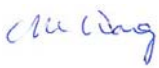


Contract No.: HY/2009/11
Central – Wanchai Bypass, North Point Reclamation

SILT SCREEN DEPLOYMENT PLAN

	Name	Signature
Prepared by:	China Harbour Engineering Co., Ltd. – China Road and Bridge Corporation Joint Venture	

1.0 Introduction

This document “Silt Screen Deployment Plan” which outlines the methodology for installation, operation, and maintenance of silt screen throughout the whole course of dredging works and filling works of North Point Reclamation, proposed by CHEC-CRBE Joint Venture (hereafter CCJV).

2.0 Scope of Works

According to the Table 1 of Further Environmental Permit (No.FEP-01/356/2009), silt screens shall be provided for two saltwater intakes as stated in such as Water Supplies Department (hereafter WSD) Saltwater Intakes at Sai Wan Ho and Quarry Bay during all dredging, filling works and the works affecting water quality within the site. In addition, CCJV proposes to deploy the silt screens system for seawater intakes at City Garden and Provident Centre that vicinity to the site. To limit pollution of water, woven geotextile shall be used to enclose the existing screen frame as shown on attached drawings in *Appendix A*. Location of seawater intake where silt screen will installed as shown on attached Figure 5 in *Appendix B*.

In addition, difficulties were found for provision of the framed type silt screen at the seawater of City Garden. Please find the latest status and further details in Section 6.0 correspondingly. Up-to-date situation for the silt screen of the Quarry Bay and San Wan Ho, please refer to the Section 5.0 for further details.

3.0 Use of Material

Bonar SG 100/100 woven geotextile which manufactured by BONTEC is proposed as the silt screen system, catalogue is attached in *Appendix C*. BONTEC operated in accordance with an ISO 9001:2000 quality assurance system and ISO 14001 environmental management system to provide a good quality product. There was successful experience in the recent projects of Hong Kong such as

- i) Exhibition Centre Atrium Link Extension;
- ii) CV/2003/06 – Stanley Waterfront Improvement Project;
- iii) CV/2004/02 – Reconstruction of Wong Shek & Ko Lau Wan Public Piers;
- iv) CV/2002/04 – Penny’s Bay Reclamation Stage 2 and
- v) HK/12/02 – Central Reclamation Phase III, Engineering Works. Visual inspection of the silt screen shall be carried in a daily basis.

According to the Environmental Monitoring and Auditing (EM&A) Manual, regularly water monitoring of water quality shall be carried out by Environmental Team (hereafter ET) in order to complies statutory regulation and maintain quality of water during the construction activities being undertaken.

4.0 Silt Screen Installation Methodology

- A. Liaise with the owners and the operators of the saltwater intakes.
- B. Carry out condition survey to the existing screen frame of saltwater intakes.
- C. Assemble the silt screen system on land as the details shows in *Appendix A*.
- D. Delivery the silt screen system to the location of saltwater intakes by means of marine vessel.
- E. Crane boat to place the weight sinker onto the seabed.
- F. Install M24 anchor bolt to seawall above highest sea level by means of pneumatic drill for further fixing of silt screen system.
- G. Attach the anchorage steel chains to the weight sinker and silt screen system then deploy the silt screen system to the position.
- H. Fix both end of silt screen system to M24 anchor bolts to secure the silt screen system in position.
- I. The entire installation process shall be assisted by divers.
- J. Water sampling shall be taken behind the open top of the floating silt screen system.
 - J.1 The marine water quality impact monitoring will be associated with the works during the construction phase. Marine water quality monitoring for dissolved oxygen (DO), temperature (°C), salinity (ppt), turbidity (NTU) and suspended solid (SS) is therefore recommended to be carried out at WSD flushing water intakes. The marine water monitoring conducted during the works carrying out to ensure the compliance with the water quality standards.
 - J.2 All of the abovementioned parameters would be measured on –site except the laboratory test of suspended solid (SS).
 - J.3 The depth of marine water quality monitoring measured by echo sounder before sampling and monitoring. The samples should be taken at the position of the seawater intake of measured depth in each tide of each monitoring stations. Turbidity should be measured in-situ whereas SS should be determined by a HOKLAS laboratory.
 - J.4 Duplicate in-situ measurements and water sampling should be carried out in each sampling event. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.

5.0 Removal of silt screens of WSD salt water intake at Sai Wan Ho and Quarry Bay

CCJV advised that WDII Contractor Chun Wo – CRGL Joint Venture (hereafter CWCRLJV) had submitted silt screen deployment plan – supplementary information for existing WSD saltwater intakes at Quarry Bay and Sai Wan Ho to EPD for deposition under the Further Environmental Permit – No.: FEP-03/356/2009. A copy of covering letter CWCRLJV concerning the WSD saltwater intakes at Sai Wan Ho & Quarry Bay please refers to in *Appendix D*.

CCJV will hand over all of the obligations to CWCRLJV and CWCRLJV will take over all of the responsibilities (including all maintenances duties and removal works of these two silt screens) at WSD saltwater intakes at Sai Wan Ho and Quarry Bay.

In addition, CCJV will provide regularly inspection and maintenance on a daily basis for silt screen at Provident Centre till removal of silt screen.

6.0 Installation of Silt Screen at Seawater intake of City Garden

Under the master EP (Permit no. 356/2009) and further EP (permit no. FEP-01/356/2009), installation of silt screen at seawater intake is not the mandatory required. Previous of silt screen installation at City Garden is looking for a good view and used to protect the water quality for stakeholder of City Garden.

Further to the several meetings with the Cayley Property Management Limited (hereafter Cayley) of City Garden, Cayley advised CCJV that the City Garden Hotel did not approve to stop the pump plants for seawater intake at day time (Please refer to *Appendix E*).

In addition, the application of construction noise permit (CNP) for installation of silt screen at the seawater intake of City Garden had been rejected by EPD (Regional Office) last year, please refer to *Appendix F*.

As a result, the installation of silt screen was rejected on both restricted hours and day time period. Moreover, referring to the recent tele-conversations with Cayley, Cayley made no further adverse comment on whether the silt screen is to be installed or not. CCJV confirmed the tele-conversations details and sent a letter to Cayley, please refer to *Appendix G*.

7.0 Installation of Silt Screen at Seawater intake of Provident Centre

Similarly to the case of City Garden, installation of silt screen at seawater intake for Provident Centre is not the mandatory required under the master EP (Permit no. 356/2009) and further EP (permit no. FEP-01/356/2009). Previous of such silt screen installation at Provident Centre is looking for a good view and used to protect the water quality for stakeholder of Provident Centre.

Removal of the silt screen of Provident Centre will carry out after completion of dredging works and installation of seawall caisson on June 2011. CCJV will formally inform the property management company of Provident Centre prior demolition.

8.0 Silt Screen Removal

After completion of the marine works, all of the silt screen shall be removed as elaborated as follows:

- A. Prior to decommission of silt screen, make sure all dredging works and installation works of caisson seawall shall be completed.
- B. Inform the property management limited formally.
- C. Loosen the fixing end of the silt screen on seawall onboard of work boat.
- D. Deposition of silt screen system by means of work boat.
- E. Detach the anchorage steel chains from silt screen system and weight sinker.
- F. Lift up and remove weight sinker by crane boat.

