Proposed Gazetting under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127)

1. Hong Kong – Americas (HKA) Submarine Cable from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

2. South East Asia – Japan 2 Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

3. Bay to Bay Express Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

Purpose

1. This paper briefs Members and seeks their views on the proposed installation of three new optical fibre submarine telecommunications cable systems before gazettal under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127) (the "Ordinance").

Background

2. Please refer to the introduction of the proposed submarine cable systems as follows:

Proposed Submarine Cable Systems	Introduction
1. Hong Kong – Americas (HKA) Submarine Cable	The HKA Consortium decided to build a submarine telecommunication cable system, which will be approximately 13,000 km in length, connecting Hong Kong and the United States. The cable will connect to Chung Hom Kok within the HKSAR. China Telecom Global Limited ("CTG") is providing the associated cable landing services for the section of HKA in HKSAR for the HKA Consortium. The total length of the HKA Submarine Cable within HKSAR waters is approximately 34.6 km, and the cable will be laid at a target maximum burial depth of approximately 5 m below the existing seabed. The HKA Submarine Cable will run from Chung Hom Kok southward rounding Cape D'Aguilar, then eastward, north of Beaufort Island and Sung Kong, to the eastern boundary of HKSAR, where it will enter the South China Sea. The total area affected is approximately 0.81 hectares, including the area of foreshore and sea-bed from Chung Hom Kok to offshore southeast waters.
2. South East Asia – Japan 2 Cable System – Hong Kong Segment	The proposed SJC2-HK is a high capacity optical fibre cable connecting Hong Kong as one of the cable landings of the SJC2. The SJC2 involves the construction of a submarine cable landing across eight countries and regions, connecting Singapore, Thailand, Vietnam, Hong Kong, Taiwan, Mainland China, Korea and Japan. China Mobile

	International Limited ("CMI") is the cable landing party of SJC2-HK Submarine Cable in Hong Kong. The cable system is mainly connecting Hong Kong, Japan and Southeast Asia countries and districts. The cable system within Hong Kong waters is about 37.5 kilometres in length and 47 millimetres in diameter where an area of approximately 1.87 hectares in the existing foreshore and sea-bed of the Hong Kong waters would be affected by the project
3. Bay to Bay Express Cable System	The proposed Bay to Bay Express Cable System ("BtoBE") is a high performance submarine cable connecting Hong Kong, the United States, Malaysia and Singapore. The BtoBE with multiple pairs of optical fibre enables high capacity transmission of data across the Pacific Ocean with round trip latency of less than 130 milliseconds. It will further enhance and contribute to the much-needed expansion of communications networks among Hong Kong, the United States, Malaysia and Singapore. China Mobile International Limited ("CMI") is the cable landing party in Hong Kong. The cable system within Hong Kong waters is about 36.3 kilometres in length and 38 millimetres in diameter where an area of approximately 1.81 hectares in the existing foreshore and sea-bed of the Hong Kong waters would be affected by the project.

3. Lands Department is now processing the gazettal and the application for the Licence for laying the proposed optical fibre submarine telecommunications cable systems. No adverse comment on the draft gazettal documents and the proposed Licence has been received from the relevant government departments during departmental circulation. The submarine cable systems will be gazetted for public inspection in accordance with the Ordinance. Under Section 6 of the Ordinance, any person who considers that he has an interest, right or easement in or over the foreshore and sea-bed may, by notice in writing delivered to the Director of Lands before the expiration of such time as shall be specified in the notice, object to the proposed cable installation and maintenance works.

4. For details of the proposed submarine cable systems, please refer to the attached Information Sheet prepared by consultants of CTG and CMI.

Advice Sought

5. If Members wish to provide comments to the proposed submarine cable systems, please fill in and return the attached reply slip by email to eshks@landsd.gov.hk or by fax to 2833 1945 on or before 28.2.2020.

District Lands Office/Hong Kong West and South
Lands Department
February 2020

Attachment 1

Proposed Gazetting

Hong Kong – Americas (HKA) Submarine Cable from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

1. Purpose

China Telecom Global Limited ("CTG") has applied to the Government for the grant of the licence for the installation and maintenance of Hong Kong – Americas (HKA) Submarine Cable. Lands Department is responsible for arranging the gazetting under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap 127) ("the Ordinance"). No adverse comments have been received during departmental circulation.

2. Background of the HKA Submarine Cable

In order to meet the tremendous telecommunication services requirement between Asia and North America, the HKA Consortium, comprised of TATA Communications, Telstra, RAM Telecom International (RTI) Express, Edge Network Services Limited, China Telecom Global Limited (CTG), and China United Network Communications Group Company Limited, proposes to install a cable of approximately 13,000 km in length connecting Hong Kong and the United States. The total length of the proposed cable in HKSAR waters is approximately 34.6 km and will run from Chung Hom Kok southward rounding Cape D'Aguilar, then eastward, north of Beaufort Island and Sung Kong, to the eastern boundary of HKSAR, where it will enter the South China Sea. CTG is providing the associated cable landing services for the section of HKA in HKSAR for the HKA Consortium.

The installation and maintenance of HKA in HKSAR waters is supported by the Office of the Communications Authority. It will provide Hong Kong with international telecommunications services to deliver a massive boost to bandwidth between the two continents, while reinforcing Hong Kong as a key communication hub in the Asia-Pacific region. .

3. Environmental Impact

CTG has assessed the Project's potential impacts on water quality, disruption of water movement or bottom sediment, marine ecology, fisheries, noise, cultural heritage, waste

management, and others including terrestrial ecology, landscape and visual, etc., in a Project Profile (PP-573/2018). Preparation took into account comments received from relevant Government Departments, and following the statuary Environmental Impact Assessment Ordinance ("EIAO") public inspection period, the Project Profile was approved by the Environmental Protection Department (EPD) on 2 January 2019, to apply directly for an Environmental Permit under the EIAO. Application for the Environmental Permit was made on 28 January 2019 and the Environmental Permit for the Project (No. EP-567/2019) was issued on 20 February 2019 for the construction and operation of the Project.

