

Capco 青山發電有限公司
Castle Peak Power Co. Ltd.

Hong Kong Offshore LNG Terminal - Works associated with the subsea gas pipeline for Black Point Power Station (BPPS) and the associated Gas Receiving Station (GRS) in BPPS

Location Plan

21 January 2021

Project No.: 0505354

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Signature Page

21 January 2021

Hong Kong Offshore LNG Terminal - Works associated with the subsea gas pipeline for Black Point Power Station (BPPS) and the associated Gas Receiving Station (GRS) in BPPS

Location Plan



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Hong Kong Offshore LNG Terminal - Works associated with the subsea gas pipeline for Black Point Power Station (BPPS) and the associated Gas Receiving Station (GRS) in BPPS
Environmental Certification Sheet
FEP-03/558/2018

Reference Document/Plan

Document/ Plan to be Certified/ Verified:	Location Plan
Date of Report:	21 January 2021
Date received by ET:	21 January 2021
Date received by IEC:	21 January 2021

Reference EP Requirement

EP Condition:	Condition No. 2.6 of FEP-03/558/2018
Content:	<i>Location Plan</i>
<p>The Permit Holder shall, no later than 1 month before the commencement of construction of the Project, deposit with the Director 3 hard copies and 1 electronic copy of a location plan of the Project with a scale of 1:1000 or other appropriate scale as agreed with the Director. The location plan shall include but not limited to the details of the works areas and boundaries, vertical and horizontal alignments of the subsea pipeline, and locations of the key environmental mitigation measures. The Project shall be constructed in accordance with the information as contained in the deposited location plan.</p>	

ET Certification

I hereby certify that the above referenced document/ plan complies with the above referenced condition of FEP-03/558/2018.	
Mr Raymond Chow, Environmental Team Leader:	 Date: 21 January 2021

IEC Verification

I hereby verify that the above referenced document/ plan complies with the above referenced condition of FEP-03/558/2018.	
Mr Arthur Lo, Independent Environmental Checker:	 Date: 21 January 2021

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1. INTRODUCTION

1.1 Background

To support the increased use of natural gas in Hong Kong from 2020 onwards, Castle Peak Power Company Limited (CAPCO) and The Hongkong Electric Company, Limited (HK Electric) have identified that the development of an offshore liquefied natural gas (LNG) receiving terminal in Hong Kong using Floating Storage and Regasification Unit (FSRU) technology ('the Hong Kong Offshore LNG Terminal Project') presents a viable additional gas supply option that will provide energy security through access to competitive gas supplies from world markets. The Hong Kong Offshore LNG Terminal Project will involve the construction and operation of an offshore LNG import facility to be located in the southern waters of Hong Kong, a double berth jetty, and subsea pipelines that connect to the gas receiving stations (GRS) at the Black Point Power Station (BPPS) and the Lamma Power Station (LPS).

The Environmental Impact Assessment (EIA) Report for the Hong Kong Offshore LNG Terminal Project was submitted to the Environmental Protection Department (EPD) of the Hong Kong Special Administrative Region Government in May 2018. The EIA Report (EIAO Register No. AEIAR-218/2018) was approved by EPD and the associated Environmental Permit (EP) (EP-558/2018) was issued in October 2018. An application for Further Environmental Permits (FEP) were made on 24 December 2019 to demarcate the works between the different parties. The following FEPs were issued on 17 January 2020 and the EP under EP-558/2018 was surrendered on 5 March 2020:

- the double berth jetty at LNG Terminal under the Hong Kong LNG Terminal Limited, joint venture between CAPCO and HK Electric (FEP-01/558/2018/A) ⁽¹⁾;
- the subsea gas pipeline for the BPPS and the associated GRS in the BPPS under CAPCO (FEP-03/558/2018); and
- the subsea gas pipeline for the LPS and the associated GRS in the LPS under HK Electric (FEP-02/558/2018/A) ⁽²⁾.

The location plan for the works associated with the subsea gas pipeline for BPPS and the associated GRS in BPPS ('the Project') is provided in **Figure 1.1**.

1.2 Objectives of the Location Plan

This *Location Plan* for the Project has been prepared in accordance with Condition 2.6 of the Further Environmental Permit FEP-03/558/2018.

FEP No. FEP-03/558/2018, Condition 2.6:

"The Permit Holder shall, no later than 1 month before the commencement of construction of the Project, deposit with the Director 3 hard copies and 1 electronic copy of a location plan of the Project with a scale of 1:1000 or other appropriate scale as agreed with the Director. The location plan shall include but not limited to the details of the works areas and boundaries, vertical and horizontal alignments of the subsea pipeline, and locations of the key environmental mitigation measures. The Project shall be constructed in accordance with the information as contained in the deposited location plan."

The key objectives of this Location Plan are to:

- (1) Application for variation of an environmental permit for FEP-01/558/2018 was undertaken and the latest FEP (FEP-01/558/2018/A) was issued on 6 November 2020.
- (2) Application for variation of an environmental permit for FEP-02/558/2018 was undertaken and the latest FEP (FEP-02/558/2018/A) was issued on 22 December 2020.

- include the details of the works areas and boundaries, vertical and horizontal alignments of the subsea pipeline; and
- include locations of the key environmental mitigation measures.

The Location Plan will be reviewed and updated as appropriate, throughout the course of the construction works to confirm that it remains current with the latest detailed information and works practice.

Legend

- Boundary of HKSAR
- Proposed GRS Location at BPPS
- Proposed GRS Location at LPS
- Proposed Route of BPPS Pipeline
- Proposed Route of LPS Pipeline
- Proposed Site for LNG Terminal
- Proposed LNG Terminal Safety Zone

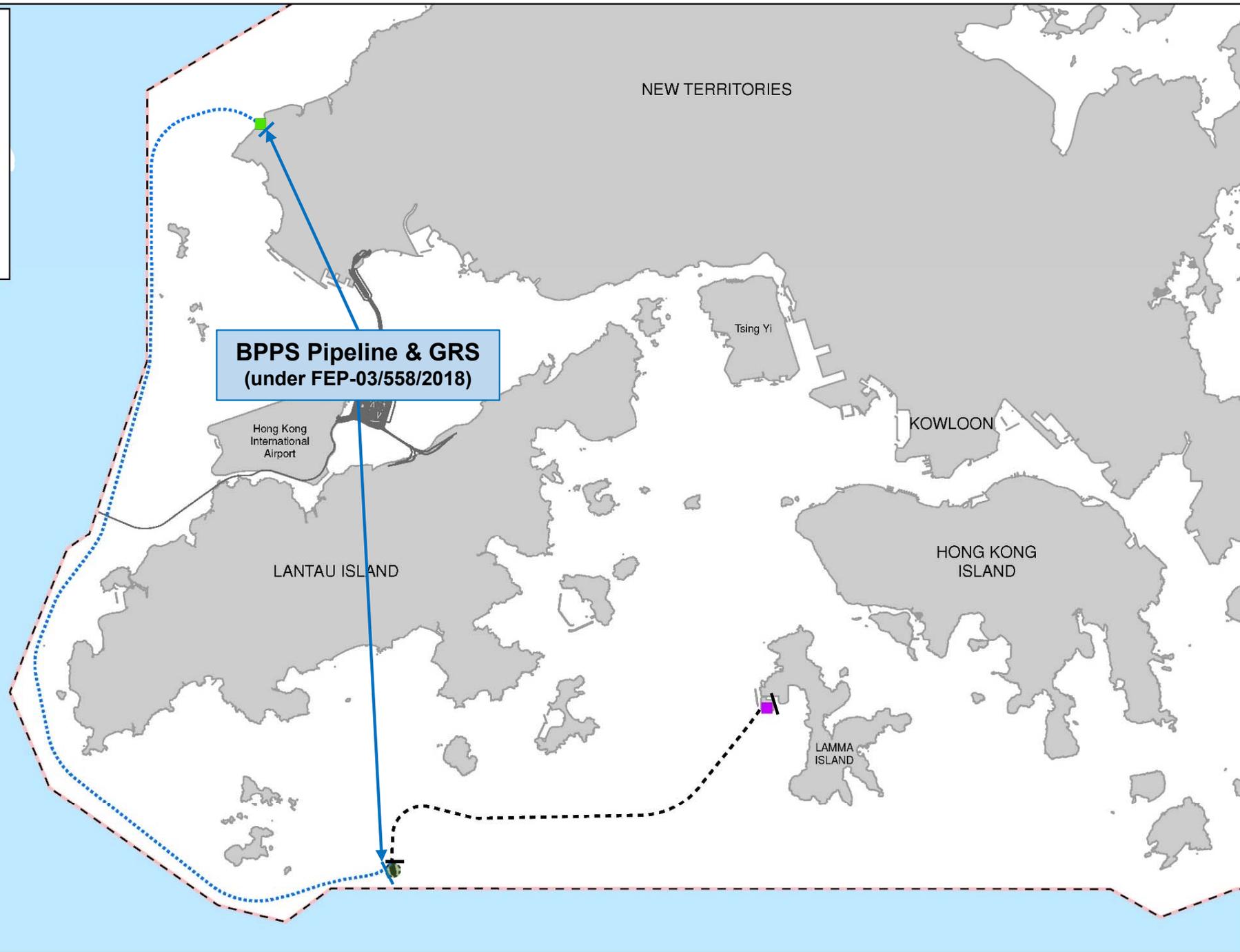


Figure 1.1

Indicative Location of Key Project Components

2. INDICATIVE WORKS AREAS AND BOUNDARIES OF THE PROJECT

The Project contains the following key facilities:

- A subsea gas pipeline connecting the LNG Terminal with the BPPS ('the BPPS Pipeline'); and
- A GRS located entirely within the BPPS.

2.1 The BPPS Pipeline

The proposed BPPS Pipeline will connect the LNG Terminal with the GRS at the BPPS and is approximately 30 inches (30") in diameter and 45km in length. It is located entirely within HKSAR waters.

The BPPS Pipeline departs the LNG Terminal and heads west running to the south of the Soko Islands towards the southwest Lantau cable corridor where there are ten (10) existing subsea cables that have to be crossed.

Thereafter, the BPPS Pipeline continues to run westwards parallel to the southern boundary of the proposed South Lantau Marine Park (SLMP). It then turns northwards and unavoidably crosses the Southwest of Fan Lau and part of the Lantau Channel Traffic Separation Scheme (LCTSS), then continues northwards and runs parallel to, but outside of, the LCTSS, passing to the west of the Southwest Lantau Marine Park. The route then continues northwards and unavoidably crosses under the HongKong-Zhuhai-Macao Bridge Hong Kong Link Road to the west of the Airport's restricted area.

The BPPS Pipeline route then continues to run northwards, passes to the west of the Southwest Lantau Marine Park, then runs parallel and within the western boundary of the proposed marine park related to the Hong Kong International Airport (HKIA) Three Runway System project (to be designated after the construction of the BPPS Pipeline), then passes to the west of the Sha Chau and Lung Kwu Chau Marine Park.

In order to approach the BPPS, the pipeline turns eastwards and unavoidably crosses the Urmston Road marine shipping channel before reaching landfall at the BPPS in the vicinity of the existing GRSSs.

The BPPS Pipeline will come ashore at the existing seawall within the boundary of the BPPS. The seawall is of sloping armour rock form and was constructed in 1993.

The overall BPPS Pipeline route (horizontal alignment) is shown in **Annex A**. The indicative works areas for the BPPS Pipeline, taking into account the installation vessels and supporting vessels (e.g. tug boat, cargo barge, flat top barge for storage, etc.), silt curtain installation ⁽³⁾, anchor arrangement and vessel logistics, are shown in **Annex B**. The works areas will not encroach onto the existing marine parks, in particular Sha Chau and Lung Kwu Chau Marine Park and Southwest Lantau Marine Park, as well as the proposed South Lantau Marine Park. The vertical alignment of the BPPS Pipeline are shown in **Annex C**.

(3) The location of double layer silt curtain is indicative and the actual extent of the double layer silt curtain is dependent on the location of the dredging / jetting works, following the requirements stated in Table A.2 of the Updated EM&A Manual. The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

2.2 The GRS

The proposed GRS at the BPPS will be located within the existing boundary of the BPPS on vacant land between the two existing GRS facilities for the Yacheng Pipeline and the Hong Kong Branch Line. The indicative works area (in green polygon) is shown in **Annex D**.

3. LOCATIONS OF KEY ENVIRONMENTAL MITIGATION MEASURES

The recommended key environmental mitigation measures and the associated locations specified, as appropriate, are summarised in **Table 3.1**. Other mitigation measures relevant to the Project will also be implemented in accordance with the Implementation Schedule detailed in Annex A of the Updated EM&A Manual.

Table 3.1 Locations of Key Environmental Mitigation Measures

Location	Key Environmental Mitigation Measures
Marine waters in Hong Kong	<ul style="list-style-type: none"> ▪ No working vessels for construction of the Project shall enter into, transit through, stop over or anchor within the existing marine parks including Sha Chau and Lung Kwu Chau Marine Park and Southwest Lantau Marine Park, and the proposed South Lantau Marine Park, unless otherwise agreed by the Director of Environmental Protection. ▪ The vessel operators of this Project will be required to use predefined and regular routes (that do not encroach into existing and proposed marine parks), make use of designated fairways to access the works areas, and would avoid traversing sensitive habitats such as existing and proposed marine parks. Predefined and regular routes will become known to Finless Porpoise (FP) and Chinese White Dolphin (CWD) using these waters. This measure will further serve to minimise disturbance to marine mammals due to vessel movements. ▪ The working vessels for construction of the Project shall not be operated at a speed higher than 10 knots when moving within the areas frequented by CWD or FP, including the waters near Sha Chau and Lung Kwu Chau Marine Park, the waters at the west of Lantau Island and the waters between Soko Islands and Shek Kwu Chau. ▪ The working vessels shall be equipped with tracking devices to record their operating speeds and marine travel routes during construction of the Project. The records shall be submitted weekly to the ET Leader and IEC for review of the acceptability of operating speeds and marine travel routes. ▪ All vessels must have a clean ballast system. ▪ All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.
Existing marine parks, proposed South Lantau Marine Park	<ul style="list-style-type: none"> ▪ Any anchoring/ anchor spread requirements during Project construction will avoid encroachment into the existing and proposed marine parks. ▪ No stopping over or anchoring activity of vessels related to the Project should be conducted within existing and proposed marine parks even before, during and after typhoon.
BPPS Pipeline between the LNG Terminal and South of Soko Islands (BPPS KP0.0 - KP8.9)	<ul style="list-style-type: none"> ▪ Pipeline dredging/ jetting works will be restricted to a daily maximum of 12 hours with daylight (0700 – 1900) operations.

Location	Key Environmental Mitigation Measures
BPPS Pipeline between Fan Lau and North of Tai O (BPPS KP15.6 - KP21.3)	<ul style="list-style-type: none"> ▪ Pipeline dredging/ jetting works will avoid the peak months of CWD calving in May and June.
Areas with dredging / jetting works	<ul style="list-style-type: none"> ▪ Adoption of appropriate dredging and jetting rate, plant numbers and silt curtains at the plant and water sensitive receivers in accordance with Table A.2 of the Updated EM&A Manual, reprovided in Table 3.2 below. ▪ No more than one jetting machine will be used for construction of the subsea gas pipeline. ▪ Silt curtain shall be formed and installed in such a way that tidal rise and fall are accommodated, with the silt curtain always extending from the surface to the bottom of the water column and held with anchor blocks. ▪ Silt curtain shall be inspected regularly to check that they are moored and marked to avoid danger to marine traffic, and any damage to the silt curtain shall be repaired promptly. ▪ Dredged marine mud will be disposed of in a gazetted marine disposal area in accordance with the Dumping at Sea Ordinance (DASO) permit conditions. ▪ Dredgers will maintain adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash. ▪ Marine works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site. Wastewater from potentially contaminated area on working vessels should be minimised and controlled. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system. ▪ No soil waste is allowed to be disposed overboard. ▪ Implementation of a marine mammal exclusion zone of not less than 250 m radius from the dredging and jetting works. ▪ No dredging or jetting works will be carried until the marine mammal exclusion zone is confirmed by an experienced marine mammal observer as clear of marine mammals for 30 minutes continuously. ▪ Use of passive acoustic monitoring device shall be explored to assist the marine mammal observer to monitor and detect the marine mammals.
Cofferdam construction at pipeline landfalls of the BPPS	<ul style="list-style-type: none"> ▪ Cofferdam construction and removal, where required, should not be conducted concurrently with the nearby pipeline dredging sections (BPPS KP44.9 – KP45.0). ▪ Silt curtain surrounding the works areas for cofferdam construction and removal at pipeline landfall of BPPS should be implemented. (See Annex B for indicative location of silt curtain for cofferdam construction and removal at pipeline landfall of BPPS)

Location	Key Environmental Mitigation Measures
	<ul style="list-style-type: none"> ▪ Silt curtain shall be formed and installed in such a way that tidal rise and fall are accommodated, with the silt curtain always extending from the surface to the bottom of the water column and held with anchor blocks. ▪ Silt curtain shall be inspected regularly to check that they are moored and marked to avoid danger to marine traffic, and any damage to the silt curtain shall be repaired promptly.
GRS at BPPS	<ul style="list-style-type: none"> ▪ Appropriate infiltration control should be adopted to limit groundwater inflow to the excavation works areas in the Project site. Groundwater pumped out from excavation area should be discharged into the storm system via silt removal facilities. ▪ Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly. ▪ Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms. ▪ Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages. ▪ Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows. ▪ The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required. ▪ Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment. No onsite discharge from these chemical toilets would be allowed. ▪ Pre-construction and construction period for the GRS at the BPPS should be reduced as far as practical to lower visual impact. ▪ Following construction, land areas temporarily affected by the construction works, will be reinstated to their former state. ▪ Any plants to be affected by the GRS at the BPPS should be preserved and care taken to ensure the existing health status of the vegetation is maintained or enhanced after construction.

Table 3.2 Summary of Dredging and Jetting Operation and Mitigation Measures for Pipeline Construction Works

Work Location	Types and No. of Plant Involved	Allowed Maximum Work Rate	Silt Curtain at Plants	Silt Curtain at Water Sensitive Receivers (WSRs)	Other Measures
Pipeline Riser (KP0.0 – 0.1)	1 Grab Dredger	8,000m ³ day ⁻¹ for 24 hours each day	Yes	Not required	Daily maximum of 12 hours with daylight (0700 – 1900)
Jetty Approach (KP0.1 – 5.0), excluding Subsea Cable Sterile Corridors	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes	Not required for grab dredging; Two layers at Southern Boundary of the proposed South Lantau Marine Park (KP0.1 – 8.9) for jetting	Daily maximum of 12 hours with daylight (0700 – 1900)
Subsea Cable Sterile Corridors (KP1.49 – 2.75 & KP3.55 – 4.43)	2 Grab Dredgers, followed by 1 Jetting Machine	8,000m ³ day ⁻¹ for 24 hours each day for each dredger 720m day ⁻¹ for 24 hours each day for jetting machine	Yes		
South of Soko Islands (KP5.0 – 8.9)	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes		
Southwest of Soko Islands (KP8.9 – 12.1)	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes	Not required	
Adamasta Channel (KP12.1 – 15.6)	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes	Not required	
Southwest Lantau (KP15.6 – 21.3)	1 Jetting Machine	1,500m day ⁻¹ for 24 hours each day	Yes	Not required	Avoid the peak months of Chinese White Dolphin (CWD) calving (May and June)
West of Tai O to West of HKIA (KP21.3 – 31.5)	1 Jetting Machine	1,500m day ⁻¹ for 24 hours each day from KP26.2 to 21.3 720m day ⁻¹ for 24 hours each day from KP31.5 to 26.2	Yes	Not required	
Sha Chau to Lung Kwu Chau (KP31.5 – 36.0)	1 Jetting Machine	720m day ⁻¹ for 24 hours each day	Yes	Two layers at Western Boundary of the Sha Chau and Lung Kwu Chau Marine Park (KP31.5 – 36.0)	

**HONG KONG OFFSHORE LNG TERMINAL - WORKS ASSOCIATED WITH
THE SUBSEA GAS PIPELINE FOR BLACK POINT POWER STATION (BPPS)
AND THE ASSOCIATED GAS RECEIVING STATION (GRS) IN BPPS**
Location Plan

Work Location	Types and No. of Plant Involved	Allowed Maximum Work Rate	Silt Curtain at Plants	Silt Curtain at Water Sensitive Receivers (WSRs)	Other Measures
Sha Chau to Lung Kwu Chau (KP36.0 – 37.5)	1 Jetting Machine	720m day ⁻¹ for 24 hours each day	Yes	Two layers at Western Boundary of Sha Chau and Lung Kwu Chau Marine Park (KP36.0 – 37.5)	
Lung Kwu Chau to Urmston Anchorage (KP37.5 – 41.1)	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes	Two layers at NW corner of Sha Chau and Lung Kwu Chau Marine Park (KP37.5 – 41.1)	
Urmston Road (KP41.1 – 42.9)	1 Grab Dredger	8,000m ³ day ⁻¹ for 24 hours each day	Yes	Not required	
West of BPPS (KP42.9 – 44.9)	1 Jetting Machine	1,000m day ⁻¹ for 24 hours each day	Yes	Two layers at CR1, CR2 (Note 1)	
Pipeline shore approach at BPPS (KP44.9 – 45.0)	1 Grab Dredger	1,500m ³ day ⁻¹ for 24 hours each day	Yes	Two layers at CR1, CR2 (Note 1)	

Note: (1) CR1 and CR2 denote the coral colonies identified at the artificial seawall at BPPS.

ANNEX A

OVERALL BPPS PIPELINE ROUTE

PROPOSED 30" BPPS PIPELINE ROUTE

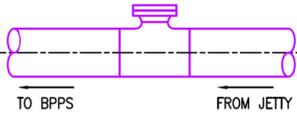
ROUTE INTRUDES INTO THE RESTRICTED ZONES

BOUNDARY LIMIT	KP	CO-ORDINATES (m) - HK 1980 GRID SYSTEM		LOCATION
		EASTING (E)	NORTHING (N)	
BL1	13.414	802436.003	804897.180	ROUNDAABOUT BOUNDARY LIMIT
BL2	15.962	800787.539	806780.310	ROUNDAABOUT BOUNDARY LIMIT
BL3	25.458	802942.492	815478.689	PROPOSED HKLR BOUNDARY LIMIT
BL4	25.638	802992.428	815651.624	PROPOSED HKLR CENTER BOUNDARY LIMIT
BL5	25.818	803042.363	815824.559	PROPOSED HKLR BOUNDARY LIMIT
BL6	26.530	803239.915	816508.706	MARINE PARK BOUNDARY LIMIT
BL7	38.115	804745.673	827892.165	MARINE PARK BOUNDARY LIMIT
BL8	42.018	806188.754	831136.068	URMSTON ROAD CHANNEL BOUNDARY LIMIT
BL9	42.620	806762.746	831316.275	URMSTON ROAD CHANNEL BOUNDARY LIMIT

PROPOSED TIE-IN LOCATION
 N 802064.769m
 E 814153.302m
 KP 0.000

PROPOSED TIE-IN POINT (TOE OF SEA WALL)
 N 830907.458m
 E 808991.190m
 KP 44.987

PROPOSED FUTURE TIE-IN
 SEE DETAIL 'A'
 N 828276.815m
 E 804744.443m
 KP 38.500



SCALE(A1) 1:55000

LOCATION	KP	CO-ORDINATES (m) - HK 1980 GRID SYSTEM		GRID AZIMUTH	TURNING RADIUS (m)
		EASTING (E)	NORTHING (N)		
TIE-IN POINT	0.000	814153.302	802064.769	233°46'50"	-
PC1	0.178	814009.439	801959.403	-	-
IP1	-	813656.750	801701.090	-	1800
PT1	1.036	813224.866	801633.327	-	-
PC2	1.939	812333.246	801493.430	261°04'58"	-
IP2	-	812257.400	801481.530	-	1800
PT2	2.092	812182.842	801463.215	-	-
PC3	2.891	811406.820	801272.531	256°11'54"	-
IP3	-	811332.080	801254.220	-	1800
PT3	3.045	811259.370	801229.630	-	-
PC4	3.948	810404.120	800940.390	251°18'53"	-
IP4	-	810331.410	800915.800	-	1800
PT4	4.101	810256.871	800897.489	-	-
PC5	5.346	809047.675	800600.442	256°11'54"	-
IP5	-	808198.470	800391.830	-	1800
PT5	6.974	807509.578	800930.436	-	-
PC6	14.264	801766.983	805420.249	308°01'11"	-
IP6	-	800902.180	806096.390	-	3000
PT6	16.368	800678.007	807171.005	-	-
PC7	18.455	800251.893	809213.655	348°13'00"	-
IP7	-	800065.640	810106.490	-	3000
PT7	20.226	800407.849	810951.911	-	-
PC8	21.555	800906.605	812184.078	22°02'14"	-
IP8	-	801059.600	812562.050	-	3000
PT8	22.366	801307.930	812885.474	-	-
PC9	24.130	802382.176	814284.567	37°31'03"	-
IP9	-	802727.580	814734.420	-	3000
PT9	25.251	802884.923	815279.319	-	-
PC10	31.367	804581.839	821155.975	16°06'23"	-
IP10	-	804689.096	821527.423	-	3000
PT10	32.136	804698.673	821913.928	-	-
PC11	34.459	804756.205	824235.828	01°25'10"	-
IP11	-	804757.244	824277.779	-	3000
PT11	34.543	804757.110	824319.743	-	-
PC12	39.430	804741.464	829206.936	359°49'00"	-
IP12	-	804736.747	830680.204	-	2000
PT12	41.970	806142.376	831121.507	-	-
PC13	42.776	806911.763	831363.059	72°34'12"	-
IP13	-	807753.830	831627.430	-	2000
PT13	44.439	808516.683	831183.555	-	-
TIE-IN POINT (TOE OF SEA WALL)	44.987	808991.190	830907.458	120°11'36"	-

PROPOSED 30" BPPS PIPELINE ROUTE

CROSSING LOCATIONS

CROSSING LABEL	CROSSING DESCRIPTION	CROSSING ANGLE (°)	KP	CO-ORDINATES (m) - HK 1980 GRID SYSTEM	
				EASTING (E)	NORTHING (N)
CR10	FLAG-SEG-P1	55	0.262	813940.442	801911.304
CR9	APCN-SEG-B17 (OUT OF SERVICE)	66	0.519	813717.383	801785.303
CR8	AAG-SEG-2	77	0.816	813439.748	801680.655
CR7	FLAG-SEG-N	61	1.492	812774.281	801562.629
CR6	APCN-SEG-B8 (OUT OF SERVICE)	57	2.243	812036.539	801427.274
CR2	FNAL-SEG-DC	58	2.746	811547.948	801307.249
CR5	APCN2-SEG-S3	56	3.102	811205.298	801211.343
CR4	AAG-SEG-11	64	3.326	810992.847	801139.494
CR3	APCN2-SEG-S2	61	3.553	810778.007	801066.836
CR1	FNAL-SEG-E	52	4.429	809938.071	800819.174

253676 ARUP GAZETAL PLAN

HK245317 EGS ALIGNMENT CHARTS

HKOLNG-CO0EC-11EKA-MTA010-0218 BPPS PIPELINE SHORE APPROACH GENERAL ARRANGEMENT DRAWING

HKOLNG-CO0EC-11EKA-MTA010-0204 BPPS PIPELINE JETTY APPROACH DRAWING

HKOLNG-CO0EC-11EKA-MTA010-9805~9806 SUBSEA PIPELINE CABLE CROSSING DETAILS

HKOLNG-CO0EC-11EKA-MTA010-0202 BPPS PIPELINE ALIGNMENT DRAWING

DWG. NO. DRAWING TITLE

REFERENCE DOCUMENTS

REV	DATE	DESCRIPTION	BY	CHK'D	APP'D	CLP
D	14AUG20	Issued for Design	CuiSM	LiuW	YuZB	
C1	25JUL20	Issued for Review	CuiSM	LiuW	YuZB	
C	25MAR20	Issued for Review	CuiSM	LiuW	YuZB	
B	12MAR20	Internally Approved	CuiSM	LiuW	YuZB	
A	03MAR20	Discipline Internal Check	CuiSM	LiuW	YuZB	

CLIENT: Capco Offshore Oil Engineering Co., Ltd.

