

[0G5J]

By Fax 3929 3483



**HIGHWAYS DEPARTMENT**  
**HONG KONG - ZHUHAI - MACAO BRIDGE**  
**HONG KONG PROJECT MANAGEMENT OFFICE**  
 4/F, HO MAN TIN GOVERNMENT OFFICES  
 88 CHUNG HAU STREET, HOMANTIN, KOWLOON, HONG KONG  
 Web site : <http://www.hyd.gov.hk>

路政署  
 港珠澳大橋香港工程管理處  
 香港九龍何文田忠孝街八十八號  
 何文田政府合署四樓  
 網址: <http://www.hyd.gov.hk>

本署檔案 Our Ref. : (0GDA) in HZMB 7/11/9/8  
 來函檔號 Your Ref. : SCL-COR-FM(SCL/KTE)-ENV-109  
 電話 Tel. : 2762 4982  
 圖文傳真 Fax : 3188 6614

SCL-COR-HYD-ENV-1092

MTR Corporation Limited  
 9/F Citylink Plaza  
 1 Shatin Station Circuit  
 Shatin New Territories  
 Hong Kong  
 (Attn: Mr. Joseph Choi)

SCL-Civil		19 JUN 2009			
File No.		COR/ENV			
Name	Initial	Action	Copy	Info	
Stanley Keung					
Henry Young					
Neil Smith					
Albert Lam					
L. K Ng					
Thomas Li					
Ray Ng					
Aron Pang					
Tommy Leung					
Barry Hui					
Sam Au					
Alberich Yu					
Joseph Yan					

19 June 2009

Dear Sirs,

**Hong Kong - Zhuhai - Macao Bridge**  
**Hong Kong Boundary Crossing Facilities (HKBCF) &**  
**Hong Kong Link Road (HKLR) and**  
**Tuen Mun - Chek Lap Kok Link (TM-CLKL)**

**Coordination with MTRCL Railway Projects**  
**on Construction and Demolition Materials Management**

I refer to your letter dated 2.6.2009 concerning the captioned.

Please find enclosed a table showing the most up-to-date estimated demand of soft public fill and rock fill for the HKBCF, HKLR and TM-CLKL projects. Please note that the actual amount of materials to be required from your projects shall depend on the suitability of the materials and the timing of the availability of the materials, and these will be determined in the detailed design stage of our projects.

Yours faithfully,

(C.M. OR)

for Project Manager / Hong Kong - Zhuhai - Macao Bridge Hong Kong  
 Highways Department

c.c.

Ove Arup & Partners HK Ltd.  
 AECOM Asia Co. Ltd.  
 SE3, SE5, SE8, SE9, SE10, E5, E16  
 File HZMB 7/9/1/5

(Attn : Mr. Eddie Tsang) 2268 3483  
 (Attn : Mr. Louis Lau) 2691 2601



### Imported Fill Amount for HKBCF, HKLR and TMCLKL project

Programme 5 (Non-dredged Reclamation)

Year	HKBCF		HKLR		TMCLKL - TBM	
	Imported Fill (million tonne) Public Fill	Rock	Imported Fill (million tonne) Public Fill	Rock	Imported Fill (million tonne) Public Fill	Rockfill
2010						
2011	0.45	5.05		0.48		1.25
2012	12.05	1.75	2.5	0.32	3.85	3.46
2013	4.3		0.3		6.09	
2014	0.65					
2015						
<b>Total:</b>	<b>17.45</b>	<b>6.8</b>	<b>2.8</b>	<b>0.8</b>	<b>9.94</b>	<b>4.71</b>

~2602855.xls

18/06/2009

**SA No. 2 to Agreement No. CE54/2001(CE)  
Wan Chai Development Phase II  
Design and Construction for Trunk Road Tunnel Option**

**Draft Notes of Meeting**

**Subject:** Coordination Meeting for the possibility to re-use surplus fill material generated from MTR WL/SIL/SCL projects in WDII **Ref:** 60041297/13.2

