Va;
- *Water Column Profiling* for CMP Va; and
- *Impact Water Quality Monitoring during Dredging Operations* for CMP Vd.

1.6.2 The sampling schedule is presented in *Annex A*.

1.7 *STUDY PROGRAMME*

A summary of the Study Programme is presented in *Annex D*.

Annex A

Sampling Schedule

Annex A1 - East of Sha Chau Environmental Monitoring and Audit Sampling Schedule for CMP IV (January 2012 - December 2013)

			2012												2013											
Tissue/ Whole Body Sampling			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Near-Pit Stations	INA		*																							
	INB		*																							
Reference North	TNA		*																							
	TNB		*																							
Reference South	TSA		*																							
	TSB		*																							
Demersal Trawling			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Near Pit Stations	INA 1-5		*	*																						
	INB 1-5		*	*																						
Reference North	TNA 1-5		*	*																						
	TNB 1-5		*	*																						
Reference South	TSA 1-5		*	*																						
	TSB 1-5		*	*																						
Capping			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<i>Ebb Tide</i>																										
Impact Station Downcurrent	IPE1		*					*		*				*		*				*		*				*
	IPE2		*					*		*				*		*				*		*				*
	IPE3		*					*		*				*		*				*		*				*
	IPE4		*					*		*				*		*				*		*				*
	PFC1		*					*		*				*		*				*		*				*
Intermediate Station Downcurrent	INE1		*					*		*				*		*				*		*				*
	INE2		*					*		*				*		*				*		*				*
	INE3		*					*		*				*		*				*		*				*
	INE4		*					*		*				*		*				*		*				*
	INE5		*					*		*				*		*				*		*				*
Reference Station Upcurrent	RFE1		*					*		*				*		*				*		*				*
	RFE2		*					*		*				*		*				*		*				*
	RFE3		*					*		*				*		*				*		*				*
	RFE4		*					*		*				*		*				*		*				*
	RFE5		*					*		*				*		*				*		*				*
<i>Flood Tide</i>																										
Impact Station Downcurrent	INF1		*					*		*				*		*				*		*				*
	PFC2		*					*		*				*		*				*		*				*
	INF3		*					*		*				*		*				*		*				*
Intermediate Station Downcurrent	IPF1		*					*		*				*		*				*		*				*
	IPF2		*					*		*				*		*				*		*				*
	IPF3		*					*		*				*		*				*		*				*
Reference Station Upcurrent	RFF1		*					*		*				*		*				*		*				*
	RFF2		*					*		*				*		*				*		*				*
	RFF3		*					*		*				*		*				*		*				*
Water Column Profiling			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Plume Stations	WCP1		*																							
	WCP2		*																							
Benthic Recolonisation Studies			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Capped Contaminated Mud Pits III																										
CPA	1 grab per station									*				*								*				*
CPB	1 grab per station									*				*								*				*
CPC	1 grab per station									*				*								*				*
Reference Stations																										
RBA	1 grab per station									*				*								*				*
RBB	1 grab per station									*				*								*				*
RBC	1 grab per station									*				*								*				*

* = Number of replicates depends on field catch or parameters

* Sampling completed
* Sampling to be completed

Annex A2 - East of Sha Chau Environmental Monitoring and Audit Sampling Schedule for CMP V (January 2012 - February 2014)

		2012												2013												2014		
Pit Specific Sediment Chemistry	Code	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	
Active-Pit																												
	ESC-NPDA		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
	ESC-NPDB		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
Pit-Edge																												
	ESC-NEDA		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
	ESC-NEDB		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
Near-Pit																												
	ESC-NNDA		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
	ESC-NNDB		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									

Cumulative Impact Sediment Chemistry		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Near-field Stations	ESC-RNA		*				*		*				*		*				*								
	ESC-RNB		*				*		*				*		*				*								
Mid-field Stations	ESC-RMA		*				*		*				*		*				*								
	ESC-RMB		*				*		*				*		*				*								
Capped Pit Stations	ESC-RCA		*				*		*				*		*				*								
	ESC-RCB		*				*		*				*		*				*								
Far-Field Stations	ESC-RFA		*				*		*				*		*				*								
	ESC-RFB		*				*		*				*		*				*								
Ma Wan Station	MW1		*				*		*				*		*				*								

Sediment Toxicity Tests		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Near-Field Stations	ESC-TDA		*						*						*												
	ESC-TDB		*						*						*												
Reference Stations	ESC-TRA		*						*						*												
	ESC-TRB		*						*						*												
Ma Wan Station	MW1		*						*						*												

