

Operation Plan for Silt Curtain System for EP No. EP-01/122/2003/A Condition 3.3.x

Purpose

To set out the procedures for opening and closing of the silt curtains used for Type A filling at FRAW to reduce the potential dispersion of the suspended solids out of the filling works area or into the harbour.

The Silt Curtain System

The silt curtain system for the underwater filling works at Final Reclamation Area West (FRAW) of CR III Project consists of three sets of silt curtains. Drawing No. H2189/K/01/C01/4243 Rev. A shows the locations of the silt curtains.

1. **(Curtain No. 1)** - Two layers of silt curtains shall be installed across the small seawall gap (gap between caisson units P7.1 and C15). The silt curtains shall extend from the water surface to the bottom of the seawall gap. The curtains shall be fixed at both ends to the caisson units and no marine vessel passage is allowed unless under emergency.
2. **(Curtain No. 2)** - Another two layers of silt curtains shall be installed across the large seawall gap (gap between caisson units C15 and C16). The silt curtains shall extend from the water surface to the bottom of the seawall gap. The curtains shall be fixed at one end to a caisson unit and the other end will be controlled by a sampan (or other suitable vessel) to allow essential passage of marine vessels.
3. **(Curtain No. 3)** - A layer of silt curtain shall be used to enclose the Type A filling works area. The silt curtain shall extend from the water surface to the seabed. The location of this silt curtain may be changed occasionally in order to cope with the progress of the filling works inside FRAW, however, it will be maintained at least 100 m away from any seawall opening.

Curtain No. 3 comprises of three sections, a movable section at the middle and two fixed sections at both sides. The movable section (middle section) comprises both the floating type (at the top) and the hanging type silt curtains (at the bottom). When it is opened for vessels to entry / exit, only the upper floating type curtain of the middle section will be moved while the lower hanging type curtain and the two fixed curtains at both sides are kept in original location without being moved. When it is closed, there will be overlapping of the two curtains. The curtain arrangement avoids the stirring up of sediment by keeping the silt curtain that touching the seabed in position. Besides, it also allows rapid opening and closing of the silt curtain. For the fixed sections (at both sides of the opening of Curtain No. 3), the upper floating curtain and the lower hanging curtain are

connected together and this curtain remains in original location when the curtain is opening or closing.

The Operation Plan for the Silt Curtain System

The silt curtain system will be operated based on the following steps / principles:

1. The opening and closing of the silt curtains will be directly controlled by designated JV site supervisory staff. For vessels need to pass the silt curtains (Curtain No. 2 or Curtain No. 3), the operative have first to notify the designated staff and wait until permission is granted.
2. For vessels passing the silt curtain, the curtain will first open by a sampan (or other suitable vessel), then after passage of the vessels the curtain will be closed as soon as possible in order to minimize the period of curtain opening.
3. The curtains (Curtain No. 2 and Curtain No. 3) will be opened and closed one by one.
4. During the period of discharging the Type A Fill by split hopper barge inside the filling works area, both Curtain No. 2 and Curtain No. 3 shall be closed and no passage of vessel across the silt curtain is allowed.
5. Curtain No. 3 shall remain closed at least 20 minutes after the discharge of the Type A Fill inside the filling working area.

