

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 704 – DRAINAGE

Environmental Protection – Sewerage and sewage treatment

230DS – Outlying Islands sewerage, stage 1 phase 1 part 2 – Yung Shue Wan sewerage, sewage treatment works and outfall

234DS – Outlying Islands sewerage, stage 1 phase 2 – Sok Kwu Wan sewage collection, treatment and disposal facilities

Members are invited to recommend to Finance Committee –

- (a) to increase the approved project estimate of **230DS** by \$59.2 million from \$288.3 million to \$347.5 million in money-of-the-day prices; and
- (b) to increase the approved project estimate of **234DS** by \$97.3 million from \$256.4 million to \$353.7 million in money-of-the-day prices.

PROBLEM

The approved project estimates (APE) of **230DS** and **234DS** are insufficient to cover the cost of works under the projects.

PROPOSAL

2. The Director of Drainage Services, with the support of the Secretary for the Environment, proposes –

/(a)

- (a) to increase the APE of **230DS** by \$59.2 million from \$288.3 million to \$347.5 million in money-of-the-day (MOD) prices; and
- (b) to increase the APE of **234DS** by \$97.3 million from \$256.4 million to \$353.7 million in MOD prices.

PROJECT SCOPE AND NATURE

3. On 16 November 2007, the Finance Committee (FC) approved –
- (a) the upgrading of **230DS** to Category A at an estimated cost of \$288.3 million in MOD prices for the provision of sewerage, sewage treatment and disposal facilities at Yung Shue Wan (YSW), Lamma Island; and
 - (b) the upgrading of **234DS** to Category A at an estimated cost of \$256.4 million in MOD prices for the provision of sewerage, sewage treatment and disposal facilities at Sok Kwu Wan (SKW), Lamma Island.
4. The proposed sewage collection, treatment and disposal facilities are capable of handling the sewage arising from an estimated population of 5 300 at YSW and 2 100 at SKW, together with the flow from local commercial activities and visitors. The approved scope of **230DS** and **234DS** comprises –

Sewage Collection Facilities

- (a) provision of about 3.3 kilometres (km) of sewers in six villages¹ of YSW together with the associated geotechnical works along the proposed sewer alignments;
- (b) provision of about 1.8 km of sewers in two villages² of SKW together with the associated geotechnical works along the proposed sewer alignments;

/Sewage

¹ The six villages at YSW are Po Wah Yuen, Sha Po New Village, Tai Yuen New Village, Kam Shan Terrace, Sha Po Old Village and Ko Long.

² The two villages at SKW are Chung Mei and Sok Kwu Wan.

Sewage Treatment and Disposal Facilities

- (c) provision of two secondary sewage treatment works (STWs) with treatment capacities of 2 850 and 1 430 cubic metres per day at YSW and SKW respectively, together with the associated sludge treatment and odour control facilities as well as the slope stabilisation works for the two STW sites;
- (d) provision of two submarine outfalls of lengths 500 metres (m) and 750 m at YSW and SKW respectively; and
- (e) provision of two pumping stations and two twin rising mains with a total length of about 1 km at SKW.

Site plans showing the works in YSW under **230DS** and SKW under **234DS** are at Enclosure 1.

5. We packaged the works under **230DS** and **234DS** into two contracts to gain greater administration efficiency, one for the proposed sewage collection facilities (the village sewerage Contract) as mentioned in paragraph 4 (a) and (b) above, and the other for the sewage treatment and disposal facilities (the STW Contract) as mentioned in paragraph 4 (c) to (e) above. We originally planned to implement the village sewerage Contract under a conventional consultant-design-contractor-build arrangement, and the STW Contract under a design-build-operate (DBO) arrangement.

6. We commenced the village sewerage Contract in January 2008 as scheduled. The contract is programmed to be completed in September 2010. For the STW Contract adopting a DBO procurement arrangement, we invited tenders from four prequalified tenderers in May 2008 but none of them submitted a tender by the tender closing date in November 2008. During post-tendering feedback meetings with the prequalified tenderers, they indicated that the main reason for their withdrawal from tendering was due to the uncertainties in obtaining financing and credit services after the global economic downturn in end 2008. They did not want to take the risks of committing themselves to a 19-year long DBO contract. To reduce the risk on tenderers and increase the competitiveness of the tender, we changed the procurement mode for the STW Contract from DBO to the conventional consultant-design-contractor-build arrangement. Tenders for the construction contract were invited on 23 October 2009 after completion of the detailed design by the consultants. Six tenders were received by the tender closing

/date

date on 18 December 2009. Tender assessment has been completed. Subject to the approval of FC, we plan to commence the works under the STW Contract in May 2010 for completion in July 2013.

