

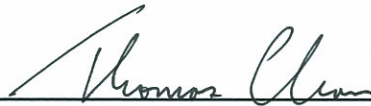
MTR Corporation Limited

South Island Line (East)

Silt Curtain Plan

July 2011

Verified by:



Thomas Chan

Independent Environmental Checker

Date:



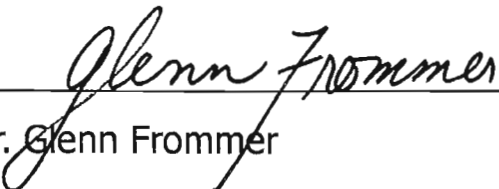
MTR Corporation Limited

South Island Line (East)

Silt Curtain Plan

July 2011

Certified by:



Dr. Glenn Frommer
Environmental Team Leader

Date: 28 JUL 2011

LEIGHTON
禮頓



H2547 – MTR/903

Silt Curtain System for Marine-based Works Plan

Revision History and Plan Approval

Revision	Date	Prepared by:	Checked by	Approved by:	Section/Description
00	21 May 11	YN Wong	Jon Kitching	Paul Freeman	For approval
01	26 July 11	D Fung <i>DF</i>	Jon Kitching <i>JK</i>	Paul Freeman <i>PF</i>	For approval

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The Engineering and Risk Manager or his delegate is responsible for updating and maintaining the plan, including the original hard copy, which should be signed by the Project Director to indicate approval.

The status of this plan is identified by a revision number and date on each page. Changes to the document are identified by a vertical single line in the right-hand margin. On revision, the plan will be uploaded as a whole to the project server or within the Leighton Asia Document Management System (LADMS) Technical Documents Module. The Senior Environment Engineer maintains a record of the revision status of the plan, which is available on request.

If you have any enquiry relating to this plan, please contact the Engineering and Risk Manager/Project Systems Manager.

Contents

	Page
1.0 Introduction	1
1.1 Background of the Project	1
1.2 Purpose.....	1
1.3 Scope of Marine-based Works	1
2.0 Mitigation of water quality impact by silt curtain.....	2
2.1 Silt curtain system at Pier E2.....	2
2.2 Silt curtain system at Pier E3.....	2
2.3 Installation of silt curtain system	2
3.0 Water quality monitoring	3
3.1 Monitoring Locations	3
3.2 Event and action plan.....	3
4.0 Inspection requirement to ensure proper functioning of silt curtain.....	3
5.0 Rectification requirement in case of any malfunctioning of silt curtain	4

List of Appendices

- Appendix A – Overall plan of Aberdeen Channel Bridge
- Appendix B – Photos of sedimentation tank
- Appendix C – Location and details of silt curtain system
- Appendix D – Construction sequence for foundation at Pier E3
- Appendix E – Specification and job reference of geotextile
- Appendix F – Response to Comments

1.0 Introduction

1.1 Background of the Project

Contract 903 is a critical component of the South Island Line (East) (SIL(E)) project taking the new railway in elevated viaduct from Nam Fung Path for almost 2km, through new stations at Ocean Park and Wong Chuk Hang, adjacent to existing buildings and over areas of challenging terrain, live roads and a 20m wide nullah, and crossing the Aberdeen Channel to Ap Lei Chau Island.

For construction of the pier foundations of railway bridge over Aberdeen Channel, a silt curtain system will be installed to enclose the marine-based construction works to reduce the dispersion of suspended solids within Aberdeen Typhoon Shelter.

1.2 Purpose

This document describes the marine-based works to be carried out within Aberdeen Typhoon Shelter for the construction of a channel crossing viaduct Aberdeen Channel Bridge, details of the proposed silt curtain system, the relevant inspection and rectification requirements of the silt curtain system during the course of construction works.

1.3 Scope of Marine-based Works

An overall plan of the proposed Aberdeen Channel Bridge which involves the construction works of Pier E2 and Pier E3 was shown in Drawing 903/W/320/ATK/C10/131 of **Appendix A**. The following construction works will be carried out within Aberdeen Typhoon Shelter for the Aberdeen Channel Bridge.

1.3.1 Construction of Pier E2

The key requirements / principles in the EIA will be complied for construction of Pier E2. The construction of piles / pile cap will be inside a watertight sheet pile cofferdam as recommended in the EIA. Sheet piles of the cofferdam will be driven into position by a vibrating hammer. The cofferdam will be removed upon completion of the pier foundation works. In order to reduce water quality impacts, a silt curtain will be deployed to completely enclose the cofferdam installation and removal works to prevent disturbance to the sediments in the vicinity of sheet piles.

There is a limitation that marine barge longer than 30.4m is not permitted by Marine Department to work inside Aberdeen Typhoon Shelter due to impact to marine traffic. The navigation channel in close proximity to the works area also restricts the use of large marine barge at Pier E2 to assist the bored piling work.

During construction of bored piles, sedimentation tank will be deployed on site to treat the water before discharge as shown in **Appendix B**, in order to reduce water quality impacts to Aberdeen Typhoon Shelter. There is no access to Pier E2 for delivery of materials for construction of the bridge. Furthermore, traffic lane of the existing Ap Lei Chau Bridge cannot be closed for bridge construction.

In order to provide access to Pier E2, a temporary working platform by concrete blocks wall and rock fill will be formed as shown on drawing 903/C/308/LCA/T10/503 in **Appendix C**. The proposed working platform is the minimum area required for the piling rig, associated

piling equipment and sedimentation tanks. The concrete blocks will be placed at seashore of high ground level. No dredging of marine sediment is required for constructing the temporary concrete working platform. As the temporary concrete blocks working platform is located at high ground level, the decrease in cross sectional area of the Aberdeen Channel is minimal. Since the effect of the temporary working platform is expected to be localized, significant impacts of the tidal flow, flushing capacity and water quality at the water sensitive receivers is not anticipated. The temporary concrete blocks working platform will be removed to original seabed level upon completion of bridge structure at Pier E2.

1.3.2 Construction of Pier E3

The existing seawall blocks and armour rock will be removed to form the working platform for the installation of 4 nos. 2m diameter bored piles and construction of the pile cap. Pipe piles/sheet piles shoring system will be installed for construction of the pile cap by insitu method. According to EIA and the available site investigation information, no dredging or excavation of marine sediment would be required.

The seawall will be reinstated upon completion of the Pier E3.

Drawing 903/W/320/ATK/C22/133 showing the construction sequence for foundation at Pier E3 is enclosed in **Appendix D**.

2.0 Mitigation of water quality impact by silt curtain

A silt curtain system will be designed and deployed to completely enclose the sheet pile cofferdam / temporary concrete block platform, seawall modification works and removal works of the sheet pile cofferdam / temporary concrete block platform. The location and details of the silt curtain system are shown in drawings 903/C/308/LCA/T10/503 and 504 in **Appendix C**. Since Pier E1 and Pier E4 are onshore, silt curtain system or mitigation measures are needless to be provided for these two locations.

2.1 Silt curtain system at Pier E2

The silt curtain system will be installed before construction of sheet pile cofferdam and temporary concrete blocks working platform to control plume dispersion and to minimize the extent of any potential impact upon marine water quality.

The silt curtain will also be deployed during the whole course of removal of sheet pile cofferdam and temporary concrete blocks platform.

2.2 Silt curtain system at Pier E3

A silt curtain system will be deployed on site prior to modification of the existing seawall at Ap Lei Chau. This silt curtain system will be maintained until completion of Pier E3 and reinstatement of the seawall.

2.3 Installation of silt curtain system

The details of silt curtain system are shown in drawing 903/C/308/LCA/T10/503. The system consists of the following materials:

- Geotextile which will be joined together to provide the required length and depth;
- 300mm diameter plastic floating buoys to keep silt curtain above sea water surface;

- Steel chain to act as ballast weight for silt curtain system;
- Concrete blocks for anchorage of the silt curtain system;

The geotextile used is Bontec SG110/110 or equivalent material approved by MTR. Specification and job reference of Bontec SG110/110 is attached in **Appendix E**.

