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By post
12 December 2023

The EIA Ordinance Register Office,
Environmental Protection Department,
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

Attn: Ms. Ada Fung

Our ref 273407/L047-EPD/FC/ht/jy

Dear Madam

Contract No. SPW 09/2019 Independent Environmental Checker for Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po
Submission of Final Audit Report

In accordance with Clause 2.6 of the Environmental Permit for Provision of Trunk Sewer to 3 Villages: Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk in Tai Po (Register No. EP-556/2018), we are pleased to submit herewith two hard copies and one electronic copy of the Final Audit Report for your perusal.

Yours sincerely

Franki Chiu
Independent Environmental Checker

e franki.chiu@arup.com

Encl.

cc DSD - Mr. YEUNG Fai Kiu

Drainage Services Department

Contract No SPW 09/2019 Independent Environmental Checker for Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po

Final Audit Report

Version 2 | 12 Dec 2023

Job number 273407

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Appendices

1 INTRODUCTION

1.1 Background

Provision of Trunk Sewers (with diameter of around 250mm) to Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk in Tai Po (the Project) is implemented so as to extend the existing gravity trunk sewer near San Uk along Wun Yiu Road for around one kilometres. Upon completion of the proposed works, a public sewer system will be ready for villagers' future connection to replace the private septic tank systems so as to collect and convey the wastewater generated in the villages to Tai Po Sewage Treatment Works for treatment and disposal.

The proposed works under the Project have been carried out under the Contract No. DC/2019/03 – Revitalisation Works of Jordan Valley Nullah and Minor Drainage and Sewerage Works in Urban Area and New Territories. The scope of the proposed works under the Project is as below.

(a) construction of about 1 kilometre long gravity trunk sewers with diameter of 250 millimetres from San Uk Ka to Ta Tit Yan for provision of sewerage system to Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk, including

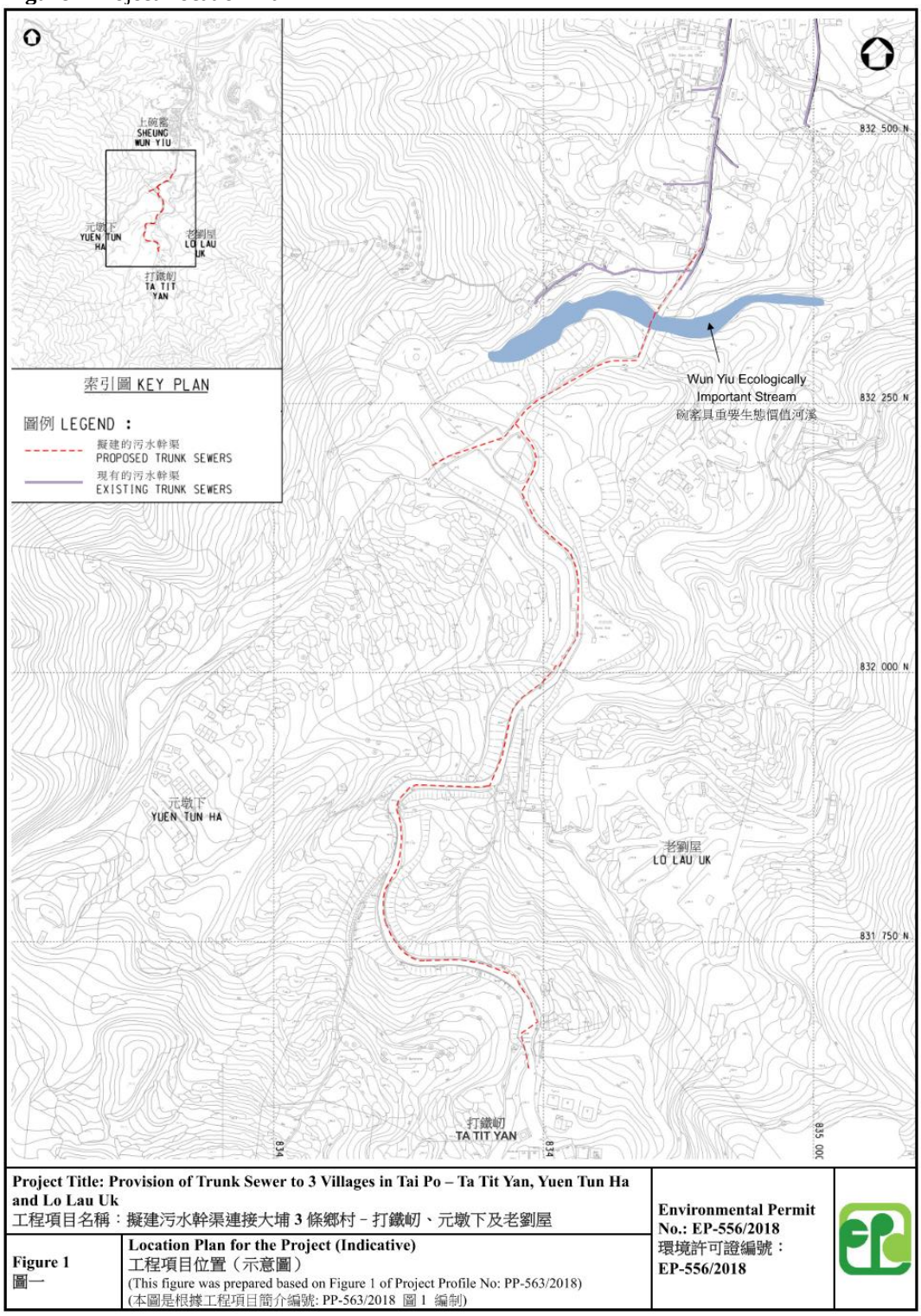
  (i) a section of about 60 metres (m) proposed sewer to be laid by trenchless method,
  (ii) a section of about 350 m proposed sewer within the Tai Mo Shan Country Park,
  (iii) a section of about 22m proposed sewer crossing the Wun Yiu Ecologically Important Stream (EIS) with pipe saddle supports at two sides of riverbank and one pre-cast or prefabricated pipe support at the middle of EIS; and
  (iv) a section of about 50 m proposed sewer crossing three stream courses with pipe saddle supports at two sides of riverbank.