JUSTIFICATION

7. As all tender prices of the STW Contract exceed the remaining non-committed funds in the APE, we therefore need to seek approval from the FC to increase the APE of **230DS** and **234DS** by \$59.2 million and \$97.3 million respectively before we could award the STW Contract to cover the additional costs due to higher-than-expected tender prices, additional works for addressing local requests and on-site constraints, increase in site supervision cost, and increase in contract price fluctuation (CPF) adjustment over the duration of the works. The justifications for the increase are set out in paragraphs 8 to 14 below.

Higher-than-expected tender prices

8. The works of the village sewerage Contract were procured through a competitive tendering process in September 2007. Compared with the original contract estimate, the tender price of the recommended tender (being the lowest amongst the bids received) was about 42% or \$29.7 million higher than the original sum allowed in the APE of the two projects (31% or \$12.8 million for **230DS**, and 58% or \$16.9 million for **234DS**). The higher-than-expected tender prices were likely due to greater risk allowances made by the recommended tenderer due to perceived difficulties involved in engaging labour, construction plant and materials for this type of village sewerage works on an outlying island and the difficulties in laying sewers in the congested and constrained village areas.

9. As mentioned in paragraph 6 above, the works of the STW Contract were eventually procured through the usual competitive tendering process in October 2009. The tender price of the recommended tender, being the lowest amongst all tenders, was about 3% or \$10.9 million higher than the original sum allowed in the APE of the two projects (4% or \$6.9 million lower for **230DS**, and 11% or \$17.8 million higher for **234DS**). The relatively higher-than-expected tender price for **234DS** is likely due to a higher risk perceived by the tenderer on the construction of the sewage treatment works at SKW which involve complicated site formation works and higher material handling cost as a result of little available working space.

/Additional

Additional works for addressing local requests and on-site constraints

10. During construction of the sewage collection facilities, the contractor has to carry out a series of additional works for addressing the following local requests and on-site situations –

- (a) *Local requests:* In the course of ongoing liaison with the community of YSW and SKW, the local residents have expressed concerns on the temporary closure of some access roads and emergency vehicular accesses for the sewer laying works.
- (b) *On-site situations:* The on-site situations for some of the proposed branch sewers and manholes were more constrained than that envisaged during the project design stage. This was largely due to the presence of uncharted utilities (such as watermains and septic tanks) and archaeological remains³ buried underneath the village alleys.

11. In view of the above, DSD has applied trenchless construction instead of open excavation for about 90 m and 120 m of sewers, and diverted about 680 m and 180 m of watermains in YSW and SKW respectively to enable the construction of these branch sewers and manholes. The alignment and design of some sections of sewers have also been revised. The expenditure (and hence the proposed increase in APE) related to these additional works was estimated to be \$3.9 million and \$3.4 million for **230DS** and **234DS** respectively.

Increase in site supervision cost

12. In line with the established project management practice, the project consultant has recruited and employed resident site staff (RSS) to supervise the works under the village sewerage and STW Contracts. Under the consultancy, Government will reimburse the consultants the RSS costs based on the prevailing terms and conditions as stipulated in the consultancy agreement. The remuneration for RSS employed for the projects turns out to be higher-than-expected. Taking into account the salary adjustments in 2008 to 2009 and the projection for salary adjustments between now and the anticipated project completion date, we estimate that there would be an increase of about \$2.3 million for **230DS** and \$6.4 million for **234DS**.

/Increase

³ Under the village sewerage Contract, the contractor is required to pay attention to the presence of any archaeological remains. Remains of four lime kilns were identified in the course of sewerage works at two locations in Yung Shue Wan. DSD has followed the Antiquities and Monuments Office's advice to undertake appropriate preservation methods at a cost of around \$0.5 million (which has already been included in the additional expenditure mentioned in paragraph 11).

Increase in provision for price adjustment

13. The two contracts under **230DS** and **234DS** are subject to CPF adjustment determined on the basis of the “Index Numbers of the Costs of Labour and Materials used in Public Sector Construction Projects” and the tendered weighting factors under the terms of the contracts. When the FC approved the funding proposal of **230DS** and **234DS** on 16 November 2007, we derived the MOD estimates on the basis of the forecast of trend rate of change in the prices of public sector building and construction output at that time. The provision for price adjustment in our funding paper was \$7.4 million for **230DS** and \$6.7 million for **234DS**.

14. However, it turned out that there was a higher-than-expected increase in construction material prices during the contract period in 2008. A chart showing the trend of relevant labour and material costs is at Enclosure 2. Also, both the actual and the forecast trend of provision for price adjustment in subsequent years have been adjusted upwards since 2007. With reference to actual payments disbursed so far and the anticipated payment on price fluctuation taking into account the increase in capital cost due to the reasons stipulated in paragraphs 8 to 12 and the longer construction period, we have to allow an additional provision for price adjustment of \$51.0 million for **230DS** and \$52.9 million for **234DS** over the duration of the projects. Detailed calculation on the increase in provision for price adjustment is at Enclosures 3 and 4 for **230DS** and **234DS** respectively.

