

Ref.: HYDHZMBEEM00_0_0005L.12

8 March 2012

Engineer's Representative
Ove Arup & Partners
Level 5, Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
Hong Kong

By Fax (2268 3970) and By Post

Attention: Mr. Michael Lo

Dear Mr. Lo,

**Re: Contract No. HY/2010/02
Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Facilities –
Reclamation Work
Spill Response Plan**

Reference is made to the Spill Response Plan copied to us by E-mail on 8 March 2012.

We are pleased to inform you that we have no adverse comments on the captioned Spill Response Plan. We write to verify the captioned submission in accordance with Condition 2.7 of EP-353/2009/D and Condition 2.7 of EP-354/2009/A (only for TMCLKL Southern Landfall Reclamation).

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

Raymond Dai
Independent Environmental Checker

ENVIRON
ENVIRON Hong Kong Limited

Project:	HYDHZMBEEM00/0/0005	
Exchange no.:	_____	
Circulation:	Read	Action
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c.c. HyD – Mr. Matthew Fung (By Fax.: 3188 6614)
AECOM – Ms. Echo Leong (By Fax: 2317 7609)
CHEC – Mr. C M Wong (By Fax: 2578 0413)

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中國港灣工程有限責任公司

香港代表： 振華工程有限公司

CHINA HARBOUR ENGINEERING COMPANY LIMITED
HONG KONG REPRESENTATIVE: ZHEN HUA ENGINEERING CO., LTD.

Date : 8th March 2012
Our Ref. : CHEC/C273/10.04/000512

Environ Hong Kong Limited
Room 2310, China Resources Building
26 Harbour Road, Wan Chai, Hong Kong

By email and fax 3548 6988

Attn.: Mr. David Yeung

Dear Sir,

Contract No. HY/2010/02
Hong Kong Zhuhai Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Works
Submission of Spill Response Plan (incorporated EPD's comments)

We refer to EPD's letter with ref. () in Ax (1) to EP2/G/A/146 (V) dated 5th March 2012, we are pleased to provide the Spill Response Plan in which certified by ET (letter with ref C/lchc12030808 dated 8th March 2012) as enclosed for your verification.

Thank you for your kind attention and please do not hesitate to contact our Mr. C.M. Wong at 9717 7986 should you have any further enquiries.

Yours faithfully,
For and on behalf of
China Harbour Engineering Company Limited

Shum Hong Sang
Project Manager

Encl.

SHS/DC/WCM/sy
on Wong

c.c.	Arup	Dr. K.K. Yin (The Engineer)	
	Highways	Ms. Bill Chan	Fax 3188 6614
	AECOM	Ms. Echo Leong	Fax 2317 7609
	ER	Mr. Michael Lo	Fax 2268 3970

Your Ref:
Our Ref: C/lhc12030808

By Fax (2578 0413) and E-mail

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

Attn: Mr. SHUM Hong-sang

8 March 2012

Dear Sir,

**Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Works**

Certification of Spill Response Plan (Rev. 4)


Reference is made to the Spill Response Plan (Rev. 4) submitted by you via e-mail dated 8 March 2012.

We hereby certify the captioned plan as in compliance with the condition 2.7 of Environmental Permits No. EP-353/2009/C and condition 2.7 of Environmental Permits EP-354/2009/A (only for TMCLKL Southern Landfall Reclamation), for your onward submission.

Should you require any further information, please do not hesitate to contact our Ms. Edith Ng at 3922 9407.

Yours faithfully,

For and on behalf of
AECOM Asia Co. Ltd.



Echo Leong
Environmental Team Leader

Contract HY/2010/02

Hong Kong - Zhuhai - Macao Bridge

Hong Kong Boundary Crossing Facilities - Reclamation Works

SPILL RESPONSE PLAN

	Name	Signature
Prepared By:	China Harbour Engineering Company Limited	<i>OM Wong</i>

Table of Content

- 1 Introduction**
- 2 General Precautions**
- 3 Transfer and Transport Precautions**
- 4 General response to the spill**
 - 4.1 Spill contained on the deck of a vessel or on land
 - 4.2 Spill into the Marine Environment
 - 4.3 Spillage Control Material
 - 4.4 Inventory of hazardous chemicals / compounds
 - 4.5 Protection of sensitive receivers
- 5 General dolphin contingency plan for petroleum/chemical spill event**
 - 5.1 Initial Action
 - 5.2 All reasonable attempts must be made to keep dolphins away from contaminated areas
- 6 Safety Equipment**
- 7 Implementation of the Spill Response Plan**
 - 7.1 Notification to workers and frontier workforces
 - 7.2 Training - workers and frontier workforces
 - 7.3 Location of Spill Kits
- 8 Contact of Relevant Parties**
- 9 Role and Responsibilities of Management Parties**
 - 9.1 Emergency Team Leader - General Manager (S & E)
 - 9.2 Safety Manager (SM)
 - 9.3 Construction Managers (CM)
 - 9.4 Environmental Officer (EO)
 - 9.5 Environmental Supervisor (ES)
 - 9.6 Superintendents / Senior Foremen / Foremen
 - 9.7 Workers
- 10 Notification the relevant parties**
- 11 Emergency Team Organization**

Appendix

- A General Layout of the Site Area
- B Flow Diagram of Handling the Spillage on Site
- C Information of Spill Kits

1. Introduction

CHEC (China Harbour Engineering Company Limited, hereafter CHEC) are the Main Contractor responsible for the execution of the reclamation works for the Hong Kong-Zhuhai-Macao Bridge (HZMB) - Boundary Crossing Facilities (HKBCF) - Reclamation Works. These works primarily involve the forming of 150 hectares of land area.

The following Spill Response Plan is required under Section 2.7 of Environmental Permit No. EP-353/2009/C and Section 2.7 of Environmental Permit No. EP-354/2009/A. Noting: the Spill Response Plan must be submitted to EPD specifically;

“ the Spill Response Plan detailing the actions to be taken in the event of accidental spillage with specific provisions for protecting marine ecology and the Chinese White Dolphin.”

2. General Precautions

In order to minimize the possibilities of accidental spillage of oil or other hazardous chemicals at the construction site, the following precautionary measures will be implemented on site as far as possible:

- i) Use drip trays for storage containers of chemical oil fuel tanks and / or generators.
- ii) Reduce the danger of stacked containers of oil or chemicals falling.
- iii) Provide tightly closed lids so as to avoid leakage of chemicals and chemical waste especially if accidentally knocked over.
- iv) Store compatible chemicals and the waste in the same storage area.
- v) Inspect the storage area regularly to detect if any leakage has occurred or if any of the containers become defective on a regular weekly basis.
- vi) Use suitable containers, which are resistant to the stored chemicals or the chemical waste so as to prevent leakage.
- vii) Label the storage containers and the chemical tanks correctly.
- viii) Provide adequate ventilation in the storage area as necessary.
- ix) Prohibit open flames and smoking near the chemical storage and fuel storage areas.
- x) Store large and heavy containers on the floor as far as possible and avoid storing these containers higher than 0.75m above the floor level (storage in vessel / barges are exclusive).
- xi) Keep all chemical, chemical waste and fuel oil storage containers below eye level for easy inspection.
- xii) Provide adequate space for safe and easy handling and inspection of the containers.
- xiii) Maintain an up-to-date log of all chemicals, chemical waste and fuel oil stored at site.
- xiv) Separate incompatible chemicals from one another.
- xv) Keep the ingress to the chemical storage area locked and restrict access.
- xvi) Provide a bucket of dry sand and a suitable fire extinguisher in the storage area.

3. Transfer and Transport Precautions

In order to minimize the change of accidental spillage occurring during the transportation of chemicals or containers of chemicals to and from the construction site, some precautionary measures will be implemented on site. These precautions are subject to site conditions and constraints. These are:

- i) Use a suitably sized container so as to avoid overfilling.
- ii) Use pumps to transfer chemical waste instead of manually pouring them.
- iii) Provide a containment structure able to hold any chemical or chemical waste that is accidentally spilled.
- iv) Use proper, safe and suitably labeled containers.
- v) Use suitable carrying equipment to transfer the chemical and chemical; waste containers from one location to another.
- vi) Only employ and use suitably licensed, trained and responsible chemical waste collection persons to carry out the transportation requirements.