SIGNATURE: DATE: PROJECT: HONG KONG OFFSHORE LNG TERMINAL PROJECT PACKAGE B

DRAWN: CuiSM 14AUG20

DESIGNED: CuiSM 14AUG20

CHECKED: LiuW 14AUG20

REVIEWED: YuZB 14AUG20

EXAMINED: XiongHR 14AUG20

APPROVED: SunGM 14AUG20

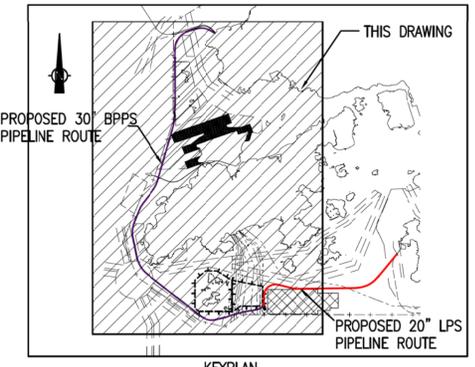
DWG TITLE: BPPS PIPELINE OVERALL ROUTE LAYOUT DRAWING

DWG No. HKOLNG-CO0EC-11EKA-MTA010-0201 REV. D

- NOTES
- ALL COORDINATES AND DIMENSIONS ARE IN METRES. THE COORDINATES ARE REFERENCED TO HONG KONG 1980 GRID SYSTEM.
 - PROPOSED PIPELINE TIE-IN POINT AT JETTY (MD1) IS AT THE ADJOINING PIPE JOINT TO THE TIE-IN POOL END.
 - FOR FSRO GAZETTE AREA ALONG THE PROPOSED PIPELINE ROUTE, REFER TO BPPS PIPELINE ALIGNMENT SHEETS.
 - CROSSING LOCATION SHOWN IN TABLE IS BASED ON CABLE DETECTED DATA FROM EGS SURVEY, HK242716 AND HK242718.
 - PIPELINE BEARINGS ARE MEASURED CLOCKWISE FROM NORTH TO PIPELINE FLOW DIRECTION.

- LEGEND
- PROPOSED 30" BPPS PIPELINE ROUTE
 - PROPOSED 20" LPS PIPELINE ROUTE
 - SHIPPING CHANNEL
 - BOUNDARY OF HONG KONG SPECIAL ADMINISTRATIVE REGION
 - PROPOSED MARINE PARK
 - EXISTING SUBMARINE CABLE
 - EXISTING PIPELINE
 - IDENTIFIED MARINE PARK

- BPPS BLACK POINT POWER STATION
- BL BOUNDARY LIMIT
- CR CROSSING
- E EASTING
- FSRO FORESHORE AND SEA-BED (RECLAMATIONS) ORDINANCE
- HKZMB HONG KONG-ZHUHAI-MACAO BRIDGE
- IP INTERSECTION POINT
- KP KILOMETRE POST
- LPS LAMMA POWER STATION
- MD MOORING DOLPHIN
- N NORTHING
- PC POINT OF CURVATURE
- PT POINT OF TANGENCY
- R RADIUS
- 3RS THREE-RUNWAY SYSTEM



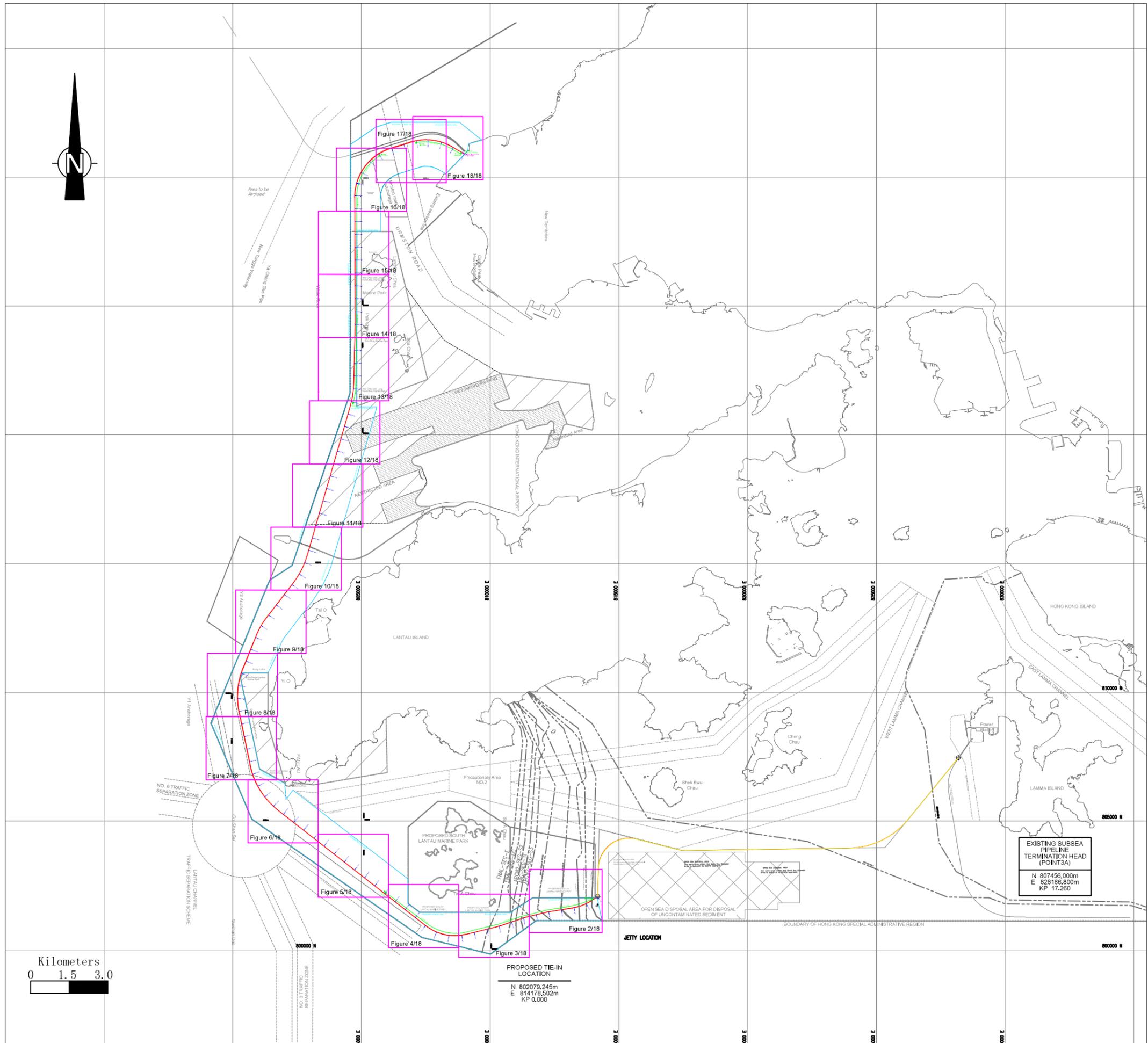
ANNEX B

INDICATIVE WORKS AREAS FOR THE BPPS PIPELINE

DESIGN DISCIPLINE	DATE
SIGNATURE	



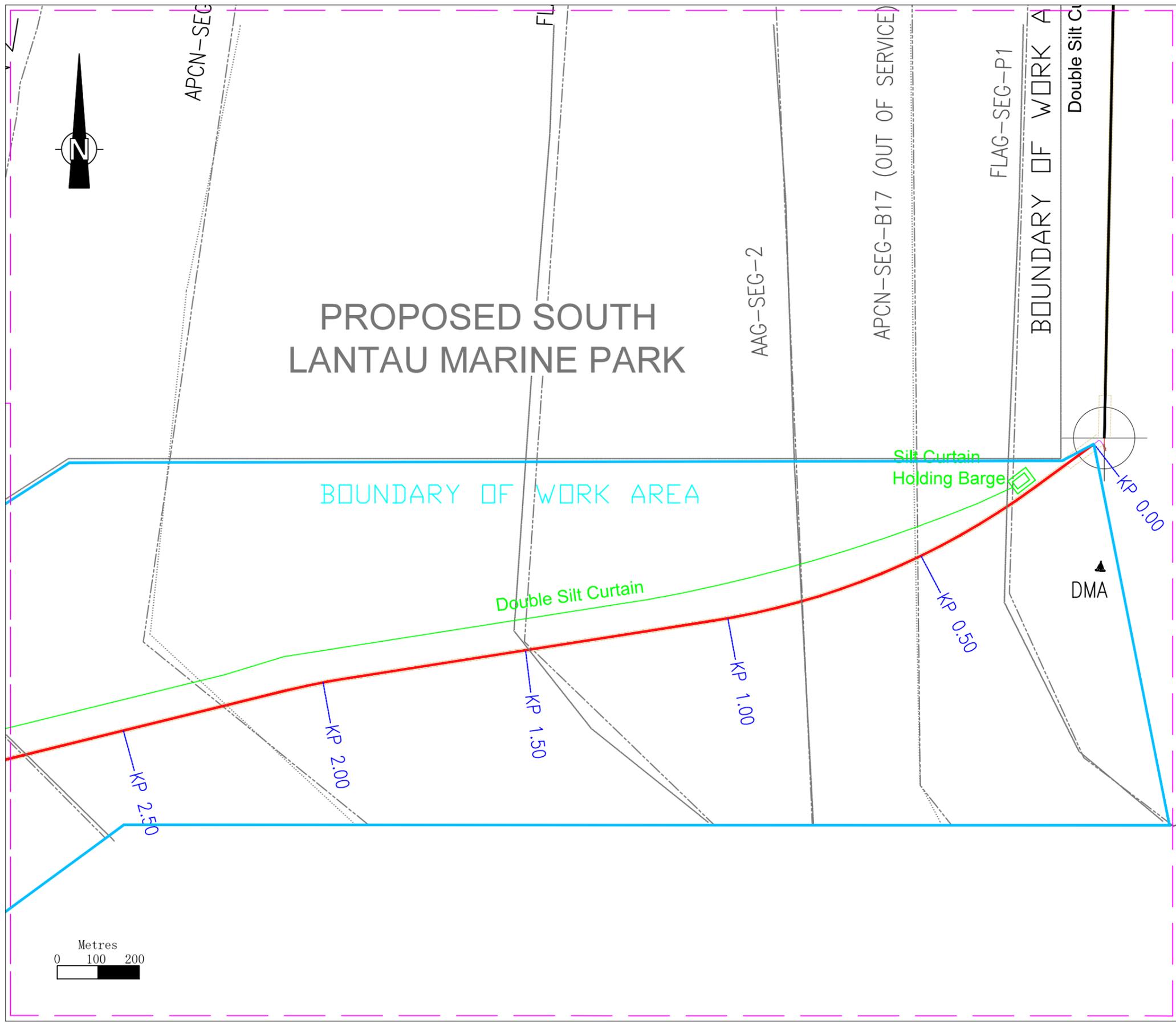
LEGEND:	
	Boundary of work area
	Double Silt Curtain
	BPPS Pipeline
	LPS Pipeline
	Drawing Cut Line



REVISION	D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie
	D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB
	C	29APR20	Issued for Review	Liuwang	XuHB	YeHB
No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
CLIENT			Offshore Oil Engineering Co.,Ltd			
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:			JOB No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT			20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)			CERTIF. No. A112002816
CHECKED	XuHB	10OCT20	Drawing Title:			SCALE (A3)
REVIEWED	Zhangjie	10OCT20	BPPS Pipeline Work Area Sketch			1:150000
EXAMINED			DWG No. HKOLNG-COOEC-21EKA-CTC020-5014(1/18)			REV. D1
APPROVED						

F
E
D
C
B
A

DESIGN DISCIPLINE	SIGNATURE	DATE



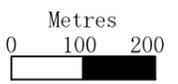
PROPOSED SOUTH LANTAU MARINE PARK

BOUNDARY OF WORK AREA

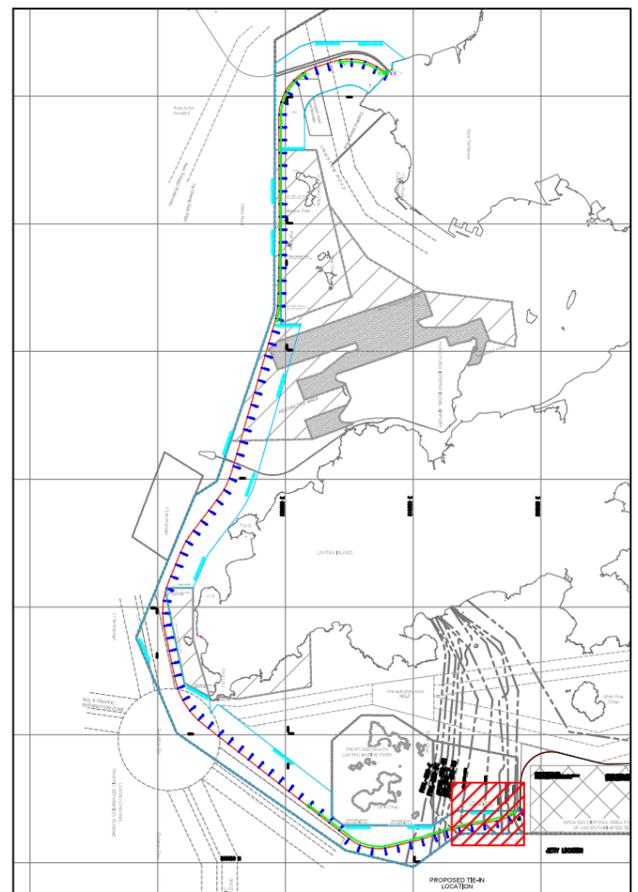
Double Silt Curtain

Silt Curtain Holding Barge

DMA



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 0.00	22° 9.414' N	113° 57.749' E	814153	802065
KP 0.50	22° 9.266' N	113° 57.505' E	813734	801793
KP 1.00	22° 9.182' N	113° 57.230' E	813260	801639
KP 1.50	22° 9.140' N	113° 56.942' E	812767	801561
KP 2.00	22° 9.097' N	113° 56.655' E	812273	801483
KP 2.50	22° 9.033' N	113° 56.373' E	811787	801366

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

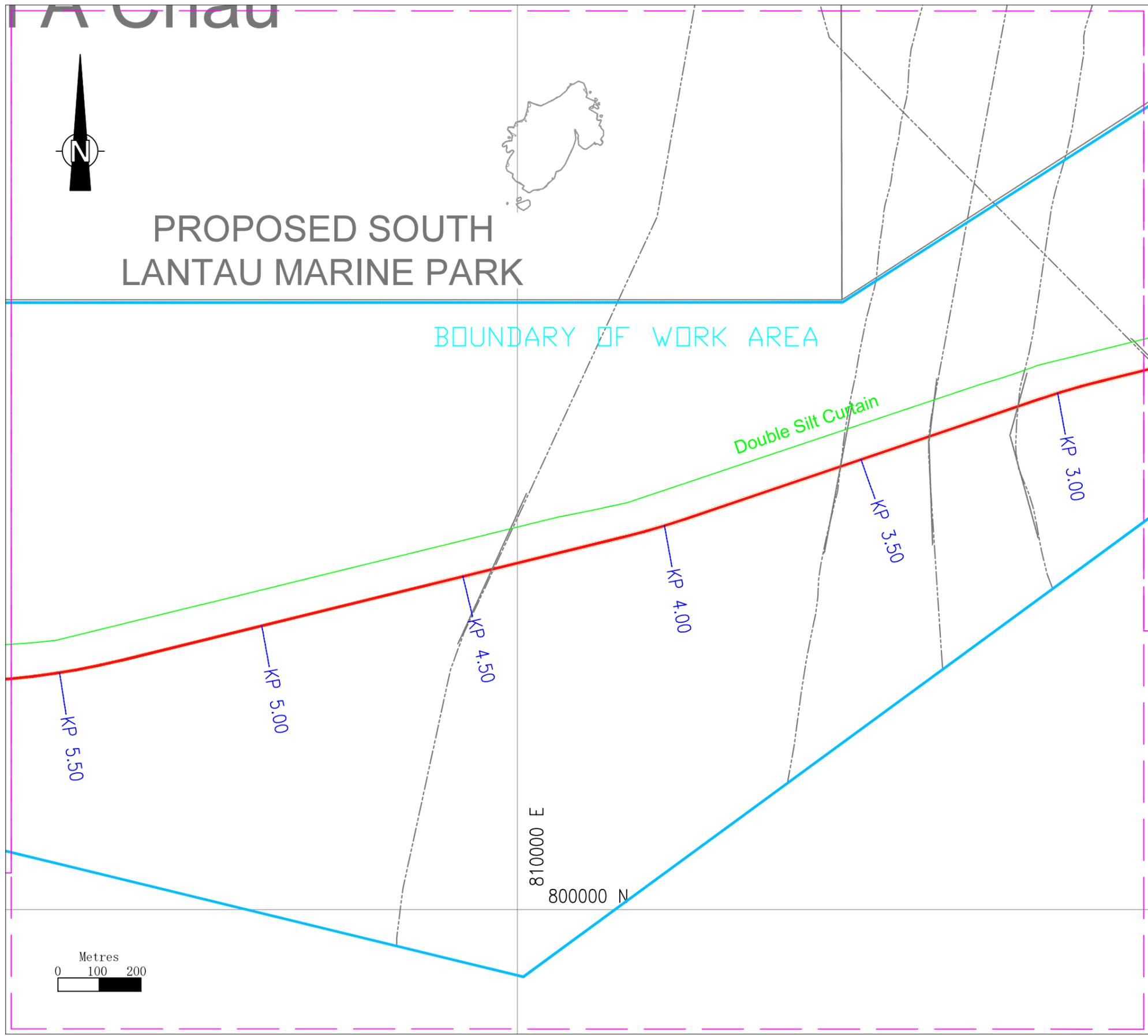
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

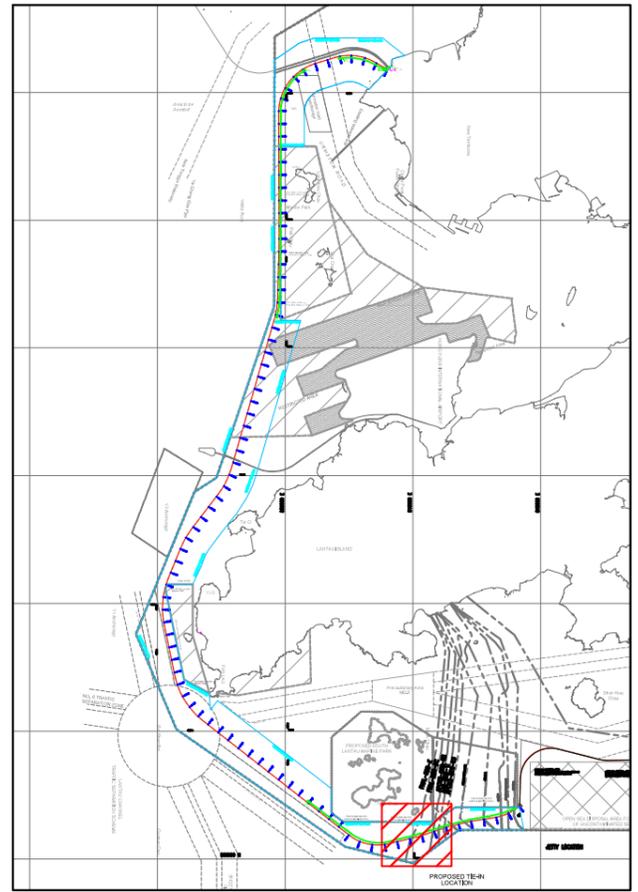
REVISION	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20	Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-CO0EC-21EKA-CTC020-5014 (2/18)	REV. D1

DESIGN DISCIPLINE	SIGNATURE	DATE



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 3.00	22° 8.966' N	113° 56.091' E	811302	801243
KP 3.50	22° 8.879' N	113° 55.815' E	810828	801084
KP 4.00	22° 8.793' N	113° 55.540' E	810354	800924
KP 4.50	22° 8.726' N	113° 55.258' E	809869	800802
KP 5.00	22° 8.661' N	113° 54.976' E	809384	800683
KP 5.50	22° 8.599' N	113° 54.693' E	808897	800570

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

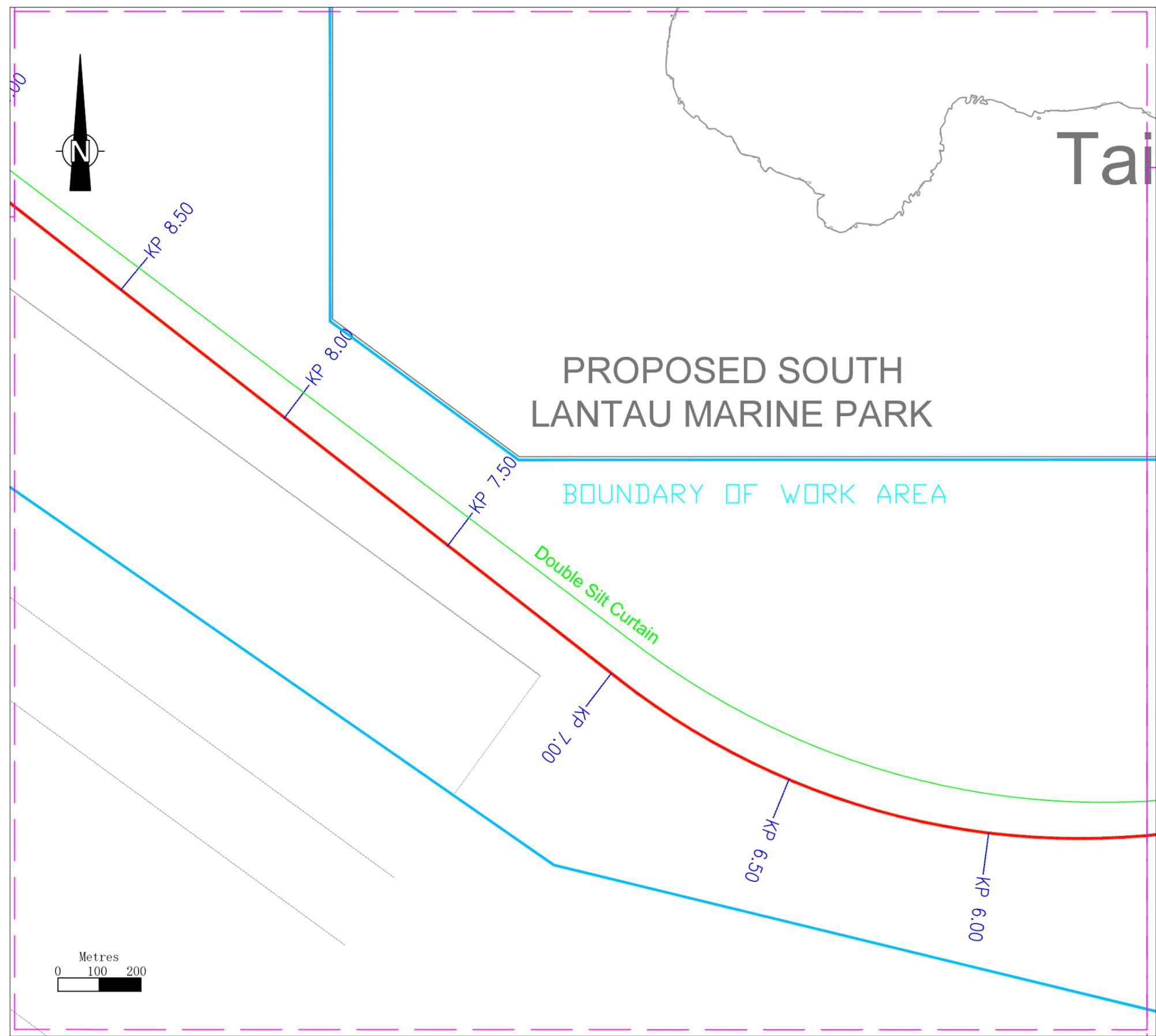
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