The following environmental monitoring and audit programmes are required for the Project under EP-567/2019:

(a) a water quality monitoring programme, to verify that the Project works will not result in any unacceptable impacts on water quality, and consequently water sensitive receivers, particularly to marine ecology and fisheries, and to rectify any anomalies considered due to the Project;

(b) a coral monitoring programme (pre-installation survey and post-project survey near the landing site), to ensure no adverse impacts on corals as a result of the Project;

(c) a marine mammal observation programme, to implement a marine mammal exclusion zone and ensure no adverse impacts on marine mammals as a result of the Project; and

(d) site inspections at the landing point, to ensure that appropriate environmental protection and precautionary measures outlined in the Project Profile are properly implemented.

Additionally, the Project shall strictly comply with the precautionary & mitigation measures laid out in the EP and further detailed in the Project Profile, including:

(a) no marine works carried out within the area of Stanley Bay from 1 June to 31 August inclusive, to minimize environmental nuisance to the users of the Stanley Bay.

(b) appointment of a Liaison Officer to ensure effective coordination and communication with the relevant parties, prior to commencement of cable installation works, to minimize environmental nuisance to the users of the Stanley Bay as noted above.

(c) cable installation method from the Beach Manhole at Sha Shek Tan to Low Water Mark (LWM) of the beach shall be trench excavation by small tracked diggers or hand tools, to minimize environmental impact from cable installation works.

(d) cable installation method from LWM of the Sha Shek Tan to about 260m seaward from the LWM shall be cable burial by divers using jet probes to minimize environmental impact from cable installation works.;

(e) cable installation method from about 260m from the LWM of the Sha Shek Tan to boundary of Hong Kong waters shall be cable burial by jet ploughing / jetting technique; and

(f) the maximum speed of the cable installation barge shall be limited to 1 km per hour during installation of submarine cable, to minimize the water quality impact and the risk of collision with marine mammals, in particular finless porpoise.

Should cable maintenance / repairing works be required during operation stage of the project, the respective measures stipulated in the EP (No. EP-567/2019) and as described in the Project Profile (PP-573/2018) will be implemented. Further details of precautionary and mitigation measures detailed in the Project Profile (PP-573/2018) are detailed in **Annex 1**.

4. Installation and Maintenance of Cable and Gazetting under the Ordinance

Lands Department has been processing CTG's application for the licence for the HKA Submarine Cable and is responsible for arranging the gazettal of installation and maintenance works of the HKA Submarine Cable. The information of the HKA Submarine Cable has been circulated among relevant Government departments and no adverse comments have been received. Departmental comments have been considered and have been addressed in the design of the HKA Submarine Cable and future works as appropriate. Lands Department considered that before approval could be given on the grant of the licence, CTG has to obtain the authorization of the HKA Submarine Cable installation and maintenance from the Chief Executive in Council under the Ordinance.

5. <u>Proposed Submarine Cable</u>

a) Dimension of the Proposed Submarine Cable

Overall diameter of the proposed submarine optical fibre cable is about 40 mm including protection and its total length is about 34.6 km in Hong Kong waters. The cable is buried in a trench with a width of about 2.0 m for approximately the first 500m from the Beach Manhole (BMH), seaward, and thereafter in a trench with a width of about 0.21 metres.

b) Method of Installation & Maintenance

The proposed HKA Submarine Cable – Hong Kong segment cable will run from Chung Hom Kok southward approaching the East Lamma Channel, then round Cape D'Aguilar, and further eastward, north of Beaufort Islands and Sung Kong, to the eastern boundary of HKSAR, to the eastern boundary of HKSAR waters, where it will enter the South China Sea. The method of installation will vary, primarily including installation of the cable by jetting technique in deeper waters, with other methods at the BMH, at the sandy beach foreshore area, and in the shallow inshore area. (Note <u>for information/indicative purposes only:</u> In order to complete the link on land between the BMH and the Cable Landing Station (CLS), the land cable will be installed in an existing terrestrial conduit. The method of installation will be by hand pulling from the BMH or CLS.)

From the BMH in the foreshore installation area of Sha Shek Tan, Chung Hom Kok, works will entail provision of protective ducts, typically using hand held drilling and excavation equipment, to drill holes from inside the BMH near the top, through the BMH wall to the edge of the concrete ramp; establish a groove across the existing concrete boat ramp; and establish a concrete footing with duct fittings at the supporting wall. Boulders at the seawall will be temporarily moved to allow construction of the concrete footing, and will be reinstated following cable installation through the duct, with the ramp groove also restored with concrete to its original state. On the sandy beach foreshore in between the High and Low Water Mark, excavation will be carried out using small tracked diggers and any equipment that cannot be carried in by hand,

including small tracked diggers, will be brought in by sea. A backhoe machine and hand tools will be used to form a trench of approximate dimension 2.0 m (width) x 2.0 m (target depth) along the sandy beach. After the cable has been laid, the beach will be reinstated to the original condition.

From the LWM the target burial depth of the cable will transition from 2 m to reach a target burial of 5 m depth at the location near the coastline where the installation barge can be set up (approximately 500 m seaward). Cable burial for this inshore segment (with articulated pipes installed onto the cable up to approximately 30 m from the landing point, to offer additional protection to the cable) will be undertaken using a diver operated hand-jet burial tool and an area approximately 1.0 m either side of the cable route will be temporarily affected.