9.0 Inspection & Rectification Works

- A. Diver inspection shall be carried out to inspect the installation of silt screen to ensure proper installation and functioning of the silt screen according to the design drawing.
- B. During the entire construction period, daily visual inspection shall be carried out to ensure proper functioning of the silt screen.
- C. Cleaning of silt screen by means of brush onboard of works in low tide period will be carried monthly or when required by IEC.
- D. Refuse around the silt screen system shall be collected at regular intervals on daily basis so that the water behind the silt screens kept free of floating debris.

E. According to the Environmental Monitoring and Auditing (EM&A) Manual, regularly water monitoring of water quality shall be carried out by ET in order to complies statutory regulation and maintain quality of water during the construction activities being undertaken.

F. The ET shall supervise the entire installation and decommissioning processes. The ET shall also closely monitor the effectiveness of the silt screen and report any irregularities which may affect its proper functioning so as to trigger early rectification by the contractor.

G. In case of any malfunction of the silt screen or damaging is suspected in daily inspection, diver inspection shall be carried out to thoroughly check whether there is any damage or defect of the silt screen and the situation will be immediately reported to the ET. Once the damage or defect is found, an immediate rectification works shall be carried out to maintain well-functioning of the silt screen after the ET leader agree on the rectification methods.

H. An additional 20 linear meters spare silt screen shall be available and keep on site for emergency replacement if damage or defect.

~ END ~

APPENDIX A

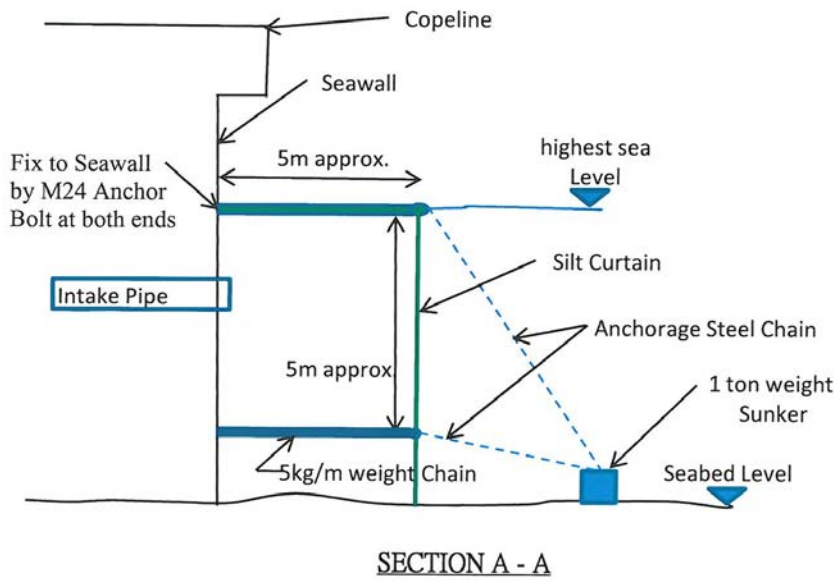
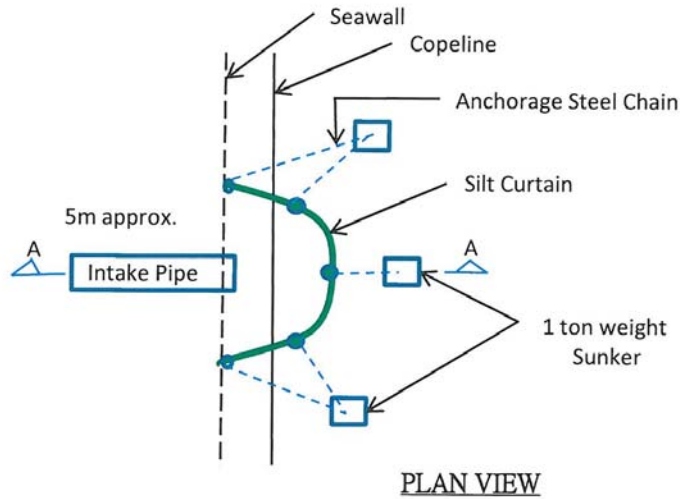
DETAIL OF SILT SCREEN (For Provident Centre only)