Tissue/ Whole Body Sampling		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Impact Stations	ESC-INA								*						*												
	ESC-INB								*						*												
Reference	ESC-TNA								*						*												
	ESC-TNB								*						*												
	ESC-TSA								*						*												
	ESC-TSB								*						*												

Demersal Trawling		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Impact Stations	ESC-INA							*	*						*	*											
	ESC-INB							*	*						*	*											
Reference Stations	ESC-TNA							*	*						*	*											
	ESC-TNB							*	*						*	*											
	ESC-TSA							*	*						*	*											
	ESC-TSB							*	*						*	*											

Capping		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
<i>Ebb Tide</i>																											
Impact Station	ESC-IPE1																				*			*		*	
	ESC-IPE2																				*			*		*	
	ESC-IPE3																				*			*		*	
	ESC-IPE4																				*			*		*	
	ESC-IPE5																				*			*		*	
Intermediate Station	ESC-INE1																				*			*		*	
	ESC-INE2																				*			*		*	
	ESC-INE3																				*			*		*	
	ESC-INE4																				*			*		*	
	ESC-INE5																				*			*		*	
Reference Station	ESC-RFE1																				*			*		*	
	ESC-RFE2																				*			*		*	
	ESC-RFE3																				*			*		*	
	ESC-RFE4																				*			*		*	
	ESC-RFE5																				*			*		*	
Ma Wan Station	MW1																				*			*		*	
<i>Flood Tide</i>																											
Impact Station	ESC-IPF1																				*			*		*	
	ESC-IPF2																				*			*		*	
	ESC-IPF3																				*			*		*	
Intermediate Station	ESC-INF1																				*			*		*	
	ESC-INF2																				*			*		*	
	ESC-INF3																				*			*		*	
Reference Station	ESC-RFF1																				*			*		*	
	ESC-RFF2																				*			*		*	
	ESC-RFF3																				*			*		*	
Ma Wan Station	MW1																				*			*		*	

			2012												2013												2014	
Routine Water Quality Monitoring			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
<i>Ebb Tide</i>																												
Impact Station	ESC-IPE1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPE2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPE3		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPE4		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPE5		*		*	*		*	*			*	*		*	*		*	*									
Intermediate Station																												
	ESC-INE1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-INE2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-INE3		*		*	*		*	*			*	*		*	*		*	*									
	ESC-INE4		*		*	*		*	*			*	*		*	*		*	*									
Reference Station	ESC-INE5		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFE1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFE2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFE3		*		*	*		*	*			*	*		*	*		*	*									
Ma Wan Station	ESC-RFE4		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFE5		*		*	*		*	*			*	*		*	*		*	*									
	MW1		*		*	*		*	*			*	*		*	*		*	*									
<i>Flood Tide</i>																												
Impact Station																												
	ESC-IPF1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPF2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-IPF3		*		*	*		*	*			*	*		*	*		*	*									
Intermediate Station																												
	ESC-INF1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-INF2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-INF3		*		*	*		*	*			*	*		*	*		*	*									
Reference Station																												
	ESC-RFF1		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFF2		*		*	*		*	*			*	*		*	*		*	*									
	ESC-RFF3		*		*	*		*	*			*	*		*	*		*	*									
Ma Wan Station																												
	MW1		*		*	*		*	*			*	*		*	*		*	*									

Water Column Profiling			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Plume Stations	WCP1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	WCP2		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							