Beyond this inshore segment, the target burial depth is 5 m below the seabed/ mudline out to the HKSAR boundary and the marine cable burial works will be conducted using jetting technique. This method uses "Injector Burial Tool" or "Sledge Tool" which are designed to simultaneously lay and bury the cable. Using these methods the injector fluidises a trench using high pressure water jets and the cable is immediately laid within the trench. The expected maximum width of the seabed fluidised by the injector is approximately 0.105 m either side of the centre line of the proposed cable route (i.e. 0.21 m width). The cable itself is expected to occupy only no more than 40 mm width for the majority of the marine route and 135 mm width along the marine route where there is articulated pipe protection i.e. within approximately 30 m from the landing point. It should be noted that the seabed can be expected to naturally reinstate to before-work level and condition shortly after completion of the works.

Crossing existing telecommunications cables is expected to involve shallower burial or surface lay, subject to the as-built burial depth of the existing cables and taking due care to

ensure the integrity of all cables.

Where the cable crosses the Hong Kong Electric Gas Pipeline, close to the boundary of HKSAR waters, owners will mutually agree the crossing procedure. Cable owners wish to simultaneous lay and bury the cable as deep and as close to the pipeline as possible, to maximize cable protection, and this will depend on pipeline burial depth as found during the Route Survey. It is foreseen that it will cross the pipeline approximately 1.5 m above the top of the pipeline and have shallower burial/be surface laid for a distance of around 100-150 m centred on the crossing point.

Following installation the cable is expected to be operational for at least 25 years. During operation there may be a potential requirement for maintenance work such as cable repair at particular fault location due to unexpected damage. These works will be similar in nature to cable installation works described above but not along the full alignment, i.e. of smaller scale, with the potential to use smaller equipment such as Remotely Operated Vehicles (ROVs) equipped with injector tool and divers with hand held tools.

c) Time required for Installation and Maintenance

The HKA Submarine Cable is provisionally scheduled to be landed and installed at Chung Hom Kok commencing in the second quarter of 2020 and is not expected to take more than 30 working days to complete.

The cable is expected to be operational for a minimum of 25 years. Duration of any cable repair work is anticipated to be of shorter duration than cable installation during construction.

Please see **Annex 2** for the alignment of the proposed HKA Submarine Cable.

6. Conclusion

Various technical aspects regarding the design and installation of the HKA Submarine Cable have been thoroughly studied, and the engineering, environmental and public safety aspects have also been examined to the satisfaction of relevant Government

departments.

Annexes

1. Precautionary & Mitigation Measures and Conditions for HKA works at Chung Hom Kok, Sha Shek Tan
2. Plan showing the Proposed Route of Hong Kong – Americas (HKA) Submarine Cable

Environmental Resources Management Ltd.

Environmental Consultant on behalf of China Telecom Global Limited

February 2020

Annex 1

Additional Precautionary & Mitigation Measures and Conditions for HKA Submarine Cable works at Chung Hom Kok, Sha Shek Tan

Additional precautionary and mitigation measures detailed in the Project Profiles include:

1. In order to minimise the risk of disturbance to the existing utilities, the Contractor should confirm the location of all the utilities within the works area with the relevant departments, for example, but not limited to, Drainage Services Department, Architectural Services Department, Water Services Department and other departments/companies.

2. The Project proponent will ensure there will be no sand lost during the construction/ repair works here. The beach will be photographed prior to the commencement of the works (and after the restoration of the site) in order to assure the beach will be reinstated to the pre-works conditions.

3. Legible notices will be put on site to show the commencement and completion dates of the land and shore-end works, daily working hours and emergency contact person and number.

4. On shore, the work area, including open trench area, will be clearly demarcated using warning tape/ markers and marshals, and fenced off with barriers to ensure the public are kept clear.

5. Trenching works will take place during non-restricted hours, i.e. 0700 to 1900 hours on any day not being a Sunday or public holiday. If works during restricted hours are later found to be necessary, a Construction Noise Permit (CNP) will be applied for displayed on site.

6. Where feasible, silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.

7. The machinery employed will be inspected prior to work to ensure the waters and beach will not be polluted with oil/grease/fuel. No machinery maintenance will be carried out onsite. Oil absorbent materials will be readily placed on site and will be applied immediately should any oil leakage incidents occur, to ensure nearby water quality would not be will not be affected.

8. All construction waste and drainage will be handled and disposed in accordance with the *Waste Disposal Ordinance and Practice Note for Professional Persons*, *Construction Site Drainage* (ProPECC PN1/94) and in particular the following measures adhered to:

   - stockpiles of materials will be covered with tarpaulin or similar fabric to minimise runoff during the rainy season;

   - care will be taken during the cable landing and construction to avoid any spillage of materials to the adjacent marine waters and to ensure that spoil materials are not discharged into adjacent waters; and

