



A New Page of the NEC Expedition - DSD's Initial Experience on 5 More NEC Pilot Contracts



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A New Page of the NEC Expedition

- DSD's Initial Experience on 5 More NEC Pilot Contracts

Outline

- **Introduction**
- **1st Government Pilot NEC Project**
- **5 NEC Contracts**
- **Partnering and Team Building**
- **Way Forward**

Improvement of Fuk Man Road Nullah in Sai Kung

(1st Government Pilot NEC Project)



Nature : Flood prevention
Contract Sum : \$76M
Duration : Aug 09 – May 12 (33months)
NEC3 Option : ECC Option C

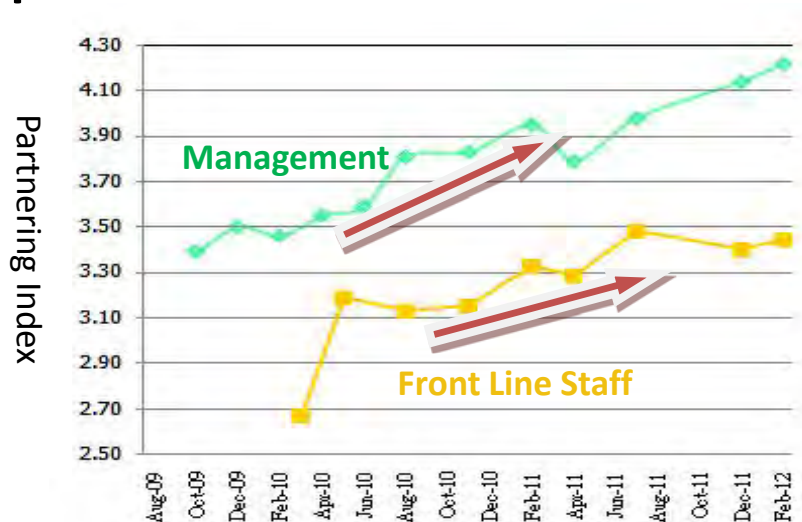


Improvement of Fuk Man Road Nullah in Sai Kung

(1st Government Pilot NEC Project)



- ✓ **Public appreciation:** landmark park, 9 appreciation letters
- ✓ **Early Completion:** 6 months ahead (original 39 months)
- ✓ **Cost Saving:** 5% saving for sharing
- ✓ **Team Spirit Enhancement:**





5 More NEC Pilot Contracts

Contract No.	Contract Title	Contract Sum	Nature	Start / Completion	NEC Contract
DC/2012/09 <i>Consultant-managed</i>	Pak Hok Lam trunk sewer and Sha Tau Kok village sewerage	\$203M	Village sewerage	June 2012 / Aug 2016	Framework Contract + ECC Option B
DC/2012/03 <i>In-house</i>	Happy Valley underground stormwater storage scheme	\$678M	Flood prevention	Sept 2012 / Apr 2018	ECC Option C
DC/2012/05 <i>Consultant-managed</i>	Yuen Long and Kam Tin Sewerage	\$160M	Village sewerage	Sept 2012 / Sept 2016	ECC Option D
DC/2012/07 <i>Consultant-managed</i>	Lam Tsuen village sewerage	\$173M	Village sewerage	Oct 2012 / Jan 2016	ECC Option B
DC/2012/01 <i>In-house</i>	Building and Civil Maintenance to DSD plant and facilities	\$160M	Maintenance	Dec 2012 / Nov 2016	TSC Option A



NEC Special Features

The *Employer*, the *Contractor*, the *Project Manager* and the *Supervisor* shall act as stated in this contract and in a spirit of mutual trust and co-operation. (10.1)

Communication and Prompt Response

More Equitable Risk Sharing

Programme (31 – 32)

Compensation Event (60 – 65)

Early Warning (16)

Risk Reduction Meeting (16)

1. Pak Hok Lam Trunk Sewer and Sha Tau Kok Village Sewerage – Framework Contract + ECC Option B



Consultant:
Black and Veatch

Contractor:
Kam Shing

Contract Sum:
\$187M

Duration :
Jun 12 – Aug16



Scope of Works:

- 2.5km gravity sewers along Sha Tau Kok Road
- 7km sewers for 9 unsewered areas in Sha Tau Kok
- One sewage pumping station and 300m of twin rising mains

1. Pak Hok Lam Trunk Sewer and Sha Tau Kok Village Sewerage – Framework Contract + ECC Option B



Time Elapsed: **10.5 months** (As at 16 May 2013)

Time to accept 1st NEC Programme: ~ 5 months after commencement

No. of Compensation Event:

7

No. of Early Warning:

18

No. of Risk Reduction Meeting:

4

(with numerous discussions)



2. Happy Valley Underground Stormwater Storage Scheme – ECC Option C

Managed by DSD's in house staff
Contractor: Chun Wo

Initial Target Cost: \$678M
Duration : Sep 12 – Apr 18 (67 months)



2. Happy Valley Underground Stormwater Storage Scheme – ECC Option C



Time Elapsed: **8 months** (As at 16 May 2013)

Time to accept 1st NEC Programme: ~ 7 weeks after commencement

No. of Compensation Event: 23

No. of Early Warning: 10

No. of Risk Reduction Meeting: 5

NEC Subcontract

Excavation and Construction of Twin Box Culvert

- ECS Option B

Scope of works:

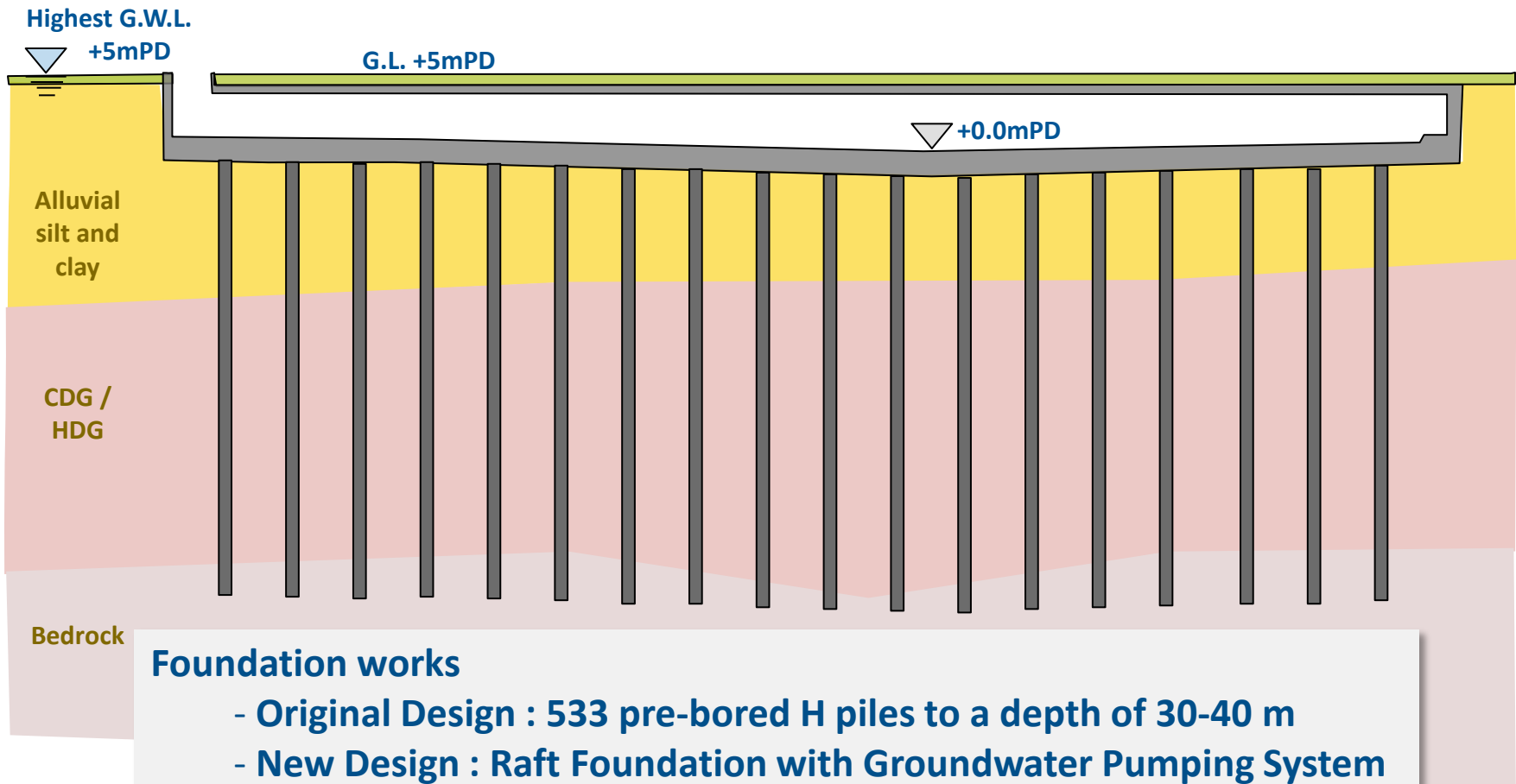
Approximate 380m long twin-cell (4mx2m) box culvert