(b) ancillary works; and

(c) environmental mitigation measures.

Figure 1 shows the project location plan in the environmental permit EP556/2018.

Figure 1 Project Location Plan



1.2 Scope of the Assignment

The scope of the Services comprises the IEC services for auditing the implementation of all mitigation measures recommended in the PP and the conditions of EP. The Service Provider shall discharge his duties in full compliance with the requirements of an IEC who shall confirm full compliance through an Audit Report deposited with the Director of Environmental Protection (DEP) within one month upon completion of the construction works of the Project. In undertaking the Services as described in this Technical Requirement, the Service Provider shall discharge, but without limitation to the following duties:

(a) To submit to the DEP for approval, a proposal on the reporting mechanism covering the approaches for the IEC and the supporting team to report to the DEP;

(b) To audit the implementation of all mitigation measures recommended in the PP and the conditions of EP;

(c) To verify the environmental acceptability of permanent and temporary works, relevant plans and submissions required in the EP;

(d) To notify the Director of EPD by fax or email, within 1 working day of receipt of notification from the ET leader, or identification by the IEC and his team, of each and every change of circumstances and emergency events.

(e) To accompany the Director of EPD in carrying out site inspections and attending meetings when requested;

(f) To offer objective and professional advice on environmental issues, when requested, and to respond to questions and enquires from the Director of EPD, with the support of relevant information, documents and records as appropriate;

(g) To allocate adequate resources, including any necessary specialist support having regard to specialists in the ET, for discharging the duties required in the PP and the conditions of EP;

(h) To report the findings of the site inspections and other environmental performance reviews to the Employer;

(i) To advise on proactive actions;

(j) To validate and confirm the accuracy of monitoring results, monitoring equipment, monitoring locations, monitoring procedures and locations of sensitive receivers;

(k) To carry out random sample checks and audit the monitoring activities, monitoring data, results and sampling procedures, etc. (at least at monthly intervals);

(l) To conduct random site inspections;

(m) To audit the ET monitoring methodology;

(n) To review and verify the monitoring reports submitted by the ET;

(o) To review the effectiveness of environmental mitigation measures and project environmental performance;

(p) To review the proposal on mitigation measures submitted by the Contractor.

(q) To liaise with the ET on environmental considerations and advise the Employer for his action if the mitigation measures identified in the PP and the conditions of EP are not implemented in a timely manner;

(r) To adhere to the agreed procedures where applicable those in this Contract for carrying out complaint investigations;

(s) To feedback audit results to ET in writing;

(t) To participate in Community Liaison Group(s); and

(u) To verify the log-book for site activities.

2 Construction Activities

The construction programme and layout plan refer to Appendix A and Appendix B.

The construction works were started on 14 Feb 2022. All construction works including construction works within 20m from Wun Yiu EIS were completed on 15 July 2022.

3 Status on Implementation of Environmental Mitigation Measures

The potential environmental impacts and mitigation measures identified in the PP and the conditions of EP of the Project during construction stage are summarised in **Table 3.1** below.

Table 3.1 Summary of potential environmental impacts and identified in the PP, the conditions of EP, Water Quality and Ecological Monitoring Plan and Waste Management Plan.

Mitigation Measures	Implementation Status
Construction Stage	
Air quality impact	
1. Implement standard dust suppression measures as stipulated in APCO	Implemented
Noise impact	
1. Erect temporary movable noise barrier	Not Implemented due to site constraint. [1]
2. Deploy quiet mechanical equipment	Implemented
3. Adopt good scheduling of works and site practices	Implemented
4. Comply with ProPECC PN 2/93 and NCO	Implemented
Water quality impact	
1. Adopt necessary silt removal facilities	Implemented
2. Construct temporary on-site drainage system	Implemented

Mitigation Measures	Implementation Status
3. Adopt good site practices	Implemented
4. Temporary on-site drainage and silt removal facilities comply with ProPECC PN 1/94, relevant technical circulars and guidelines	Implemented
5. Water quality monitoring of the Wun Yiu EIS should be carried out before, during and after the construction of the proposed pipe support and any other construction works adjacent (within 20m) to the Wun Yiu EIS. An event and action plan should be provided for relevant parties to take immediate action in case any deterioration in water quality is observed in the monitoring events.	Implemented
6. Protection of natural watercourses will be in compliance with Environment, Transport and Works Bureau Technical Circular (Works) (ETWB TC(W)) No. 5/2005 《Protection of natural streams/rivers from adverse impacts arising from construction works》	Implemented
7. Adequate measures shall be taken to ensure that no pollution or siltation occurs to the gathering grounds	Implemented
8. Temporary drains with silt traps shall be constructed at the boundary of the site prior to the commencement of any earthworks	Implemented
9. Regular cleaning of the silt traps shall be carried out to ensure that they function properly at all time.	Implemented
10. All excavated or filled surfaces which have the risk of erosion shall be protected from erosion at all time.	Implemented
11. Site formation plans shall be submitted to WSD for approval prior to commencement of work.	Implemented
12. No structure or temporary works shall be erected in the catchwaters without prior approval of WSD	Implemented
13. The Contractor shall be responsible for cleaning frequently any waterworks roads and associated drainage works of mud and debris.	Implemented
14. The approval for using the access may be withdrawn on written notice to the Contractor by WSD at their absolute discretion.	Implemented
15. The Contractor shall recover immediately his vehicle which fell into the catchwater or stream bed or pay to Government on demand the cost of recovery that may be necessary through the occurrence of any incident caused by the Contractor	Implemented
16. The Contractor shall carry out repair or reinstatement works to the satisfaction of WSD or pay to Government on demand the cost of repair and reinstatement to any waterworks	Implemented