Contract No.: HY/2009/11

Central - Wanchai Bypass, North Point Reclamation

Silt Screen Detail at Provident Garden

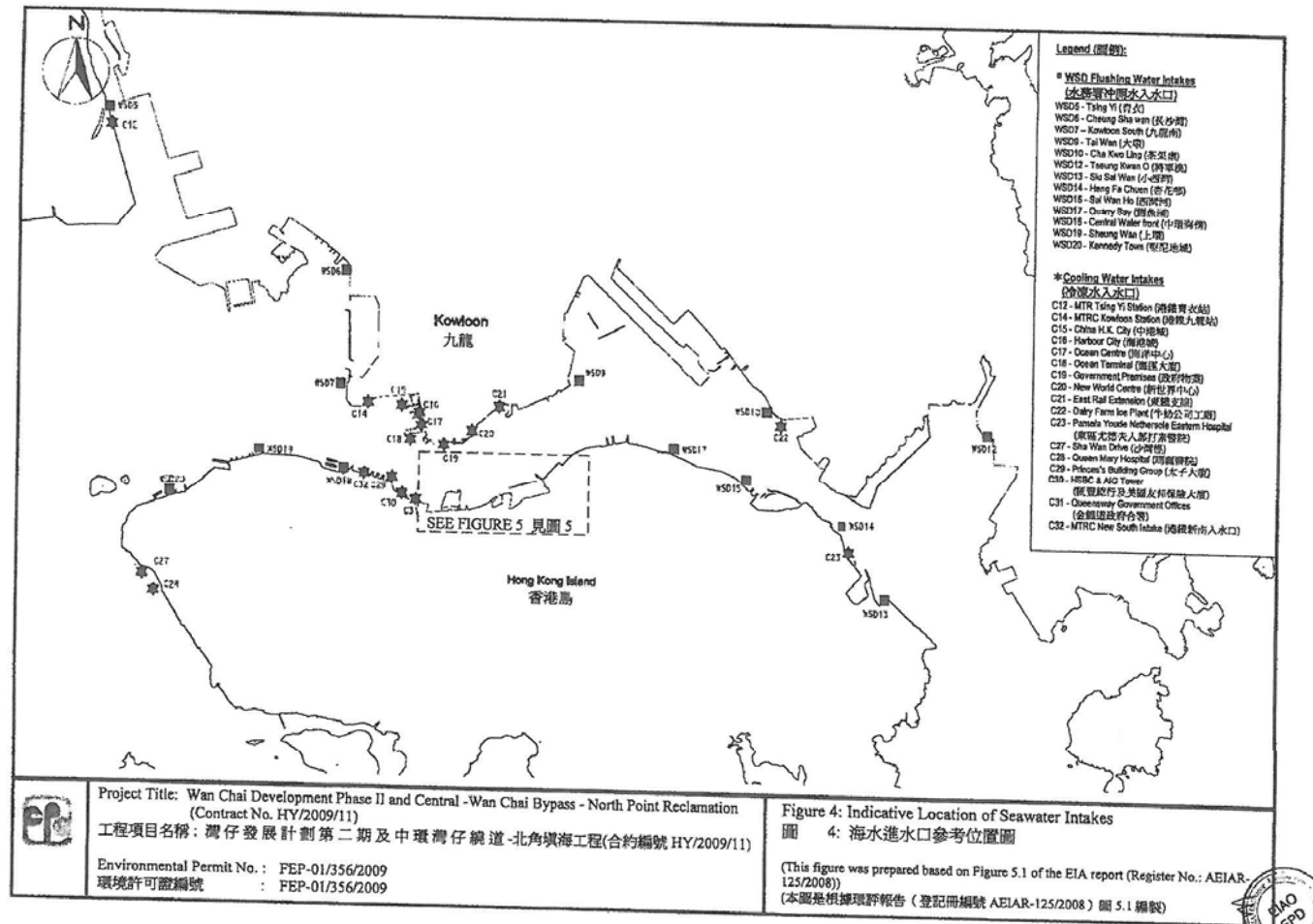
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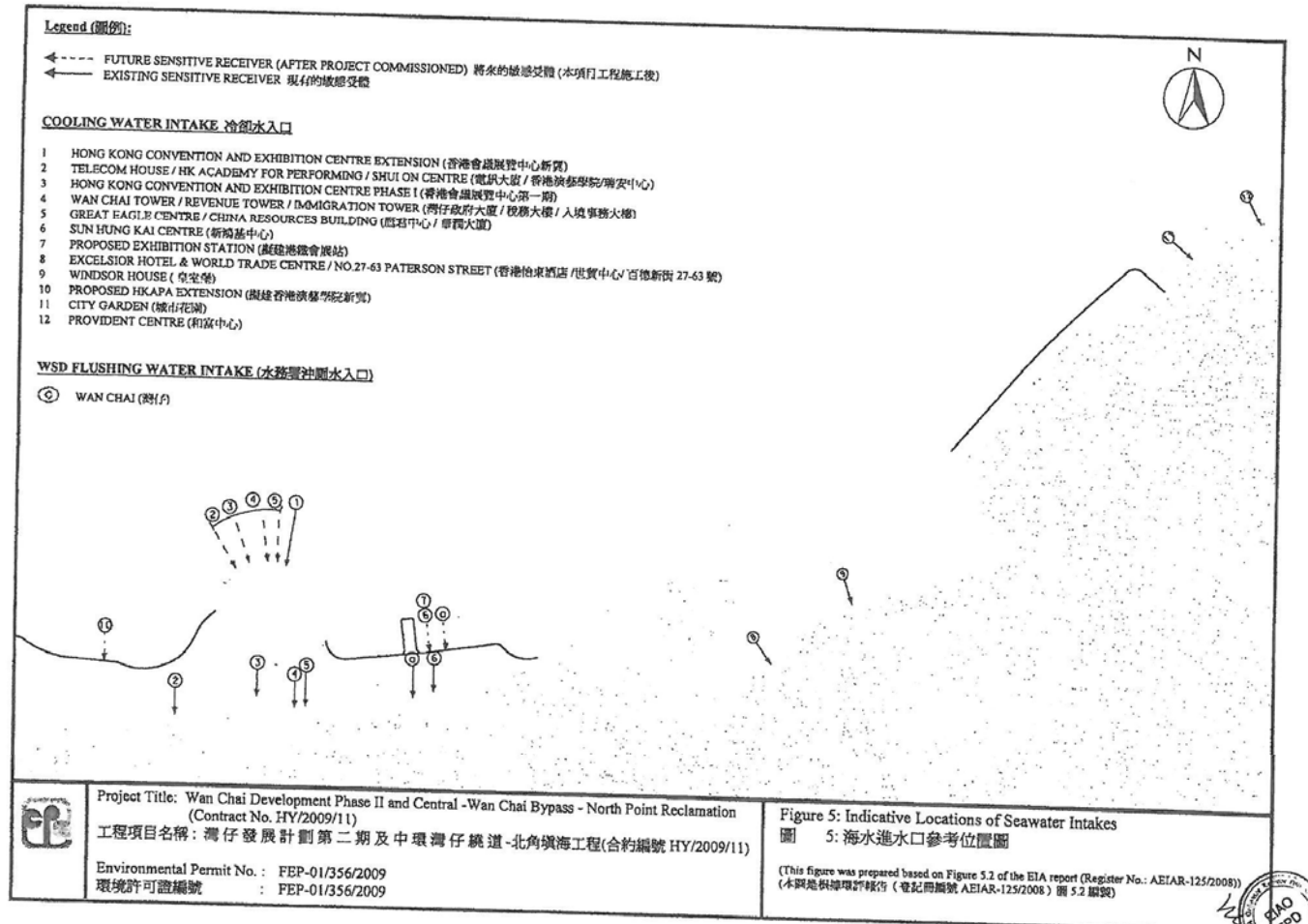


China Harbour Engineering Company Limited - China Road and Bridge Corporation Joint Venture

APPENDIX B

LOCATIONS MAP OF SILT SCRREN FOR SEAWATER INTAKE





Project Title: Wan Chai Development Phase II and Central - Wan Chai Bypass - North Point Reclamation
 (Contract No. HY/2009/11)
 工程項目名稱: 灣仔發展計劃第二期及中環灣仔繞道-北角填海工程(合約編號 HY/2009/11)
 Environmental Permit No.: FEP-01/356/2009
 環境許可證編號: FEP-01/356/2009



APPENDIX C

MATERIAL CATALOGUE OF SILT SCREEN

Silt Curtain
Bontec SG100/100

April 2007



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6) <u>Approval Letters</u>	
- Bonar's product recognition	
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Manufacturer Company Profile



The advertisement features a photograph of a modern, dark-colored building with large glass windows. In front of the building, a red truck is parked, with a white trailer that reads "GEOTEXTILES AGROTEXTILES" and "www.bonartf.com". To the left of the truck, a sign displays the Bontec logo and the text "Bontec Geotextiles". Below the photograph, there are five small images showing different types of geotextiles: a woven fabric, a nonwoven fabric, a fibrous material, a fibrous material, and a white fabric. The background of the advertisement is red.

WE UNDERCOVER THE WORLD

bontec

woven and nonwoven geotextiles

A TOTAL RANGE OF GEOTEXTILES

WHY CHOOSE BONTEC® GEOTEXTILES ?



Bonar Technical Fabrics is Europe's premier manufacturer of woven and nonwoven geotextile products. Through our continuous commitment to quality, product development and production improvement, we have earned our position as a major player in our markets. Today, with over 30 years' experience in the geosynthetics industry, and the full backing of our parent company, we are confident that we will continue to grow our business and remain at the forefront of our markets for many years ahead.

Manufactured under the brand name Bontec® using state of the art geotextile production technology, our woven and nonwoven geotextile ranges offer product solutions for the functions of Separation, Filtration, Drainage, Erosion Control, Reinforcement and Protection.



Fibre Extrusion

■ In-house Fibre Production

Fibre production involves the extrusion of continuous filaments that are then cut into short staple fibres. Through the careful identification of fibre formulation, filament density and staple fibre length, we can ensure that the mechanical and hydraulic properties are maximised for each of our nonwoven product ranges.



Non-woven geotextiles

■ Nonwoven Geotextile Production

Using ultra modern needle punching looms and a unique thermal bonding process, our nonwoven geotextile production involves the processing of a uniform web of staple fibres that are orientated and bonded to form a finished sheet product.



Woven geotextiles

■ Woven Geotextile Production

Polypropylene tapes are manufactured in our slit film extrusion department prior to being woven on Sulzer looms. The warp tapes (machine direction) are beamed into the loom and the weft tapes (cross-machine direction) are threaded over and under alternate elements. The woven product that emerges offers very high mechanical strengths per unit weight.