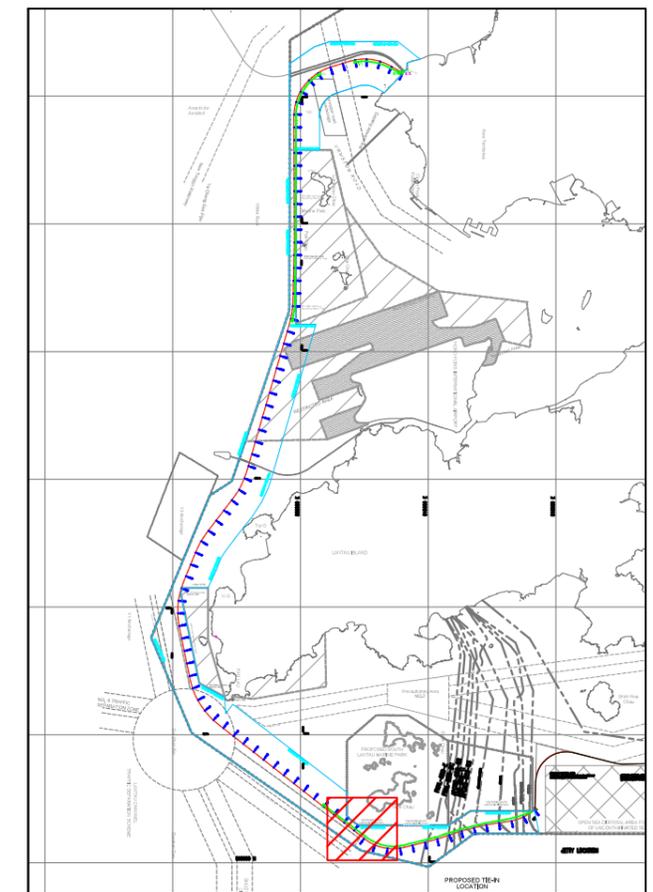
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	100CT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB. No.
DRAWN	Liuwang	100CT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	100CT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	100CT20		A112002816
REVIEWED	Zhangjie	100CT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-CO0EC-21EKA-CTC020-5014 (3/18)	REV. D1

DESIGNATION	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 6.00	22° 8.594' N	113° 54.403' E	808399	800562
KP 6.50	22° 8.664' N	113° 54.123' E	807917	800691
KP 7.00	22° 8.802' N	113° 53.873' E	807489	800946
KP 7.50	22° 8.968' N	113° 53.644' E	807095	801254
KP 8.00	22° 9.135' N	113° 53.415' E	806701	801562
KP 8.50	22° 9.301' N	113° 53.185' E	806308	801870

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

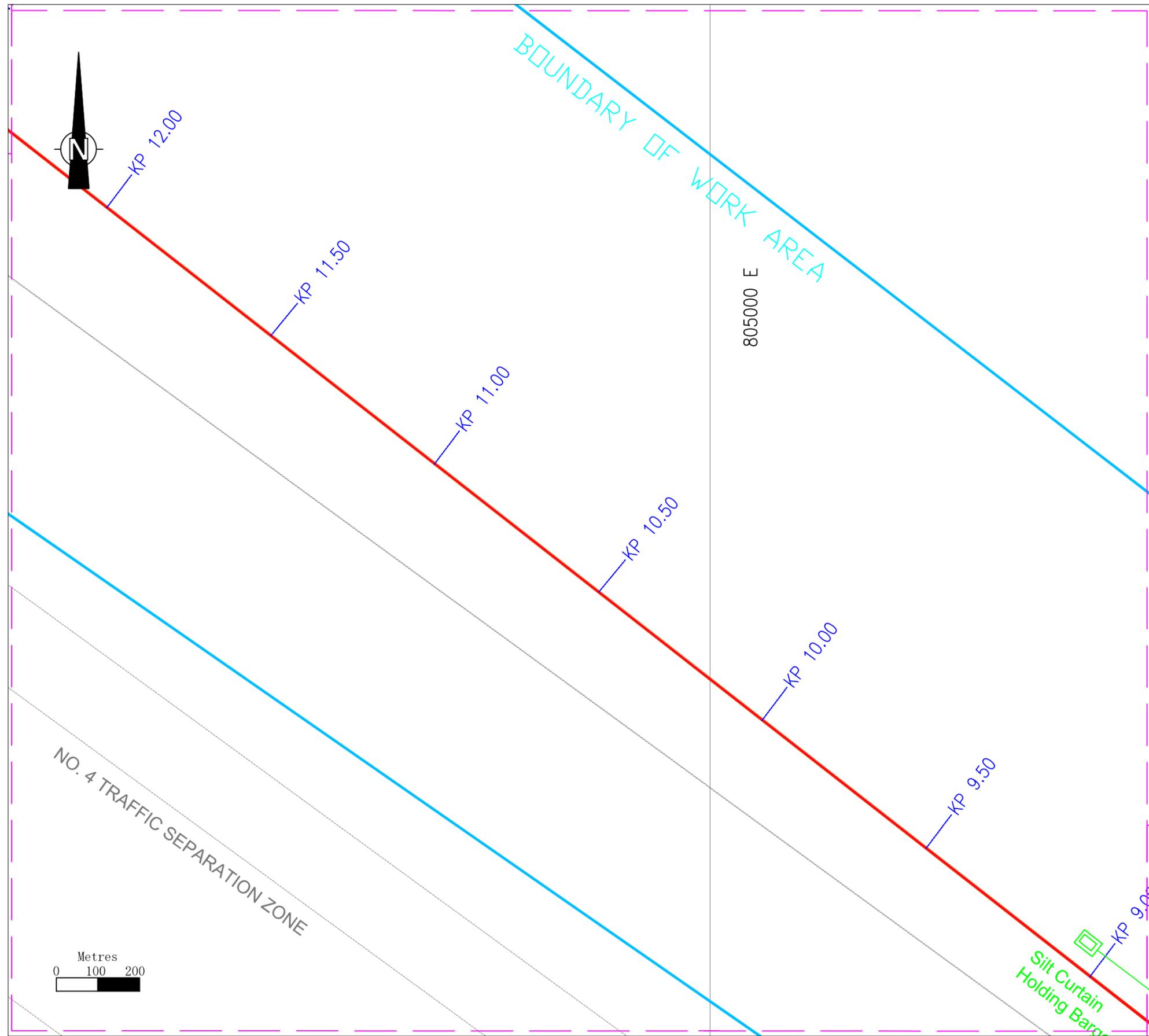
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

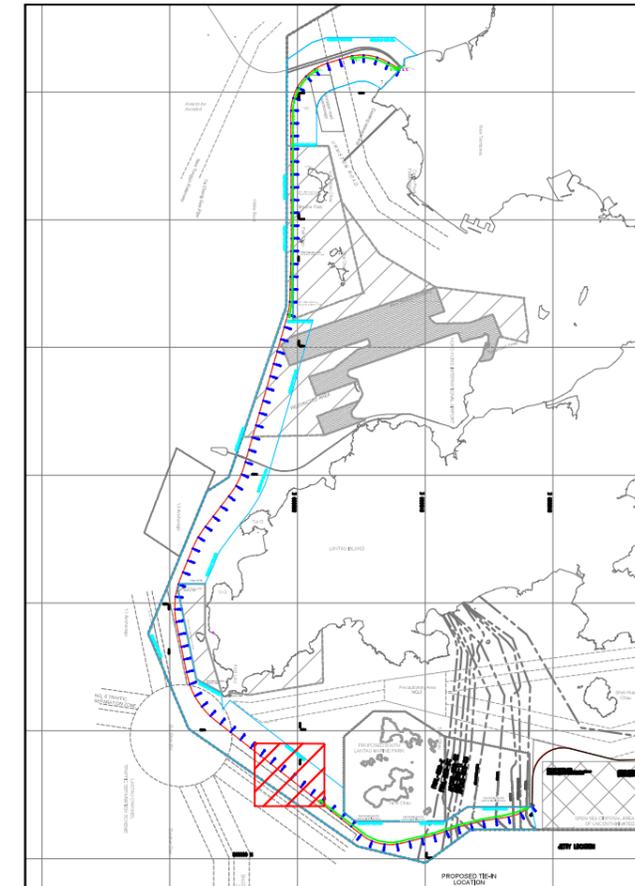
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued For Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued For Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co.,Ltd		
SIGNATORY SIGNATURE	DATE	PROJECT TITLE:	JOB No.	
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No. A112002816
CHECKED	XuHB	10OCT20	Drawing Title:	SCALE (A3)
REVIEWED	Zhangjie	10OCT20	BPPS Pipeline Work Area Sketch	1:10000
EXAMINED			DWG No. HKOLNG-COOEC-21EKA-CTCO20-5014 (4/18)	REV. D1
APPROVED				

DESIGN DISCIPLINE	DATE
SIGNATURE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 9.00	22° 9.468' N	113° 52.956' E	805914	802178
KP 9.50	22° 9.634' N	113° 52.726' E	805520	802486
KP 10.00	22° 9.801' N	113° 52.497' E	805126	802794
KP 10.50	22° 9.967' N	113° 52.267' E	804732	803102
KP 11.00	22° 10.133' N	113° 52.038' E	804338	803410
KP 11.50	22° 10.300' N	113° 51.808' E	803944	803718
KP 12.00	22° 10.466' N	113° 51.579' E	803550	804026

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

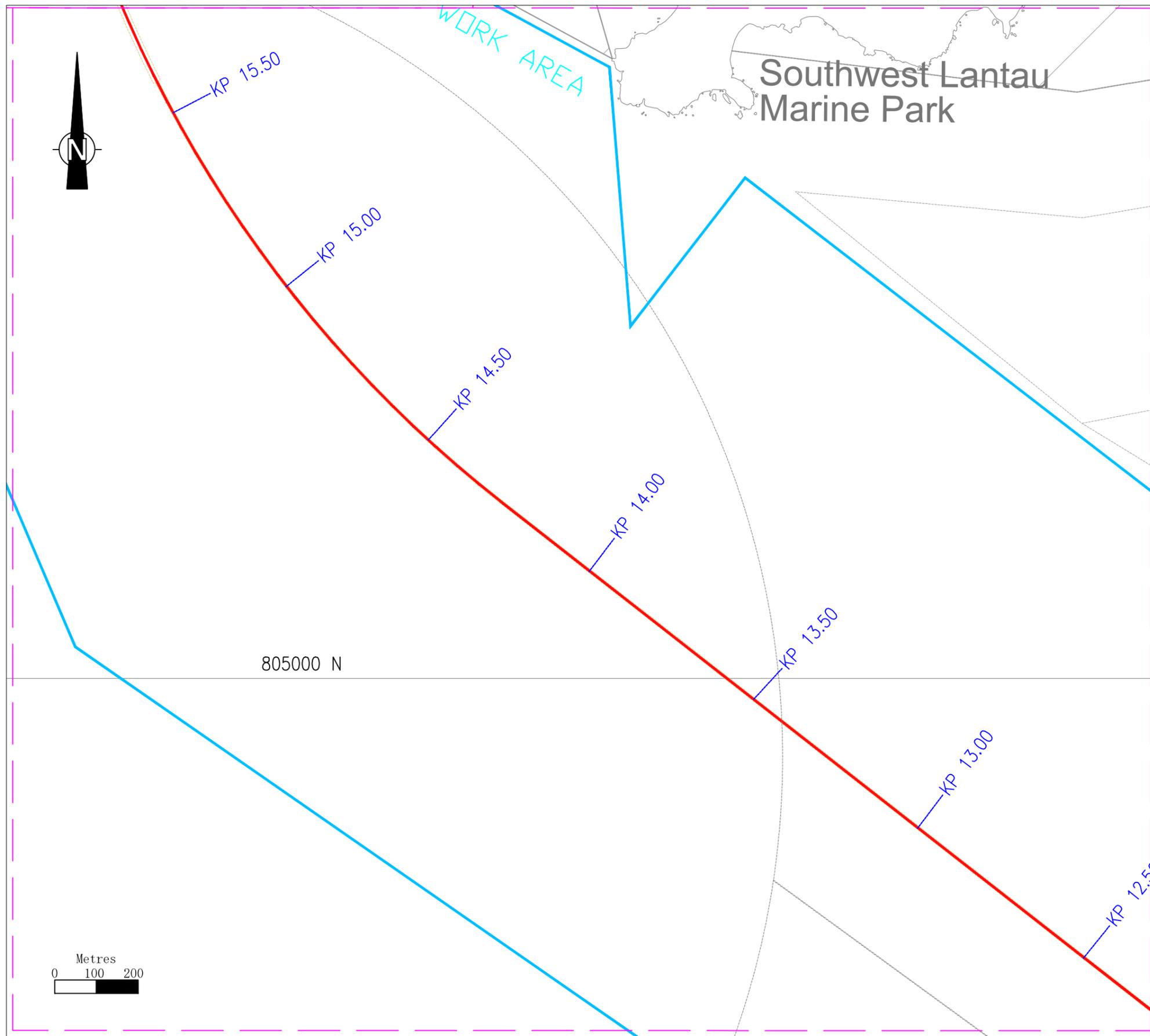
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

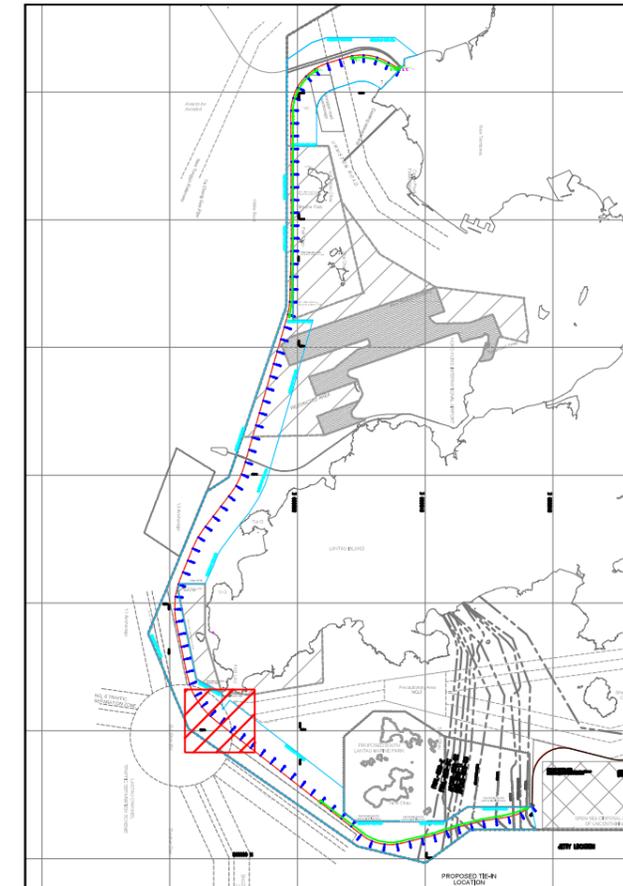
REVISION	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20	Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB. No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-CO0EC-21EKA-CTC020-5014 (5/18)	REV. D1

DESIGNATION	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 12.50	22° 10.633' N	113° 51.349' E	803156	804334
KP 13.00	22° 10.799' N	113° 51.120' E	802762	804642
KP 13.50	22° 10.966' N	113° 50.890' E	802369	804950
KP 14.00	22° 11.132' N	113° 50.661' E	801975	805258
KP 14.50	22° 11.302' N	113° 50.434' E	801587	805573
KP 15.00	22° 11.501' N	113° 50.237' E	801248	805940
KP 15.50	22° 11.727' N	113° 50.077' E	800975	806358

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

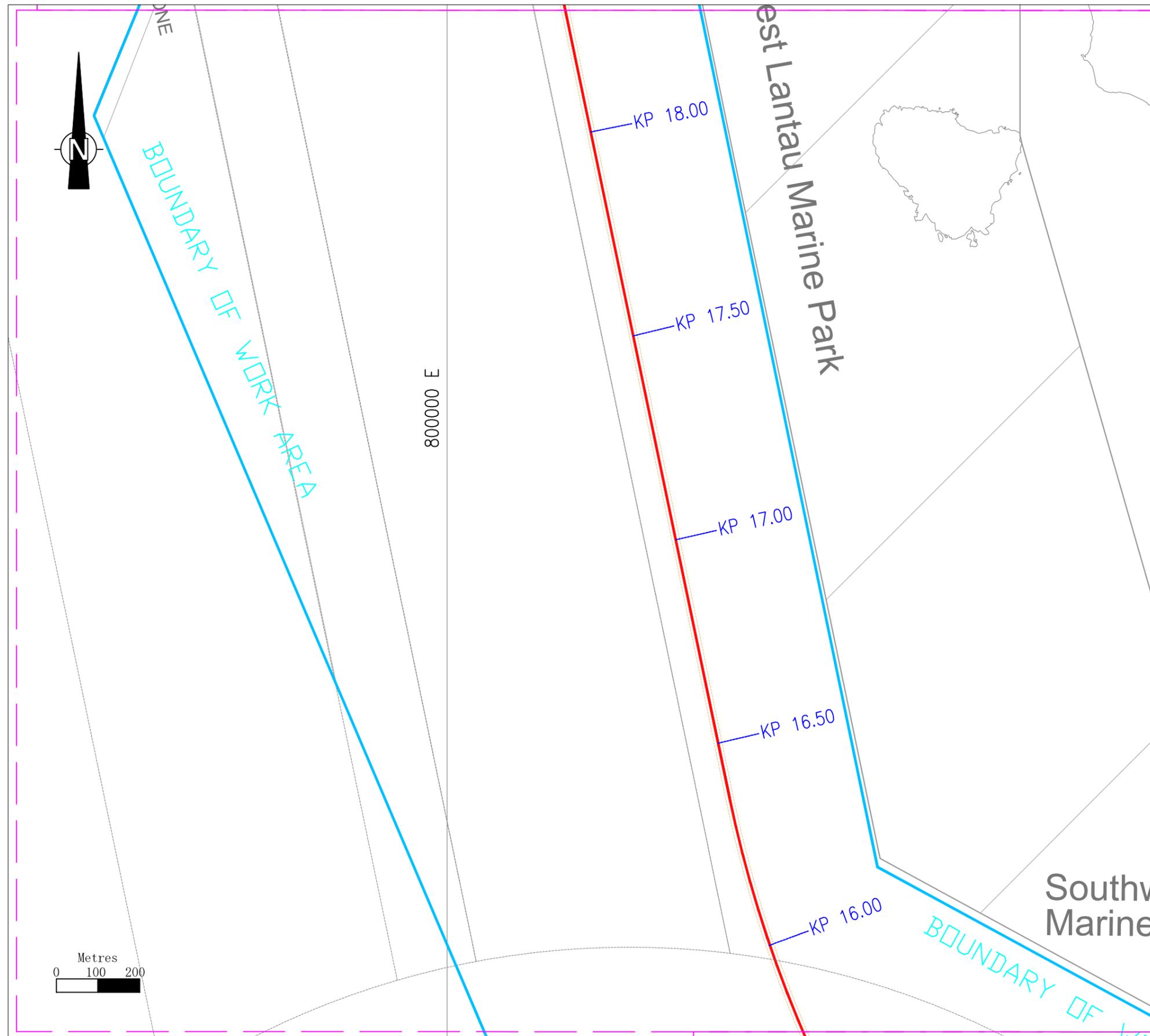
LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

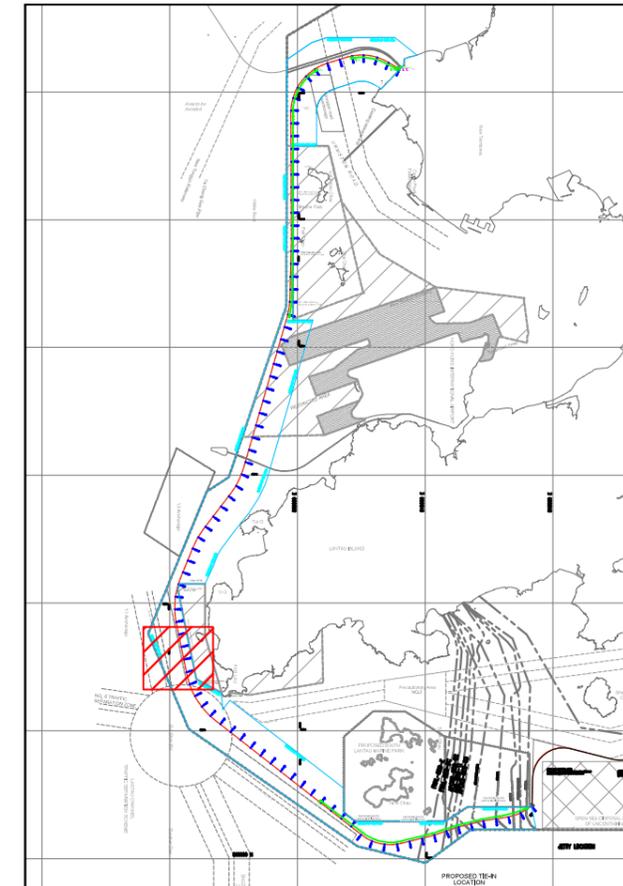
Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

REVISION	D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie
	D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB
	C	29APR20	Issued for Review	Liuwang	XuHB	YeHB
No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
CLIENT						
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB. No.		
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2		
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.		
CHECKED	XuHB	10OCT20		A112002816		
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)		
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000		
APPROVED			DWG No. HKOLNG-COOEC-21EKA-CTC020-5014(6/18)	REV.	D1	

NO.	DESCRIPTION	SIGNATURE	DATE



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 16.00	22° 11.975' N	113° 49.961' E	800775	806816
KP 16.50	22° 12.237' N	113° 49.888' E	800651	807300
KP 17.00	22° 12.502' N	113° 49.828' E	800549	807789
KP 17.50	22° 12.767' N	113° 49.768' E	800447	808279
KP 18.00	22° 13.032' N	113° 49.708' E	800345	808768

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

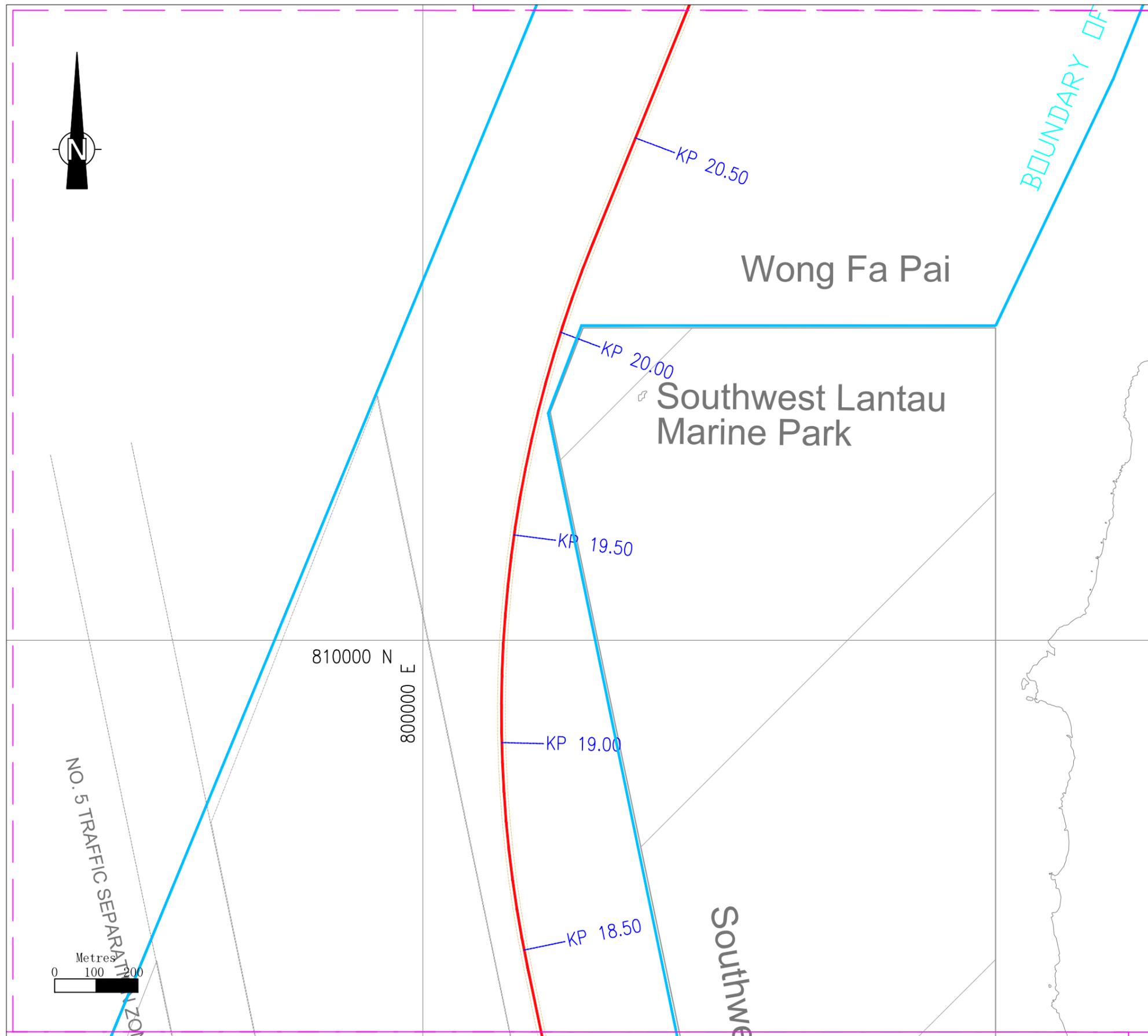
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

