Investigation Report for Exceedances of Limit Level of Water Quality Monitoring on 1 June 2023

Investigation was carried out in response to exceedances of limit level during the water quality monitoring on 1 June 2023. The following table summarizes details of the exceedances.

Environmental Team for Hung Shui Kui/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure								
Date	**Station**	**Parameter (Unit)**	**Depth-averaged Measured Value**	**Action Level**	**Limit Level**	**Exceedance**		**Project Related (Y/N)**
						AL	**LL**	
01/06	TKW1	Turbidity (NTU)	202.5	27.9	29.2		✓	N
	TKW		190.0	24.2	24.6		✓	N
	SW		33.8	21.4	22.9		✓	N
	TKW1	Suspended Solids (SS) (mg/L)	46.0	16.0	18.4		✓	N
	TKW		36.5	19.8	21.6		✓	N
	SW		15.0	9.7	9.9		✓	N

Construction activities carried out at and adjacent to Road D1 during the investigation period:	According to the information provided by the engineer representative (RE), the construction works carried out within the site area of Road D1 (Designated Project (DP)) on 1 June 2023 include: <u>Site 3-8 (Road D1) at Portion B7</u> • Dewatering; • Erection of formwork for manhole; and • Rectification works of the cut slope. The construction works carried out at adjoining non-DP works area on 1 June 2023 include: <u>Site 3-6 and Site 3-7 at Portion B2</u> • Preparation work for installation of chain link fence; • Installation of chain link fence; • Soil transported to Site 3-6 for temporary storage; and • Erection of formwork for u-channel. <u>Site 3-6 (near Chun Tsuen) (Temporary Stockpile Area) at Portion B1</u> • Trim formation level +23.0mPD; and • Breaking of existing concrete near gate B.

	Site 3-6 (Wing Hong) at Portion B2 • Preparation work for installation of air pipe of Biopile. Site 3-7 (near Bee Bee Garden) at Portion A2 • No activity. Site 3-7 (near gate B) at Portion A2 • General electric work; and • Set up oscillator for BP02. Site 3-8 (Kai Pak Ling Road) at Portion B6 • No activity. Site 3-8 (Hung Wan) at Portion B7 • No activity.
Possible reason for Action or Limit Level Non-compliance:	According to the records of the Hong Kong Observatory, about 30 to 50 mm rainfall was recorded over Hung Shui Kiu on 1 June 2023, which led to river runoff with high turbidity/ SS levels due to surface runoff from the catchment. For instance, high levels of SS (about 14 mg/L) and turbidity (about 29.7 NTU) were recorded at station U1 upstream of station SW. The high levels of SS and turbidity upstream of SW were considered key factors of SS and turbidity Limit Level exceedances at SW, respectively. Other factors that may be related to the exceedances include surface runoff and effluent discharges from workshops, open storages, warehouse, and/ or private toilet(s) along the catchment downstream of the site. As observed during the site inspections on 30 May 2023 and 1 June 2023, the Contractor had implemented on site measures to control site runoff from Site 3-8 and Road D1, including sump, WetSep and portable pumps for temporary storage and treatment of surface water and site effluent. As no effluent discharge licence was applied for Site 3-6 and Site 3-7, no direct discharge from the sites was allowed. Effluent and surface runoff at Site 3-6 and Site 3-7 were collected and diverted to retention ponds on-site for ground infiltration. No evidence was found to indicate that the exceedances on 1 June 2023 were affected by the site activities. The non-compliances at TKW1 and TKW may be related to surface runoff and effluent discharges from workshops, open storages, warehouse, private toilet(s) and/ or residential dwellings along the catchment downstream of the site. No further exceedances of action or limit levels of SS and turbidity at TKW1, TKW and SW, were detected during the water quality monitoring on 2 and 3 June 2023. In conclusion, the exceedances recorded on 1 June 2023 were considered non-project related.
Action taken / to be taken:	1. Repeated in-situ measurement was carried out to confirm the turbidity level measured at TKW, TKW1 and SW. Repeated in-

	situ measurement was not applicable for laboratory measurement of SS level. 2. The source of impact may be related to rainfall at Hung Shui Kiu recorded on 1 June 2023 and also surface runoff and effluent discharges from workshops, open storages, warehouse, private toilet(s) and/ or residential dwellings along the catchment downstream of the site. 3. A notification of exceedances has been issued to the IEC, the Contractor, and the EPD. 4. Duplicate water samples were collected on site, and in-situ measurement was repeated. The monitoring data were checked and confirmed. All plant, equipment and the Contractor's working methods were checked during the site inspection. No non-compliance was observed. 5. As no evidence was found to indicate that the exceedance on 1 June 2023 was affected by the site activities, no additional mitigation measure was discussed with the IEC, the RE and the Contractor. 6. During the site inspections, the Contractor had implemented on-site measures to control site runoff. The Contractor was reminded to implement/ maintain the following mitigation measures: <u>Site 3-8 and Road D1</u> a. The WetSep and other accessories shall be maintained regularly to minimise malfunction. b. Surface run-off from construction sites shall be discharged at the designated discharge point as indicated in the effluent discharge licence for Site 3-8 via adequately designed sand/ silt removal facilities. c. The Contractor will provide sump(s) near the WetSep at Site 3-8 to temporary store site runoff prior to treatment. d. Channels/ earth bunds/ sandbag barriers will be properly provided on site to direct stormwater to the sump(s). e. Water (either upstream river water or site runoff) detained behind the box culvert will be treated by the WetSep at Site 3-8 prior to discharge. <u>Site 3-6, Site 3-7, and Contaminated Soil Treatment Area</u> f. As no effluent discharge licence is applied for Site 3-6 and Site 3-7, no direct discharge of surface runoff or construction effluent is allowed from the sites. g. Impervious canvases are deployed to cover the stockpiles at the contaminated soil treatment area to minimise contaminated surface runoff (Figure 3). h. Perimeter channels, sump pits and leachate collection tanks are installed at the contaminated soil treatment area to collect and store leachate from the stockpiles of excavated materials to eliminate untreated leachate escaped from the treatment area.

i. A retention pond is set up at Site 3-6 (Portion B1) to store effluent and surface runoff from Site 3-6 and Site 3-7 (Figure 3).
j. Another retention pond is also set up near the contaminated soil treatment area for the discharge chamber workfront to collect effluent and surface runoff (Figure 3).