Mitigation Measures	Implementation Status
installations that shall or may be necessary at any time as a result of damage caused by the Contractor or others under his charge.	
17. The Contractor shall enter and remain on and use the access at his own risk and he shall indemnify the Government of Hong Kong from all claims, costs, damages and expense arising from the use of the access.	Implemented
18. No excavation with depth more than 2m shall be permitted within 120m from the centerline of WSD water tunnels without the prior approval of WSD.	Implemented
19. All waterworks access roads must be maintained unobstructed at all time.	Implemented
Waste impact	
1. Sort C&D materials on site	Implemented
2. Reuse inert C&D materials for backfilling	Implemented
3. Dispose non-inert C&D materials and general refuse to PFRF and landfills through trip ticket system	Implemented
4. Comply with relevant technical circulars and regulations	Implemented
Ecological impact	
1. Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	Implemented
2. Adopt good site practices	Implemented
3. Implement practical dust, noise and site run-off control measures	Implemented
4. Ecological monitoring of the Wun Yiu EIS should be carried out before, during and after the construction of the proposed pipe support and any other construction works adjacent (within 20m) to the Wun Yiu EIS. The construction process should be supervised by qualified ecologist all the time to ensure that no major impact to the aquatic ecosystem. The details should be agreed with AFCD and EPD before construction.	Implemented [2]
5. To avoid or minimize impacts to the Wun Yiu Ecologically Important Stream (WYEIS), the following measures shall be implemented during construction stage of the Project: a. no construction activity within the water body of WYEIS; b. no construction work shall be carried out inside WYEIS in spring and wet seasons; c. only hand-held tools may be used inside WYEIS; and d. the natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed.	Implemented
6. No dredging, river training or river diversion	Implemented

Mitigation Measures	Implementation Status
shall be allowed in the Project.	
7. The proposed pipe support in the Wun Yiu EIS will be constructed on exposed dry rock surface (instead of the riverbed) above the existing stream course water body. All the construction works involved will be above the water body. Therefore, the water body will be totally untouched during the construction stage.	Implemented
8. Both the size of the proposed pipe support and the scale of the construction works involved in the Wun Yiu EIS will be rather small.	Implemented
9. In consideration of the available literature on breeding season of freshwater fish in Hong Kong, no construction works inside the extent of the Wun Yiu EIS will be allowed in spring and the wet season.	Implemented
10. Ensure not disturbing the stream course water body during the works will be imposed.	Implemented
11. The proposed works site inside or in the proximity of natural rivers and streams should be temporarily isolated, such as placing of sandbags or silt curtains with lead edge at bottom and properly supported props, to prevent adverse impacts on the stream water qualities.	Implemented
12. The natural bottom and existing flow in the river should be preserved to avoid disturbance to the river habitats. No access track on riverbed should be allowed.	Implemented
13. Stockpiling of construction materials including cement, if necessary, should be properly covered and protected with deployment of sandbags.	Implemented
14. Construction debris and spoil should be covered up and/or properly disposed of as soon as possible to avoid being washed into nearby rivers/streams by rain.	Implemented
15. Construction effluent including those from cement grouting, site run-off and sewage should be properly collected and/or treated. Wastewater from a construction site should be managed with the following approach in descending order: (1) minimisation of wastewater generation; (2) reuse and recycle; (3) treatment. Proper locations for discharge outlets of wastewater treatment facilities well away from the natural streams/rivers should be identified.	Implemented
16. Adequate lateral support may need to be erected in order to prevent soil/mud from slipping into the stream/river, but without unduly impeding the flow during heavy rain.	Implemented
17. Supervisory staff should be assigned to station on site to closely supervise and monitor the works.	Implemented
18. Removal of existing vegetation alongside the	Implemented

Mitigation Measures	Implementation Status
riverbanks should be avoided or minimised. When disturbance to vegetation is unavoidable, all disturbed areas should be hydroseeded or planted with suitable vegetation to blend in with the natural environment upon completion of works.	
19. Standard good site practice (e.g. hoarding of works areas, placement of equipment or stockpile at designated area, etc.) should be implemented in construction stage to minimize potential disturbance impact	Implemented
20. Practical dust and noise control measures (e.g. regular watering, use of quiet mechanical plant, temporary noise barrier, etc.) should be implemented during construction stage	Implemented
21. Effective site run-off control measures (e.g. provision of surface drainage system, use of sand/silt traps, etc.) should be provided during the construction stage to minimize impacts on adjacent water bodies	Implemented
Landscape and visual impact	
1. Carry out proper control over site cleanliness and stockpiling of materials	Implemented
Traffic impact	
1. Implement good practices on temporary traffic arrangement	Implemented
Operation Stage	
Water quality impact	
1. Install the sewer pipes spanning the individual watercourses inside a sleeve steel pipe for leaking prevention purpose.	Implemented
2. The design of temporary on-site drainage and silt removal facilities will comply with the guidelines stipulated in EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94).	Implemented
3. All waterworks access roads must be maintained unobstructed at all time.	Implemented

Notes:

[1] Adjustment of operation mode were made which Electric Hand-held Poker and Generator operated only when concrete lorry mixer left.

[2] Post-Construction Ecological Survey have been conducted till end of July 2023, according to Water Quality and Ecological Monitoring Plan.