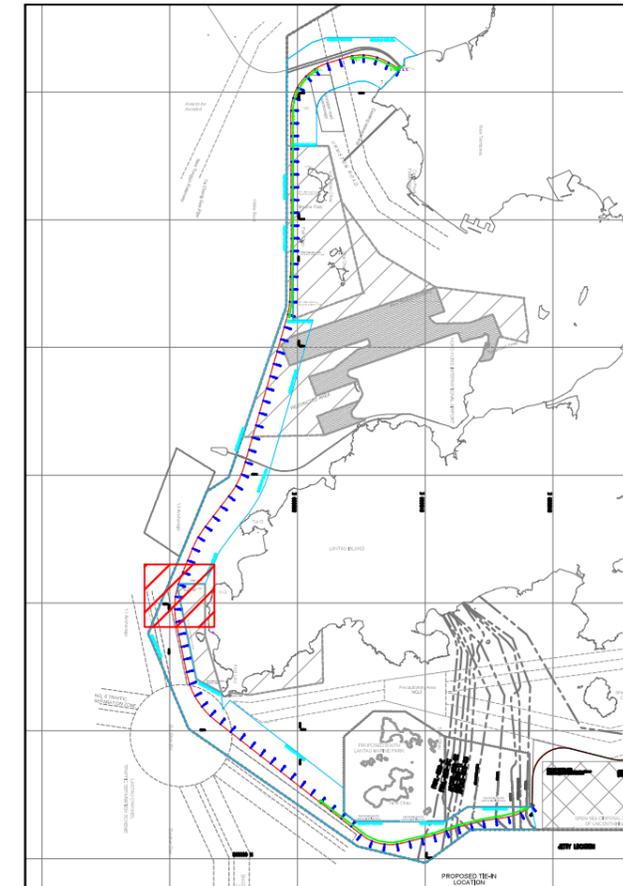
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued For Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued For Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd	
SIGNATORY SIGNATURE	DATE	PROJECT TITLE:	JOB. No.
DRAWN	Liuwang 10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang 10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB 10OCT20		A112002816
REVIEWED	Zhangjie 10OCT20	Drawing Title:	SCALE (A3)
EXAMINED		BPPS Pipeline Work Area Sketch	1:10000
APPROVED		DWG No. HKOLNG-COEOEC-21EKA-CTCO20-5014(7/18)	REV. D1

DESIGN DISCIPLINE	DATE
SIGNATURE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 18.50	22° 13.297' N	113° 49.648' E	800243	809258
KP 19.00	22° 13.566' N	113° 49.616' E	800190	809754
KP 19.50	22° 13.836' N	113° 49.632' E	800219	810253
KP 20.00	22° 14.100' N	113° 49.697' E	800331	810740
KP 20.50	22° 14.353' N	113° 49.801' E	800511	811206

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

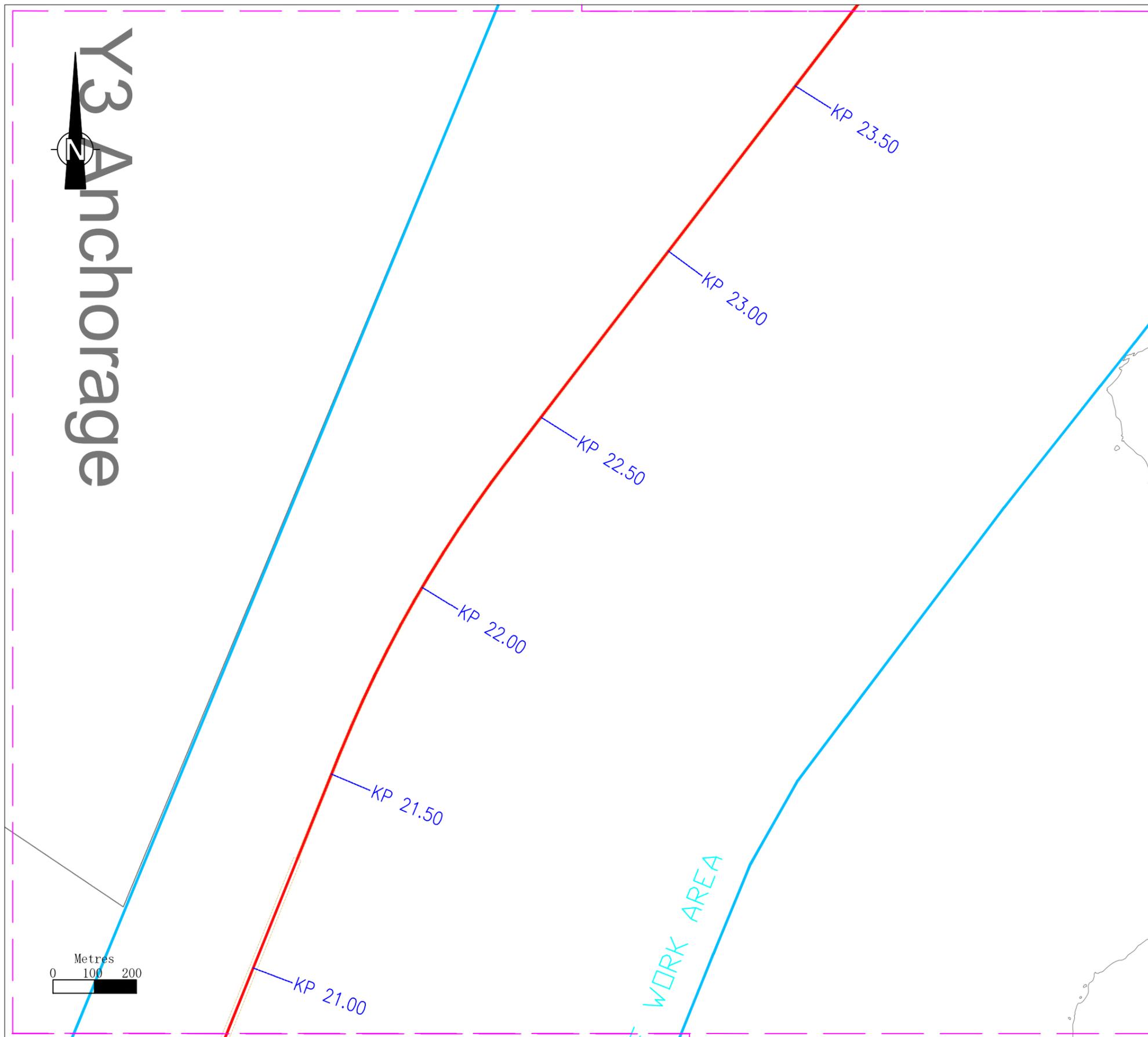
Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

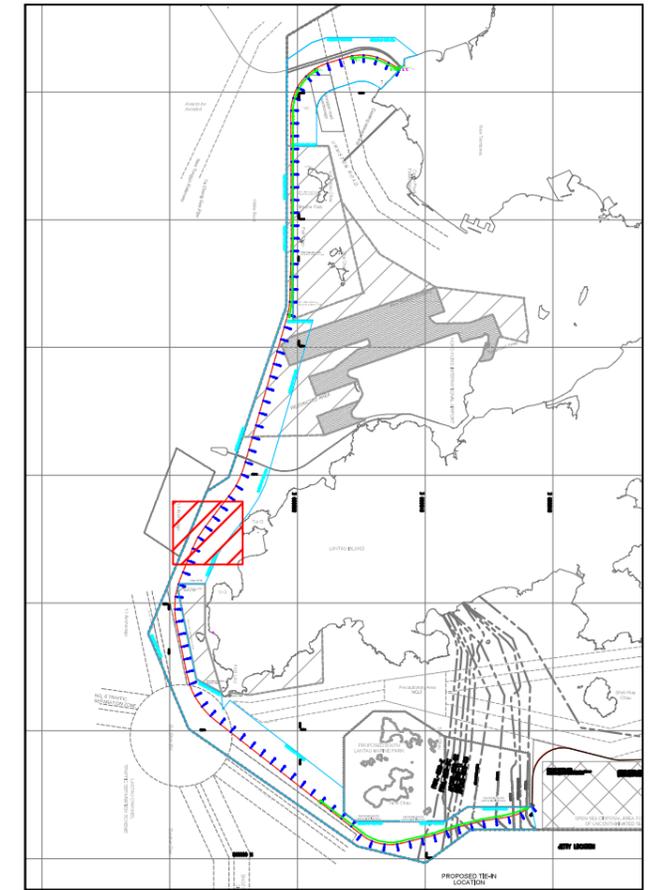
CLIENT	Capco	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-CO0EC-21EKA-CTC020-5014 (8/18)	REV. D1

DESIGNATION	
DISCIPLINE	
SIGNATURE	
DATE	

Y3 Anchorage



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 21.00	22° 14.604' N	113° 49.909' E	800698	811670
KP 21.50	22° 14.856' N	113° 50.018' E	800886	812133
KP 22.00	22° 15.100' N	113° 50.144' E	801103	812583
KP 22.50	22° 15.322' N	113° 50.310' E	801390	812992
KP 23.00	22° 15.537' N	113° 50.487' E	801694	813389
KP 23.50	22° 15.752' N	113° 50.664' E	801999	813785

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

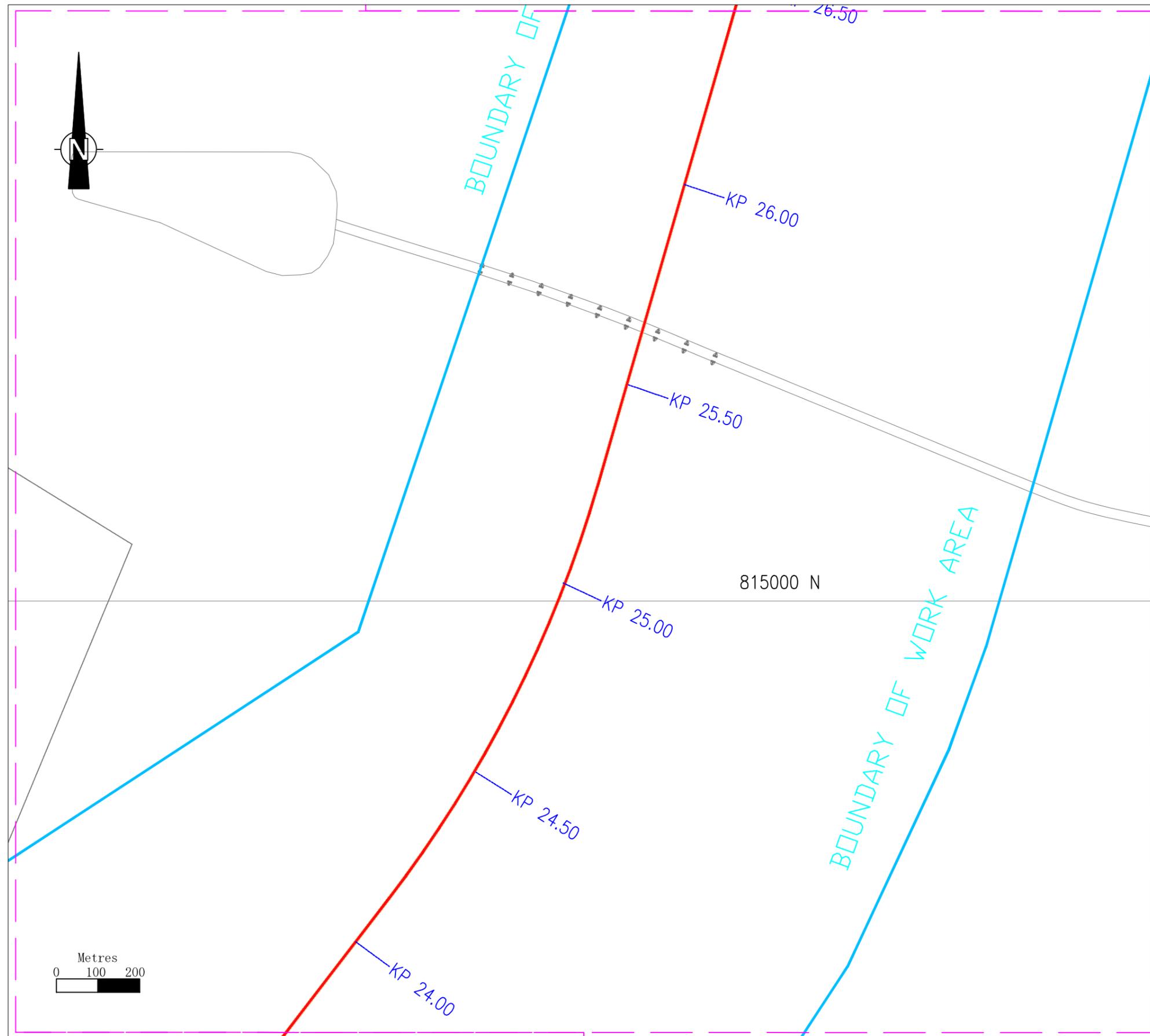
LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

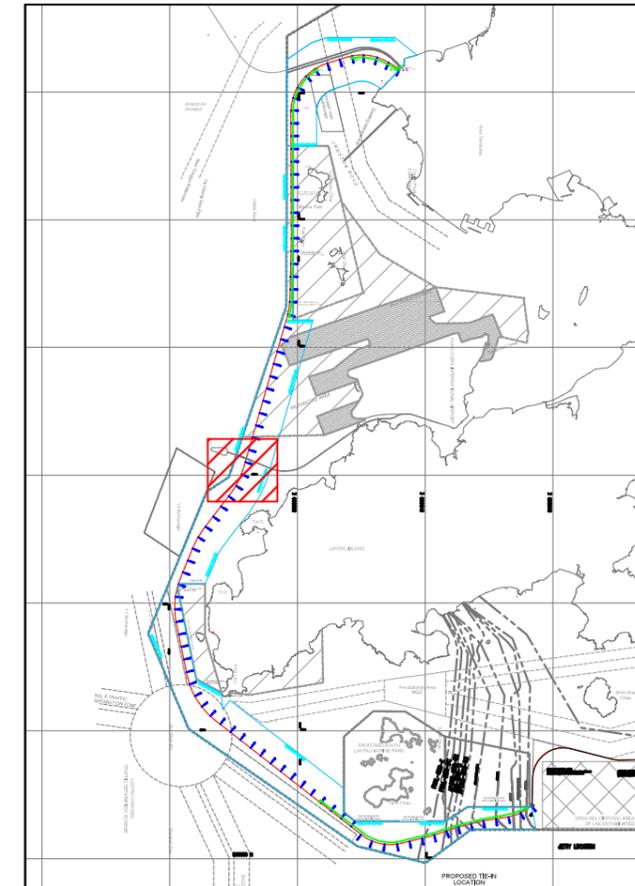
Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

REVISION	D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie
	D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB
	C	29APR20	Issued for Review	Liuwang	XuHB	YeHB
No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
CLIENT						
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB No.		
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2		
DESIGNED	Liuwang	10OCT20	-Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.		
CHECKED	XuHB	10OCT20		A112002816		
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)		
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000		
APPROVED			DWG No. HKOLNG-COOEC-21EKA-CTC020-5014(9/18)	REV.	D1	

DESIGN DISCIPLINE	DATE
SIGNATURE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 24.00	22° 15.968' N	113° 50.840' E	802303	814182
KP 24.50	22° 16.190' N	113° 51.006' E	802589	814592
KP 25.00	22° 16.434' N	113° 51.132' E	802805	815042
KP 25.50	22° 16.693' N	113° 51.218' E	802954	815519
KP 26.00	22° 16.953' N	113° 51.298' E	803093	815999

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

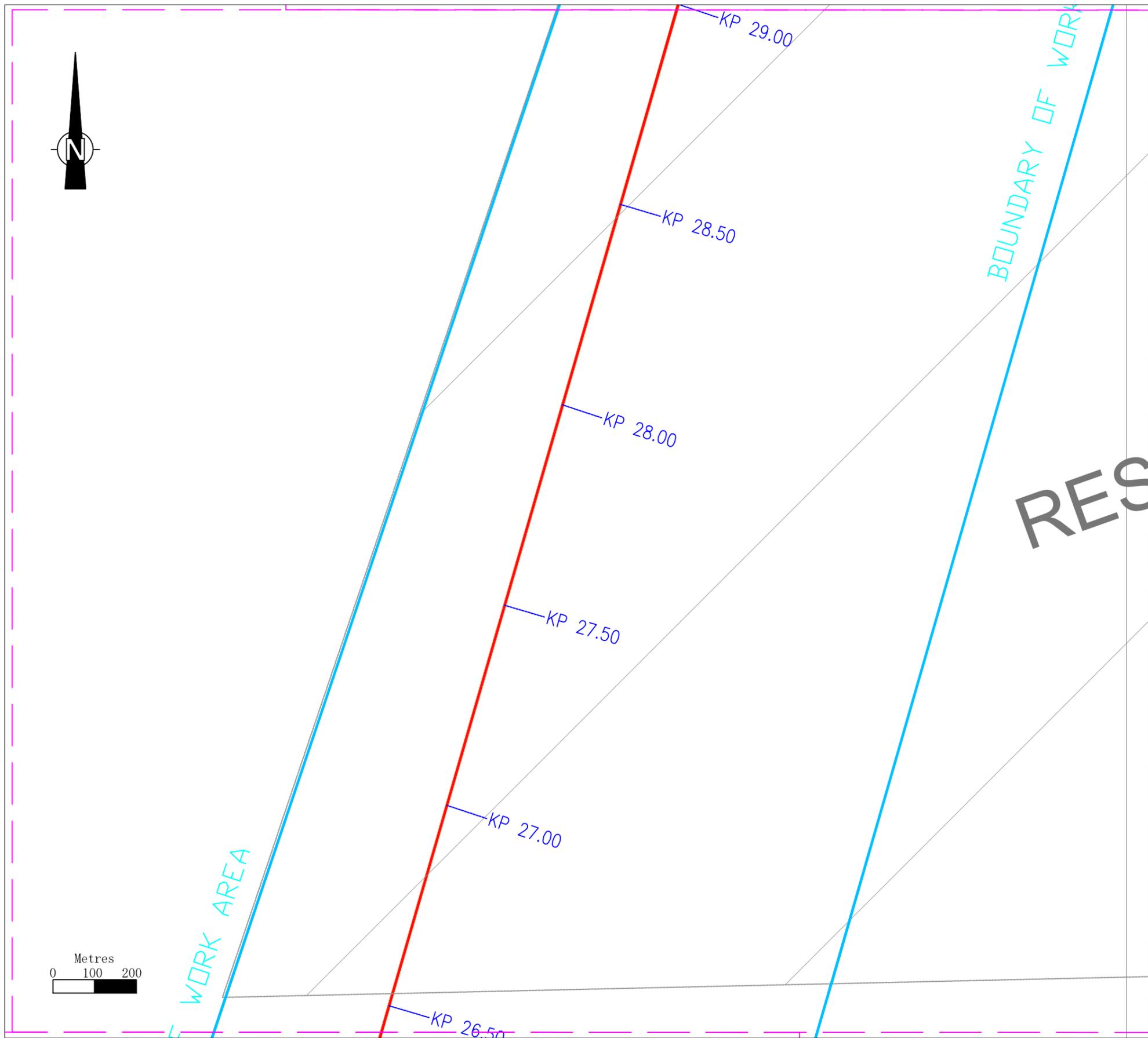
LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

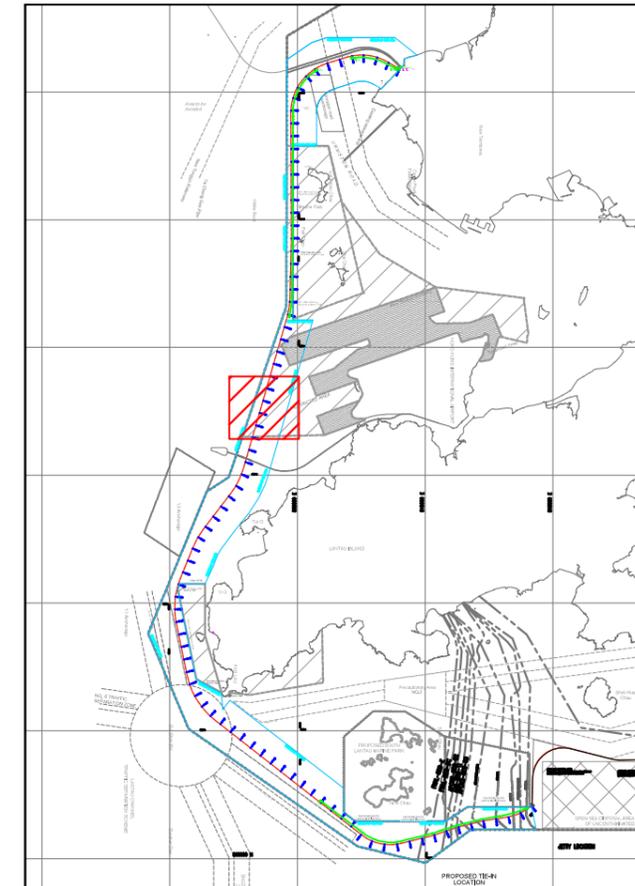
Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

REVISION	D1	10OCT20	Issued for Review	Liuwang	XuHB	Zhangjie
	D	27MAY20	Issued for Review	Liuwang	XuHB	YeHB
	C	29APR20	Issued for Review	Liuwang	XuHB	YeHB
	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.
CLIENT	Capco 香港中華煤氣有限公司		Offshore Oil Engineering Co., Ltd			
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB. No.		
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2		
DESIGNED	Liuwang	10OCT20	-Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.		
CHECKED	XuHB	10OCT20		A112002816		
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)		
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000		
APPROVED			DWG No. HKOLNG-COIEC-21EKA-CTC020-5014 (10/18)	REV.	D1	

DESIGN DISCIPLINE	DATE
SIGNATURE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 26.50	22° 17.214' N	113° 51.378' E	803232	816480
KP 27.00	22° 17.474' N	113° 51.458' E	803370	816960
KP 27.50	22° 17.735' N	113° 51.538' E	803509	817440
KP 28.00	22° 17.995' N	113° 51.618' E	803648	817921
KP 28.50	22° 18.255' N	113° 51.699' E	803786	818401
KP 29.00	22° 18.516' N	113° 51.779' E	803925	818882

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

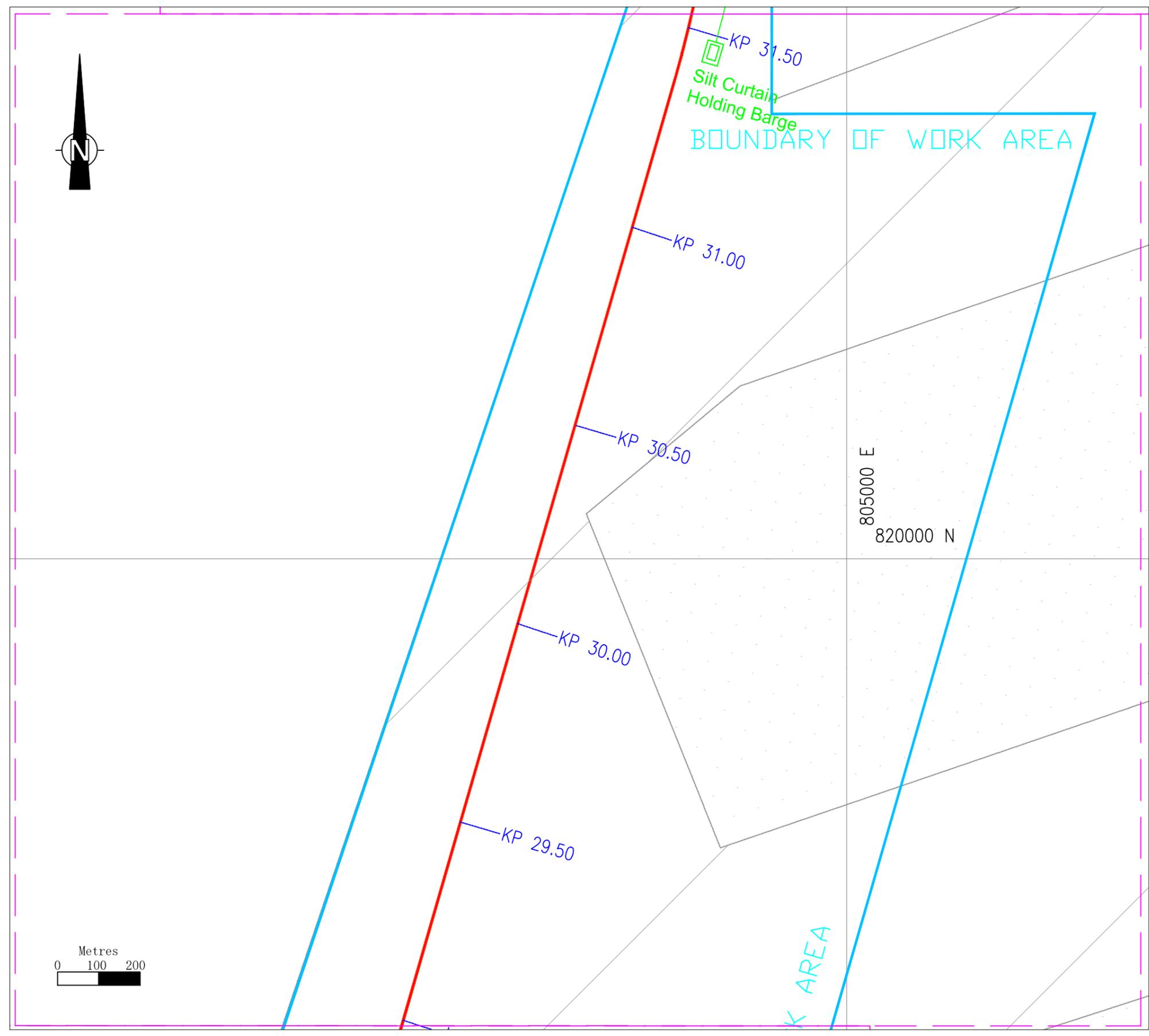
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.