State of the art laboratory

■ Quality and the Environment

All plants operate in accordance with an ISO 9001:2000 Quality Assurance System and ISO 14001 Environmental Management System. Products are tested internally in our fully equipped geosynthetics laboratory in accordance with the latest European and International standards.



First class customer service

■ First Class Customer Service

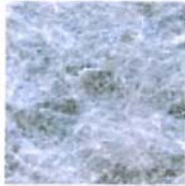
At Bonar we believe the customer should be able to purchase the most appropriate product for his task. As such our staff are readily available to offer a full service package from the initial product selection phase, through to final delivery and the provision of after sales support.



Bonar Technical Fabrics has been an active Corporate Member of the International Geosynthetics Society since 1985.

BONTEC®: A TOTAL RANGE OF GEOTEXTILES

NON-WOVEN GEOTEXTILES



■ **NW: Thermally Bonded Non Woven Geotextiles**

Produced using mechanical and thermal bonding processes, the NW range is primarily used for lightweight separation and filtration. Their excellent hydraulic properties result in their preferred use in filtration applications. Typical uses include as a filter to encapsulate a trench drain or a granular drainage blanket.



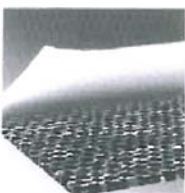
■ **SNW: Superior Needle-punched Nonwoven Geotextiles**

Made from white high tenacity fibres, the SNW range offers maximum performance per unit weight and is ideal for use in applications where both strength and elongation are key parameters of the geotextiles' performance.



■ **VNW: Coloured Needle-punched Nonwoven Geotextiles**

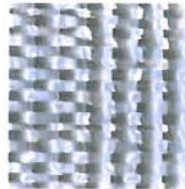
Produced using multi-coloured staple virgin fibres, products range from 200 to 1800g/m². VNW grades offer a felt like appearance and are used in the functions of protection, drainage and erosion control. Areas of application include membrane protection in landfill and reservoirs, or for erosion control on riverbanks and coastlines.



■ **LG: Geocomposites**

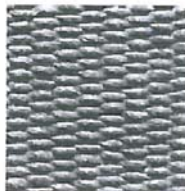
Produced via a combination of woven and nonwoven technology, the LG range offers the best of both product types in a single layer. The resulting products are ideally suited to uses where a high demand is placed on the geotextiles' strength, protection efficiency and physical robustness.

WOVEN GEOTEXTILES



■ **SG: Standard Grade Light weight Woven Geotextiles**

Increasing from 70 to 200g/m², SG lightweights are used primarily for separation to prevent good quality granular fill intermixing with the poorer soil below. Typical uses include in new highways, car parks, airport runways, under stone foundation layers for new buildings etc.



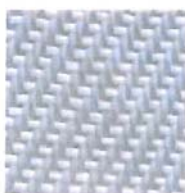
■ **SG: Standard Grade Heavy weight Woven Geotextiles**

With possible tensile strengths in excess of 200kN/m, SG heavyweight geotextiles are used in applications where the loadings are severe. Uses include short term basal reinforcement, coastal erosion schemes or areas requiring general soil stabilisation.



■ **HF: High Flow Woven Geotextiles**

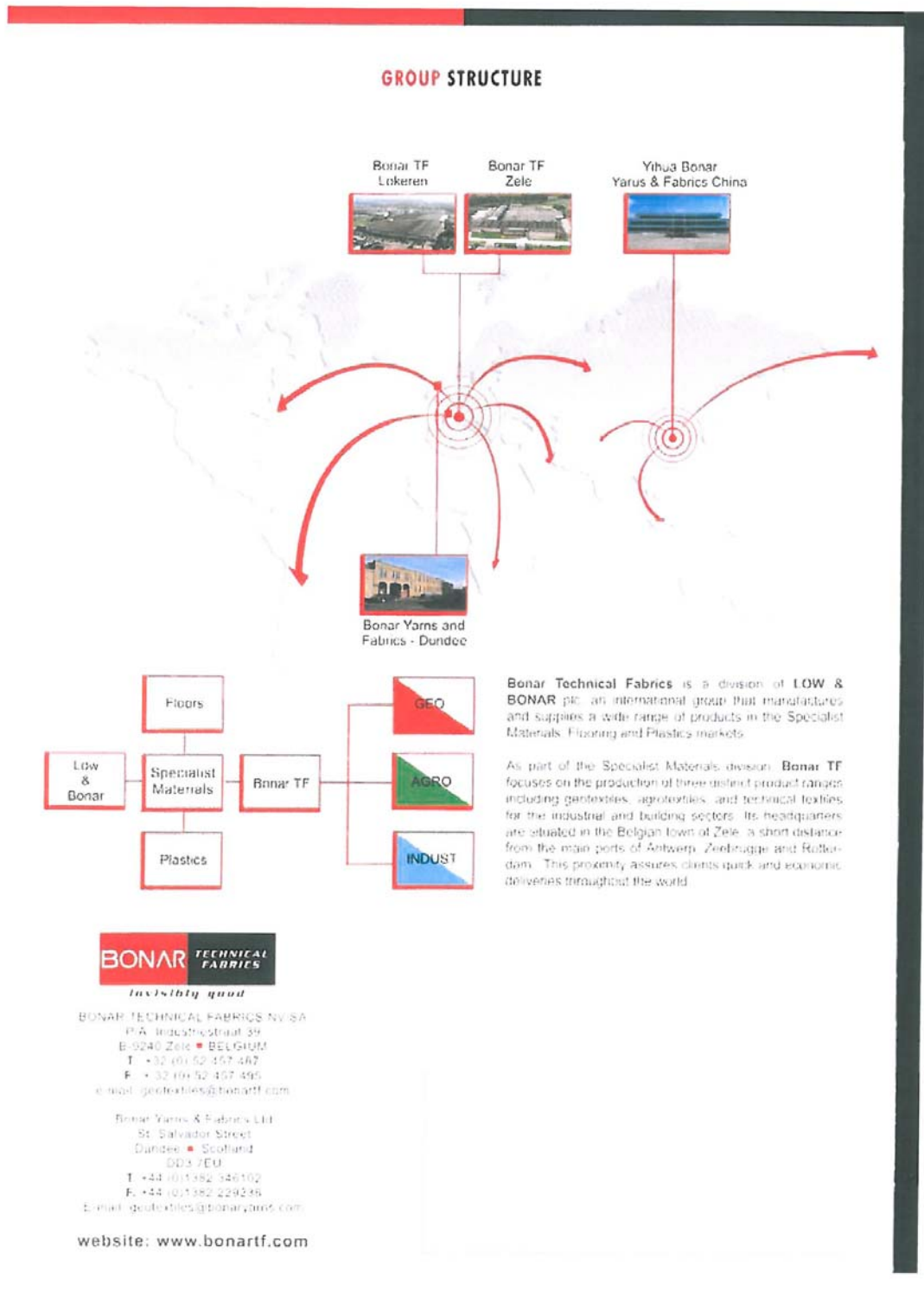
Used where there exists a requirement for the quick escape of excess water, HF fabrics are used primarily in erosion control applications, e.g. under concrete retaining blocks or between dissimilar layers of quick draining granular fill e.g. a coarse sand and rounded gravel.



■ **HS: High Strength Woven Geotextiles**

Produced from high tenacity polyester yarns, the HS products offer tensile strengths up to 600kN/m combined with low extension and excellent creep characteristics. Applications include the reinforcement of vertical walls, steep slopes and embankments over soft soil with long term design lives.