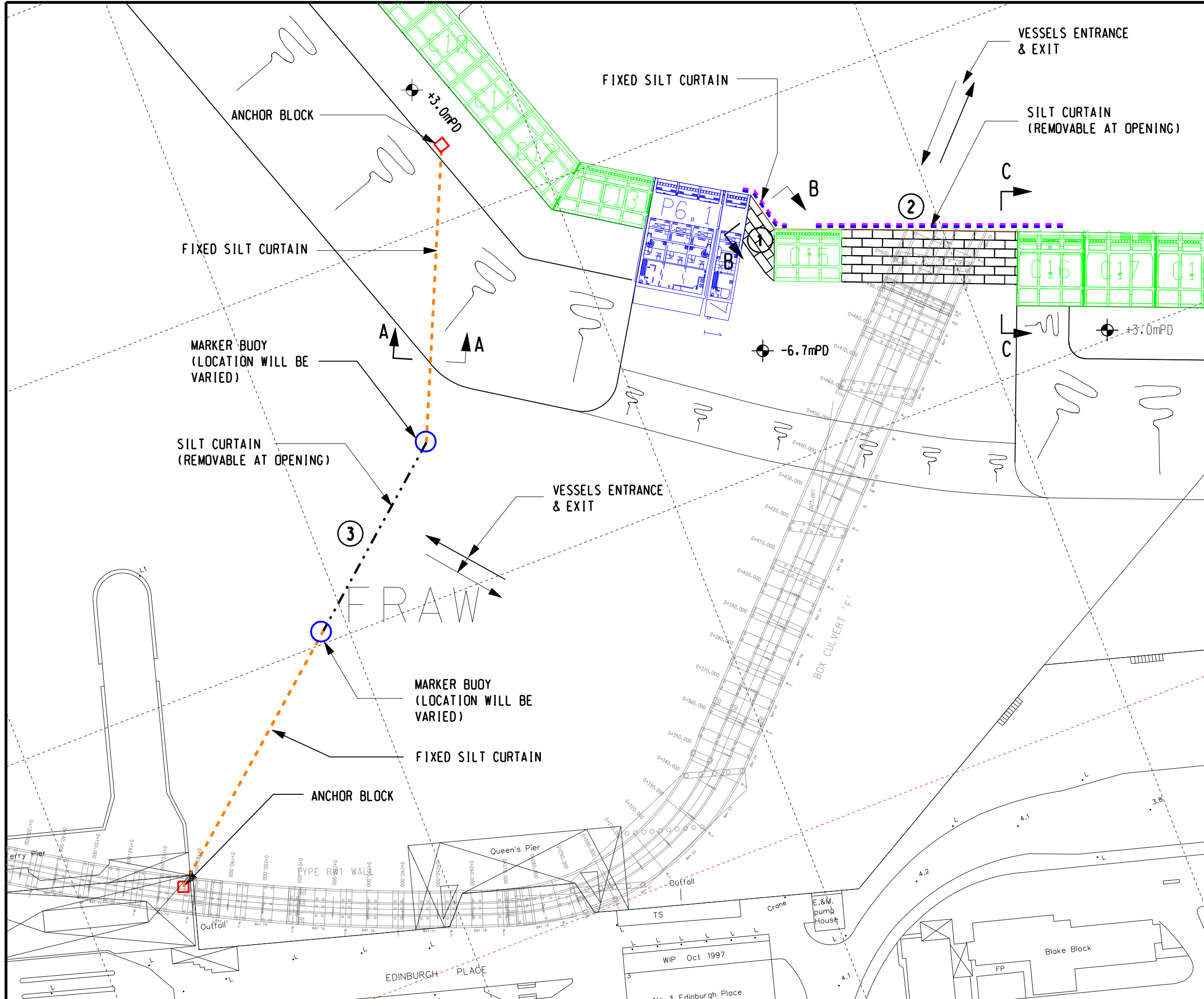
Inspection and Maintenance for the Silt Curtains

Visual inspection on the integrity of the silt curtains shall be conducted daily. Diver inspection of the curtains shall be conducted on a weekly basis.

In case of any minor observable damage found from the daily inspection or from weekly diver inspection, the damaged parts shall be fixed promptly. Sufficient spare parts should be kept on site to ensure prompt maintenance of the curtains. In case of major damage found and replacement of curtain required, the Type A filling works shall be temporarily suspended until completion of the curtain replacement works.

