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

REVISED SILT CURTAIN DEPLOYMENT PLAN

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

Table of Content

1.0 Introduction

Under the requirement of Condition 2.8 of the Further Environmental Permit No. FEP- 01/356/2009 for the Project "Wan Chai Development Phase II and Central-Wan Chai Bypass - North Point Reclamation", China Harbour Engineering Company Limited – China Road and Bridge Corporation Joint Venture (the Contractor) has submitted Silt Curtain Deployment Plan to EPD for deposited on 25th February 2010.

The silt curtain deployment plan shall include plans showing the construction programme and details on the design, operation and maintenance requirements of the silt curtain(s) including but not limited to deployment of silt curtain(s) for dredging and filling works as recommended in the approved EIA Report (Register No: AEIAR-125/2008) and the relevant documents in the EIAO Register. All mitigation measures recommended in the silt curtain deployment plan shall be fully and properly implemented throughout the construction period. (refer to notes 8 and 9 of Further Environmental Permit, Permit no.FEP-01-356/2009). "General Layout Plan of Silt Curtain On Site", Please refer to ***Appendix A***.

The document "Silt Curtain Deployment Plan" which outlines the methodology for installation, operation, and maintenance of silt curtain deployment in which certified by ET and verified by IEC previously and throughout the whole course of dredging works and filling works of North Point Reclamation, proposed by CHEC-CRBC Joint Venture. In addition, this document "Revised Silt Curtain Deployment Plan" incorporate the aforementioned plan and in order to

i) all filling works for permanent and temporary reclamation conducted behind the seawall and
ii) filling works surrounded by silt curtain,

the Contractor deploy one more silt curtain into the sea to fulfill and comply the clauses (b) & (c) of condition 2.14 of Further Environmental Permit (FEP-01/356/2009) and clauses (b) & (c) of condition 2.15 of Environmental Permit (EP-356/2009).

2.0 Scope of Works

Silt curtain shall be provided during all dredging, filling works, trench filling, sort public filling, and works affecting water quality within the site. To limit pollution of water, woven geotextile shall be used as silt curtain system that is sustained by floating foam and in such a way that tidal rise and fall is accommodated. Concrete anchor block is used as self-weight to fix the silt curtain in appropriate location. According to the condition 2.8 of FEP-01/356/2009, silt curtain shall be deployed around seawall dredging and seawall trench filling in reclamation shoreline zones including "North Point Reclamation".

Details of silt curtain system as shown on attached drawings and there are:

i) "Details of Silt Curtain Deployment for Dredging Works (Not for works under IEC)", please refer to ***Appendix B***.

ii) "Details of Silt Curtain Deployment for Dredging Works Under Island Eastern Corridor (IEC)", please refer to ***Appendix C.***

iii) "Details of Silt Curtain Deployment for Filling Trench", please refer to ***Appendix D***.

In order to minimize the loss of sediment affecting the water quality due to filling works, more than one pieces of silt curtain had been provided and deployed into the sea. Such newly deployed silt curtain would seal off the seawall gap in between caisson and the existing seawall and all filling material during filling works for reclamation conducted would be behind seawall. Detailed for drawing "Silt curtain deployment for sorted public fill behind seawall" and "Details of silt curtain for filling works", please refer to ***Appendix E & F respectively***.

3.0 Use of Material

Bonar SG100/100 woven geotextile which manufactured by BONTEC is proposed as the silt curtain system, catalogue is attached in Appendix B. BONTEC operated in accordance with an ISO 9001:2000 quality assurance system and ISO 14001 environmental management system to provide a good quality product. The Bonar geotextile is widely used in recent port works construction such as CV2003/06 – Stanley waterfront improvement project, CV/2004/02 – Reconstruction of Wong Shek & Ko Lau Wan public pier project, CV/2002/04 – Penny's Bay Reclamation Stage 2 and HK/12/02 – CED, Central Reclamation Phase III, Engineering Works (For the Use of Material, Please refer to ***Appendix G***). The properties of Bonar geotextile is satisfactory and fulfill the requirement as stipulated in particular specification. Visual inspection of the silt screen shall be carried in a daily basis.

According to the USEPA, "Assessment and Remediation of Contaminated Sediments (ARCS) Program", silt curtain have been used at many locations with varying degrees of success. For example, silt curtain with impervious materials were found to be ineffective during a demonstration in other projects primarily as a result of tidal fluctuation, wind and current. Moreover, we have demonstrated in many projects as listed above, the successful conclusion in the deployment of the material "Bonar SG100/100" woven geotextile.

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

4.0 Silt Curtain Installation Methodology

1) Carry out initial topographical survey to determine approximate depth of water for fixing silt curtain.
2) Fabricate the silt curtain in approximately 5 m length per panel according to the maximum water depth. The width of each panel was fixed at 5.25m as the width of the geotextile supplied from the factory. Make sure the length of each panel was sufficient for the depth of works area.
3) Each individual silt curtain panel was joined together by the use of high strength nylon rope.
4) The top of silt curtain is attached to 300x300m floating foams for buoyancy. Steel chain of 5kg/m weight was fixed along the bottom of the silt curtain for anchoring the panels to the seabed level.
5) Launching the silt curtain into the sea by crane boat to cover the site area. While the silt curtain has floated alignment in position, concrete blocks are sunk to anchor the silt curtain. Concrete block is tied to the silt curtain at 30m intervals.
6) Lit markers buoys with light are installed onto the silt curtain to aid night navigation and prevention of collision of boat.
7) The newly silt curtain (for filling sorted public fill) would deployed into the sea and which located at the last installed caisson. The aforesaid silt curtain would seal off the caisson and existing seawall all the time. i.e. Once caisson(s) installed and completed, the silt curtain would shift to the last caisson unit and deployed again before carrying any filling works and to prevent any unwanted materials entering into the open sea.
8) For "The Seawall Layout and Setting Out Plan", please refer to ***Appendix H***.

5.0 Silt Curtain Removal

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

1. Prior to decommission of silt curtain, make sure all marine works or works affecting the seawall shall be completed, and also the water quality shall be checked to ensure no dispersion of muddy water outside the works area.
2. Loosen the fixing wire of the silt curtain from the concrete block and remove the silt curtain by motor boat.
3. Lifting the concrete block slightly by driver team and crane boat in order to minimize the disturbance of seabed causing mud wave.

6.0 Inspection & Rectification Works

1. Diver inspection shall be carried out to inspect the installation and decommission of silt curtain to ensure proper installation and functioning of the silt curtain according to the design drawing.
2. During the entire construction period, visual inspection, water monitoring and regular diver inspection shall be carried out to ensure no muddy water passing through the silt curtain system and maintain proper functioning of the silt

curtain. Visual inspection for the silt curtain shall be carried out daily. Accordingly to the Environmental Monitoring and Auditing (EM&A) Manual, a regular water monitoring shall be carried out in order to complies the statutory regulations and maintain the quality of water during operation of construction activities. When damaging is suspected in daily inspection, diver inspection would be undertaken in order to ensure the performance of the silt curtain is effective and efficient, an immediate action would be undertaken immediately if the curtain is damage or defect or when necessarily.

3. The ET shall supervise the entire installation and decommissioning processes. The ET shall also closely monitor the effectiveness of the silt curtain and report any irregularities which may affect its proper functioning so as to trigger early rectification by the contractor.
4. In case of any malfunction of the silt curtain, diver inspection shall be carried out to check whether there is any damage or defect of the silt curtain and the situation will be immediately reported to the ET. Once the damage or defect is found, the rectification works shall be carried out to maintain well-functioning of the silt curtain after the ET leader agree on the rectification methods.
5. 20 linear meters additional geotextile will be ready for use and keep on site for emergency replacement in case damage or defect is observed of the silt curtain.

7.0 Remark

1. The spacing of the proposed lighted marker buoys for the silt curtain shall not be more than 30 apart.
2. The silt curtain will be mounted to the existing concrete seawall (Vertical Seawall) and or breakwater.

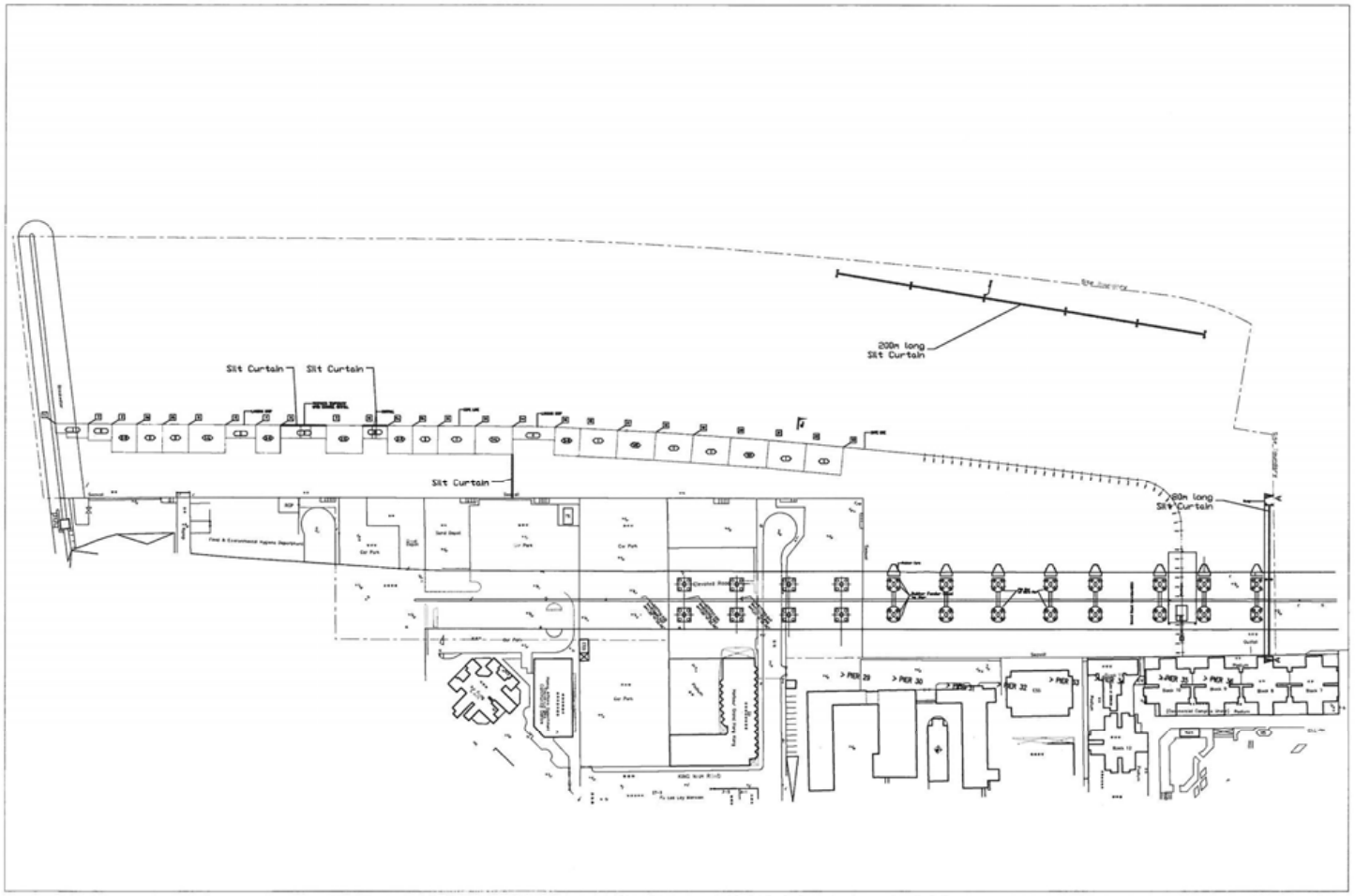
8.0 Tentative Installation Programme of Silt Curtain

Silt Curtain for Dredging: 6-Mar-2010

At the site boundary
Section NPR1 & 1A: 03-Mar-2010
Section 2: 15-Mar-2010
Section 3: 22-Apr-2010
For the detailed Works Programme, please refer to ***Appendix I.***

APPENDIX A

GENERAL LAYOUT PLAN
OF SILT CURTAIN IN SITE



General Layout Plan of Silt Curtain in Site

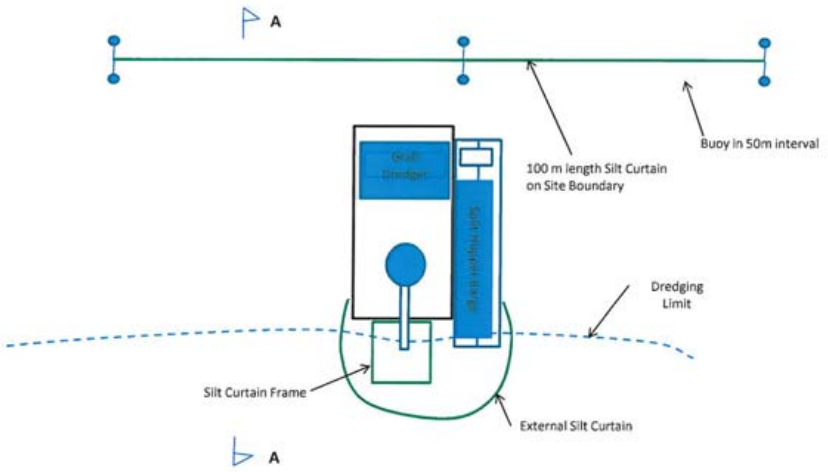
Sketch No. SK1

APPENDIX B

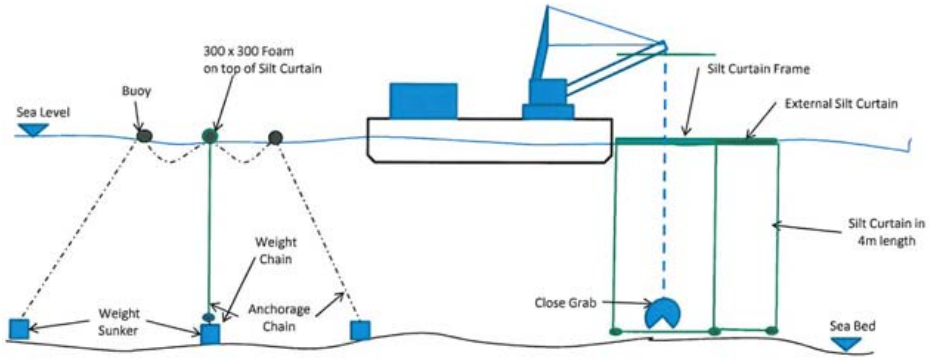
DETAILS OF SILT CURTAIN DEPLOYMENT FOR DREDGING WORKS (Not for works under IEC)

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

Details of Silt Curtain Arrangement For Dredging Works (Not for works under IEC)



PLAN

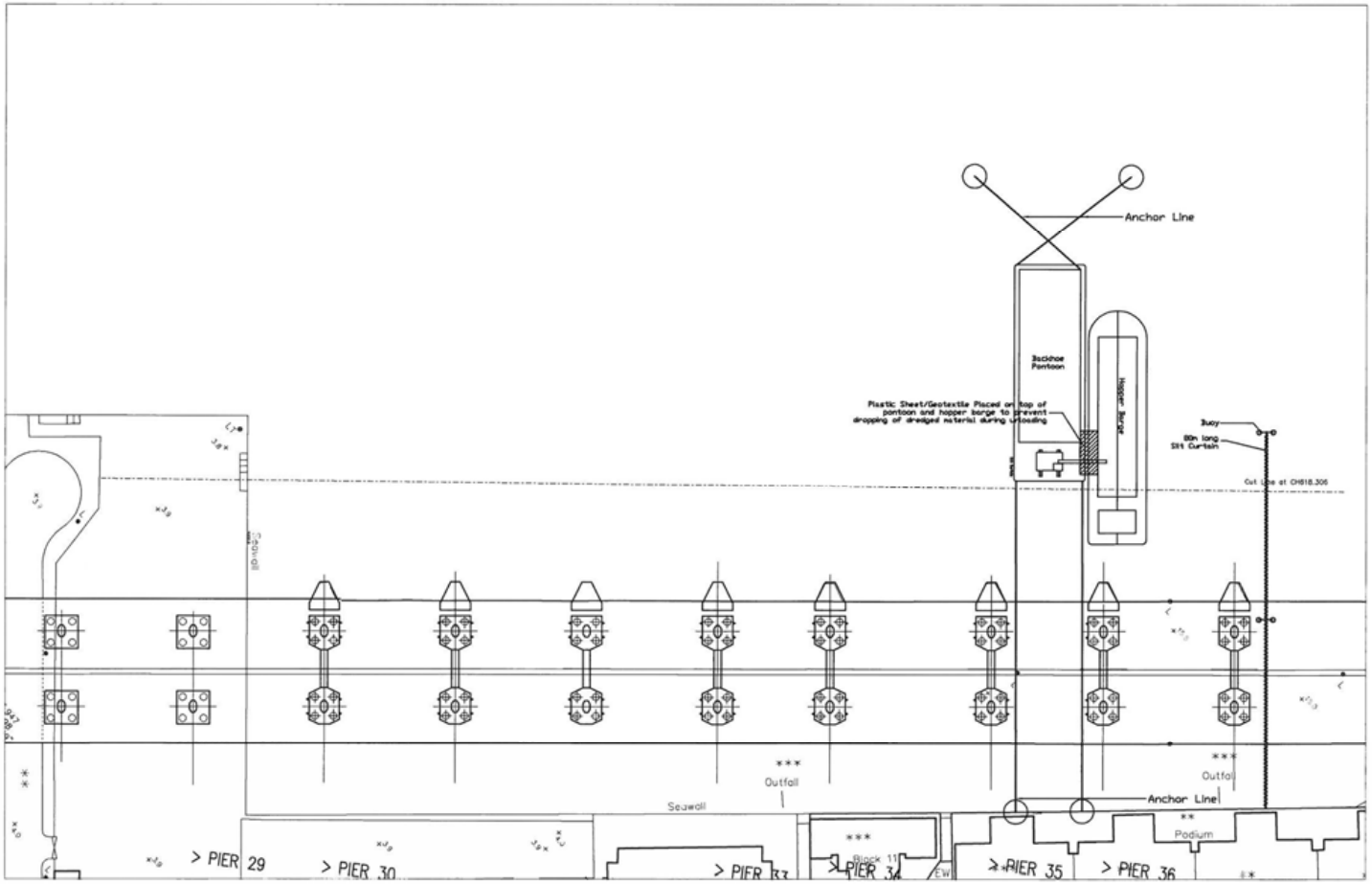


SECTION A - A

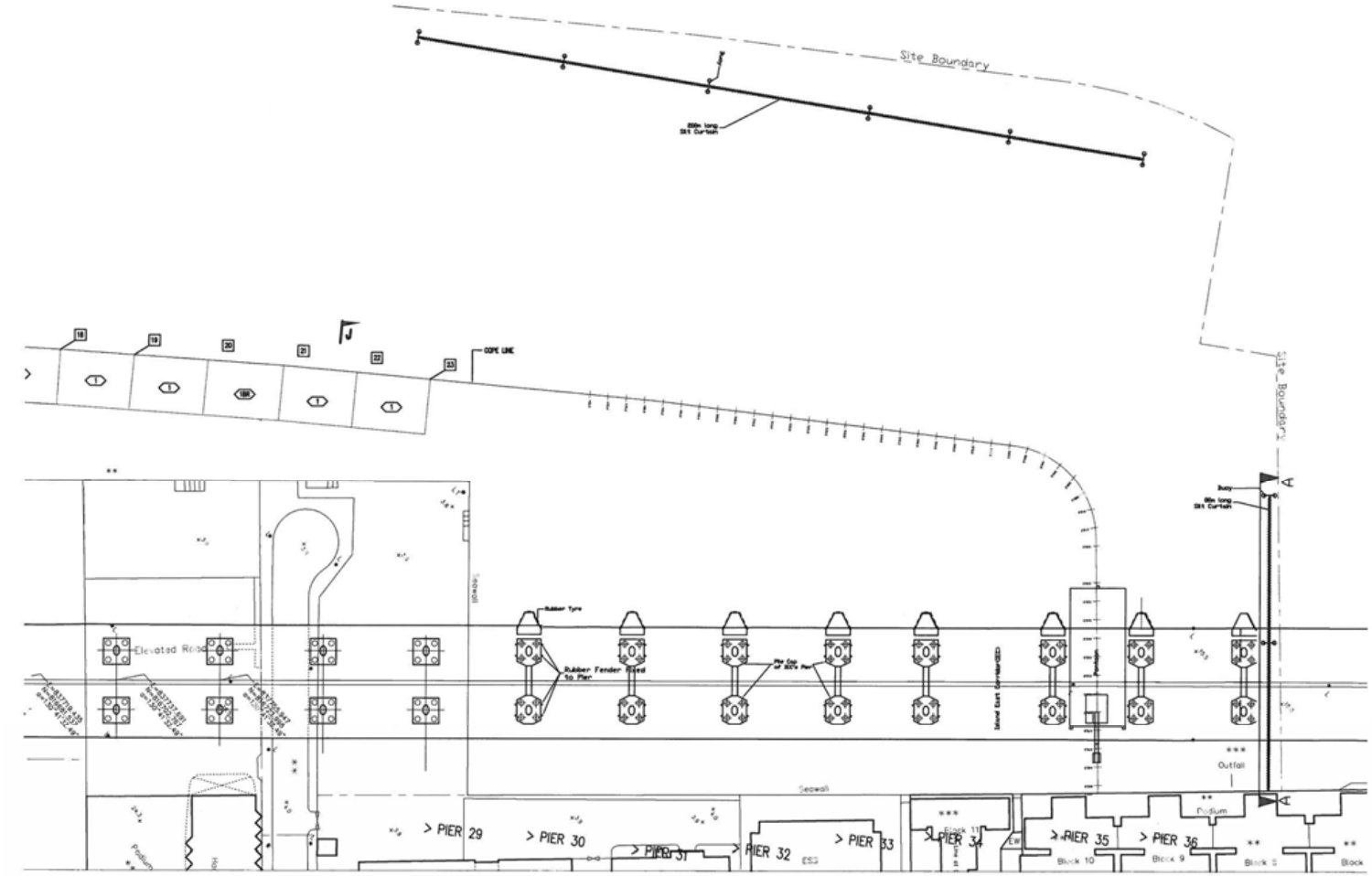
China Harbour Engineering Company Limited -
China Road and Bridge Corporation Joint Venture