4. General response to the spill

The general response to the spill shall be carried out to minimize the amount of oil or hazardous chemicals to the marine environment. The location of the spill is also a consideration. The general response includes the following:

4.1 Spill contained on the deck of a vessel or on land

Workers should be made aware of the emergency telephone numbers, locations of emergency showers, location of Spill Kits and emergency evacuation routes. Medical emergency response should also be undertaken whenever necessary. The response actions to an incident should include the following steps:

- i) Immediately inform the Emergency Team of the spill incident occurring.
- ii) Take all possible measures to reduce or stop the spillage, such as shut off the valve.
- iii) Provided it is safe to do so, the area containing the spill shall have forced ventilation installed in order to make a safe spillage condition.
- iv) The Emergency Team Leader shall be responsible for organizing the manpower to identify the spill source and stop or cease it.
- v) The Emergency Team Leader as the assigned person shall equip all people involved in the cleanup works suitable personal protective equipment prior to the removal of any leaked chemical or chemical waste.
- vi) If possible and practical, the spilt chemical shall be put back into the containers of origin. Otherwise a suitable material like dry sand or sawdust shall be used to absorb the leakage.
- vii) Any contaminated sand / sawdust / other materials shall be collected and put into black plastic bags and shall be clearly labeled as "chemical waste".
- viii) All collected chemical waste shall be placed in an area designated for chemical waste storage.

4.2 *Spill into the Marine Environment*

This type of spill is considered the most serious in terms of the possibility of causing impact to the local cetacean community and other marine organisms. The notification system is separated into two scales, as determined by the area of spillage of 100 m².

Upon spillage, we will use the standard Spill Kits available in the market. The standard Spill Kits includes items such as pads, pillow and Secondary Oil Containment (SOC). SOC is used to enclose the spillage area to contain the spillage spreading outside of the SOC. The pads and pillow are used for absorbing and removing the spillage within the SOC. Standard Spill Kits is attached in **Appendix C**.

It is the responsibility of the person observing the spill to report this immediately to their immediate supervisor who shall inform the Superintendent and General Manager (S&E) as Emergency Team Leader. The superintendent shall be assigned to deploy the Spill Kits to the spillage site. Depending on the scale of the spillage area of 100 m², the report system is separated into the following two systems:

For the spillage area greater than 100 m², the report system is:

- i) The General Manager (S&E) shall inform all parties such as Engineer Representative, Marine Department (MD), Fire Services Department (FSD), Agriculture, Fisheries and Conservation Department (AFCD), Environmental Protection Department (EPD), Environmental Team (ET) and Independent Environmental Checker (IEC) immediately. The contact of the parties tabulated in **Section 8.0**.
- ii) The Emergency Team Leader shall be responsible for organizing the manpower to identify the spill source and stop or cease it.
- iii) The Emergency Team Leader is the assigned person who shall equip all people involved in the cleanup works suitable personal protective equipment prior to the removal of any leaked chemical or chemical waste.
- iv) The spillage area shall be contained by using secondary oil containment (SOC).
- v) Pads and Pillow of the Spill Kit shall be applied to absorb and remove the spillage within the SOC. They will be collected by Disposal Bags as part of the Spill Kits item.

For the spillage area smaller than 100 m² the report system is:

- i) The General Manager (S&E) shall inform the parties such as Engineer Representative, Environmental Team and Independent Environmental Checker immediately. The contact of the parties tabulated in **Section 8.0**.
- ii) The Emergency Team Leader shall be responsible for organizing the manpower to identify the spill source and stop or cease it.
- iii) The Emergency Team Leader is the assigned person who shall equip all people involved in the cleanup works suitable personal protective equipment prior to the removal of any leaked chemical or chemical waste.
- iv) The spillage area shall be contained by using secondary oil containment (SOC).
- v) Pads and Pillow of the Spill Kit shall be applied to absorb and remove the spillage within the SOC. They will be collected by Disposal Bags as part of the Spill Kits item.

4.3 Spillage Control Material

- i) The spillage control material shall be distributed around the site at locations nearby to any storage of chemicals or oil. A spillage control material located nearby to the Environmental Officer (EO) office shall contain enough number of Spill Kits available on site. Also in a storage area immediate adjacent to the EO office shall be a reasonable supply stock of Spill Kits available to be deployed as necessary.
- ii) The pads and pillow of the Spill Kits used for spillage control by means of physical absorption. No chemical or biological reaction would be carried out during in the spillage control practices. Collection of pads and pillows absorbing material is a must after completion of spillage removal.
- iii) The inventory of hazardous chemicals that will be used in this project would be inspected periodically by superintendent(s) in a bi-monthly regular basis.
- iv) At least 4 sets of Spill Kits would be provided on site in case of any emergency and managed by the on shift superintendent or Emergency Team Leader's delegates. The Contractor provides sufficient numbers of spillage control kits on site and total numbers of such kits would be discussed with ER.

4.4 Inventory of hazardous chemicals / compounds

- i) Basically, diesel would be the major chemical used on site for the HKBCF project, lubricant is the other chemicals that stored on site for operation of machineries.
- ii) Each sub-contractors provide the inventory of hazardous chemicals / compound (other from diesel) used on site.
- iii) The superintendents will inspect the stock of hazardous chemicals / compound together with the foremen of each sub-contractor.
- iv) Records of such hazardous chemicals / compound would be kept on site for further inspection.
- v) All of the spillage control kits used for spillage removal would meet EPD and Marine Departments' requirement.

4.5 Protection of sensitive receivers

- i) Application of this section will apply if any one of the following conditions are met:
- A) If the site area of spillage of chemical / hazardous compounds more than 100m².
 - B) The location of spillage relative to the water intakes, Tai Ho Wan Inlet and coral sites such as Brothers Island is less than 1 km distance
- ii) Deployed a layer of physical absorbent at the water intakes, Tai Ho Wan Inlet and coral site in order to protect such areas from the adverse affect due to spillage.
- iii) The Contractor will inform the relevant parties as mentioned in **Section 4.2.**
- iv) The on shift superintendent or Emergency Team Leader's delegates will in- charge all the mitigate measures implement on site in order to minimize the adverse effect.
- v) Follow the procedures as stated in **Appendix B.**
- vi) Scope of additional water quality monitoring would be implemented with the agreement of ER, ET and IEC.

5. General dolphin contingency plan for petroleum/chemical spill event

It is not known to what ability Chinese White Dolphin (CWD) can detect chemicals within its environment. At best, cetaceans will be able to detect chemicals that float on the water surface that have a high viscosity (*sludge* like) but may not be able to detect more volatile fractions such as petrol/aviation fuel. As such, an emergency spill plan must provide for keeping CWD away from the effected area.

5.1 *Initial Action*

- i) Observation from high platforms (the dolphin monitoring barge) or aerial surveys to determine the extent of the spill and record the number and location of any CWD within the area. As per the Dolphin Watch Plan¹ protocol, dolphins within the effected area can be visually and acoustically tracked to monitor risk and their specific reactions to the spill can be logged. This will help determine immediate and future risks.
- ii) The course of action decided on will be related to such factors as the extent of the spill, the proximity of cetaceans to it and the likelihood of contact, e.g., enclosing the spill area or enclosing important habitats.

5.2. *All reasonable attempts must be made to keep dolphins away from contaminated areas*

- i) The use of booms is an effective containment method and can also act as a barrier to dolphins. Deployment of such with concomitant visual and acoustic observations is appropriate for small and controllable spills that can be dealt with in the short term.
- ii) In the event of larger spills, the deployment of barrier nets (such silt curtains or anti-shark nets) would be an effective means of keeping dolphins out of the contaminated area until such times as the area was free of contamination.
- iii) If dolphins are detected within the boom/enclosed area which contains contaminants, the same protocol used to displace dolphins from behind silt curtains will be put into action, as described in the Dolphin Watch Plan.

¹ The Dolphin Watch Plan is submitted separately under Sections 2.6 of Environmental Permit No. EP-353/2009/C.

6. Safety Equipment

The following is a list of the site safety equipment will be available;

- i) Suitable fire extinguishers. There needs to be consideration regarding the flame retardant chemicals inside these devices do not exacerbate the problems that are occurring with a leak.
- ii) Brushes, dustpans, mops and buckets.
- iii) Dry sand and sawdust.
- iv) Tissue and toweling (both paper and cloth).
- v) Containers to receive waste including plastic bags, drums, etc.
- vi) Spill Kits.

7. Implementation of the Spill Response Plan

7.1 Notification to workers and frontier workforces

Personnel will receive information regarding the existence of a Spill Response Plan during the site induction training carried out by the EO at the site. This is correct since any chemical spill is considered a safety and environmental issue with regards to the workers at a site. It is also normal that all workers involved with handling chemicals and oils shall be supervised. For this reason it is important that all site supervisors (foreman and superintendent) are trained in the necessary procedures involved in containing a spill control practices. Then there are those workers that are constantly involved in handling hazardous chemicals and oils. These workers shall also receive the appropriate training with regards to the handling of a spill.