Attachments

1. Drawing No. H2189/K/01/C01/4243 Rev.A
2. Drawing No. H2189/K/01/C01/4245 Rev.B
3. Drawing No. H2189/K/01/C01/4244 Rev.B



LEGEND:

- 1ST LAYER SILT CURTAIN
- 2ND LAYER SILT CURTAIN
- ② SILT CURTAIN TYPE (REFER TO ATTACHED DETAIL SKETCHES)

REV	DESCRIPTION	BY	DATE	CHK'D
A	SECOND ISSUE	GL	JAN'08	GL
-	FIRST ISSUE	GL	JAN'08	GL

APPROVAL

CEDD Civil Engineering and Development Department
Hong Kong
土木工程拓展署

ATKINS 安達顧問有限公司
ATKINS CHINA LTD

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LEIGHTON CHINA STATE VAN OORD
JOINT VENTURE

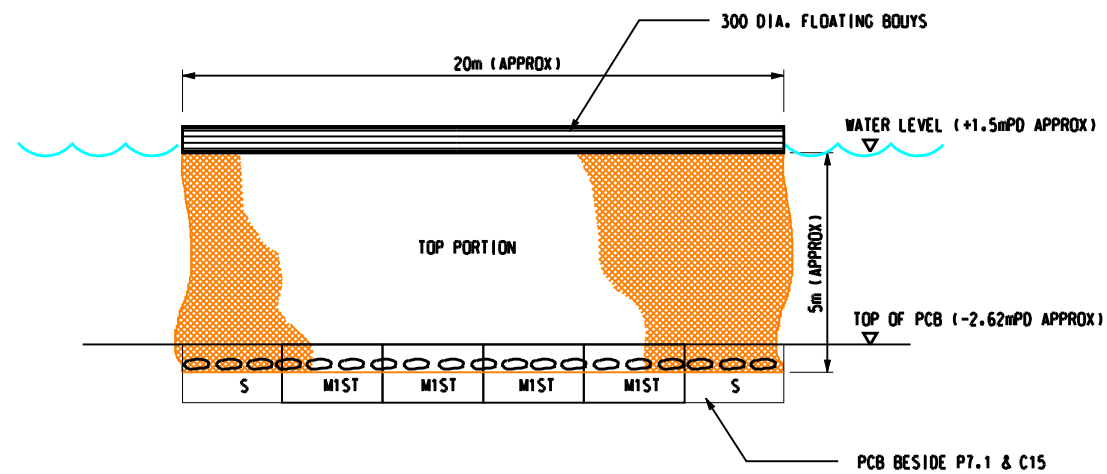
CONTRACT NO. HK 12/02
Central Reclamation Phase III
Engineering Works