APPENDIX C

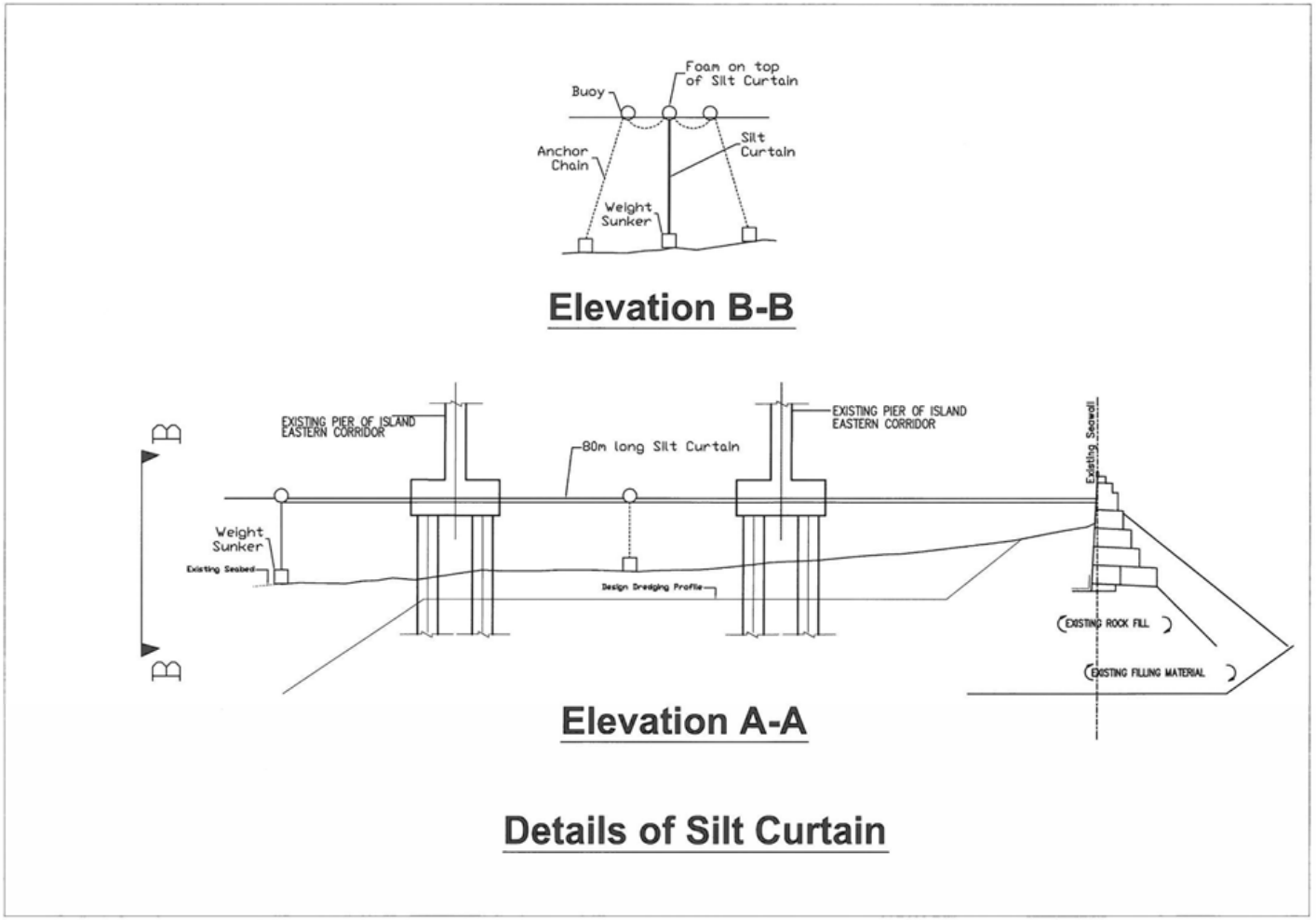
DETAILS OF SILT CURTAIN DEPLOYMENT FOR DREDGING WORKS UNDER IEC



Prevention from Dropping of Dredged Material to Sea During Unloading Dredged Material to Hopper Barge



Details of Silt Curtain for Dredging


Foam on top of Silt Curtain
Buoy
Anchor Chain
Silt Curtain
Weight Sunker
Elevation B-B
B
B
EXISTING PIER OF ISLAND EASTERN CORRIDOR
80m long Silt Curtain
EXISTING PIER OF ISLAND EASTERN CORRIDOR
Existing Seawall
Weight Sunker
Existing Seabed
Design Dredging Profile
EXISTING ROCK FILL
EXISTING FILLING MATERIAL
Elevation A-A
Details of Silt Curtain

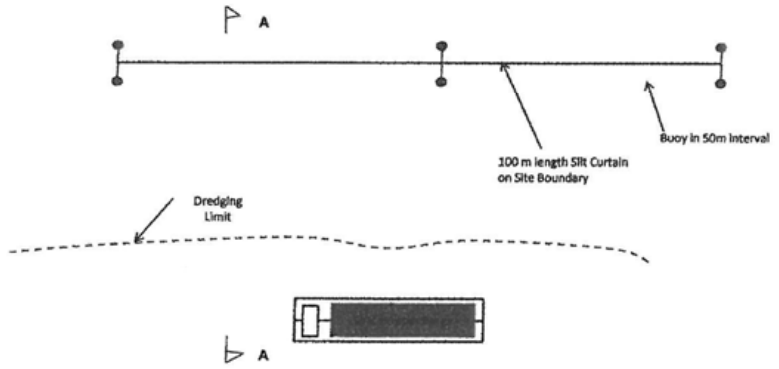
APPENDIX D

DETAILS OF SILT CURTAIN DEPLOYMENT FOR FILLING TRENCH

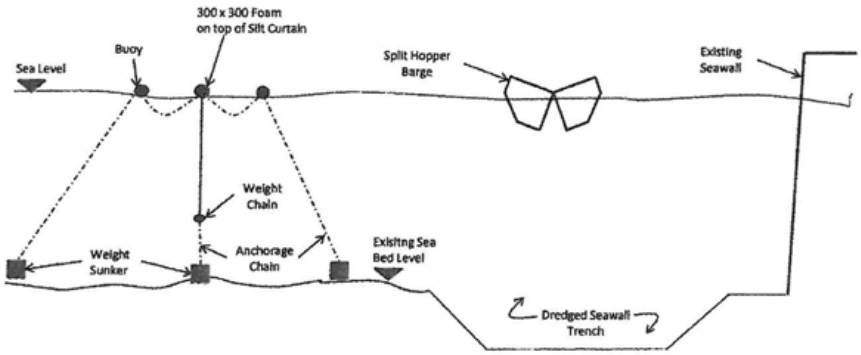
Contract No. :HY/2009/11
Central - Wanchai Bypass, North Point Reclamation

Silt Curtain Deployment for Filling Trench

Date: 17-Mar-10



PLAN



SECTION A - A

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

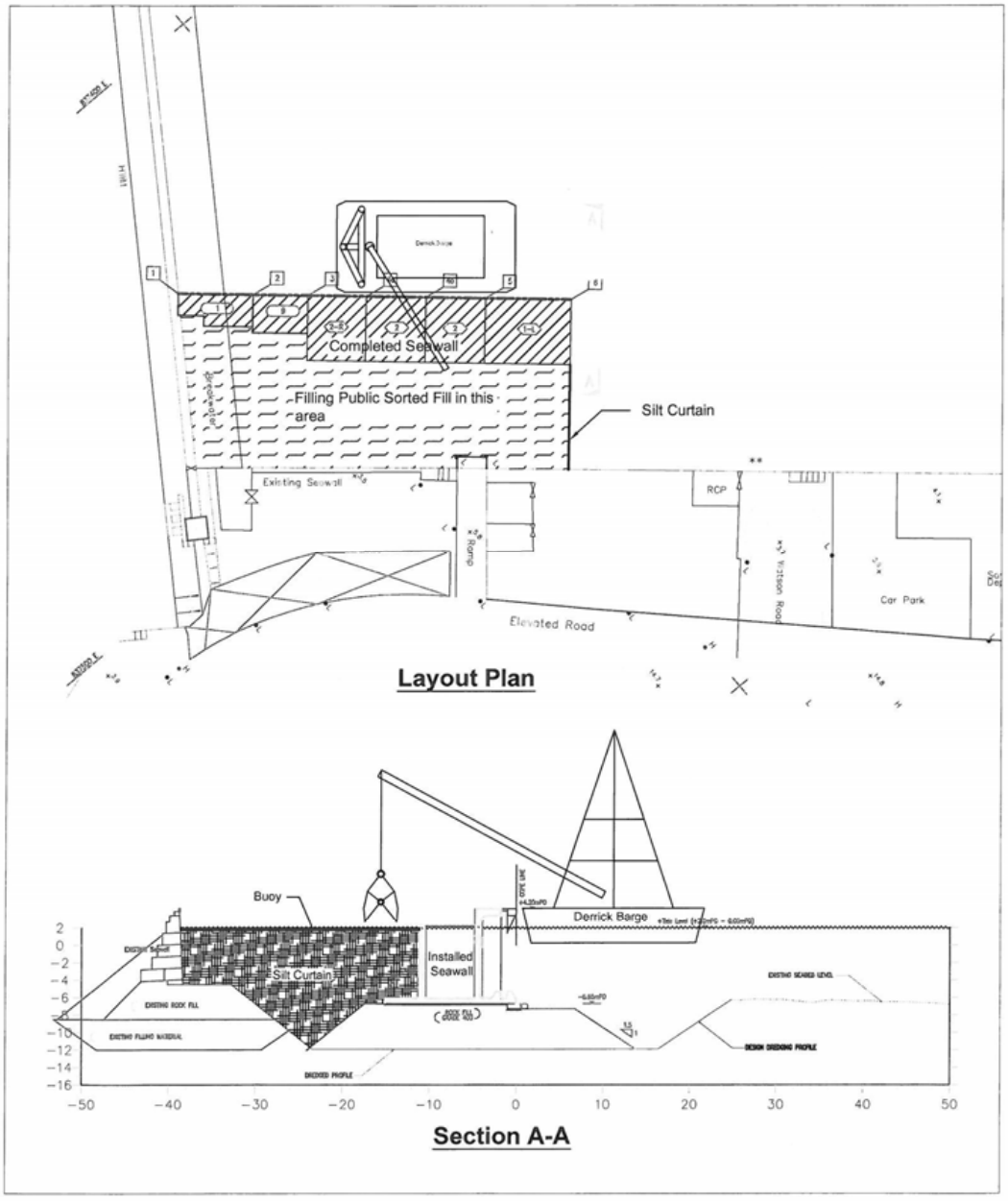
APPENDIX E

DETAILS OF SILT CURTAIN DEPLOYMENT FOR SORTED PUBLIC FILL BEHIND SEAWALL

Contract No. HY/2009/11
Central - Wan chai Bypass - North Point Reclamation

Silt Curtain Deployment for Sorted Public Fill Behind Seawall

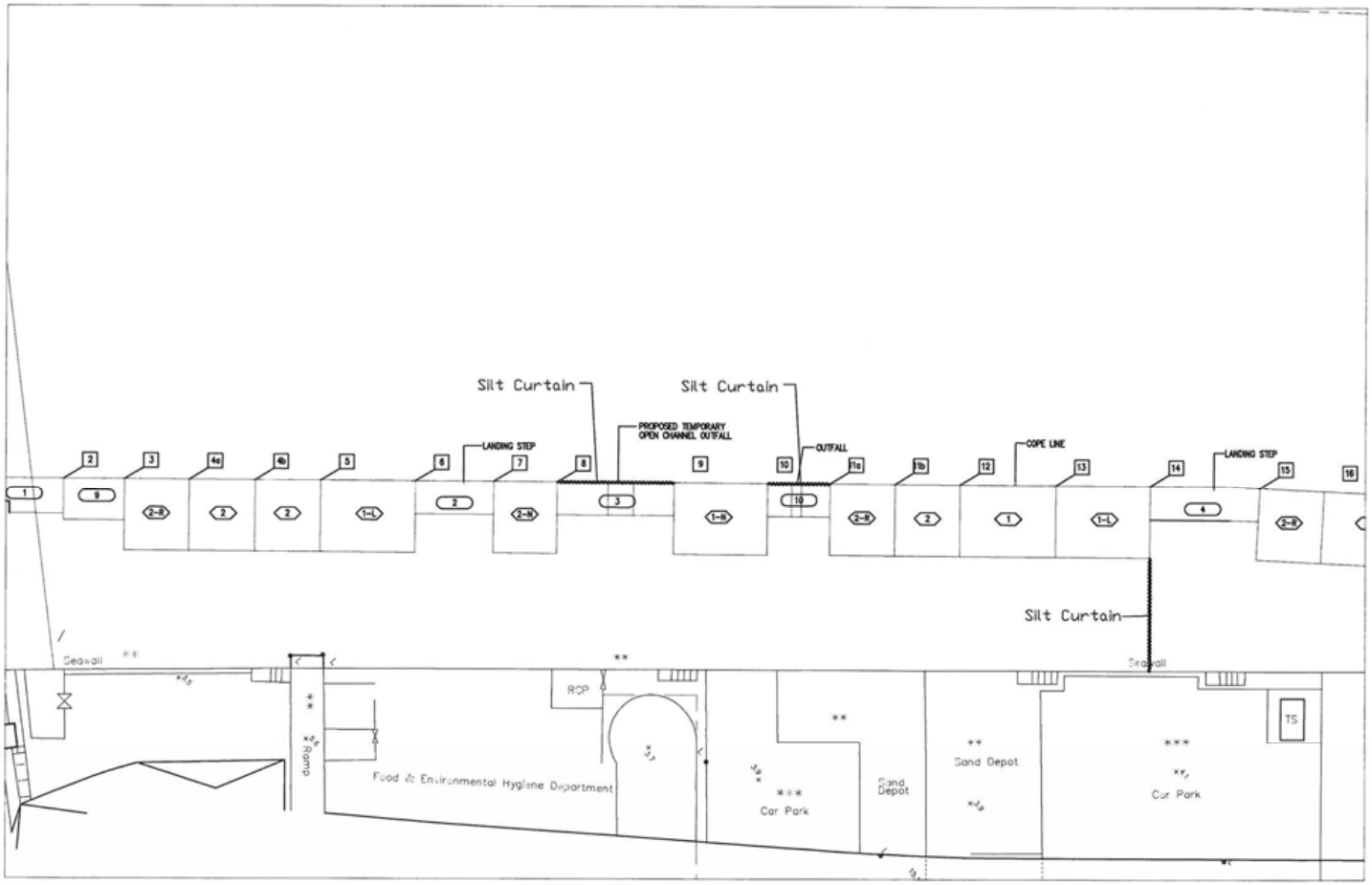
Date: 12 July 2010



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

APPENDIX F

DETAILS OF SILT CURTAIN FOR FILLING WORKS



Details of Silt Curtain for Filling Works

APPENDIX G

MATERIAL CATALOGUE OF SILT CURTAIN

Silt Curtain

Bontec SG100/100

April 2007

G&E ENGINEERING

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Manufacturer Company Profile


GEOTEXTILES
AGROTEXTILES
www.bonartf.com
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WE UNDER COVER THE WORLD
bontec
woven and nonwoven geotextiles
A TOTAL RANGE OF GEOTEXTILES

WHY CHOOSE BONTEC® GEOTEXTILES ?

BONAR TECHNICAL FABRICS
Invisibly good

bontec
woven and nonwoven 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.

CE Q&E IQS

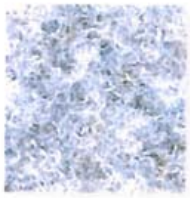
Bonar Technical Fabrics has been an active Corporate Member of the International Geosynthetics Society since 1985.

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.

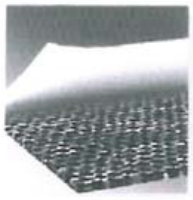


SNW: Superior Needlepunched Nonwoven Geotextiles

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 Needlepunched Nonwoven Geotextiles

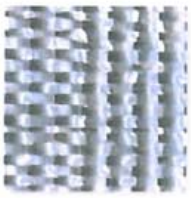
Produced using multi-coloured staple virgin fibres, products range from 200 to 1600g/m2. VNW grades offer a felt like appearance and are used in the functions of protection, drainage and erosion control. Areas of application include membrane protection in landfill and reservoirs, or for erosion control 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 tensile 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 revetment blocks or between dissimilar layers of quick draining granular fill e.g. a coarse sand and rounded gravel.