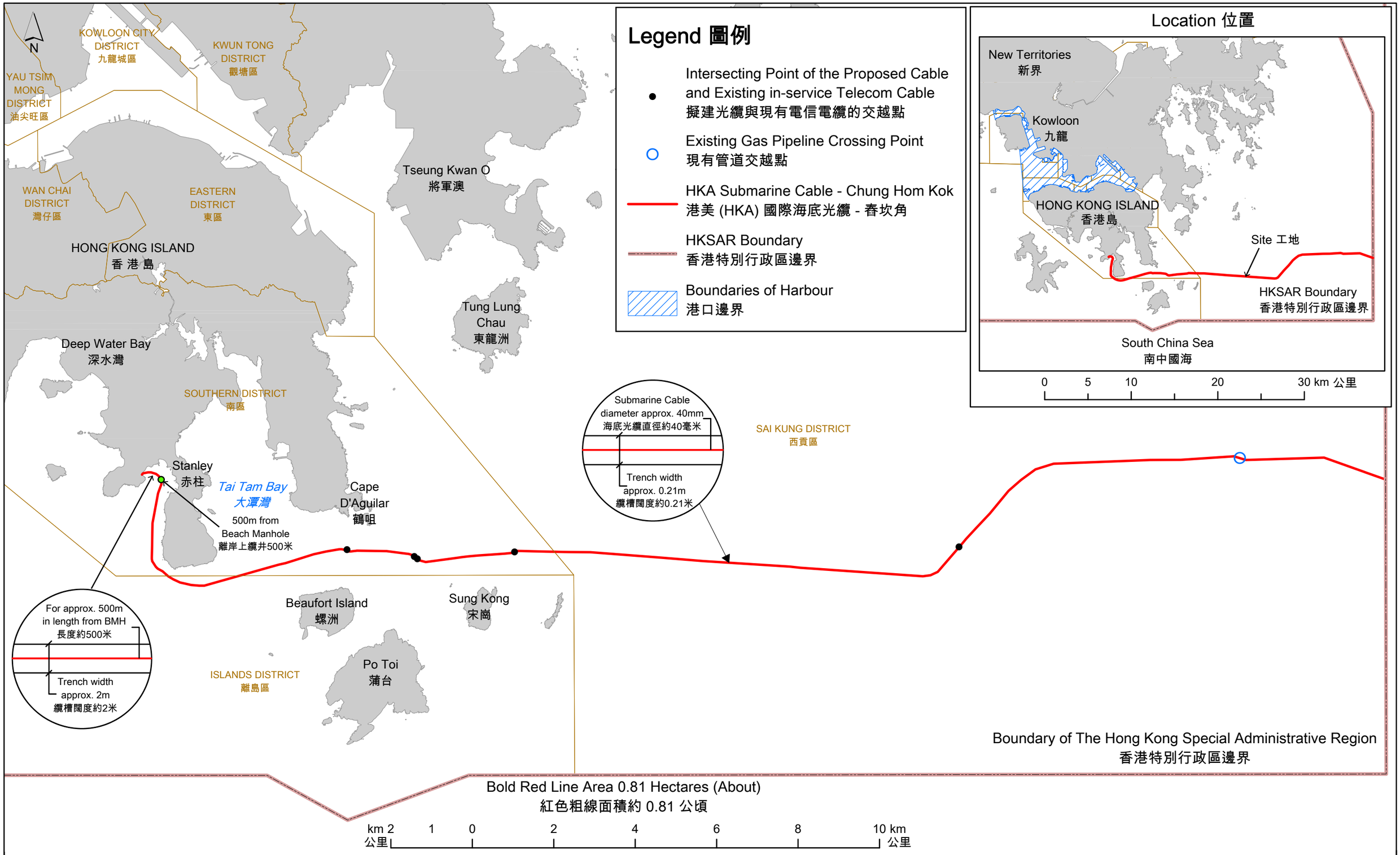
   - best Management Practices (BMPs) will be applied to avoid and minimise contaminated runoff from work sites, marine plants and vessels, including wastewater being properly treated and discharged to storm drain.

9. If a specific vessel/barge is used for the transport of debris recovered from the seabed during route clearance/ pre-lay grapnel run in order to prevent leakage of material during loading and transport to the disposal site, it shall:

   - be fitted with tight bottom seals;

   - be filled to a level which ensures that material does not spill over during loading and transport; and

   - maintain adequate freeboard to ensure that the decks are not washed by wave action.



Annex 2
附件 2

Proposed Route of HKA Submarine Cable System
擬建港美 (HKA) 國際海底光纜系統路線

File: T:\GIS\CONTRACT\0444245\mxd\0444245_HKA_Cable_Route_intersection_Chinese.mxd
Date: 24/12/2019

Environmental Resources Management

ERM

Attachment 2

Information Sheet

Proposed Gazetting under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127)

South East Asia – Japan 2 Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

1. Application

China Mobile International Limited ("CMI") has applied to the Government for the grant of Licence for the installation of the proposed South East Asia – Japan 2 Cable System – Hong Kong Segment ("SJC2-HK"). Lands Department is responsible for processing the Licence and arranging the gazettal under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap.127) ("the Ordinance"). No adverse comments have been received from the relevant government departments during departmental circulation and application for permission to apply directly for an Environmental Permit for the project has been submitted to EPD on 20 December 2019.

2. Purposes

The South-East Asia - Japan (SJC) Cable System is an optical fibre submarine telecommunications cable connecting Japan, China, Hong Kong, the Philippines, Brunei, Thailand, Singapore and Indonesia, which was completed in 2013. Construction of the South-East Asia - Japan 2 (SJC2) Cable System is now proposed and this Project comprises the Hong Kong Segment of SJC2.

The SJC2-HK Cable will provide seamless connectivity, lower latency and network diversity to enterprises and customers within North and Southeast Asia. Installation is scheduled to be completed in the fourth quarter of 2020 and the cable system is planned to be put in service by end of 2020.

Buried below the seabed, the SJC2-HK Cable enters the eastern waters of Hong Kong, follows the established "east-west cable corridor (south)" and lands at an existing Beach Manhole at Sha Shek Tan on the Chung Hom Kok peninsula, which is at the southern side of Hong Kong Island. This is the same landing location of the existing SJC Cable and another submarine cable system.

3. Review by Government Departments

An environmental assessment was undertaken and CMI has submitted a Project Profile to Environmental Protection Department (EPD) seeking permission to apply directly for an Environmental Permit under the Environmental Impact Assessment Ordinance on 20 December 2019.

Other government departments including Drainage Services Department, Marine Department (MD), Planning Department, Civil Engineering and Development Department, Highways Department, Transport Department, Water Supplies Department and the Office of the Communications Authority have reviewed the project details and no adverse comments on the project have been received.

A Marine Traffic Impact Assessment was carried out by CMI and has been submitted to MD for approval prior to project construction.

4. Licence and Gazettal under the Ordinance

Lands Department has been processing the application for the licence for laying the proposed SJC2-HK. The proposed licence has been circulated among relevant Government departments and no adverse comments have been received. Departmental comments have been considered and have been addressed in the design and future cable laying works as appropriate.