Following the site inspection on 25 May 2023, the IEC advised that water diversion measure (which separates the upstream river water from the site runoff and effluent discharge) before passing through the box culvert at Site 3-8 (Portion B7) should be implemented to facilitate the source identification in exceedance investigation for the water quality monitoring stations U1 and SW. The RE had also issued a reminder to the Contractor to implement the measure on 17 June 2023. The measure has been implemented since late June 2023. The RE and the ET will continue to audit the Contractor's progress in implementation and maintenance of this and other measures during the regular weekly site inspection.

7. The frequency of monitoring was increased to daily at SW, TKW1 and TKW from 2 June 2023. No further action or limit level exceedances of SS and turbidity at TKW, TKW1 and SW was recorded on 2 and 3 June 2023. Daily monitoring was therefore ceased after 3 June 2023. The following table summarizes the monitoring results of SS and turbidity at TKW, TKW1 and SW on 2 and 3 June 2023.

Date	**2 June 2023**		**3 June 2023**	
Parameters / Stations	**SS (mg/L)**	**Turbidity (NTU)**	**SS (mg/L)**	**Turbidity (NTU)**
TKW1	5.1	27.3	6.9	11.2
TKW	6.4	16.9	3.3	9.9
SW	3.1	21.1	4.4	3.2

Photo Records of Site Inspection held by the ET on 30 May 2023

Site 3-8 and Road D1	
 (P1) Stockpile of dusty materials was covered properly to avoid generation of muddy runoff. No muddy surface runoff was observed during the site inspection.	 (P2) Surface runoff and site effluent were collected and diverted to the WetSep for temporary storage and treatment before the water was used for fugitive dust suppression on site.
 (P3) Surface runoff was directed to the sump for temporary storage. No muddy surface runoff and no direct discharge of construction effluent was observed.	

Contaminated Soil Treatment Area (Portion B2) (Non-DP area)	
 (P4) Contaminated materials were stocked on site pending for decontamination.	 (P5) Stockpiles within the contaminated soil treatment area were covered by impervious canvases. Leachate collection tanks were also in place.
 (P6) Perimeter channels installed outside the contaminated soil treatment area.	 (P7) Sump pit (under construction) for collection of leachate and surface runoff from stockpiles.

Site Photos on 1 June 2023 provided by the Engineer

Site 3-8 and Road D1 (Portion B7)

(R1)

WetSep was functioned properly on 1 June 2023

(R2)

Sump formed next to the finished box culvert

Site 3-8 (Portion B6) (Non-DP area)

(R3)

(R4)

No activity was carried out at Site 3-8 (Portion B6). No effluent discharge was observed.

Contaminated Soil Treatment Area (Portion B2) (Non-DP area)

(R5)

Sloping surfaces of stockpiles within the contaminated soil treatment area were covered by impervious canvas.

(R6)

No surface runoff or effluent was leaked from the contaminated soil treatment area during the site inspection.

Site 3-6 (Portion B1) (Non-DP area)

(R7)

(R8)

No effluent discharge from the site was observed.

Site 3-7 (Portion A2)

(R9)

(R10)

No effluent discharge from the site was observed.

Site Observation Photos around Water Quality Monitoring Stations taken by the ET on 1 June 2023

(W1)

Water Quality Monitoring Station: TKW

(W2)

Water Quality Monitoring Station: TKW1

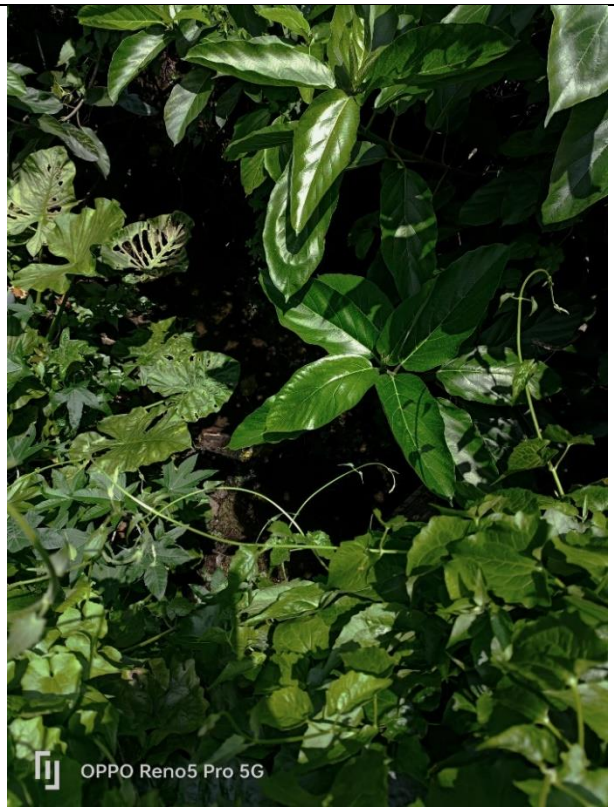
 (W3) Water Quality Monitoring Station: SW	