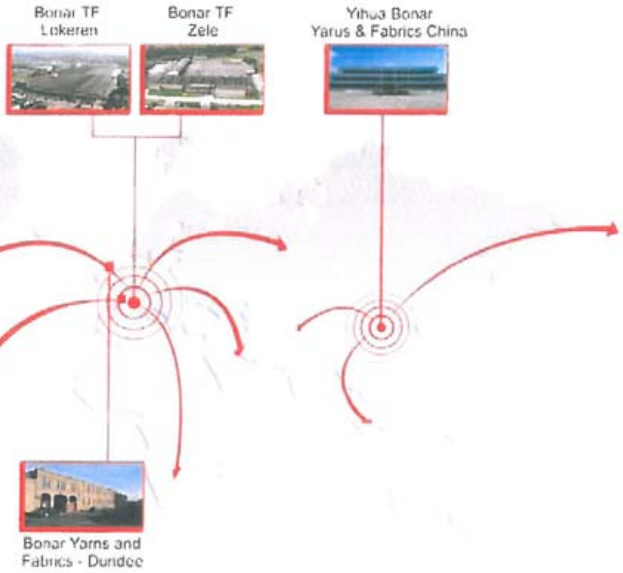
HS: High Strength Woven Geotextiles

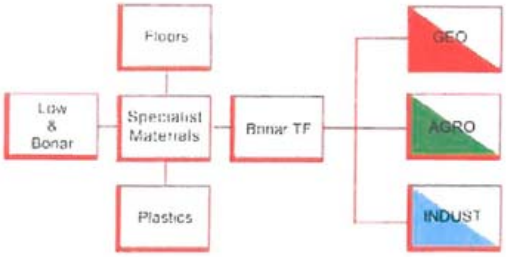
Produced from high tenacity polyester yarns, the HS products offer tensile strengths up to 600kN/m combined with low extension and excellent creep characteristics. Applications include the reinforcement of vertical walls, steep slopes and embankments over soft soil with long term design lives.

bontec

woven and nonwoven geotextiles

GROUP STRUCTURE





Bonar Technical Fabrics is a division of **LOW & BONAR** plc, an international group that manufactures and supplies a wide range of products in the Specialist Materials, Flooring and Plastics markets.

As part of the Specialist Materials division, **Bonar TF** focuses on the production of three distinct product ranges including geotextiles, agrotextiles, and technical textiles for the industrial and building sectors. Its headquarters are situated in the Belgian town of Zele, a short distance from the main ports of Antwerp, Zeebrugge and Rotterdam. This proximity assures clients quick and economic deliveries throughout the world.

BONAR TECHNICAL FABRICS

invisibly good

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F +32 (0) 52 457 495
e-mail: geotextiles@bonartf.com

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F +44 (0)1382 229245
E-mail: geotextiles@bonaryarns.com

website: www.bonartf.com

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

CE

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/m².s	- 6,9 l/m².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/m²	+/- 47,5 g/m²
Composition	100 % polypropylene woven geotextile		

Durability	• 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 & under-ground structures	solid waste	liquid waste
EN 13254:2000	EN 13255:2000	EN 13256:2000	EN 13257:2000	EN 13265:2000

1. This geotextile is intended for use in both functions & applications highlighted with a bold border.
2. Roll dimensions are 5,25 m x 100/200 m. Other dimensions on demand.
3. 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.
4. Although not guaranteed, these results do to the best of our knowledge offer a true and accurate record of the product's performance.
5. 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
invisibly good

BONAR Technical Fabrics nv/sa
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Tel. +32 (0)33 457 477 • Fax +32 (0)33 457 495
E-mail geotextiles@bonartf.com

BONAR Yarns & Fabrics Ltd
St. Salvator Street • Dundee DD3 7PJ • United Kingdom
Tel. +44 (0)1382 348352 • Fax +44 (0)1382 202170
E-mail geotextiles@bonaryarns.com

Specification Comparison

Particular Specification vs Bonar SG 100/100

Updated: 25/08/2006

	Particular Specification		Bonar SG 100/100	
Properties	Test Method	Technical Data	Test Method	Technical Data
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

CERTIFICAAT KWALITEITSMANAGEMENTSYSTEEM

ISO 9001 : 2000

Hiermee verklaart BQA, nv dat het kwaliteitsmanagementsysteem van de firma
Bonar Technical Fabrics NV – Site in Zele en Lokeren

BONAR TF

waarvan de zetel gevestigd is Industriestraat 39 - 9240 Zele - België, op 02-05-2005 beoordeeld werd en conform is met de norm ISO 9001, uitgave 2000, voor het volgende toepassingsgebied:

Development, manufacture and sales of a standard range of fibres and textiles such as agrotextiles, building textiles and geosynthetics, as well as similar products especially designed to customer specifications.

Dit certificaat is door BQA, nv verstrekt conform zijn kwaliteitshandboek betreffende kwaliteits-systeemcertificatie en na het afsluiten van het certificatiecontract N° AC/AJ/CER/02-05-2005/301, waarbij de firma zich onderwerpt aan de regelmatige controle van haar kwaliteitsmanagementsysteem.

Certificaat N° C/02-05-2005/301
Geldig tot 02-05-2008

BEL CERT

BQA N° QS 006

A. COCHAUX
Directeur

BQA

AC/AJ/C/02-05-2005

Iedere persoon die kennis heeft van misbruik van dit certificaat moet BQA, nv hiervan verwittigen. Het openbaar maken van dit certificaat is slechts in zijn geheel toegestaan.
BQA, nv - Montoyerstraat 24 bte 9 - 1000 Brussel.

CERTIFICAAT MILIEUBEHEERSYSTEEM

ISO 14001 : 2004

Hiermee verklaart BQA, nv dat het kwaliteitssysteem van de firma
Bonar Technical Fabrics NV – Site in Zele en Lokeren

BONAR TF

waarvan de zetel gevestigd is Industriestraat 39 – 9240 Zele - België, op 02-05-2005 beoordeeld werd
en conform is met de norm ISO 14001, uitgave 2004, voor het volgende toepassingsgebied:

Development, manufacture and sales of a standard range of fibres and textiles such as agrotextiles, building textiles and geosynthetics, as well as similar products especially designed to customer specifications.

Dit certificaat is door BQA, nv verstrekt conform zijn kwaliteitshandboek EMS betreffende milieubeheersysteem-certificatie en na het afsluiten van het certificatiecontract N° AC/AJ/CER/02-05-20052/2, waarbij de firma zich onderwerpt aan de regelmatige controle van haar milieubeheersysteem.
Certificaat N° C/02-05-2005
Geldig tot 02-05-2008

BEL CERT

BQA N° 018 EMS

A. COCHAUX
Directeur

BQA

Iedere persoon die kennis heeft van misbruik van dit certificaat moet BQA, nv hiervan verwittigen. Het openbaar maken van dit certicaat 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
p/a Industriestraat 39
B-9240 Zele

bontec

A bonar technical fabrics product

Fax

Date: 11-Aug-04	
To: G and E – Hong Kong **Mr. Gary NG**	**From: Isabelle Ruyffelaere – 0032 52 457 487** **Philippe Grimmelprez – 0032 52 457 486**
Fax:	**Pages: 1 +**
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 headquaters 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 Grimmelprez
Sales & Marketing Manager geotextiles.

BONAR TECHNICAL FABRICS
invisibly good

BONAR Technical Fabrics nv/sa
Industriestraat 39 • B-9240 Zele • Belgium
Tel +32 (0)52 457 411 • Fax +32 (0)52 457 495
E-mail geotextiles@bonarnv.com

BONAR Yarns & Fabrics Ltd.
St. Johnston Street • Dundee DD3 7EJ • United Kingdom
Tel +44 (0)1382 348102 • Fax +44 (0)1382 202276
E-mail ruskin@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 Grimmelprez – 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 accurring soil acids and alkalis.
b/ The material is resistant to biological attack
c/ when used correctly (cfr installation guidelines), resistant to detoriation 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 temeperatures 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 Grimmelprez
Sales & Marketing Manager

BONAR TECHNICAL FABRICS
invisibly good

BONAR Technical Fabrics nv/sa
Industriestraat 39 • B-9240 Zele • Belgium
Tel +32 (0)52 457 411 • Fax +32 (0)52 457 495
E-mail geotextiles@bonartf.com

BONAR Yarns & Fabrics Ltd
St. Salvador Street • Dundee DD3 7EU • United Kingdom
Tel +44 (0)1382 346102 • Fax +44 (0)1382 202378
E-mail rguild@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 longitudenal ascis 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 edgeof 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 exposedsteel 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 1

		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	Yee Hop Engineering Co Ltd		SG100/100

March 12, 2007

Approval Letters

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

RECEIVED 25 JAN 05

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 本署檔號 : ( ) in PW WC/CV0402/R20/340 Pt.1
Your reference 來函檔號 : 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 Yin 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. CV/2004/02			
Post	Initial	Copy	Action
CK			
PN			
SA			
Sch-A			
Eng (1)			
Eng (2)			
QE			
Foreman			
QS			
Safety			
Material			
Survey			

Yours faithfully,

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

c.c.
SIOW/P2B – Site Copy

cls

#2960 P.001 /001

FEB.28.2005 17:33

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 5035
Facsimile 傳真 : (852) 2714 2054
Our reference 本署檔號 : (15) in PW WC/CV0306/R20/340 Pt.01
Your reference 來函檔號 : CIV/002091/1.2/HW/SY/CC/mc(S0087),
CIV/002091/1.2/HW/SY/CC/mc(S0118)

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 Waterfront 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 YK MA)
Engineer's Representative
Port Works Division
Civil Engineering and Development Department

c.c.
Site Office (Attn: SIOW/P1A)
CEG/P1A

File PW WC/CV0306/M10/300

YKMA/ma

Post-it® Fax Note 7671 Date 24/2/05 # of pages ▶ 1
To MR. STANLEY WAN From ONG SZE-HO
Co./Dept. G&E Co. SFK
Phone # 25060028 Phone # 60347009
Fax # 25700089 Fax #

TOTAL P.01

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	INFORM
SA		
DBA		
QS		
ENG		
SUR		
FOREMAN		
FILE		

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

Luke Chi
Engineer's Representative

LC/JY/ak

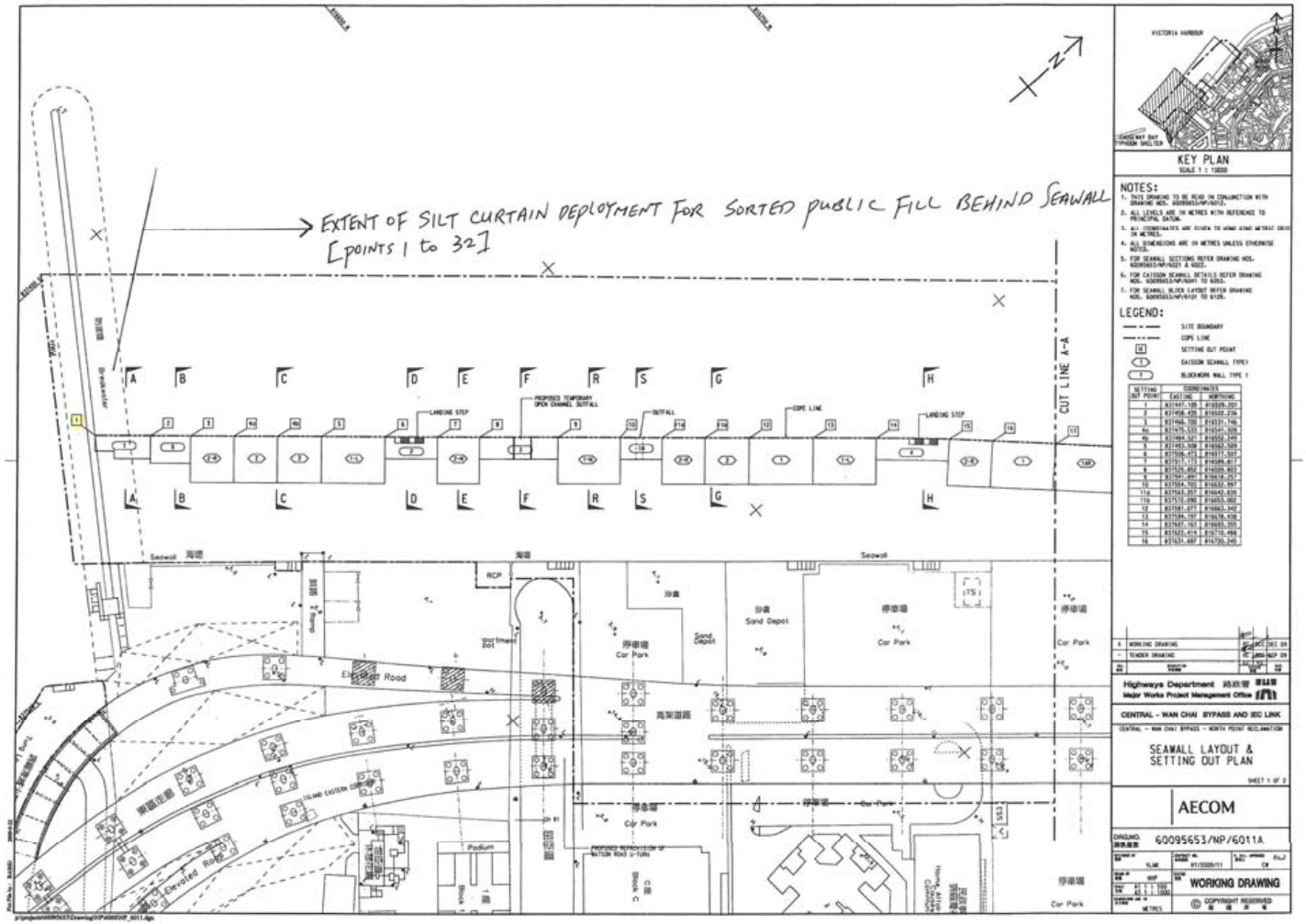
Photos References

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 H

THE SEAWALL LAYOUT AND SETTING OUT PLAN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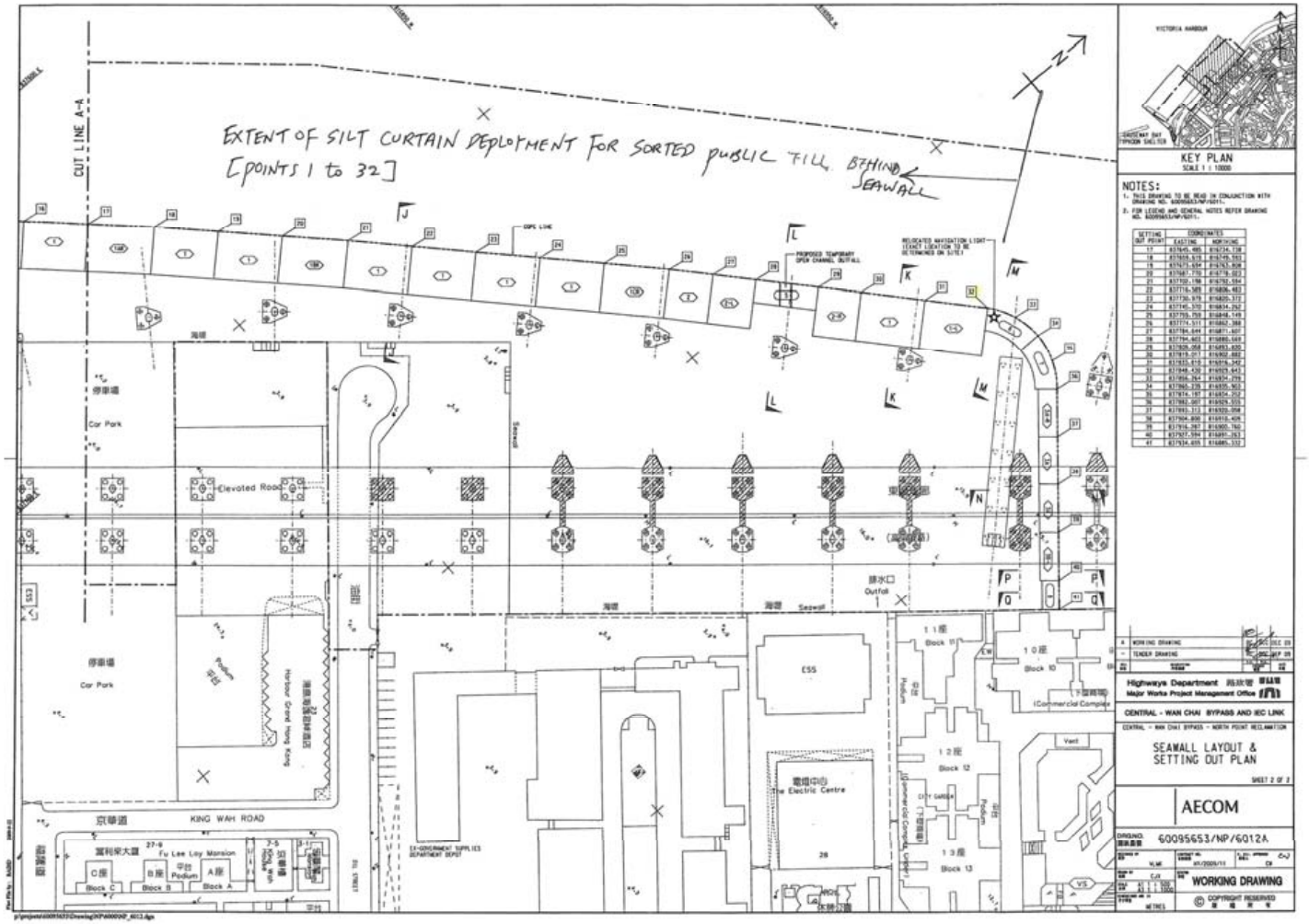
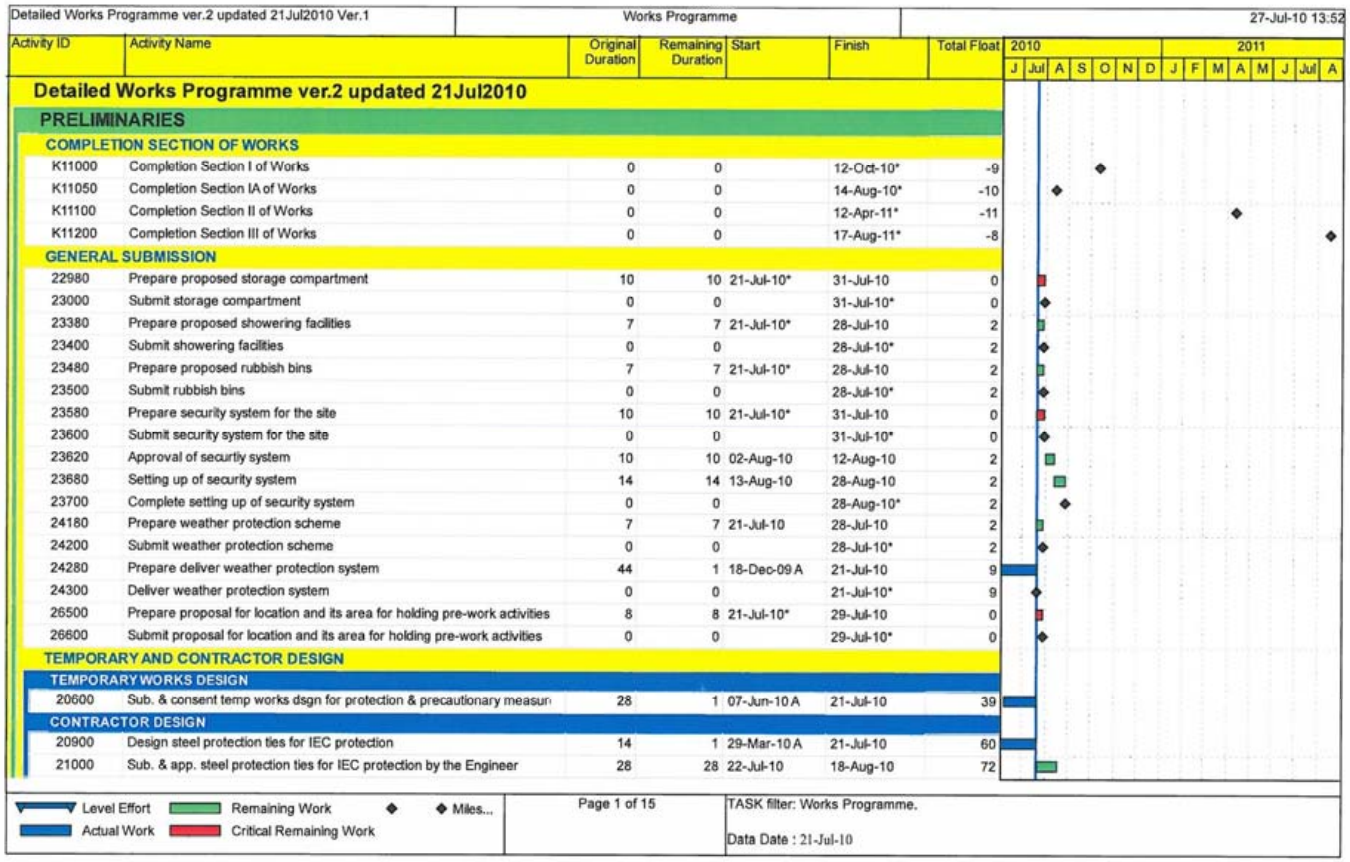
[POINTS 1 to 32]
KEY PLAN
NOTES:
LEGEND:
SEAWALL LAYOUT & SETTING OUT PLAN
CENTRAL - WAN CHAI BYPASS AND IEC LINK
Highways Department
Major Works Project Management Office
AECOM
WORKING DRAWING
COPYRIGHT RESERVED
Elevated Road
Podium
Car Park
Sand Depot
Seawall
CUT LINE A-A