5. Details of the Proposed South East Asia – Japan 2 Cable System – Hong Kong Segment

a) Dimensions of the Proposed Submarine Cable

The overall diameter of the proposed submarine cable is about 47 millimetres. Its total length is about 37.5 kilometres.

b) Method of Construction

The installation of SJC2-HK from the sea-bed offshore from Sha Shek Tan at Chung Hom Kok to the eastern boundary of Hong Kong Waters, a cable-laying barge will be employed to simultaneously lay and bury the submarine cable at a depth of about 5 metres below the sea-bed with a narrow trench of about 0.5 metres in width. At the cable section approaching the existing conduit and beach manhole, the cable will be installed by a diver and protected by articulated pipe.

At the crossing of the Hong Kong Electric Gas Pipeline in the southern waters which is buried around 3 meters below the seabed, the cable will be laid by either the burial tool or divers at a depth possible/agreed with the facility owner, over the top of the Gas Pipeline, for a section of approximately 200 metres to avoid any interference. Additional cable protection by URADUCT will be employed. At the crossings with existing or planned submarine cable along the route, the cable will be buried to 3m below seabed on top of the existing cables as far as possible, subject to the as-built depth of the existing cables. It is anticipated that the overall installation works will take about four months to complete.

c) Period of Construction

The cable installation is tentatively scheduled to start in the second quarter of 2020 and expected to be completed within four months.

6. Conclusion

Various technical aspects regarding the location of cable laying and landing point at Sha Shek Tan at Chung Hom Kok, as well as the design and construction of the Reclamation Scheme have been thoroughly studied, and the engineering, environmental and public safety aspects have also been examined to the satisfaction of respective Government departments.

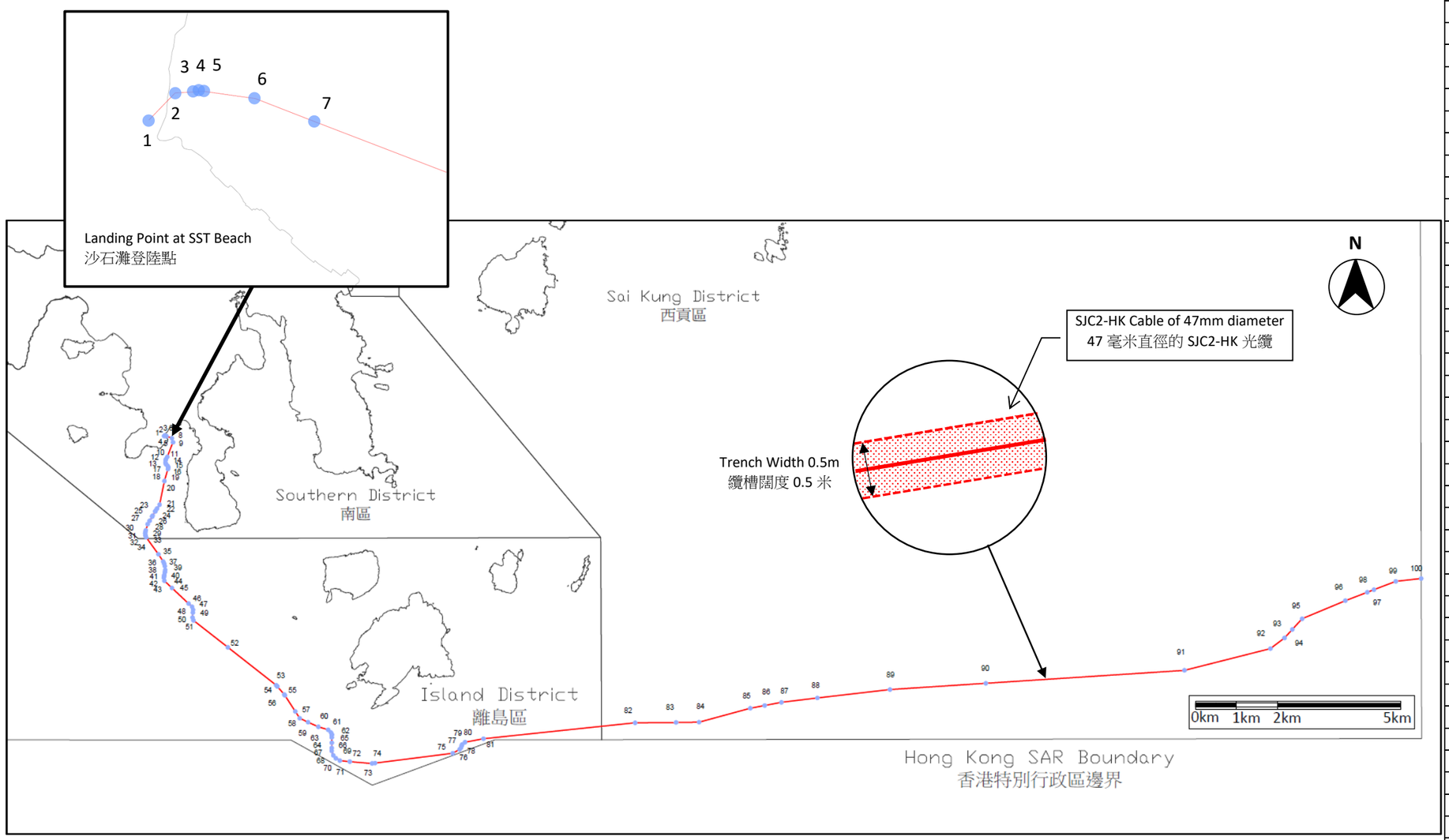
Annex

Figure 1 Layout Plan of the Proposed SJC2-HK

SMEC Asia Limited
Environmental and Permitting Consultant of CMI
February 2020

Proposed South East Asia – Japan 2 Cable System – Hong Kong Segment (SJC2-HK) Layout Plan
擬建東南亞 – 日本二號光纜系統 – 香港段 (SJC2-HK) 平面圖