During the installation of the silt curtain, diver inspection will be conducted to ensure proper installation and functioning of the silt curtain according to the design. Any gap or separation between silt curtain and sea bed will be made good using sand bags.

3.0 Water quality monitoring

According to Environmental Monitoring and Audit Manual in the EIA, water quality monitoring will be conducted by ET during the course of marine construction works at Aberdeen Channel to monitor any variation of water quality from the baseline conditions and exceedences of WQOs at sensitive receivers to ensure the recommended mitigation measures are properly implemented.

3.1 Monitoring Locations

Water quality monitoring will be undertaken at monitoring stations as shown in Table 4.1 and Figure 4.1 in the Environmental Monitoring and Audit Manual.

During the course of the marine construction works at Aberdeen Channel, impact monitoring will be undertaken at all monitoring stations three working days per week.

3.2 Event and action plan

The Action and Limit (AL) Levels for water quality are defined in Table 4.2 of the Environmental Monitoring and Audit Manual. The actions in accordance with the Event and Action Plan in Table 4.3 of Environmental Monitoring and Audit Manual should be carried out if the water quality assessment criteria are exceeded at any designated monitoring points.

4.0 Inspection requirement to ensure proper functioning of silt curtain

Diver inspection will be carried out to ensure proper installation and functioning of the silt curtain according to the design during installation of the silt curtain system. Any defect found will be rectified before commencement of works within the silt curtain.

Daily visual inspection of the silt curtain system will be conducted to ensure the silt curtain can function properly during the marine-based construction works. The following items will be checked for the inspection:

- Any damage to geotextile panel.
- Any sign of sediment plume dispersion.
- Any movement of anchor blocks.
- Any damage to anchor wire.

Diver inspection will only be arranged if damage is suspected. These include sign of sediment plume dispersion outside the silt curtain or the water monitoring results exceeding the Action and Limit Levels as stated in Section 3.2 above.

5.0 Rectification requirement in case of any malfunctioning of silt curtain

Additional geotextile will be kept on site for emergency replacement of the silt curtain system so that adverse impact to the water quality can be minimized.

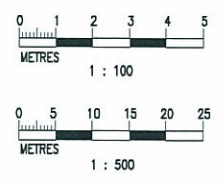
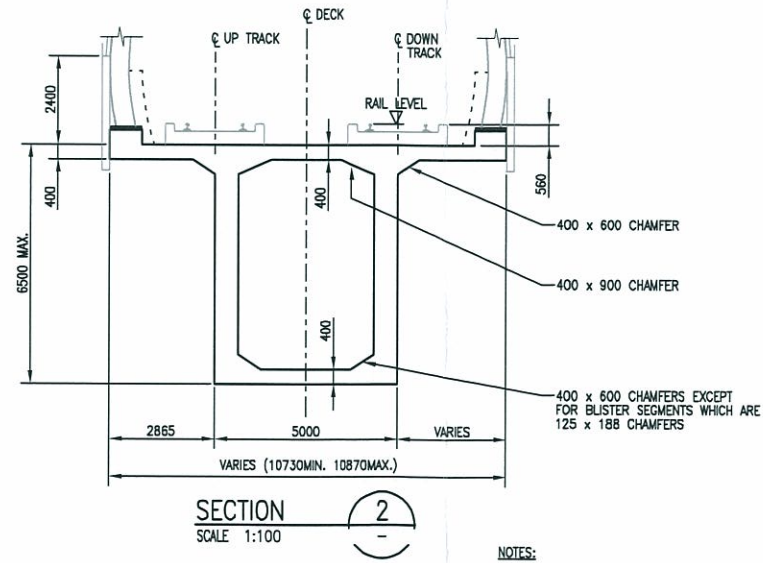
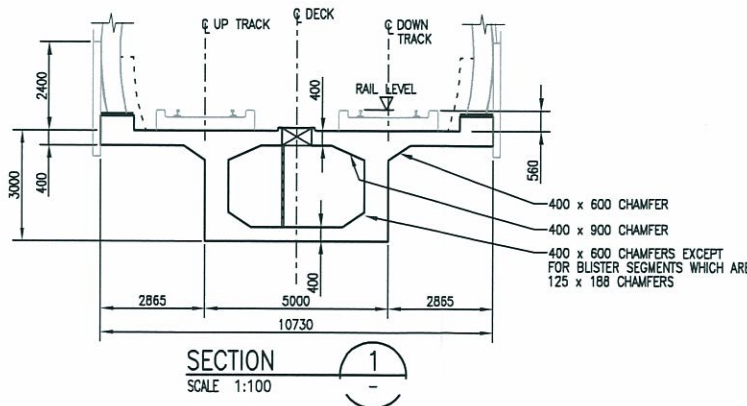
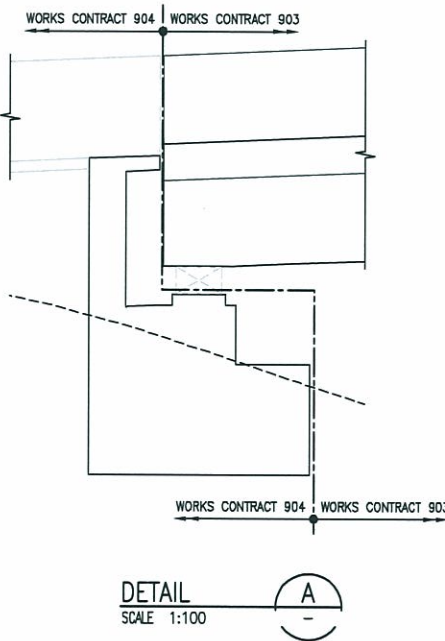
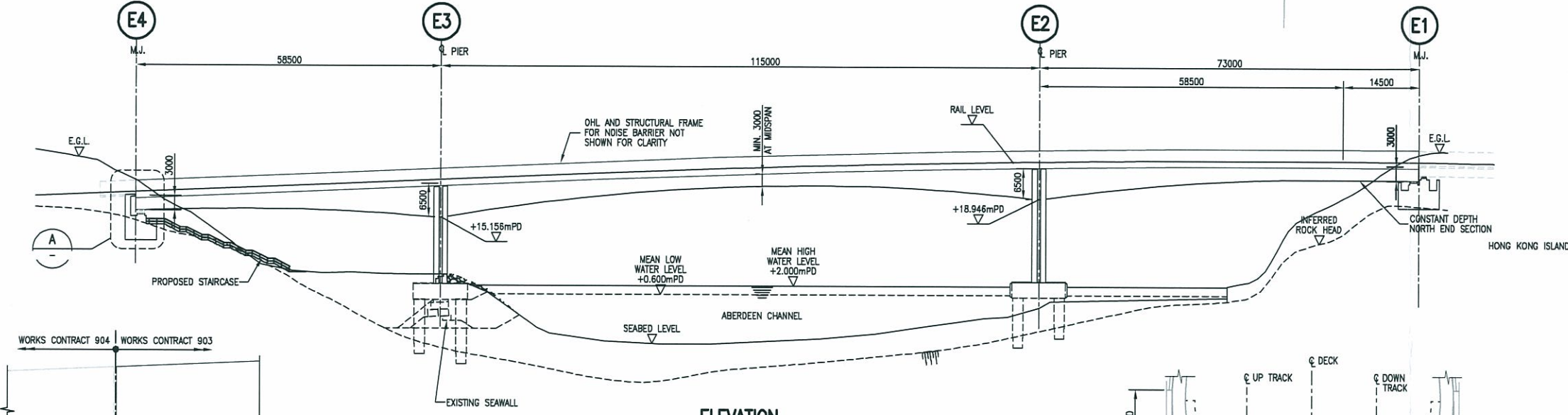
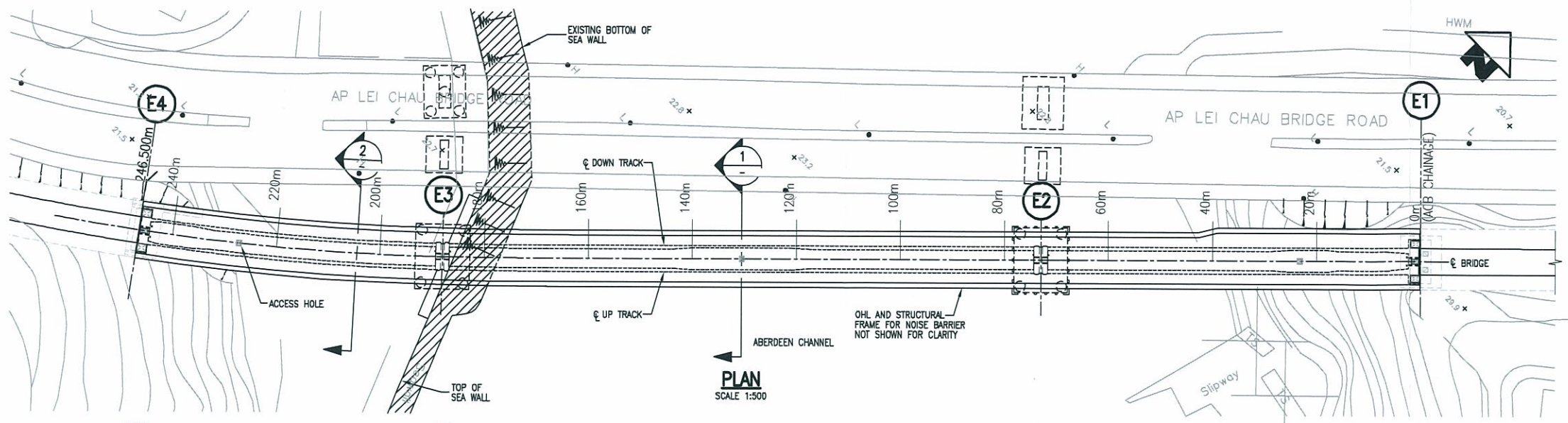
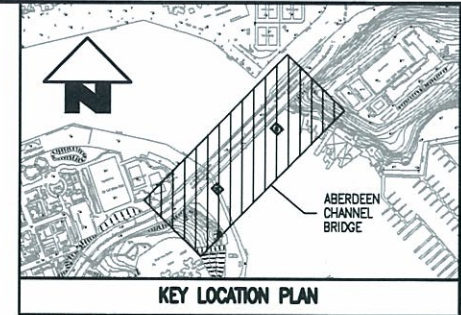
The marine-based construction works will be suspended until the completion of silt curtain repair. Diver inspection will also be conducted to ensure that the silt curtain is properly repaired.