EXTENT OF SILT CURTAIN DEPLOYMENT FOR SORTED PUBLIC FILL BEHIND SEAWALL
[POINTS 1 to 32]
CUT LINE A-A
KEY PLAN
NOTES:
Car Park
Elevated Road
KING WAH ROAD
Fu Lee Loy Mansion
The Electric Centre
Commercial Complex
Highways Department
Major Works Project Management Office
CENTRAL - WAN CHAI BYPASS AND IEC LINK
SEAWALL LAYOUT & SETTING OUT PLAN
AECOM
60095653/NP/6012A
WORKING DRAWING

APPENDIX I

DETAILED WORKS PROGRAMME



Detailed Works Programme ver.2 updated 21Jul2010 Ver.1 | Works Programme | 27-Jul-10 13:52

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
Detailed Works Programme ver.2 updated 21Jul2010						
PRELIMINARIES						
COMPLETION SECTION OF WORKS						
K11000	Completion Section I of Works	0	0		12-Oct-10*	-9
K11050	Completion Section IA of Works	0	0		14-Aug-10*	-10
K11100	Completion Section II of Works	0	0		12-Apr-11*	-11
K11200	Completion Section III of Works	0	0		17-Aug-11*	-8
GENERAL SUBMISSION						
22980	Prepare proposed storage compartment	10	10	21-Jul-10*	31-Jul-10	0
23000	Submit storage compartment	0	0		31-Jul-10*	0
23380	Prepare proposed showering facilities	7	7	21-Jul-10*	28-Jul-10	2
23400	Submit showering facilities	0	0		28-Jul-10*	2
23480	Prepare proposed rubbish bins	7	7	21-Jul-10*	28-Jul-10	2
23500	Submit rubbish bins	0	0		28-Jul-10*	2
23580	Prepare security system for the site	10	10	21-Jul-10*	31-Jul-10	0
23600	Submit security system for the site	0	0		31-Jul-10*	0
23620	Approval of securtiy system	10	10	02-Aug-10	12-Aug-10	2
23680	Setting up of security system	14	14	13-Aug-10	28-Aug-10	2
23700	Complete setting up of security system	0	0		28-Aug-10*	2
24180	Prepare weather protection scheme	7	7	21-Jul-10	28-Jul-10	2
24200	Submit weather protection scheme	0	0		28-Jul-10*	2
24280	Prepare deliver weather protection system	44	1	18-Dec-09 A	21-Jul-10	9
24300	Deliver weather protection system	0	0		21-Jul-10*	9
26500	Prepare proposal for location and its area for holding pre-work activities	8	8	21-Jul-10*	29-Jul-10	0
26600	Submit proposal for location and its area for holding pre-work activities	0	0		29-Jul-10*	0
TEMPORARY AND CONTRACTOR DESIGN						
TEMPORARY WORKS DESIGN						
20600	Sub. & consent temp works dsgn for protection & precautionary measur	28	1	07-Jun-10 A	21-Jul-10	39
CONTRACTOR DESIGN						
20900	Design steel protection ties for IEC protection	14	1	29-Mar-10 A	21-Jul-10	60
21000	Sub. & app. steel protection ties for IEC protection by the Engineer	28	28	22-Jul-10	18-Aug-10	72

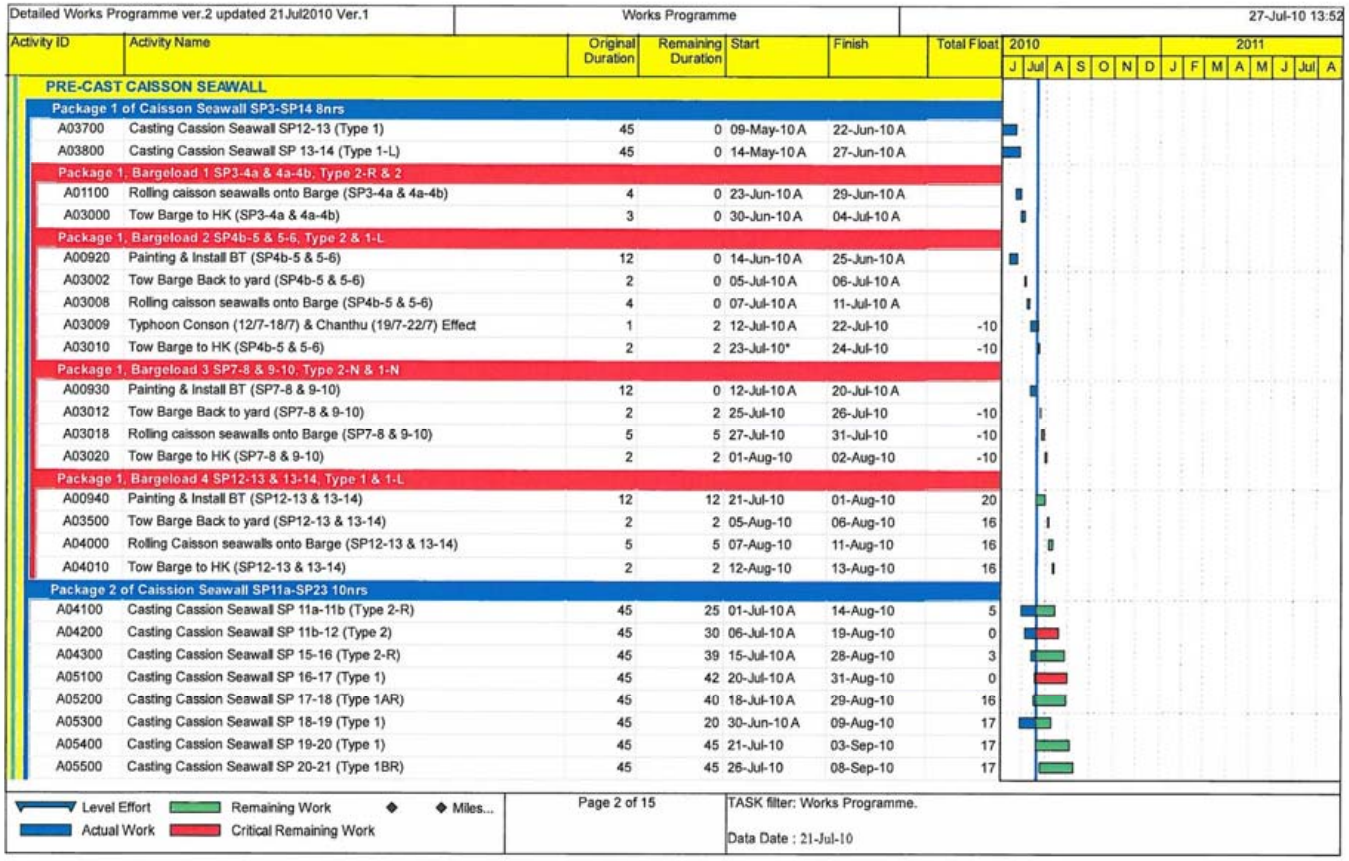
2010: J Jul A S O N D | 2011: J F M A M J Jul A

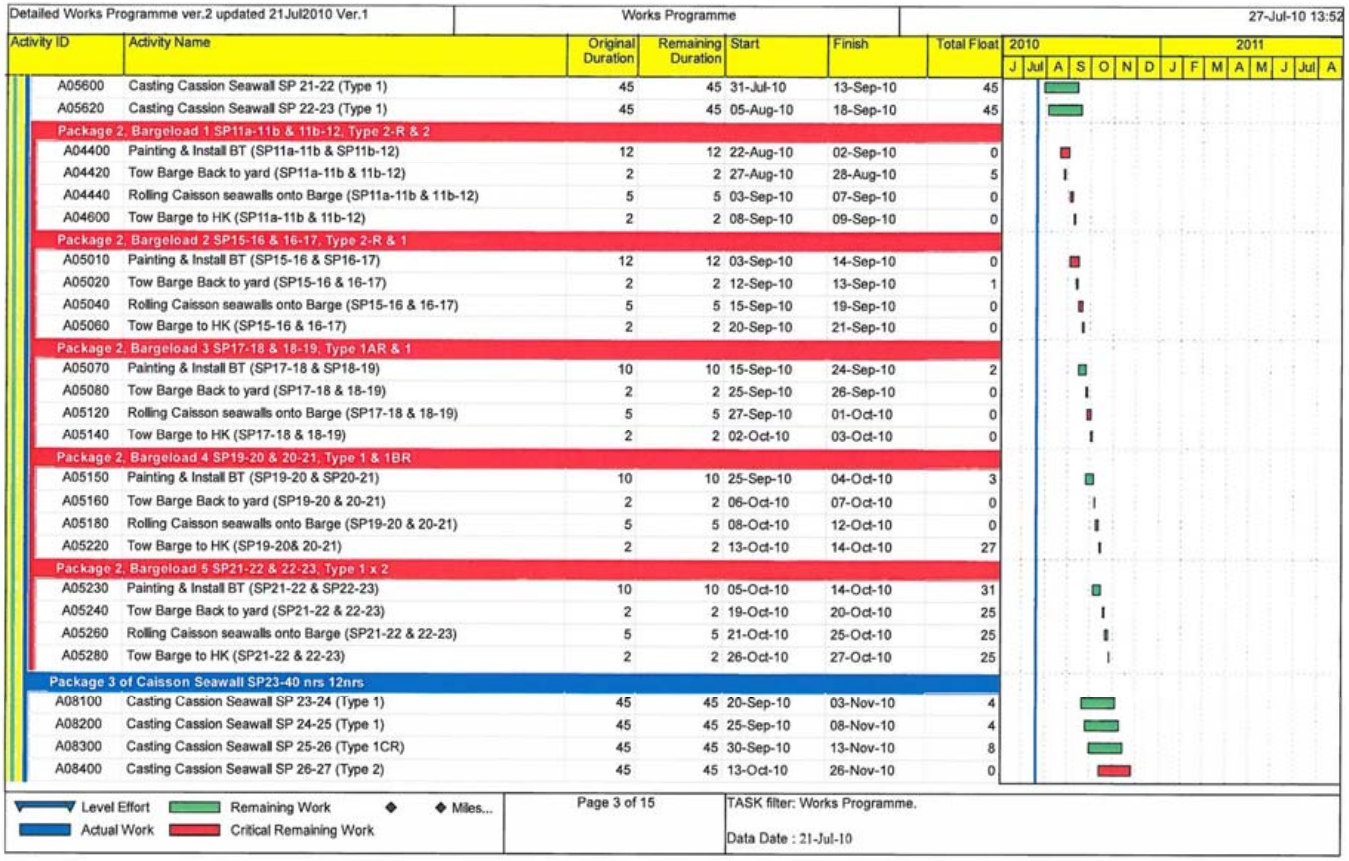
Level Effort | Remaining Work | Miles... | Actual Work | Critical Remaining Work

Page 1 of 15

TASK filter: Works Programme.

Data Date : 21-Jul-10


Detailed Works Programme ver.2 updated 21Jul2010 Ver.1
Works Programme
27-Jul-10 13:52
Activity ID
Activity Name
Original Duration
Remaining Duration
Start
Finish
Total Float
2010
2011
J Jul A S O N D J F M A M J Jul A
PRE-CAST CAISSON SEAWALL
Package 1 of Caisson Seawall SP3-SP14 8nrs
A03700 Casting Cassion Seawall SP12-13 (Type 1) 45 0 09-May-10 A 22-Jun-10 A
A03800 Casting Cassion Seawall SP 13-14 (Type 1-L) 45 0 14-May-10 A 27-Jun-10 A
Package 1, Bargeload 1 SP3-4a & 4a-4b, Type 2-R & 2
A01100 Rolling caisson seawalls onto Barge (SP3-4a & 4a-4b) 4 0 23-Jun-10 A 29-Jun-10 A
A03000 Tow Barge to HK (SP3-4a & 4a-4b) 3 0 30-Jun-10 A 04-Jul-10 A
Package 1, Bargeload 2 SP4b-5 & 5-6, Type 2 & 1-L
A00920 Painting & Install BT (SP4b-5 & 5-6) 12 0 14-Jun-10 A 25-Jun-10 A
A03002 Tow Barge Back to yard (SP4b-5 & 5-6) 2 0 05-Jul-10 A 06-Jul-10 A
A03008 Rolling caisson seawalls onto Barge (SP4b-5 & 5-6) 4 0 07-Jul-10 A 11-Jul-10 A
A03009 Typhoon Conson (12/7-18/7) & Chanthu (19/7-22/7) Effect 1 2 12-Jul-10 A 22-Jul-10 -10
A03010 Tow Barge to HK (SP4b-5 & 5-6) 2 2 23-Jul-10* 24-Jul-10 -10
Package 1, Bargeload 3 SP7-8 & 9-10, Type 2-N & 1-N
A00930 Painting & Install BT (SP7-8 & 9-10) 12 0 12-Jul-10 A 20-Jul-10 A
A03012 Tow Barge Back to yard (SP7-8 & 9-10) 2 2 25-Jul-10 26-Jul-10 -10
A03018 Rolling caisson seawalls onto Barge (SP7-8 & 9-10) 5 5 27-Jul-10 31-Jul-10 -10
A03020 Tow Barge to HK (SP7-8 & 9-10) 2 2 01-Aug-10 02-Aug-10 -10
Package 1, Bargeload 4 SP12-13 & 13-14, Type 1 & 1-L
A00940 Painting & Install BT (SP12-13 & 13-14) 12 12 21-Jul-10 01-Aug-10 20
A03500 Tow Barge Back to yard (SP12-13 & 13-14) 2 2 05-Aug-10 06-Aug-10 16
A04000 Rolling Caisson seawalls onto Barge (SP12-13 & 13-14) 5 5 07-Aug-10 11-Aug-10 16
A04010 Tow Barge to HK (SP12-13 & 13-14) 2 2 12-Aug-10 13-Aug-10 16
Package 2 of Caission Seawall SP11a-SP23 10nrs
A04100 Casting Cassion Seawall SP 11a-11b (Type 2-R) 45 25 01-Jul-10 A 14-Aug-10 5
A04200 Casting Cassion Seawall SP 11b-12 (Type 2) 45 30 06-Jul-10 A 19-Aug-10 0
A04300 Casting Cassion Seawall SP 15-16 (Type 2-R) 45 39 15-Jul-10 A 28-Aug-10 3
A05100 Casting Cassion Seawall SP 16-17 (Type 1) 45 42 20-Jul-10 A 31-Aug-10 0
A05200 Casting Cassion Seawall SP 17-18 (Type 1AR) 45 40 18-Jul-10 A 29-Aug-10 16
A05300 Casting Cassion Seawall SP 18-19 (Type 1) 45 20 30-Jun-10 A 09-Aug-10 17
A05400 Casting Cassion Seawall SP 19-20 (Type 1) 45 45 21-Jul-10 03-Sep-10 17
A05500 Casting Cassion Seawall SP 20-21 (Type 1BR) 45 45 26-Jul-10 08-Sep-10 17
Level Effort
Remaining Work
Miles...
Actual Work
Critical Remaining Work
Page 2 of 15
TASK filter: Works Programme.
Data Date : 21-Jul-10



Detailed Works Programme ver.2 updated 21Jul2010 Ver.1 | Works Programme | 27-Jul-10 13:52

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
A05600	Casting Cassion Seawall SP 21-22 (Type 1)	45	45	31-Jul-10	13-Sep-10	45
A05620	Casting Cassion Seawall SP 22-23 (Type 1)	45	45	05-Aug-10	18-Sep-10	45
	Package 2, Bargeload 1 SP11a-11b & 11b-12, Type 2-R & 2					
A04400	Painting & Install BT (SP11a-11b & SP11b-12)	12	12	22-Aug-10	02-Sep-10	0
A04420	Tow Barge Back to yard (SP11a-11b & 11b-12)	2	2	27-Aug-10	28-Aug-10	5
A04440	Rolling Caisson seawalls onto Barge (SP11a-11b & 11b-12)	5	5	03-Sep-10	07-Sep-10	0
A04600	Tow Barge to HK (SP11a-11b & 11b-12)	2	2	08-Sep-10	09-Sep-10	0
	Package 2, Bargeload 2 SP15-16 & 16-17, Type 2-R & 1					
A05010	Painting & Install BT (SP15-16 & SP16-17)	12	12	03-Sep-10	14-Sep-10	0
A05020	Tow Barge Back to yard (SP15-16 & 16-17)	2	2	12-Sep-10	13-Sep-10	1
A05040	Rolling Caisson seawalls onto Barge (SP15-16 & 16-17)	5	5	15-Sep-10	19-Sep-10	0
A05060	Tow Barge to HK (SP15-16 & 16-17)	2	2	20-Sep-10	21-Sep-10	0
	Package 2, Bargeload 3 SP17-18 & 18-19, Type 1AR & 1					
A05070	Painting & Install BT (SP17-18 & SP18-19)	10	10	15-Sep-10	24-Sep-10	2
A05080	Tow Barge Back to yard (SP17-18 & 18-19)	2	2	25-Sep-10	26-Sep-10	0
A05120	Rolling Caisson seawalls onto Barge (SP17-18 & 18-19)	5	5	27-Sep-10	01-Oct-10	0
A05140	Tow Barge to HK (SP17-18 & 18-19)	2	2	02-Oct-10	03-Oct-10	0
	Package 2, Bargeload 4 SP19-20 & 20-21, Type 1 & 1BR					
A05150	Painting & Install BT (SP19-20 & SP20-21)	10	10	25-Sep-10	04-Oct-10	3
A05160	Tow Barge Back to yard (SP19-20 & 20-21)	2	2	06-Oct-10	07-Oct-10	0
A05180	Rolling Caisson seawalls onto Barge (SP19-20 & 20-21)	5	5	08-Oct-10	12-Oct-10	0
A05220	Tow Barge to HK (SP19-20& 20-21)	2	2	13-Oct-10	14-Oct-10	27
	Package 2, Bargeload 5 SP21-22 & 22-23, Type 1 x 2					
A05230	Painting & Install BT (SP21-22 & SP22-23)	10	10	05-Oct-10	14-Oct-10	31
A05240	Tow Barge Back to yard (SP21-22 & 22-23)	2	2	19-Oct-10	20-Oct-10	25
A05260	Rolling Caisson seawalls onto Barge (SP21-22 & 22-23)	5	5	21-Oct-10	25-Oct-10	25
A05280	Tow Barge to HK (SP21-22 & 22-23)	2	2	26-Oct-10	27-Oct-10	25
	Package 3 of Caisson Seawall SP23-40 nrs 12nrs					
A08100	Casting Cassion Seawall SP 23-24 (Type 1)	45	45	20-Sep-10	03-Nov-10	4
A08200	Casting Cassion Seawall SP 24-25 (Type 1)	45	45	25-Sep-10	08-Nov-10	4
A08300	Casting Cassion Seawall SP 25-26 (Type 1CR)	45	45	30-Sep-10	13-Nov-10	8
A08400	Casting Cassion Seawall SP 26-27 (Type 2)	45	45	13-Oct-10	26-Nov-10	0