This training and briefing should be carried out by a member of the EO at the site area.

Trainer	Notified the workers	Participant
Environmental Officer	Worker safety Containment Clearing up Correct Disposal Reporting spills	All workers All Supervisors All superintendents
	Types of sensitive receivers Locations of these receivers Methods to protect these receivers Need for prompt action	Workers usually involved with hazardous chemicals or oil. All Supervisors All superintendents

In case of a spill happening, the worker noticing a spill shall immediately notify his supervisor. The supervisor shall then immediately contact the Site Engineer / Foreman, EO and ER. Any or all of these people shall have the responsibility to instruct the Emergency Team Leader or his delegate upon the necessary course of action to contain the spill. All of these people shall report to the area where the spill occurs to follow up on the action required to contain the spill. The patrol boat would be immediately dispatched to the site of spill and use the spillage control kit to contain the spill.

As soon as the spill has been noted by the foremen and/or superintendent, and if any of the chemical or oil escaped into the marine environment, then relevant parties shall be notified for support as needed. Incident report after the incident would be submitted to ER within 2 working days. For the contacts of relevant parties please refer to **section 8.0** for more details. The Contractor will follow the procedures attached in **Appendix B**.

7.2 Training - workers and frontier workforces

All new workers will be introduced to the Spill Response Plan during the environmental induction training carried out by the Environmental Officer at the site. All workers at this site have to undergo such training. The EO shall periodically conduct Tool Box talks to the site workers. It is normal to conduct these at least once every month. They will be incorporated into the safety talks presented at this site. During such talks a demonstration of the containment methods and equipment shall be discussed and conducted.

7.3 Location of Spill Kits

One set of spillage control kit would be provided at site area WA2 and stored at the entrance of the Temporary Chemical Waste Container.

Another 3 sets of Spill Kits would be on the vessels at the marine works ready for use if spillage occurred. 2 sets of Spill Kits would be stored at patrol boat and 1 set of Spill Kit would be placed at one of the working platform mounted on the barge for dolphin watching. The working platform would be stationing at the site.

Site superintendent, foremen and engineers would be notified by EO of the locations of the spillage control kits.

8. Contact of Relevant Parties

	Name	Telephone no.
Emergency Team		
General Manager (S&E)	Daniel Leung	9877 4288
Environmental Officer	C.M. Wong	9717 7986
Environmental Supervisor	Joy Chan	9381 3259
Environmental Supervisor	Arthur Lee	6908 4007
Foreman	Cheung Chu Kong	9086 7666
Foreman	Cheung Tak Fai	9251 7371
Superintendent	Alan Yeung Chung Chi	9525 2813
Superintendent	Tse Sui Ping	6156 7937
Relevant Government Departments		
General Emergency Services	-	999
Labour Department	-	2717 1717
Fire Services Department	-	2723 2233
Agriculture, Fisheries and Conservation Department (AFCD)	-	2708 8885

China Harbour Engineering Company HY/2010/02, Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works	Rev. 4
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Environmental Protection Department (EPD)	-	2838 3111
Nearest Fire Station	Tung Chung Fire Station	2988 1898
	Chek Lap Kok Fire Station	2949 9081
Nearest Ambulance Depot	Tung Chung Ambulance Depot	2988 8282
	Castle Peak Bay Ambulance Depot	2451 7193
Nearest Hospital	Tuen Mun Hospital	2468 5111
Airport Authority Hong Kong	-	2186 7111
Weather Forecast	-	187 8200
Marine Department	-	2852 4472-77
Vessel Traffic Centre	-	2858 2163 , VHF channel 12 or 14
Marine Police Control Centre	-	2803 6241
Maritime Rescue Coordination Centre	-	2545 0181, 2233 7999
Relevant Utility Companies		
China Light and Power Co. Ltd.	-	2728 8333
China Gas Co. Ltd.	-	2880 6999
Water Supplies Department	(Hong Kong & Island)	2811 0788
	(Kowloon & New Territory)	2396 0210
ER (Engineer Representatives) – Ove Arup & Partners Ltd		
CRE	Ir. Michael Lo	6290 8860
SRE	Ir. Ben Poon	5180 0405
Environmental Team – AECOM		
Environmental Team Leader (ETL)	Echo Leong	3922 9280
Independent Environmental Checker – ENVIRON Hong Kong Limited		
IEC	Raymond Dai	3743 0788

9. Role and Responsibilities of Management Parties

9.1 *Emergency Team Leader - General Manager (S & E)*

The General Manager (S & E) is a representative of head office responsible for ensuring commitment to environmental performance is fulfilled and assigning adequate resources and facilities to provide an effective environmental management programme on site.

9.2 *Safety Manager (SM)*

The Safety Manager (SM) is a senior staff responsible for safety, health and environmental matter for the Contract. He is also responsible for general administration work of the safety and environmental divisions, including recruitment, supervision and appraisal for safety officers and environmental officers, meeting with safety officers and environmental officers regularly. SM is also to assist in handling investigation of incidents and accidents.

9.3 *Construction Managers (CM)*

The Construction Manager (CM) is a senior staff on site in which report to the Project Director has the responsibility to coordinate all environmental matters on site with all relative authorities. CM is also responsible for all site operations, management of environmental issues, staff supervision, control, coordination & planning, external liaison as well as implementing and monitoring necessary corrective actions. CM is working full-time on the site.

The Construction Manager will also carry out immediate action to rectify any non-compliance of environmental requirements as well as handle any complaints received from the public.

Construction Manager has the responsibility to coordinate all environmental matters on site areas and to report these to the Site Safety and Environmental Committee, HyD, EPD and Engineer's Representatives. The Construction Manager is also responsible for ensuring commitment to environmental performance is fulfilled and assigning adequate resources and facilities. With the assistance of the Environmental Officer, he would also oversee the implementation and performance of the Spill Response Plan.

9.4 Environmental Officer (EO)

The Environmental Officer will be appointed on site for the overall coordination, monitoring and overseeing the performance and implementation of the WMP for the Contract. The Environmental Officer directly reports to the Construction Manager.

The responsibilities of the Environmental Officer are also included as follows:

- Review the Spill Response Plan and ensure works are executed in accordance with the plan;
- Monitor and control the works including those of subcontractors to ensure compliance with specified requirements;
- Train the worker and frontier workforces;
- Assist in handling any complaints received; and
- Ensure regular environmental monitoring is carried out, and that all environmental monitoring results are recorded.

9.5 Environmental Supervisor (ES)

Environmental Supervisor (ES) is responsible for the implementation of this Spill Response Plan with the assistance of the foreman. They are also responsible for:

- co-operate with the Environmental Officer to rectify any non-conformances being identified;
- attend environmental meetings whenever necessary;
- carry out ad hoc environmental site inspections when deficiencies are being found; and
- assist with Environmental Officer on any environmental accidents like chemical spillage.

9.6 Superintendents / Senior Foremen / Foremen

The Superintendent / Senior Foremen / Foremen are responsible for site supervision and coordination of the works as well as implementation of any remedial actions or environmental protection measures as directed by the CM / EO.

The Superintendent / Senior Foremen / Foremen are also responsible for:

- assisting in the daily implementation of the Spill Response Plan including to ensure all waste is sorted, segregated, recycled or reused when applicable;
- supervise the whole process of cleaning;
- ensuring waste is avoided and/or minimised as much as practically possible and
- ensure waste is clean and stored in temporary chemical waste container before left.
- Superintendent shall be assigned to deploy the Spill Kits when a spillage occurs.

9.7 Workers

The workers are responsible to carry out the waste collection practice and follow the instruction of superintendent/senior foreman/ foreman. They are obligated to carry out the works like:

- trained before handling chemical spillage;
- pick up the Spill Kits
- transfer the Spill Kits to Site and
- collection of chemical wastes from site area and stored back to the temporary chemical storage area.