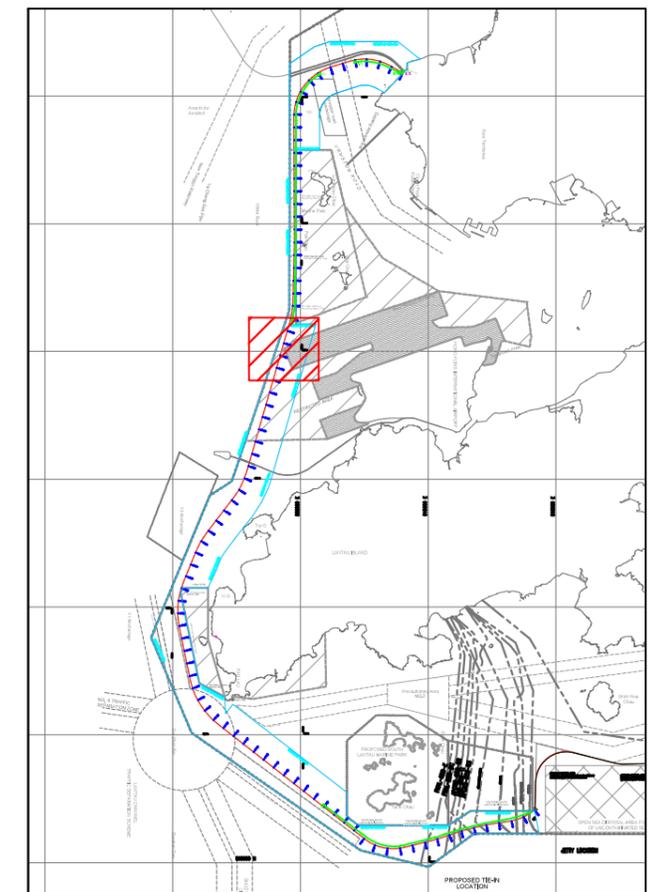
REVISION	NO.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No. A112002816
CHECKED	XuHB	10OCT20	Drawing Title:	SCALE (A3)
REVIEWED	Zhangjie	10OCT20	BPPS Pipeline Work Area Sketch	1:10000
EXAMINED			DWG No. HKOLNG-COEC-21EKA-CTC020-5014(11/18)	REV. D1
APPROVED				

DESIGN	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 29.50	22° 18.776' N	113° 51.859' E	804064	819362
KP 30.00	22° 19.037' N	113° 51.939' E	804202	819842
KP 30.50	22° 19.297' N	113° 52.019' E	804341	820323
KP 31.00	22° 19.558' N	113° 52.100' E	804480	820803
KP 31.50	22° 19.819' N	113° 52.178' E	804616	821284

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

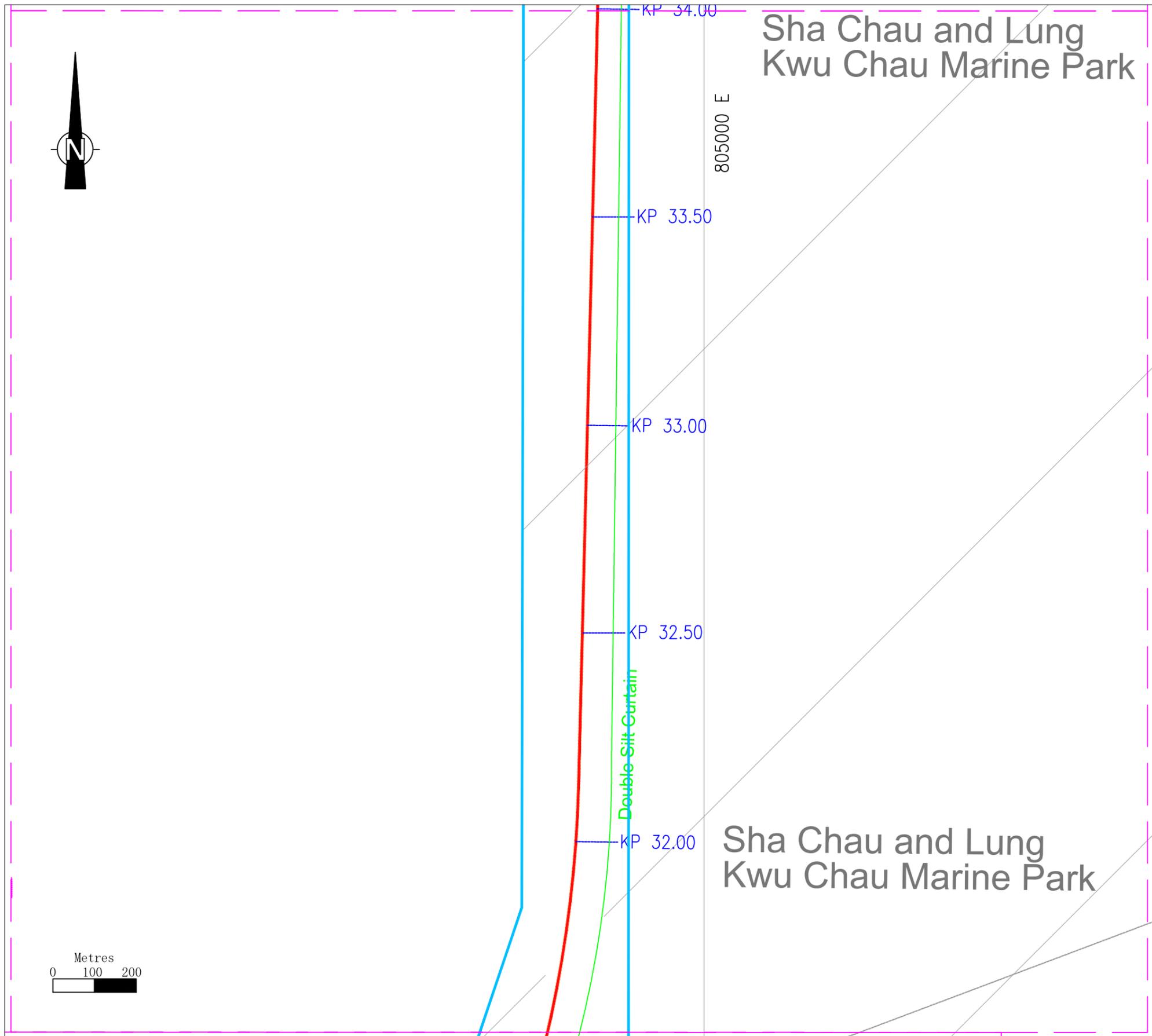
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

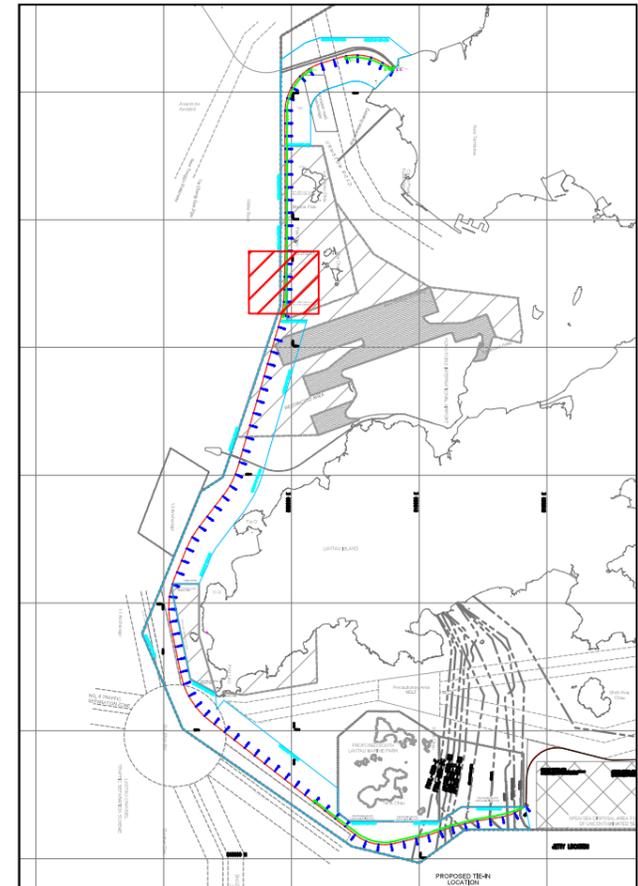
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY SIGNATURE	DATE	PROJECT TITLE:	JOB. No.	
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-COEC-21EKA-CTC020-5014 (12/18)	REV. D1

DESIGN DISCIPLINE	SIGNATURE	DATE



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 32.00	22° 20.086' N	113° 52.222' E	804692	821778
KP 32.50	22° 20.357' N	113° 52.230' E	804708	822277
KP 33.00	22° 20.628' N	113° 52.237' E	804720	822777
KP 33.50	22° 20.898' N	113° 52.243' E	804732	823277
KP 34.00	22° 21.169' N	113° 52.250' E	804744	823777

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

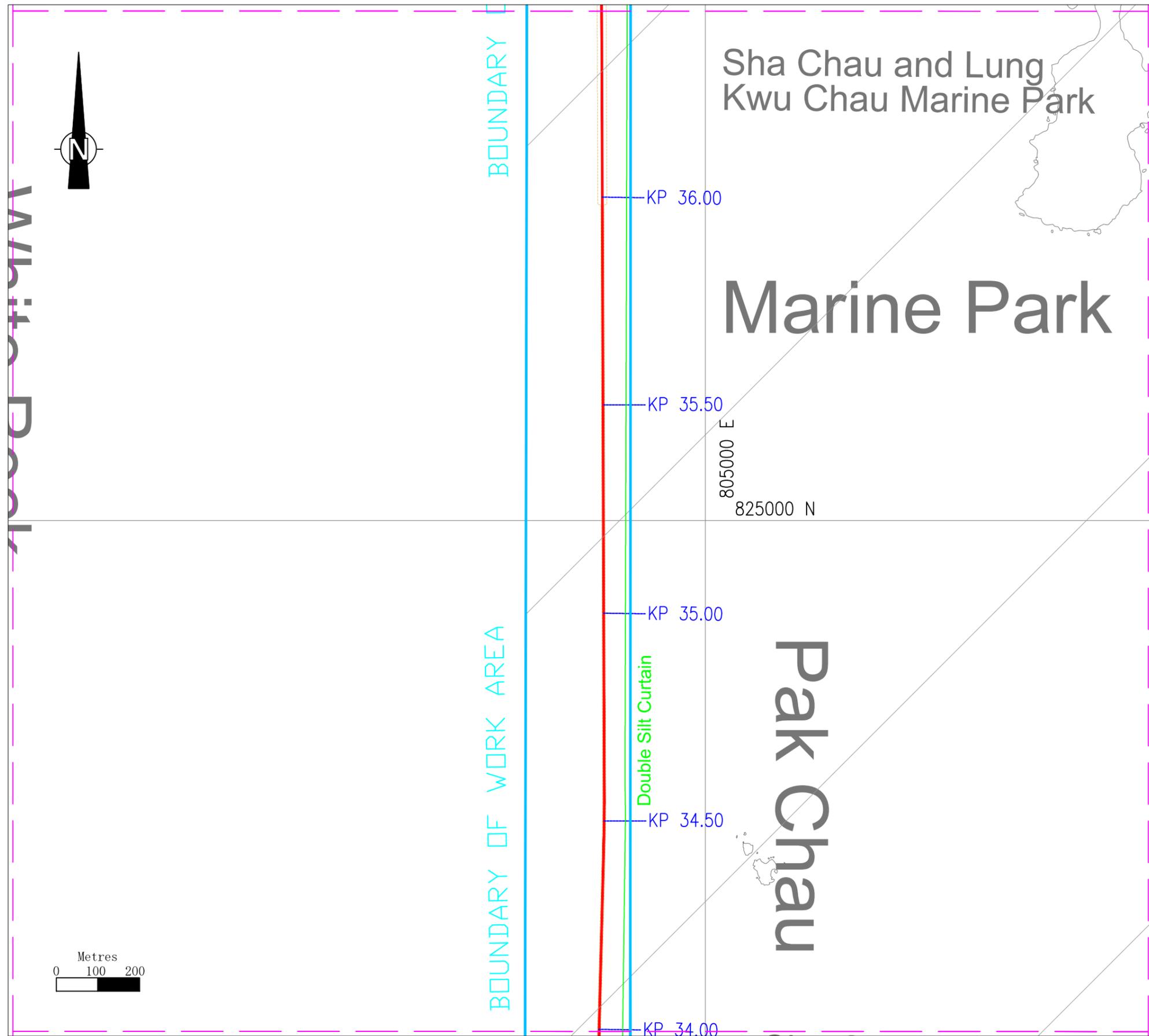
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

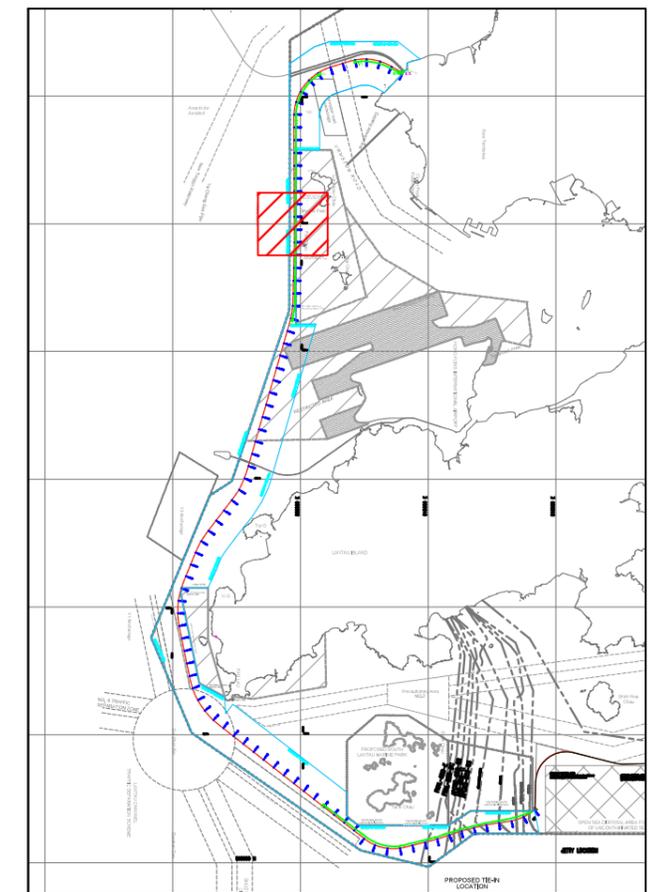
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued For Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued For Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd
SIGNATORY SIGNATURE		PROJECT TITLE: HONG KONG OFFSHORE LNG TERMINAL PROJECT -Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)
DRAWN	Liuwang	JOB No. 20ZB-DD2
DESIGNED	Liuwang	CERTIF. No. A112002816
CHECKED	XuHB	SCALE (A3) 1:10000
REVIEWED	Zhangjie	Drawing Title: BPPS Pipeline Work Area Sketch
EXAMINED		DWG No. HKOLNG-COEC-21EKA-CTC020-5014 (13/18)
APPROVED		REV. D1

DESIGN DISCIPLINE	SIGNATURE	DATE



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 34.00	22° 21.169' N	113° 52.250' E	804744	823777
KP 34.50	22° 21.440' N	113° 52.256' E	804756	824777
KP 35.00	22° 21.711' N	113° 52.255' E	804756	824777
KP 35.50	22° 21.982' N	113° 52.254' E	804754	825277
KP 36.00	22° 22.253' N	113° 52.252' E	804752	825777

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

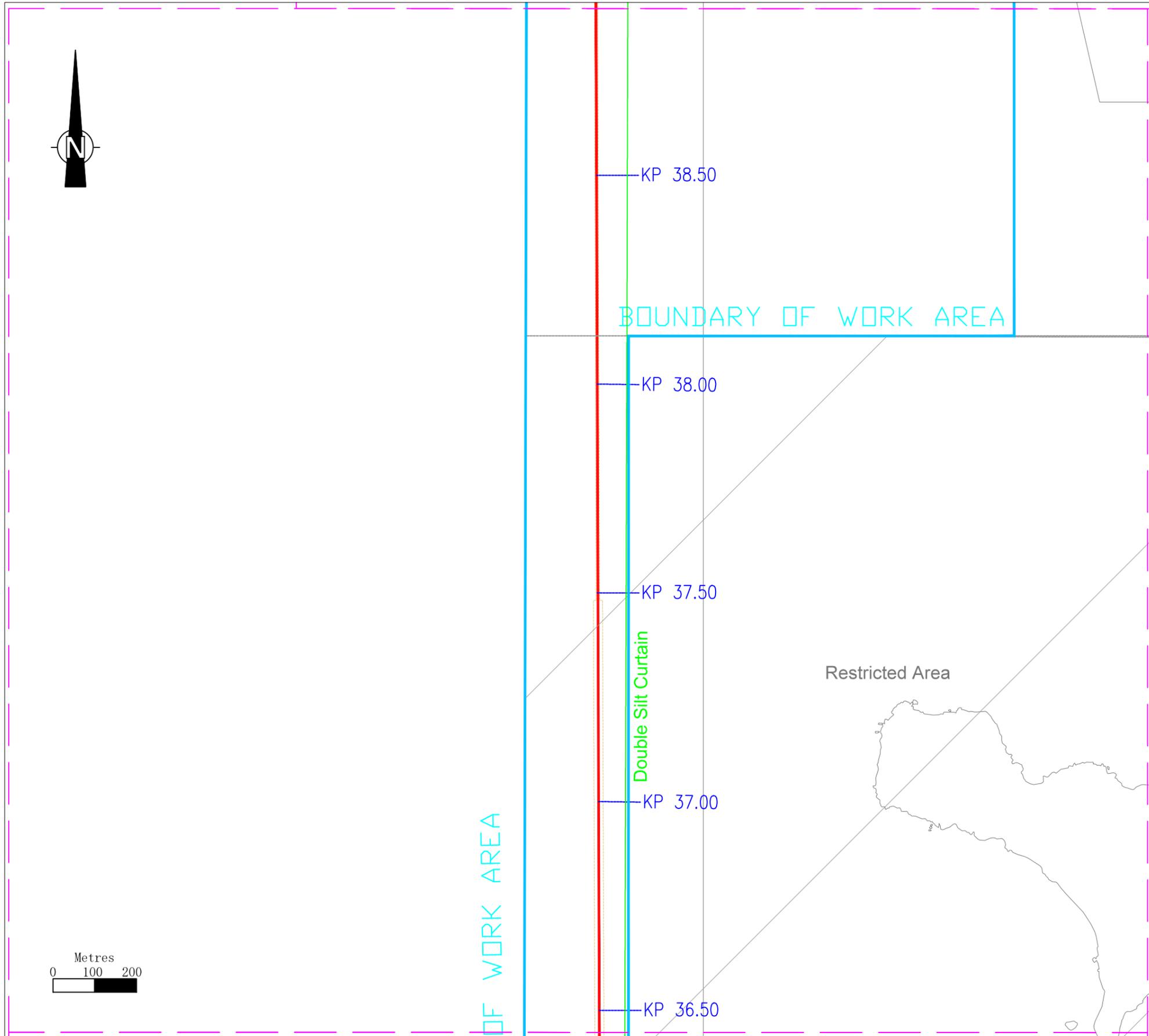
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

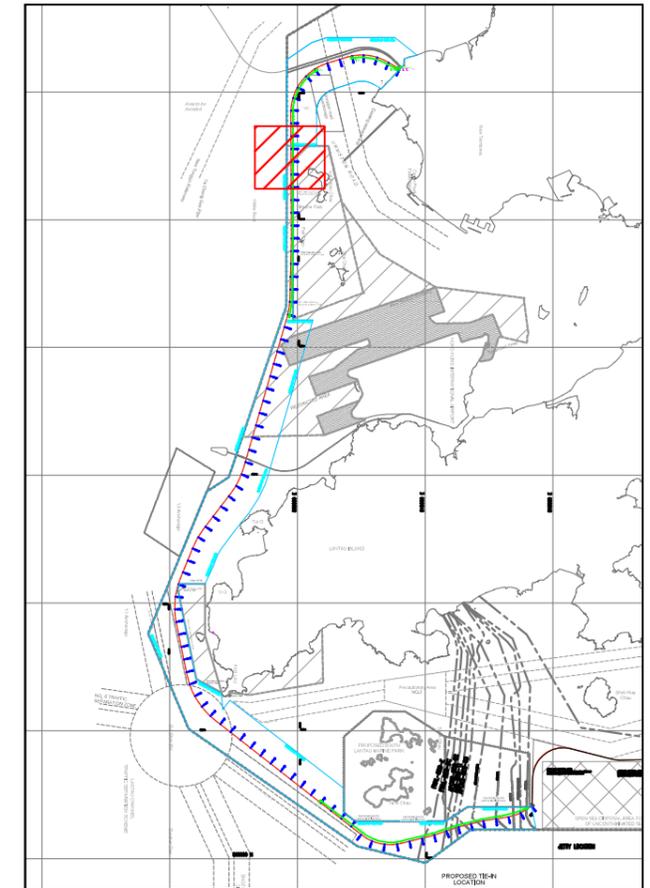
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd
SIGNATORY SIGNATURE		PROJECT TITLE: HONG KONG OFFSHORE LNG TERMINAL PROJECT -Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)
DRAWN	Liuwang	JOB No. 20ZB-DD2
DESIGNED	Liuwang	CERTIF. No. A112002816
CHECKED	XuHB	SCALE (A3) 1:10000
REVIEWED	Zhangjie	Drawing Title: BPPS Pipeline Work Area Sketch
EXAMINED		DWG No. HKOLNG-COEC-21EKA-CTC020-5014 (14/18)
APPROVED		REV. D1

DESIGNATION	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 36.50	22° 22.524' N	113° 52.251' E	804751	826277
KP 37.00	22° 22.795' N	113° 52.249' E	804749	826777
KP 37.50	22° 23.066' N	113° 52.248' E	804748	827277
KP 38.00	22° 23.337' N	113° 52.246' E	804746	827777
KP 38.50	22° 23.607' N	113° 52.245' E	804744	828277

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

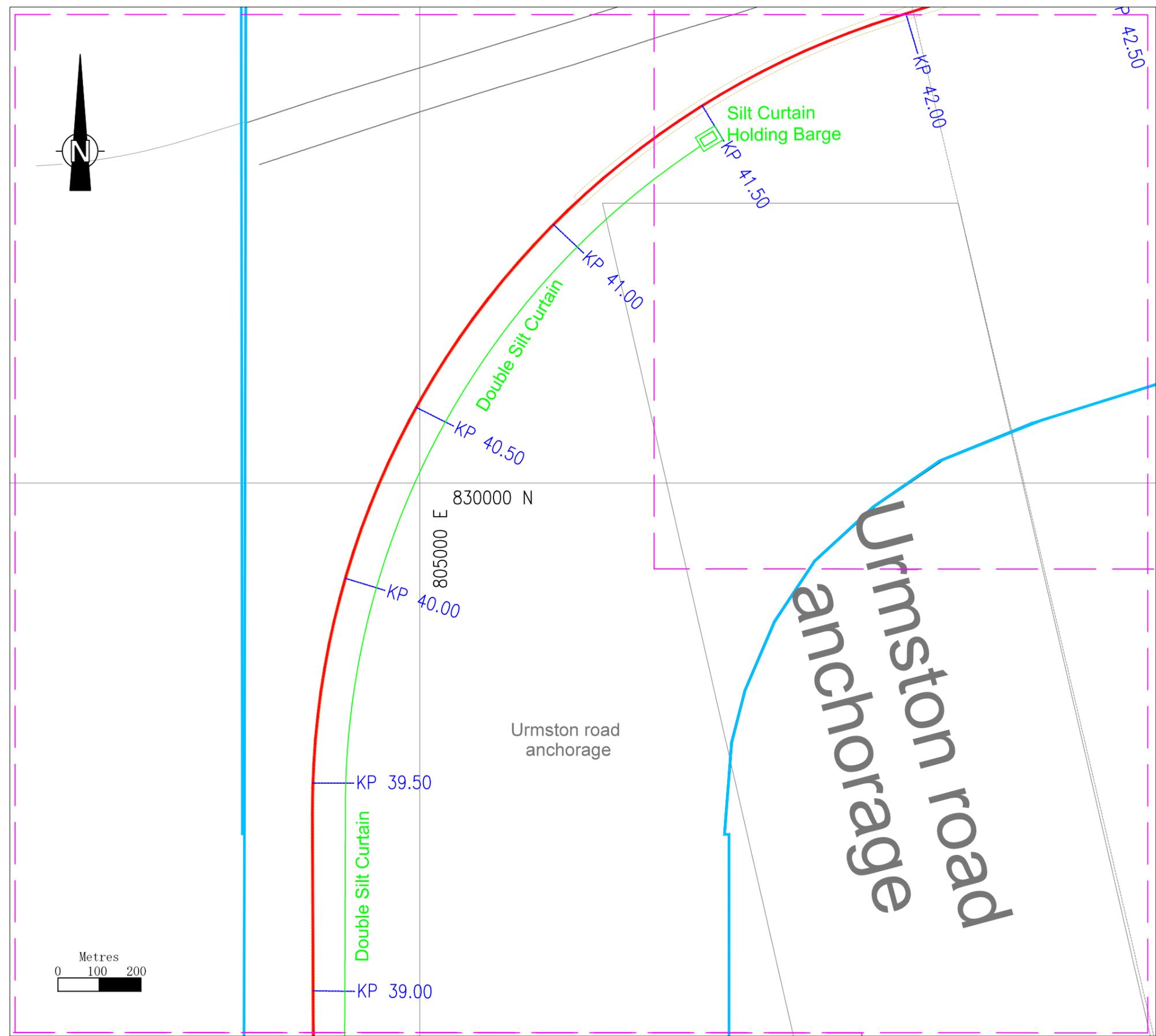
- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