Figure 1 圖一



Work Limit Control Point (WLCP)
光纜控制點

South East Asia – Japan 2 Cable System – Hong Kong Segment (SJC2-HK)
東南亞日本海底光纜網絡工程二 – 香港段 (SJC2-HK)

WLCP 控制點	Easting 東經	Northing 北緯	WLCP 控制點	Easting 東經	Northing 北緯
1	839287.866	808498.051	51	840000.021	804022.008
2	839296.456	808506.912	52	840835.780	803367.984
3	839303.330	808507.282	53	842010.534	802448.921
4	839304.876	808507.467	54	842036.503	802419.033
5	839305.736	808507.467	55	842209.691	802220.702
6	839322.920	808505.071	56	842220.528	802203.912
7	839340.965	808498.062	57	842475.286	801811.648
8	839476.216	808446.229	58	842583.832	801644.670
9	839502.700	808348.420	59	842785.532	801549.154
10	839363.920	807994.045	60	843035.551	801438.712
11	839331.452	807939.964	61	843274.553	801365.734
12	839320.288	807905.450	62	843342.148	801300.247
13	839318.407	807857.096	63	843362.284	801253.749
14	839326.491	807823.324	64	843362.634	801240.276
15	839340.929	807807.824	65	843361.973	801179.742
16	839374.104	807772.212	66	843362.720	801050.555
17	839385.452	807741.762	67	843360.886	800923.581
18	839384.937	807738.256	68	843360.575	800851.789
19	839379.274	807697.837	69	843397.931	800745.318
20	839293.920	807406.223	70	843460.718	800673.740
21	839176.306	806832.234	71	843558.400	800617.496
22	839115.828	806740.314	72	843801.176	800593.066
23	839079.575	806684.572	73	844342.091	800547.196
24	839068.407	806666.484	74	844413.094	800556.092
25	839008.273	806564.414	75	846302.971	800795.078
26	838995.903	806543.373	76	846468.478	800887.278
27	838935.939	806442.226	77	846503.351	800929.933
28	838886.284	806358.614	78	846519.311	800974.790
29	838841.967	806210.409	79	846530.294	801005.248
30	838827.710	806162.976	80	846601.432	801065.091
31	838825.308	806134.554	81	847050.958	801148.074
32	838827.376	806102.996	82	850736.826	801534.364
33	838834.599	806071.992	83	851731.373	801544.357
34	838848.698	806040.804	84	852289.935	801550.086
35	839149.203	805628.930	85	853535.811	801887.853
36	839264.565	805450.672	86	853885.758	801954.498
37	839288.466	805398.448	87	854292.593	802032.104
38	839304.118	805339.762	88	855166.651	802139.438
39	839314.449	805245.826	89	856931.939	802341.541
40	839306.036	805196.548	90	859261.810	802493.355
41	839292.815	805128.629	91	864090.563	802809.582
42	839286.290	805095.593	92	866180.299	803336.467
43	839279.593	805061.633	93	866523.257	803596.244
44	839292.499	804983.385	94	866711.946	803802.022
45	839476.276	804810.863	95	866950.374	804061.974
46	839882.009	804430.584	96	868000.788	804501.838
47	839965.737	804351.983	97	868534.086	804705.388
48	839990.162	804279.459	98	868696.391	804767.366
49	839985.366	804210.619	99	869226.923	804970.011
50	839977.315	804093.610	100	869843.671	805038.317

Attachment 3

Information Sheet

Proposed Gazetting under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127)

Bay to Bay Express Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

1. Application

China Mobile International Limited ("CMI") has applied to the Government for the grant of Licence for the installation of the proposed Bay to Bay Express Cable System – Hong Kong Segment ("BtoBE-HK"). Lands Department is responsible for processing the Licence and arranging the gazettal under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap.127) ("the Ordinance"). No adverse comments have been received from the relevant government departments during departmental circulation and application for permission to apply directly for an Environmental Permit for the project will be submitted to EPD in Mid-February 2020.

2. Purposes

The Bay to Bay Express (BtoBE) Cable System is a 38mm diameter optical fibre submarine telecommunications cable that will further enhance and contribute to the much-needed expansion of communications networks between Hong Kong, the United States, Malaysia and Singapore. With multiple pairs of optical fibres, BtoBE will enable high capacity transmission of data across the Pacific Ocean with round trip latency of less than 130ms. BtoBE will be built with advanced optical submarine transmission equipment, thereby improving network redundancy, flexibility and ensuring highly reliable communications. The proposed installation is scheduled to be completed in 2020.

The total length of the whole BtoBE Cable System will be 16,000km, of which this Project – the Hong Kong Segment (BtoBE-HK) – is about 36.3km in length within Hong Kong waters. Buried below the seabed, the BtoBE-HK Cable enters the eastern waters of Hong Kong and lands at an existing beach manhole at Sha Shek Tan on the Chung Hom Kok peninsula, which is at the southern side of Hong Kong Island. This is the same landing location of some other submarine cables.

3. Review by Government Departments

An environmental assessment was undertaken and CMI will submit a Project Profile to Environmental Protection Department (EPD) seeking permission to apply directly for an Environmental Permit under the Environmental Impact Assessment Ordinance in Mid-February 2020.

Other government departments including Drainage Services Department, Marine Department (MD), Planning Department, Civil Engineering and Development Department, Highways Department, Transport Department, Water Supplies Department and the Office of the Communications Authority have reviewed the project details and no adverse comments on the project have been received.

A Marine Traffic Impact Assessment was carried out by CMI and has been submitted to MD for approval prior to project construction.

4. Licence and Gazettal under the Ordinance

Lands Department has been processing the application for the licence for laying the proposed BtoBE-HK. The proposed licence has been circulated among relevant Government departments and no adverse comments have been received. Departmental comments have been considered and have been addressed in the design and future cable laying works as appropriate.