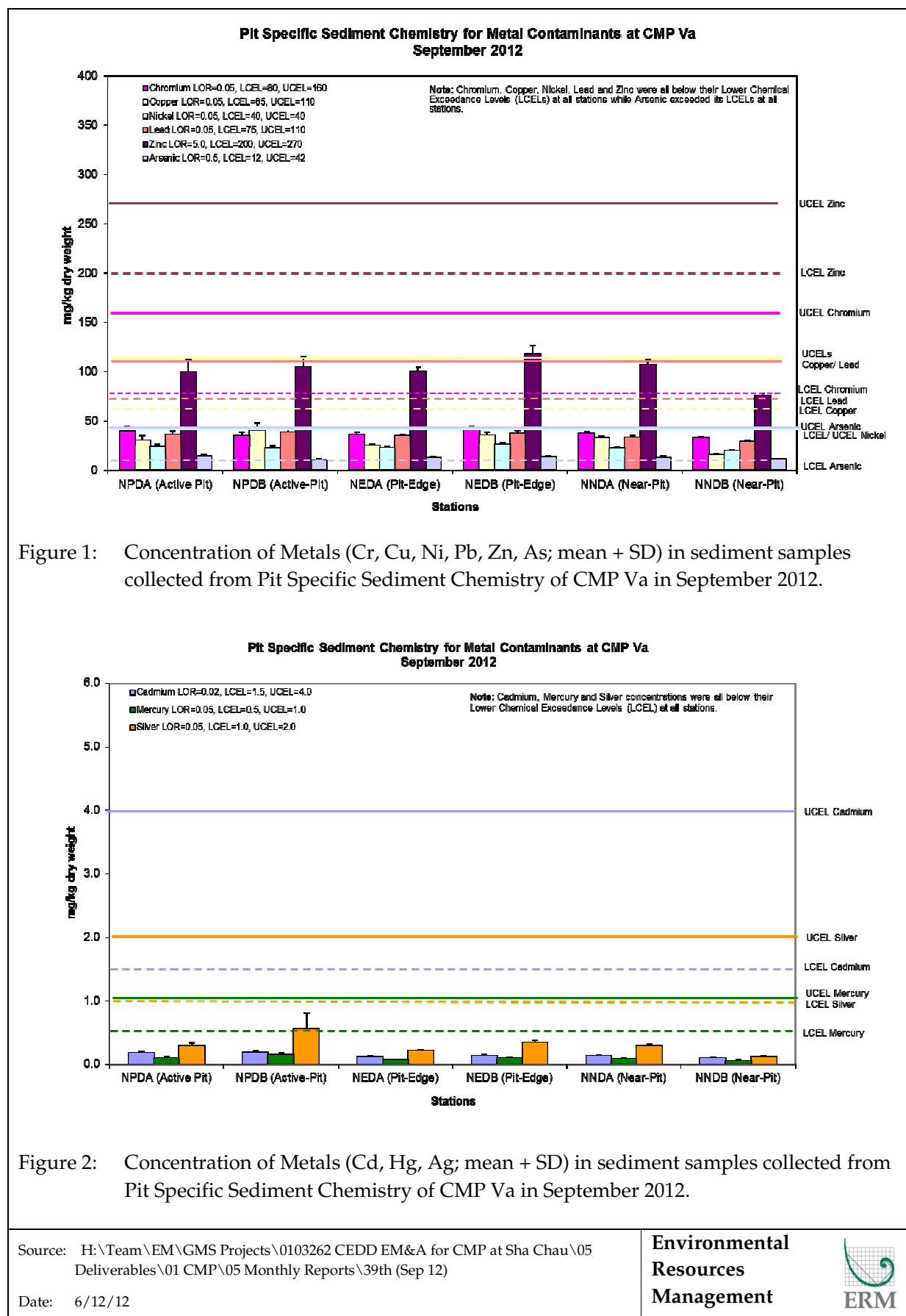
Benthic Recolonisation Studies			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Capped Contaminated Mud Pits IVa-c																												
Reference Stations	ESC-CPA								*					*								*				*		
	ESC-CPB								*					*								*				*		
	ESC-CPC								*					*								*				*		
														*								*				*		
	ESC-RBA								*					*								*				*		
	ESC-RBB								*					*								*				*		
	ESC-RBC								*					*								*				*		

Impact Monitoring for Dredging			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Upstream/Reference Stations																												
	US1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	US2		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
Downstream/Impact Stations																												
	DS1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	DS2		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	DS3		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	DS4		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	DS5		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
Ma Wan Station																												
	MW1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*							