**Meeting Place:** Conference Room, 13/F, North Point Government Office, 333 Java Road, North Point, HK

**Date of Meeting:** 4:00 p.m., 2 June 2009, Tuesday

<b>Present:</b>	Mr Richard Ng	SE/CEDD/HKI&I
	Mr Vincent Kwok	E/CEDD/HKI&I
	Mr Stanley Keung	CM/MTRCL
	Mr Kristian Murfitt	SConE/MTRCL
	Mr Darryl Wong	SDME/MTRCL
	Mr Albert Lam	SConE/MTRCL
	Mr Dennis Chiu	DME1/MTRCL
	Mr Simon Wong	Principal Engineer/AECOM
	Mr H S Lo	Engineer/AECOM

No.	Item	Action
1.0	<b>Introduction</b>	
1.1	The members of the meeting introduced themselves respectively.	
1.2	The coordination meeting is to discuss the possibility to re-use of surplus rockfill and public fill generated from WL/SIL/SCL in Wan Chai Development Phase II (WDII) reclamation contracts	
1.3	AECOM, as the consultant of Civil Engineering and Development Department (CEDD) for the Design and Construction for the WDII - Trunk Road Tunnel Option, briefly introduced the background and scope of the works under the WDII contracts: <ol style="list-style-type: none"> <li>1. the major works under WDII included the Wan Chai reclamation works and construction of the Central-Wan Chai Bypass (CWB) Tunnel from Central Reclamation Phase III eastern boundary to the west of ex-PCWA;</li> <li>2. Owing to the need to maintain the operation of the existing water-front facilities before the reprovisioned ones are operational, reclamation works under WDII will have to be sub-divided into stages. For each stage, the reclamation work will be carried out first, to be followed by the construction of the CWB tunnel box, backfilling to the tunnel and</li> </ol>	

No.	Item	Action
	<p>then the reprovisioned utilities above it;</p> <p>3. The current target commencement date for the proposed works is early 2010 for substantial completion in early 2017.</p>	
2.0	<b>Programme of WDII Contracts with MTRCL Projects</b>	
2.1	<p>CEDD advised that WDII Contracts will commence around late 2009 to early 2010 and under the latest construction programme, WDII Contracts would need public fill and rockfill for reclamation/ backfilling / seawall foundation construction starting from June 2010.</p>	
2.2	<p>AECOM further elaborated that owing to the construction sequences to re-provision/ protect/ divert and maintain the existing WCESSP sewage outfall, cross harbour mains, drainage box culverts and cooling mains, the reclamation works in WDII will be divided into at least 9 small areas and fill demand for reclamation work and backfilling work in each of the areas are scattered into different discrete time frames from early 2010 to early 2016.</p>	
2.3	<p>MTRCL briefly described the quantities of generated C&amp;D materials in their proposed projects with a summary table <i>Preliminary Estimate of Excavated Materials – Status as at: 11 May 2009</i> tabled. Currently six projects are planned, namely:</p> <ol style="list-style-type: none"> <li>1. WIL (West Island Line);</li> <li>2. SIL(E) (South Island Line (East));</li> <li>3. SCL(EWL) (Shatin to Central Link (East West Line));</li> <li>4. SCL(NSL) (Shatin to Central Link (North South Line));</li> <li>5. KTE (Kwun Tong Line Extension);</li> <li>6. XRL (The Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link).</li> </ol> <p>The total quantity of generated C&amp;D materials is about 35 million tonnes.</p> <p>MTRCL concerned about the timing of using the C&amp;D materials in WDII. Refer to the preliminary programme in the table, MTRCL mentioned that the C&amp;D materials generated in WIL, SIL(E) and SCL(NSL) may be reusable in WDII Contracts in respect to the programme and location of works.</p>	
2.4	<p>AECOM presented three charts showing the flow of public fill for WDII reclamation works and backfilling to CWB tunnel and the flow of rockfill for seawall foundation needed in each month from Jan 2010 to Dec 2016 . AECOM advised that there are three peak periods requires public fill (end 2010, end 2012/early 2013 and end 2014/early 2015) and rockfill (mid 2010, mid 2012 and early 2014). The charts of WDII preliminary fill demand curves were enclosed to this notes of meeting.</p>	
2.5	<p>AECOM further explained that due to lack of available land for temporary stockpiling, any C&amp;D materials received from MTR Projects shall be delivered directly to WDII site for use and will be unable to stockpile any of the fill materials from MTR projects. MTRCL also advised that stockpiling area for the surplus C&amp;D material generated from their projects is also not available.</p>	