The following actions will be taken with the inspection results from the diver:

- If gap is found between silt curtain and seabed, sand bags will be placed at bottom of silt curtain to prevent dispersion of sediment.
- Sufficient size of geotextile to allow for tidal effect.
- Damage on geotextile will be repaired by additional layer of geotextile.
- Provision of additional silt curtain surrounding the existing one if necessary.

Appendix A – Overall plan of Aberdeen Channel Bridge

Maps reproduced with permission of the Director of Lands, e Hong Kong Government



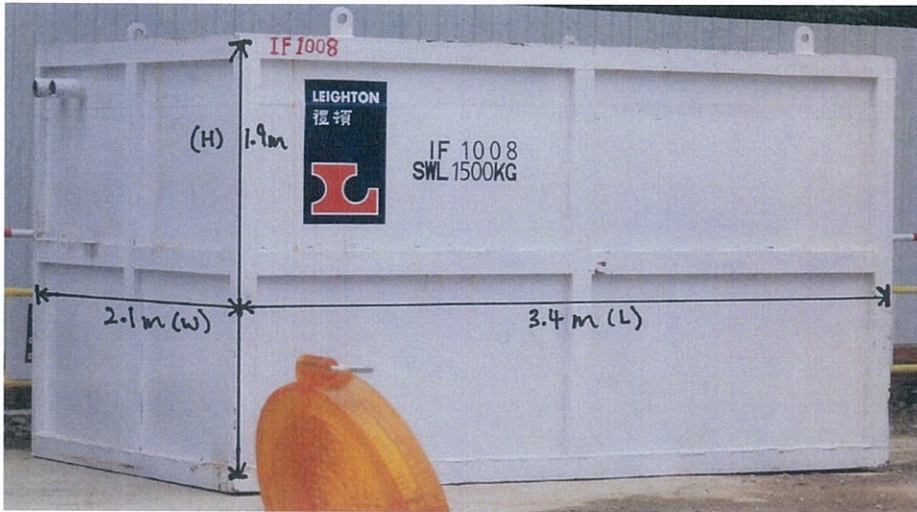
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 - STRAY CURRENT MONITORING POINT REQUIRED FOR PIER E3. REFER TO DRAWING No. 903/W/320/ATK/CS0/002
 - EARTH PROVISIONS GIVEN IN DRAWING No. 903/W/320/ATK/CS0/001

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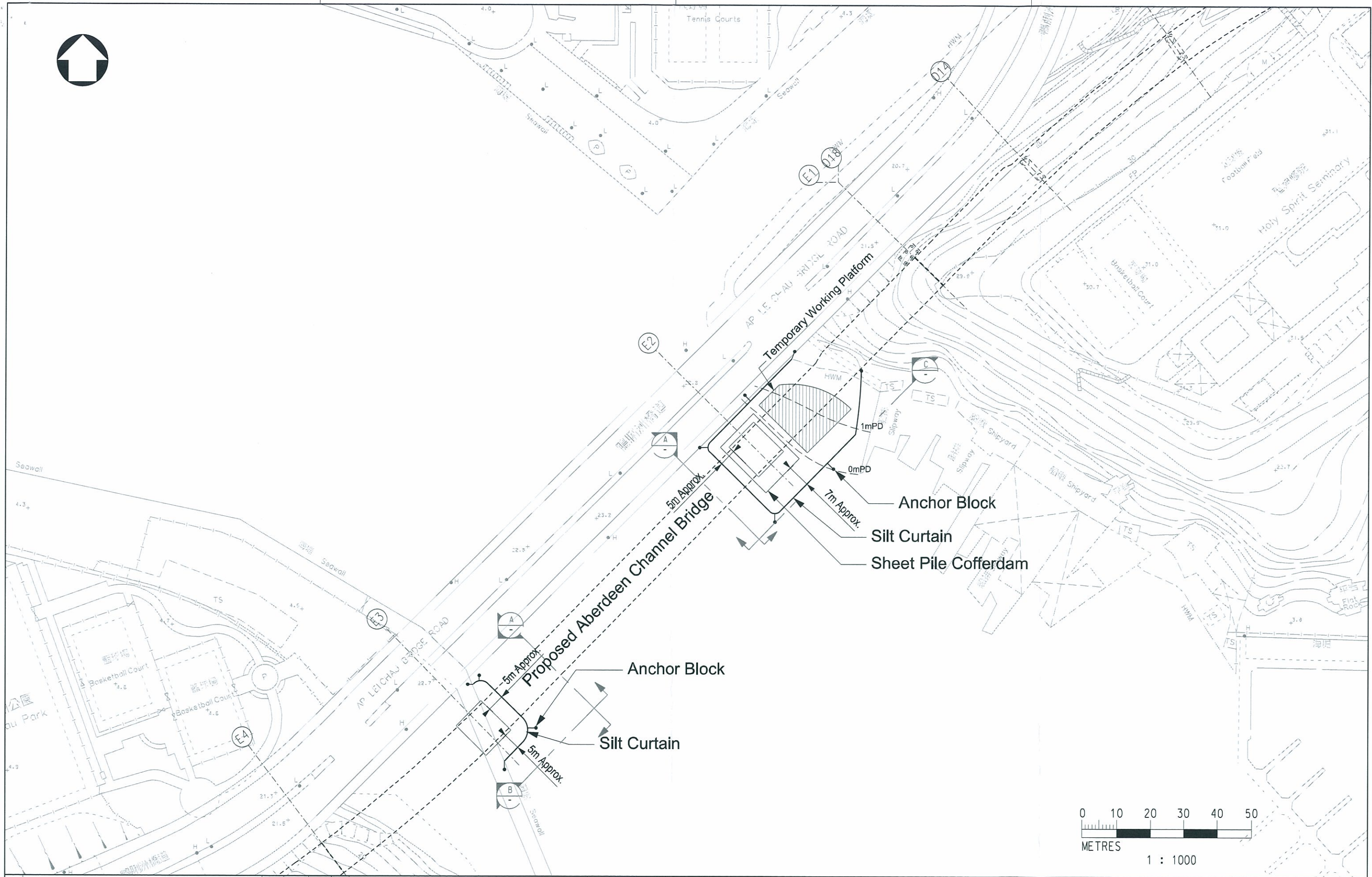
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										OVERALL GENERAL ARRANGEMENT			
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Appendix B – Photos of sedimentation tank