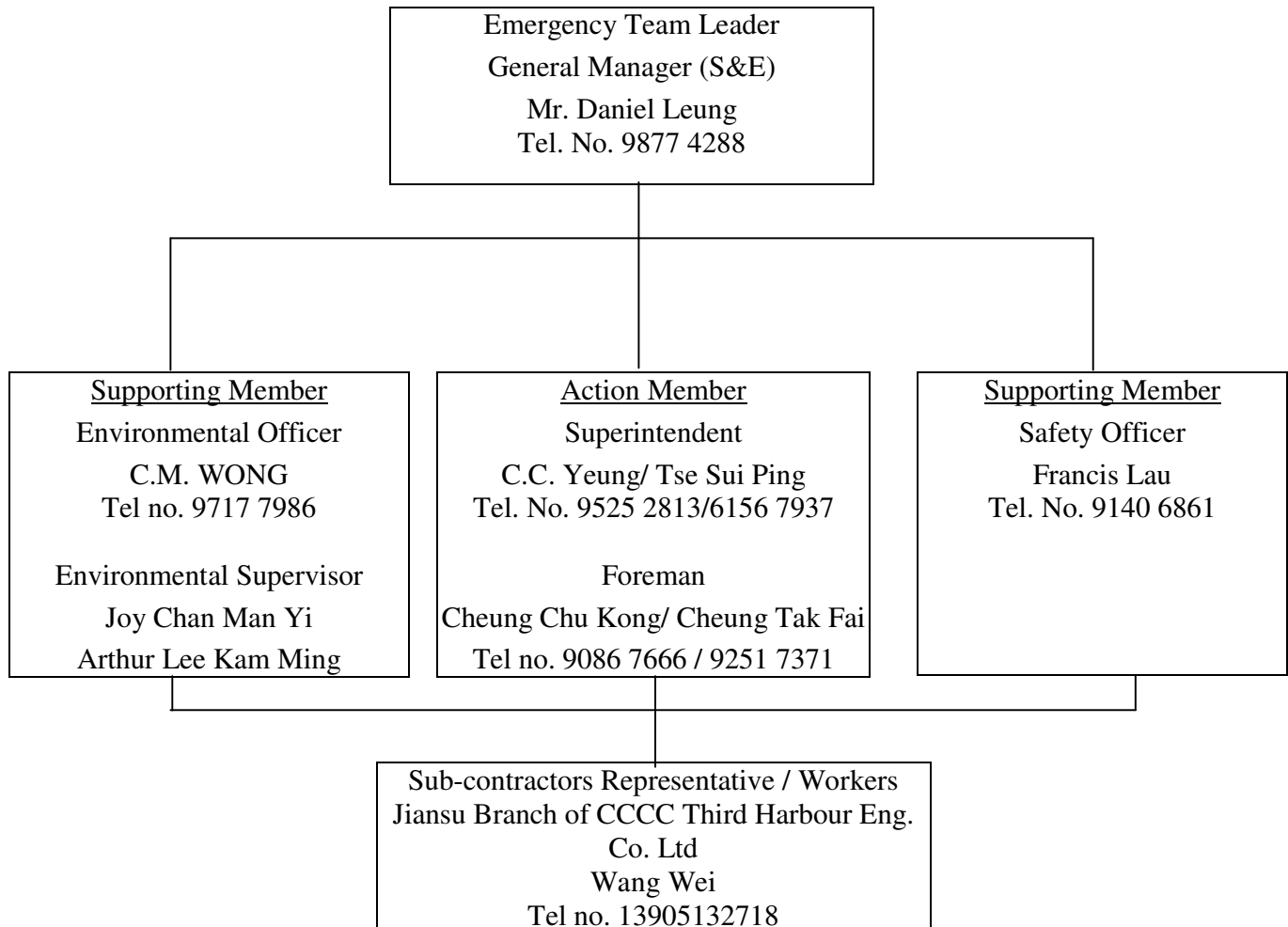
10 Notification the relevant parties

This will be the responsibility of the most senior and experienced worker involved and the immediate works supervisor. If the spill is small and contained easily, then the EO shall be informed and information will be given to the Engineer Representative (ER) as soon as practical. Both may choose to inspect the area if the spill is less than 100m² to confirm that the spill is contained and the correct / most suitable clean up procedure has been implemented. In all cases of spillage, representative photographs shall be taken before and after clean up. If the spillage persists, daily photo records should be taken. The EO shall be responsible for keeping a record of the spill incidence.

Spills greater than site area 100m² shall require both the EO and the ER to attend the area to check that the spill was contained and proper cleanup was carried out. A photograph record shall be kept, as shall be a record by both the EO and the ER. The Construction Manager /Engineer / Superintendent/ Foreman shall also be informed of the incident. If there was full containment and no significant quantity entered into the marine environment, then the event shall be documented.

If any significant quantity enters the marine environment (site area 100m²), then a full scale notification shall occur. Under such circumstances, identified people in the relevant parties shall be notified for support as needed, the contact of the relevant parties listed in **Section 8.0**.

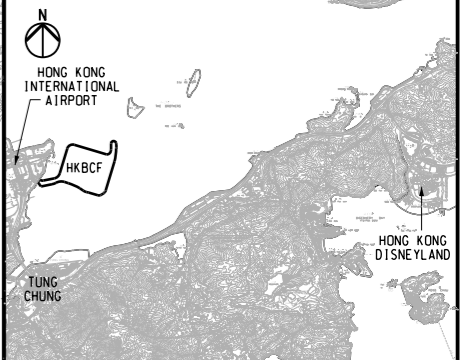
11 Emergency Team Organization



Appendix A

General Layout of the Site Area

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON-SITE.
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KEY PLAN

- NOTES**
1. ALL COORDINATES ARE RELATED TO HONG KONG 1980 GRID.
 2. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM (mPD).
 3. REFER TO DRG NO. 211036/SL/1002 FOR THE DEFINITION OF SETTING OUT LINE (SOL) FOR THE HONG KONG BOUNDARY CROSSING FACILITIES (HKBCF) RECLAMATION SITE.
 4. REFER TO DRG NO. 211036/SL/1004 FOR DETAILS OF SITE BOUNDARY.
 5. FOR EXTENT OF SORTING FACILITIES AT FILL BANK AT TSEUNG KWAN O AREA 137 REFER TO DRG NO. 211036/SL/1015.

- LEGEND**
- - - - - SITE BOUNDARY
 - - - - - SETTING OUT LINE (SOL)
 - - - - - WORKS AREA BOUNDARY

Rev	Description	By	Date
-	FOR CONSTRUCTION	HYJL	11/11

Consultant

ARUP 奧雅納工程顧問
Ove Arup & Partners Hong Kong Limited

Supported By :

- Ecosystems Ltd.
- EDA Marine Ltd.
- Geotechnical Consulting Group (Asia) Ltd.
- Hong Kong Cetacean Research Project
- IntelBuild Technyx Asia Limited
- Tony Gee and Partners LLP

Contract No. and Title:
Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title
KEY PLAN