No.	Item	Action
3.0	<b>Quality of C&amp;D Materials from MTR projects</b>	
3.1	CEDD and AECOM stated that the public fill provided from MTR projects shall have particle size <u>less than 200mm</u> for reclamation work in order to allow smooth diaphragm wall construction after reclamation. AECOM further elaborated the construction sequences of reclamation and CWB tunnel to clarify the need to have finer particle size requirement.	
3.2	CEDD and AECOM stated that rockfill of grade 200 is needed for WDII seawall construction, MTRCL responded that about half of the rock generated from MTR projects would have a size below 200mm in general.	
3.3	CEDD advised that delivery of public fill/ rockfill for reclamation and seawall foundation works will be by barges rather than land transportation owing to the congested road condition at Wan Chai North. AECOM further explained that the heavy traffic condition in Hung Hing Road would not allow delivery of fill materials by trucks.	
3.4	CEDD/AECOM asked MTRCL about the type of rock expected to be generated and MTRCL advised that about half of the rock is volcanic rock and half of the rock is granite. CEDD/AECOM raised concerns that volcanic rock may not be acceptable by the maintenance agent for seawall construction.	
3.5	MTRCL requested CEDD/AECOM to provide a quarterly demand table to show the demand of public fill and rockfill so that they can review if the generated C&D materials in MTR projects are available to supply to WDII Contracts.	AECOM
3.6	CEDD/AECOM also requested MTRCL to provide a table to show the generation of public fill and rockfill from MTR projects on quarterly/monthly basis for their information.	MTRCL
3.7	Regarding the arrangement for the WDII contractor to collect the C&D materials from MTR project, MTRCL said that the contractors would make their arrangement if it were commercial viable. MTRCL suggested that WDII contractors could liaise with MTR contractors for the supply and logistic arrangements of C&D materials to WDII contracts.	
3.8	MTRCL commented that the requested quantities of C&D materials from WDII Contracts are rather small in quantities as compared to the generated materials in MTR projects. MTRCL would explore and discuss with other projects to investigate if the materials can be reused by other projects or otherwise the surplus will be likely disposed to Mainland China.	
3.9	CEDD summarized a total of about 1.4Mm <sup>3</sup> public fill is required in WDII contracts. Upon MTRCL enquiry, CEDD advised that the construction of CWB tunnel at Causeway Bay typhoon shelter is managed by HyD/MWPMO and MTRCL might liaise with HyD for the use of their surplus C&D materials in HyD Contracts.	
3.10	It is agreed that both AECOM and MTRCL shall keep inform to both parties on any change of public fill/ rock fill demand programme for WDII and C&D materials generated programme for MTR projects for further	AECOM/ MTRCL

No.	Item	Action
	review and coordination.	
4.0	Next Meeting	
4.1	To be confirmed.	