Offset by project contingencies

15. The increase in cost due to reasons explained in paragraphs 8 to 14 above is partly offset by a sum of \$3.9 million and \$0.1 million to be released from the project contingencies of **230DS** and **234DS** respectively. Taking into account the considerable risks in dealing with the stability of the massive rock slopes on site as well as other works uncertainties for construction of the sewage treatment facilities, we consider it necessary to retain \$19.9 million for **230DS** and \$21.0 million for **234DS** as contingencies to cater for further variations as necessary, possible claims and valuation of works during finalisation of the project account.

Review of financial position

16. Having reviewed the financial position of the two projects, we consider it necessary to increase the APE of **230DS** by \$59.2 million from \$288.3 million to \$347.5 million in MOD prices, and increase the APE of **234DS** by \$97.3 million from \$256.4 million to \$353.7 million in MOD prices, in order to cover the total costs of the works under the projects. A summary of the proposed increases of \$59.2 million and \$97.3 million for **230DS** and **234DS** respectively is as follows –

/Increase

	Proposed increased amount/ savings in MOD prices (\$ million)	% of the total increased amount/ savings	Proposed increased amount/ savings in MOD prices (\$ million)	% of the total increased amount/ savings
	<u>230DS</u>		<u>234DS</u>	
Increase due to –		%		%
(a) Higher-than-expected tender prices	5.9	9	34.7	36
(i) village sewerage Contract	12.8		16.9	
(ii) STW Contract	(6.9)		17.8	
(b) Additional works for addressing local requests and on-site constraints	3.9	6	3.4	3
(c) Increase in site supervision cost	2.3	4	6.4	7
(d) Increase in provision for price adjustment	51.0	81	52.9	54
(e) Total increase (e = a + b + c + d)	63.1	100	97.4	100
Partly offset by –				
(f) Contingencies	3.9	100	0.1	100
(g) Total savings (g = f)	3.9	100	0.1	100
(h) Proposed increase (h = e – g)	59.2		97.3	

A comparison of the cost breakdown of the APE and the revised project estimate is at Enclosures 5 and 6 for **230DS** and **234DS** respectively.

FINANCIAL IMPLICATIONS

17. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (MOD)	
	<u>230DS</u>	<u>234DS</u>
Up to 31 March 2010	45.2	43.3
2010 – 2011	41.1	41.1
2011 – 2012	85.1	85.1
2012 – 2013	99.5	99.5
2013 – 2014	34.6	46.1
2014 – 2015	25.3	26.4
2015 – 2016	16.7	12.2
	347.5	353.7

18. The proposed increase in the APE will not give rise to additional recurrent expenditure.

PUBLIC CONSULTATION

19. The proposed increase in the APE does not involve any change in the scope of the projects. Therefore, further public consultation is not necessary.

20. We consulted the Legislative Council Panel on Environmental Affairs (the Panel) on 29 March 2010 on the proposed increase in the APE for **230DS** and **234DS**. Members raised no objection to the submission of the proposal to the Public Works Subcommittee and requested the Administration to provide supplementary information on the detailed arrangements for a DBO contract. We submitted a follow-up reply to the Panel on 1 April 2010.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