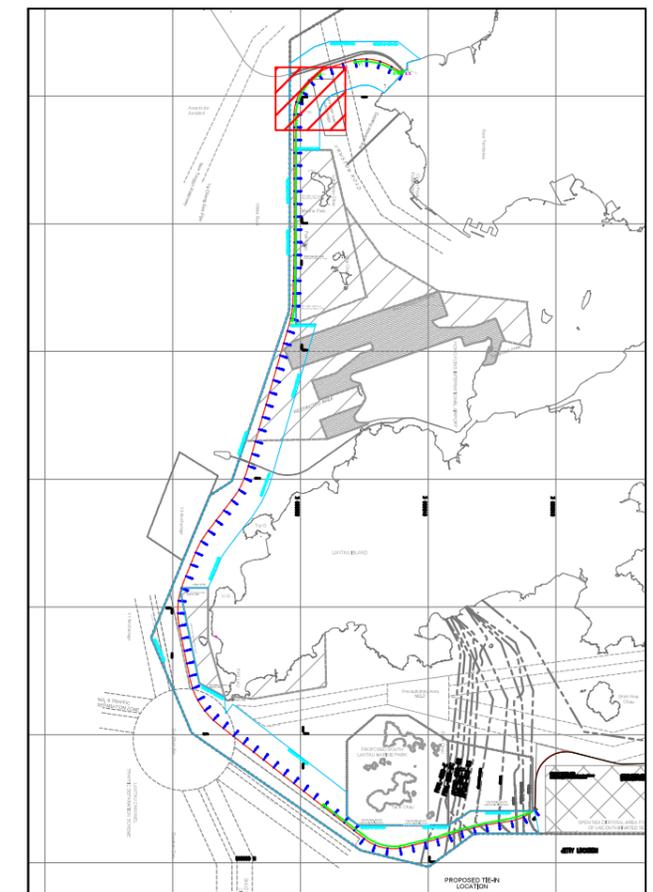
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	華能香港能源有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB. No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-COEC-21EKA-CTC020-5014 (15/18)	REV. D1

DESIGN	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 39.00	22° 23.878' N	113° 52.243' E	804743	828777
KP 39.50	22° 24.149' N	113° 52.242' E	804742	829277
KP 40.00	22° 24.416' N	113° 52.287' E	804820	829769
KP 40.50	22° 24.665' N	113° 52.402' E	805018	830227
KP 41.00	22° 24.879' N	113° 52.579' E	805322	830622
KP 41.50	22° 25.046' N	113° 52.807' E	805715	830930
KP 42.00	22° 25.155' N	113° 53.073' E	806171	831131
KP 42.50	22° 25.237' N	113° 53.351' E	806648	831280

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

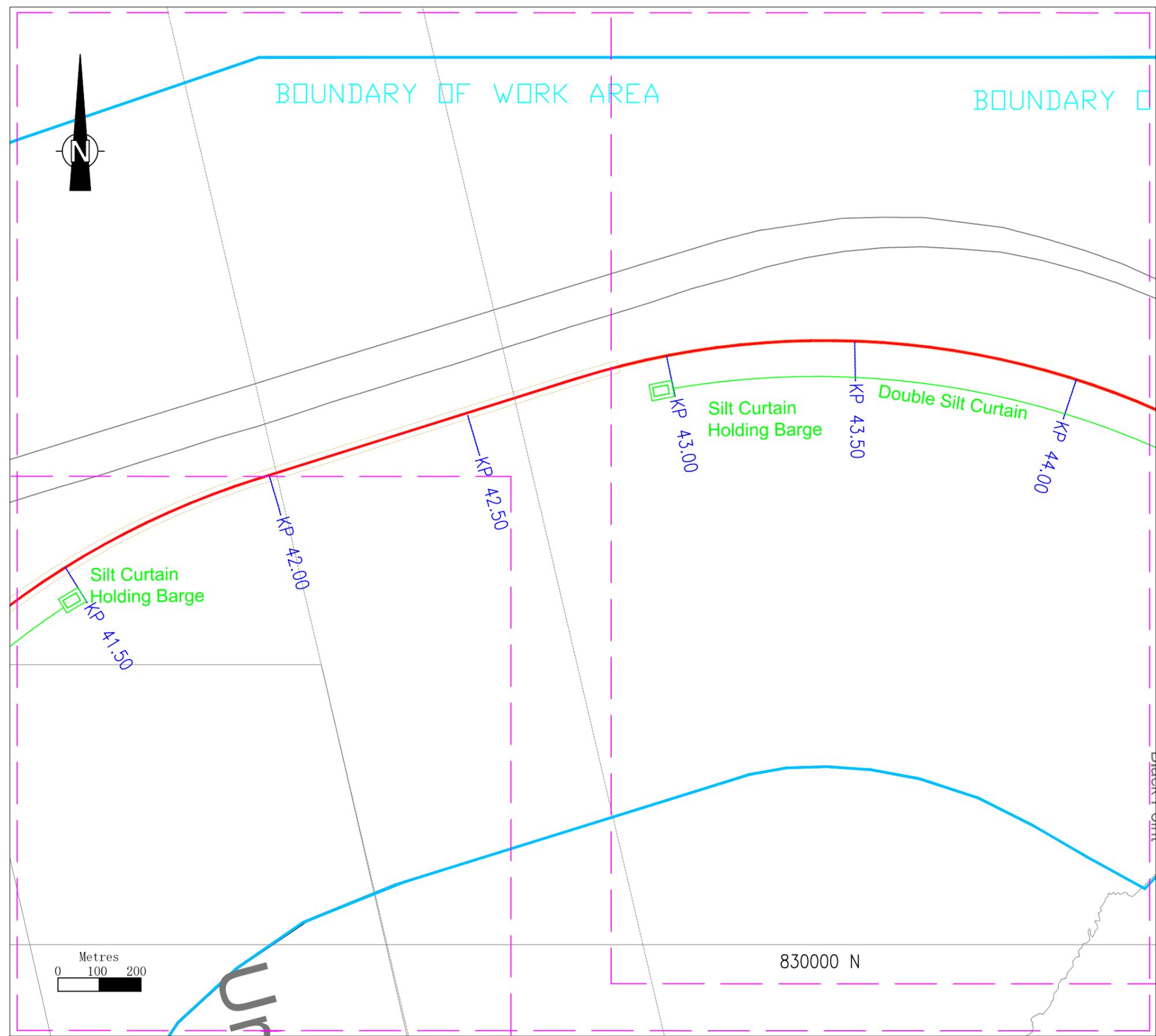
- Blue line: Boundary of work area
- Green line: Double Silt Curtain
- Red line: BPPS Pipeline

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

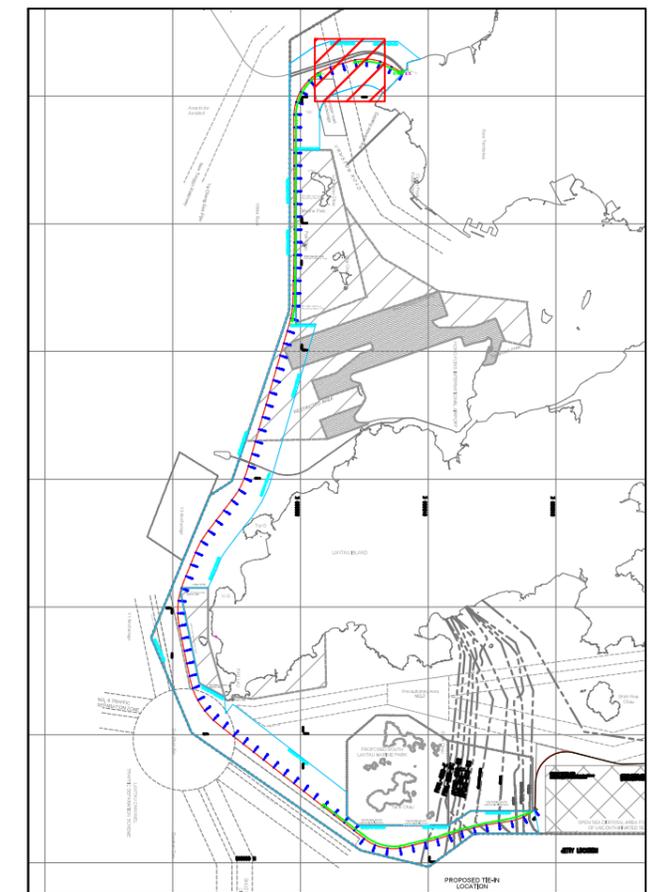
REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	Capco 香港中華煤氣有限公司	Offshore Oil Engineering Co., Ltd
SIGNATORY SIGNATURE		
DATE	10OCT20	
PROJECT TITLE	HONG KONG OFFSHORE LNG TERMINAL PROJECT - Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	
JOB. No.	20ZB-DD2	
CERTIF. No.	A112002816	
SCALE (A3)	1:10000	
DWG No.	HKOLNG-COEC-21EKA-CTC020-5014(16/18)	
REV.	D1	

DESIGN	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 41.50	22° 25.046' N	113° 52.807' E	805715	830930
KP 42.00	22° 25.155' N	113° 53.073' E	806171	831131
KP 42.50	22° 25.237' N	113° 53.351' E	806648	831280
KP 43.00	22° 25.312' N	113° 53.631' E	807129	831418
KP 42.50	22° 25.237' N	113° 53.351' E	806648	831280
KP 43.00	22° 25.312' N	113° 53.631' E	807129	831418
KP 43.50	22° 25.331' N	113° 53.921' E	807626	831452
KP 44.00	22° 25.282' N	113° 54.206' E	808117	831361

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline
- Steel Sheet Piles for Cofferdam

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

REVISION	No.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT: **Capco** 香港中華煤氣有限公司
Offshore Oil Engineering Co., Ltd

SIGNATORY SIGNATURE DATE PROJECT TITLE: HONG KONG OFFSHORE LNG TERMINAL PROJECT - Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018) JOB No. 20ZB-DD2

DRAWN Liuwang 10OCT20

DESIGNED Liuwang 10OCT20 CERTIF. No. A112002816

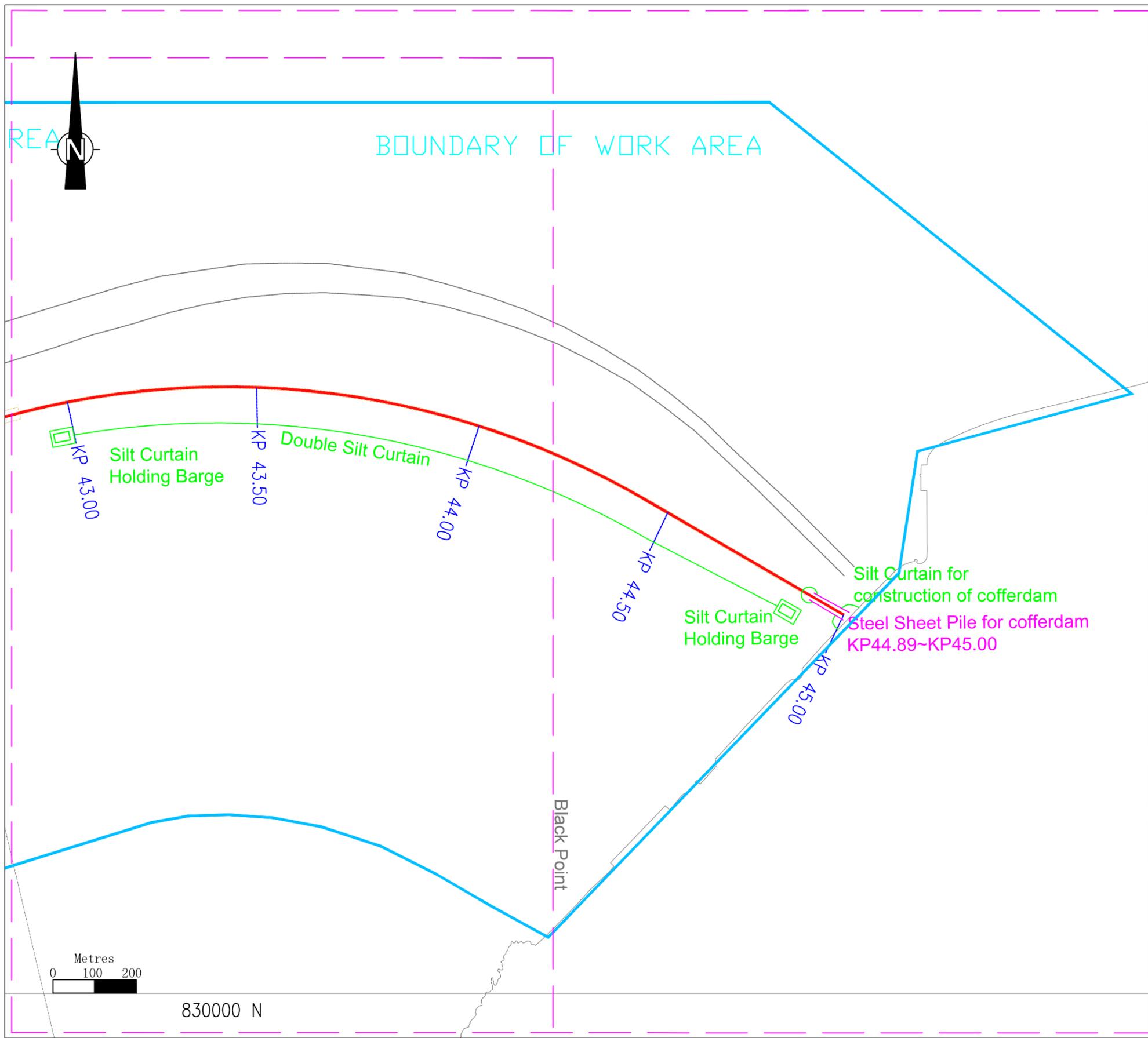
CHECKED XuHB 10OCT20

REVIEWED Zhangjie 10OCT20 Drawing Title: BPPS Pipeline Work Area Sketch SCALE (A3) 1:10000

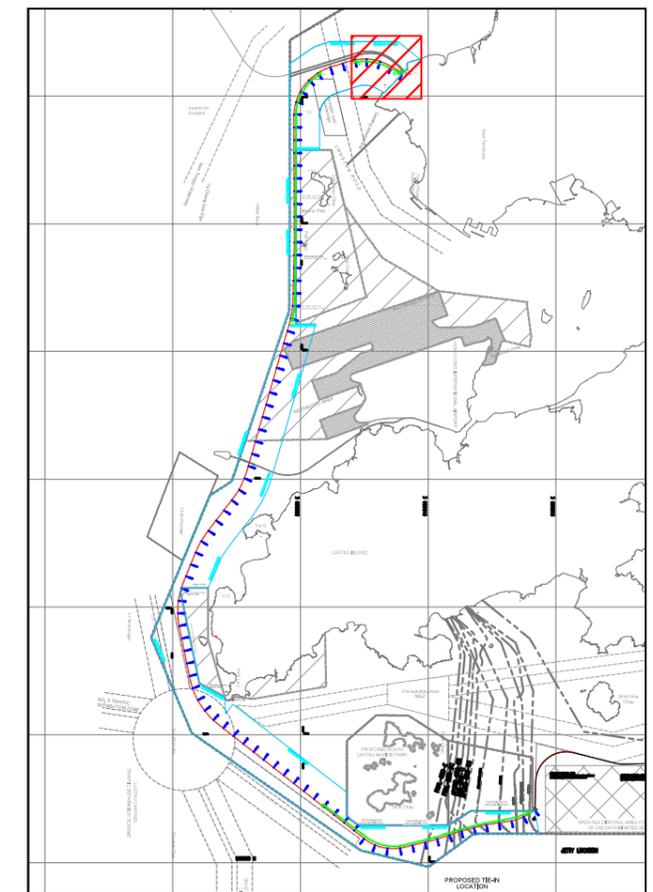
EXAMINED

APPROVED DWG No. HKOLNG-COOC-21EKA-CTC020-5014 (17/18) REV. D1

DESIGNATION	
DISCIPLINE	
SIGNATURE	
DATE	



PROPOSED 30" BPPS PIPELINE ROUTE



ID	WGS84		HK80	
	LATITUDE	LONGITUDE	E	N
KP 43.00	22° 25.312' N	113° 53.631' E	807129	831418
KP 43.50	22° 25.331' N	113° 53.921' E	807626	831452
KP 44.00	22° 25.282' N	113° 54.206' E	808117	831361
KP 44.50	22° 25.170' N	113° 54.471' E	808570	831153
KP 45.00	22° 25.034' N	113° 54.723' E	809002	830901

NOTE: THE COORDINATES ARE REFERENCED TO THE WORLD GEODETIC SYSTEM 1984 COORDINATE SYSTEM (WGS84) AND THE HONG KONG 1980 GRID SYSTEM (HK80).

LEGEND:

- Boundary of work area
- Double Silt Curtain
- BPPS Pipeline
- Steel Sheet Piles for Cofferdam

Note 1: Silt curtain will be deployed at the plant for dredging and jetting activities.
 Note 2: The length of the double layer silt curtain deployed at the active dredging / jetting location will be determined considering the findings of the EIA Report and Environmental Review Report for the BPPS Pipeline Construction Options, the potential impact to existing marine traffic for review by the Marine Department and the performance of the pilot test upon agreement with the Environmental Team and the Independent Environmental Checker.

REVISION	NO.	DATE	DESCRIPTION	BY	REV' W.	EXAM.	CLP
D1	10OCT20		Issued for Review	Liuwang	XuHB	Zhangjie	
D	27MAY20		Issued for Review	Liuwang	XuHB	YeHB	
C	29APR20		Issued for Review	Liuwang	XuHB	YeHB	

CLIENT	華能香港有限公司	Offshore Oil Engineering Co., Ltd		
SIGNATORY	SIGNATURE	DATE	PROJECT TITLE:	JOB No.
DRAWN	Liuwang	10OCT20	HONG KONG OFFSHORE LNG TERMINAL PROJECT	20ZB-DD2
DESIGNED	Liuwang	10OCT20	Works associated with the subsea gas pipeline for Black Point Power Station and the associated Gas Receiving Station in BPPS (Further Environment Permit No. FEP-03/558/2018)	CERTIF. No.
CHECKED	XuHB	10OCT20		A112002816
REVIEWED	Zhangjie	10OCT20	Drawing Title:	SCALE (A3)
EXAMINED			BPPS Pipeline Work Area Sketch	1:10000
APPROVED			DWG No. HKOLNG-COEC-21EKA-CTC020-5014 (18/18)	REV. D1