4 Overview of Contractor Submission

A concise list of contractor submission for the project is given in **Table 4.1** below:

Table 4.1 List of contractor submission

Description	IEC verification / Submission Record (Date)
Waste Management Plan prepared by DC/2019/03 Contractor for IEC comment	IEC comments returned on 16.4.2020
Water Quality and Ecological Monitoring Plan prepared by DC/2019/03 Contractor for IEC comment	IEC comment returned on 8.5.2020
Waste Management Plan prepared by DC/2019/03 Contractor for IEC comment	2nd IEC comments returned on 20.5.2020
Water Quality and Ecological Monitoring Plan prepared by DC/2019/03 Contractor for IEC comment	IEC comment returned on 4.6.2020
Waste Management Plan prepared by DC/2019/03 Contractor for IEC comment	1st IEC comments returned on 10.7.2020
Waste Management Plan prepared by DC/2019/03 Contractor for IEC comment	IEC verification letter submitted on 24.7.2020
Layout plan of the Project under Condition 2.2 of EP-556/2018 prepared by DC/2019/03 Contractor for IEC comment	IEC comment sent on 29.7.2020
Layout plan of the Project under the Condition 2.2 of EP-556/2018 Contractor for IEC comment	27 Aug 2020
EPD provided comments on WQEMP of Location B4 – Wun Yiu Road	10 Sep 2020
Revised response to comment for WMP under EP condition 2.3	12 Oct 2020
Revised Layout Plan under EP condition 2.2	29 Oct 2020
Revised response to comment for WQEMP under EP condition 2.1	30 Oct 2020
Verification letter for the Waste Management Plan (Rev 4) by ETL for IEC verification	5 Nov 2020
Verification letter for the WQEMP 2.1 by ETL for IEC verification	5 Nov 2020
Verification letter for the Layout Plan by ETL for IEC verification	5 Nov 2020
Resubmission of WQEMP and Layout Plans by ET	7 Jan 2021
Revised Layout Plan and WQEMP by ET	18 Feb 2021
Water Quality and Ecological Monitoring Report – Oct – Nov 2021	23 Aug 2022
Water Quality and Ecological Monitoring Report – Dec 2021	23 Aug 2022
Water Quality and Ecological Monitoring Report – Jan 2022	23 Aug 2022
Water Quality and Ecological Monitoring Report – Feb 2022	23 Aug 2022
Water Quality and Ecological Monitoring Report – Mar 2022	29 Aug 2022
Water Quality and Ecological Monitoring Report – Apr 2022	29 Aug 2022
Water Quality and Ecological Monitoring Report – May 2022	29 Aug 2022
Ecology Monitoring Report for June 22 to July 22	28 Sep 2022
Water Quality and Ecological Monitoring Report – June 2022	12 Nov 2022
Water Quality and Ecological Monitoring Report – July 2022	12 Nov 2022
Post-Construction Ecological Monitoring Report (August 2022)	15 Nov 2022
Post-Construction Ecological Monitoring Report (September 2022)	15 Nov 2022

Description	IEC verification / Submission Record (Date)
Post-Construction Ecological Monitoring Report (October 2022)	15 Nov 2022
Post-Construction Ecological Monitoring Report (November 2022)	21 Nov 2022
Post-Construction Ecological Monitoring Report Rev 1 (November 2022)	2 Dec 2022
Post-Construction Ecological Monitoring Report Rev 1 (December 2022)	6 Jan 2023
Post-Construction Ecological Monitoring Report Rev 1 (January 2023)	14 Feb 2023
Post-Construction Ecological Monitoring Report Rev 1 (March 2023)	24 Apr 2023
Post-Construction Ecological Monitoring Report Rev 1 (April 2023)	3 May 2023
Post-Construction Ecological Monitoring Report Rev 1 (May 2023)	19 Jun 2023
Post-Construction Ecological Monitoring Report Rev 1 (June 2023)	14 Jul 2023
Post-Construction Ecological Monitoring Report Rev 1 (July 2023)	9 Aug 2023

5 Major Accomplishment

5.1 Meetings

- Discussion between DSD, IEC, Best Build and ET on EPD's comments on the WQEMP submission was held on 18 Sep 2020.
- A site meeting was held on 10 Jan 2021 with the presence of DSD, ET, Best Build and IEC.

5.2 Summary of Work Done

Upon commencement of the Assignment, accumulated number of environmental submission verification and IEC monthly progress report are summarized in **Table 5.1**.

Table 5.1 Summary of work done

Work	Number
IEC Monthly Progress Report	**38**
Audit Report	**1**

5.3 IEC Site Audit

IEC site audits were conducted from Jan 2022 to May 2023 with the presence of Environmental Officer, Contractor and IEC. The IEC site audit checklists are given in Appendix C.

6 Conclusion

The potential environmental impacts and mitigation measures identified in the PP, the conditions of EP, Water Quality and Ecological Monitoring Plan and Waste Management Plan of the Project are implemented or compensate has been made and executed during construction stage