Sampling completed
Sampling to be completed

Annex B

Monitoring Results



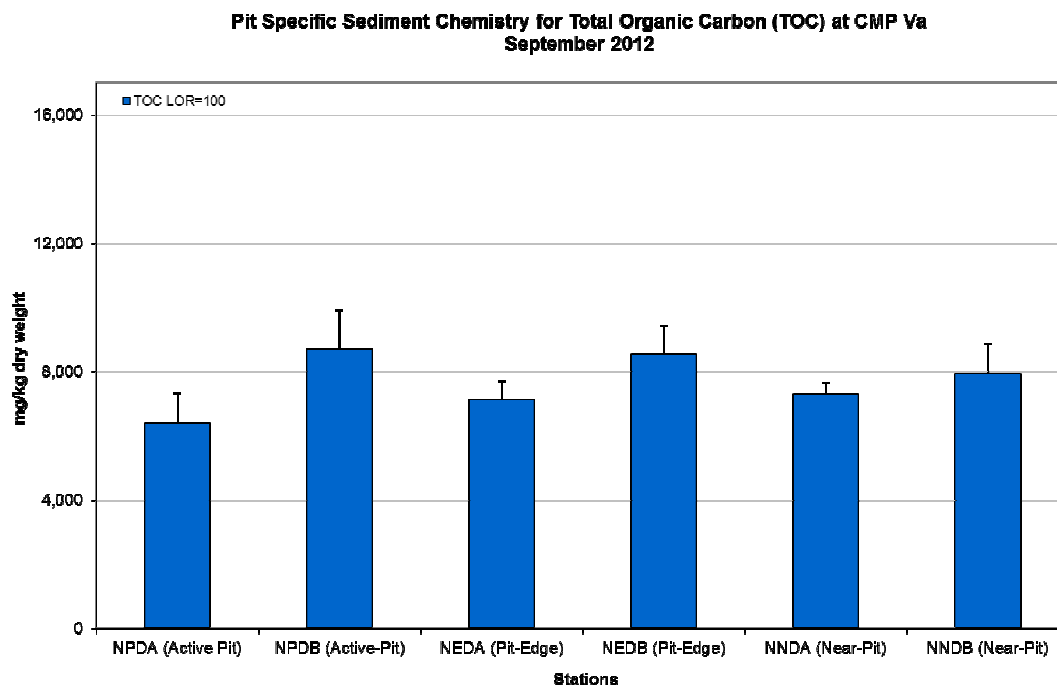


Figure 3: Concentration of Total Organic Carbon (mg/kg dry weight; mean + SD) in sediment samples collected from Pit Specific Sediment Chemistry of CMP Va in September 2012.

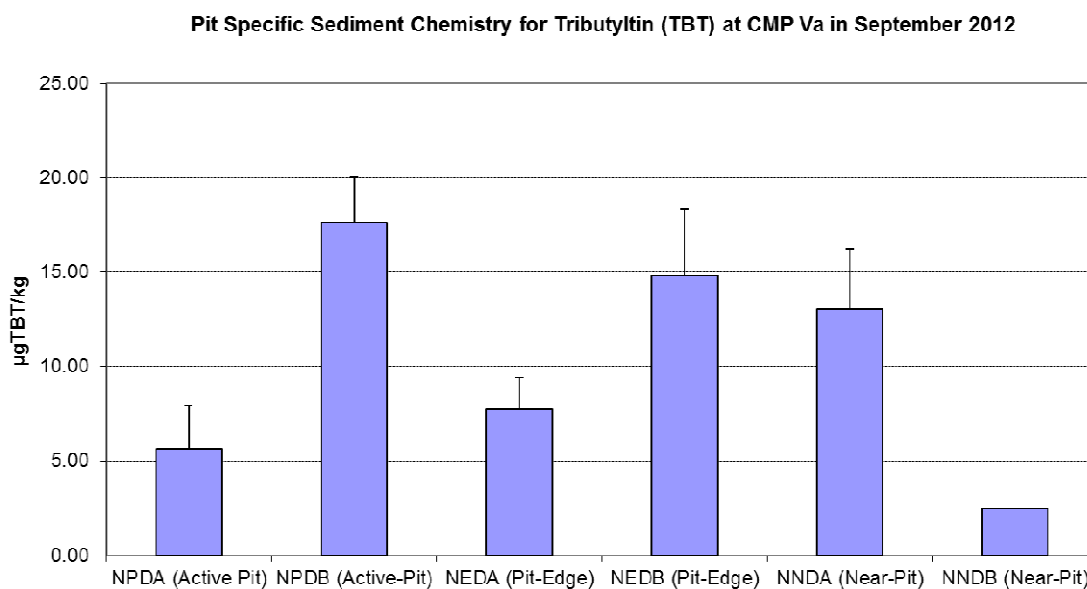


Figure 4: Concentration of Tributyltin (µg TBT/kg; mean + SD) in sediment samples collected from Pit Specific Sediment Chemistry of CMP Va in September 2012.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau\05 Deliverables\01 CMP\05 Monthly Reports\39th (Sep 12)