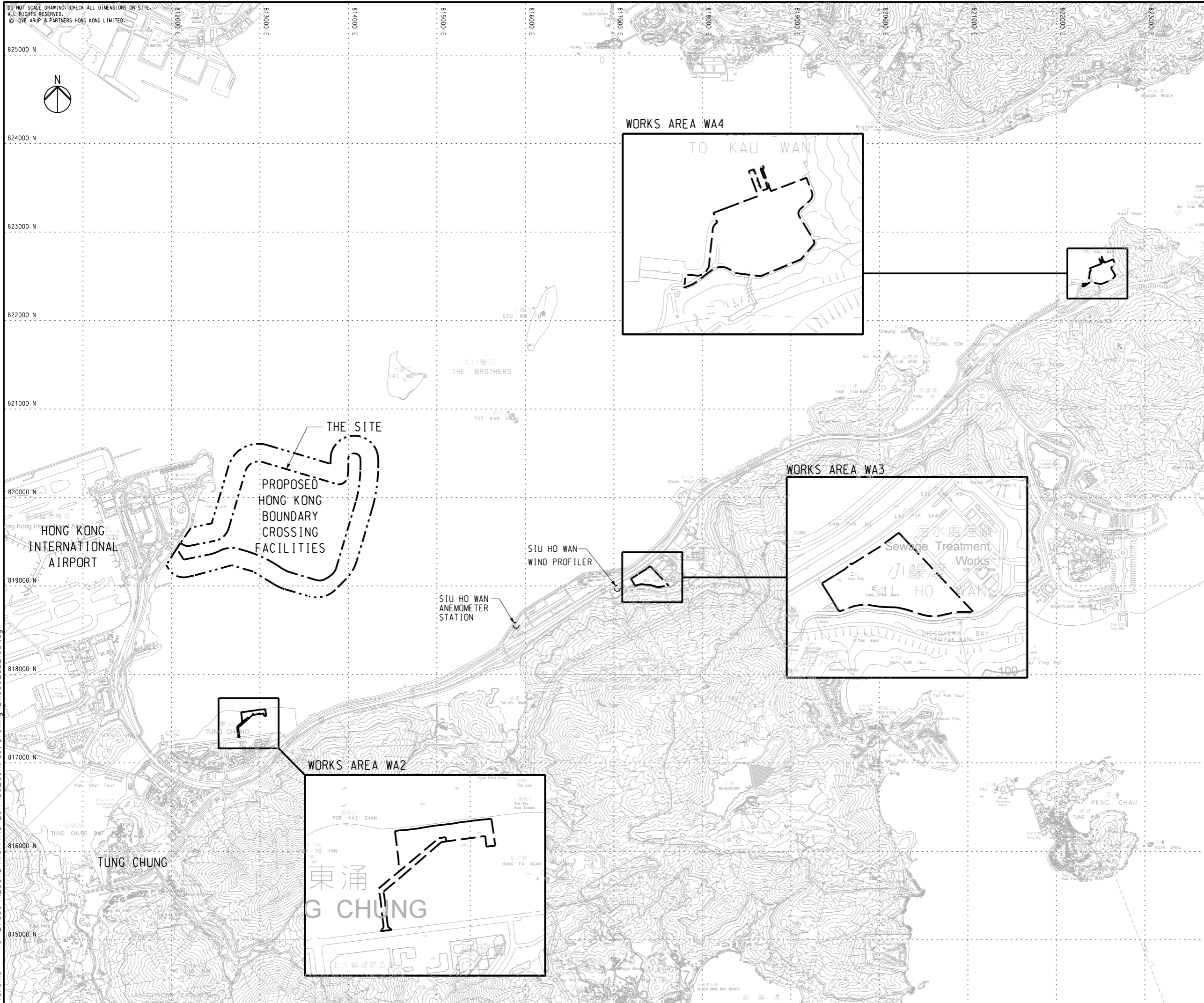
Drawing no. 211036/SL/1001 Rev. -

Drawn RL	Date 11/09	Checked KKY	Approved DML
Scale 1:20000 @A1 1:40000 @A3		Status	WORKING

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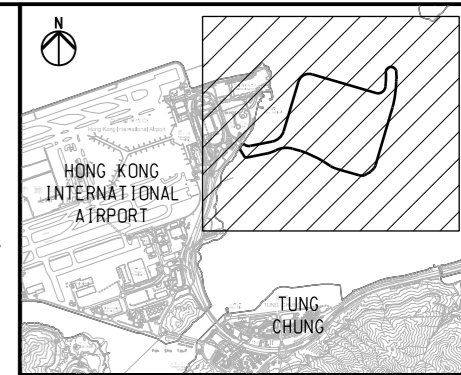
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Filename : J:\211036\RECORD\WORKING\20111130_Contract Drawing_211036_SL_1001.dgn



DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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NOTES

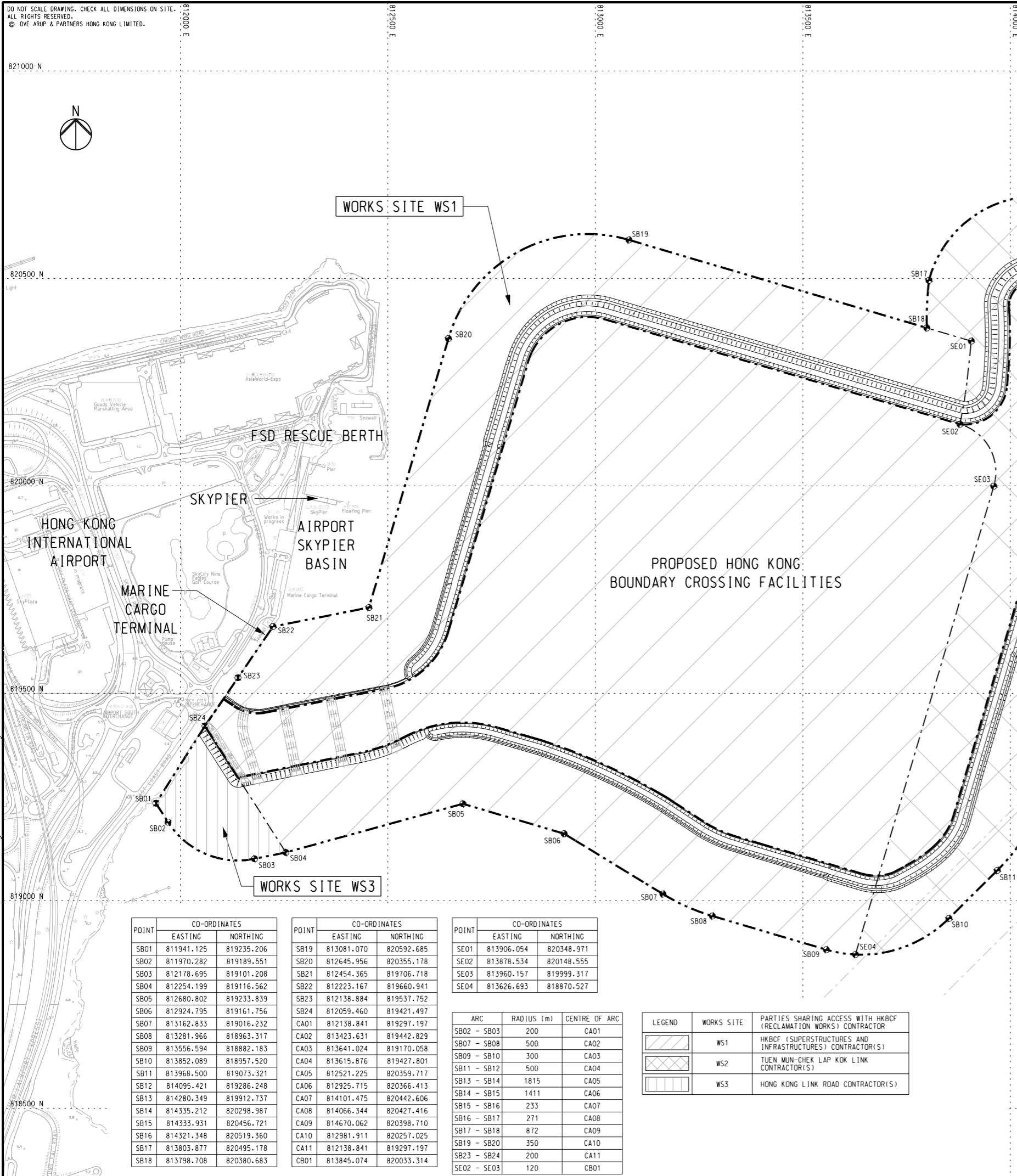
- ALL COORDINATES ARE RELATED TO HONG KONG 1980 GRID.
- ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM (mPD).
- THE SITE BOUNDARY IS BASED ON :
 - DRG NO. 15M1711a "FORESHORE AND SEABED (RECLAMATIONS) ORDINANCE (CHAPTER 127) FOR PWP ITEM NO. 834TH HONG KONG - ZHUHAI - MACAO BRIDGE HONG KONG BOUNDARY CROSSING FACILITIES"
 - DRG NOS. 25308/GZ/100 TO 103 "PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)" FOR PWP ITEM NO. 834TH HONG KONG - ZHUHAI - MACAO BRIDGE HONG KONG BOUNDARY CROSSING FACILITIES"
 - DRG NOS. 60044963/GAZ/1000, 1011 TO 1015 "PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)" FOR PWP ITEM NO. 825TH (PART) TUEN MUN CHEK LAP KOK LINK"
 - PLAN NO. 24037/GZ/019 "PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)" FOR PWP ITEM NO. 844TH HONG KONG ZHUHAI MACAO BRIDGE HONG KONG LINK ROAD.
- THE POSITION OF TUNG CHUNG NAVIGATION CHANNEL IS BASED ON HONG KONG ELECTRONIC NAVIGATIONAL CHART (ENC) ISSUED BY HYDROGRAPHIC OFFICE OF THE MARINE DEPARTMENT, HKSAR.
- THE CONTRACTOR SHALL ALLOW OTHERS TO USE PART(S) OF THE AIRPORT SKYPIER BASIN WITHIN THE SITE BOUNDARY FREELY AND AT CERTAIN LOCATIONS AT WHICH CROSSING VESSEL MOVEMENTS ARE NECESSARY TO ACCESS ANY PARTS OF SKYPIER BASIN.
- FOR THE DETAILED REQUIREMENTS OF MARINE ACCESS AT THE AIRPORT SKYPIER BASIN, REFER TO SECTION 21 IN THE SPECIFICATIONS.