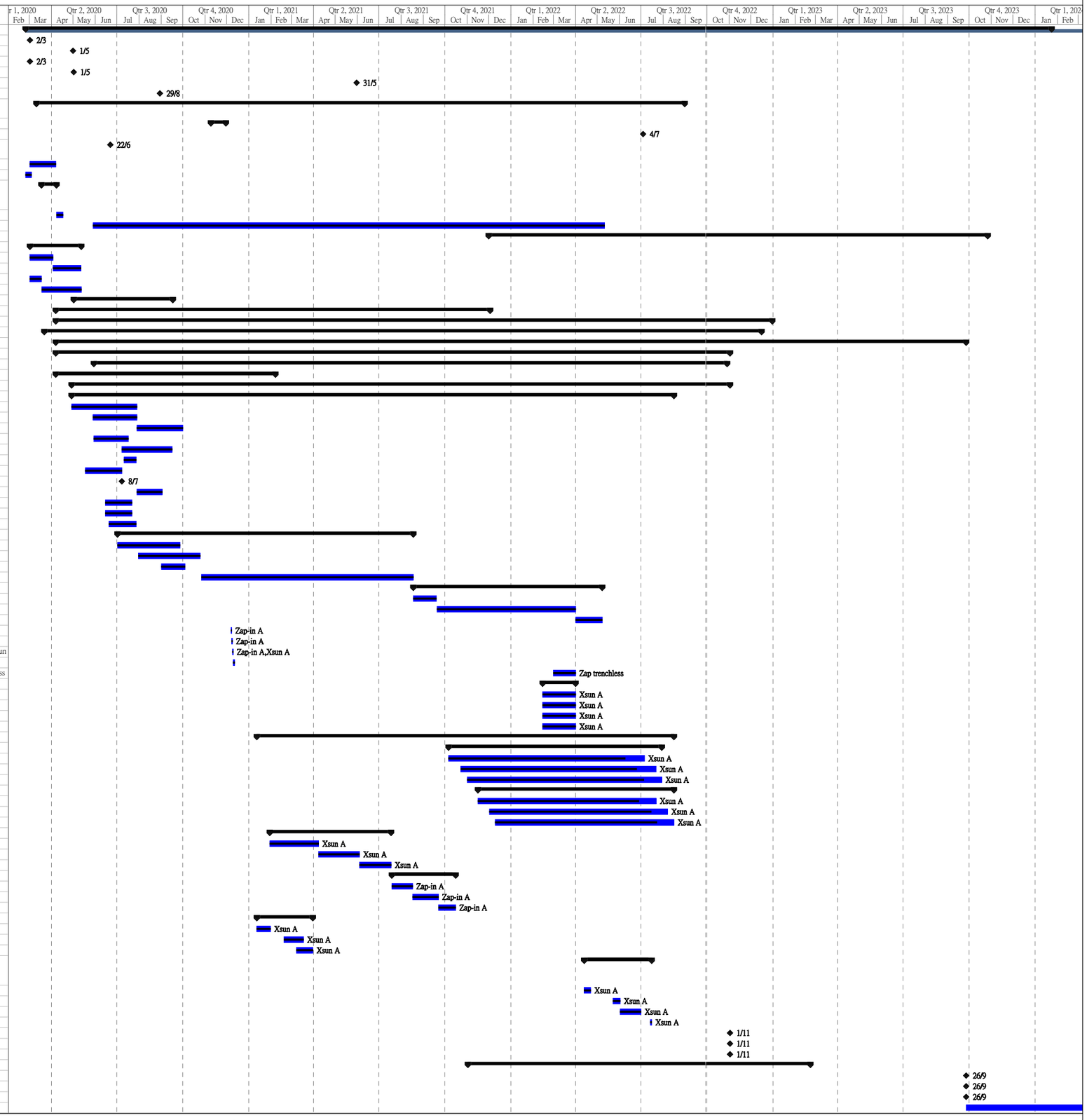
Appendix A

Construction Programme

Best Build Construction Company Limited
Contract No. DC/2019/03
Revitalisation Works of Jordan Valley Nullah and Minor Drainage and Sewerage Works in Urban and New Teritories

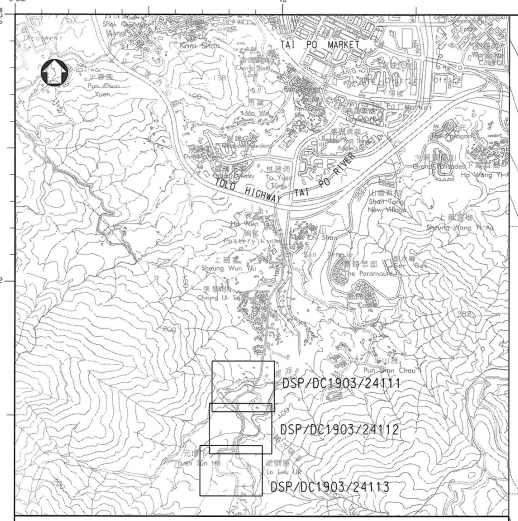
Project Programme
Rev. 7 (14 Aug 2021)