DRAWING TITLE
SILT CURTAIN ARRANGEMENT FOR TYPE A FILLING

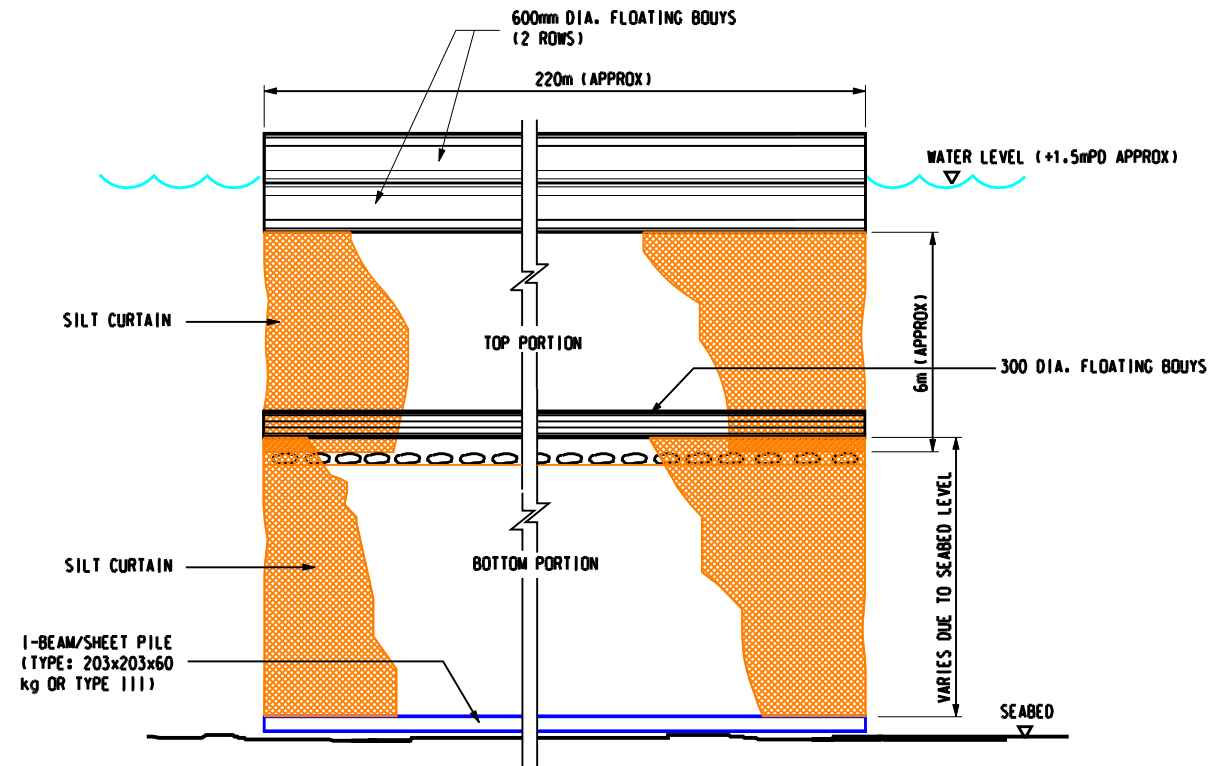
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SKETCH

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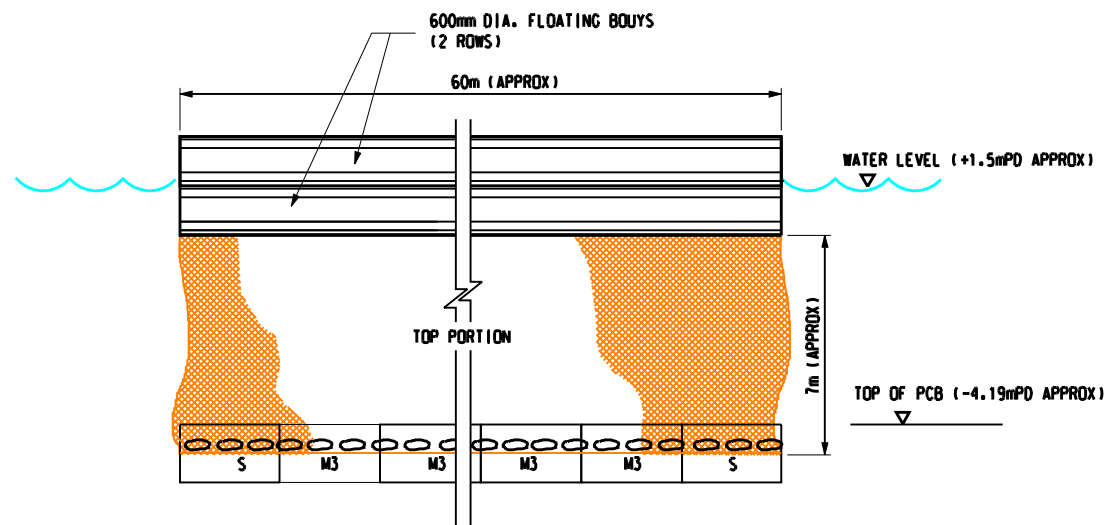
DRAWING NUMBER
H2189/K/01/C01/4243
REVISION
A