Product Specification

bontec

a bonar technical fabrics product

SG 100/100

Technical data sheet according to internal specifications Bonar TF: version 03 dd. 17/02/03
Accompanying documents CE marking: version 01 dd. 01/10/02



1137
1137-CPD-601
03

separation	filtration	reinforcement	protection	drainage

	test method	value	tolerance
Mechanical properties			
Tensile strength MD	EN ISO 10319	110 kN/m	- 9,9 kN/m
Tensile strength CD	EN ISO 10319	110 kN/m	- 9,9 kN/m
Elongation MD	EN ISO 10319	20 %	+/- 4,6 %
Elongation CD	EN ISO 10319	11 %	+/- 2,53 %
Static puncture resistance – CBR	EN ISO 12236	12,5 kN	- 2,5 kN
Dynamic perforation resistance – cone drop	EN 918	10 mm	+ 2 mm
Hydraulic properties			
Water permeability normal to the plane	EN ISO 11058	23 x 10 ⁻³ m/s	- 6,9 x 10 ⁻³ m/s
Water flow normal to the plane (*)	EN ISO 11058	23 l/m ² .s	- 6,9 l/m ² .s
Characteristic opening size	EN ISO 12956	190 µm	+/- 57 µm
Physical properties			
Thickness under 2 kPa (*)	EN 964/1	1,53 mm	+/- 0,31 mm
Weight (*)	EN 965	475 g/m ²	+/- 47,5 g/m ²
Composition	100 % polypropylene woven geotextile		

Durability	<ul style="list-style-type: none"> geotextile has to be covered within 2 weeks after installation 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 13249:2000	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 13265:2000

- This geotextile is intended for use in both functions & applications highlighted with a bold border.
- Roll dimensions are 5,25 m x 100/200 m. Other dimensions on demand.
- Bonar Technical Fabrics reserves the right to alter product specifications without prior notice. It is the responsibility of all users to satisfy themselves that the above data is current.
- Although not guaranteed, these results do to the best of our knowledge offer a true and accurate record of the product's performance.
- Bonar Technical Fabrics cannot accept responsibility for the performance of these products as the conditions of use are beyond our control.

(*) Not mandated characteristics for CE marking.



BONAR Technical Fabrics nv/sa
Bonarstraat 19 • B-1040 Zaventem • Belgium
Tel. +32 (0)27 457 431 • Fax +32 (0)27 457 435
E-mail: geotextiles@bonar.be

BONAR Yarns & Fabrics Ltd
St. Salvator Street • Dundee DD1 3TU • United Kingdom
Tel. +44 (0)1382 349550 • Fax +44 (0)1382 202370
E-mail: ygs40@bonaryarns.com

Specification Comparison
 Particular Specification vs Bonar SG 100/100

Updated: 25/08/2006

<u>Properties</u>	<u>Particular Specification</u>		<u>Bonar SG 100/100</u>	
	<u>Test Method</u>	<u>Technical Data</u>	<u>Test Method</u>	<u>Technical Data</u>
Tensile strength MD	(mean value)	55 kN/m	EN ISO 10319	110 kN/m
Tensile strength CMD	(mean value)	55 kN/m	EN ISO 10319	110 kN/m
Elongation MD	-	-	EN ISO 10319	20%
Elongation CMD	-	-	EN ISO 10319	11%
Mass per unit area	(mean value)	330 g/m ²	EN 965	475 g/m ²
Thickness at 2kN/m ²	-	-	EN 964-1	1.53 mm
Dynamic perforation resistance	-	-	EN 918	10 mm
Resistance to static puncture	-	-	EN ISO 12236	12.5 kN
Opening size O90	(maximum value)	190 um	EN ISO 12956	190 um
Water permeability	-	-	EN ISO 11058	23 mm/s
Material	-	PP woven	-	PP woven
Roll width	-	-	-	5.25 m
Roll length	-	-	-	100 m

Ref:\...\comp.xls

Page 1 of 1

Certification





Iedere persoon die kennis heeft van misbruik van dit certificaat moet BQA, nv hiervan in kennis stellen. Het openbaar maken van dit certificaat is slechts in zijn geheel toegestaan.
BQA, nv - Montoyerstraat 24 (B9) - 1000 Brussel

AC/AJ/C/02-05-2005



Exchange: +32 (0) 52 45 74 11
Geo: +32 (0) 52 45 74 87
Agro: +32 (0) 52 45 74 01
Carpet & Fibres: +32 (0) 52 45 74 83
Accountancy: +32 (0) 52 45 74 10
Purchase: +32 (0) 52 45 74 13
Fax General: +32 (0) 52 45 74 54
Fax Geo/Carpet: +32 (0) 52 45 74 95
Fax Agro: +32 (0) 52 44 56 04
Fax purchase: +32 (0) 52 45 74 19
www.bonartf.com

Zele, 14.07.06

CERTIFICATION OF CONFORMANCE

The undersigned supplier BONAR TECHNICAL FABRICS, hereby states under his responsibility that the following product complies with the indicated technical properties :

L/C n°ICBC04M606896

Type SG 100/100 : 13125,0 m²
Type VNW 200-PP-K 9773,2 m²

Manufacturer : Bonar Technical Fabrics N.V

BONAR TECHNICAL FABRICS N.V.


BONAR TECHNICAL FABRICS N.V.
Industriestraat 39
B-9240 Zele

BONAR TECHNICAL FABRICS nv/sa
Industriestraat 39 Zone 22 • B-9240 Zele • BELGIUM • HR Dendermonde 57 031 • BTW/TVA BE 421 053 442 • Ondernemingsnummer: 0421 053 442



ING IBAN BE64 3900 9581 7059
BIC: BBRJ BE BB

FORTIS IBAN BE45 2930 1911 2489
BIC: GEB ABEBB

KBC IBAN BE66 4400 0019 1143
EIC: KRED BE BB

ING BREDA IBAN NL34 BBRU 020 9944633
BIC: BBRUNL2X

FROM : G AND E COMPANY LIMITED PHONE NO. : + 852 2570 0069 Apr. 28 2005 12:00PM P1
12/08 2004 16:43 FAX 32 32 457495 BONAR TF GEO 001/001

bontec

A bonar technical fabrics product

Fax

Date: 11-Aug-04	From: Isabelle Ruyffelaere - 0032 52 457 487
To: G and E - Hong Kong	Philippe Grimmelpez - 0032 52 457 486
Mr. Gary NG	Pages: 1 +
Fax:	Your reference: Bonar TF acquisition of Uco Technical Fabrics
	Our reference: G&E11082004.fax

To Whom it may concern

We hereby confirm that Bonar acquired the company UCO Technical Fabrics in October 1996 and all activities of the manufacturing and sales of Woven and Non woven geotextiles.

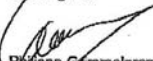
The Company changed name to **BONAR TECHNICAL FABRICS**.

Its headquarters are moved to Industriestraat 39, 9240 Zele, Belgium. At the same location is a new manufacturing plant of non woven geotextiles based.

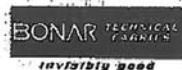
The plant where woven geotextiles are produced is based on the old UCO location: weverslaan 15, Lokeren, Belgium.

Should you require any further information, please do not hesitate to contact us.

Best regards



Philippe Grimmelpez
Sales & Marketing Manager geotextiles.