21. The proposed increase in the APE will not give rise to any adverse environmental implications.

HERITAGE IMPLICATIONS

22. The proposed increase in the APE will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION AND CLEARANCE

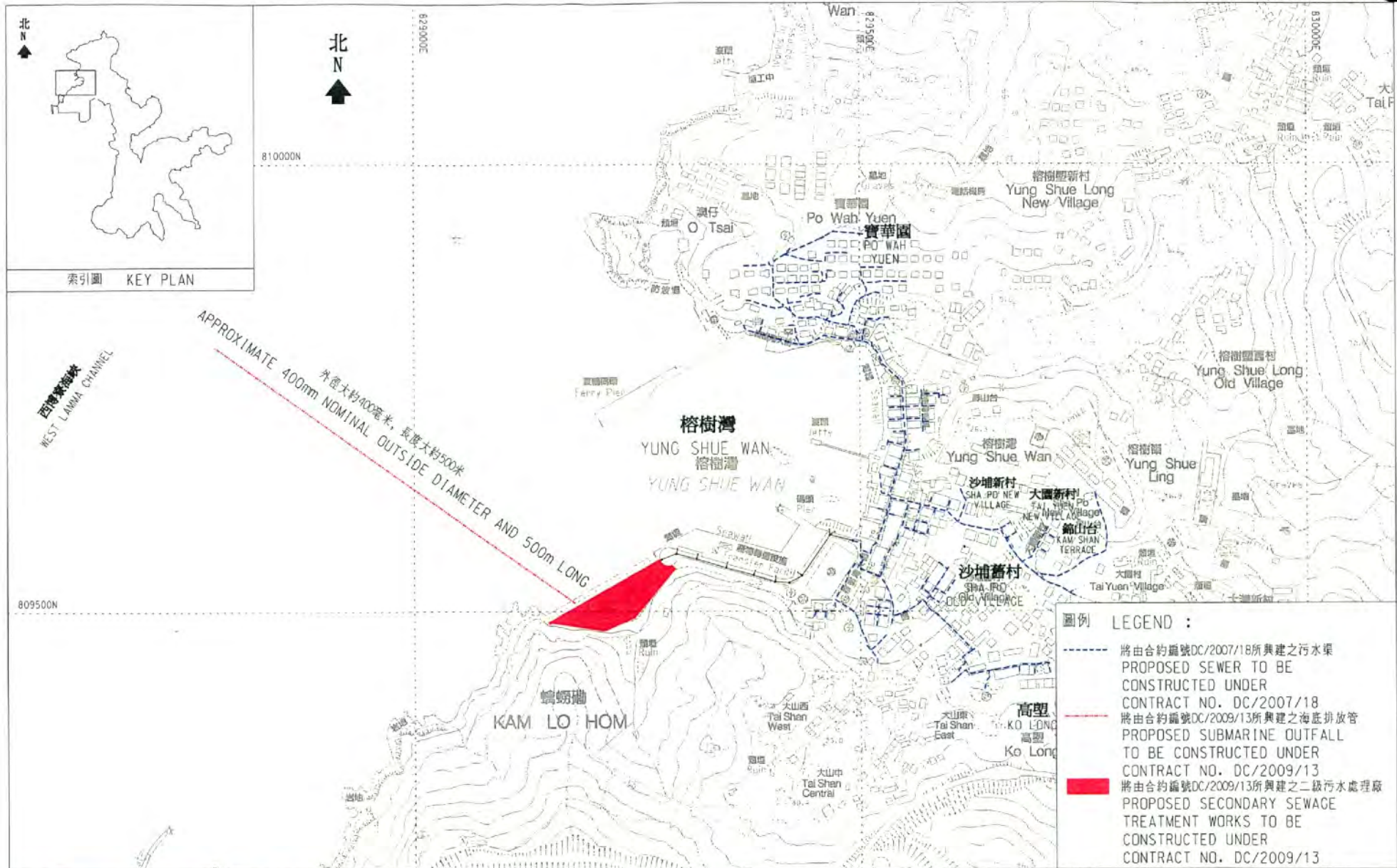
23. The proposed increase in the APE will not involve any land acquisition and clearance.

BACKGROUND INFORMATION

24. In November 2007, the FC approved the upgrading of **230DS** and **234DS** to Category A at an estimated cost of \$288.3 million and \$256.4 million in MOD prices respectively for implementing the proposed sewerage works on Lamma Island.