(SILT SCREEN AT LOCATION 1)
FOR TOP PORTION AT WATER LEVEL
FIRST & SECOND LAYER
NTS



(SILT SCREEN AT LOCATION 3)
TOP & BOTTOM PORTION
NTS



(SILT SCREEN AT LOCATION 2)
FOR TOP PORTION AT WATER LEVEL
FIRST & SECOND LAYER
NTS

LEGEND:

- 1ST LAYER SILT CURTAIN
- 2ND LAYER SILT CURTAIN
- ② SILT CURTAIN TYPE (REFER TO ATTACHED DETAIL SKETCHES)

REV	DESCRIPTION	BY	DATE	CHK'D
B	THIRD ISSUE	GL	JAN'08	GL
A	SECOND ISSUE	GL	JAN'08	GL
-	FIRST ISSUE	GL	JAN'08	GL

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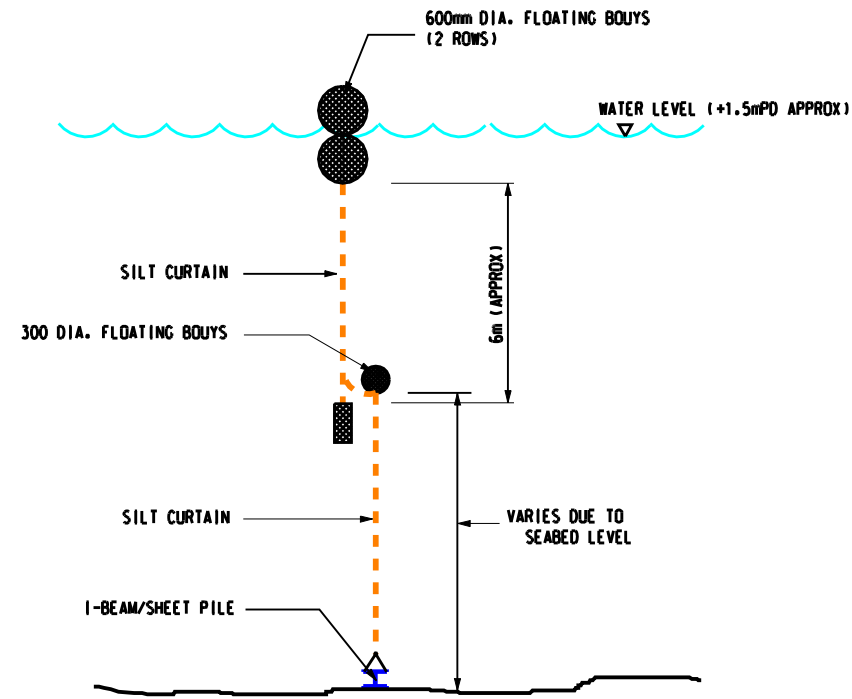
CONTRACT NO. HK 12/02
Central Reclamation Phase III
Engineering Works

DRAWING TITLE
SILT CURTAIN ARRANGEMENT
FOR TYPE A FILLING
(DETAILS)