2. Happy Valley Underground Stormwater Storage Scheme – ECC Option C



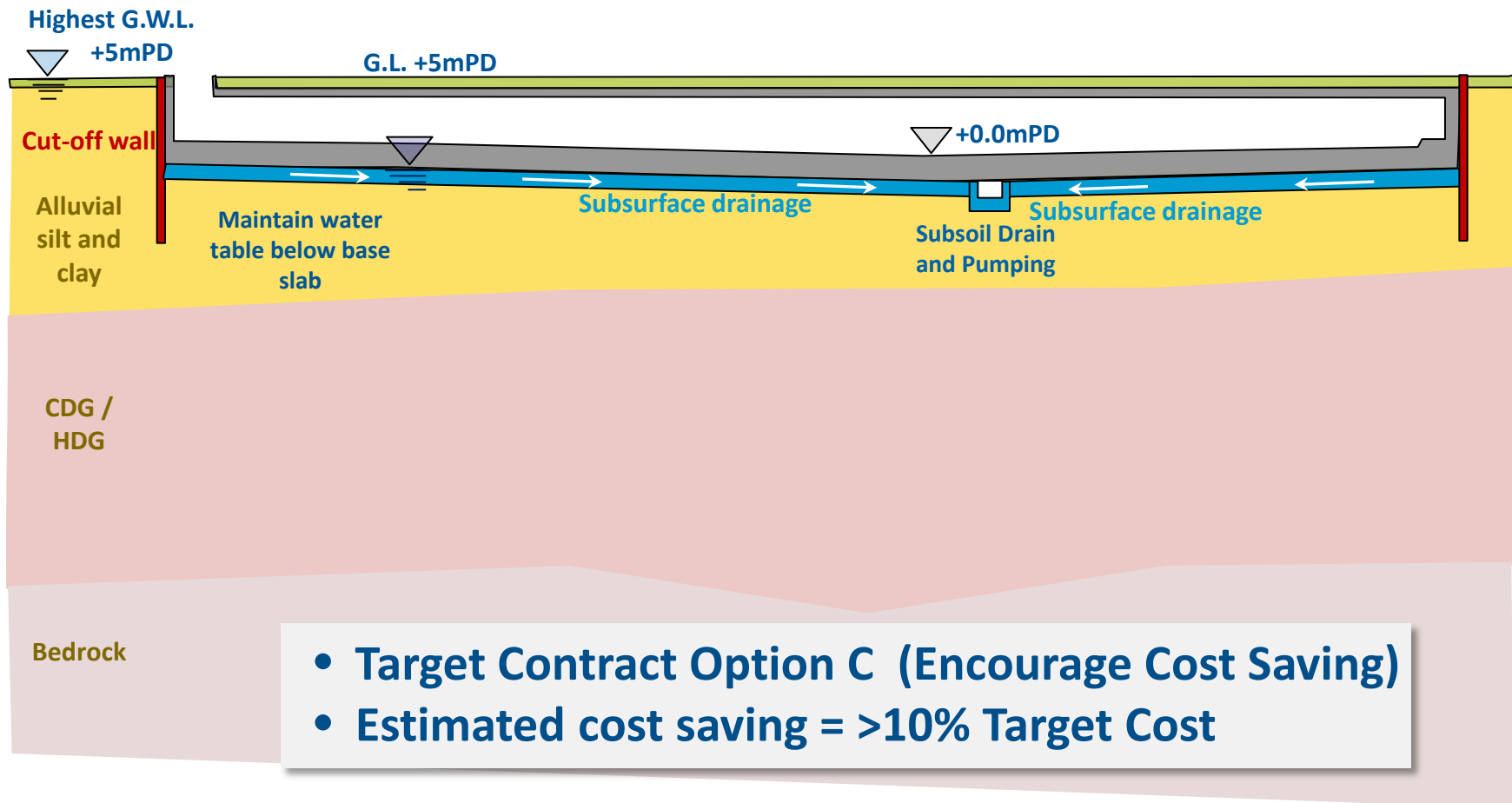
Piles: Uplifting Force Resisted by 533 Tension Piles Socketed at Bedrock Layer