Date: 6/12/12

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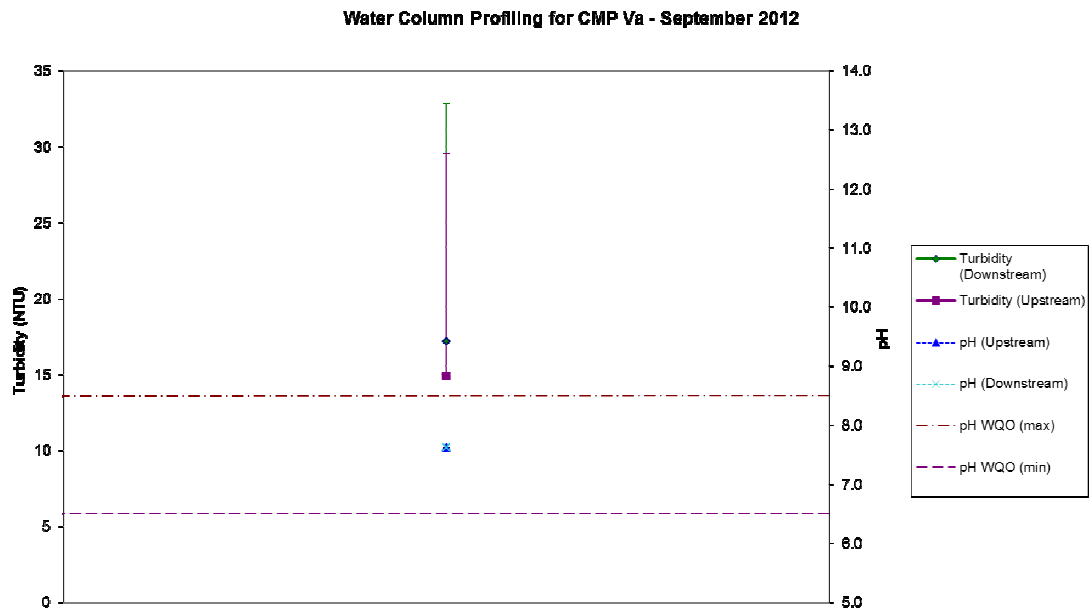


Figure 5: Turbidity and pH (mean + SD) recorded during Water Column Profiling for disposal operations at CMP Va in September 2012.

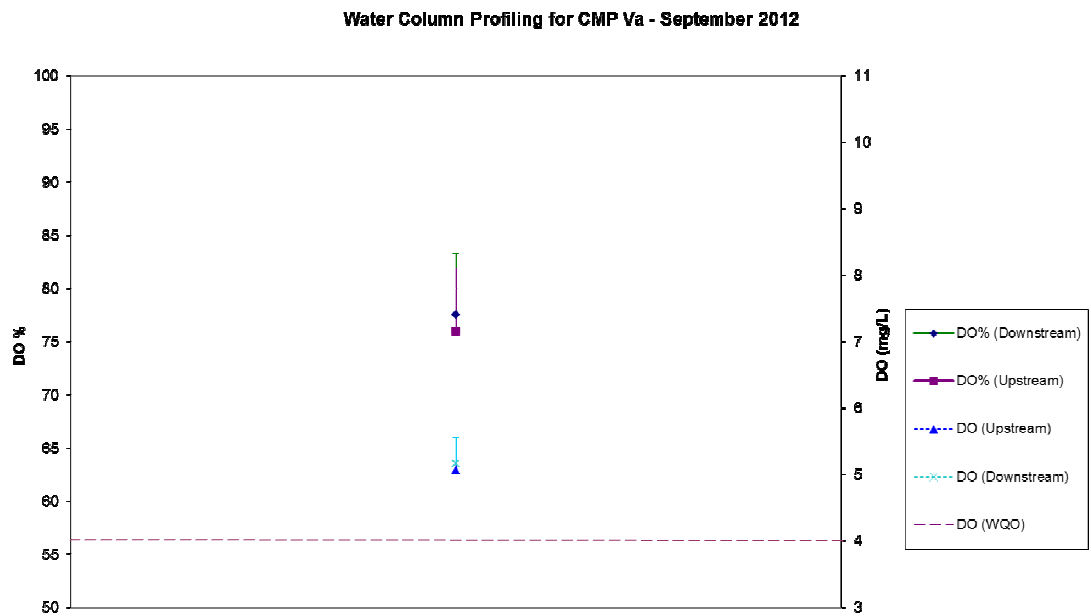


Figure 6: Dissolved Oxygen (mean + SD) recorded during Water Column Profiling for disposal operations at CMP Va in September 2012.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau\05 Deliverables\01 CMP\05 Monthly Reports\39th (Sep 12)