**MTR CORPORATION LIMITED**  
**PROJECTS DIVISION**  
**Minutes of Meeting**

<p><b>Subject: Discussion on the Potential Disposal of Spoil from New Railway Projects as Fill Material for Central-Wan Chai Bypass</b></p> <p>File No.: <b>SCL-MTM-CM(SCLC)-ENV-001148</b></p>	<p>Date of Meeting: <b>5 October 2009</b></p> <p>Time: <b>17:00 pm</b></p> <p>Place: <b>9B, Citylink</b></p>																																																												
<p><b>Purpose of Meeting:</b></p> <p>To discuss the possibility of using spoil generated from the coming railway projects as fill material in Central-Wan Chai Bypass (CWB) project</p>																																																													
<p><b>Attendees:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Name</u></th> <th style="text-align: left;"><u>Position</u></th> <th style="text-align: left;"><u>Telephone</u></th> <th style="text-align: left;"><u>Name</u></th> <th style="text-align: left;"><u>Position</u></th> <th style="text-align: left;"><u>Telephone</u></th> </tr> </thead> <tbody> <tr> <td colspan="3"><u>HyD/MWPMO</u></td> <td colspan="3"><u>MTRCL</u></td> </tr> <tr> <td>Kelvin Ng</td> <td>E4/CWB</td> <td>2762 3570</td> <td>Stanley Keung</td> <td>CM – SCL</td> <td>3929 7333</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Ivan Chau</td> <td>CM – XRL</td> <td>2208 3647</td> </tr> <tr> <td colspan="3"><u>AECOM (CWB Consultant)</u></td> <td>Albert Lam</td> <td>SConE – SCL</td> <td>6401 9440</td> </tr> <tr> <td>Kelvin Cheng</td> <td>PM</td> <td>2685 6414</td> <td>Ken Wong</td> <td>SConE – SIL</td> <td>9660 8480</td> </tr> <tr> <td>Alex Wong</td> <td>SE</td> <td>2685 6529</td> <td>Simon Yeung</td> <td>ConE I - XRL</td> <td>2208 3742</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Gilbert Wong</td> <td>DME I – WIL</td> <td>3921 3361</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Tommy Leung</td> <td>ConE II – SCL</td> <td>3929 7452</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Joe Wong</td> <td>E III – WIL</td> <td>3921 3346</td> </tr> </tbody> </table>		<u>Name</u>	<u>Position</u>	<u>Telephone</u>	<u>Name</u>	<u>Position</u>	<u>Telephone</u>	<u>HyD/MWPMO</u>			<u>MTRCL</u>			Kelvin Ng	E4/CWB	2762 3570	Stanley Keung	CM – SCL	3929 7333				Ivan Chau	CM – XRL	2208 3647	<u>AECOM (CWB Consultant)</u>			Albert Lam	SConE – SCL	6401 9440	Kelvin Cheng	PM	2685 6414	Ken Wong	SConE – SIL	9660 8480	Alex Wong	SE	2685 6529	Simon Yeung	ConE I - XRL	2208 3742				Gilbert Wong	DME I – WIL	3921 3361				Tommy Leung	ConE II – SCL	3929 7452				Joe Wong	E III – WIL	3921 3346
<u>Name</u>	<u>Position</u>	<u>Telephone</u>	<u>Name</u>	<u>Position</u>	<u>Telephone</u>																																																								
<u>HyD/MWPMO</u>			<u>MTRCL</u>																																																										
Kelvin Ng	E4/CWB	2762 3570	Stanley Keung	CM – SCL	3929 7333																																																								
			Ivan Chau	CM – XRL	2208 3647																																																								
<u>AECOM (CWB Consultant)</u>			Albert Lam	SConE – SCL	6401 9440																																																								
Kelvin Cheng	PM	2685 6414	Ken Wong	SConE – SIL	9660 8480																																																								
Alex Wong	SE	2685 6529	Simon Yeung	ConE I - XRL	2208 3742																																																								
			Gilbert Wong	DME I – WIL	3921 3361																																																								
			Tommy Leung	ConE II – SCL	3929 7452																																																								
			Joe Wong	E III – WIL	3921 3346																																																								

Item No.	Description	Action By / Status
1.0	<b><u>Update on Spoil Quantity and Fill Requirement</u></b>	
1.1	MTRCL tabled a summary (based on 22 June 09 estimate) of spoil generated from the coming new railway projects. (Attachment 1)	Noted
1.2	MTRCL stated that majority of the excavated rock would be grade 700 down. MTRCL remarked that a study was underway on reuse of granite as concrete aggregate. Once the reusing scheme was confirmed, the amount of rock available as fill material would be reduced.	Noted