Figure 1 Rainfall Record from the Hong Kong Observatory

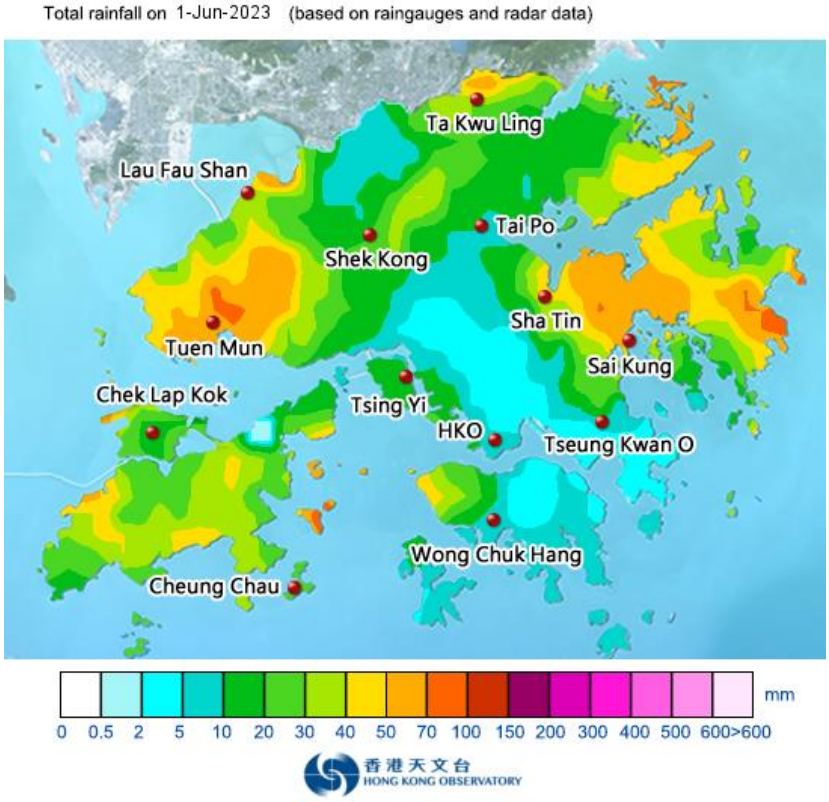
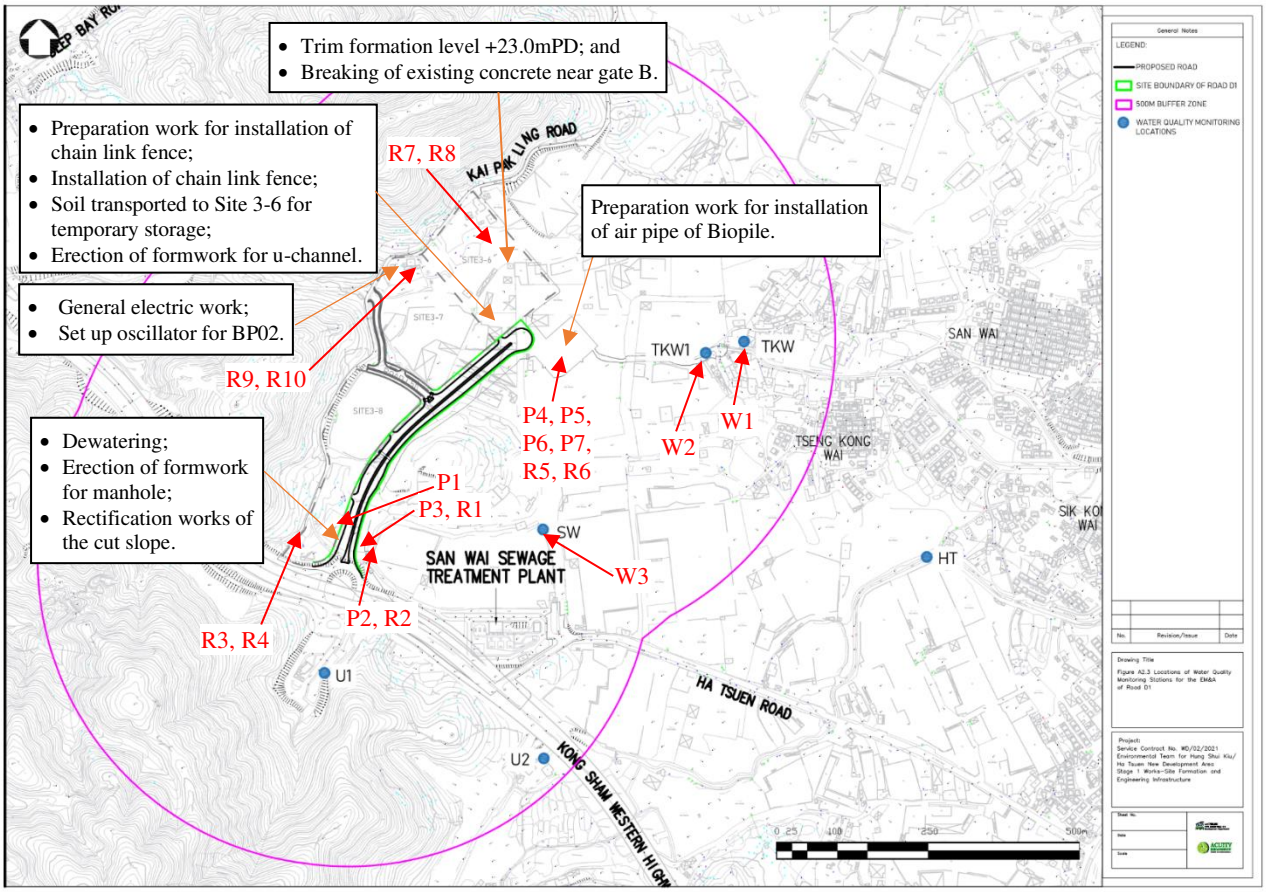


Figure 2 Location Plan of Impact Water Quality Monitoring Stations (Site activities held on 1 June 2023 were reported in text boxes)



Retention pond in Site 3-6 & 3-7.

Workfront for discharge chamber

Contaminated soil treatment area. Stockpile and biopile were covered by canvas. Leachate was stored in the leachate collection tank

Retention pond for discharge chamber workfront

0 20 40 60 80 100m
1 : 2000 SCALE BAR

MOTT MACDONALD	CONTRACT NO. YL/2020/03 HUNG SHUI KIU/HA TSUEN NEW DEVELOPMENT AREA STAGE 1 WORKS	Water quality pollution control measures implemented for Site 3-6 and Site 3-7	SCALE 1:2000 @ A3 / DATE 02-JUN-23 / CHECK - / DRAWN RH / JOB NO. SK0050 / SKETCH NO. Figure 3 / REV 27

Default \\Yl202003-srv1\share\Public\YL202003\Land Survey\Site Sketch\0050 Aerial photo\380288-CV-SK-0050 - rev.27.dgn 19/6/2023

Prepared by:	Howard Chan	Certified by:	F. C. Tsang
Designation:	Environmental Team Member	Designation:	Environmental Team Leader
Signature:		Signature:	
Date:	18 July 2023	Date:	18 July 2023

Investigation Report for Exceedances of Limit Level of Water Quality Monitoring on 5 June 2023

Investigation was carried out in response to exceedances of limit level during the water quality monitoring on 5 June 2023. The following table summarizes details of the exceedances.

Environmental Team for Hung Shui Kui/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure								
Date	**Station**	**Parameter (Unit)**	**Depth-averaged Measured Value**	**Action Level**	**Limit Level**	**Exceedance**		**Project Related (Y/N)**
						AL	**LL**	
05/06	TKW1	Suspended Solids (SS) (mg/L)	22.5	16.0	18.4		✓	N
	TKW		28.5	19.8	21.6		✓	N

Construction activities carried out at and adjacent to Road D1 during the investigation period:	According to the information provided by the engineer representative (RE), the construction works carried out on 5 June 2023 include: <u>Site 3-8 (Road D1) at Portion B7</u> • Dewatering; • Erection of formwork for manhole; and • Erection of metal scaffolding for manhole. The construction works carried out at adjoining non-DP works area on 5 June 2023 include: <u>Site 3-6 and Site 3-7 at Portion B2</u> • No major construction works reported. <u>Site 3-6 (near Chun Tsuen) (Temporary Stockpile Area) at Portion B1</u> • Trim formation level +23.0mPD; and • Breaking of existing concrete near gate B. <u>Site 3-7 (near gate B) at Portion A2</u> • General electric work; • Splice casing for BP02; • First airlifting and water sampling for BP15; and • Installation of steel cages for BP15.
Possible reason for Action or Limit Level Non-compliance:	According to the records of the Hong Kong Observatory, about 5 to 20 mm rainfall was recorded over Hung Shui Kiu on 5 June 2023, which led to river runoff with high suspended solids levels due to surface runoff from the catchment. Other factors that may be related to the exceedances include surface runoff and effluent discharges from workshops, open storages, warehouse, and/ or private toilet(s) along the catchment downstream of the site.