Date: 6/12/12

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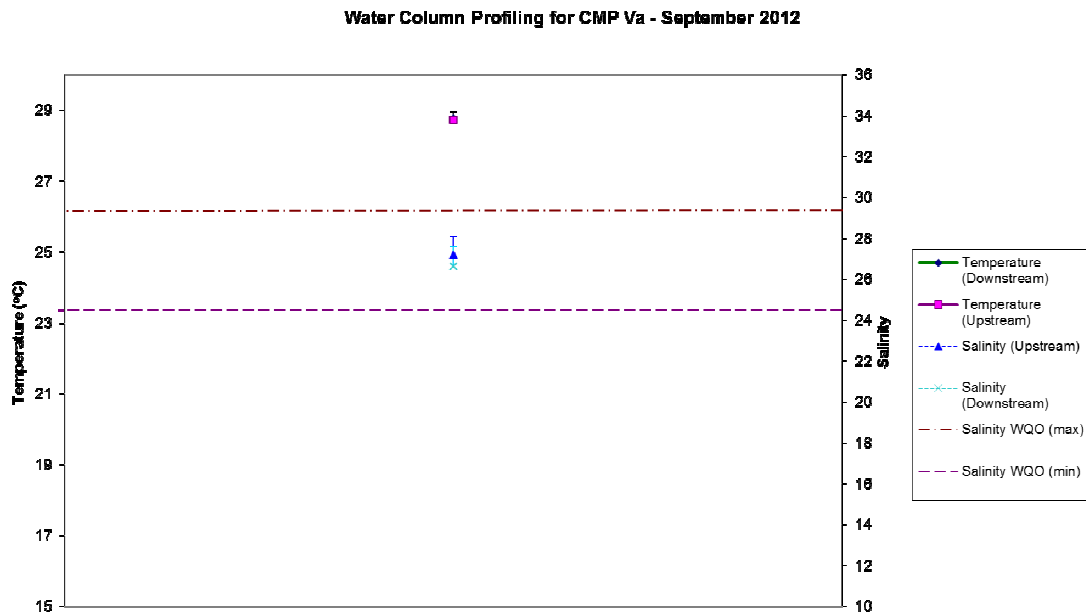


Figure 7: Salinity and Temperature (mean + SD) recorded during Water Column Profiling for disposal operations at CMP Va in September 2012.

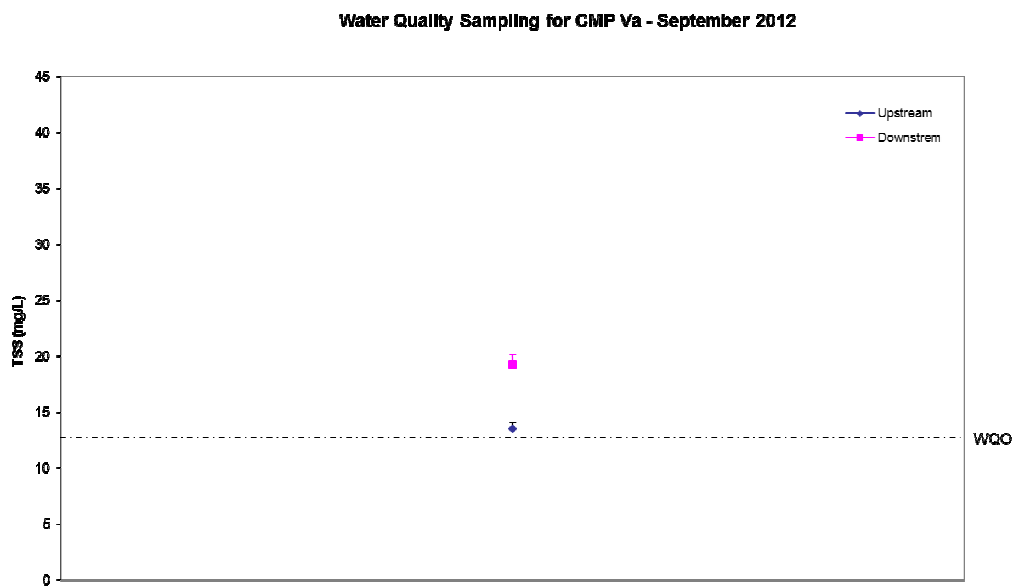


Figure 8: Total Suspended Solids (mean + SD) recorded during Water Column Profiling for disposal operations at CMP Va in September 2012.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau\05 Deliverables\01 CMP\05 Monthly Reports\39th (Sep 12)

Date: 6/12/12

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Annex C

Results of Impact
Monitoring during CMP Vd
Dredging Operations for
September 2012

Table C1 **Summary Table of DO, Turbidity and TSS Levels Recorded in September 2012**

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average TSS Level (mg/L)
			Bottom	Surface and Mid Depth		
2012/09/05	ME	DS1	4.89	5.28	7.73	8.17
		DS2	4.92	5.31	7.74	8.67
		DS3	5.10	5.42	8.76	11.50
		DS4	5.20	5.39	13.52	15.83
		DS5	5.44	5.39	8.56	10.33
		MW1	4.71	4.81	6.63	8.67
	MF	US1	4.88	5.23	7.96	10.17
		US2	4.77	5.17	9.26	9.83
		DS1	5.05	5.19	25.94	29.83
		DS2	4.92	5.18	18.88	23.83
		DS3	4.62	4.96	45.09	58.17
		DS4	4.50	4.92	26.76	34.00
		DS5	4.74	4.97	18.76	20.67
		MW1	4.68	5.12	6.07	8.50
		US1	5.14	5.27	25.51	31.50
		US2	5.16	5.34	14.38	16.50