5. Details of the Proposed Bay to Bay Express Cable System – Hong Kong Segment

a) Dimensions of the Proposed Submarine Cable

The overall diameter of the proposed submarine cable is about 38 millimetres. Its total length is about 36.3 kilometres.

b) Method of Construction

The installation of BtoBE-HK from the sea-bed offshore from Sha Shek Tan at Chung Hom Kok to the eastern boundary of Hong Kong Waters. A cable-laying barge will be employed to simultaneously lay and bury the submarine cable at a depth of about 5 metres below the sea-bed with a narrow trench of about 0.5 metres in width. At the cable section approaching the existing conduit and beach manhole, the cable will be installed by a diver and protected by articulated pipe.

At the crossing of the Hong Kong Electric Gas Pipeline in the southern waters which is buried around 3 meters below the seabed, the cable will be laid by either the burial tool or divers at a depth possible/agreed with the facility owner, over the top of the Gas Pipeline for a section of approximately 100 metres to avoid any interference. Additional cable protection by URADUCT will be employed. At crossings with existing or planned submarine cables along the route, the cable will be buried to 3m below seabed on top of the existing cables as far as possible, subject to the as-built depth of the existing cables. It is anticipated that the overall installation works will take about four months to complete.

c) Period of Construction

The cable installation is tentatively scheduled to start in the third quarter of 2020 and expected to be completed within four months.

6. Conclusion

Various technical aspects regarding the location of cable laying and landing point at Sha Shek Tan at Chung Hom Kok, as well as the design and construction of the Reclamation Scheme have been thoroughly studied, and the engineering, environmental and public safety aspects have also been examined to the satisfaction of respective Government departments.

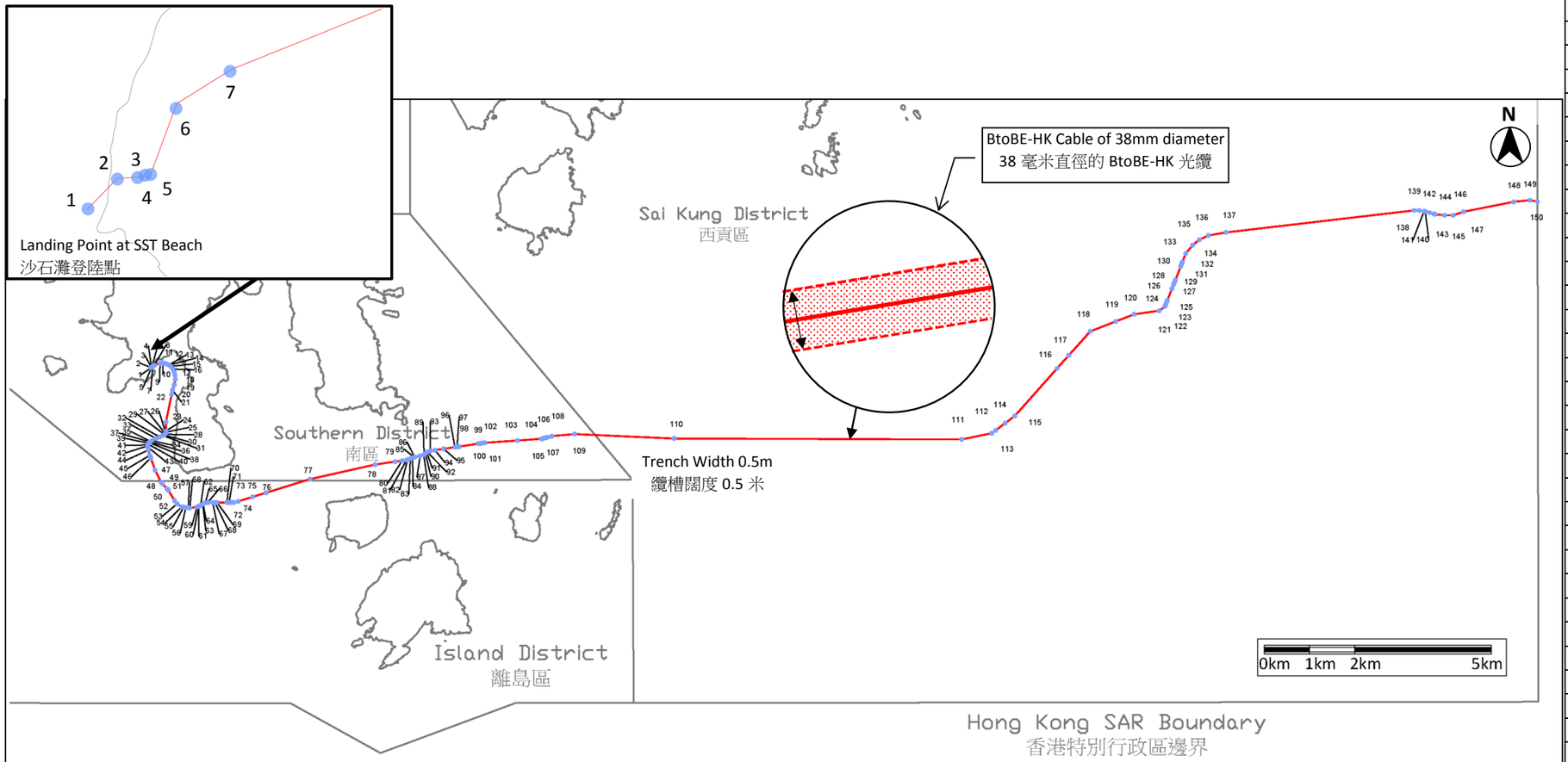
Annex

Figure 1 Layout Plan of the Proposed BtoBE-HK

SMEC Asia Limited
Environmental and Permitting Consultant of CMI
February 2020

Proposed Route of Bay to Bay Express (BtoBE) Cable System – Hong Kong Segment Layout Plan
擬建 Bay to Bay Express(BtoBE)海底光纜系統 – 香港段平面圖