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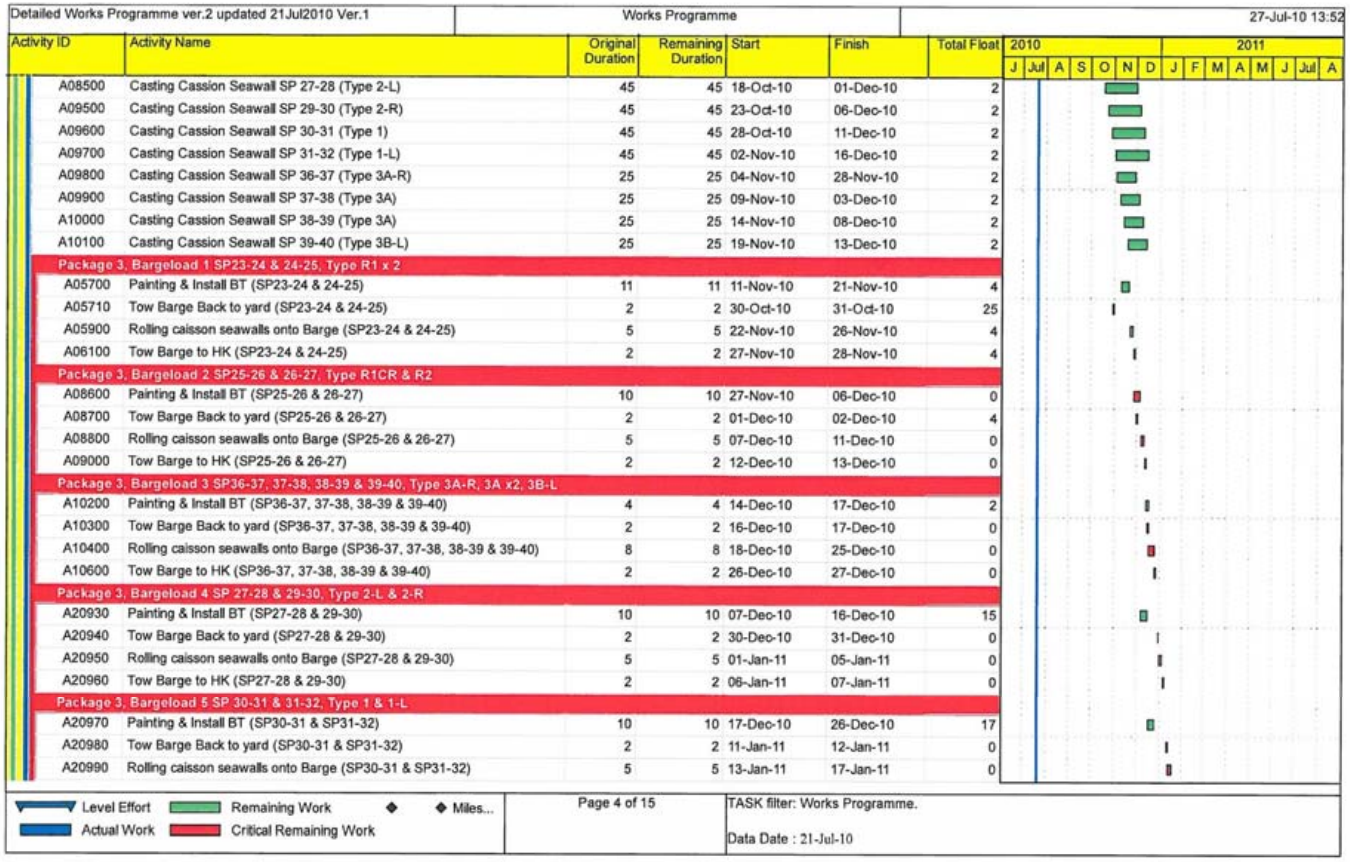

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
A08500	Casting Cassion Seawall SP 27-28 (Type 2-L)	45	45	18-Oct-10	01-Dec-10	2
A09500	Casting Cassion Seawall SP 29-30 (Type 2-R)	45	45	23-Oct-10	06-Dec-10	2
A09600	Casting Cassion Seawall SP 30-31 (Type 1)	45	45	28-Oct-10	11-Dec-10	2
A09700	Casting Cassion Seawall SP 31-32 (Type 1-L)	45	45	02-Nov-10	16-Dec-10	2
A09800	Casting Cassion Seawall SP 36-37 (Type 3A-R)	25	25	04-Nov-10	28-Nov-10	2
A09900	Casting Cassion Seawall SP 37-38 (Type 3A)	25	25	09-Nov-10	03-Dec-10	2
A10000	Casting Cassion Seawall SP 38-39 (Type 3A)	25	25	14-Nov-10	08-Dec-10	2
A10100	Casting Cassion Seawall SP 39-40 (Type 3B-L)	25	25	19-Nov-10	13-Dec-10	2
	Package 3, Bargeload 1 SP23-24 & 24-25, Type R1 x 2					
A05700	Painting & Install BT (SP23-24 & 24-25)	11	11	11-Nov-10	21-Nov-10	4
A05710	Tow Barge Back to yard (SP23-24 & 24-25)	2	2	30-Oct-10	31-Oct-10	25
A05900	Rolling caisson seawalls onto Barge (SP23-24 & 24-25)	5	5	22-Nov-10	26-Nov-10	4
A06100	Tow Barge to HK (SP23-24 & 24-25)	2	2	27-Nov-10	28-Nov-10	4
	Package 3, Bargeload 2 SP25-26 & 26-27, Type R1CR & R2					
A08600	Painting & Install BT (SP25-26 & 26-27)	10	10	27-Nov-10	06-Dec-10	0
A08700	Tow Barge Back to yard (SP25-26 & 26-27)	2	2	01-Dec-10	02-Dec-10	4
A08800	Rolling caisson seawalls onto Barge (SP25-26 & 26-27)	5	5	07-Dec-10	11-Dec-10	0
A09000	Tow Barge to HK (SP25-26 & 26-27)	2	2	12-Dec-10	13-Dec-10	0
	Package 3, Bargeload 3 SP36-37, 37-38, 38-39 & 39-40, Type 3A-R, 3A x2, 3B-L					
A10200	Painting & Install BT (SP36-37, 37-38, 38-39 & 39-40)	4	4	14-Dec-10	17-Dec-10	2
A10300	Tow Barge Back to yard (SP36-37, 37-38, 38-39 & 39-40)	2	2	16-Dec-10	17-Dec-10	0
A10400	Rolling caisson seawalls onto Barge (SP36-37, 37-38, 38-39 & 39-40)	8	8	18-Dec-10	25-Dec-10	0
A10600	Tow Barge to HK (SP36-37, 37-38, 38-39 & 39-40)	2	2	26-Dec-10	27-Dec-10	0
	Package 3, Bargeload 4 SP 27-28 & 29-30, Type 2-L & 2-R					
A20930	Painting & Install BT (SP27-28 & 29-30)	10	10	07-Dec-10	16-Dec-10	15
A20940	Tow Barge Back to yard (SP27-28 & 29-30)	2	2	30-Dec-10	31-Dec-10	0
A20950	Rolling caisson seawalls onto Barge (SP27-28 & 29-30)	5	5	01-Jan-11	05-Jan-11	0
A20960	Tow Barge to HK (SP27-28 & 29-30)	2	2	06-Jan-11	07-Jan-11	0
	Package 3, Bargeload 5 SP 30-31 & 31-32, Type 1 & 1-L					
A20970	Painting & Install BT (SP30-31 & SP31-32)	10	10	17-Dec-10	26-Dec-10	17
A20980	Tow Barge Back to yard (SP30-31 & SP31-32)	2	2	11-Jan-11	12-Jan-11	0
A20990	Rolling caisson seawalls onto Barge (SP30-31 & SP31-32)	5	5	13-Jan-11	17-Jan-11	0

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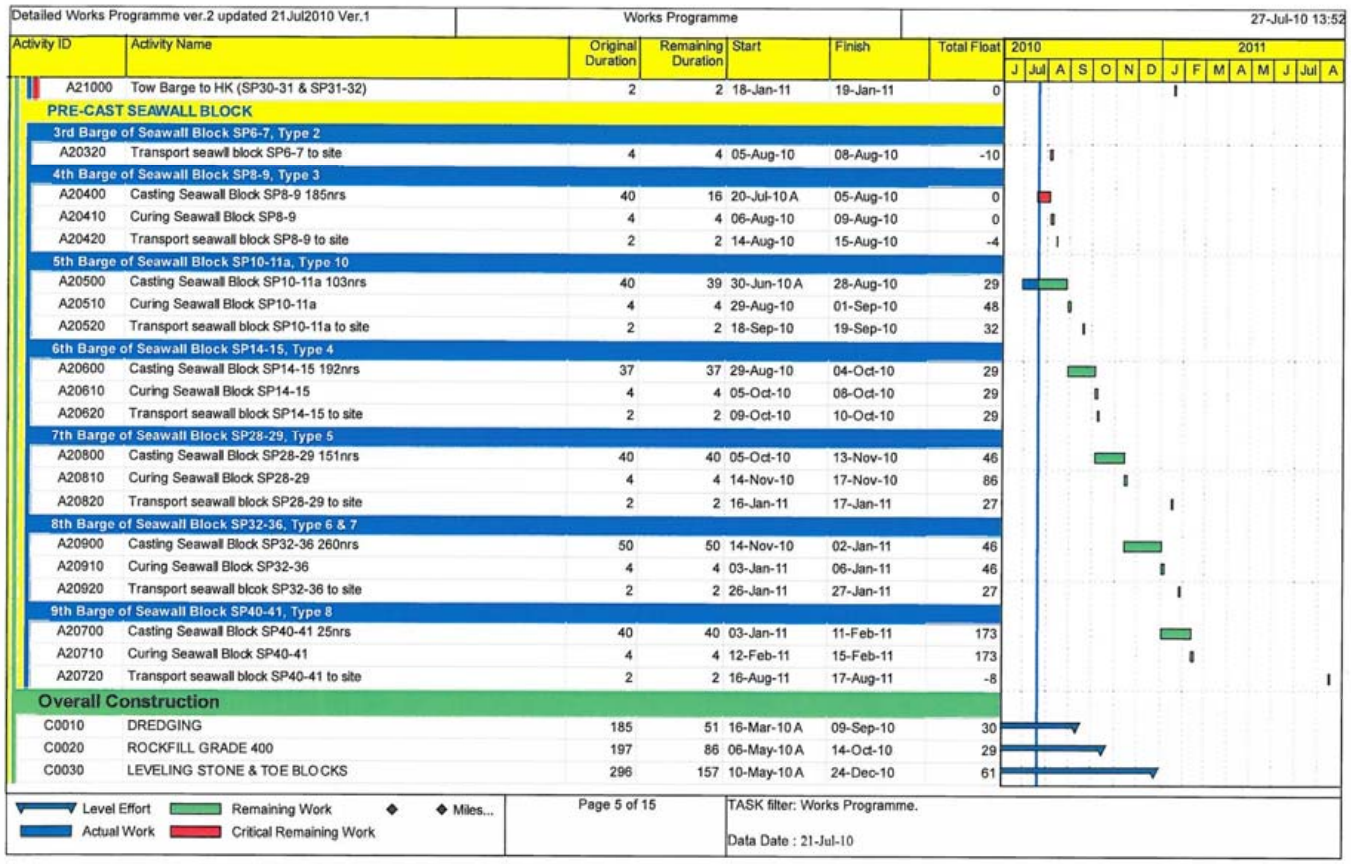

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
A21000	Tow Barge to HK (SP30-31 & SP31-32)	2	2	18-Jan-11	19-Jan-11	0
	PRE-CAST SEAWALL BLOCK					
	3rd Barge of Seawall Block SP6-7, Type 2					
A20320	Transport seawll block SP6-7 to site	4	4	05-Aug-10	08-Aug-10	-10
	4th Barge of Seawall Block SP8-9, Type 3					
A20400	Casting Seawall Block SP8-9 185nrs	40	16	20-Jul-10 A	05-Aug-10	0
A20410	Curing Seawall Block SP8-9	4	4	06-Aug-10	09-Aug-10	0
A20420	Transport seawall block SP8-9 to site	2	2	14-Aug-10	15-Aug-10	-4
	5th Barge of Seawall Block SP10-11a, Type 10					
A20500	Casting Seawall Block SP10-11a 103nrs	40	39	30-Jun-10 A	28-Aug-10	29
A20510	Curing Seawall Block SP10-11a	4	4	29-Aug-10	01-Sep-10	48
A20520	Transport seawall block SP10-11a to site	2	2	18-Sep-10	19-Sep-10	32
	6th Barge of Seawall Block SP14-15, Type 4					
A20600	Casting Seawall Block SP14-15 192nrs	37	37	29-Aug-10	04-Oct-10	29
A20610	Curing Seawall Block SP14-15	4	4	05-Oct-10	08-Oct-10	29
A20620	Transport seawall block SP14-15 to site	2	2	09-Oct-10	10-Oct-10	29
	7th Barge of Seawall Block SP28-29, Type 5					
A20800	Casting Seawall Block SP28-29 151nrs	40	40	05-Oct-10	13-Nov-10	46
A20810	Curing Seawall Block SP28-29	4	4	14-Nov-10	17-Nov-10	86
A20820	Transport seawall block SP28-29 to site	2	2	16-Jan-11	17-Jan-11	27
	8th Barge of Seawall Block SP32-36, Type 6 & 7					
A20900	Casting Seawall Block SP32-36 260nrs	50	50	14-Nov-10	02-Jan-11	46
A20910	Curing Seawall Block SP32-36	4	4	03-Jan-11	06-Jan-11	46
A20920	Transport seawall blcok SP32-36 to site	2	2	26-Jan-11	27-Jan-11	27
	9th Barge of Seawall Block SP40-41, Type 8					
A20700	Casting Seawall Block SP40-41 25nrs	40	40	03-Jan-11	11-Feb-11	173
A20710	Curing Seawall Block SP40-41	4	4	12-Feb-11	15-Feb-11	173
A20720	Transport seawall block SP40-41 to site	2	2	16-Aug-11	17-Aug-11	-8
	Overall Construction					
C0010	DREDGING	185	51	16-Mar-10 A	09-Sep-10	30
C0020	ROCKFILL GRADE 400	197	86	06-May-10 A	14-Oct-10	29
C0030	LEVELING STONE & TOE BLOCKS	296	157	10-May-10 A	24-Dec-10	61

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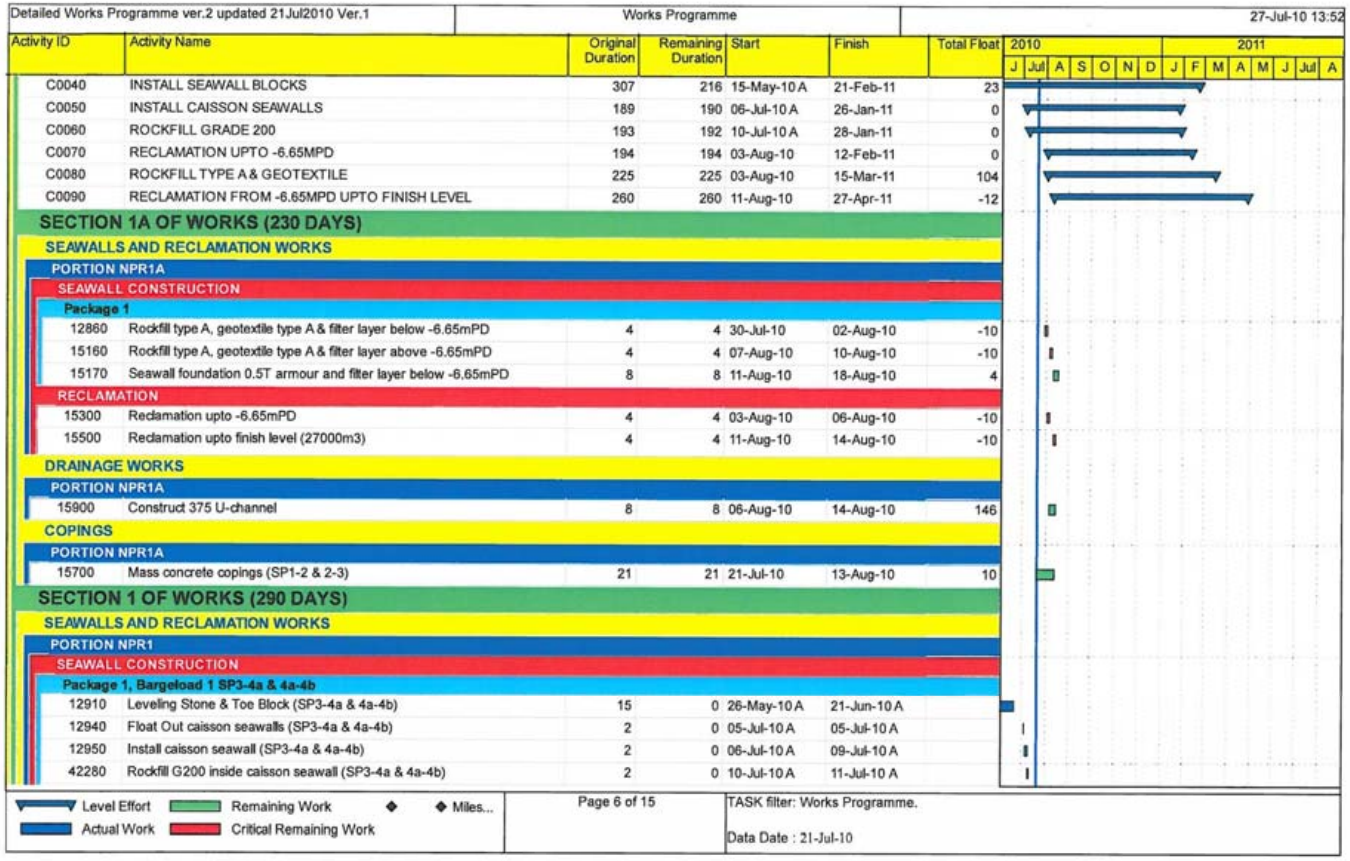