Notes:

1. Cell shaded yellow indicated value exceeding the Action Level criteria.
2. Cell shaded red indicated value exceeding the Limit Level criteria.
3. DO for Surface and Mid-depth: less than 3.76 mg L⁻¹ (Action Level); less than 3.11 mg L⁻¹ (Limit Level)
DO for Bottom: less than 2.96 mg L⁻¹ (Action Level); less than 2 mg L⁻¹ (Limit Level)
Depth-average Turbidity: greater than 28.14 NTU (Action Level); greater than 38.32 NTU (Limit Level)
Depth-average SS: greater than 37.88 mg L⁻¹ (Action Level); greater than 61.92 mg L⁻¹ (Limit Level)

Annex D

Study Programme

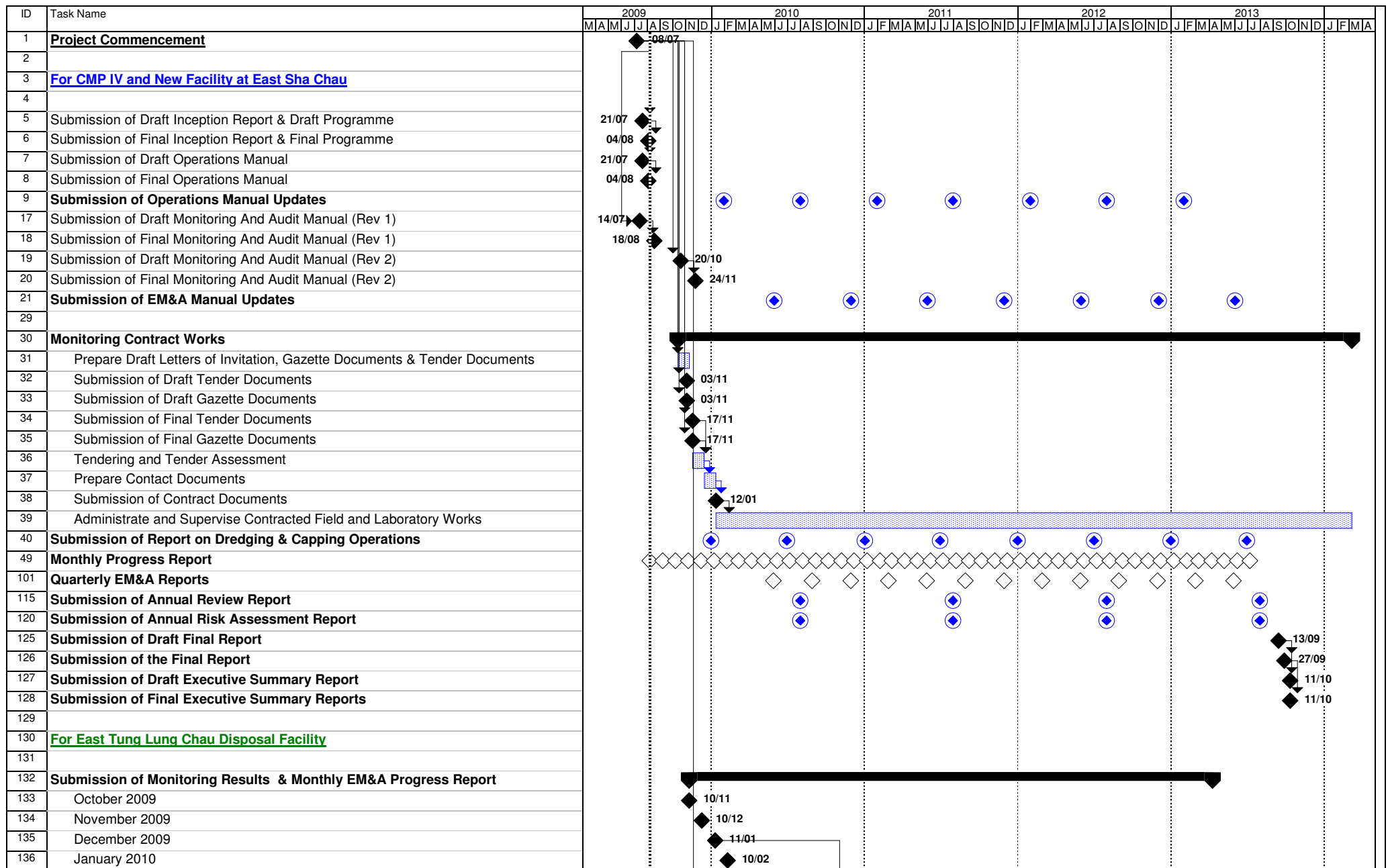


Figure 4.1 - Study Programme



Project: Agreement No. CE 4/2009 (EP) Environmental Monitoring and Audit for Contaminated Mud Pits at Sha Chau (2009-2013) - Investigation