	As observed during the site inspections on 5 June 2023 and 8 June 2023, the Contractor had implemented on site measures to control site runoff from Site 3-8 and Road D1, including sump, WetSep and portable pumps for temporary storage and treatment of surface water and site effluent. As no effluent discharge licence was applied for Site 3-6 and Site 3-7, no direct discharge from the sites was allowed. Effluent and surface runoff at Site 3-6 and Site 3-7 were collected and diverted to retention ponds on-site for ground infiltration. No evidence was found to indicate that the exceedances on 5 June 2023 were affected by the site activities. The non-compliances at TKW1 and TKW may be related to surface runoff and effluent discharges from workshops, open storages, warehouse, private toilet(s), and/ or residential dwellings along the catchment downstream of the site. No further exceedance of action or limit levels of SS at TKW and TKW1 was detected during the water quality monitoring on 7 and 9 June 2023. In conclusion, the exceedances recorded on 5 June 2023 were considered non-project related.
Action taken / to be taken:	1. Repeated in-situ measurement was not applicable for laboratory measurement of SS level. 2. The source of impact may be related to rainfall at Hung Shui Kiu recorded on 5 June 2023 and also surface runoff and effluent discharges from workshops, open storages, warehouse, private toilet(s) and/ or residential dwellings along the catchment downstream of the site. 3. A notification of exceedances has been issued to the IEC, the Contractor, and the EPD. 4. Duplicate water samples were collected on site, and the monitoring data were checked and confirmed. All plant, equipment and the Contractor's working methods were checked during the site inspection. No non-compliance was observed. 5. As no evidence was found to indicate that the exceedance on 5 June 2023 was affected by the site activities, no additional mitigation measure was discussed with the IEC, the RE and the Contractor. 6. During the site inspections, the Contractor had implemented on site measures to control site runoff. The Contractor was reminded to implement/ maintain the following mitigation measures: <u>Site 3-8 and Road D1</u> a. The WetSep and other accessories shall be maintained regularly to minimise malfunction. b. Surface run-off from construction sites shall be discharged at the designated discharge point as indicated in the effluent discharge license via adequately designed sand/ silt removal facilities.

c. The Contractor will provide sump(s) near the WetSep at Site 3-8 to temporary store site runoff prior to treatment.
d. Channels/ earth bunds/ sandbag barriers will be properly provided on site to direct stormwater to the sump(s).
e. Water (either upstream river water or site runoff) detained behind the box culvert will be treated by the WetSep at Site 3-8 prior to discharge.

Site 3-6, Site 3-7, and Contaminated Soil Treatment Area

f. As no effluent discharge licence is applied for Site 3-6 and Site 3-7, no direct discharge of surface runoff or construction effluent is allowed from the sites.
g. Impervious canvases are deployed to cover the stockpiles at the contaminated soil treatment area to minimise contaminated surface runoff (Figure 3).
h. Perimeter channels, sump pits and leachate collection tanks are installed at the contaminated soil treatment area to collect and store leachate from the stockpiles of excavated materials to eliminate untreated leachate escaped from the treatment area.
i. A retention pond is set up at Site 3-6 (Portion B1) to store effluent and surface runoff from Site 3-6 and Site 3-7 (Figure 3).
j. Another retention pond is also set up near the contaminated soil treatment area for the discharge chamber workfront to collect effluent and surface runoff (Figure 3).

Following the site inspection on 25 May 2023, the IEC advised that water diversion measure (which separates the upstream river water from the site runoff and effluent discharge) before passing through the box culvert at Site 3-8 (Portion B7) should be implemented to facilitate the source identification in exceedance investigation for the water quality monitoring stations U1 and SW. The RE had also issued a reminder to the Contractor to implement the measure on 17 June 2023. The measure has been implemented since late June 2023. The RE and the ET will continue to audit the Contractor's progress in implementation and maintenance of this and other measures during the regular weekly site inspection.

7. After the laboratory results were received on 13 June 2023, the frequency of monitoring was increased to daily at TKW1 and TKW from 14 June 2023. No further action and limit level exceedance of SS at TKW1 and TKW was recorded on 13, 14 and 15 June 2023. Daily monitoring was therefore ceased after 15 June 2023. The following table summarizes the monitoring results of SS at TKW1 and TKW on 13, 14 and 15 June 2023.

Date	**13 June 2023**	**14 June 2023**	**15 June 2023**
Parameters	**SS (mg/L)**	**SS (mg/L)**	**SS (mg/L)**
TKW1	8.3	5.4	6.2
TKW	7.4	8.6	5.5

Photo Records of Site Inspection held by the ET on 8 June 2023

Site 3-8 (Road D1)

(P1)

Stockpile of dusty materials was covered properly to avoid generation of muddy runoff. No muddy surface runoff was observed during the site inspection.

(P2)

Surface runoff and site effluent were collected and diverted to the WetSep for temporary storage and treatment before the water was used for fugitive dust suppression on site.

(P3)

Surface runoff was directed to the sump for temporary storage. No muddy surface runoff and no direct discharge of construction effluent was observed.

Contaminated Soil Treatment Area (Portion B2)

(P4)

Sloping surfaces of stockpiles at the contaminated soil treatment area were covered by impervious canvases to minimize contaminated runoff during rainfall.

(P5)

Leachate collection tanks were in place at the contaminated soil treatment area.

Site 3-7 (Portion A2)

(P6)

(P7)

No effluent or surface runoff was observed to discharge from the site.