Figure 1 圖一



Work Limit Control Point (WLCP)
光纜控制點

Bay to Bay Express (BtoBE) Cable System – Hong Kong Segment
Bay to Bay Express (BtoBE) 海底光纜系統 – 香港段

WLCP 控制點	Easting 東經	Northing 北緯	WLCP 控制點	Easting 東經	Northing 北緯
1	839287.866	808498.051	51	839675.444	805804.179
2	839296.456	808506.912	52	839810.587	805577.576
3	839303.330	808507.282	53	839870.932	805507.274
4	839304.876	808507.467	54	839971.323	805438.089
5	839305.736	808507.467	55	840013.626	805433.090
6	839313.464	808528.323	56	840063.280	805427.223
7	839329.100	808538.108	57	840112.936	805421.370
8	839368.988	808554.170	58	840149.221	805417.093
9	839496.461	808605.504	59	840302.874	805436.880
10	839546.982	808607.914	60	840346.195	805450.445
11	839596.645	808601.281	61	840350.652	805451.841
12	839644.764	808586.896	62	840388.630	805476.581
13	839689.276	808563.282	63	840430.578	805503.790
14	839693.684	808559.211	64	840444.136	805512.584
15	839726.230	808529.148	65	840491.741	805529.022
16	839769.891	808472.130	66	840541.240	805533.465
17	839803.758	808410.311	67	840649.711	805534.379
18	839820.787	808340.369	68	840699.709	805534.801
19	839827.338	808248.646	69	840749.707	805535.253
20	839805.197	808126.834	70	840965.789	805537.209
21	839766.213	808013.324	71	841015.787	805537.662
22	839746.129	807916.243	72	841065.785	805538.131
23	839621.840	807309.952	73	841117.537	805538.616
24	839621.883	807107.864	74	841216.015	805562.086
25	839620.169	807087.378	75	841531.611	805659.111
26	839616.736	807067.076	76	841827.925	805750.215
27	839607.804	807048.803	77	842798.267	806048.600
28	839593.542	807034.774	78	844231.499	806370.390
29	839591.696	807033.666	79	844669.303	806433.234
30	839576.015	807024.251	80	844825.939	806453.939
31	839547.489	807010.403	81	844922.519	806470.049
32	839482.361	806978.462	82	844957.849	806483.326
33	839407.094	806941.720	83	845004.653	806500.915
34	839308.628	806893.531	84	845054.484	806518.660
35	839284.913	806881.900	85	845089.537	806531.783
36	839267.901	806870.823	86	845101.784	806534.614
37	839265.457	806868.620	87	845220.824	806562.125
38	839252.952	806857.348	88	845295.797	806588.539
39	839239.378	806839.997	89	845308.973	806593.181
40	839229.757	806822.093	90	845336.629	806616.267
41	839223.230	806801.791	91	845366.176	806641.014
42	839220.485	806780.936	92	845376.877	806645.115
43	839221.348	806758.051	93	845443.841	806670.773
44	839235.454	806690.138	94	845547.807	806689.659
45	839266.755	806574.243	95	845738.901	806717.641
46	839287.734	806515.189	96	845985.701	806754.076
47	839382.312	806250.556	97	846035.165	806761.379
48	839517.972	805979.288	98	846084.630	806768.674
49	839544.275	805949.765	99	846503.471	806830.451
50	839646.219	805836.285	100	846552.936	806837.748

WLCP 控制點	Easting 東經	Northing 北緯	WLCP 控制點	Easting 東經	Northing 北緯
101	846602.403	806845.034	116	859250.422	808487.909
102	846646.076	806851.467	117	859506.558	808775.089
103	847364.250	806900.498	118	859979.691	809305.479
104	847897.335	806937.059	119	860541.256	809523.012
105	847927.543	806945.104	120	860948.939	809680.894
106	847975.859	806957.972	121	861498.674	809758.548
107	848024.190	806970.784	122	861625.677	809852.509
108	848118.990	806995.914	123	861640.606	809890.547
109	848621.814	807043.365	124	861658.874	809937.090
110	850817.409	806945.964	125	861677.110	809983.647
111	857149.650	806925.273	126	861777.286	810239.404
112	857810.273	807059.234	127	861814.461	810334.136
113	857894.911	807123.208	128	861832.726	810380.681
114	858105.389	807282.219	129	861850.978	810427.231
115	858318.780	807443.636	130	861972.403	810736.911

WLCP 控制點	Easting 東經	Northing 北緯	WLCP 控制點	Easting 東經	Northing 北緯
131	861990.655	810783.461	141	867356.216	811942.073
132	862009.163	810829.910	142	867452.639	811915.562
133	862083.739	811017.080	143	867549.061	811889.051
134	862231.545	811197.269	144	867575.352	811881.823
135	862382.191	811321.174	145	867779.853	811857.504
136	862582.196	811415.081	146	867970.390	811857.152
137	862976.389	811483.668	147	868201.657	811934.769
138	867110.445	811965.425	148	869304.544	812154.292
139	867222.809	811964.356	149	869663.883	812191.047
140	867332.110	811948.701	150	869828.536	812161.502

Reply Slip

To : District Lands Office/Hong Kong West and South
(Please return by email: eshks@landsd.gov.hk or by fax: 2833 1945 on or before 28.2.2020)

Proposed Gazetting under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127)

1. Hong Kong – Americas (HKA) Submarine Cable from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

2. South East Asia – Japan 2 Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

3. Bay to Bay Express Cable System – Hong Kong Segment from Sha Shek Tan at Chung Hom Kok to the Eastern Boundary of the Hong Kong Special Administrative Region

I / We* ☐ support the above proposal.
☐ have no comment on the above proposal.
☐ object to the above proposal and my / our reasons are :

_____

_____

_____

_____

* *Please tick the appropriate box* ☐

Name : _____ Signature : _____

Date : _____ Telephone no. : _____

E-mail Address : _____