ID	Task	Duration	Start	Finish	Predecessors	Successors	Resource Names
1	**Project Programme for DC/2019/03**	**1169 d**	**Tue 25/2/20**	**Tue 23/1/24**			
2	Starting Date (Contract)	0 d	Mon 2/3/20	Mon 2/3/20		+61 d,7FS+181 d,17,37,38	
3	Access date for S1 (within 60 days after the starting date)	0 d	Fri 1/5/20	Fri 1/5/20	2FS+61 d	0FS+911 d,1090FS+453 d	
4	Access date for portion 1 to 6, 8 to 10, 12, 13, 15 to 28 (starting date)	0 d	Mon 2/3/20	Mon 2/3/20	2		
5	Access date for portion 7 (within 60 days after starting date)	0 d	Fri 1/5/20	Fri 1/5/20	2FS+61 d		
6	Access date for portion 11 (date of ordering commencement of the sectio	0 d	Mon 31/5/21	Mon 31/5/21			
7	Access date for portion 14A and 14B (within 180 days after starting date)	0 d	Sat 29/8/20	Sat 29/8/20	2FS+181 d		
8	**Commencement date of XPs/ STLA for Portion 1 to 6, 8 to 9, 12, 13 to 28**	**903 d**	**Wed 11/3/20**	**Wed 31/8/22**			
35	**Starting date of XPs/ STLA for portion 7**	**21 d**	**Mon 9/11/20**	**Mon 30/11/20**			
39	**Starting date of XPs/ STLA for portion 11**	**0 d**	**Mon 4/7/22**	**Mon 4/7/22**			
41	**Starting date of XPs/ STLA for portion 14A & 14B (14 days after the starting date)**	**0 d**	**Mon 22/6/20**	**Mon 22/6/20**			
43	Mobilization	30 d	Mon 2/3/20	Mon 6/4/20	2	6,271,246,253,183,162,9...	
44	Submission and approval for the procurement and subletting procedures	7 d	Tue 25/2/20	Tue 3/3/20		,774,863,862,944,46,47,45	
45	**Subletting of Key Services (Such as Traffic Consultant, Survey Service, BIM Service and Subcontractor for PM's accommodation)**	**17 d**	**Wed 18/3/20**	**Tue 7/4/20**	**44**	**48,63**	
48	Prepare and submit the 1st of TTM drawing for discussion with relevant p	5 d	Wed 8/4/20	Thu 16/4/20	46,45	49,156	
49	Submission of TTA schemes for discussion in TMLG meeting with all rel	580 d	Fri 29/5/20	Tue 10/5/22	48	1108,406SS	
50	**Submission of Testing and As-built BIM record**	**567 d**	**Wed 1/12/21**	**Thu 26/10/23**			
57	**General submission for health and safety requirements**	**55.5 d**	**Mon 2/3/20**	**Tue 12/5/20**			
58	Draft Safety Plan	28 d	Mon 2/3/20	Thu 2/4/20	2	59	
59	Safety Plan (5th submission)	27 d	Fri 3/4/20	Mon 11/5/20	58	63	
60	Draft Environmental Management Plan	14 d	Mon 2/3/20	Tue 17/3/20	2	61	
61	Environmental Management Plan (3rd submission)	41 d	Wed 18/3/20	Tue 12/5/20	60	63	
62	**S1 - Work Area 1**	**116 d**	**Sat 2/5/20**	**Wed 16/9/20**			
66	**Section 1**	**495 d**	**Tue 7/4/20**	**Thu 2/12/21**			
180	**Section 2**	**814 d?**	**Tue 7/4/20**	**Fri 30/12/22**			
317	**Section 3**	**815 d?**	**Sun 22/3/20**	**Thu 15/12/22**			
807	**Section 4**	**1035 d?**	**Tue 7/4/20**	**Tue 26/9/23**			
937	**Section 5**	**765 d**	**Tue 7/4/20**	**Tue 1/11/22**			
938	**Portion 3 - A3 - Canton Road (Team B3)**	**721 d**	**Sat 30/5/20**	**Fri 28/10/22**			
964	**Portion 4 - A4 - Waterloo Road (Xsun)**	**251 d**	**Tue 7/4/20**	**Sat 6/2/21**			
996	**Portion 5 - A5 - Castle Peak Road (San Tin) (Team B3)**	**749 d**	**Wed 29/4/20**	**Tue 1/11/22**			
1027	**Portion 14A and 14B - B4 Wun Yiu Road (Zap-in A)**	**685 d**	**Wed 29/4/20**	**Mon 15/8/22**			
1028	XP application with TTA submission and consultation with RMO/	74 d	Wed 29/4/20	Tue 28/7/20	43	1049	
1029	Material Submission and approval (PE pipe outstanding)	50 d	Fri 29/5/20	Tue 28/7/20	43	1036,1030	
1030	Order and delivery of PE pipe	55 d	Wed 29/7/20	Wed 30/9/20	1029	1049	
1031	Submission of method Statement	39 d	Sat 30/5/20	Thu 16/7/20	43	1049	
1032	Submission of proposed pre-cast FRP pipe support including certifi	60 d	Tue 7/7/20	Tue 15/9/20	1034	1053	
1033	Liaison with Others	14 d	Sat 11/7/20	Mon 27/7/20	43	1049	
1034	Subletting - Subcontracting of the works (Draft subletting documer	42 d	Mon 18/5/20	Tue 7/7/20	44	1035,1032	
1035	TRA - Potential delay for retendering of the sub-contracts	0 d	Wed 8/7/20	Wed 8/7/20	1034	1049	
1036	Procurement for those are not including in subletting package (PE p	30 d	Wed 29/7/20	Tue 1/9/20	1029	1053	
1037	Tree survey	30 d	Mon 15/6/20	Tue 21/7/20	43	1049	
1038	Utility survey	30 d	Mon 15/6/20	Tue 21/7/20	43	1049	
1039	Submission and approval of temporary works design	30 d	Sat 20/6/20	Mon 27/7/20	43	1049	
1040	**Submission of Water Quality and Ecological Monitoring Plan, La**	**338 d**	**Thu 2/7/20**	**Tue 17/8/21**			
1041	WQEMP (submitted to EPD and AFCD on 2/7/2020, consent fr	82 d	Thu 2/7/20	Sat 26/9/20	43	1046,1044	
1042	WMP (draft resubmitted to DSD for Comment and submitted to	82 d	Fri 31/7/20	Sat 24/10/20	43	1049,1044	