Site Photos on 5 June 2023 provided by the Engineer

Site 3-8 (Road D1)

(R1)

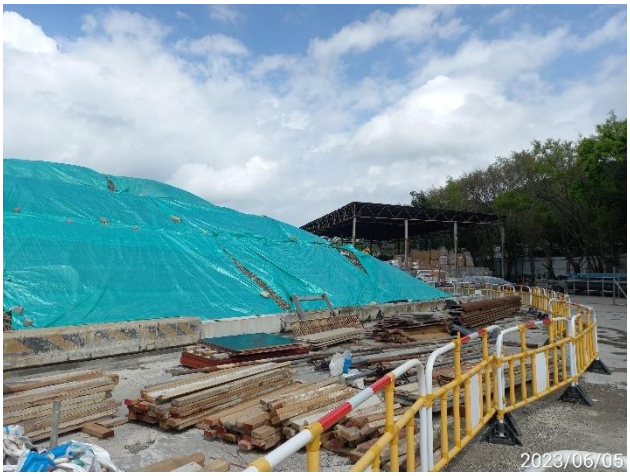
The WetSep was functioned properly on 5 June 2023.

(R2)

No muddy surface runoff was observed on 5 June 2023.

Contaminated Soil Treatment Area (Portion B2)

(R3)



(R4)

Sloping surfaces of stockpiles at the contaminated soil treatment area were coverd by impervious canvases to minimise contaminated runoff during rainfall. No surface runoff or effluent was leaked from the contaminated soil treatment area during the site inspection.

Site 3-6 (Portion B1)

(R5)

(R6)

No effluent or surface runoff was observed on site.

Site 3-7 (Portion A2)

(R7)

(R8)

No effluent or surface runoff was observed on site.

Site Observation Photos around Water Quality Monitoring Stations taken by the ET on 5 June 2023

(W1)

Water Quality Monitoring Station: TKW

(W2)

Water Quality Monitoring Station: TKW1

Figure 1 Rainfall Record from the Hong Kong Observatory

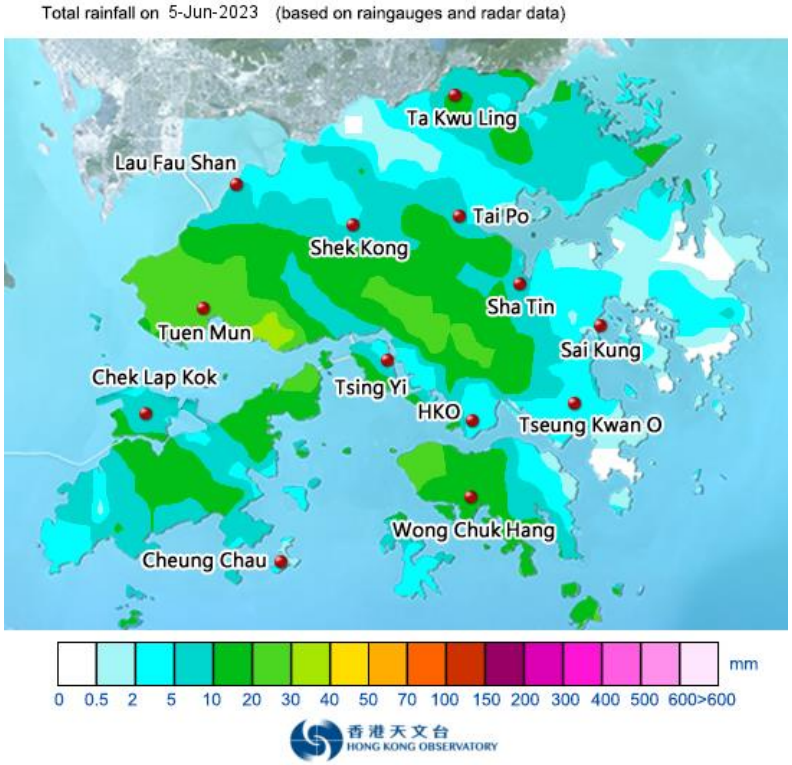
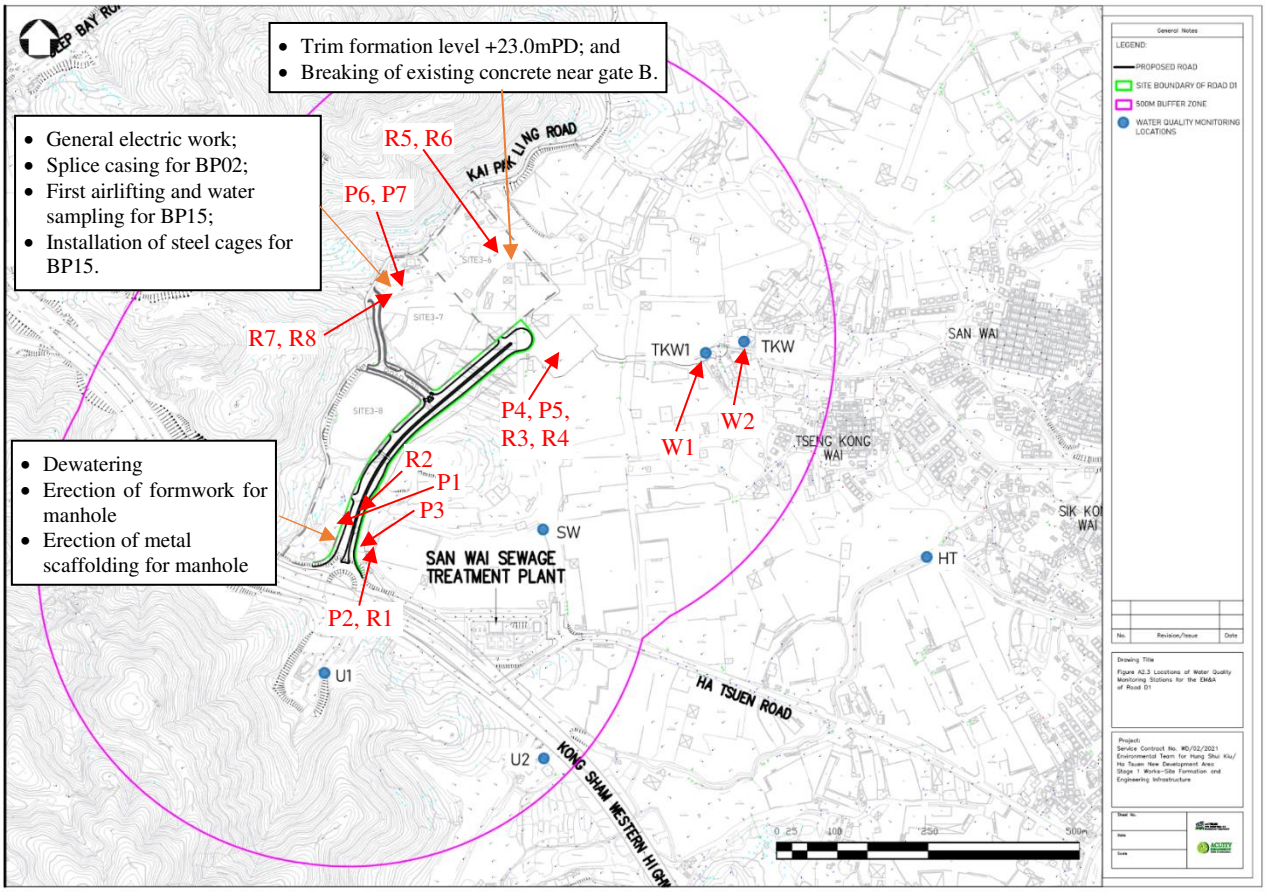


Figure 2 Location Plan of Impact Water Quality Monitoring Stations (Site activities held on 5 June 2023 were reported in text boxes)



Retention pond in Site 3-6 & 3-7.