2. Happy Valley Underground Stormwater Storage Scheme – ECC Option C



Cost Saving Design: Sub-surface Drainage System replaced piling system



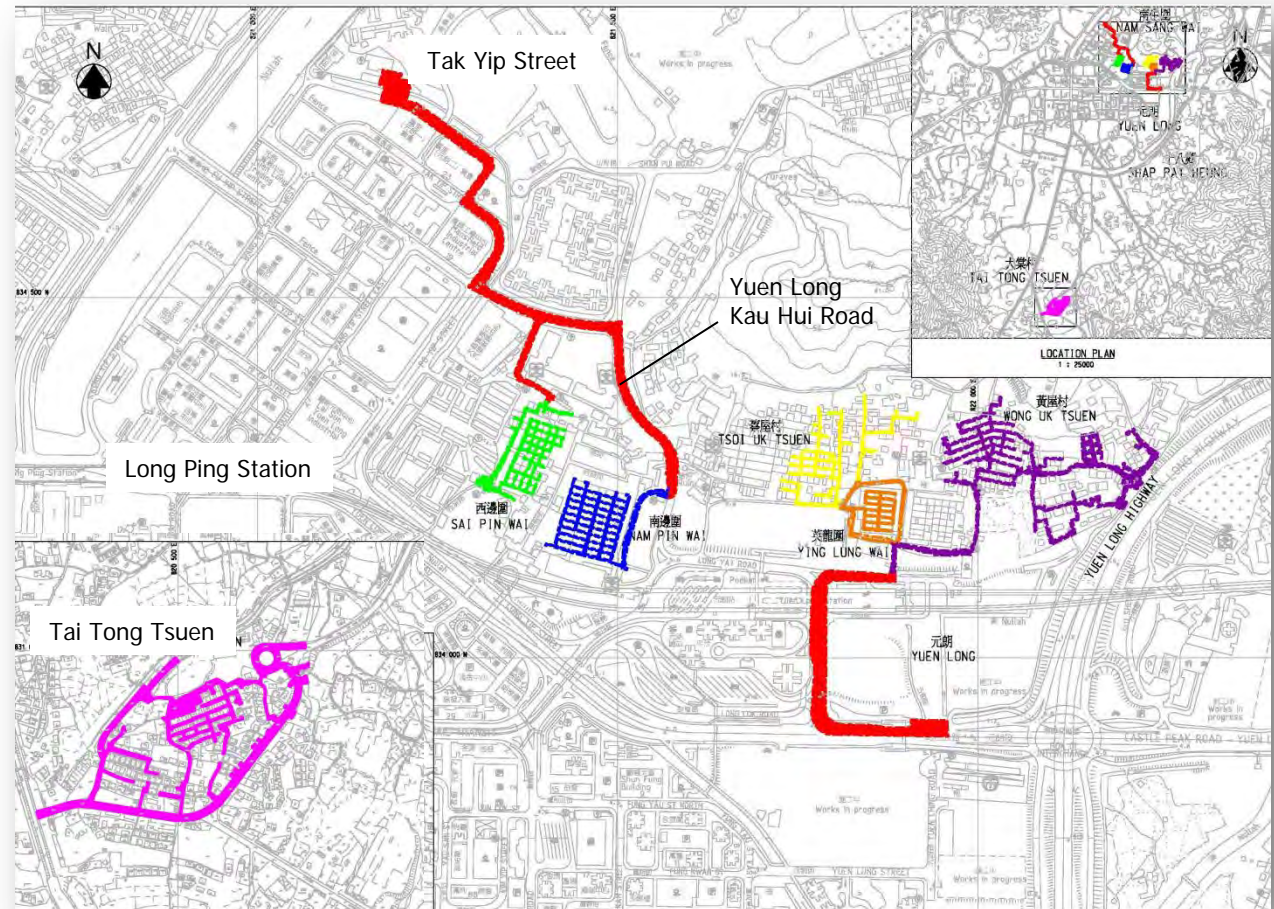
3. Yuen Long and Kam Tin Sewerage – ECC Option D