1043	Layout Plan (submitted on 27/7/2020 and consent by DSD on 2	28 d	Tue 1/9/20	Sat 3/10/20	43	1049,1044	
1044	Late consent of LP and WQEMP by EPD	240 d	Tue 27/10/20	Tue 17/8/21	1041,1042,1043	1046	
1045	**Water Quality and Ecological Monitoring**	**214 d**	**Wed 18/8/21**	**Sat 7/5/22**			
1046	Baseline	28 d	Wed 18/8/21	Sat 18/9/21	1041,1044	1047,1053	
1047	Duration Construction	158 d	Mon 20/9/21	Thu 31/3/22	1046,1071	1048	
1048	Post Construction	28 d	Fri 1/4/22	Sat 7/5/22	1067,1047	1111	
1049	Starting date for the implementation of TTA	1 d	Mon 7/12/20	Mon 7/12/20	1028,1035,1042,42,104	1050	Zap-in A
1050	General site clearance	1 d	Tue 8/12/20	Tue 8/12/20	1049	1051	Zap-in A
1051	Trial Pit and UU diversion	1 d	Wed 9/12/20	Wed 9/12/20	1050	1052	Zap-in A,Xsun
1052	TRA - Potential delay for extended period for diversion of charted	2 d	Thu 10/12/20	Fri 11/12/20	1051		
1053	installation of one small pre-cast or prefabricated pipe support at th	27 d	Tue 1/3/22	Thu 31/3/22	1032,1036,1046		Zap trenchless
1054	**construction of the associated sewer manholes and pipe saddle su**	**40 d**	**Mon 14/2/22**	**Thu 31/3/22**			
1055	MH2 to MH3 (24m)	40 d	Mon 14/2/22	Thu 31/3/22			Xsun A
1056	MH6.3 to MH6.2 (16m)	40 d	Mon 14/2/22	Thu 31/3/22			Xsun A
1057	MH11-12 (10m)	40 d	Mon 14/2/22	Thu 31/3/22			Xsun A
1058	MH22a-MH22 (16m)	40 d	Mon 14/2/22	Thu 31/3/22			Xsun A
1059	**Construction of approximately 950m long 250mm diameter trunk**	**473 d**	**Tue 12/1/21**	**Mon 15/8/22**			
1060	**Section 1 - MH3 to MH6 and MH6.2 to MH6 (178m)**	**241 d**	**Wed 6/10/21**	**Fri 29/7/22**			
1061	Excavation	220 d	Wed 6/10/21	Tue 5/7/22		1062SS+14 d	Xsun A
1062	Laying of pipe and construction of manhole	220 d	Sat 23/10/21	Thu 21/7/22	1061SS+14 d	1063SS+7 d	Xsun A
1063	Backfill and reinstatement	220 d	Mon 1/11/21	Fri 29/7/22	1062SS+7 d	1085	Xsun A
1064	**Section 2 - MH7 to MH12 (203m)**	**221 d**	**Tue 16/11/21**	**Mon 15/8/22**			
1065	Excavation	200 d	Tue 16/11/21	Thu 21/7/22		1066SS+14 d	Xsun A
1066	Laying of pipe and construction of manhole	200 d	Thu 2/12/21	Sat 6/8/22	1065SS+14 d	1067SS+7 d	Xsun A
1067	Backfill and reinstatement	200 d	Fri 10/12/21	Mon 15/8/22	1066SS+7 d	1048	Xsun A
1068	**Section 3 - MH17 to MH12 (241m) (Not located upstream of I**	**135 d**	**Sat 30/1/21**	**Sat 17/7/21**			
1069	Excavation	52 d	Sat 30/1/21	Wed 7/4/21		1070	Xsun A
1070	Laying of pipe and construction of manhole	47 d	Thu 8/4/21	Thu 3/6/21	1069	1071	Xsun A
1071	Backfill and reinstatement	36 d	Fri 4/6/21	Sat 17/7/21	1070	1047,1073	Xsun A
1072	**Section 4a - MH18 to 22A (130m)**	**75 d**	**Mon 19/7/21**	**Fri 15/10/21**			
1073	Excavation	25 d	Mon 19/7/21	Mon 16/8/21	1071	1074	Zap-in A
1074	Laying of pipe and construction of manhole	31 d	Tue 17/8/21	Tue 21/9/21	1073	1075	Zap-in A
1075	Backfill and reinstatement	19 d	Wed 22/9/21	Fri 15/10/21	1074	1085	Zap-in A
1076	**Section 4b - MH17 to 18 (67m) (Not located upstream of EIS)**	**64 d**	**Tue 12/1/21**	**Tue 30/3/21**			
1077	Excavation	17 d	Tue 12/1/21	Sat 30/1/21		1078SS+30 d	Xsun A
1078	Laying of pipe and construction of manhole	23 d	Fri 19/2/21	Wed 17/3/21	1077SS+30 d	1079SS+14 d	Xsun A
1079	Backfill and reinstatement	20 d	Mon 8/3/21	Tue 30/3/21	1078SS+14 d	1085	Xsun A
1080	**Construction of drainage pipe the associated manhole between MH1 and MH2 by trenchless method**	**74 d**	**Wed 13/4/22**	**Fri 15/7/22**			
1081	Trialpit Excavation and coordination for UU diversion	5 d	Wed 13/4/22	Thu 21/4/22		1082	Xsun A
1082	Launching and receiving pit	9 d	Mon 23/5/22	Wed 1/6/22	1081	1083	Xsun A
1083	Pipe installation by trenchless method and MH1 (approx. 10m)	24 d	Thu 2/6/22	Thu 30/6/22	1082	1084	Xsun A
1084	Construction of MH1 and backfilling	2 d	Thu 14/7/22	Fri 15/7/22	1083	1085	Xsun A
1085	Planned Completion for Section 5	0 d	Tue 1/11/22	Tue 1/11/22	1026,995,963,1075,108	1108,55SS-1 d,1086	
1086	Terminal float for Section 5	0 d	Tue 1/11/22	Tue 1/11/22	1085	1087	
1087	End of Section 5 (911 day after the starting date i.e. 30/8/2022) Extenc	0 d	Tue 1/11/22	Tue 1/11/22	1086	1110	
1088	**Section 6 (Subject to excision)**	**388 d**	**Tue 2/11/21**	**Tue 21/2/23**			
1108	Planned completion (Completion of all sections)	0 d	Tue 26/9/23	Tue 26/9/23	65,64,49,51,177,314,80	1109	
1109	Terminal float for all Sections	0 d	Tue 26/9/23	Tue 26/9/23	1108	1110	
1110	End of all Sections	0 d	Tue 26/9/23	Tue 26/9/23	3FS+911 d,1107,1087,1	1111	
1111	Establishment Works	311 d	Wed 27/9/23	Thu 26/9/24	1110,1048		