Workfront for discharge chamber

Contaminated soil treatment area. Stockpile and biopile were covered by canvas. Leachate was stored in the leachate collection tank

Retention pond for discharge chamber workfront

N

0 20 40 60 80 100m
1 : 2000 SCALE BAR

MOTT MACDONALD

CONTRACT NO. YL/2020/03
HUNG SHUI KIU/HA TSUEN NEW DEVELOPMENT AREA
STAGE 1 WORKS

Water quality pollution control measures implemented for Site 3-6 and Site 3-7

SCALE	1:2000 @ A3	DATE	02-JUN-23
CHECK	-	DRAWN	RH
JOB NO. SK0050	SKETCH NO. Figure 3		REV 27

Default \\Yl202003-srv1\share\Public\YL202003\Land Survey\Site Sketch\0050 Aerial photo\380288-CV-SK-0050 - rev.27.dgn 19/6/2023

Prepared by:	Howard Chan	Certified by:	F. C. Tsang
Designation:	Environmental Team Member	Designation:	Environmental Team Leader
Signature:		Signature:	
Date:	18 July 2023	Date:	18 July 2023

Investigation Report for Exceedance of Limit Level of Water Quality Monitoring on 9 June 2023

Investigation was carried out in response to an exceedance of limit level during the water quality monitoring on 9 June 2023. The following table summarizes details of the exceedance.

Environmental Team for Hung Shui Kui/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure								
Date	**Station**	**Parameter (Unit)**	**Depth-averaged Measured Value**	**Action Level**	**Limit Level**	**Exceedance**		**Project Related (Y/N)**
						AL	**LL**	
09/06	SW	Suspended Solids (SS) (mg/L)	21.5	9.7	9.9		✓	N

Construction activities carried out at and adjacent to Road D1 during the investigation period:	According to the information provided by the engineer representative (RE), the construction works carried out on 9 June 2023 include: <u>Site 3-8 (Road D1) at Portion B7</u> • Dewatering; • Stripped off external formwork for manhole; • Erection of formwork for manhole; and • Rectification works of the cut slope. The construction works carried out at adjoining non-DP works area on 9 June 2023 include: <u>Site 3-6 and Site 3-7 at Portion B2</u> • No major construction works reported. <u>Site 3-7 (near gate B) at Portion A2</u> • Final airlifting and dipping record of founding level for BP07; • Concreting for BP07; and • Excavation by reverse circulation drill for BP17. <u>Site 3-8 (Box Culvert) at Portion B7</u> • Drilling for dowel bar; and • Digging existing concrete.
Possible reason for Action or Limit Level Non-compliance:	According to the records of the Hong Kong Observatory, about 10 to 30 mm rainfall was recorded over Hung Shui Kiu on 9 June 2023, which led to river runoff with high suspended solids levels due to surface runoff from the catchment. Other factors that may be related to the exceedance include surface runoff and effluent discharges from workshops, open storages, warehouse and/ or private toilet(s) along the catchment downstream of the site. As observed during the site inspections on 8 June 2023 and 9 June 2023, the Contractor had implemented on site measures to control site runoff from Site 3-8 and Road D1, including sump, WetSep and portable pumps for temporary storage and treatment of surface water

	and site effluent. As no effluent discharge licence was applied for Site 3-6 and Site 3-7, no direct discharge from the sites was allowed. Effluent and surface runoff at Site 3-6 and Site 3-7 were collected and diverted to retention ponds on-site for ground infiltration. No evidence was found to indicate that the exceedance on 9 June 2023 was affected by the site activities. The non-compliance at SW may be related to surface runoff and effluent discharges from workshops, open storages, warehouse and/ or private toilet(s) along the catchment downstream of the site. No further exceedance of action level or limit level of SS at SW was detected during the water quality monitoring on 13, 14 and 15 June 2023. In conclusion, the exceedance recorded on 9 June 2023 was considered non-project related.
Action taken / to be taken:	1. Repeated in-situ measurement was not applicable for laboratory measurement of SS level. 2. The source of impact may be related to rainfall at Hung Shui Kiu recorded on 9 June 2023 and also surface runoff and effluent discharges from workshops, open storages, warehouse, and/ or private toilet(s) along the catchment downstream of the site. 3. A notification of exceedance has been issued to the IEC, the Contractor, and the EPD. 4. Duplicate water samples were collected on site, and the monitoring data were checked and confirmed. All plant, equipment and the Contractor's working methods were checked during the site inspection. No non-compliance was observed. 5. As no evidence was found to indicate that the exceedance on 9 June 2023 was affected by the site activities, no additional mitigation measure was discussed with the IEC, the RE and the Contractor. 6. During the site inspection, the Contractor had implemented on site measures to control site runoff. The Contractor was reminded to implement/ maintain the following mitigation measures: <u>Site 3-8 and Road D1</u> a. The WetSep and other accessories shall be maintained regularly to minimise malfunction. b. Surface run-off from construction sites shall be discharged at the designated discharge point as indicated in the effluent discharge license via adequately designed sand/ silt removal facilities. c. The Contractor will provide sump(s) near the WetSep at Site 3-8 to temporary store site runoff prior to treatment. d. Channels/ earth bunds/ sandbag barriers will be properly provided on site to direct stormwater to the sump(s).

e. Water (either upstream river water or site runoff) detained behind the box culvert will be treated by the WetSep at Site 3-8 prior to discharge.