Appendix C – Location and details of silt curtain system



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CHECKED	JK
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DATE	12/05/2011

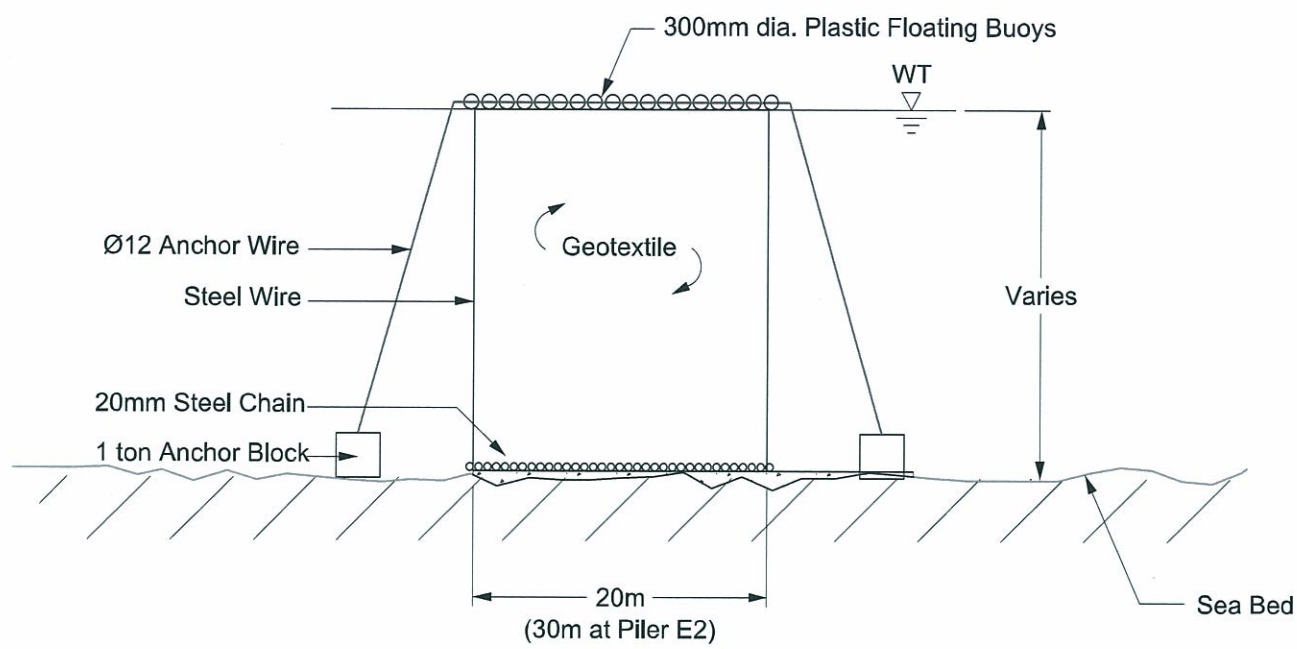
SOUTH ISLAND LINE (EAST)

 ORIGINATOR

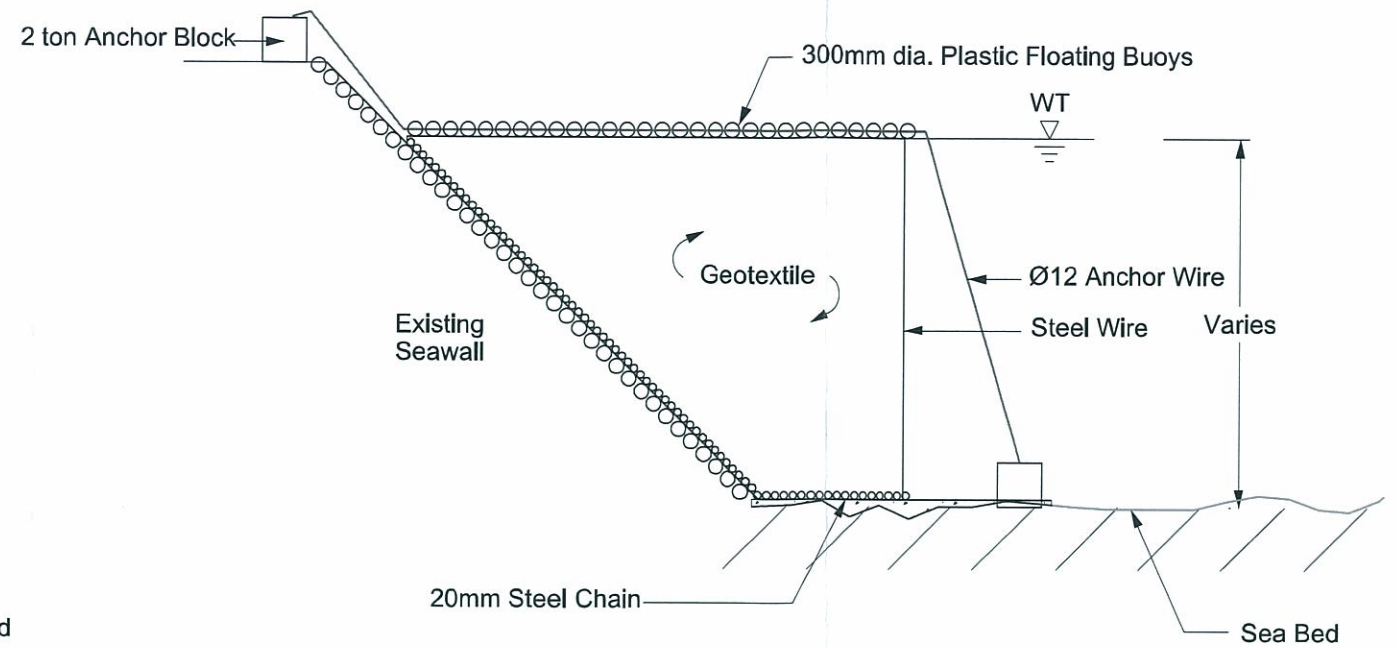
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TITLE CONTRACT 903 OCP AND WCH STATION ABERDEEN CHANNEL BRIDGE LOCATION OF SILT CURTAIN SYSTEM		SCALE AS SHOWN	DRAWING NO. 903/C/308/LCA/T10/503	REV. B
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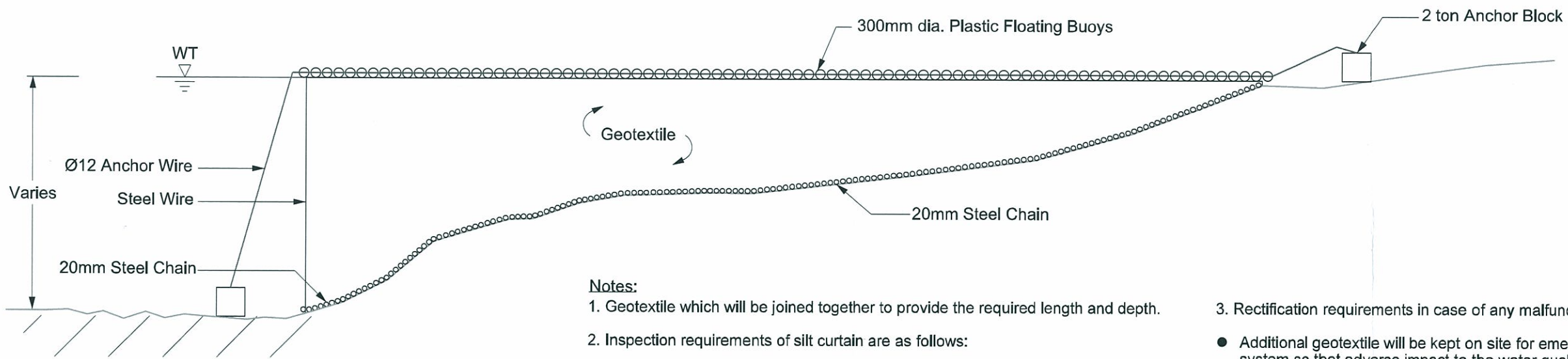
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View A-A