Item No.	Description	Action By / Status
1.3	MTRCL stated that soft materials included both rock and soil excavated by TBM.	Noted
1.4	HyD/MWPMO tabled a fill requirement breakdown for CWB project. (Attachment 2)	Noted
1.5	HyD/MWPMO stated that their rockfill quantity was calculated by assuming grade 400 down would be used. HyD/MWPMO further stated that grade 400 down was the specification requirement for CWB permanent works. However, other grading might be accepted in Package V because only temporary reclamation would be involved and the grading requirement of rockfill would be subject to contractor's design.	Noted
<b>2.0</b>	<b><u>Tentative Allocation of Spoil from New Railway Projects</u></b>	
2.1	MTRCL identified that WIL and XRL would be able to supply spoil to CWB from 2010 to 2011 whereas SIL, KTE and SCL could be the possible fill sources for CWB after 2011 noting that MTRCL would also supply spoil to Hong Kong-Zhuhai-Macau bridge project which was planned to commence in 2011.	Noted
2.2	<p>MTRCL briefed the current status of WIL and XRL as follows:-</p> <p><u>WIL</u></p> <p>4 advance works contracts were awarded. Shafts excavation would commence shortly and some spoil would be mucked out starting from November 2009. It was envisaged that the proposed barging point at ex-abattoir and PCWA would be operated in around May 2010 and Oct 2010 respectively. Spoil generated before completion of the two barging points would most likely be disposed to local landfill site by land transport. Exact location of the landfill site to be proposed by contractors.</p> <p><u>XRL</u></p> <p>The project was under tendering stage. XRL would have 6 barging points. It was envisaged that construction contracts would be awarded starting from December 2009.</p>	Noted
2.3	HyD/MWPMO stated that CWB Package IV was being tendered and would be awarded by the end of 2009. CWB Package V would be tendered in late 2009. HyD/MWPMO envisaged that CWB construction would commence in around April 2010.	Noted
<b>3.0</b>	<b><u>Method of Delivery</u></b>	
3.1	HyD/MWPMO confirmed that CWB would collect spoil from MTRCL baring points by CWB own barges. CWB would not receive any spoil from land transport due to congested traffic in Central and Wan Chai areas.	Noted
3.2	MTRCL advised CWB to send small barges to collect spoil from ex-abattoir barging point as big barges might encounter maneuvering problem because the barging point would be very close to the existing China Merchants wharf. MTRCL further advised that the high seabed level at ex-abattoir barging point would limit the daily operation period of barges.	Noted



Item No.	Description	Action By / Status
3.3	HyD/MWPMO advised that the fill demand for CWB would not be steady as per the construction program. HyD/MWPMO advised MTRCL to design the barging points to suit CEDD barges for spoil collection as well in order to cater for the time slot without CWB barges. MTRCL reminded that the barging points are also adaptable for loading spoil into the conventional derrick barges, however, protection measures may be required on such barges in view of higher dropping height from the loading ramps, i.e. +10.0mPD at the tipping edge.	Noted
4.0	<b><u>Commercial Issues</u></b>	
4.1	MTRCL stated that WIL, SIL and KTE were MTR ownership projects whereas XRL and SCL were government projects.	Noted
4.2	MTRCL confirmed that provisions had been included in XRL contracts to control spoil disposal. MTRCL were empowered under contract to instruct contractors to dispose spoil to the specific projects/locations.	Noted
4.3	MTRCL would check any provisions had been included in WIL contracts to control the spoil disposal and would advise in due course.	MTRCL (WIL)
5.0	<b><u>AOB</u></b>	
5.1	MTRCL stated that as per CEDD requirement, water content of TBM spoil should be controlled to below 25% for delivery to Tai Shan. MTRCL expressed that cement or lime would be added to the wet spoil to reduce moisture content and enquired whether CWB project would have similar requirement. HyD/MWPMO explained that they did not have any specification requirement for temporary fill but they had grading requirement for fill used in permanent works.	Noted
5.2	MTRCL further stated that PS had been added in WIL contracts to control grading and moisture content of spoil to be transported by CEDD. HyD/MWPMO requested MTRCL to provide a copy of the PS for their reference.	MTRCL (WIL)
5.3	It had no objection for HyD/MWPMO to mention in CWB tender document that spoil generated from MTRCL new railway projects would be a possible source of fill materials.	Noted
6.0	<b><u>Next Meeting</u></b>	
6.1	It was agreed that representatives from WDII & HZM bridge project should be invited for overall coordination in the next meeting. Time and venue to be confirmed.	