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
C0040	INSTALL SEAWALL BLOCKS	307	216	15-May-10 A	21-Feb-11	23
C0050	INSTALL CAISSON SEAWALLS	189	190	06-Jul-10 A	26-Jan-11	0
C0060	ROCKFILL GRADE 200	193	192	10-Jul-10 A	28-Jan-11	0
C0070	RECLAMATION UPTO -6.65MPD	194	194	03-Aug-10	12-Feb-11	0
C0080	ROCKFILL TYPE A & GEOTEXTILE	225	225	03-Aug-10	15-Mar-11	104
C0090	RECLAMATION FROM -6.65MPD UPTO FINISH LEVEL	260	260	11-Aug-10	27-Apr-11	-12
	SECTION 1A OF WORKS (230 DAYS)					
	SEAWALLS AND RECLAMATION WORKS					
	PORTION NPR1A					
	SEAWALL CONSTRUCTION					
	Package 1					
12860	Rockfill type A, geotextile type A & filter layer below -6.65mPD	4	4	30-Jul-10	02-Aug-10	-10
15160	Rockfill type A, geotextile type A & filter layer above -6.65mPD	4	4	07-Aug-10	10-Aug-10	-10
15170	Seawall foundation 0.5T armour and filter layer below -6.65mPD	8	8	11-Aug-10	18-Aug-10	4
	RECLAMATION					
15300	Reclamation upto -6.65mPD	4	4	03-Aug-10	06-Aug-10	-10
15500	Reclamation upto finish level (27000m3)	4	4	11-Aug-10	14-Aug-10	-10
	DRAINAGE WORKS					
	PORTION NPR1A					
15900	Construct 375 U-channel	8	8	06-Aug-10	14-Aug-10	146
	COPINGS					
	PORTION NPR1A					
15700	Mass concrete copings (SP1-2 & 2-3)	21	21	21-Jul-10	13-Aug-10	10
	SECTION 1 OF WORKS (290 DAYS)					
	SEAWALLS AND RECLAMATION WORKS					
	PORTION NPR1					
	SEAWALL CONSTRUCTION					
	Package 1, Bargeload 1 SP3-4a & 4a-4b					
12910	Leveling Stone & Toe Block (SP3-4a & 4a-4b)	15	0	26-May-10 A	21-Jun-10 A	
12940	Float Out caisson seawalls (SP3-4a & 4a-4b)	2	0	05-Jul-10 A	05-Jul-10 A	
12950	Install caisson seawall (SP3-4a & 4a-4b)	2	0	06-Jul-10 A	09-Jul-10 A	
42280	Rockfill G200 inside caisson seawall (SP3-4a & 4a-4b)	2	0	10-Jul-10 A	11-Jul-10 A	

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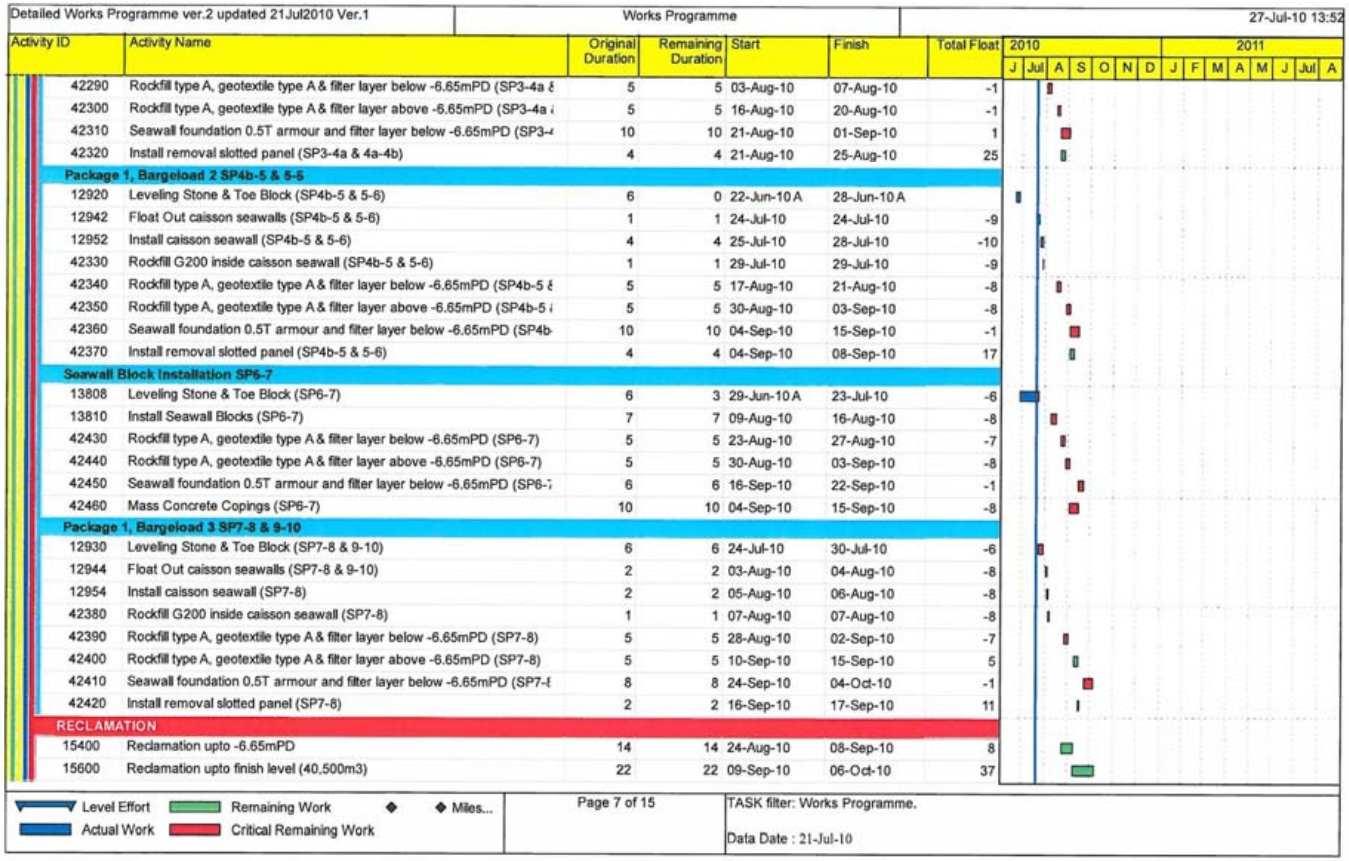

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42290	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP3-4a &	5	5	03-Aug-10	07-Aug-10	-1
42300	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP3-4a &	5	5	16-Aug-10	20-Aug-10	-1
42310	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP3-4	10	10	21-Aug-10	01-Sep-10	1
42320	Install removal slotted panel (SP3-4a & 4a-4b)	4	4	21-Aug-10	25-Aug-10	25
Package 1, Bargeload 2 SP4b-5 & 5-5						
12920	Leveling Stone & Toe Block (SP4b-5 & 5-6)	6	0	22-Jun-10 A	28-Jun-10 A	
12942	Float Out caisson seawalls (SP4b-5 & 5-6)	1	1	24-Jul-10	24-Jul-10	-9
12952	Install caisson seawall (SP4b-5 & 5-6)	4	4	25-Jul-10	28-Jul-10	-10
42330	Rockfill G200 inside caisson seawall (SP4b-5 & 5-6)	1	1	29-Jul-10	29-Jul-10	-9
42340	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP4b-5 &	5	5	17-Aug-10	21-Aug-10	-8
42350	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP4b-5 &	5	5	30-Aug-10	03-Sep-10	-8
42360	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP4b	10	10	04-Sep-10	15-Sep-10	-1
42370	Install removal slotted panel (SP4b-5 & 5-6)	4	4	04-Sep-10	08-Sep-10	17
Seawall Block Installation SP6-7						
13808	Leveling Stone & Toe Block (SP6-7)	6	3	29-Jun-10 A	23-Jul-10	-6
13810	Install Seawall Blocks (SP6-7)	7	7	09-Aug-10	16-Aug-10	-8
42430	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP6-7)	5	5	23-Aug-10	27-Aug-10	-7
42440	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP6-7)	5	5	30-Aug-10	03-Sep-10	-8
42450	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP6-7	6	6	16-Sep-10	22-Sep-10	-1
42460	Mass Concrete Copings (SP6-7)	10	10	04-Sep-10	15-Sep-10	-8
Package 1, Bargeload 3 SP7-8 & 9-10						
12930	Leveling Stone & Toe Block (SP7-8 & 9-10)	6	6	24-Jul-10	30-Jul-10	-6
12944	Float Out caisson seawalls (SP7-8 & 9-10)	2	2	03-Aug-10	04-Aug-10	-8
12954	Install caisson seawall (SP7-8)	2	2	05-Aug-10	06-Aug-10	-8
42380	Rockfill G200 inside caisson seawall (SP7-8)	1	1	07-Aug-10	07-Aug-10	-8
42390	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP7-8)	5	5	28-Aug-10	02-Sep-10	-7
42400	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP7-8)	5	5	10-Sep-10	15-Sep-10	5
42410	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP7-8	8	8	24-Sep-10	04-Oct-10	-1
42420	Install removal slotted panel (SP7-8)	2	2	16-Sep-10	17-Sep-10	11
RECLAMATION						
15400	Reclamation upto -6.65mPD	14	14	24-Aug-10	08-Sep-10	8
15600	Reclamation upto finish level (40,500m3)	22	22	09-Sep-10	06-Oct-10	37

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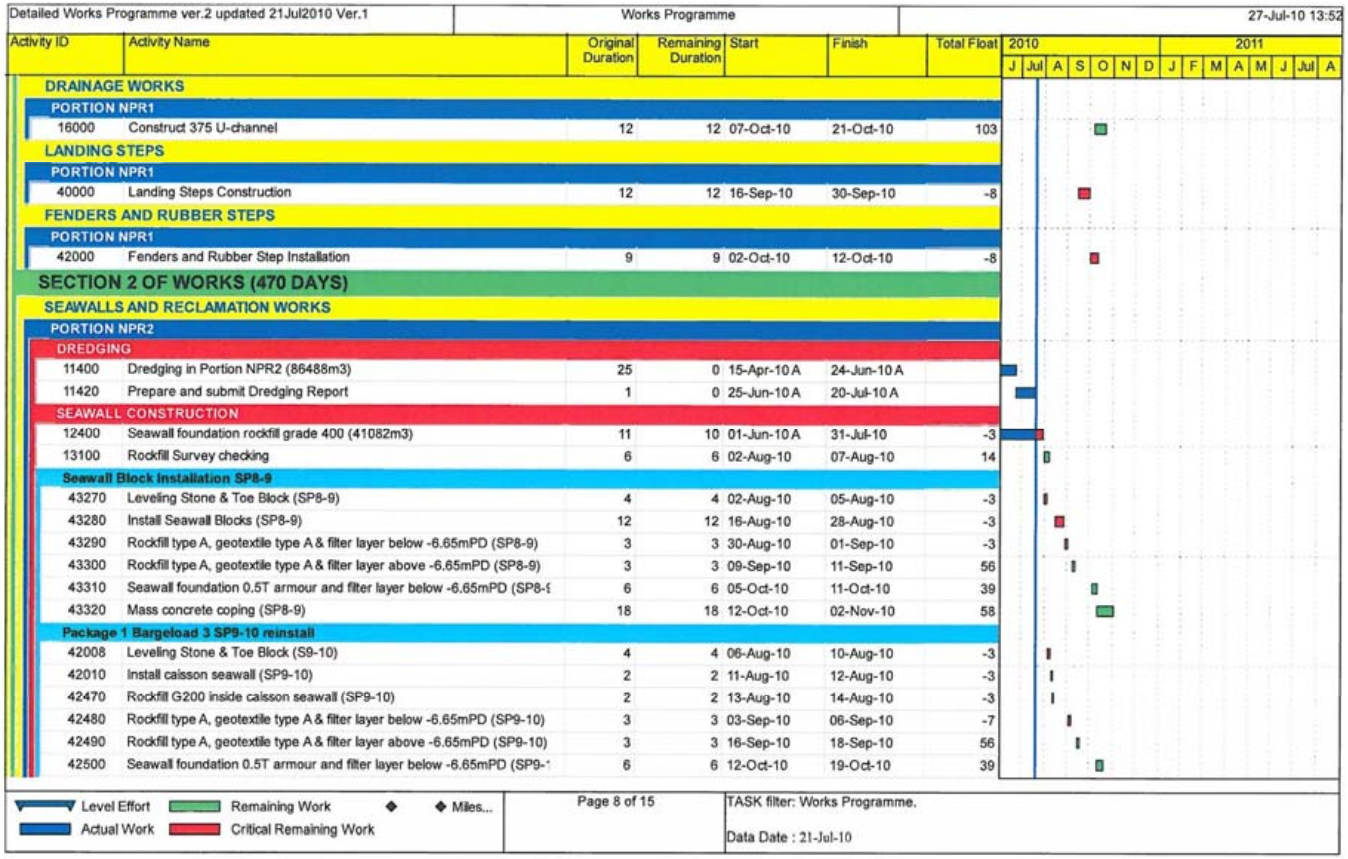
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Works Programme
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Activity ID
Activity Name
Original Duration
Remaining Duration
Start
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DRAINAGE WORKS
PORTION NPR1
16000 Construct 375 U-channel 12 12 07-Oct-10 21-Oct-10 103
LANDING STEPS
PORTION NPR1
40000 Landing Steps Construction 12 12 16-Sep-10 30-Sep-10 -8
FENDERS AND RUBBER STEPS
PORTION NPR1
42000 Fenders and Rubber Step Installation 9 9 02-Oct-10 12-Oct-10 -8
SECTION 2 OF WORKS (470 DAYS)
SEAWALLS AND RECLAMATION WORKS
PORTION NPR2
DREDGING
11400 Dredging in Portion NPR2 (86488m3) 25 0 15-Apr-10 A 24-Jun-10 A
11420 Prepare and submit Dredging Report 1 0 25-Jun-10 A 20-Jul-10 A
SEAWALL CONSTRUCTION
12400 Seawall foundation rockfill grade 400 (41082m3) 11 10 01-Jun-10 A 31-Jul-10 -3
13100 Rockfill Survey checking 6 6 02-Aug-10 07-Aug-10 14
Seawall Block Installation SP8-9
43270 Leveling Stone & Toe Block (SP8-9) 4 4 02-Aug-10 05-Aug-10 -3
43280 Install Seawall Blocks (SP8-9) 12 12 16-Aug-10 28-Aug-10 -3
43290 Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP8-9) 3 3 30-Aug-10 01-Sep-10 -3
43300 Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP8-9) 3 3 09-Sep-10 11-Sep-10 56
43310 Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP8-9 6 6 05-Oct-10 11-Oct-10 39
43320 Mass concrete coping (SP8-9) 18 18 12-Oct-10 02-Nov-10 58
Package 1 Bargeload 3 SP9-10 reinstall
42008 Leveling Stone & Toe Block (S9-10) 4 4 06-Aug-10 10-Aug-10 -3
42010 Install caisson seawall (SP9-10) 2 2 11-Aug-10 12-Aug-10 -3
42470 Rockfill G200 inside caisson seawall (SP9-10) 2 2 13-Aug-10 14-Aug-10 -3
42480 Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP9-10) 3 3 03-Sep-10 06-Sep-10 -7
42490 Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP9-10) 3 3 16-Sep-10 18-Sep-10 56
42500 Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP9- 6 6 12-Oct-10 19-Oct-10 39
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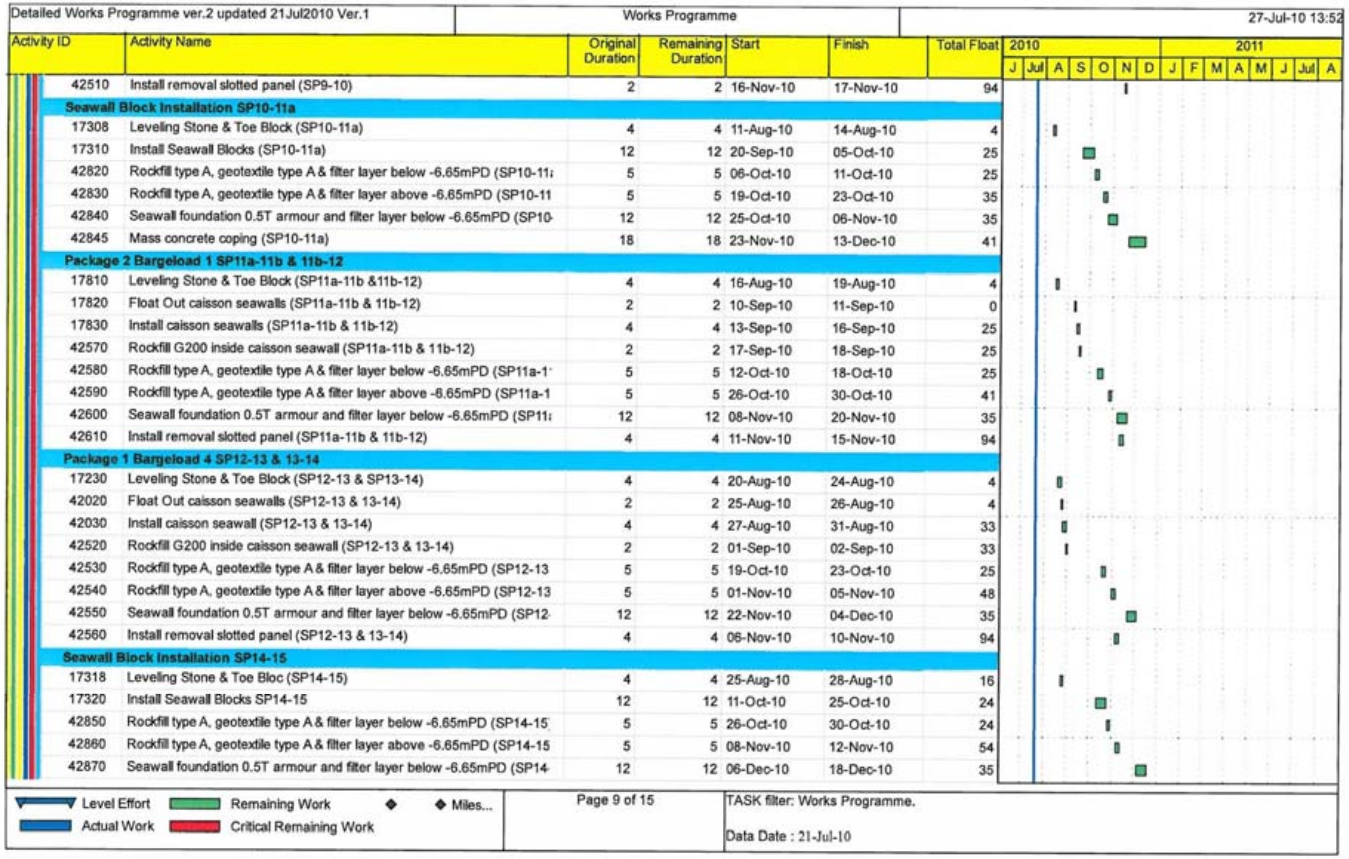