ANNEX C

VERTICAL ALIGNMENT OF THE BPPS PIPELINE

Attachment 3 Vertical Alignment of BPPS Pipeline

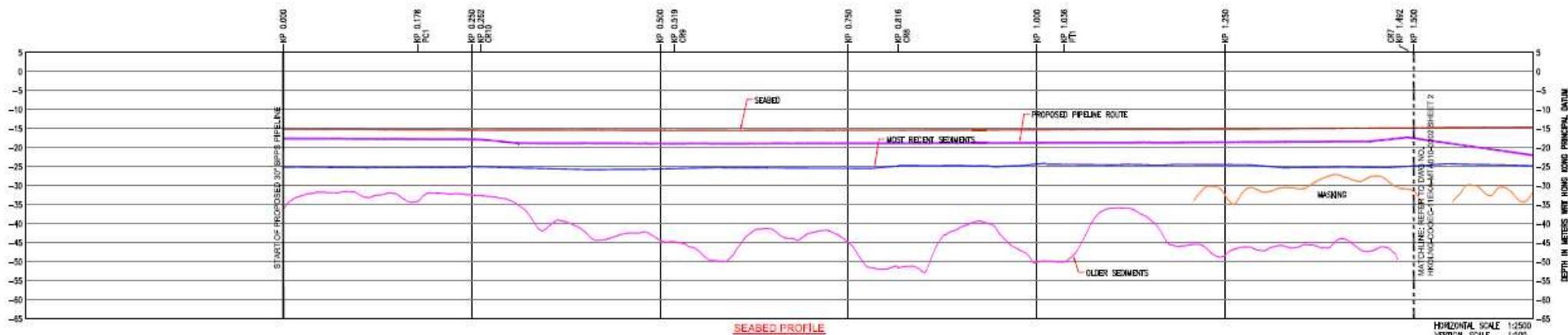


Figure 1. Seabed Profile - KP 0.00 to KP 1.50

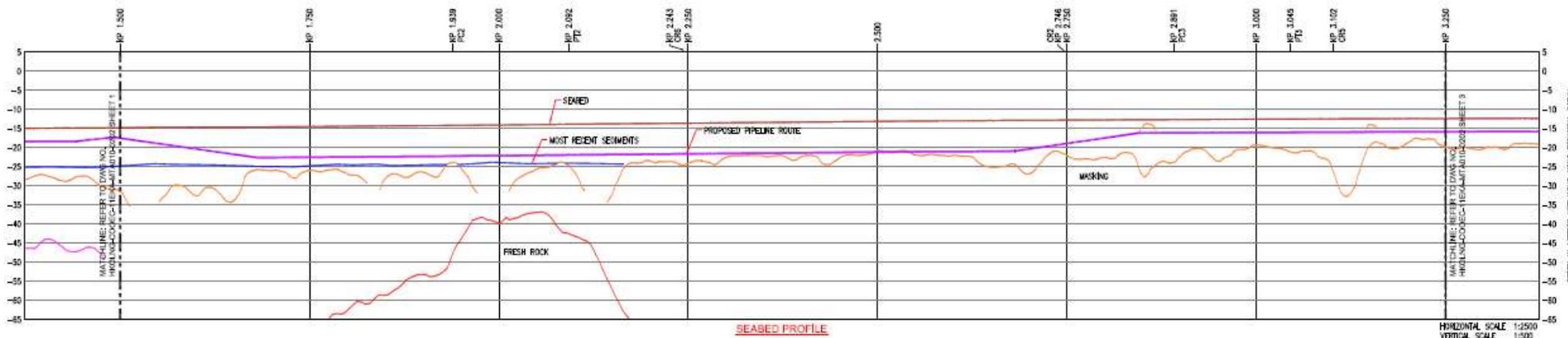


Figure 2. Seabed Profile - KP 1.50 to KP 3.25

GEOLOGICAL PROFILE

- SEABED
- MASKING
- BASE OF MOST RECENT SEDIMENTS
- BASE OF OLDER SEDIMENTS
- TOP OF WEATHERED ROCK
- TOP OF FRESH ROCK

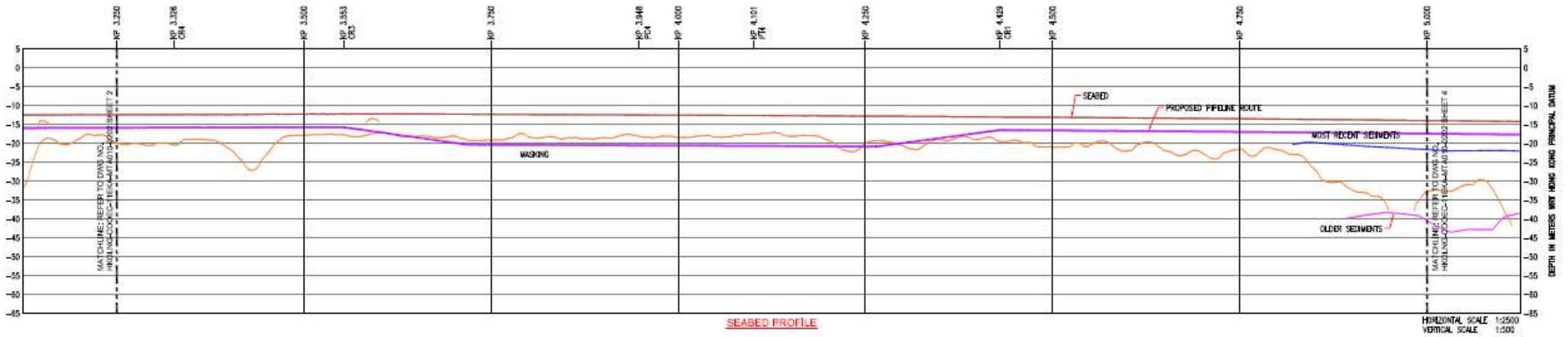


Figure 3. Seabed Profile - KP 3.25 to KP 5.00

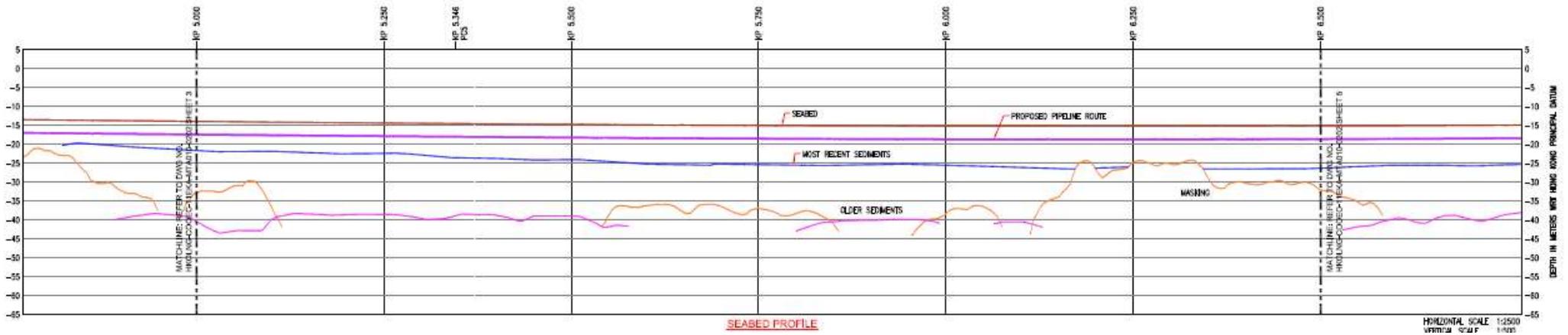


Figure 4. Seabed Profile - KP 5.00 to KP 6.50

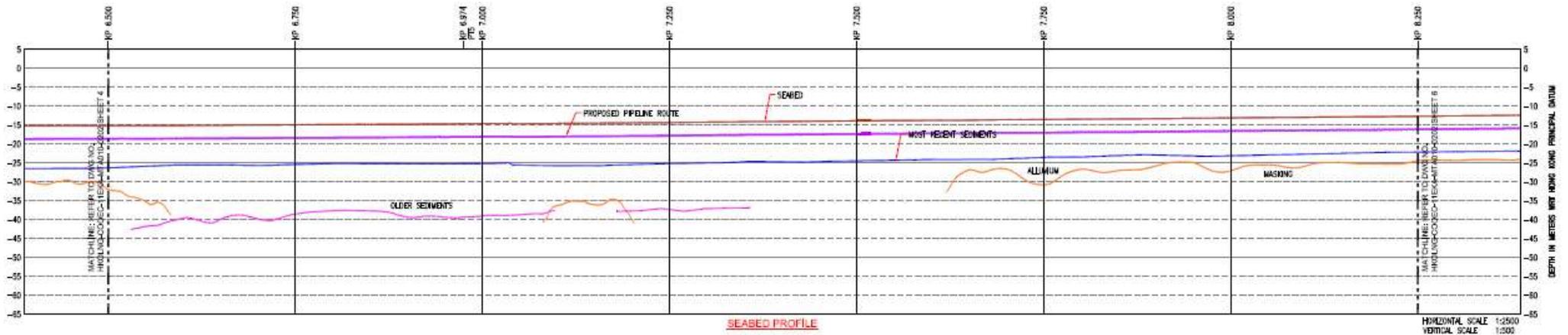


Figure 5. Seabed Profile - KP 6.50 to KP 8.25

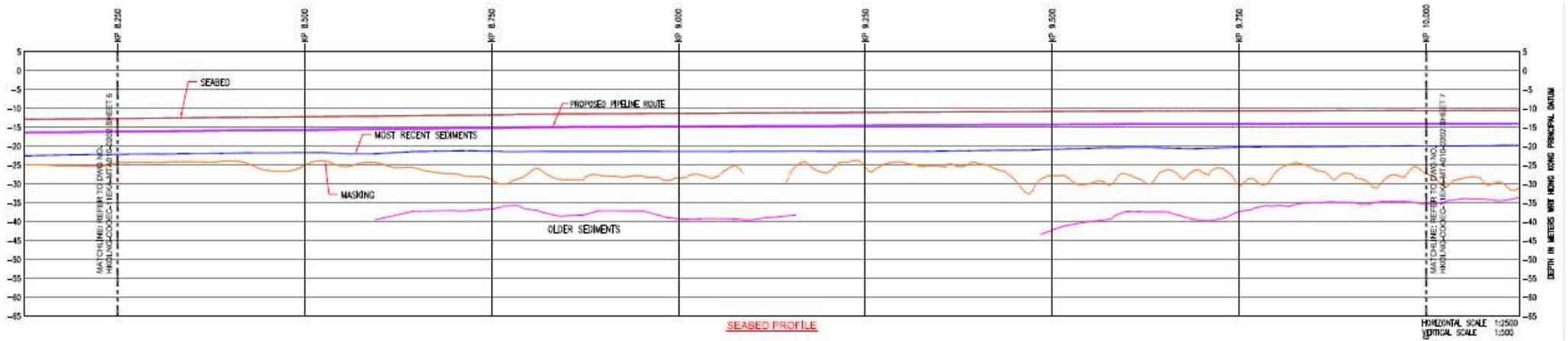


Figure 6. Seabed Profile - KP 8.25 to KP 10.00

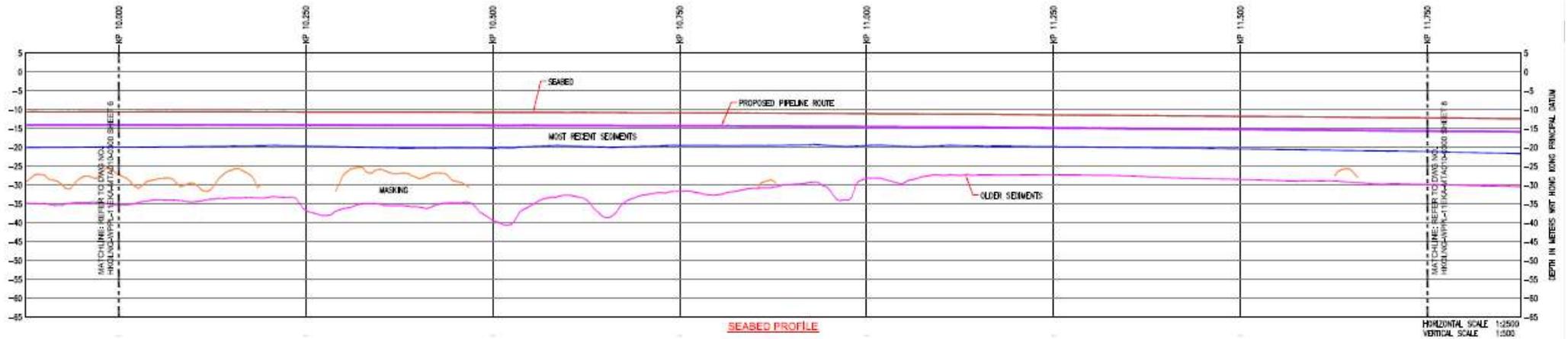


Figure 7. Seabed Profile - KP 10.00 to KP 11.75

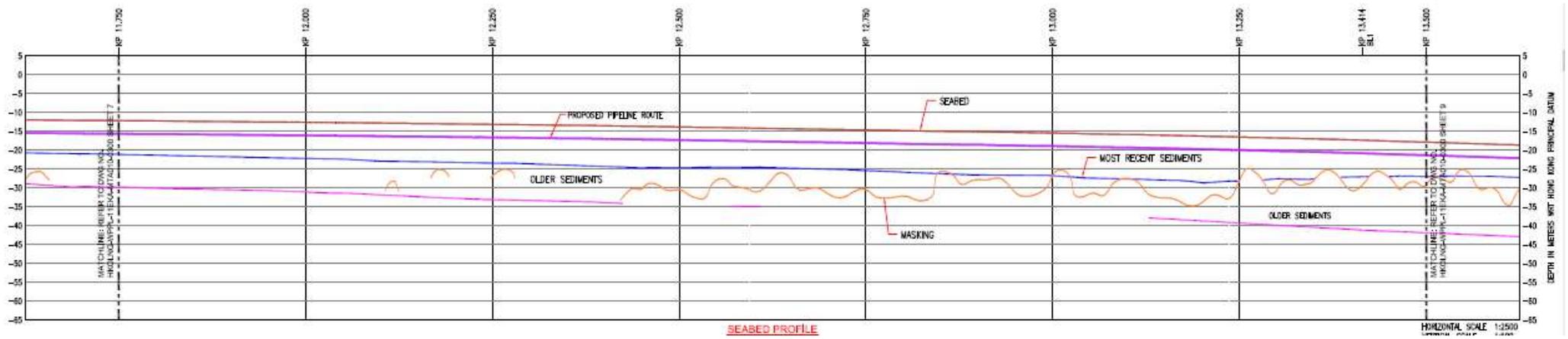


Figure 8. Seabed Profile - KP 11.75 to KP 13.50

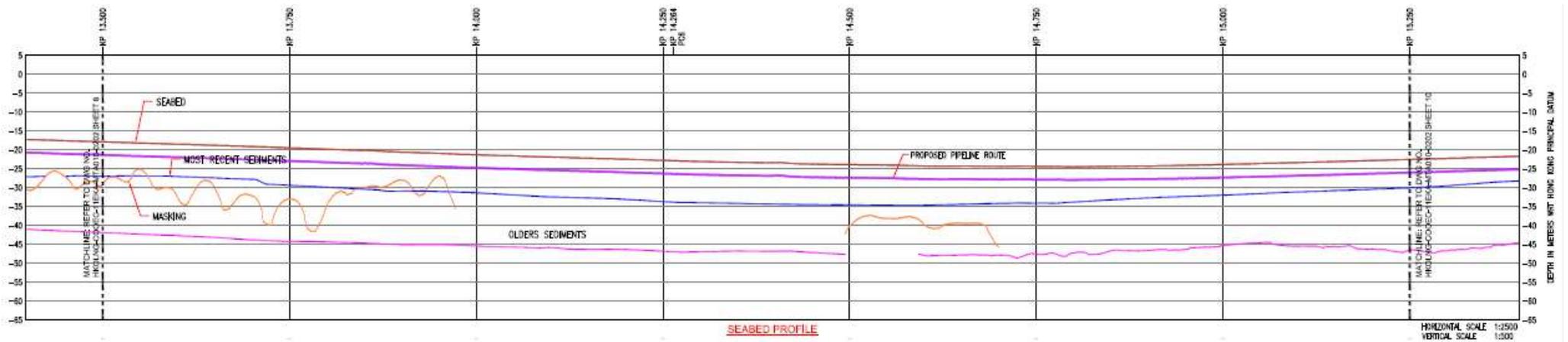


Figure 9. Seabed Profile - KP 13.50 to KP 15.25

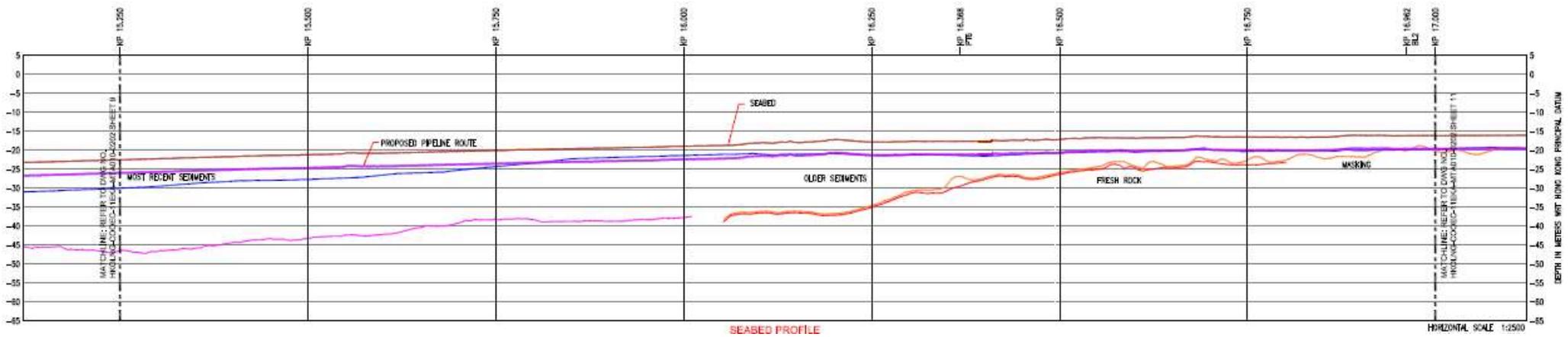


Figure 10. Seabed Profile - KP 15.25 to KP 17.00

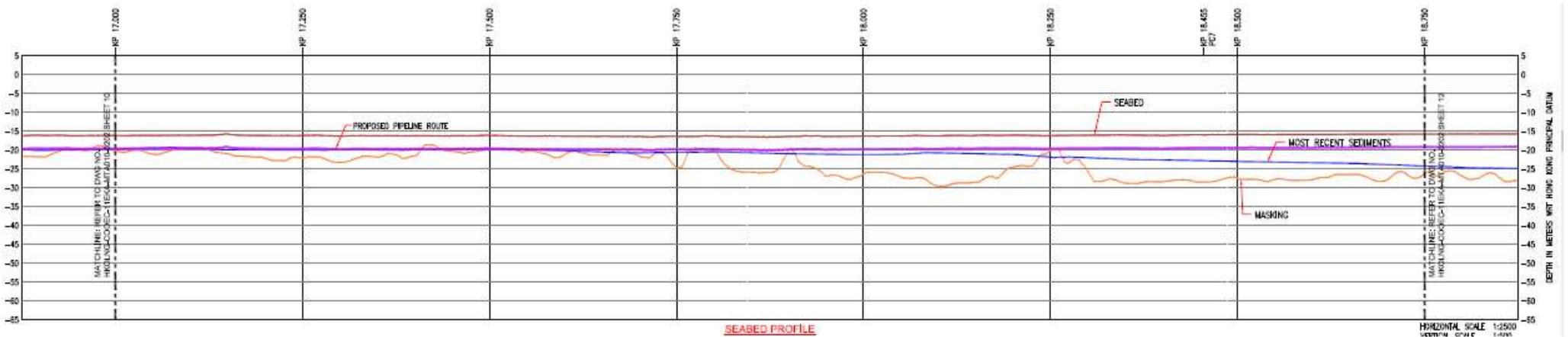


Figure 11. Seabed Profile - KP 17.00 to KP 18.75

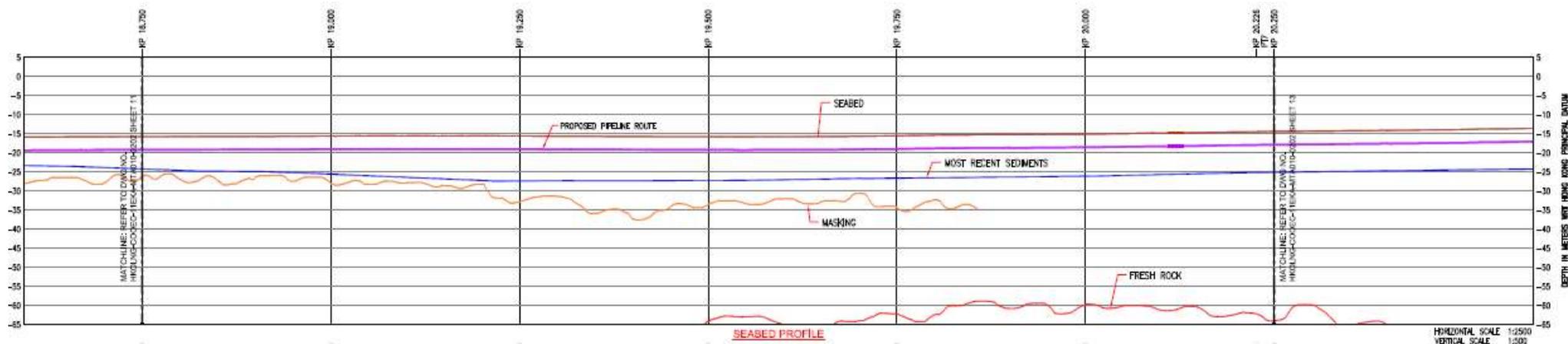


Figure 12. Seabed Profile - KP 18.75 to KP 20.25

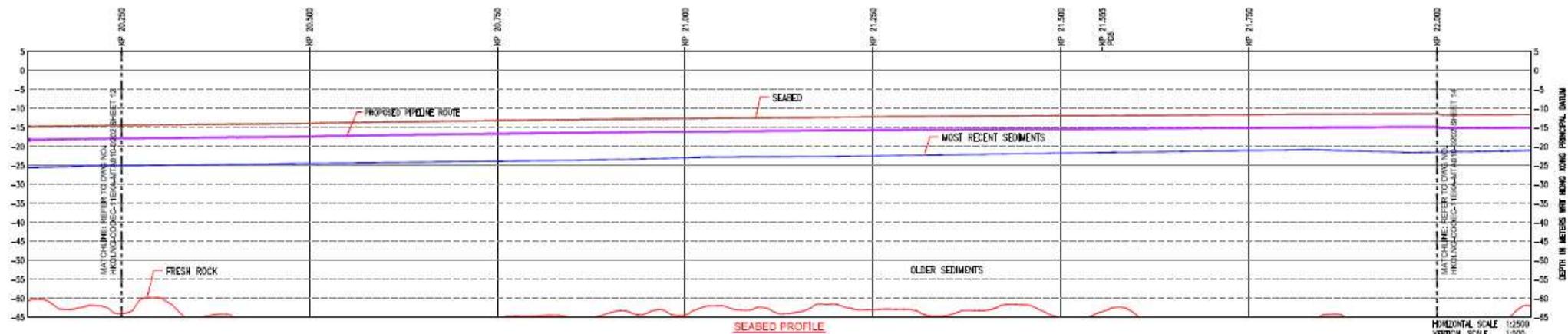


Figure 13. Seabed Profile - KP 20.25 to KP 22.00

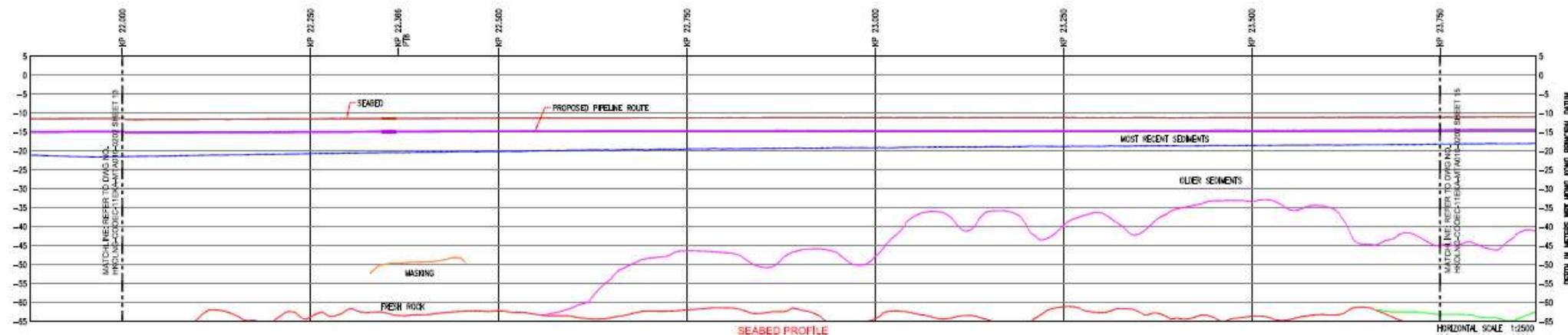


Figure 14. Seabed Profile - KP 22.00 to KP 23.75

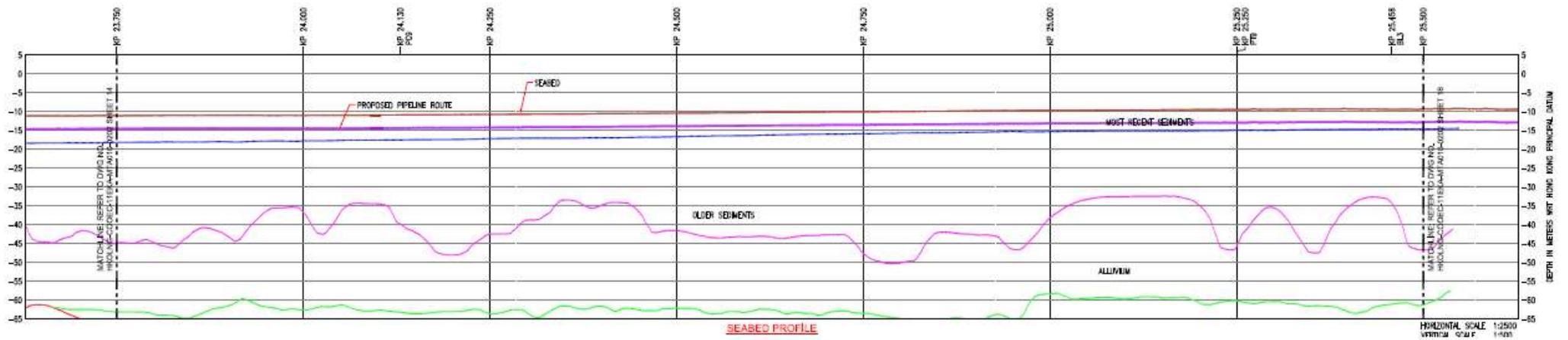


Figure 15. Seabed Profile - KP 23.75 to KP 25.50

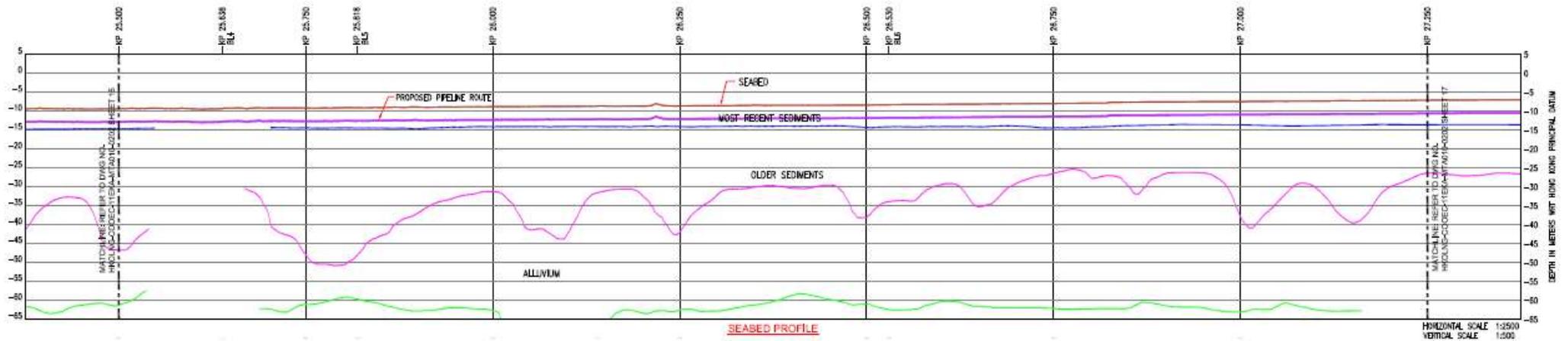


Figure 16. Seabed Profile - KP 25.50 to KP 27.25

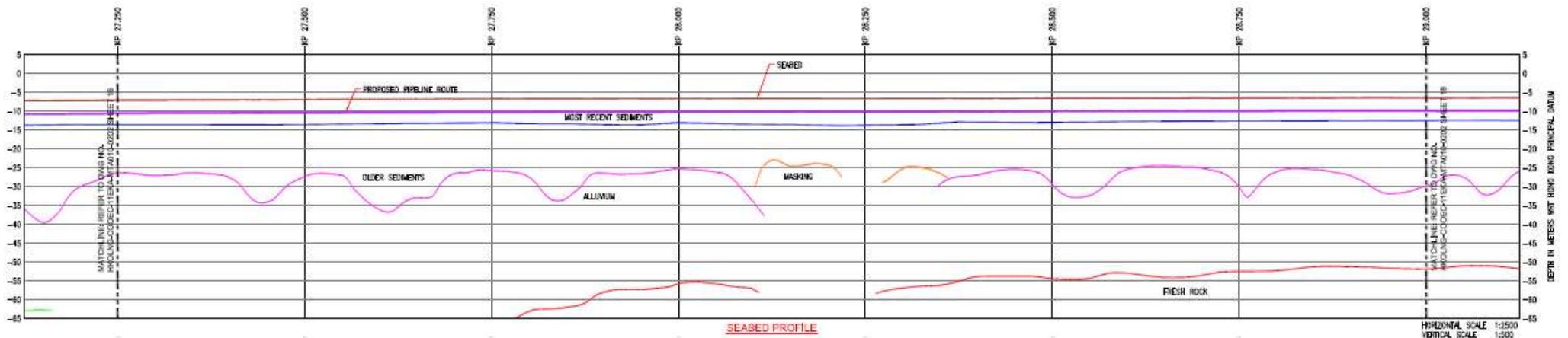


Figure 17. Seabed Profile - KP 27.25 to KP 29.00

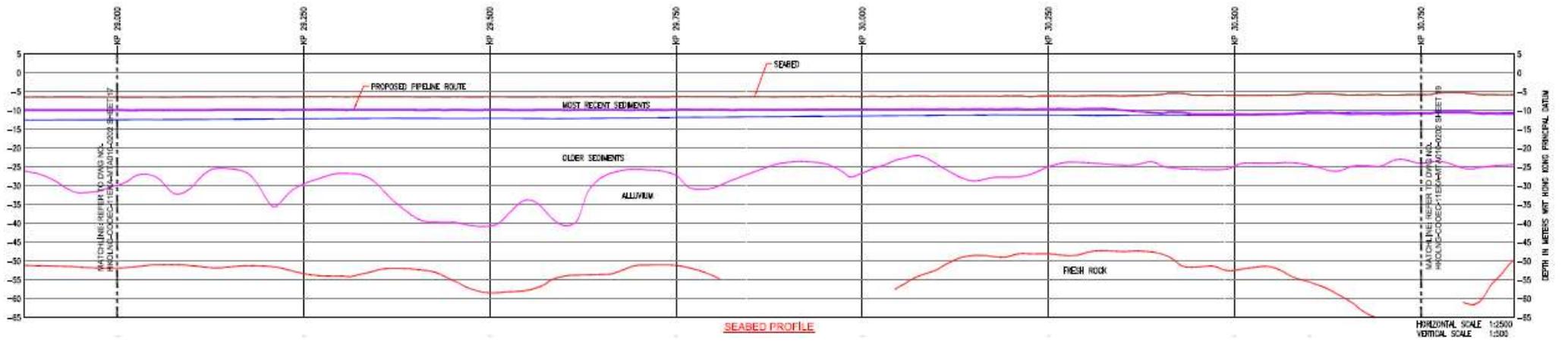


Figure 18. Seabed Profile - KP 29.00 to KP 30.75

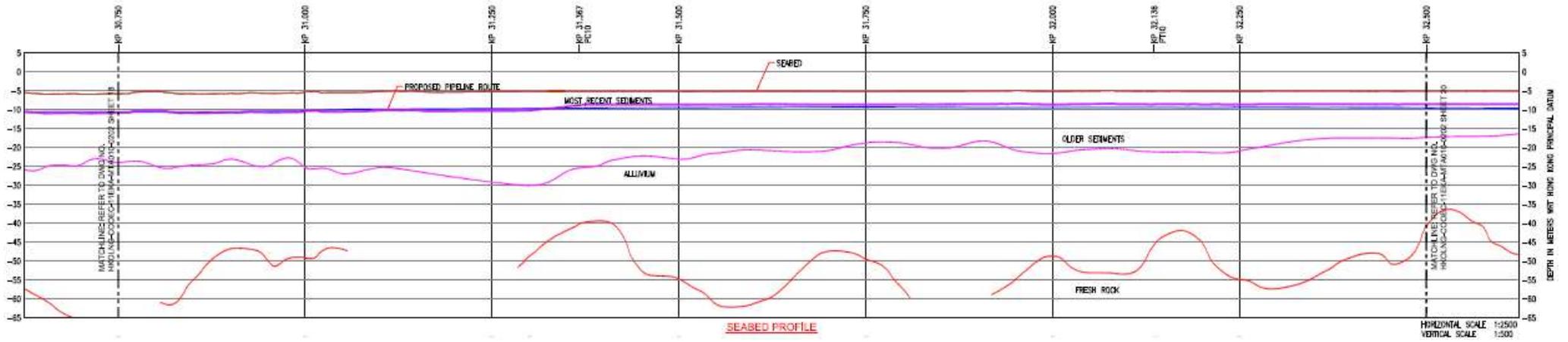


Figure 19. Seabed Profile - KP 30.75 to KP 32.50

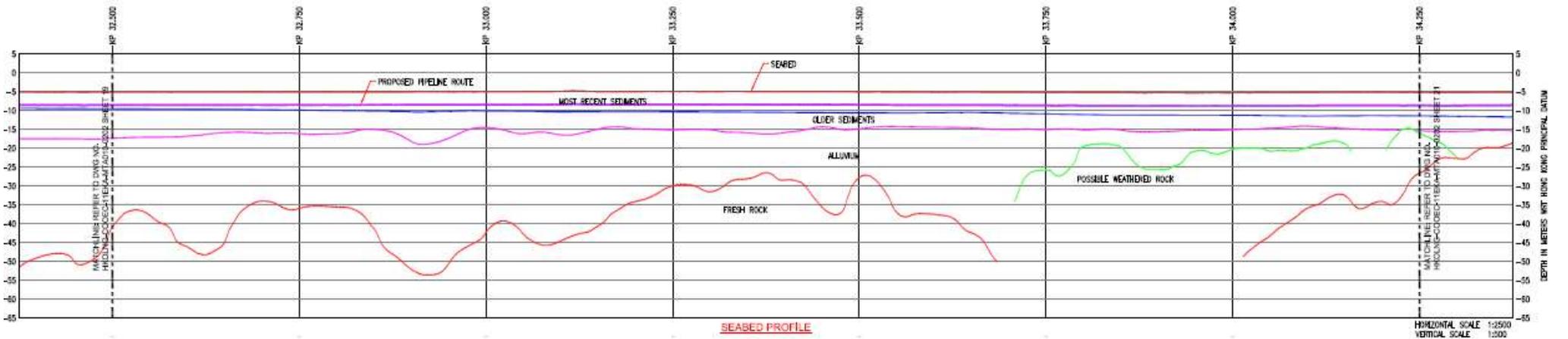


Figure 20. Seabed Profile - KP 32.50 to KP 34.25

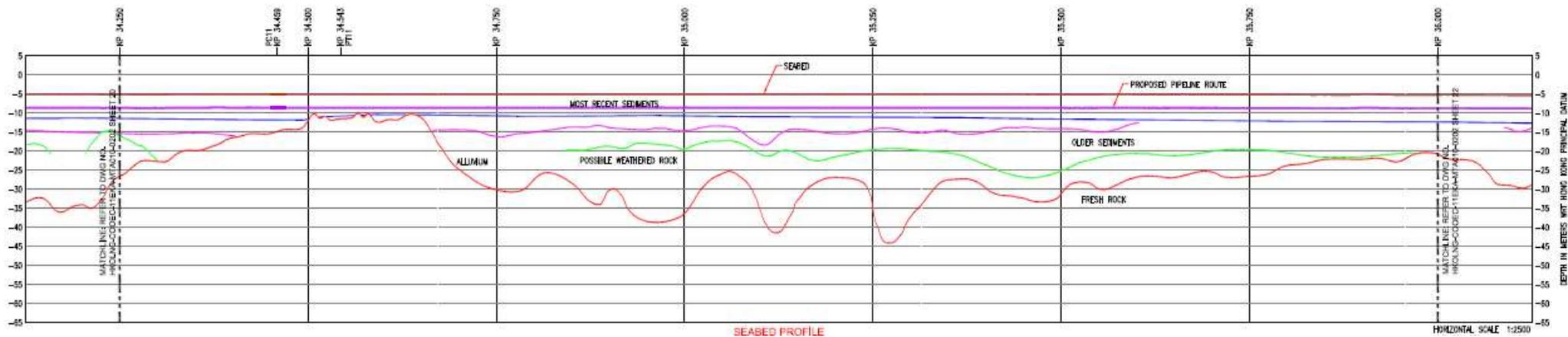


Figure 21. Seabed Profile - KP 34.25 to KP 36.00

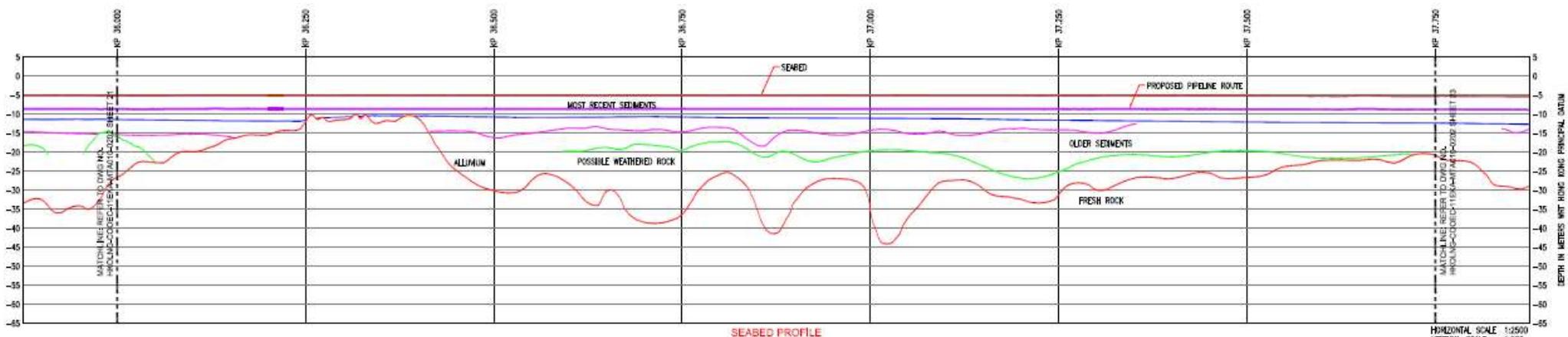


Figure 22. Seabed Profile - KP 36.00 to KP 37.75

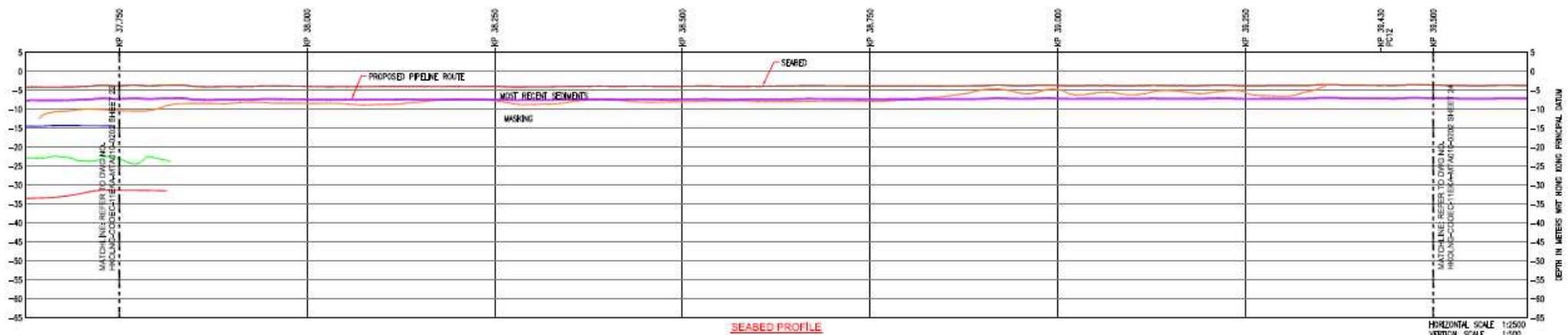


Figure 23. Seabed Profile - KP 37.75 to KP 39.50

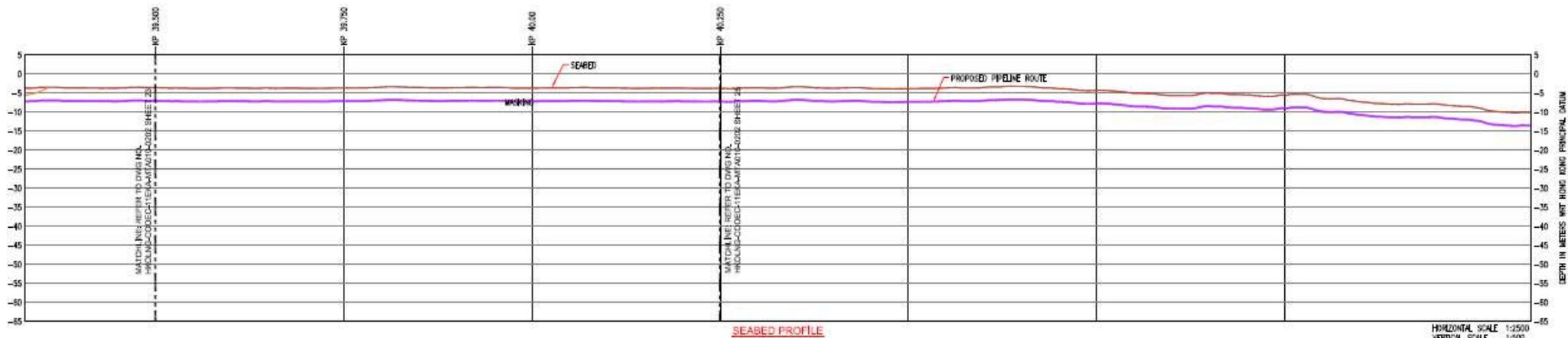


Figure 24. Seabed Profile - KP 39.50 to KP 40.25

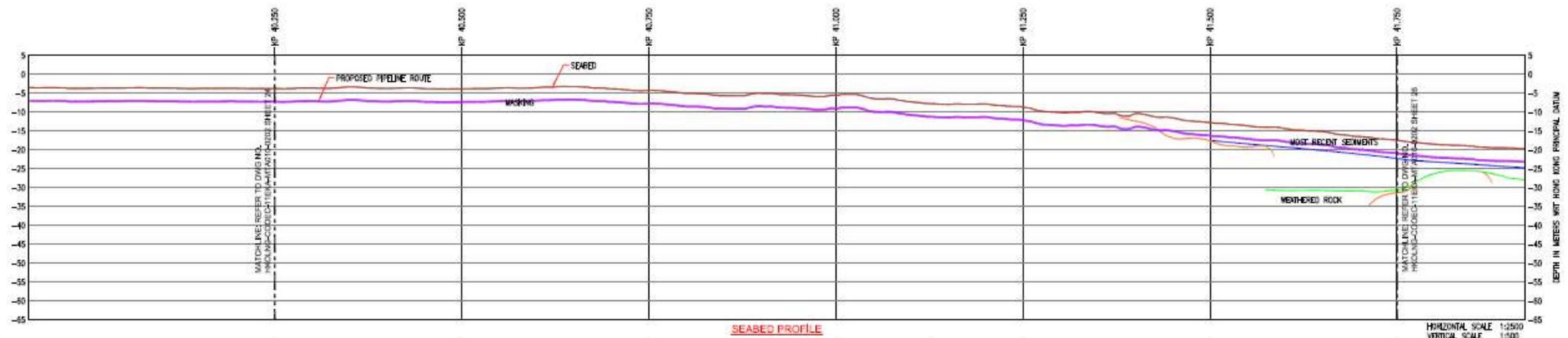


Figure 25. Seabed Profile - KP 40.25 to KP 41.75

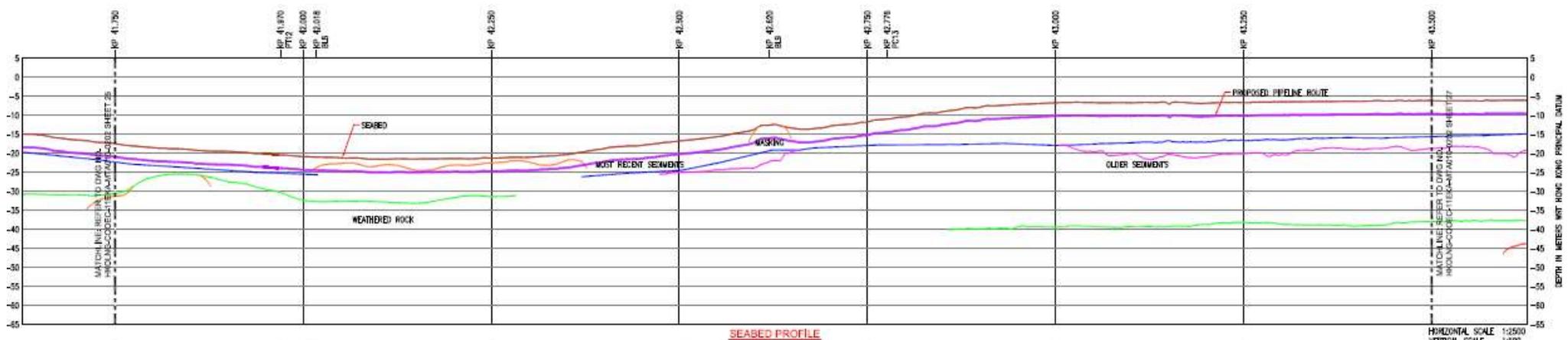


Figure 26. Seabed Profile - KP 41.75 to KP 43.50

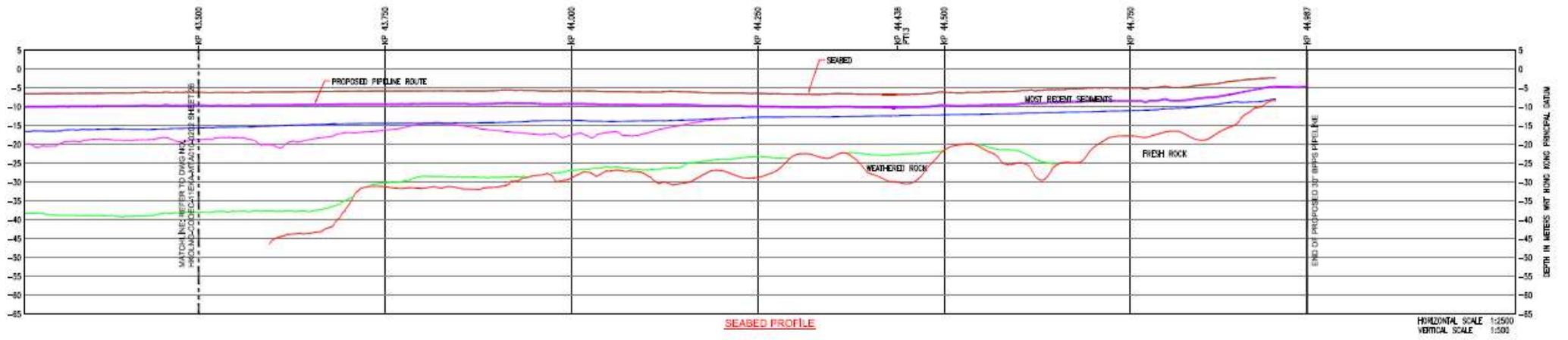
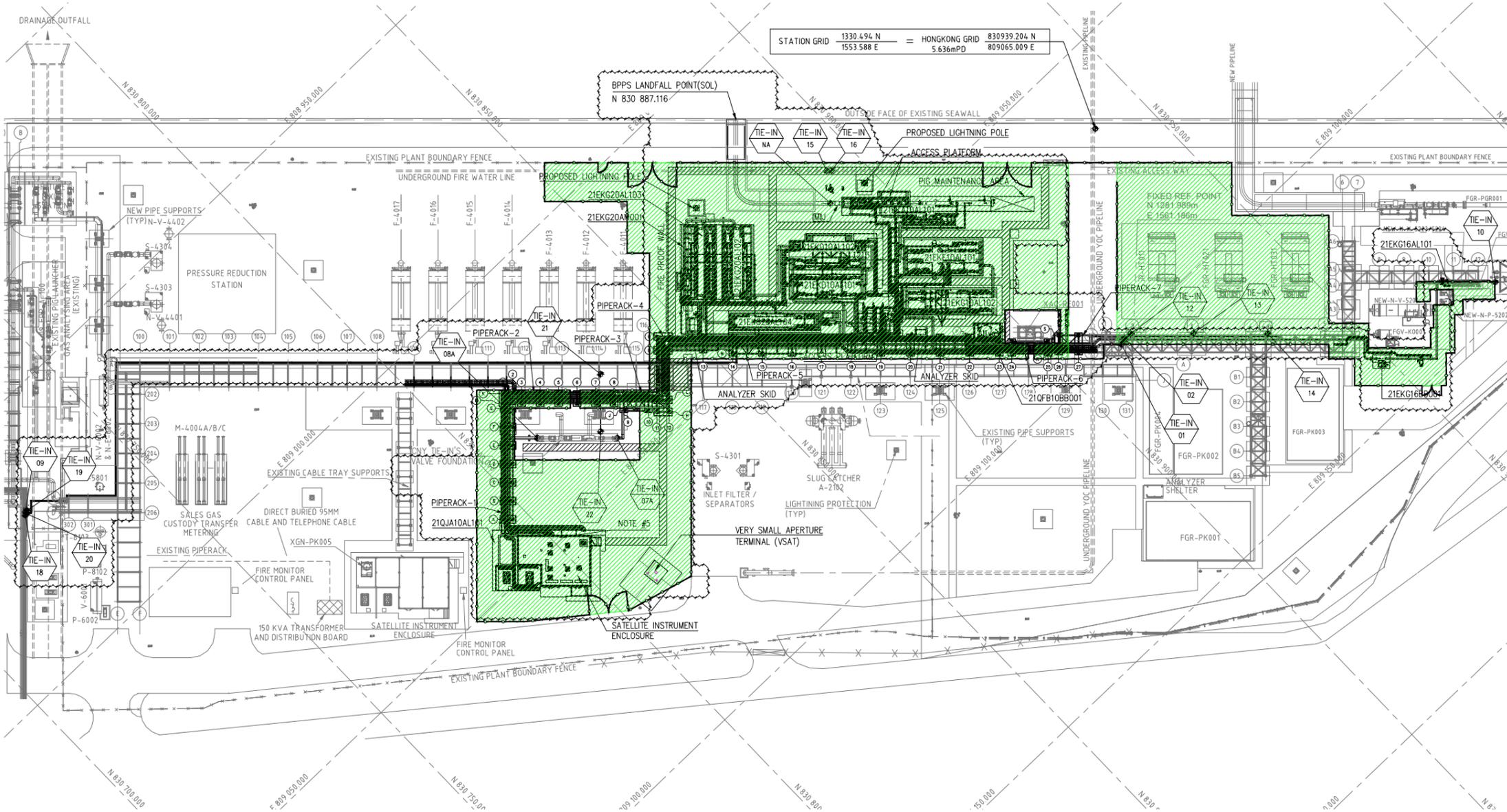
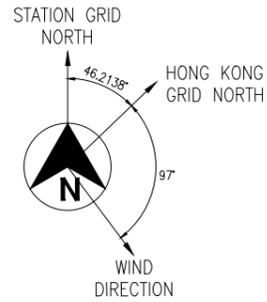


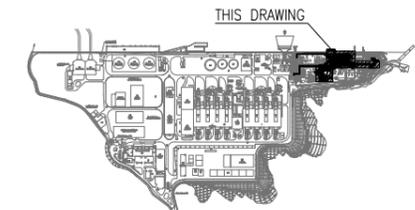
Figure 27. Seabed Profile - KP 43.50 to KP 44.98