Consultant:
Black and Veatch

Contractor:
Kwan On

Contract Sum:
\$160M

Duration:
Sep 12 – Sep 16
(48 months)



Scope of Works:

- Provision of public sewerage for six unsewered villages in Yuen Long

3. Yuen Long and Kam Tin Sewerage – ECC Option D



Time Elapsed: **9 months**

(As at 16 May 2013)

Time to accept 1st NEC Programme: 15 weeks after commencement

No. of Compensation Event:	5
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No. of Early Warning:	10
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No. of Risk Reduction Meeting:	Weekly basis
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4. Lam Tsuen Village Sewerage

– ECC Option B (with works order arrangement clauses incorporated)

Consultant:

Arup

Contractor:

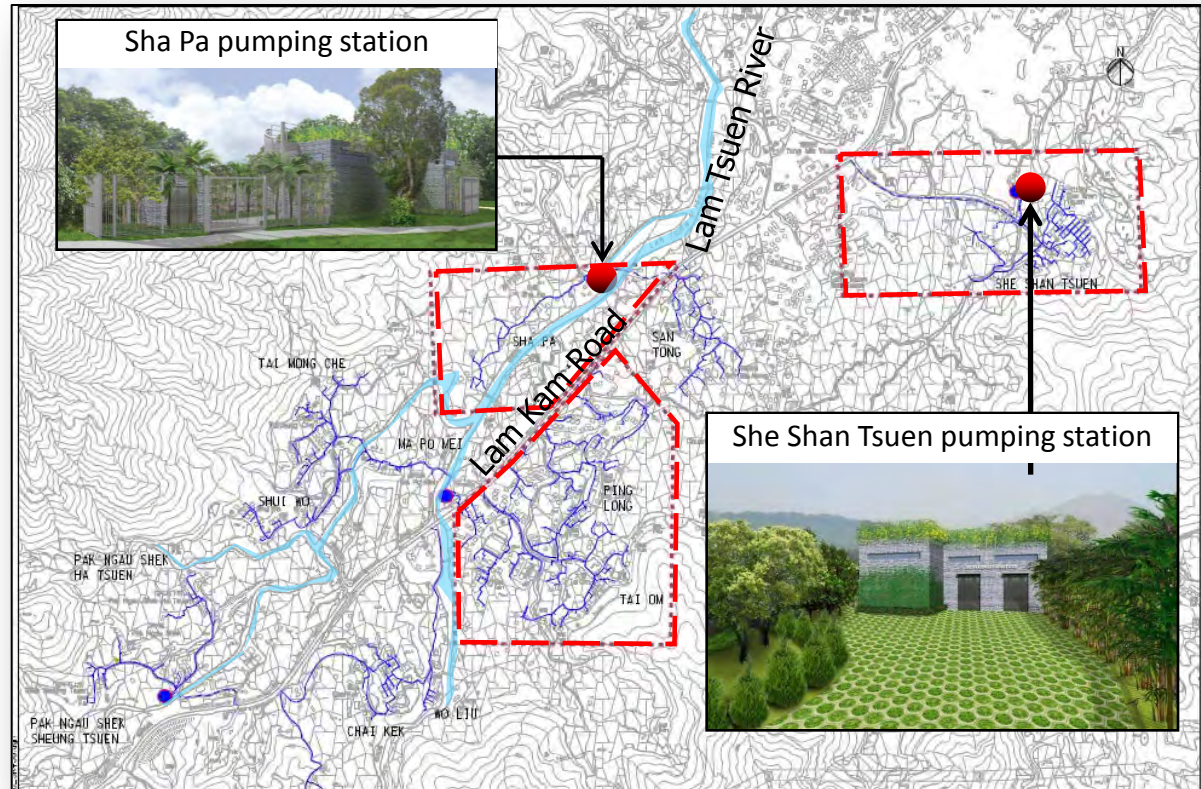
Hsin Chong Tsun Yip JV

Contract Sum:

\$173M

Duration :

Oct 12 – Jan 16
(33 months)



Scope of Works:

- 8.4km of village sewers in 4 unsewered villages
- 0.7km of twin rising mains
- Two sewage pumping stations

4. Lam Tsuen Village Sewerage

– ECC Option B (with Works Order arrangement clauses incorporated)



Time Elapsed: **6 months** (As at 16 May 2013)