BONAR Technical Fabrics nv/sa
Industriestraat 39 • B-9240 Zele • Belgium
Tel +32 (0)52 457 411 • Fax +32 (0)52 457 486
E-mail geotextiles@bonar.com

BONAR Yarns & Fabrics Ltd.
St. Salvador Street • Dundee DD3 7EL • United Kingdom
Tel +44 (0)1392 346102 • Fax +44 (0)1392 202278
E-mail nyarn@bonaryarns.com

bontec

a bonar technical fabrics product

fax

Date: 14-Jun-05	
To: G and E – Hong Kong Mr. Gary NG / Mr Stanley	From: Isabelle Ruyffelaere – 0032 52 457 487 Philippe Grimmelpez – 0032 52 457 486
Fax:	Pages: 1 +
Your reference: SG 100/100	
Our reference: G&E06142005.fax	

Dear Gary,

- With reference to your inquiry of we hereby would like to confirm that:

Bontec SG 100/100 geotextile is woven in our vertical integrated plant in Belgium according the strict Iso 9001 : 2000 quality and ISO 14001 environmental system.

- a/ The material is resistant to all naturally occurring soil acids and alkalis.
- b/ The material is resistant to biological attack
- c/ when used correctly (cfr installation guidelines), resistant to deterioration vaused by the effects of exposure to weather and burial. The polymers contain special stabilizers to resist to normal UV and oxidation.
- d/ this is stable over temperatures of 0 – 60 °C.
- e/ The material is resistant to normal forces imposed during installation. Special forces that might occur during construction / installation must be given to Bonar so that special studies can be done.

Should you require any further information, please do not hesitate to contact us.

Best regards


Philippe Grimmelpez
Sales & Marketing Manager



BONAR Technical Fabrics nv/sa
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BONAR Yarns & Fabrics Ltd
St. Salvador Street • Dundee DD3 7EU • United Kingdom
Tel +44 (0)1382 346102 • Fax +44 (0)1382 202378
E-mail rguid@bonaryarns.com

Installation Guideline

BONTEC: Woven and Non Woven Geotextiles manufactured by Bonar Technical Fabrics – Belgium.



RECOMMENDATION FOR THE INSTALLATION OF GEOTEXTILES

- The **BONTEC** geotextiles shall be kept in its original packaging in order to protect it from damaging UV-rays and high temperatures.
- The **BONTEC** geotextiles shall be stored protected from wind, rain, excess moisture or sunlight.
- The **BONTEC** geotextiles shall only be unpacked just before use. The material shall be covered within 1 week
- The **BONTEC** geotextiles shall be labelled and show the following data :
 - roll number
 - quality
 - name of the manufacturer
 - roll length & width
 - roll weight
- The **BONTEC** geotextiles shall be laid with the longitudinal axis down slopes
- A minimum overlap of 500 mm between the different sheets shall be respected. Sewing of the different fabrics shall be done with a double prayer stitching technique with non deteriorating thread.
- Wherever visibility or installation of the **BONTEC** geotextile is poor an extra safety overlap of +/- 1 m shall be respected
- The surfaces to be covered with **BONTEC** geotextiles shall be smooth and free of sticks, roots, sharp objects, and all debris that may damage the fabric. The surface to be covered shall be firm and unyielding, with no sudden changes or brakes in grade.
- The compacted sub-base shall be maintained in a smooth, uniform and compacted condition during installation of the fabric.
- In area's where wind is prevalent, fabric installation shall be started at the upwind side of the project and proceed downwind. The leading edge of the fabric shall be secured at all times with sandbags or other means sufficient to hold it down during high winds. Sandbags or rubber tires may be used as required to hold the fabric in position during installation. Tires shall not have exposed steel cords or other sharp edges which may snag or cut the fabric. Materials, equipment or other items shall not be dragged across the fabric or be allowed to slide down slopes on the fabric.
- Should the fabric be damaged during any step of the installation, the damaged section shall be repaired by covering it with a piece of fabric which extends at least 0,6 meter in all directions beyond the damaged area. The fabric shall be secured as directed by the engineer.
- Smoking shall not be permitted by personnel working on the fabric.

P.geodiversen/installationgeot.doc

List of Project Reference

Bonar

Date	Project	Client	Consultant	Style
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
Feb-05	99/9028 Lamma Power Station	Wai Kee (Zens) Construction & Transportation Co Ltd	Maunsell Geotechnical Services Ltd	SG100/100
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
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
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
May-05	03/8013 Lamma Island to Cyberport	Leader Marine Contractors Ltd Honwin Engineering Ltd	Maunsell Geotechnical Services Ltd	SG100/100 SG100/100
Jul-05	Shenzhen to Tai Po Twin Submarine Gas Pipeline Project	Honwin Engineering Limited		SG100/100
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
Nov-05	HY/2002/26 Stone Cutter's Bridge	r Hong Kong River Engineering Co Ltd	Ove Arup	SG100/100
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 Department	SG100/100
Mar-06	Maintenance Dredging at Castle Peak Power Station (CPPS) Jetty	New Concepts Engineering Development Ltd	Civil Engineering Department	SG100/100
Mar-06	CV/2004/04	China Harbour Engineering	Civil Engineering	SG100/100
		Bonar Woven Geotextile		

		Co (Group)	Department	
Mar-06	HY/2005/06 Castle Peak Road Improvement West of Tsing Lung Tau	Shun Tat Construction Engineering Limited	Mouchel Halcrow JV	SG100/100
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 and Partner	SG100/100 NW15
Jun-06	Hong Kong Convention and Exhibition Centre	Wai Kee (Zens) Construction & Transportation Co Ltd Kaden - Wai Kee (C&T) Joint Venture		SG100/100 SG100/100
Aug-06	EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38	Kaden Construction Limited	Scott Wilson Ltd	SG100/100
Oct-06	Lamma Island Cable Landing	United Marine Co Ltd	Hong Kong Electric Co Ltd	SG100/100
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
Dec-06		Friendly Benefit Engineering Ltd		SG100/100
Feb-07	Prebored Socketted H-Piles at Hong Kong Convention & Exhibition Centre March 12, 2007	Yee Hop Engineering Co Ltd		SG100/100

Bonar Woven Geotextile

2

Approval Letters

FROM : G AND E COMPANY LIMITED PHONE NO. : + 852 2570 0089 Apr. 28 2005 12:02PM P6

CEDD 土木工程拓展署
Civil Engineering and Development Department

RECEIVED
 R26.10.05.D

土木工程處
 Civil Engineering Office

Web site 網址 : <http://www.cedd.gov.hk>
 E-mail 電子郵件 :
 Telephone 電話 : (852) 2760 5737
 Facsimile 傳真 : (852) 2714 2054
 Our reference 本署編號 : () in PW WC/CV0402/R20/340 Pt.1
 Your reference 來函編號 : KS330/2005

香港九龍公主道101號
 土木工程拓展署大樓四樓
 4/F, Civil Engineering and Development Building,
 101 Princess Margaret Road,
 Kowloon, Hong Kong

24 January 2005

BY MAIL & FAX No. 2780 2085

Kin Shing Construction Company Limited
 1/F,
 27 Yün Chong Street,
 Mong Kok
 Kowloon
 (Attn.: Mr. Patrick P K Chau – Site Agent)

Dear Sirs,

Contract No. CV/2004/02
Reconstruction of Wong Shek and Ko Lau Wan Public Piers

Material Submission – Geotextile for Silt Curtain

I refer to your letter of 14.1.2005 enclosing the particulars of the geotextile for fabrication of silt curtain.