25. The proposed increase in the APE will not involve any additional tree removal or planting proposals.

26. The proposed increase in the APE will not create any new jobs.



西博萊海峽
WEST LAMIA CHANNEL

APPROXIMATE 400mm 外徑大約400毫米, 長度大約500米
NOMINAL OUTSIDE DIAMETER AND 500m LONG

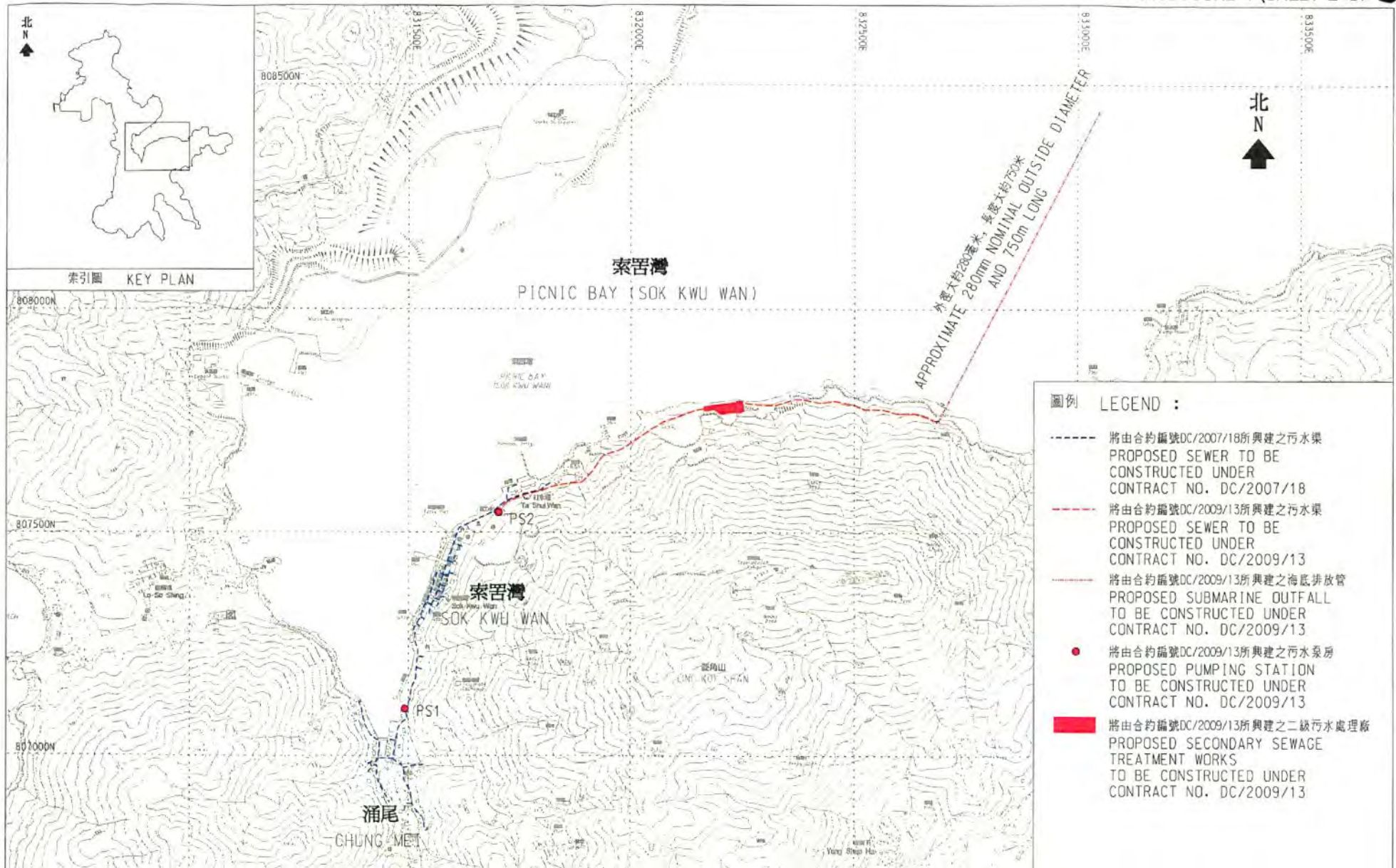
- 圖例 LEGEND :
- 將由合約編號DC/2007/18所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2007/18
 - 將由合約編號DC/2009/13所興建之海底排放管
PROPOSED SUBMARINE OUTFALL TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
 - 將由合約編號DC/2009/13所興建之二級污水處理廠
PROPOSED SECONDARY SEWAGE TREATMENT WORKS TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13

偉信 Scot Wilson CDM
偉信 CDM 專業顧問公司

渠務署
DRAINAGE SERVICES DEPARTMENT

工務計劃項目第230DS號 - 離島污水收集系統第1階段第1期工程第2部分 -
榕樹灣污水收集系統、污水處理廠及排放管
PWP ITEM NO. 230DS - OUTLYING ISLANDS SEWERAGE STAGE I PHASE 1 PART 2
YUNG SHUE WAN SEWERAGE, SEWAGE TREATMENT WORKS AND OUTFALL

SCALE: 1 : 4000	FIGURE NO. 圖則一	FIGURE 1	REV. -
DRAWN: NYH	榕樹灣之擬建污水工程概覽		
CHECKED: JPCW	LAYOUT PLAN OF PROPOSED SEWERAGE WORKS FOR YUNG SHUE WAN		
DATE: 10/09			



- 圖例 LEGEND :
- 將由合約編號DC/2007/18所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2007/18
 - 將由合約編號DC/2009/13所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
 - 將由合約編號DC/2009/13所興建之海底排放管
PROPOSED SUBMARINE OUTFALL TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
 - 將由合約編號DC/2009/13所興建之污水泵房
PROPOSED PUMPING STATION TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
 - 將由合約編號DC/2009/13所興建之二級污水處理廠
PROPOSED SECONDARY SEWAGE TREATMENT WORKS TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13