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42510	Install removal slotted panel (SP9-10)	2	2	16-Nov-10	17-Nov-10	94
Seawall Block Installation SP10-11a						
17308	Leveling Stone & Toe Block (SP10-11a)	4	4	11-Aug-10	14-Aug-10	4
17310	Install Seawall Blocks (SP10-11a)	12	12	20-Sep-10	05-Oct-10	25
42820	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP10-11	5	5	06-Oct-10	11-Oct-10	25
42830	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP10-11	5	5	19-Oct-10	23-Oct-10	35
42840	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP10-	12	12	25-Oct-10	06-Nov-10	35
42845	Mass concrete coping (SP10-11a)	18	18	23-Nov-10	13-Dec-10	41
Package 2 Bargeload 1 SP11a-11b & 11b-12						
17810	Leveling Stone & Toe Block (SP11a-11b &11b-12)	4	4	16-Aug-10	19-Aug-10	4
17820	Float Out caisson seawalls (SP11a-11b & 11b-12)	2	2	10-Sep-10	11-Sep-10	0
17830	Install caisson seawalls (SP11a-11b & 11b-12)	4	4	13-Sep-10	16-Sep-10	25
42570	Rockfill G200 inside caisson seawall (SP11a-11b & 11b-12)	2	2	17-Sep-10	18-Sep-10	25
42580	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP11a-1	5	5	12-Oct-10	18-Oct-10	25
42590	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP11a-1	5	5	26-Oct-10	30-Oct-10	41
42600	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP11	12	12	08-Nov-10	20-Nov-10	35
42610	Install removal slotted panel (SP11a-11b & 11b-12)	4	4	11-Nov-10	15-Nov-10	94
Package 1 Bargeload 4 SP12-13 & 13-14						
17230	Leveling Stone & Toe Block (SP12-13 & SP13-14)	4	4	20-Aug-10	24-Aug-10	4
42020	Float Out caisson seawalls (SP12-13 & 13-14)	2	2	25-Aug-10	26-Aug-10	4
42030	Install caisson seawall (SP12-13 & 13-14)	4	4	27-Aug-10	31-Aug-10	33
42520	Rockfill G200 inside caisson seawall (SP12-13 & 13-14)	2	2	01-Sep-10	02-Sep-10	33
42530	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP12-13	5	5	19-Oct-10	23-Oct-10	25
42540	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP12-13	5	5	01-Nov-10	05-Nov-10	48
42550	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP12	12	12	22-Nov-10	04-Dec-10	35
42560	Install removal slotted panel (SP12-13 & 13-14)	4	4	06-Nov-10	10-Nov-10	94
Seawall Block Installation SP14-15						
17318	Leveling Stone & Toe Bloc (SP14-15)	4	4	25-Aug-10	28-Aug-10	16
17320	Install Seawall Blocks SP14-15	12	12	11-Oct-10	25-Oct-10	24
42850	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP14-15	5	5	26-Oct-10	30-Oct-10	24
42860	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP14-15	5	5	08-Nov-10	12-Nov-10	54
42870	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP14-	12	12	06-Dec-10	18-Dec-10	35

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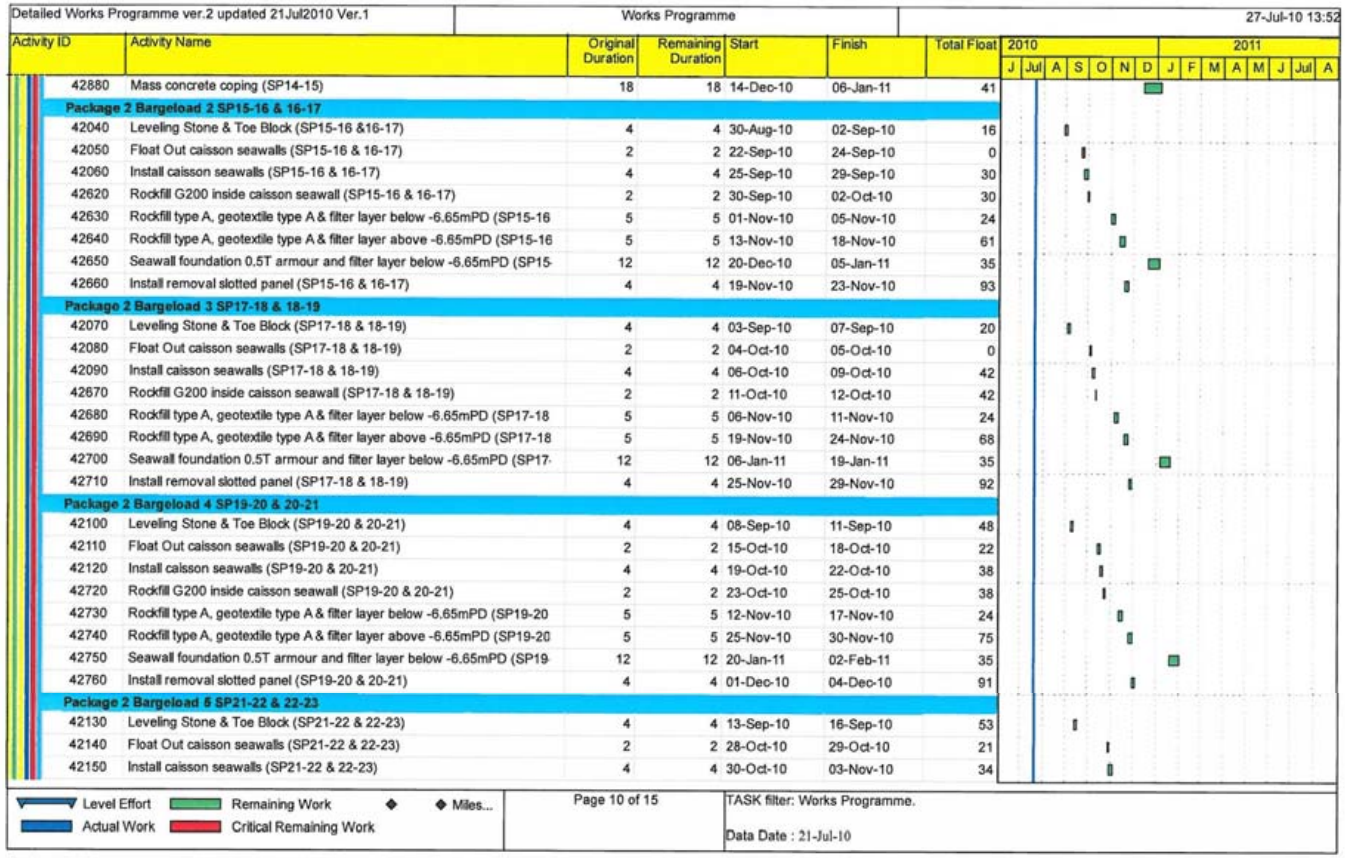

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42880	Mass concrete coping (SP14-15)	18	18	14-Dec-10	06-Jan-11	41
Package 2 Bargeload 2 SP15-16 & 16-17						
42040	Leveling Stone & Toe Block (SP15-16 &16-17)	4	4	30-Aug-10	02-Sep-10	16
42050	Float Out caisson seawalls (SP15-16 & 16-17)	2	2	22-Sep-10	24-Sep-10	0
42060	Install caisson seawalls (SP15-16 & 16-17)	4	4	25-Sep-10	29-Sep-10	30
42620	Rockfill G200 inside caisson seawall (SP15-16 & 16-17)	2	2	30-Sep-10	02-Oct-10	30
42630	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP15-16	5	5	01-Nov-10	05-Nov-10	24
42640	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP15-16	5	5	13-Nov-10	18-Nov-10	61
42650	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP15-	12	12	20-Dec-10	05-Jan-11	35
42660	Install removal slotted panel (SP15-16 & 16-17)	4	4	19-Nov-10	23-Nov-10	93
Package 2 Bargeload 3 SP17-18 & 18-19						
42070	Leveling Stone & Toe Block (SP17-18 & 18-19)	4	4	03-Sep-10	07-Sep-10	20
42080	Float Out caisson seawalls (SP17-18 & 18-19)	2	2	04-Oct-10	05-Oct-10	0
42090	Install caisson seawalls (SP17-18 & 18-19)	4	4	06-Oct-10	09-Oct-10	42
42670	Rockfill G200 inside caisson seawall (SP17-18 & 18-19)	2	2	11-Oct-10	12-Oct-10	42
42680	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP17-18	5	5	06-Nov-10	11-Nov-10	24
42690	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP17-18	5	5	19-Nov-10	24-Nov-10	68
42700	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP17-	12	12	06-Jan-11	19-Jan-11	35
42710	Install removal slotted panel (SP17-18 & 18-19)	4	4	25-Nov-10	29-Nov-10	92
Package 2 Bargeload 4 SP19-20 & 20-21						
42100	Leveling Stone & Toe Block (SP19-20 & 20-21)	4	4	08-Sep-10	11-Sep-10	48
42110	Float Out caisson seawalls (SP19-20 & 20-21)	2	2	15-Oct-10	18-Oct-10	22
42120	Install caisson seawalls (SP19-20 & 20-21)	4	4	19-Oct-10	22-Oct-10	38
42720	Rockfill G200 inside caisson seawall (SP19-20 & 20-21)	2	2	23-Oct-10	25-Oct-10	38
42730	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP19-20	5	5	12-Nov-10	17-Nov-10	24
42740	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP19-20	5	5	25-Nov-10	30-Nov-10	75
42750	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP19-	12	12	20-Jan-11	02-Feb-11	35
42760	Install removal slotted panel (SP19-20 & 20-21)	4	4	01-Dec-10	04-Dec-10	91
Package 2 Bargeload 6 SP21-22 & 22-23						
42130	Leveling Stone & Toe Block (SP21-22 & 22-23)	4	4	13-Sep-10	16-Sep-10	53
42140	Float Out caisson seawalls (SP21-22 & 22-23)	2	2	28-Oct-10	29-Oct-10	21
42150	Install caisson seawalls (SP21-22 & 22-23)	4	4	30-Oct-10	03-Nov-10	34

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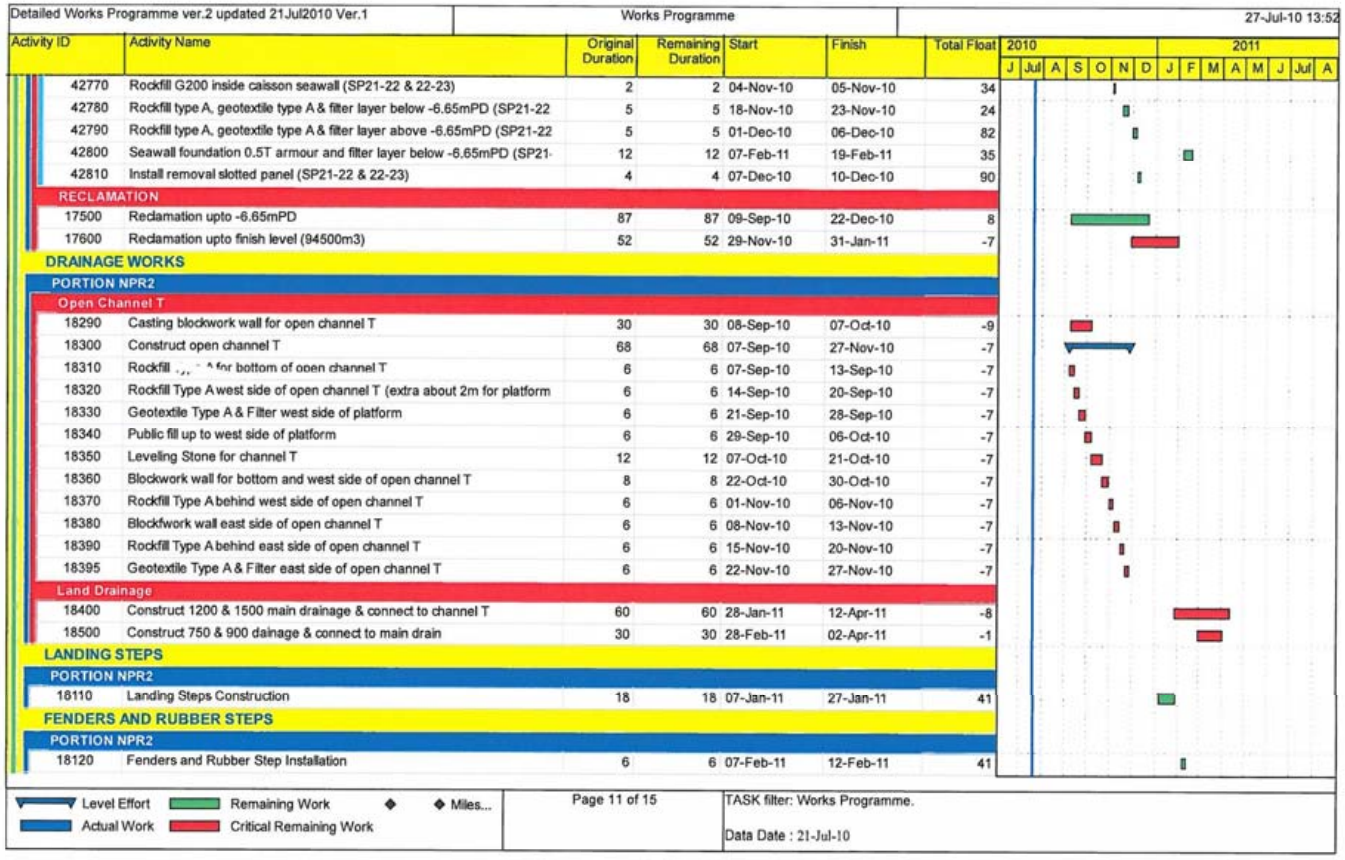

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42770	Rockfill G200 inside caisson seawall (SP21-22 & 22-23)	2	2	04-Nov-10	05-Nov-10	34
42780	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP21-22	5	5	18-Nov-10	23-Nov-10	24
42790	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP21-22	5	5	01-Dec-10	06-Dec-10	82
42800	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP21-	12	12	07-Feb-11	19-Feb-11	35
42810	Install removal slotted panel (SP21-22 & 22-23)	4	4	07-Dec-10	10-Dec-10	90
	RECLAMATION					
17500	Reclamation upto -6.65mPD	87	87	09-Sep-10	22-Dec-10	8
17600	Reclamation upto finish level (94500m3)	52	52	29-Nov-10	31-Jan-11	-7
	DRAINAGE WORKS					
	PORTION NPR2					
	Open Channel T					
18290	Casting blockwork wall for open channel T	30	30	08-Sep-10	07-Oct-10	-9
18300	Construct open channel T	68	68	07-Sep-10	27-Nov-10	-7
18310	Rockfill ... for bottom of open channel T	6	6	07-Sep-10	13-Sep-10	-7
18320	Rockfill Type A west side of open channel T (extra about 2m for platform	6	6	14-Sep-10	20-Sep-10	-7
18330	Geotextile Type A & Filter west side of platform	6	6	21-Sep-10	28-Sep-10	-7
18340	Public fill up to west side of platform	6	6	29-Sep-10	06-Oct-10	-7
18350	Leveling Stone for channel T	12	12	07-Oct-10	21-Oct-10	-7
18360	Blockwork wall for bottom and west side of open channel T	8	8	22-Oct-10	30-Oct-10	-7
18370	Rockfill Type A behind west side of open channel T	6	6	01-Nov-10	06-Nov-10	-7
18380	Blockfwork wall east side of open channel T	6	6	08-Nov-10	13-Nov-10	-7
18390	Rockfill Type A behind east side of open channel T	6	6	15-Nov-10	20-Nov-10	-7
18395	Geotextile Type A & Filter east side of open channel T	6	6	22-Nov-10	27-Nov-10	-7
	Land Drainage					
18400	Construct 1200 & 1500 main drainage & connect to channel T	60	60	28-Jan-11	12-Apr-11	-8
18500	Construct 750 & 900 dainage & connect to main drain	30	30	28-Feb-11	02-Apr-11	-1
	LANDING STEPS					
	PORTION NPR2					
18110	Landing Steps Construction	18	18	07-Jan-11	27-Jan-11	41
	FENDERS AND RUBBER STEPS					
	PORTION NPR2					
18120	Fenders and Rubber Step Installation	6	6	07-Feb-11	12-Feb-11	41

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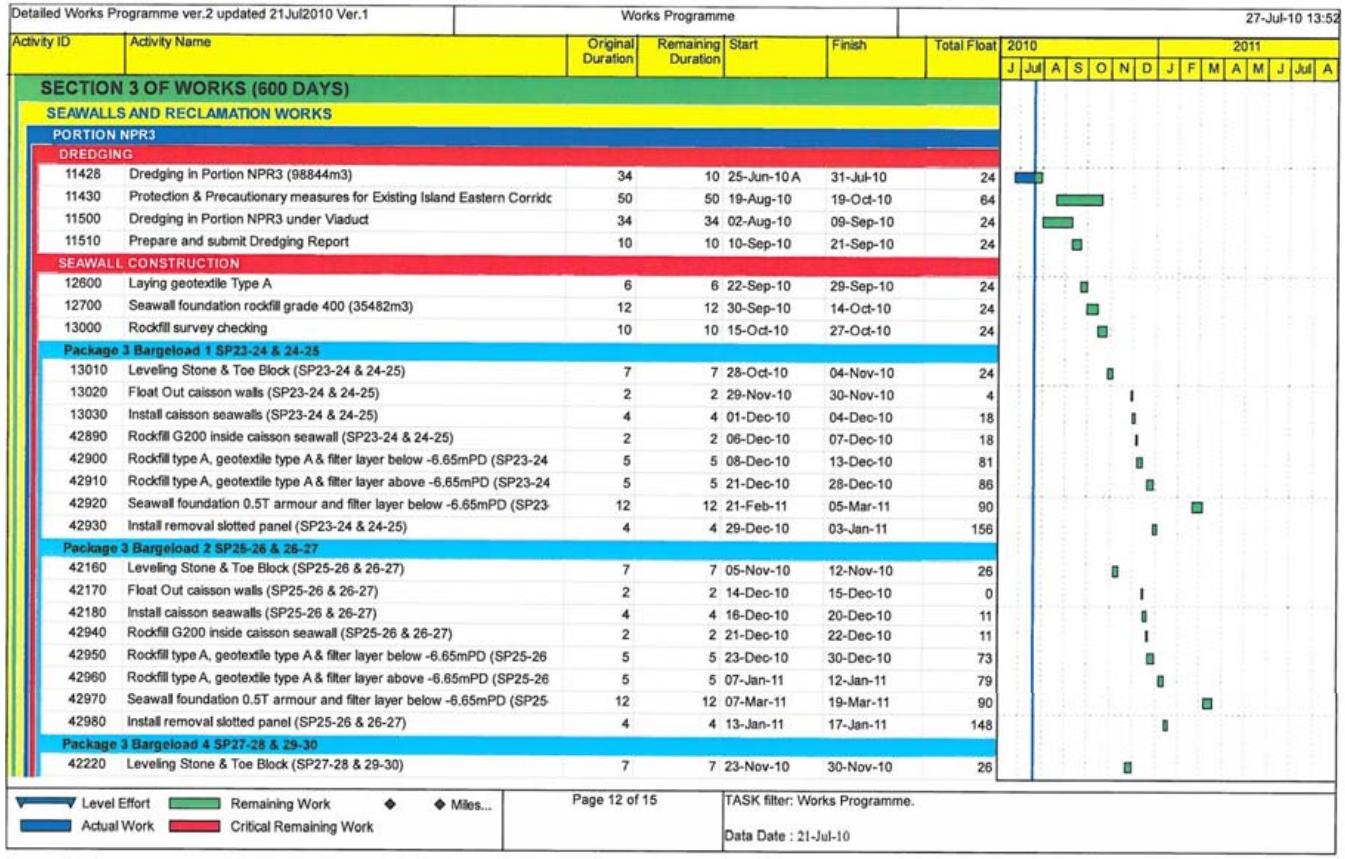