In accordance with PS Clause 26.08(2), the proposed "SG 100/100" woven geotextile manufactured by Bonar Technical Fabrics is approved to be used under the captioned Contract.

Pursuant to PS Clause 26.08(1), you are required to submit details of the silt curtains 3 weeks before their deployment.

Contract No.	CHK	Initial	Copy	Action
CK				
EN				
SA				
Sub-A				
Est./11				
Est./11				
C.P.				
Formal				
Q.S.				
Salary				
Material				
Survey				

Yours faithfully,

(Signature)
 (W H LEE)
 Engineer's Representative
 Port Works Division
 Civil Engineering and Development Department

c.c.
 S10W/P2B – Site Copy

cls

100/1002 0962#

P2B.28.2005 17:33

FROM : G AND E COMPANY LIMITED PHONE NO. : + 852 2570 0089 Apr. 28 2005 12:02PM P7
 24-FEB-2005 18:57 FROM SFK TO 25700089 P.01/01
 10' d 74101

土木工 程 拓 展 署
CEDD Civil Engineering and Development Department

Web site 網址 : <http://www.cedd.gov.hk>
 E-mail 電子郵件 :
 Telephone 電話 : (852) 2762 2035
 Facsimile 傳真 : (852) 2714 2054
 Our reference 本署編號 : (15) in PW WC/CV0306/R20540 P.01
 Your reference 來函編號 : CV0306/1/2/HW/SY/CC/mr(S0087),
 CV0306/1/2/HW/SY/CC/mr(S0114)

土木工 程 處
 Civil Engineering Office

香港九龍公主道 101 號
 土木工 程 拓 展 署 大 樓 4 樓
 4/F, Civil Engineering and Development Building,
 101 Princess Margaret Road,
 Kowloon, Hong Kong

18 February 2005

Sun Fook Kong (Civil) Limited
 Rms. 3207-10,
 Great Eagle Centre,
 23 Harbour Road,
 Wan Chai,
 Hong Kong
 (Attn: Mr. Howard KONG - Fax No.2827 6275)

Dear Sirs,

Contract No. CV/2003/06
Stanley Water-front Improvement Project -
Construction of Pier and Boardwalk

Fabric for Silt Curtain

I refer to your above letters dated 21.1.2005 and 15.2.2005 proposing the SG100/100 fabric supplied by "Bonar Technical Fabrics" for silt curtain.

I have no objection to your proposed material for silt curtain.

Yours faithfully,

Paul Y.K.M.A.
 (Paul Y.K.M.A.)

Engineer's Representative
 Port Works Division
 Civil Engineering and Development Department

c.c.
 Site Office (Attn: SIOW/PIA)
 CEG/PIA

File PW WC/CV0306/M10/300

YK:MM

Post-Net Fax Note	7671	Date	24/2/05
To	MR. STANLEY WAN	From	CHANG SZE FAO
Co./Dept.	CE&E	Co.	SFK
Phone #	2508 0028	Phone #	6341709
Fax #	25700089	Fax #	

TOTAL P.01

FROM : G AND E COMPANY LIMITED PHONE NO. : + 852 2578 0889 Apr. 28 2005 12:01PM P5

Mott MacDonald Hong Kong Limited
 Consulting Engineers

Chief Resident Engineer's Office
 North Lantau Development - Tung Chung
 for Territories Development Department

Our Ref : S287/NL1/25.7/283/JY

30 June 1992

China Harbour Engineering Company
 19/F, China Harbour Building
 370-374 King's Road
 North Point
 Hong Kong.

Attn : Mr. S. Y. Yu

T.D.D. CONTRACT NO. NL 1/91 C. E. Dept.		
DATE	ACTION	BY/FORM
SA		llc
DBA		
DS		
ENG		
SUR		
FOREMAN		
FILE		llc

Dear Sirs,

North Lantau Development
 Contract No. NL1/91
 Tung Chung Development Phase I - Site Formation
 Materials for Subsoil Drains

I refer to your letter ref. NL1/C/0097/008/MM/145 of 10/6/92 submitting materials for subsoil drains for our approval.

I have the following comments :

- 1) The proposed subsoil drain material - i.e. 300mm diameter ADS corrugated polyethylene subsoil drain pipes from Benpak Waterwise company is acceptable.
- 2) The proposed Geotextile SG17/15 from UCO (2 layers) as protection for subsoil drainage is acceptable in principal. Please submit further technical specification such as lapping and site storage requirements recommended by the manufacturer.
- 3) The proposed Greenfix Eromat Special type 5 from CCL is still under review. You will be notified of the outcome if a decision is made.

Yours faithfully
 for MOTT MACDONALD HONG KONG LIMITED

(Signature)
 Luke Chi
 Engineer's Representative

LC/Y/ak
(Signature)

llc
2/7
llc
30/6

(Signature)

Photos References



G AND E COMPANY LIMITED

Rm. B, 13/F Cheung Lee Ind. Bldg.
9 Cheung Lee Street
Chai Wan, Hong Kong
Tel: 2508 0028 / 2570 0103 Fax: 2570 0089



APPENDIX D

A COPY OF COVERING LETTER FROM CHUN WO – CRGL JOINT VENTURE



俊和 - 中國中鐵聯營
CHUN WO - CRGL JOINT VENTURE

Your reference :

Our reference : CWCRLJV/573/1344-2010

5 October 2010

Environmental Protection Department
The EIA Ordinance Register Office,
27/F, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong

Attn: Mr. Raymond L. Y. Lai - Environmental Protection Officer

Dear Sirs,

Contract No. HK/2009/02
Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East
Further Environmental Permit – No.: FEP - 03/356/2009
Submission of Silt Screen Deployment Plan – Supplementary Information for
Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho

Pursuant to the FEP-03/356/2009 Special Conditions Part C Clause 2.9, we submit herewith the following documents for your perusal:

1. Silt Screen Deployment Plan – Supplementary Information for Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho (4 Hard Copies and 1 Electronic Copy);
2. Letter of Certification from Environmental Team (Lam Geotechnics Limited); and
3. Letter of Verification from Independent Environmental Checker (ENVIRON Hong Kong Limited).

Should you have any query, please do not hesitate to contact our Miss Flora Ng at 3658-3064.

Your attention to this matter is fully appreciated.

Yours faithfully,
For and on behalf of
Chun Wo-CRGL Joint Venture

Chan Sing Cho
Project Manager

Encl. as stated
cc.
CEDD – SE - Patrick Keung (w/encl)
AECOM – CRE - Mr. Ian J Jones (w/encl)
Environ – IEC - Mr. David Yeung (w/encl)
Lam – ET Leader - Mr. Raymond Tai (w/encl)

FN/bt

香港九龍長沙灣大南西街601至603號香港紗廠工業大廈一期五樓C室
5C, Hong Kong Spinners Industrial Building Phase 1, 601-603 Tai Nan West Street, Cheung Sha Wan, Kowloon, Hong Kong.
Tel: (852) 3758 8711 Fax: (852) 2744 6937

APPENDIX E

LETTER FROM CAYLEY PROPERTY MANAGEMENT LIMITED (Refusal of Installation of Silt Screen at seawater intake of City Garden)

28-01-11 11:57 AM :CHEC

+852 2512 0427 # 1/ 1

28-JAN-2011 11:57 FROM CAYLEY PROPERTY LTD

TO 25120427

P.01/01

Your Ref: CHEC-CRBCJV/C-257/02.08/002227
Our Ref: CG/L/118-01-2011

28 January 2011

China Harbour Engineering Company Limited-
China Road and Bridge Corporation Joint Venture
19th Floor, China Harbour Building,
370-374 King's Road,
North Point, Hong Kong.