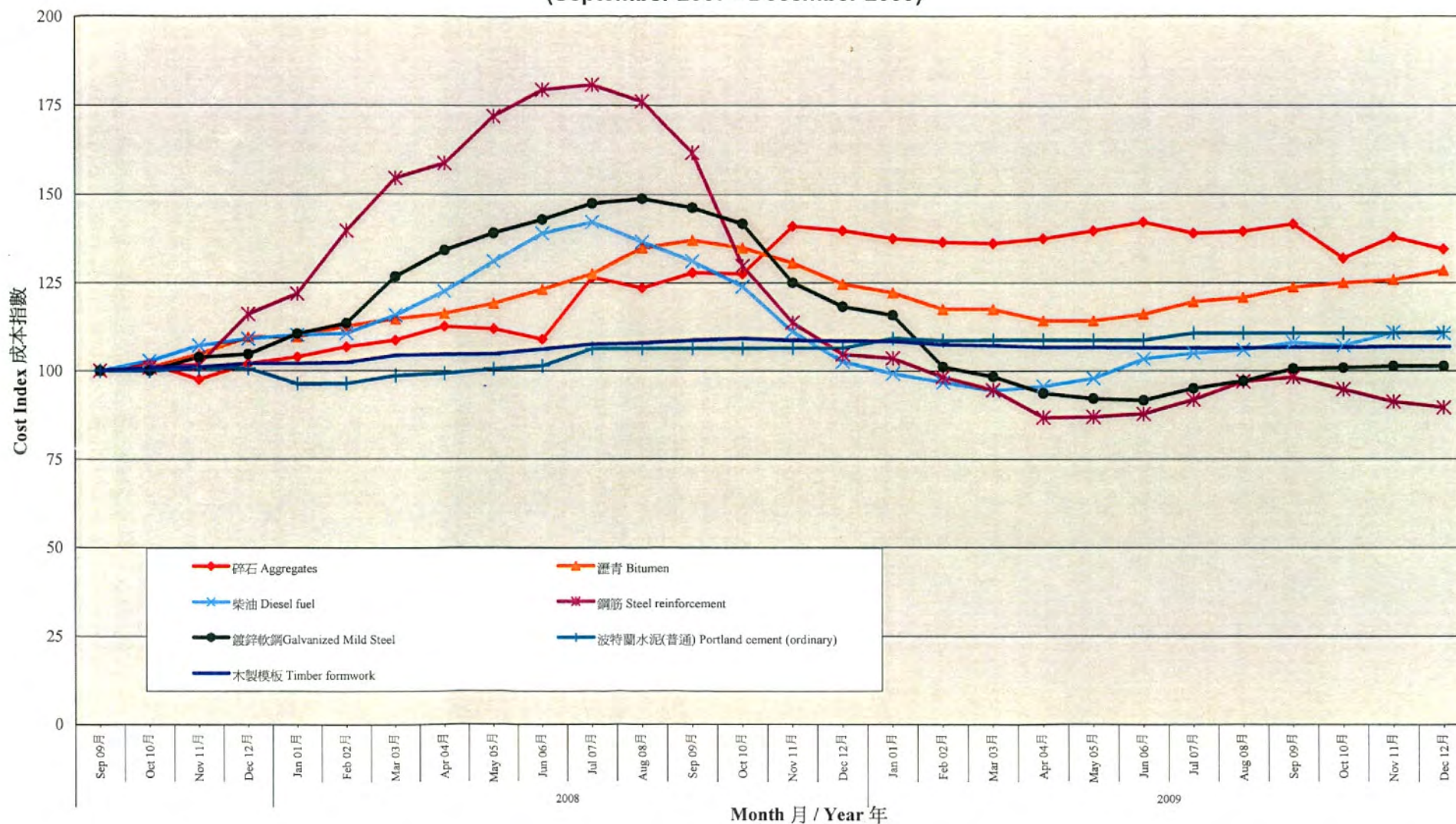
偉信 Scott Wilson CDM
 偉信 CDM 聯營顧問公司

渠務處 DRAINAGE SERVICES DEPARTMENT

工務計劃項目第234DS號 - 離島污水收集系統第1階段第2期工程 -
 索罟灣污水收集、處理及排放設施
 PWP ITEM NO. 234DS - OUTLYING ISLANDS SEWERAGE STAGE I PHASE 2
 SOK KWU WAN SEWAGE COLLECTION, TREATMENT AND DISPOSAL FACILITIES

SCALE: 1 : 8000	FIGURE NO. 圖則二	FIGURE 2	REV. -
DRAWN: NYH	索罟灣之擬建污水工程概覽		
CHECKED: JPCW	LAYOUT PLAN OF PROPOSED SEWERAGE WORKS FOR SOK KWU WAN		
DATE: 10/09			

工資及材料成本指數 (2007年9月=100)
 (2007年9月至2009年12月)
 Cost of Labour and Material Index (September 2007 = 100)
 (September 2007 - December 2009)



Enclosure 3 to PWSC(2010-11)3

**230DS – Outlying Islands sewerage, stage 1 phase 1 part 2 –
Yung Shue Wan sewerage, sewage treatment works and outfall**

Table 1 – Cash flow and provisions for price adjustment in PWSC(2007-08)49

Year	Original project estimate (\$ million, in September 2007 prices) X	Original price adjustment factors (September 2007)# Y	Approved project estimate (\$ million, in MOD prices) Z	Provision for price adjustment (\$ million) A=Z – X
2007 - 2008	0.3	1.00000	0.3	0.0
2008 - 2009	44.1	1.00750	44.4	0.3
2009 - 2010	96.8	1.01758	98.5	1.7
2010 - 2011	80.9	1.02775	83.1	2.2
2011 - 2012	25.8	1.03803	26.8	1.0
2012 - 2013	19.0	1.05619	20.1	1.1
2013 - 2014	14.0	1.07732	15.1	1.1
Total	280.9	-	288.3	7.4

Table 2 – Latest cash flow and provision for price adjustment due to latest project estimate (PE) and latest adjustment factors