KEY PLAN

LEGEND

- SITE BOUNDARY
- SETTING OUT LINE (SOL)
- BOUNDARY WITHIN SITE



Rev	Description	By	Date
-	FOR CONSTRUCTION	TL	11/11

Consultant

ARUP 奧雅納工程顧問 •
Ove Arup & Partners Hong Kong Limited

Supported By :

- Ecosystems Ltd. ○
- EDA Marine Ltd. ○
- Geotechnical Consulting Group (Asia) Ltd. ○
- Hong Kong Cetacean Research Project ○
- IntelBuild Technyx Asia Limited ○
- Tony Gee and Partners LLP ○

Contract No. and Title:
Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title
SITE BOUNDARY
SETTING OUT PLAN

Drawing no. 211036/SL/1004		Rev. -	
Drawn RL	Date 05/10	Checked KKY	Approved DML
Scale 1:5000 @A1 1:10000 @A3		Status	WORKING



POINT	EASTING	NORTHING
SB01	811941.125	819235.206
SB02	811970.282	819189.551
SB03	812178.695	819101.208
SB04	812254.199	819116.562
SB05	812680.802	819233.839
SB06	812924.795	819161.756
SB07	813162.833	819016.232
SB08	813281.966	818963.317
SB09	813556.594	818882.183
SB10	813852.089	818957.520
SB11	813968.500	819073.321
SB12	814095.421	819286.248
SB13	814280.349	819912.737
SB14	814335.212	820298.987
SB15	814333.931	820456.721
SB16	814321.348	820519.360
SB17	813803.877	820495.178
SB18	813798.708	820380.683