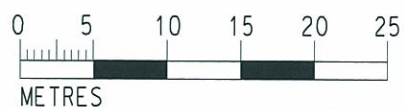
View B-B



View C-C

Notes:

- Geotextile which will be joined together to provide the required length and depth.
- Inspection requirements of silt curtain are as follows:
 - Diver inspection will be carried out to ensure proper installation and functioning of the silt curtain according to the design during installation of the silt curtain system. Any defect found will be rectified before commencement of works within the silt curtain.
 - Daily visual inspection of the silt curtain system will be conducted to ensure the silt curtain can function properly during the marine-based construction works. The following items will be checked for the inspection:
 - Any damage to geotextile panel.
 - Any sign of sediment plume dispersion.
 - Any movement of anchor blocks.
 - Any damage to anchor wire.
 - Diver inspection will only be arranged if damage is suspected. These include sign of sediment plume dispersion outside the silt curtain or the water monitoring results exceeding the Action and Limit Levels.
- Rectification requirements in case of any malfunctioning of the silt curtain system:
 - Additional geotextile will be kept on site for emergency replacement of the silt curtain system so that adverse impact to the water quality can be minimized.
 - The marine-based construction works will be suspended until the completion of silt curtain repair. Diver inspection will also be conducted to ensure that the silt curtain is properly repaired.
 - The following actions will be taken with the inspection results from the diver:
 - If gap is found between silt curtain and seabed, sand bags will be placed at bottom of silt curtain to prevent dispersion of sediment.
 - Sufficient size of geotextile to allow for tidal effect.
 - Damage on geotextile will be repaired by additional layer of geotextile.
 - Provision of additional silt curtain surrounding the existing one if necessary.



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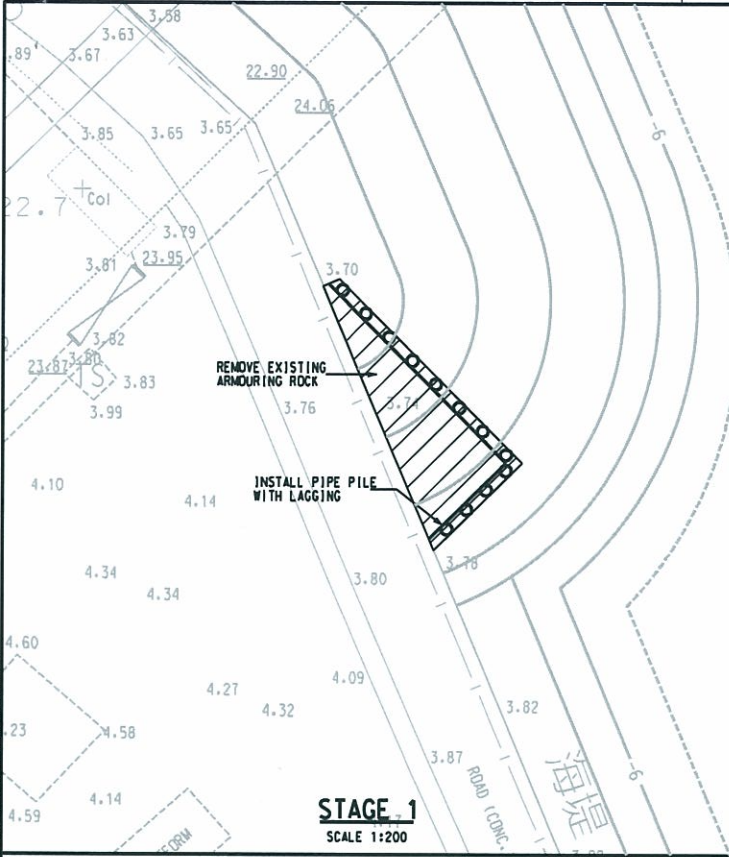
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SOUTH ISLAND LINE (EAST)	
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TITLE CONTRACT 903 OCP AND WCH STATION ABERDEEN CHANNEL BRIDGE DETAILS OF SILT CURTAIN SYSTEM	
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DRAWING NO.	903/C/308/LCA/T10/504
REV.	B

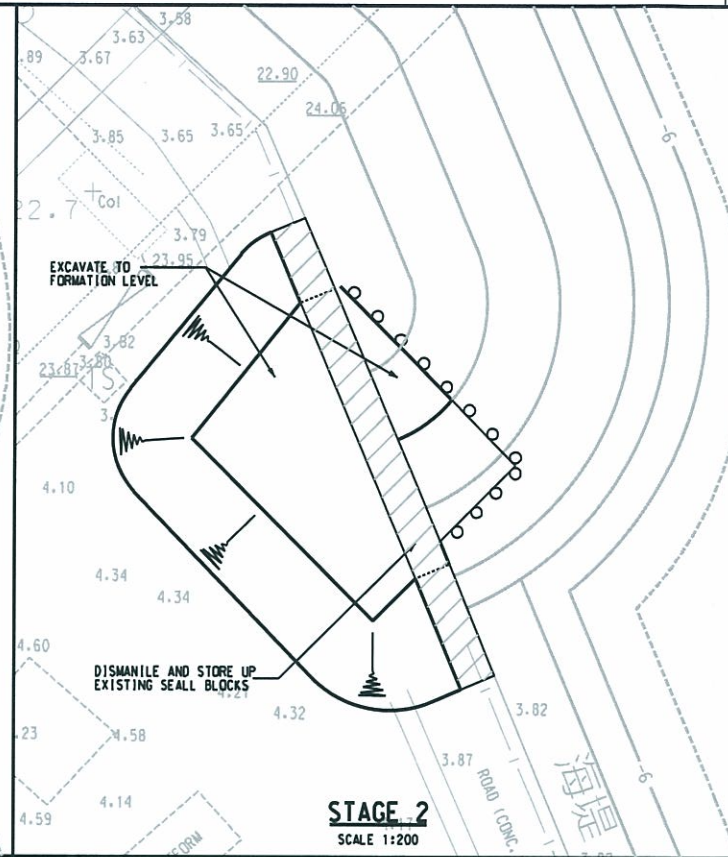
Appendix D – Construction sequence for foundation at Pier E3

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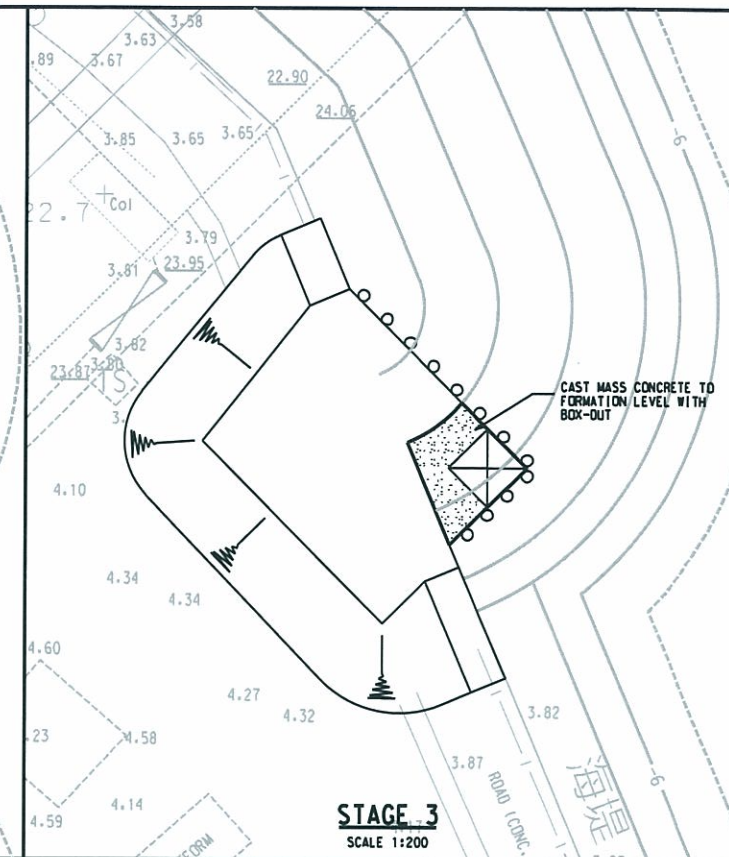
STAGE 1
SCALE 1:200