Year	Latest PE (\$ million, in September 2007 prices) a	Latest PE (\$ million, in September 2009 prices) @ b	Latest price adjustment factors (March 2010)## c	Latest PE (\$ million, in MOD prices) d	Latest provision for price adjustment (\$ million) e	Net increase in provision for price adjustment (\$ million) f
2007 - 2008	0.0	0.0 [^]	-	0.0	e = d – a	f = e – A
2008 - 2009	19.2	20.7 [^]	-	20.7		
2009 - 2010	22.9	24.5 ^{^^}	1.00000	24.5		
2010 - 2011	36.0	40.0	1.02700	41.1		
2011 - 2012	72.0	79.9	1.06551	85.1		
2012 - 2013	80.9	89.8	1.10813	99.5		
2013 - 2014	27.0	30.0	1.15246	34.6		
2014 - 2015	19.0	21.1	1.19856	25.3		
2015 - 2016	12.1	13.4	1.24650	16.7		
Total	289.1	319.4	-	347.5	58.4	51.0

Notes:

Price adjustment factors adopted in October 2007 are based on the projected movement of prices for public sector building and construction output at that time, which are assumed no change in 2007; to increase by 1.0% per annum over the period from 2008 to 2011 and by 1.5% per annum over the period from 2012 to 2014.

@ The latest PE (in September 2007 prices) is multiplied by 1.11031 for conversion to September 2009 prices. The figure of 1.11031 represents the changes in price movement for public sector building and construction output between September 2007 and September 2009.

Price adjustment factors adopted in March 2010 are based on the latest movement of prices for public sector building and construction output, which are assumed to increase by 3.0% per annum in 2010 and by 4.0% per annum over the period from 2011 to 2016.

[^] \$0.0 million and \$20.7 million for 2007-08 and 2008-09 respectively are actual expenditures in MOD prices.

^{^^} Latest PE of \$24.5 million in 2009-10 comprises actual expenditure of \$23.5 million for the period from April 2009 to February 2010, and latest PE (in September 2009 prices) of \$1.0 million for March 2010, which is derived by multiplying the latest PE of \$0.9 million in September 2007 prices by 1.11031 for conversion to September 2009 prices.

Enclosure 4 to PWSC(2010-11)3

**234DS – Outlying Islands sewerage, stage 1 phase 2 –
Sok Kwu Wan sewage collection, treatment and disposal facilities**

Table 1 – Cash flow and provisions for price adjustment in PWSC(2007-08)49

Year	Original project estimate (\$ million, in September 2007 prices) X	Original price adjustment factors (September 2007)# Y	Approved project estimate (\$ million, in MOD prices) Z	Provision for price adjustment (\$ million) A=Z – X
2007 - 2008	0.3	1.00000	0.3	0.0
2008 - 2009	39.0	1.00750	39.3	0.3
2009 - 2010	79.9	1.01758	81.3	1.4
2010 - 2011	78.0	1.02775	80.2	2.2
2011 - 2012	23.5	1.03803	24.4	0.9
2012 - 2013	18.0	1.05619	19.0	1.0
2013 - 2014	11.0	1.07732	11.9	0.9
Total	249.7	-	256.4	6.7

Table 2 – Latest cash flow and provision for price adjustment due to latest project estimate (PE) and latest adjustment factors

Year	Latest PE (\$ million, in September 2007 prices) a	Latest PE (\$ million, in September 2009 prices) @ b	Latest price adjustment factors (March 2010)## c	Latest PE (\$ million, in MOD prices) d	Latest provision for price adjustment (\$ million) e	Net increase in provision for price adjustment (\$ million) f
2007 - 2008	0.0	0.0 [^]	-	0.0	e = d – a	f = e – A
2008 - 2009	19.4	20.7 [^]	-	20.7		
2009 - 2010	21.2	22.6 ^{^^}	1.00000	22.6		
2010 - 2011	36.0	40.0	1.02700	41.1		
2011 - 2012	72.0	79.9	1.06551	85.1		
2012 - 2013	80.9	89.8	1.10813	99.5		
2013 - 2014	36.0	40.0	1.15246	46.1		
2014 - 2015	19.8	22.0	1.19856	26.4		
2015 - 2016	8.8	9.8	1.24650	12.2		
Total	294.1	324.8	-	353.7	59.6	52.9

Notes:

Price adjustment factors adopted in October 2007 are based on the projected movement of prices for public sector building and construction output at that time, which are assumed no change in 2007; to increase by 1.0% per annum over the period from 2008 to 2011 and by 1.5% per annum over the period from 2012 to 2014.

@ The latest PE (in September 2007 prices) is multiplied by 1.11031 for conversion to September 2009 prices. The figure of 1.11031 represents the changes in price movement for public sector building and construction output between September 2007 and September 2009.

Price adjustment factors adopted in March 2010 are based on the latest movement of prices for public sector building and construction output, which are assumed to increase by 3.0% per annum in 2010 and by 4.0% per annum over the period from 2011 to 2016.

[^] \$0.0 million and \$20.7 million for 2007-08 and 2008-09 respectively are actual expenditures in MOD prices.