Attn: Mr. Daniel Cheung
Site Agent



Cayley Property

By Fax(No: 2512-0427) & By Post

Dear Mr. Cheung,

Contract No. HY/2009/11
Central - Wan Chai Bypass- North Point Reclamation
Proposal of Silt Screen Installation Schedule at City Garden

We refer to your letter of 10 January 2011 with reference number CHEC-CRBCJV/C-257/02.08/002227 regarding the subject matter.

It is regretted to inform your esteemed company that the major owner of the above Sea Water Pump Plant i.e. City Garden Hotel has raised out her objection to your proposed time schedule for suspension of the sea water pump operation for the silt screen installation.

In order to obtain an easier mutual consents from all concerned parties to your proposed time schedule on silt screen installation, we are of the view that it is deemed necessary to minimize the interruption of their business hours and the suspension of the operation of the sea water pump should be confined from 01:00 a.m. to 04:00 a.m. in winter season.

Please therefore work out your revised time schedule to us in accordance with their request for our transmission to all concerned parties for their further consideration at soonest possible.

Should you have any queries or need further discussion, please feel free to contact our Mr. C. K. Wong at telephone no: 3749-6013 during office hours.

Thank you for your kind attention and action, please.

Yours faithfully,
For and on behalf of
CAYLEY PROPERTY MANAGEMENT LIMITED


Johnny Au
Estate Manager

RT/JA/CKW/ty

o.c. All Commercial Owners of Blocks 1-14
City Garden Hotel




carling company

Cayley Property Management Limited
Shop 1A, 1/F, Block 7 City Garden Shopping Centre
233 Electric Road, North Point, Hong Kong
Tel: 4852 2566 7911 Fax: 4852 2807 0719
www.cayley.com

 A MEMBER OF THE HONG KONG REAL ESTATE ASSOCIATION

TOTAL P.01

APPENDIX F

REFUSAL OF APPLICATION OF CONSTRUCTION NOISE PERMIT (CNP) (For Application of Silt Screen Installation at City Garden during Restricted Hour)

本署檔案 (5) in 323622
OUR REF:
來函檔案
YOUR REF:
電話 25161716
TEL NO:
圖文傳真 29601760
FAX NO:
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong



環境保護署
環保法規管理科
區域辦事處(南)
香港鰗魚涌
海灣街一號
華懋交易廣場二樓

30 November 2010

To: CHINA HARBOUR ENGINEERING COMPANY LIMITED
AND CHINA ROAD AND BRIDGE CORPORATION (trading
as China Harbour Engineering Company Limited – China Road
and Bridge Corporation Joint Venture)
19/F, CHINA HARBOUR BUILDING,
370-374 KING'S ROAD,
NORTH POINT,
HONG KONG

Dear Sir,

Notice of Refusal to issue Construction Noise Permit
pursuant to Section 8(7) of the Noise Control Ordinance (Cap. 400)

I write to inform you that, under Section 8(5) of the Noise Control Ordinance, the Authority has decided to refuse to issue a construction noise permit in respect of your application, which was received by the Authority on 16 November 2010, for the use of powered mechanical equipment for carrying out construction work at **SEAWATER INTAKE OF CITY GARDEN (BETWEEN BLOCK 6 AND BLOCK 7), NORTH POINT, HONG KONG.**

The reason for the refusal is that:

- the calculated total noise emission of the proposed powered mechanical equipment to be used at the site exceeds the acceptable noise level at the nearby noise sensitive receivers stipulated in the Technical Memorandum on Noise from Construction Work other than Percussive Piling.
- information provided is insufficient for the Authority to consider the application falls within unavoidable constraints on working hours as stipulated in the Technical Memorandum on Noise from Construction Work other than Percussive Piling.

Yours faithfully,

(CHEUNG Sau-cheong, Andrew)
for Authority

(5) in 323622

致：中國港灣工程有限責任公司及中國路橋有限責任公司
(trading as China Harbour Engineering Company Limited –
China Road and Bridge Corporation Joint Venture)
香港北角英皇道 370 - 374 號
振華大廈 19 樓

執事先生：

依據《噪音管制條例》(第 400 章)第 8(7)條
拒絕簽發建築噪音許可證通知

本監督在二零一零年十一月十六日，接獲你的建築噪音許可證申請，知悉你擬於下述地址：香港北角城市花園之海水引入口(介乎第六座與第七座之間)，使用機動設備進行建築工程。本監督現根據《噪音管制條例》第 8(5)條的規定，通知你是項申請不獲接納。

拒絕理由如下：

- 根據計算，你建議在工地使用的機動設備所發出的整體噪音，將會超出按「管制建築工程噪音(撞擊式打樁除外)技術備忘錄」所訂定有關鄰近「噪音感應強的地方」可接受的噪音聲級
- 根據「管制建築工程噪音(撞擊式打樁除外)技術備忘錄」，你所提供的證明不足以令本監督認為該申請的施工時間有無可避免的限制。

監 督

(張壽昌 代行)

二零一零年十一月三十日

APPENDIX G

LETTER TO CAYLEY PROPERTY MANAGEMENT LIMITED (No Silt Screen Installation at City Garden)



CHEC-CRBC JV



Date : 21 February 2011
Our Ref. : CHEC-CRBC JV/C-257/01.22/002452

Cayley Property Management Limited
Shop 1A, 1/F, Block 7
City Garden Shopping Centre,
233 Electric Road, North Point, Hong Kong

By Fax : 2807 0719 & Post

Attn.: Mr. C.K. Wong

Dear Sir,

Contract No. HY/2009/11
Central-Wan Chai Bypass – North Point Reclamation
Installation of Silt Screen at Seawater Intake of City Garden

We refer to the tele-conversation on 15 February 2011 regarding the installation of the silt screen at the subject site.

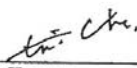
We confirm our discussion that you have no comments on whether the silt screen is to be installed or not, given that our works should not affect the function of the pump at the intake. As such, we will not install the silt screen at the seawater intake of the pump house of City Garden.

We will endeavour every effort to ensure that the pump would not be affected by our works. For your information, the dredging of the foundation trench to receive the seawall caissons has been completed.

Nevertheless, we will implement protective measures around the site area such as to enclose with one 80m long silt curtain next to City Garden, and another one 80m long double layer silt curtain deployed next to the working plant etc. The Government appointed Environmental Team would monitor the water quality in the area of the seawater intake frequently.

Thank you for your attention.

Yours faithfully,
For and on behalf of
China Harbour Engineering Company Limited –
China Road and Bridge Corporation Joint Venture



Daniel Cheung
Site Agent

DC/sy

c.c. AECOM - Mr. David Kwan & Kelvin Cheng
Lam Environmental Services - Mr. Raymond Dai (Fax: 2882 3331)
Environ - Mr. David Yeung (Fax: 3548 6988)

19th Floor, China Harbour Building, 370-374 King's Road, North Point, Hong Kong
Telephone: (852) 2887 8118 Facsimile: (852) 2512 0427