1. REMOVE EXISTING ARMOURING ROCK ON SLOPING SEAWALL.
2. INSTALL PIPE PILES WITH LAGGING.



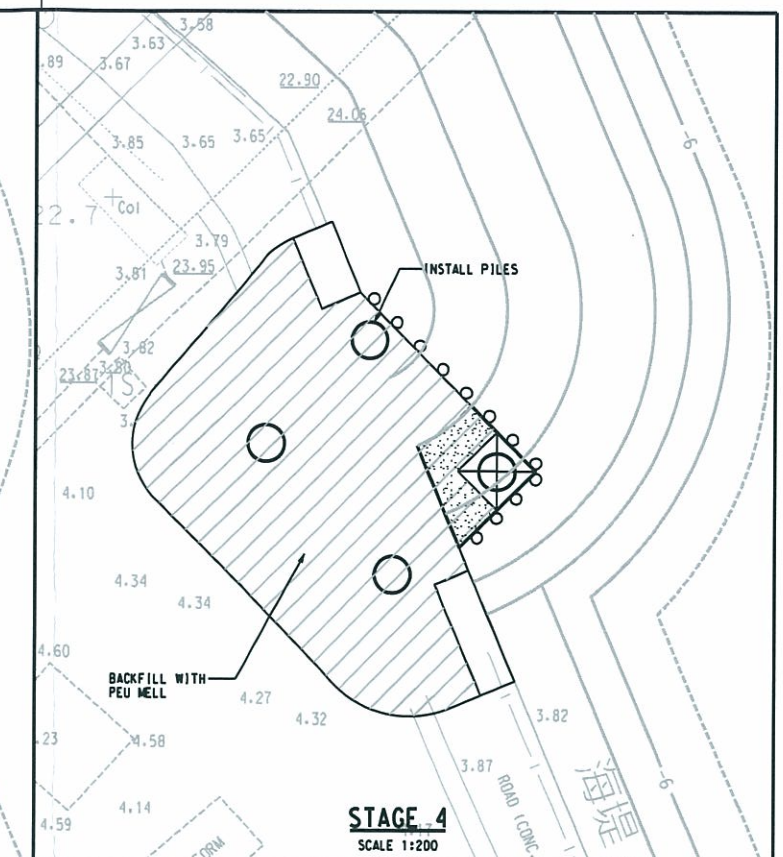
STAGE 2
SCALE 1:200

1. EXCAVATE IN FRONT AND BEHIND EXISTING SEAWALL.
2. DISMANTLE AND STORED UP EXISTING SEAWALL BLOCKS.



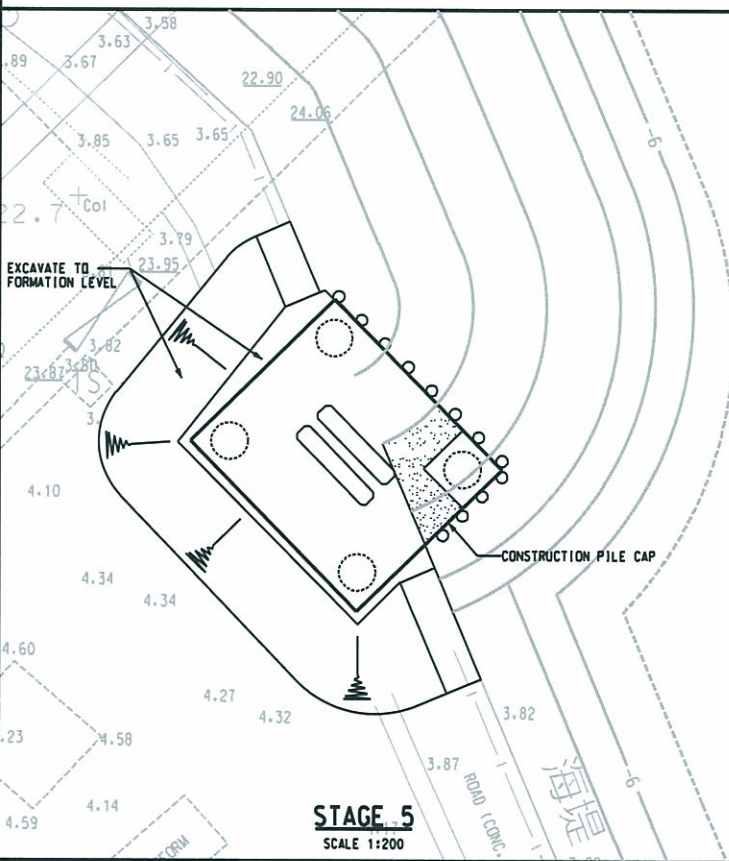
STAGE 3
SCALE 1:200

1. CASTING MASS CONCRETE WITH BOX-OUT FOR PILING.
2. MAKING GOOD OF FINAL EXCAVATION LEVEL.



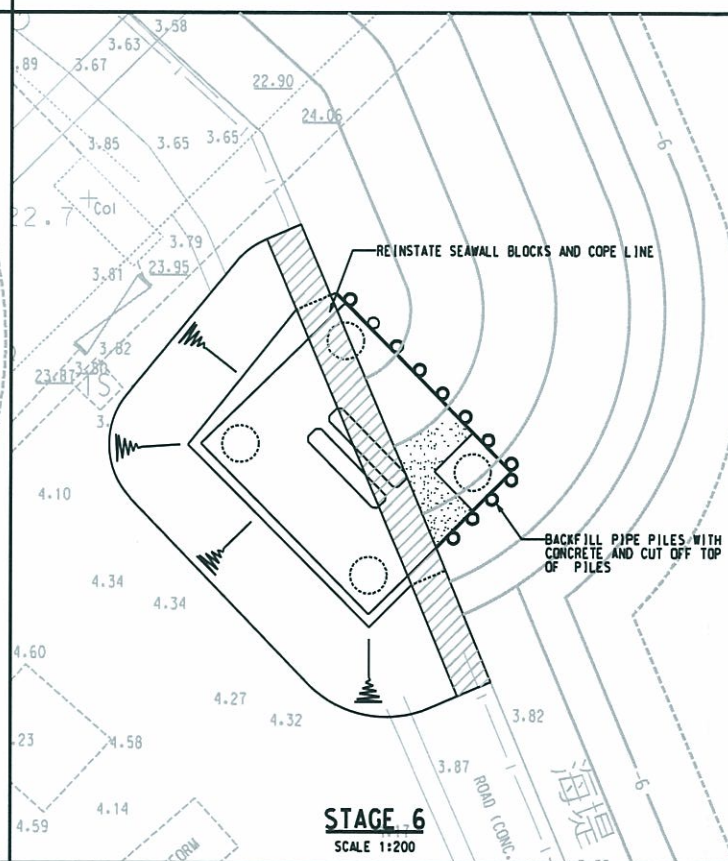
STAGE 4
SCALE 1:200

1. TEMPORARILY BACKFILL TO APPROXIMATELY +4.0mPD AS PILING PLATFORM.
2. INSTALL PILES.



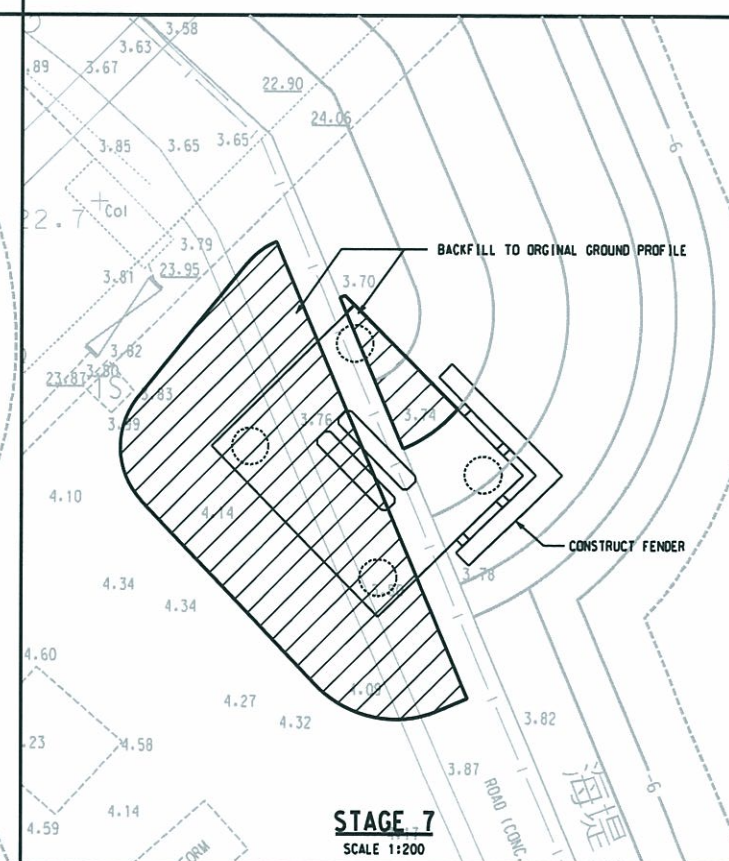
STAGE 5
SCALE 1:200

1. EXCAVATE TO FINAL EXCAVATION LEVEL.
2. MAKING GOOD OF FINAL EXCAVATION LEVEL SURFACE.
3. CONSTRUCT PILE CAP.



STAGE 6
SCALE 1:200

1. REINSTATE SEAWALL BLOCKS AND COPELINE.
2. BACKFILL PIPE PILES WITH CONCRETE AND CUT DOWN PIPE PILE TOP TO 0mPD (PIPE PILES TO BE LEFT IN).



STAGE 7
SCALE 1:200

1. CONSTRUCT FENDER.
2. BACKFILL TO ORIGINAL GROUND PROFILE.

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 903/W/320/ATK/C22/131, 132, 141 AND 151.
2. ALL LEVELS ARE GIVEN IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.



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TITLE	CONTRACT 903 ABERDEEN CHANNEL BRIDGE SEAWALL AND RECLAMATION FOR CONSTRUCTION OF BRIDGE PIER CONSTRUCTION SEQUENCE		
SCALE	AS SHOWN (A1)	DRAWING NO.	903/W/320/ATK/C22/133
REV.	A		

Appendix E – Specification and job reference of geotextile

bontec

a bonar technical fabrics product



SG 110/110

Woven polypropylene geotextile made of slit film tapes

Technical data sheet according to internal specifications Bonar TF: version 06 dd. 05/01/10
 Accompanying documents CE marking: version 04 dd. 05/01/10



1137-CPD-615

10

separation	filtration	reinforcement	protection	drainage

	test method	value	tolerance
Mechanical properties			
Tensile strength MD	EN ISO 10319	110,0 kN/m	-9,9 kN/m
Tensile strength CD		110,0 kN/m	-9,9 kN/m
Elongation MD	EN ISO 10319	12,0 %	+/-2,8 %
Elongation CD		8,0 %	+/-1,8 %
Static puncture resistance – CBR	EN ISO 12236	12,50 kN	-2,50 kN
Dynamic perforation resistance – cone drop	EN ISO 13433	10,0 mm	+2,0 mm
Hydraulic properties			
Water permeability normal to the plane		25x10 ⁻³ m/s	-8x10 ⁻³ m/s
Water flow normal to the plane (*)	EN ISO 11058	25 l/m ² .s	-8 l/m ² .s
Characteristic opening size (AOS)	EN ISO 12956	230,0 µm	+/-69,0 µm
Physical properties			
Thickness under 2 kPa (*)	EN ISO 9863-1	1,53 mm	+/-0,31 mm
Weight (*)	EN ISO 9864	464,0 g/m ²	+/-46,4 g/m ²
Composition	100 % polypropylene woven geotextile		
Durability	predicted to be durable for a minimum of 25 years in natural soil with 4 < pH < 9 and soil temperatures < 25° C		

roads	railways	foundations & retaining walls	drainage systems	erosion control systems
EN 13248:2000	EN 13250:2000	EN 13251:2000	EN 13252:2000	EN 13253:2000
reservoirs & dams	canals	Tunnels & underground structures	solid waste	liquid waste
EN 13254:2000	EN 13255:2000	EN 13256:2000	EN 13257:2000	EN 13285:2000

1. This geotextile is intended for use in both functions & applications highlighted with a bold border.