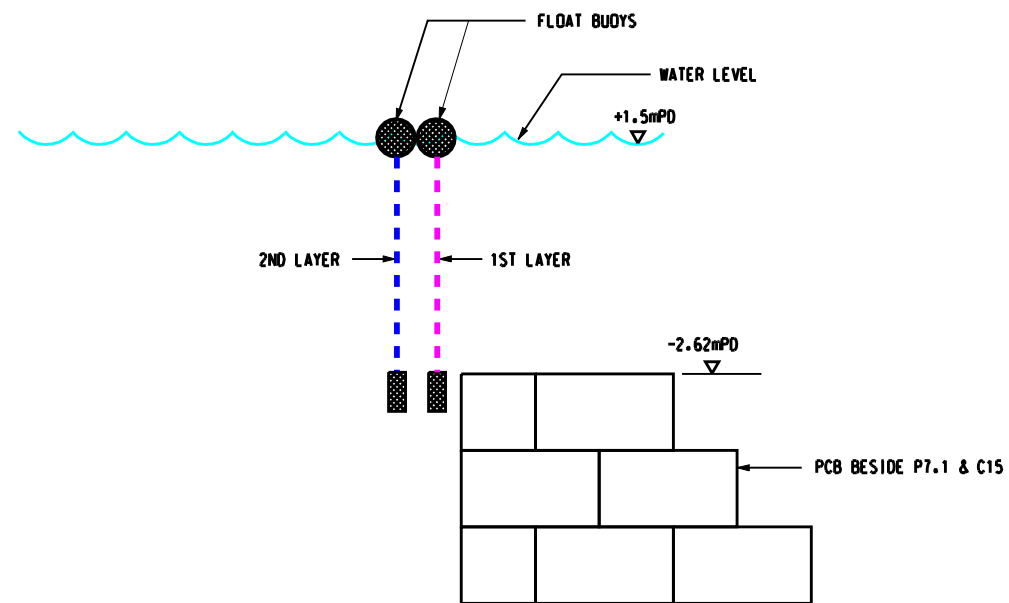
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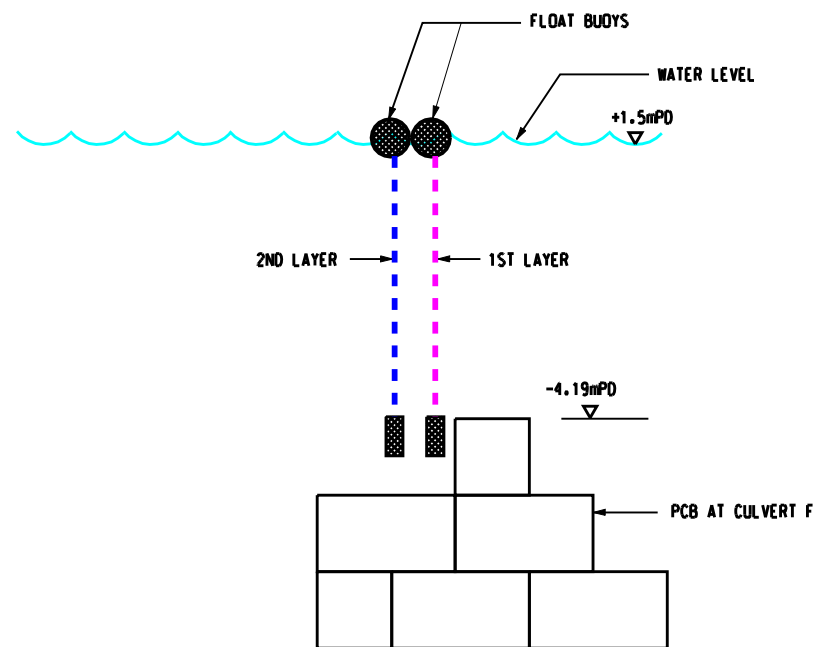
DRAWING NUMBER
H2189/K/01/C01/4245



SECTION A-A
NTS



SECTION B-B
NTS



SECTION C-C
NTS

LEGEND:

- 1ST LAYER SILT CURTAIN
- 2ND LAYER SILT CURTAIN
- ② SILT CURTAIN TYPE (REFER TO ATTACHED DETAIL SKETCHES)

B	THIRD ISSUE	GL	JAN'08	GL
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REV	DESCRIPTION	BY	DATE	CHK'D

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Central Reclamation Phase III
Engineering Works

DRAWING TITLE
SILT CURTAIN ARRANGEMENT FOR TYPE A FILLING (SECTIONS)

STATUS **SKETCH**

SCALE AT A3	DESTIGNED	GL	DRAWN	CC	CHECKED	GL
NTS	DATE	JAN'08	DATE	JAN'08	DATE	JAN'08

DRAWING NUMBER
H2189/K/01/C01/4244