ANNEX D

INDICATIVE WORKS AREAS FOR THE GRS AT BPPS



KEY PLAN



GENERAL NOTES

1. ALL DIMENSIONS ARE IN mm, ELEVATIONS & COORDINATES ARE IN m.
2. NOMINAL GRADE (PIPING DATUM) 0.000m = NOMINAL GRADE (HONG KONG DATUM) 5.700m.
3. RELATIONSHIP OF HONG KONG GRID TO STATION GRID.
H.K. GRID 808 950.493 E = STATION GRID 0.000 E
828 896.966 N = STATION GRID 0.000 N
4. PIG RECEIVER DESIGNED FOR INTELLIGENT PIGGING.
5. EXISTING HOSE REEL CABINET AT NEW SIE BUILDING SHALL BE RELOCATED.

LEGEND

- ESCAPE /ACCESS CLEAR WIDTH OF NOT LESS THAN 1.525m AND CLEAR HEIGHT OF 2.3m.
- NEW BPPS GRS SCOPE OF WORK
- SITE BOUNDARY AT THE BPPS GRS



HKOLNG-CO0EC-21EKG-MPD010-9101		HKOLNG GRS - EQUIPMENT LIST																																																												
DWG. NO.		DRAWING TITLE																																																												
REFERENCE DOCUMENTS																																																														
REVISION	DATE	DESCRIPTION	BY	CHK'D	APP'D	CLP																																																								
C	03JUN2020	ISSUED FOR REVIEW	AKR	ASD	MF																																																									
B	17APR2020	INTERNALLY APPROVED	AKR	ASD	MF																																																									
A	21FEB2020	DISCIPLINE INTERNAL CHECK	AKR	ASD	MF																																																									
<table border="0"> <tr> <td>CLIENT</td> <td></td> <td></td> <td></td> <td>JOB No.</td> <td colspan="2">20ZB-DD02</td> </tr> <tr> <td>SIGNATURE</td> <td>DATE</td> <td colspan="3">PROJECT: HONG KONG OFFSHORE LNG TERMINAL PROJECT PACKAGE B</td> <td>CERTIF. No.</td> <td>A112002816</td> </tr> <tr> <td>DRAWN</td> <td>SGB</td> <td>20AUG2020</td> <td colspan="3">DRAWING TITLE: HKOLNG GRS - OVERALL PLOT PLAN GRS</td> <td>SCALE (A3)</td> </tr> <tr> <td>DESIGNED</td> <td>AKR</td> <td>20AUG2020</td> <td colspan="3"></td> <td>1 : 1000</td> </tr> <tr> <td>CHECKED</td> <td>ASD</td> <td>20AUG2020</td> <td colspan="3"></td> <td></td> </tr> <tr> <td>REVIEWED</td> <td>TWC</td> <td>20AUG2020</td> <td colspan="3"></td> <td></td> </tr> <tr> <td>EXAMINED</td> <td>TWC</td> <td>20AUG2020</td> <td colspan="3"></td> <td></td> </tr> <tr> <td>APPROVED</td> <td>MF</td> <td>20AUG2020</td> <td colspan="3">DWG No. HKOLNG-CO0EC-21EKG-MLD020-9112</td> <td>REV. C</td> </tr> </table>							CLIENT				JOB No.	20ZB-DD02		SIGNATURE	DATE	PROJECT: HONG KONG OFFSHORE LNG TERMINAL PROJECT PACKAGE B			CERTIF. No.	A112002816	DRAWN	SGB	20AUG2020	DRAWING TITLE: HKOLNG GRS - OVERALL PLOT PLAN GRS			SCALE (A3)	DESIGNED	AKR	20AUG2020				1 : 1000	CHECKED	ASD	20AUG2020					REVIEWED	TWC	20AUG2020					EXAMINED	TWC	20AUG2020					APPROVED	MF	20AUG2020	DWG No. HKOLNG-CO0EC-21EKG-MLD020-9112			REV. C
CLIENT				JOB No.	20ZB-DD02																																																									
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