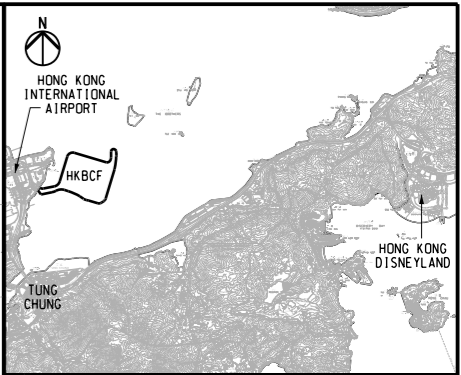
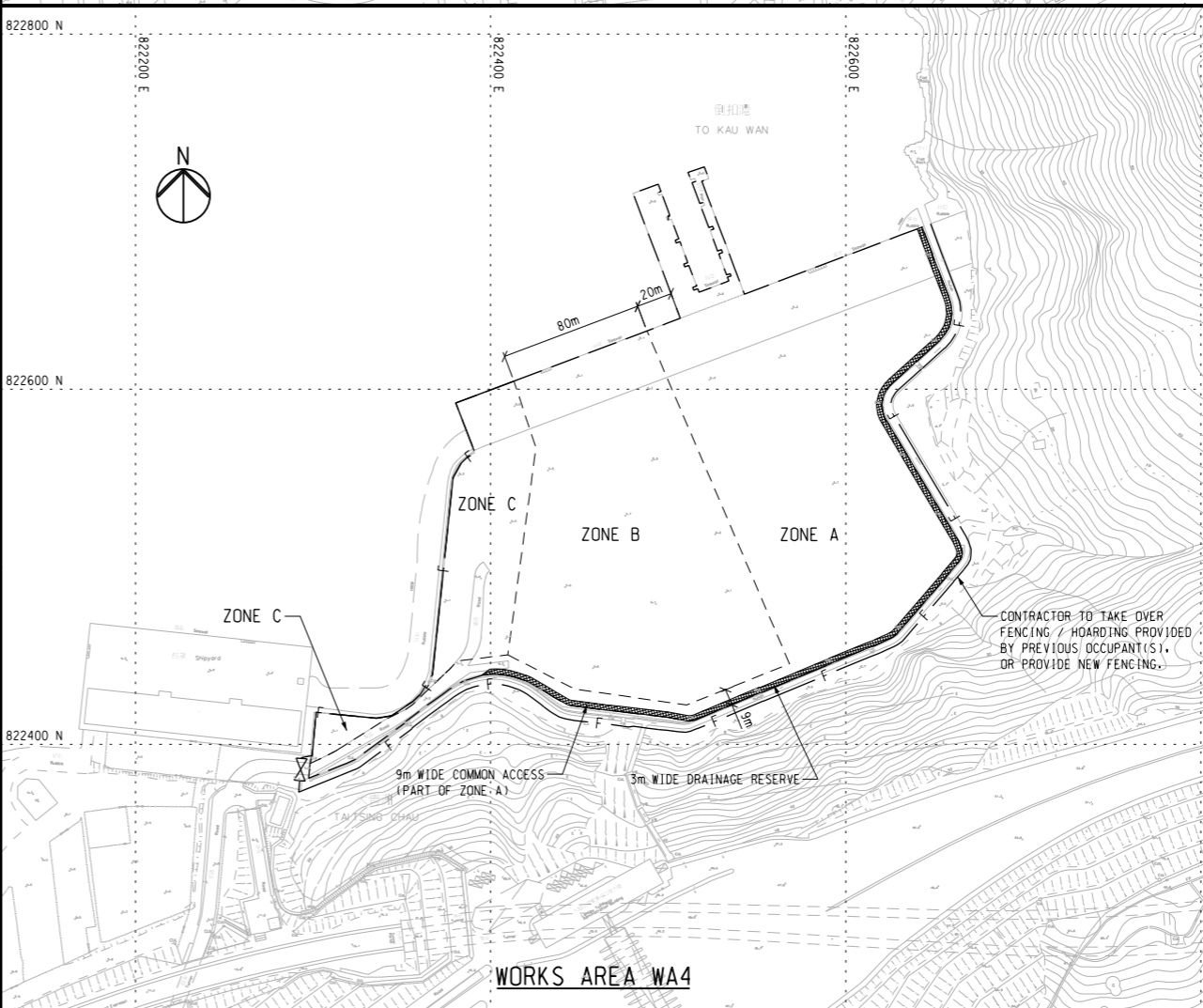
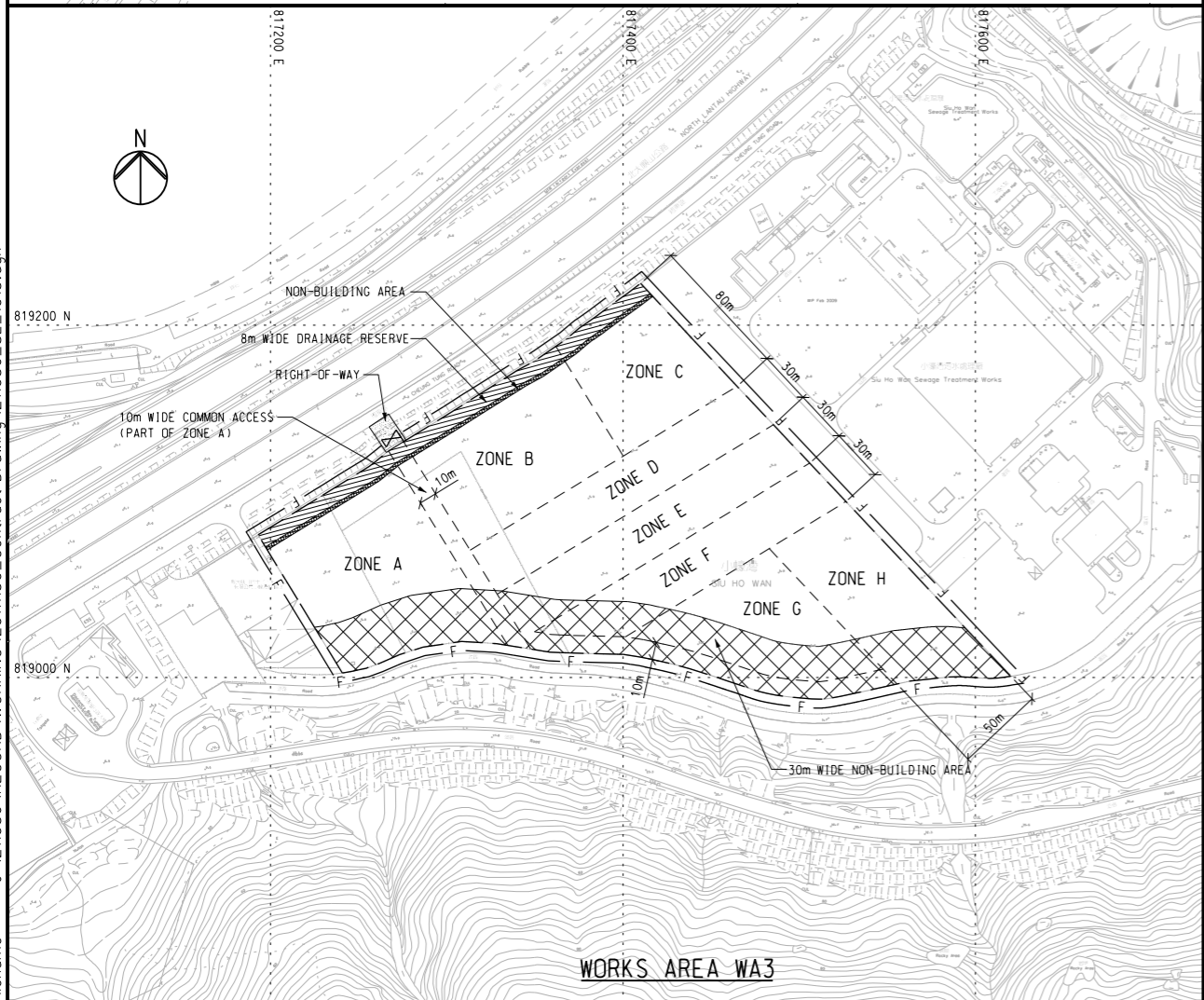
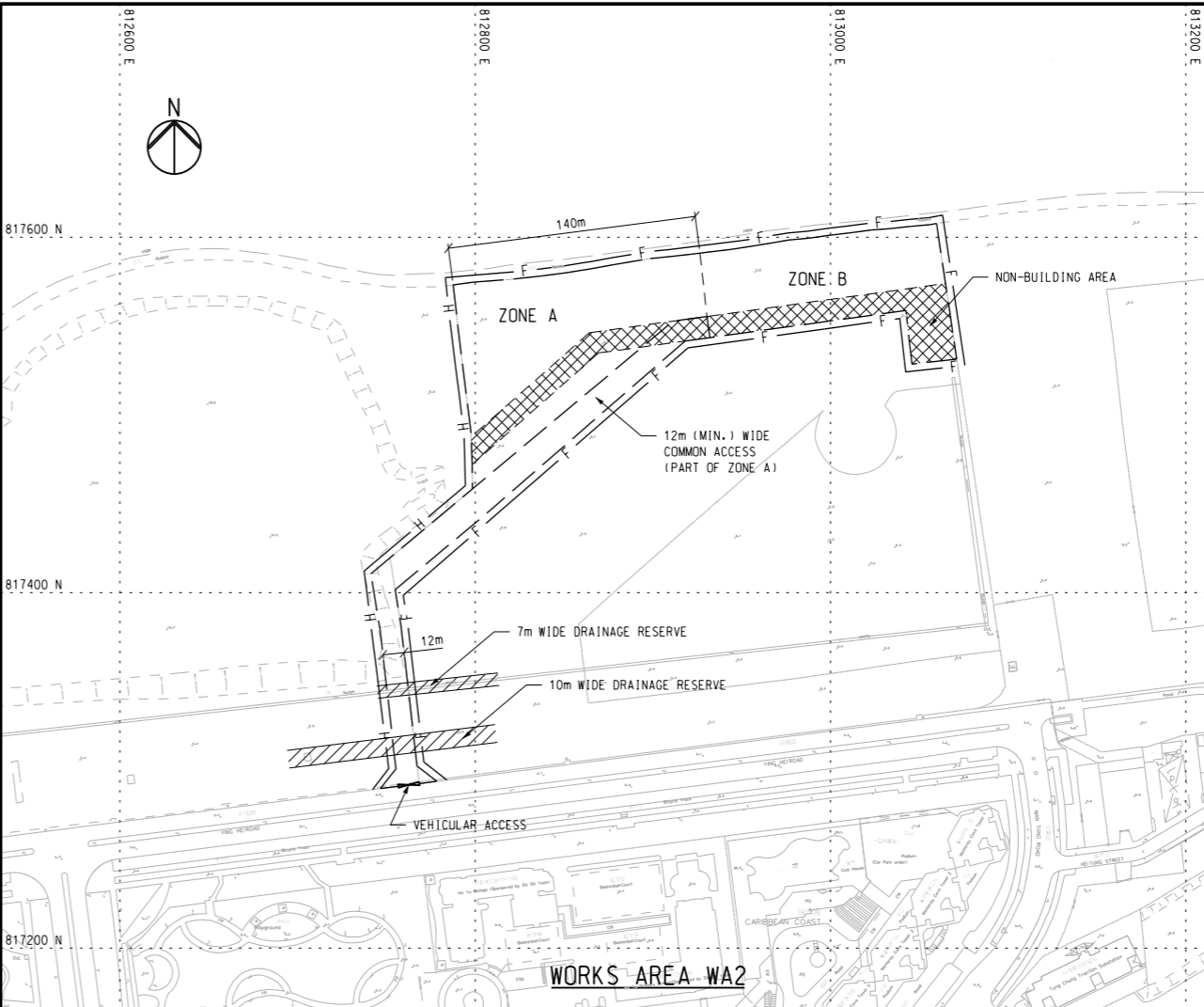
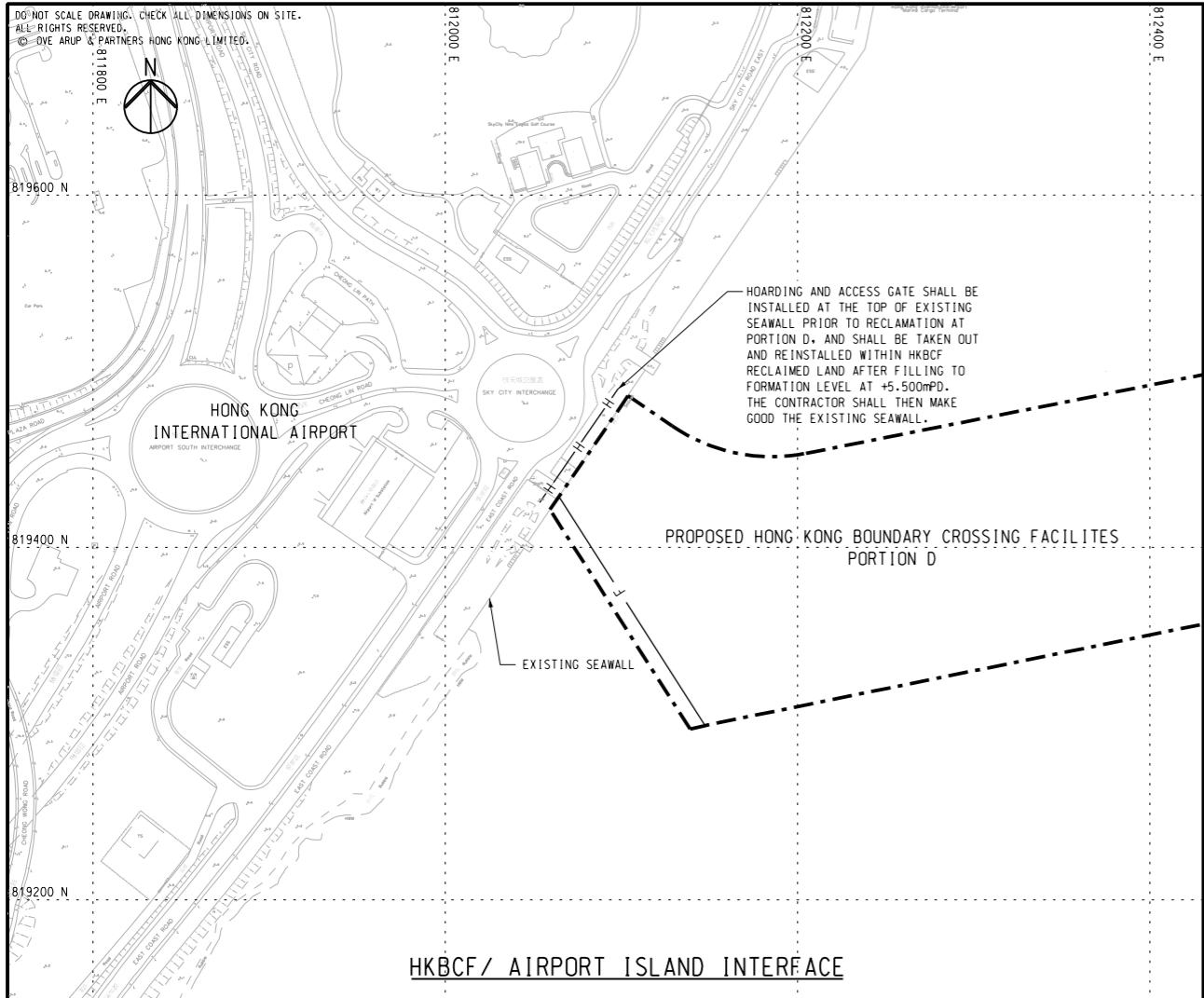
POINT	EASTING	NORTHING
SB19	813081.070	820592.685
SB20	812645.956	820355.178
SB21	812454.365	819706.718
SB22	812223.167	819660.941
SB23	812138.884	819537.752
SB24	812059.460	819421.497
CA01	812138.841	819297.197
CA02	813423.631	819442.829
CA03	813641.024	819170.058
CA04	813615.876	819427.801
CA05	812521.225	820359.717
CA06	812925.715	820366.413
CA07	814101.475	820442.606
CA08	814066.344	820427.416
CA09	814670.062	820398.710
CA10	812981.911	820257.025
CA11	812138.841	819297.197
CB01	813845.074	820033.314