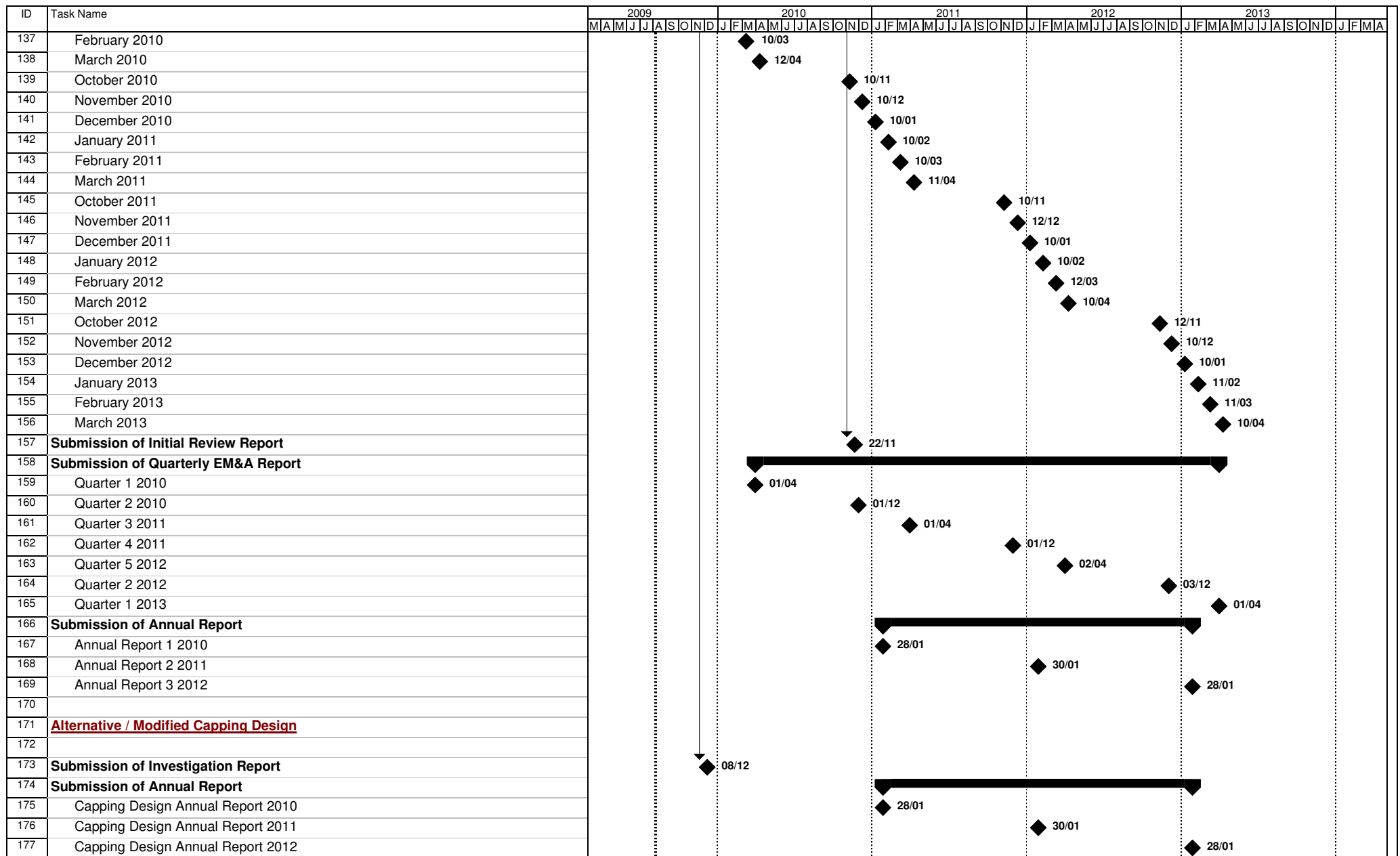


Figure 4.1 - Study Programme