Attachment 1 – Spoil generated from MTRC projects (based on 22 June 2009 estimate)

Attachment 2 – Breakdown of C&D materials for individual HyD works package

**Spoil Generated from MTRC Projects (based on 22 June 19 estimate)**

Attachment 1

**Table 1 - Estimate of Soft Materials (tonne)**

Projects	2010				2011				2012				2013				2014				2015				2016				Total	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
	WIL			20,360	56,138	57,205	53,617	31,146	21,879	10,023	6,131																			
SIL(E)				154,204	273,139	260,596	210,224	41,359	109,999	63,645	7,374	7,991																	1,159,064	
SCL (EWL)								382,928	416,903	436,445	60,577	63,875	410,261	350,772	367,129	327,440	104,990	11,061	7,341	139,947	124,817	131,613	72,008	75,366	67,218					4,476,207
SCL (NSL)									64,893	67,920	77,622	74,164	73,000	6,995	167,104	149,038	157,153	212,706	222,625	198,558	209,368	141,632	148,237	132,212	139,410	11,660				2,341,527
KTE																														836,777
XRL	58,520	204,560	360,720	965,972	1,172,722	1,365,891	1,874,807	1,908,310	1,297,845	1,117,669	982,275	701,574	471,682	541,365	230,384	42,368	561,068	357,478	370,312	323,375	340,881	213,840	223,603	199,429	139,410	11,846	12,398	11,058	11,660	14,483,775
Total	58,520	204,560	360,720	965,972	1,227,618	1,802,844	2,322,423	1,802,844	2,322,423	1,973,828	1,769,931	1,508,828	1,256,801	988,787	1,083,649	713,112	561,068	357,478	370,312	323,375	340,881	213,840	223,603	199,429	139,410	11,846	12,398	11,058	11,660	23,554,249

**Table 2 - Estimate of Rock (tonne)**

Projects	2010				2011				2012				2013				2014				2015				2016				Total		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			
	WIL			59,860	165,052	30,720	165,052	234,128	40,081	40,081	18,686																				925,614
SIL(E)																															2,377,481
SCL (EWL)																															898,621
SCL (NSL)																															683,590
KTE																															1,252,170
XRL	266,248	535,880	278,005	25,648	58,627	531,351	61,361	59,860	58,627	535,880	278,005	25,648	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	7,495,435	
Total	266,248	535,880	278,005	25,648	58,627	531,351	61,361	59,860	58,627	535,880	278,005	25,648	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	531,351	61,361	59,860	58,627	13,632,911	

Central - Wan Chai Bypass and Island Eastern Corridor Link  
 SA3 to Agreement No. CE 3/95 - Design, Tender and Construction Phase  
 Appendix C2 - Breakdown of C&D Materials for Individual Hyd Works Package - Without Temporary Stockpiling Area