^{^^} Latest PE of \$22.6 million in 2009-10 comprises actual expenditure of \$22.0 million for the period from April 2009 to February 2010, and latest PE (in September 2009 prices) of \$0.6 million for March 2010, which is derived by multiplying the latest PE of \$0.5 million in September 2007 prices by 1.11031 for conversion to September 2009 prices.

**230DS – Outlying Islands sewerage, stage 1 phase 1 part 2 –
Yung Shue Wan sewerage, sewage treatment works and outfall**

A comparison of the APE and the latest project estimate is as follows –

	(A)	(B)	(C)	(C) – (A)
	Approved Project Estimate	Revised Project Estimate¹	Latest Project Estimate	Difference
	\$ million	\$ million	\$ million	\$ million
(a) Construction of about 3.3 km of sewers	41.2	54.0	57.9	16.7
(b) Design and construction of	174.3	174.3	167.4	(6.9)
(i) sewage treatment works	101.6	101.6	95.5	(6.1)
(ii) submarine outfall	72.7	72.7	71.9	(0.8)
(c) Consultants' fees for	36.3	36.3	38.6	2.3
(i) contract administration	1.4	1.4	1.4	0.0
(ii) site supervision	34.2	34.2	36.5	2.3
(iii) environmental monitoring and audit	0.7	0.7	0.7	0.0
(d) Environmental mitigation measures	5.3	5.3	5.3	0.0
(e) Contingencies	23.8	11.0	19.9	(3.9)
(f) Provision for price adjustment	7.4	7.4	58.4	51.0
Total	288.3	288.3	347.5	59.2

¹ Revised estimate after the award of the contract for construction of the sewerage collection facilities in January 2008.

2. As regards **1(a) (Construction of about 3.3 km of sewers)**, the increase of \$16.7 million includes –
 - (i) \$12.8 million due to the higher-than-expected price submitted by the contractor; and
 - (ii) \$3.9 million due to additional works for addressing local requests and on-site constraints.

3. As regards **1(b) (Design and construction of sewage treatment facilities)**, the decrease of \$6.9 million is due to the lower-than-expected price submitted by the contractor.

4. As regards **1(c) (Consultants' fees)**, the increase of \$2.3 million is due to increase in the remuneration for RSS.

5. As regards **1(e) (Contingencies)**, we retain \$19.9 million as the contingencies to cater for further variations as necessary, possible claims and valuation of works during finalisation of the project account.

6. As regards **1(f) (Provision for price adjustment)**, the increase of \$51.0 million is mainly due to upsurge in CPF payment to the contractor during the construction period and the higher-than-expected capital cost for the project.

**234DS – Outlying Islands sewerage, stage 1 phase 2 –
Sok Kwu Wan sewage collection, treatment and disposal facilities**

A comparison of the APE and the latest project estimate is as follows –

	(A)	(B)	(C)	(C) – (A)
	Approved Project Estimate	Revised Project Estimate¹	Latest Project Estimate	Difference
	\$ million	\$ million	\$ million	\$ million
(a) Construction of about 1.8 km of sewers	29.1	46.0	49.4	20.3
(b) Design and construction of	163.7	163.7	181.5	17.8
(i) sewage treatment works	68.9	68.9	91.6	22.7
(ii) submarine outfall	76.7	76.7	76.4	(0.3)
(iii) sewage pumping stations	18.1	18.1	13.5	(4.6)
(c) Consultants' fees for	30.9	30.9	37.3	6.4
(i) contract administration	1.2	1.2	1.2	0.0
(ii) site supervision	29.1	29.1	35.5	6.4
(iii) environmental monitoring and audit	0.6	0.6	0.6	0.0
(d) Environmental mitigation measures	4.9	4.9	4.9	0.0
(e) Contingencies	21.1	4.2	21.0	(0.1)
(f) Provision for price adjustment	6.7	6.7	59.6	52.9
Total	256.4	256.4	353.7	97.3

¹ Revised estimate after the award of the contract for construction of the sewerage collection facilities in January 2008.

2. As regards **1(a) (Construction of about 1.8 km of sewers)**, the increase of \$20.3 million includes –
 - (i) \$16.9 million due to the higher-than-expected price submitted by the contractor; and
 - (ii) \$3.4 million due to additional works for addressing local requests and on-site constraints.

 3. As regards **1(b) (Design and construction of sewage treatment facilities)**, the increase of \$17.8 million is due to the higher-than-expected price submitted by the contractor.

 4. As regards **1(c) (Consultants' fees)**, the increase of \$6.4 million is due to increase in the remuneration for RSS.

 5. As regards **1(e) (Contingencies)**, we retain \$21.0 million as the contingencies to cater for further variations as necessary, possible claims and valuation of works during finalisation of the project account.

 6. As regards **1(f) (Provision for price adjustment)**, the increase of \$52.9 million is mainly due to upsurge in CPF payment to the contractor during the construction period and the higher-than-expected capital cost for the project.
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