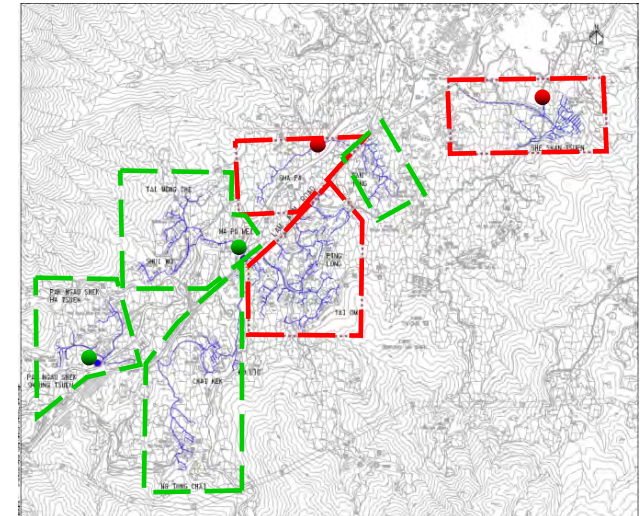
Time to accept 1 st NEC Programme:	~ 2 weeks after commencement
No. of Compensation Event:	3
No. of Early Warning:	5
No. of Risk Reduction Meeting:	2



4. Lam Tsuen Village Sewerage

– ECC Option B (with Works Order arrangement clauses incorporated)

- Set up to compare performance of NEC against GCC contract.
- Village sewerage works splits into 2 contracts:
 - 1 NEC and 1 GCC
- Works supervised by same consultants and constructed by same contractor but different teams.



— Layout of NEC Contract

— Layout of GCC Contract

5. Building and Civil Maintenance and Minor Works to DSD Plant and Facilities

– Term Service Contract Option A (Term Contract)



Managed by DSD's in house staff

Contract Sum: \$160M

Duration: Dec 12 – Nov16



Time Elapsed: 6 months

(As at 16 May 2013)

- Senior management (DD and AD) attended all monthly progress meetings to date;
- Transparent submissions/approval status reported in meetings
 - all well within contractual timeframe with advanced submissions before ordering works;
- Extended partnering with plants operators to streamline administration procedures.