Table C2.1 - Required and Generated Rockfill

Contract package		Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Total
		2010	2010	2011	2011	2012	2012	2013	2013	2014	2014	2015	2015	2016	2016	
Package I - Central Interchange	Required (from fill bank)															0.000
	Generated (deposited to fill bank)															0.000
Package IV - North Point Reclamation (CEDO (Entusted Works))	Required (from fill bank)	0.173	0.053	0.003												0.229
	Generated (deposited to fill bank)															0.000
Package V - Main Tunnel (Ex PCWA to EVB)	Required (from fill bank)	0.128	0.004		0.008			0.020	0.027							0.187
	Generated (deposited to fill bank)		0.018	0.036	0.036	0.040	0.045	0.048	0.005	0.018	0.018	0.018		0.029		0.313
Package VI - Island Eastern Corridor Link	Required (from fill bank)															0.000
	Generated (deposited to fill bank)															0.000
Package IX - Re-provisioning of FEHD Whitefield Depot	Required (from fill bank)															0.000
	Generated (deposited to fill bank)															0.000

Table C2.3 - Required and Generated Public Fill

Contract package		Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Total
		2010	2010	2011	2011	2012	2012	2013	2013	2014	2014	2015	2015	2016	2016	
Package I - Central Interchange	Required (from fill bank)															0.000
	Generated (deposited to fill bank)		0.029	0.028	0.001	0.001	0.001	0.001								0.000
Package IV - North Point Reclamation (CEDO (Entusted Works))	Required (from fill bank)	0.126	0.118	0.151												0.445
	Generated (deposited to fill bank)															0.000
Package V - Main Tunnel (Ex PCWA to EVB)	Required (from fill bank)															0.000
	Generated (deposited to fill bank)		0.017	0.032	0.017	0.017	0.022	0.026								0.151
Package VI - Island Eastern Corridor Link	Required (from fill bank)															0.000
	Generated (deposited to fill bank)															0.000
Package IX - Re-provisioning of FEHD Whitefield Depot	Required (from fill bank)															0.000
	Generated (deposited to fill bank)		0.010													0.010

1.452

Total 1.816

Table C2.4 - Dredged Marine Deposit

Contract package		Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Total
		2010	2010	2011	2011	2012	2012	2013	2013	2014	2014	2015	2015	2016	2016	
Package I - Central Interchange	Contaminated															0.000
	Uncontaminated															0.000
Package IV - North Point Reclamation (CEDO (Entusted Works))	Contaminated	0.243														0.243
	Uncontaminated	0.210														0.210
Package V - Main Tunnel (Ex PCWA to EVB)	Contaminated	0.110	0.007	0.004	0.046			0.189								0.356
	Uncontaminated	0.067	0.003	0.002	0.031			0.063								0.166
Package VI - Island Eastern Corridor Link	Contaminated															0.000
	Uncontaminated															0.000
Package IX - Re-provisioning of FEHD Whitefield Depot	Contaminated															0.000
	Uncontaminated															0.000

Table C2.5 - Summary of overall C&D material situation

Contract package		Soft Inert C&D (incl. Gravel or IV rock) (m <sup>3</sup> )	Grade II or better rock (m <sup>3</sup> )	Artificial hard material (Broken concrete and asphalt) (m <sup>3</sup> )	C&D waste to landfill (m <sup>3</sup> )
Package I - Central Interchange	Generated (disposed off site)	116,000	0	1,600	200
	Required (from fill bank)	4,600	0	0	0
Package IV - North Point Reclamation (CEDO (Entusted Works))	Generated (disposed off-site)	0	0	0	0
	Required (from fill bank)	395,000	229,000	0	0
Package V - Main Tunnel (Ex PCWA to EVB)	Generated (disposed off-site)	1,527,000	343,000	0	0
	Required (from fill bank)	1,348,000	318,000	0	0
Package VI - Island Eastern Corridor Link	Generated (disposed off-site)	247,000	0	14,200	3,800
	Required (from fill bank)	87,000	0	0	0
Package IX - Re-provisioning of FEHD Whitefield Depot	Generated (disposed off-site)	40,000	0	0	0
	Required (from fill bank)	0	0	0	0
Total Generated to be disposed off site		1,930,000	343,000	36,000	4,000
Total Upon from Fill Bank		1,814,000	547,000	0	0