 2. It is the responsibility of all users to satisfy themselves that the above data is current.
 3. Roll dimensions are 5,25 m x 100 m. Other dimensions on demand.
 4. Bonar Technical Fabrics reserves the right to alter product specifications without prior notice.
 5. Although not guaranteed, these results do to the best of our knowledge offer a true and accurate record of the product's performance.
 6. Bonar Technical Fabrics cannot accept responsibility for the performance of these products as the conditions of use are beyond our control.
 7. Geotextile has to be covered within 2 weeks after installation
- (*) Not mandated characteristics for CE marking.



Bonar SG Woven Geotextile

Date	Project	Client	Consultant	Style	Qty
Aug-85	HY/84/28 Vehicular border link at Lok Ma Chau	China Construction Engineering Corporation		800g/sqm	
Oct-93	DC/93/03 Main drainage channels for Yuen Long and Kam Tin	Wan Hin & Co. Ltd		HS150/60 HS450/60 HS600/100	265,190 145,200 37,015
Feb-05	CV/2003/06 Stanley Waterfront Improvement Project - Construction Pier and Boardwalk	Sun Fook Kong (Civil) Ltd	Civil Engineering and Development Department	SG100/100 NW10	2,080 3,150
Feb-05	99/9028 Lamma Power Station	Wai Kee (Zens) Construction & Transportation Co Ltd	Maunsell Geotechnical Services Ltd	SG100/100	1,040
Feb-05	CV/2004/02 Reconst. of Wong Shek & Ko Lau Wan Public Piers	Kin Shing Construction Co Ltd	Civil Engineering and Development Department	SG100/100	4,680
Apr-05	CV/2002/04 Penny's Bay Reclamation Stage 2	Gammon Skanska Ltd Shun Tat Construction Engineering Ltd	Scott Wilson Ltd	SG100/100 SG100/100	4,160 3,150
Apr-05	HK/12/02 CED, Central Reclamation Phase III, Engineering Works	Best Leader Engineering Ltd Leighton - China State - Van Oord Joint Venture	Atkins China Ltd	SG100/100 SG100/100	1,040 2,615
May-05	03/8013 Lamma Island to Cyberport	Leader Marine Contractors Ltd Honwin Engineering Ltd	Maunsell Geotechnical Services Ltd	SG100/100 SG100/100	1,040 1,050
Jul-05	Shenzhen to Tai Po Twin Submarine Gas Pipeline Project	Honwin Engineering Ltd		SG100/100	3,675
Sep-05	TP37/03 Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A	Leader - Wai Kee (C&T) Joint Venture	Hyder Consulting Ltd	SG100/100	1,040
Nov-05	HY/2002/26 Stone Cutter's Bridge	Hong Kong River Engineering Co Ltd	Ove Arup & Partners HK Ltd	SG100/100	1,050
Feb-06	CV/2005/12 Fill Reception Facilities at Tseung Kwan O Area 137 Quarry Bay and Mui Wo	Penta-Ocean Construction Co Ltd	Civil Engineering and Development Department	SG100/100	525
Mar-06	Maintenance Dredging at Castle Peak Power Station (CPPS) Jetty	New Concepts Engineering Development Ltd	Civil Engineering and Development Department	SG100/100	525
Mar-06	CV/2004/04 Maintenance and Repairs to Government / Public Piers and Immersed Tubes of Hung Hom Cross-Harbor Tunnel	China Harbour Engineering Co (Group)	Civil Engineering and Development Department	SG100/100	1,050
Mar-06	HY/2005/06 Castle Peak Road Improvement West of Tsing Lung Tau	Shun Tat Construction Engineering Limited Chun Wo Construction & Engineering Co Ltd	Mouchel Halcrow JV	SG100/100 SG100/100	1,050 525