Underwater inspection on the diffusers of the submarine outfall off Aberdeen Sewage Plant



Removal of scum from Drop Shaft at Chai Wan Preliminary Treatment Works

Partnering and Team Building (1)

1. NEC advisor
2. NEC training
- 3. Partnering workshop**



Partnering and Team Building (2)

- 4. Stakeholder workshop
- 5. Team members' initial reaction
- 6. Regular partnering meeting**



Sceptical.

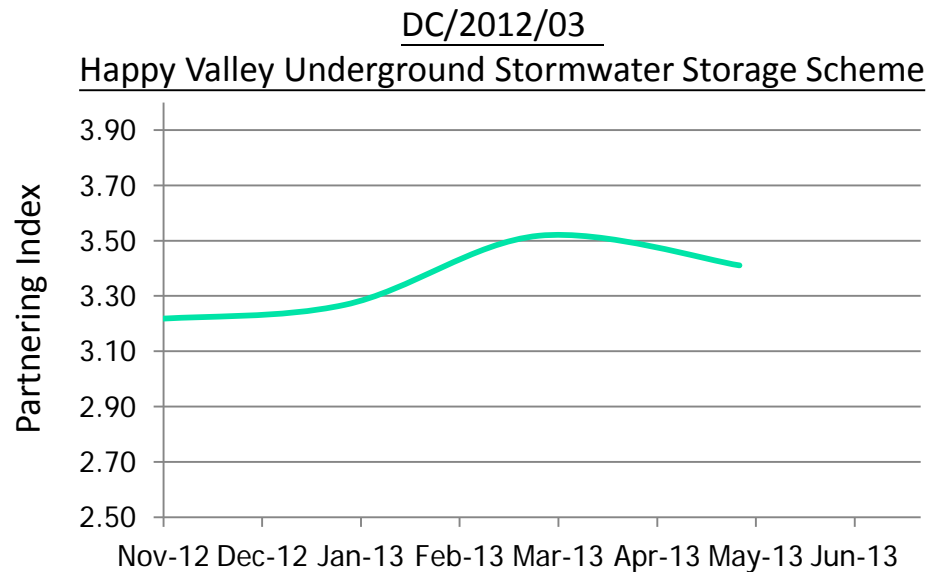
Partnering and Team Building (3)

- 7. Team logo
- 8. Joint office
- 9. Partnering activities
- 10. WhatsApp to improve communication
- 11. Senior management involvement**



Way forward

- To continue monitoring partnering scores



- To develop project specific indices for performance monitoring for the 5 NEC pilot contracts



NEC in the Pipeline

<u>1st E&M NEC Contract</u>	Nature	Target Commencement	NEC Contract
Provision of Electrical and Mechanical System for Sha Pa, She Shan Tsuen, Ma Po Mei and Pak Ngau Shek Sewage Pumping Stations	E&M (Pumping station)	Mar 2014	ECC Option C
<u>1st DSD PSC Consultancy</u>	Nature	Target Commencement	NEC Contract
Investigation for drainage improvement works in Happy Valley	Flood prevention	Dec 2013	PSC Option G

NEC in the Pipeline

- **Further DSD NEC contracts under consideration**
 - **5 nos. in the next 2 years**
 - **Drainage/ sewerage works and term maintenance works**
 - **Total value approx. \$2.1 billions**

Project Title	Estimated Value	Nature	Tentative Start	Tentative Completion
Drainage Improvement Works at Ngong Ping	\$137M	Drainage works	May 2014	Oct 2016
Village Sewerage in Tseung Kwan O, Ma Yau Tong and Ka Loon Tsuen	\$336M	Village sewerage	Jul 2014	Nov 2018
Improvement of Yuen Long Town Nullah (Town Centre Section) - Stage 1 Improvement Works	\$580M	Odour Control	Mid 2014	Mid 2018
Construction of Additional Sewage Rising Mains and Rehabilitation of the existing Sewage Rising Main between Tung Chung and Siu Ho Wan	\$771M	Sewerage works	Dec 2014	Dec 2021
Drainage Maintenance and Construction in Mainland North Districts (2015 – 2018)	\$280M	Term Maintenance Contract	Jan 2015	Dec 2018



“Are You Ready to Join the NEC Expedition?”