POINT	EASTING	NORTHING
SE01	813906.054	820348.971
SE02	813878.534	820148.555
SE03	813960.157	819999.317
SE04	813626.693	818870.527

ARC	RADIUS (m)	CENTRE OF ARC
SB02 - SB03	200	CA01
SB07 - SB08	500	CA02
SB09 - SB10	300	CA03
SB11 - SB12	500	CA04
SB13 - SB14	1815	CA05
SB14 - SB15	1411	CA06
SB15 - SB16	233	CA07
SB16 - SB17	271	CA08
SB17 - SB18	872	CA09
SB19 - SB20	350	CA10
SB23 - SB24	200	CA11
SE02 - SE03	120	CB01

LEGEND	WORKS SITE	PARTIES SHARING ACCESS WITH HKBCF (RECLAMATION WORKS) CONTRACTOR
[Hatched Pattern]	WS1	HKBCF (SUPERSTRUCTURES AND INFRASTRUCTURES) CONTRACTOR(S)
[Cross-hatched Pattern]	WS2	TUEN MUN-CHEK LAP KOK LINK CONTRACTOR(S)
[Vertical Line Pattern]	WS3	HONG KONG LINK ROAD CONTRACTOR(S)

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KEY PLAN

- NOTES**
1. ALL COORDINATES ARE RELATED TO HONG KONG 1980 GRID.
 2. FOR DETAILS OF HOARDING REFER TO HIGHWAYS DEPARTMENT STANDARD DRG NOS. H6110 AND H6111.
 3. FOR DETAILS OF CHAIN LINK FENCE REFER TO HIGHWAYS DEPARTMENT STANDARD DRG NOS. H6121 AND H6122.
 4. FOR DETAILS OF GATE REFER TO HIGHWAYS DEPARTMENT STANDARD DRG NO. H6121.
 5. THE ALIGNMENT AND THE EXTENT OF HOARDING AND CHAIN LINK FENCE SHOWN ARE INDICATIVE AND SHALL BE CONFIRMED BY THE ENGINEER ON SITE.
 6. THE LOCATION AND WIDTH OF ENTRANCE GATE SHOWN ARE INDICATIVE AND SHALL BE CONFIRMED BY THE ENGINEER ON SITE.
 7. FOR HOARDING AND FENCE AT FILL BANK AT TSEUNG KWAN O AREA 137 REFER TO DRG NO. 211036/SL/1015.

LEGEND

---	SETTING OUT LINE (SOL)
---	WORKS AREA BOUNDARY
F	CHAIN LINK FENCE
H	HOARDING
X	GATE

Rev	Description	By	Date
-	FOR CONSTRUCTION	TL	11/11

Consultant

ARUP 奧雅納工程顧問

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- Tony Gee and Partners LLP ○

Contract No. and Title:
Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title
WORKS AREA LAYOUT
AND HOARDING PLAN
(SHEET 1 OF 3)

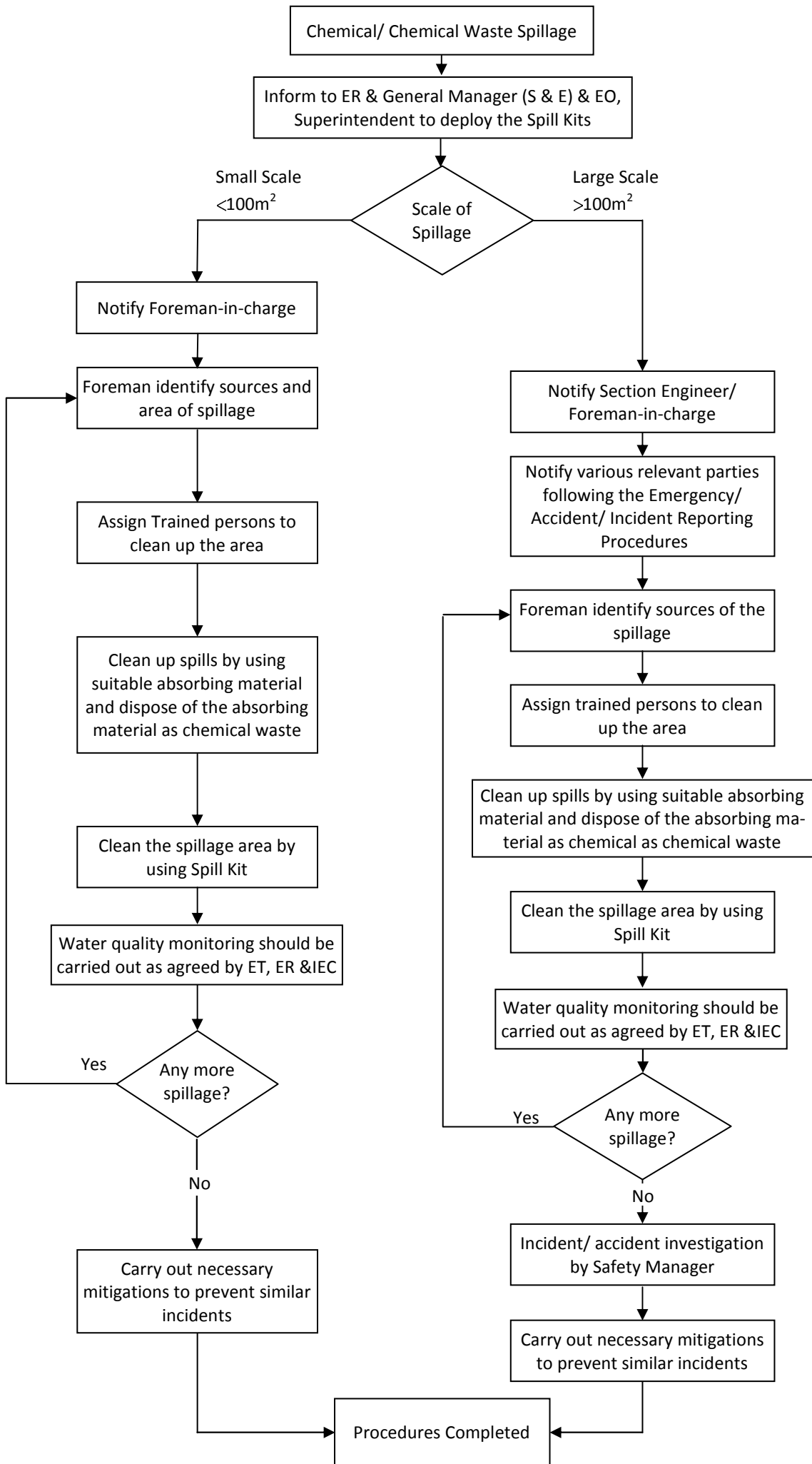
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Drawn	Date	Checked	Approved		
RL	06/10	KKY	DML		
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Appendix B

Flow Diagram of Handling the Spillage on Site



Appendix C

Information of Spill Kits

SPC Environmental Spill Kits



[Home](#) ▶ [Safety Products](#) ▶ [Spill Control / Containment](#) ▶ [Absorbent Spill Kits](#) ▶ [Overpack Spill Kits](#) ▶ [Brady Corp. - SPC Brand](#)



55-Gallon Drum Spill Kit

Be prepared to respond quickly to spills with the 55-Gallon Drum Spill Kit.

[Features](#)

[Reviews](#)

[Related Items](#)

[Shipping Info](#)

- Kit is stored in a reusable 55-gallon drum with a lever-locked lid.
- Kit includes fifty 15 x 19" pads, four 3" x 12" socks, eight 18 x 18" pillows, goggles, nitrile gloves, five disposal bags and an emergency response handbook.



95-Gallon Overpack Spill Kit

For fast response to a larger spill, choose the 95 Gallon Overpack Spill Kit.

[Features](#)

[Reviews](#)

[Related Items](#)

[Shipping Info](#)

- Tough, secure and highly visible, the kit absorbs up to 82 gallons.
- Top quality screw-top overpack drum meets UN and DOT specifications.
- For responding to larger spills.
- Available in Oil Only, Allwik (Maintenance Only) and Hazwik (Chemical Only) versions.
- [Click here for Kit Contents](#)