May-06	212 Main Works for the Proposed Third Golf Course Development at Kau Sai Chau, Sai Kung	China Harbour Engineering Co (Group)	Ove Arup & Partners HK Ltd	SG100/100	3,150
Jun-06	Hong Kong Convention and Exhibition Centre Project - Silt Screen for Intake Pipe	Wai Kee (Zens) Construction & Transportation Co Ltd Kaden - Wai Kee (C&T) JV	NA	SG100/100	2,100
Aug-06	EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38	Kaden Construction Limited	Scott Wilson Ltd	SG100/100	1,050
Sep-06	CV/2004/06 Management and Capping of Contaminated Mud Pit IV at East of Sha Chau - Phase III	Kaden - Wai Kee (C&T) Joint Venture	Civil Engineering and Development Department	SG100/100	1,050
Oct-06	Lamma Island Cable Landing	United Marine Co Ltd	Hong Kong Electric Co Ltd	SG100/100	2,100
Nov-06	CV/2004/01 Maintenance and Repairs to Seawalls, Piers and Other Port Works	Kin Shing Construction Co Ltd	Civil Engineering and Development Department	SG100/100	2,625
Dec-06	Private project	Friendly Benefit Engineering Ltd		SG100/100	525
Feb-07	Prebored Socketted H-Piles at Hong Kong Convention & Exhibition Centre	Yee Hop Engineering Co Ltd	NA	SG100/100	3,623
May-07	HY/2005/06 Castle Peak Road Improvement - West of Tsing Lung Tau	Chun Wo Construction & Engineering Co Ltd	Mouchel Halcrow JV	SG100/100	525
May-07	CV/2004/05 Dredging Maintenance	China Harbour Engineering Co Ltd	Civil Engineering and Development Department	SG100/100	2,100
Aug-07	Dredging Project in Lai Chi Kok Shipyard	Maritime Mechanic Ltd	NA	SG100/100	525
Aug-07	6/WSD/06 Construction of Salt Water Supply System for Penny's Bay	Univic Engineering Ltd	Water Supplies Department	SG100/100	1,050
Nov-07	Permanent Aviation Fuel Facility Hong Kong International Airport (Contract No. H2104)	UDL Dredging Ltd	Babtie Asia Ltd	SG100/100	1,050
Dec-07	Seawall Modify, Tuen Mun Area 38	Cheer Engineering Ltd	Scott Wilson Ltd	SG100/100	525
May-08	DC/2007/10 Design and Construction of HK West Drainage Tunnel	Tapbo Civil Engineering Co Ltd	Ove Arup & Partners HK Ltd	SG100/100	5,486
Sep-08	CV/2006/05 Maintenance of Seawalls and Navigation Channels	China Harbour Engineering Co Ltd	CEDD	SG100/100	6,825
Sep-08	Marine Works at Maldives	Kwan Sing Engineering & Construction Co Ltd		SG100/100	525
Nov-08	DC/2007/06 River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River	Kwan Lee Construction Co Ltd	Maunsell Consultants Asia Ltd	SG100/100	7,875



Mar-09	DC/2007/01 Drainage Improvement Works in Ki Lun Tsuen, Kwu Tung, Ma Tso Lung and Sha Ling	Shanghai Urban Construction Group Corp	Mott Connell Ltd	SG100/100 SG40/40	3,675 70,350
Jun-09	CHEC247 Lamma Power Station - Navigation Channel Improvement	China Harbour Engineering Co Ltd		SG100/100	7,350
Jan-10	Tsing Yi	Sam Woo Bore Pile Foundation Ltd		SG110/110	525
Feb-10	HY/2009/11 Central - Wanchai Bypass - North Point Reclamation	China Harbour Engineering Co UDL Ship Management Ltd	AECOM Asia Co Ltd	SG110/110 SG110/110	21,016 1,050
Mar-10	KL/2009/01 Site formation for Kai Tak Cruise Terminal Development	Penta-Ocean Construction Co. Ltd Kwan Sing Construction Ltd Crown Asia Engineering Ltd	Scott Wilson	SG110/110 SG110/110 SG110/110	14,175 5,775 1,050
Apr-10	TK/2009/01 Infrastructure Works at Town Centre South and Tiu Keng Leng, Tseung Kwan O	Shun Tat Construction Engineering Ltd	Meinhardt (C&S) Ltd	SG110/110 SG40/40	9,450 1,050
Apr-10	Lau Fau Shan	Wang Hip Iron Works Wirks Co Ltd		SG110/110	525
May-10	HK/2009/01 Wan Chai Development Phase II Central Wanchai Bypass	Leader Civil Engineering Corp Ltd	AECOM Asia Co Ltd	SG110/110	5,250
Jun-10	9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Main Form West Kowloon to Sai Ying Pun	Shun Tat Construction Engineering Ltd	Mott Connell Limited	SG110/110	5,745
Oct-10	DC/2007/12 Design and Construction of Tsuen Wan Drainage Tunnel	Shun Tat Construction Eng Ltd	Hyder Consulting Ltd	SG110/110	2,100
Oct-10	TP/2010/02 Cycle Tracks from Sheung Shui to Ma On Shan	Richwell Machinery Eng Ltd	CEDD	SG110/110	525
Dec-10	CV/2010/03 Maintenance Contract for Seawalls and Navigation Channels	China Harbour Eng Co Ltd	CEDD	SG110/110	6,300
Dec-10	HK/2009/02 Wan Chai Development Phase II	Tung Wo Engineering Co Ltd	AECOM Asia Co Ltd	SG110/110	3,150
5-Jan-11	HY/2009/15 Central-Wanchai Bypass-Tunnel Causeway Bay Typhoon Shelter	Shun Tat Construction Eng Ltd China State Engineering Co Ltd	AECOM Asia Co Ltd	SG110/110 SG110/110	4,200 525
11-Jan-10	DC/2008/09 Submarine outfall Aberdeen	Paul Y Construction Co Ltd	AECOM Asia Co Ltd	SG110/110	525
Jan-10	KL/2008/07 Kai Tak Development - Advance Infrastructure Works for Developments at the Southern Part of the Former Runway, Stage 1	Crown Asia Engineering Ltd	AECOM Asia Co Ltd	SG110/110	1,050
24-Jan-11	CV/2009/02 Handing of Surplus Public Fill	China Harbour Eng Co Ltd	CEDD	SG110/110	525
15-Mar-11	HK/2010/06 Wanchai Development Phase II- Central-Wanchai Bypass over MTR Tsuen Wan Line	Leader Civil Engineering Corp Ltd Gammon Construction Ltd	AECOM Asia Co Ltd	SG110/110 SG110/110	7,350 525

Appendix F –Response to Comments

Comments	Responses
<p>Comment from EPD on Silt Curtain System for Marine-based Works Plan Noise Mitigation Measures Plan for C903 e-mail from CHAN Rowena Hoi Cheung on 8 July 2011:</p>	
<p>P.1 section 1.3.1 – In the 3rd paragraph, please specify what is the “water treatment facility” to be provided on site.</p>	<p>Sedimentation tank will be deployed for water treatment facility.</p>
<p>According to the Silt Curtain Plan, we note that silt curtain system will only be provided for construction of Pier E2 and E3. Please clarify is there any silt curtain system/water quality mitigation measures would be provided for construction of Pier E1 & 4 if marine-based works are involved?</p>	<p>As both locations of Pier E1 & 4 are onshore, hence, silt curtain/water quality mitigation measures are needless to be provided for these two locations.</p>