Site 3-6, Site 3-7, and Contaminated Soil Treatment Area

f. As no effluent discharge licence is applied for Site 3-6 and Site 3-7, no direct discharge of surface runoff or construction effluent is allowed from the sites.
g. Impervious canvases are deployed to cover the stockpiles at the contaminated soil treatment area to minimise contaminated surface runoff (Figure 3).
h. Perimeter channels, sump pits and leachate collection tanks are installed at the contaminated soil treatment area to collect and store leachate from the stockpiles of excavated materials to eliminate untreated leachate escaped from the treatment area.
i. A retention pond is set up at Site 3-6 (Portion B1) to store effluent and surface runoff from Site 3-6 and Site 3-7 (Figure 3).
j. Another retention pond is also set up near the contaminated soil treatment area for the discharge chamber workfront to collect effluent and surface runoff (Figure 3).

Following the site inspection on 25 May 2023, the IEC advised that water diversion measure (which separates the upstream river water from the site runoff and effluent discharge) before passing through the box culvert at Site 3-8 (Portion B7) should be implemented to facilitate the source identification in exceedance investigation for the water quality monitoring stations U1 and SW. The RE had also issued a reminder to the Contractor to implement the measure on 17 June 2023. The measure has been implemented since late June 2023. The RE and the ET will continue to audit the Contractor's progress in implementation and maintenance of this and other measures during the regular weekly site inspection.

7. After the laboratory results were received on 13 June 2023, the frequency of monitoring was increased to daily at SW from 14 June 2023. No further action level or limit level exceedance of SS at SW was recorded on 14 and 15 June 2023. Daily monitoring was therefore ceased after 15 June 2023. The following table summarizes the monitoring results of SS at SW on 13, 14 and 15 June 2023.

Date	**13 June 2023**	**14 June 2023**	**15 June 2023**
Parameters / **Stations**	**SS (mg/L)**	**SS (mg/L)**	**SS (mg/L)**
SW	4.0	4.8	8.6

Photo Records of Site Inspection held by the ET on 8 June 2023

Site 3-8 (Road D1)	
 (P1) Stockpile of dusty materials was covered properly to avoid generation of muddy runoff. No muddy surface runoff was observed during the site inspection.	 (P2) Surface runoff and site effluent were collected and diverted to the WetSep for temporary storage and treatment before the water was used for fugitive dust suppression on site.
 (P3) Surface runoff was directed to the sump for temporary storage. No muddy surface runoff and no direct discharge of construction effluent was observed.	

Contaminated Soil Treatment Area (Portion B2)

(P4)

Sloping surfaces of stockpiles at the contaminated soil treatment area were covered by the impervious canvases to minimize contaminated runoff during rainfall.

(P5)

Leachate collection tanks were in place at the contaminated soil treatment area.

Site 3-7 (Portion A2)

(P6)

(P7)

No effluent or surface runoff was observed to discharge from the site.

Site Photos on 9 June 2023 provided by the Engineer

Site 3-8 (Road D1)

(R1)

The WetSep was functioned properly on 9 June 2023.

(R2)

Rain water deposited around the manhole was diverted to the sump for temporary storage prior to treatment by the WetSep on site.

Contaminated Soil Treatment Area (Portion B2)

(R2)

(R3)

Sloping surfaces of stockpiles at the contaminated soil treatment area were coverd by impervious canvases to minimise contaminated runoff during rainfall. No surface runoff or effluent was leaked from the contaminated soil treatment area during the site inspection.

Site 3-7 (Portion A2)	
 (R4) No effluent or surface runoff was observed to discharge from the site.	

Site Observation Photo around Water Quality Monitoring Station taken by the ET on 9 June 2023