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
SECTION 3 OF WORKS (600 DAYS)						
SEAWALLS AND RECLAMATION WORKS						
PORTION NPR3						
DREDGING						
11428	Dredging in Portion NPR3 (98844m3)	34	10	25-Jun-10 A	31-Jul-10	24
11430	Protection & Precautionary measures for Existing Island Eastern Corridc	50	50	19-Aug-10	19-Oct-10	64
11500	Dredging in Portion NPR3 under Viaduct	34	34	02-Aug-10	09-Sep-10	24
11510	Prepare and submit Dredging Report	10	10	10-Sep-10	21-Sep-10	24
SEAWALL CONSTRUCTION						
12600	Laying geotextile Type A	6	6	22-Sep-10	29-Sep-10	24
12700	Seawall foundation rockfill grade 400 (35482m3)	12	12	30-Sep-10	14-Oct-10	24
13000	Rockfill survey checking	10	10	15-Oct-10	27-Oct-10	24
Package 3 Bargeload 1 SP23-24 & 24-25						
13010	Leveling Stone & Toe Block (SP23-24 & 24-25)	7	7	28-Oct-10	04-Nov-10	24
13020	Float Out caisson walls (SP23-24 & 24-25)	2	2	29-Nov-10	30-Nov-10	4
13030	Install caisson seawalls (SP23-24 & 24-25)	4	4	01-Dec-10	04-Dec-10	18
42890	Rockfill G200 inside caisson seawall (SP23-24 & 24-25)	2	2	06-Dec-10	07-Dec-10	18
42900	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP23-24	5	5	08-Dec-10	13-Dec-10	81
42910	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP23-24	5	5	21-Dec-10	28-Dec-10	86
42920	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP23-	12	12	21-Feb-11	05-Mar-11	90
42930	Install removal slotted panel (SP23-24 & 24-25)	4	4	29-Dec-10	03-Jan-11	156
Package 3 Bargeload 2 SP25-26 & 26-27						
42160	Leveling Stone & Toe Block (SP25-26 & 26-27)	7	7	05-Nov-10	12-Nov-10	26
42170	Float Out caisson walls (SP25-26 & 26-27)	2	2	14-Dec-10	15-Dec-10	0
42180	Install caisson seawalls (SP25-26 & 26-27)	4	4	16-Dec-10	20-Dec-10	11
42940	Rockfill G200 inside caisson seawall (SP25-26 & 26-27)	2	2	21-Dec-10	22-Dec-10	11
42950	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP25-26	5	5	23-Dec-10	30-Dec-10	73
42960	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP25-26	5	5	07-Jan-11	12-Jan-11	79
42970	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP25-	12	12	07-Mar-11	19-Mar-11	90
42980	Install removal slotted panel (SP25-26 & 26-27)	4	4	13-Jan-11	17-Jan-11	148
Package 3 Bargeload 4 SP27-28 & 29-30						
42220	Leveling Stone & Toe Block (SP27-28 & 29-30)	7	7	23-Nov-10	30-Nov-10	26

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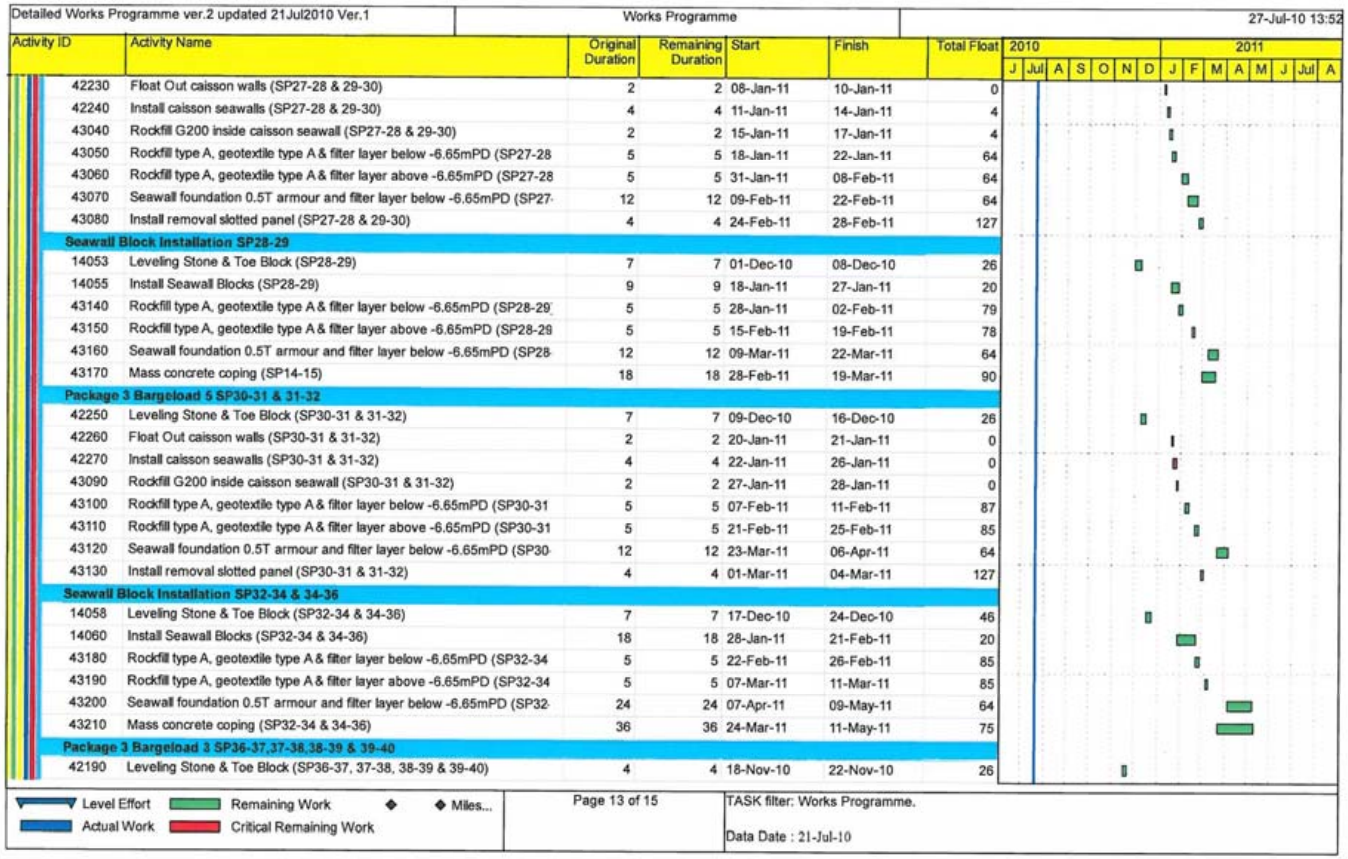

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42230	Float Out caisson walls (SP27-28 & 29-30)	2	2	08-Jan-11	10-Jan-11	0
42240	Install caisson seawalls (SP27-28 & 29-30)	4	4	11-Jan-11	14-Jan-11	4
43040	Rockfill G200 inside caisson seawall (SP27-28 & 29-30)	2	2	15-Jan-11	17-Jan-11	4
43050	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP27-28	5	5	18-Jan-11	22-Jan-11	64
43060	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP27-28	5	5	31-Jan-11	08-Feb-11	64
43070	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP27-	12	12	09-Feb-11	22-Feb-11	64
43080	Install removal slotted panel (SP27-28 & 29-30)	4	4	24-Feb-11	28-Feb-11	127
Seawall Block Installation SP28-29						
14053	Leveling Stone & Toe Block (SP28-29)	7	7	01-Dec-10	08-Dec-10	26
14055	Install Seawall Blocks (SP28-29)	9	9	18-Jan-11	27-Jan-11	20
43140	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP28-29	5	5	28-Jan-11	02-Feb-11	79
43150	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP28-29	5	5	15-Feb-11	19-Feb-11	78
43160	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP28-	12	12	09-Mar-11	22-Mar-11	64
43170	Mass concrete coping (SP14-15)	18	18	28-Feb-11	19-Mar-11	90
Package 3 Bargeload 5 SP30-31 & 31-32						
42250	Leveling Stone & Toe Block (SP30-31 & 31-32)	7	7	09-Dec-10	16-Dec-10	26
42260	Float Out caisson walls (SP30-31 & 31-32)	2	2	20-Jan-11	21-Jan-11	0
42270	Install caisson seawalls (SP30-31 & 31-32)	4	4	22-Jan-11	26-Jan-11	0
43090	Rockfill G200 inside caisson seawall (SP30-31 & 31-32)	2	2	27-Jan-11	28-Jan-11	0
43100	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP30-31	5	5	07-Feb-11	11-Feb-11	87
43110	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP30-31	5	5	21-Feb-11	25-Feb-11	85
43120	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP30-	12	12	23-Mar-11	06-Apr-11	64
43130	Install removal slotted panel (SP30-31 & 31-32)	4	4	01-Mar-11	04-Mar-11	127
Seawall Block Installation SP32-34 & 34-36						
14058	Leveling Stone & Toe Block (SP32-34 & 34-36)	7	7	17-Dec-10	24-Dec-10	46
14060	Install Seawall Blocks (SP32-34 & 34-36)	18	18	28-Jan-11	21-Feb-11	20
43180	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP32-34	5	5	22-Feb-11	26-Feb-11	85
43190	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP32-34	5	5	07-Mar-11	11-Mar-11	85
43200	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP32-	24	24	07-Apr-11	09-May-11	64
43210	Mass concrete coping (SP32-34 & 34-36)	36	36	24-Mar-11	11-May-11	75
Package 3 Bargeload 3 SP36-37,37-38,38-39 & 39-40						
42190	Leveling Stone & Toe Block (SP36-37, 37-38, 38-39 & 39-40)	4	4	18-Nov-10	22-Nov-10	26

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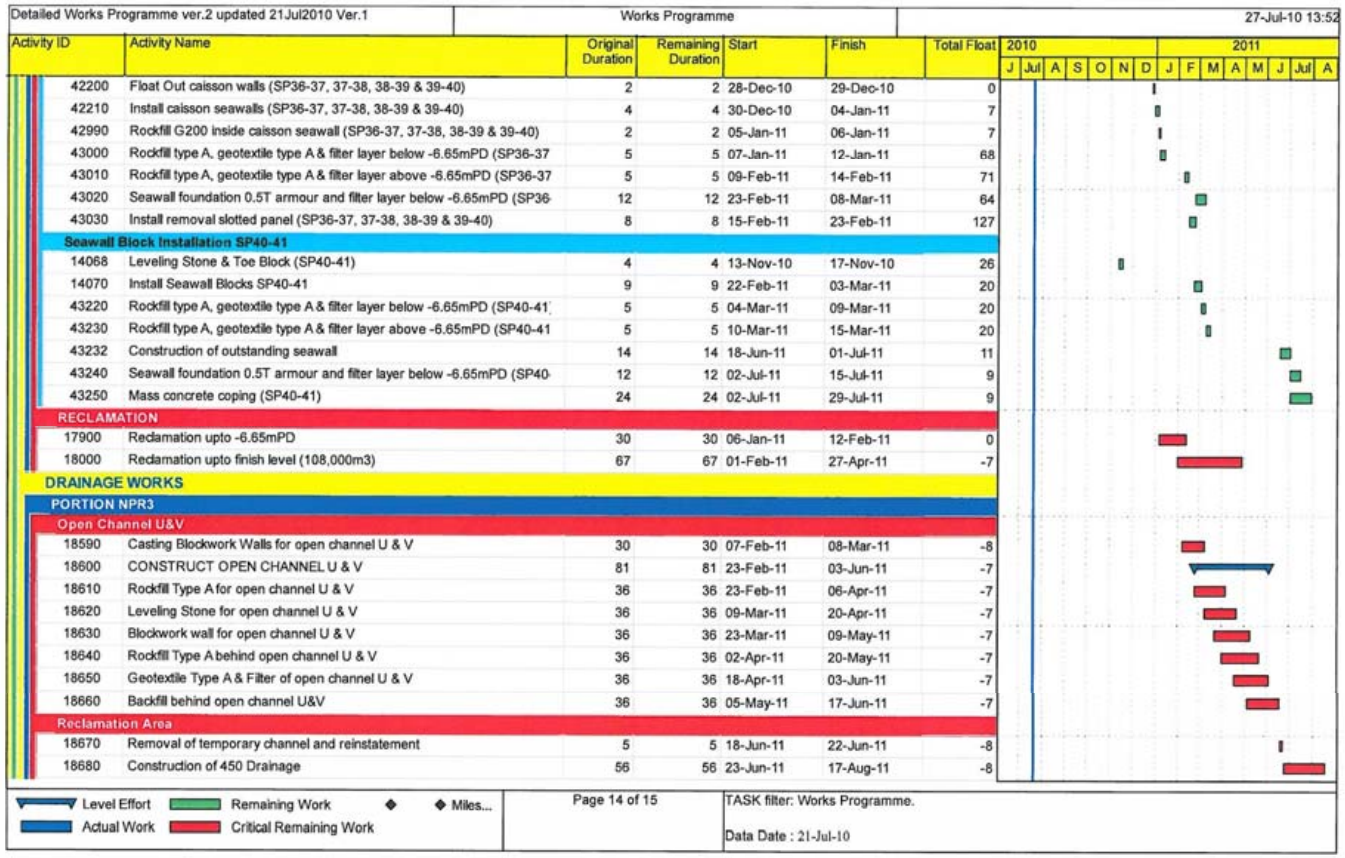

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Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
42200	Float Out caisson walls (SP36-37, 37-38, 38-39 & 39-40)	2	2	28-Dec-10	29-Dec-10	0
42210	Install caisson seawalls (SP36-37, 37-38, 38-39 & 39-40)	4	4	30-Dec-10	04-Jan-11	7
42990	Rockfill G200 inside caisson seawall (SP36-37, 37-38, 38-39 & 39-40)	2	2	05-Jan-11	06-Jan-11	7
43000	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP36-37	5	5	07-Jan-11	12-Jan-11	68
43010	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP36-37	5	5	09-Feb-11	14-Feb-11	71
43020	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP36-	12	12	23-Feb-11	08-Mar-11	64
43030	Install removal slotted panel (SP36-37, 37-38, 38-39 & 39-40)	8	8	15-Feb-11	23-Feb-11	127
Seawall Block Installation SP40-41						
14068	Leveling Stone & Toe Block (SP40-41)	4	4	13-Nov-10	17-Nov-10	26
14070	Install Seawall Blocks SP40-41	9	9	22-Feb-11	03-Mar-11	20
43220	Rockfill type A, geotextile type A & filter layer below -6.65mPD (SP40-41	5	5	04-Mar-11	09-Mar-11	20
43230	Rockfill type A, geotextile type A & filter layer above -6.65mPD (SP40-41	5	5	10-Mar-11	15-Mar-11	20
43232	Construction of outstanding seawall	14	14	18-Jun-11	01-Jul-11	11
43240	Seawall foundation 0.5T armour and filter layer below -6.65mPD (SP40-	12	12	02-Jul-11	15-Jul-11	9
43250	Mass concrete coping (SP40-41)	24	24	02-Jul-11	29-Jul-11	9
RECLAMATION						
17900	Reclamation upto -6.65mPD	30	30	06-Jan-11	12-Feb-11	0
18000	Reclamation upto finish level (108,000m3)	67	67	01-Feb-11	27-Apr-11	-7
DRAINAGE WORKS						
PORTION NPR3						
Open Channel U&V						
18590	Casting Blockwork Walls for open channel U & V	30	30	07-Feb-11	08-Mar-11	-8
18600	CONSTRUCT OPEN CHANNEL U & V	81	81	23-Feb-11	03-Jun-11	-7
18610	Rockfill Type A for open channel U & V	36	36	23-Feb-11	06-Apr-11	-7
18620	Leveling Stone for open channel U & V	36	36	09-Mar-11	20-Apr-11	-7
18630	Blockwork wall for open channel U & V	36	36	23-Mar-11	09-May-11	-7
18640	Rockfill Type A behind open channel U & V	36	36	02-Apr-11	20-May-11	-7
18650	Geotextile Type A & Filter of open channel U & V	36	36	18-Apr-11	03-Jun-11	-7
18660	Backfill behind open channel U&V	36	36	05-May-11	17-Jun-11	-7
Reclamation Area						
18670	Removal of temporary channel and reinstatement	5	5	18-Jun-11	22-Jun-11	-8
18680	Construction of 450 Drainage	56	56	23-Jun-11	17-Aug-11	-8

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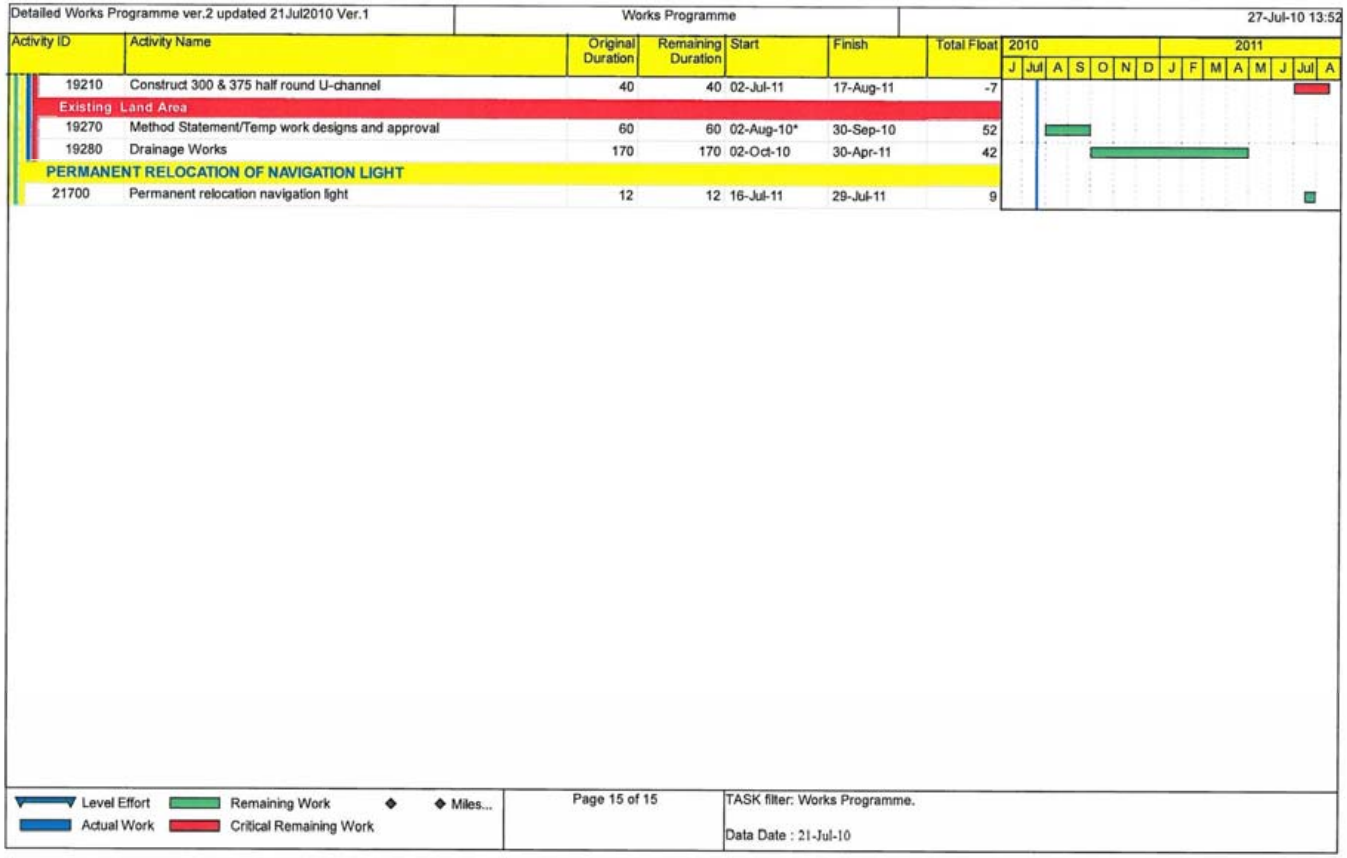
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Works Programme
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Activity ID
Activity Name
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Start
Finish
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19210 Construct 300 & 375 half round U-channel 40 40 02-Jul-11 17-Aug-11 -7
Existing Land Area
19270 Method Statement/Temp work designs and approval 60 60 02-Aug-10* 30-Sep-10 52
19280 Drainage Works 170 170 02-Oct-10 30-Apr-11 42
PERMANENT RELOCATION OF NAVIGATION LIGHT
21700 Permanent relocation navigation light 12 12 16-Jul-11 29-Jul-11 9
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