 (W1) Water Quality Monitoring Station: SW	

Figure 1 Rainfall Record from the Hong Kong Observatory

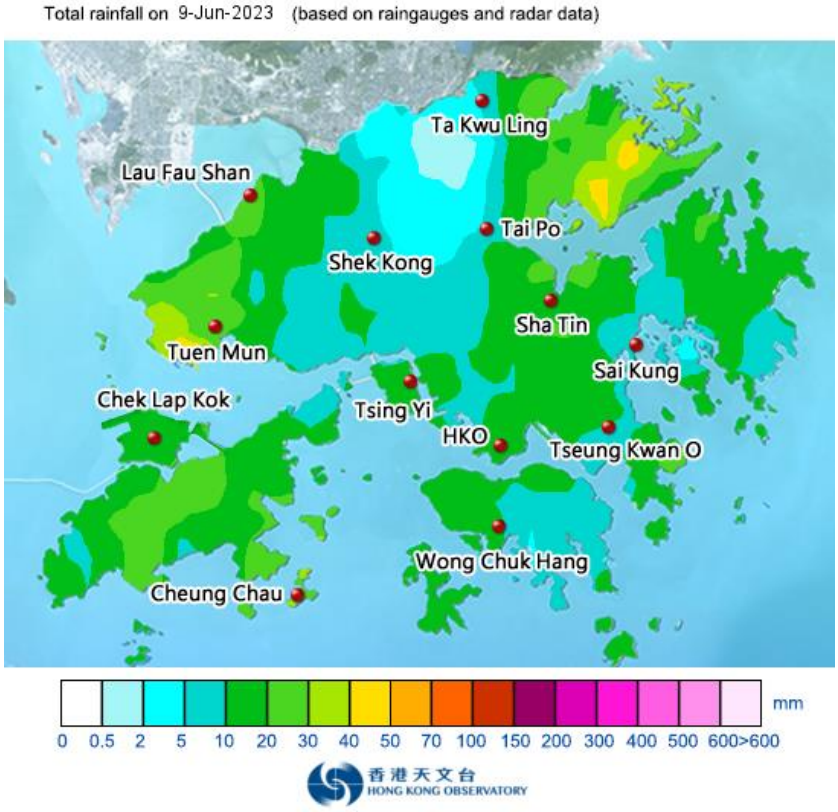
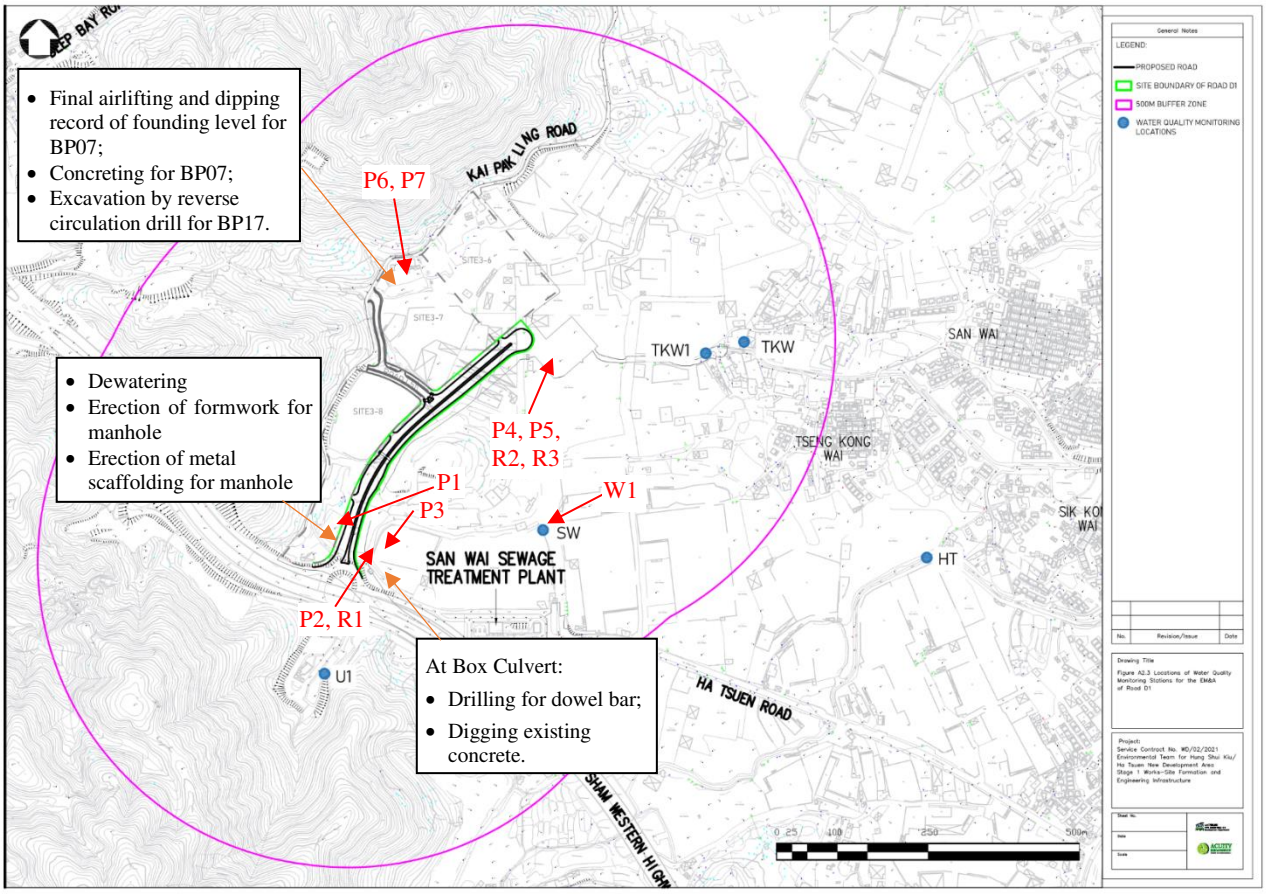
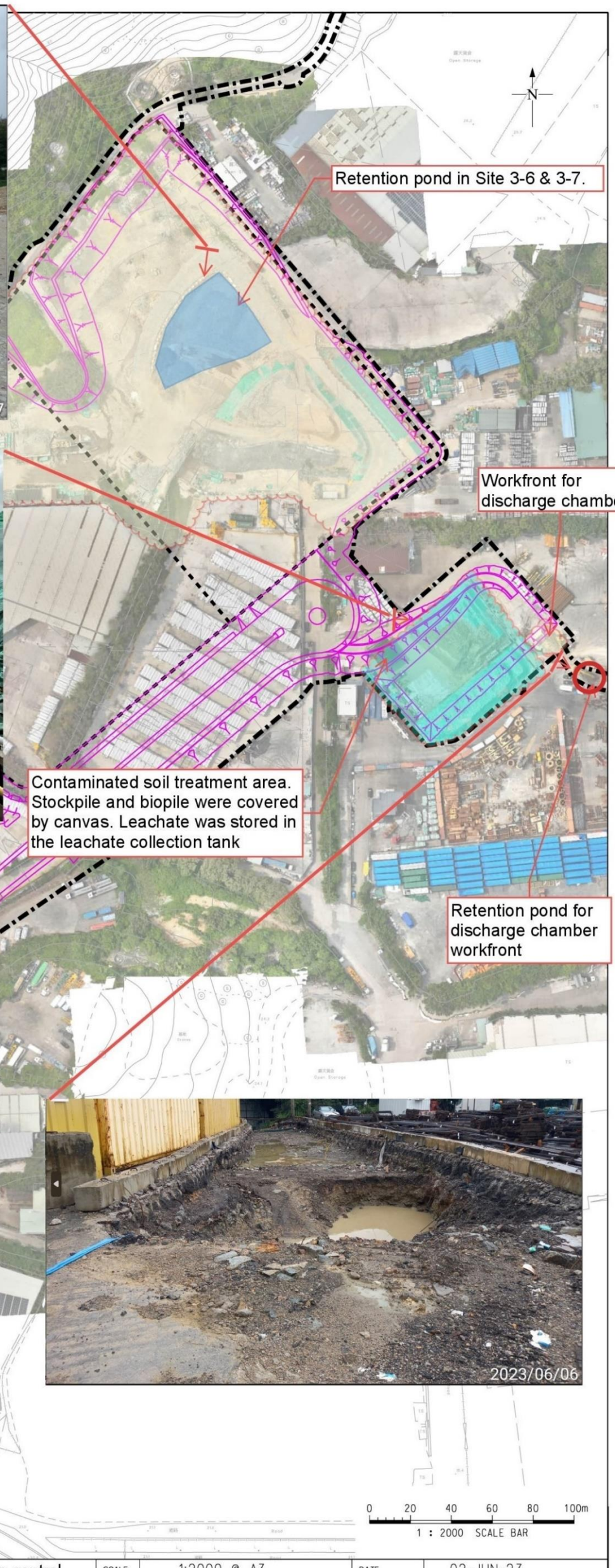


Figure 2 Location Plan of Impact Water Quality Monitoring Stations (Site activities held on 9 June 2023 were reported in text boxes)





MOTT MACDONALD	CONTRACT NO. YL/2020/03 HUNG SHUI KIU/HA TSUEN NEW DEVELOPMENT AREA STAGE 1 WORKS	Water quality pollution control measures implemented at Site 3-6 and Site 3-7	SCALE 1:2000 @ A3	DATE 02-JUN-23	
			CHECK -	DRAWN RH	
			JOB NO. SK0050	SKETCH NO. Figure 3	REV 27

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Prepared by:	Howard Chan	Certified by:	F. C. Tsang
Designation:	Environmental Team Member	Designation:	Environmental Team Leader
Signature:		Signature:	
Date:	18 July 2023	Date:	18 July 2023