Appendix B

Layout Plan



KEY PLAN
SCALE 1 : 15 000

NOTES :

1. FOR GENERAL NOTES, SEE DSP/DC1903/24101.
2. TRENCHLESS METHODS SHALL BE CORING OR PIPE JACKING OR OTHER TRENCHLESS METHODS WITHOUT MAN ENTRY ACCEPTED BY THE PROJECT MANAGER.

LEGEND :

- EXISTING SEWER AND MANHOLE
- PROPOSED GRAVITY SEWER
- SITE BOUNDARY
- PROPOSED SEWER MANHOLE
- PROPOSED PRE-CAST FRP PIPE SUPPORT AND THE FIXING DETAILS TO BE DESIGNED BY THE CONTRACTOR, CERTIFIED BY INDEPENDENT CHECKING ENGINEER AND APPROVED BY THE PROJECT MANAGER
- PROPOSED CONCRETE SADDLE SUPPORT

no.	date	description	initial
REVISION			

	name	date
designed	Y. L. LU	24/9/19
drawn	C. S. YU	24-9-2019
checked	W. Y. CHEUNG	24.9.2019
vetted	W. W. LAU	24.9.2019

approved

W. Y. LEUNG
Chief Engineer
3.10.2019
Date

contract no. DC/2019/03

file no. SP 7/1/129

project no.

contract

REVITALISATION WORKS OF JORDAN VALLEY NULLAH AND MINOR DRAINAGE AND SEWERAGE WORKS IN URBAN AREA AND NEW TERRITORIES

drawing title

LOCATION B4-
PROVISION OF TRUNK SEWERS
AT WUN YIU ROAD

GENERAL LAYOUT

(SHEET 1 OF 3)

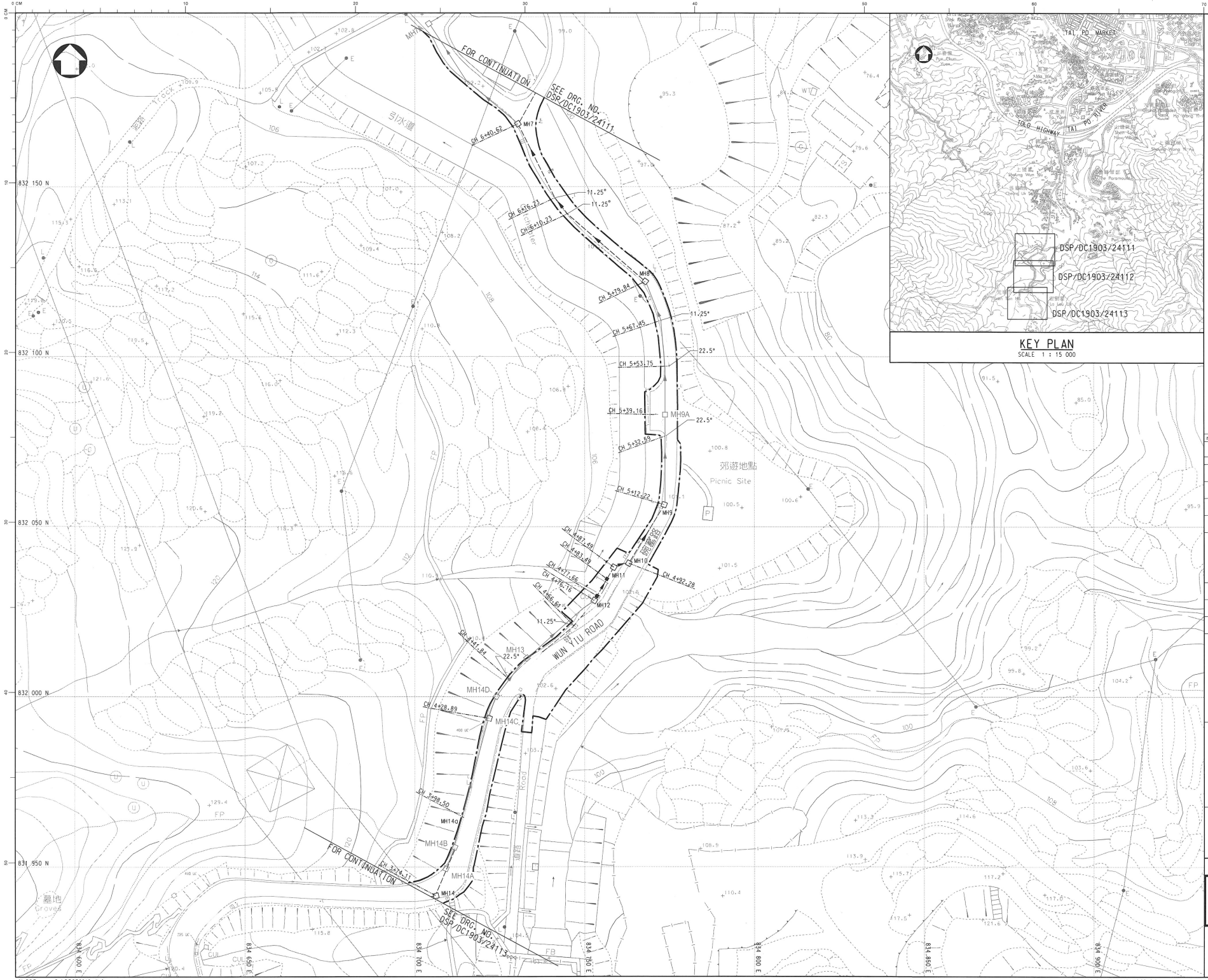
drawing no. DSP/DC1903/24111

scale 1 : 500 OR AS SHOWN

office

SEWERAGE PROJECTS DIVISION

DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION



KEY PLAN
SCALE 1 : 15 000

NOTES :

1. FOR GENERAL NOTES, SEE DSP/DC1903/24101.

LEGEND :

- PROPOSED GRAVITY SEWER
- SITE BOUNDARY
- PROPOSED SEWER MANHOLE
- PROPOSED CONCRETE SADDLE SUPPORT

no.	date	description	initial
REVISION			

	name	date
designed	Y. L. LU	24/9/19
drawn	C. S. YU	24-9-2019
checked	W. Y. CHEUNG	24.9.2019
vetted	W. W. LAU	24.9.2019

approved

W. Y. LEUNG
Chief Engineer

3.10.2019
Date

contract no. DC/2019/03

file no. SP 7/1/129

project no.

contract

REVITALISATION WORKS OF JORDAN VALLEY NULLAH AND MINOR DRAINAGE AND SEWERAGE WORKS IN URBAN AREA AND NEW TERRITORIES

drawing title

LOCATION B4-
PROVISION OF TRUNK SEWERS
AT WUN YIU ROAD

GENERAL LAYOUT

(SHEET 2 OF 3)

drawing no.

DSP/DC1903/24112

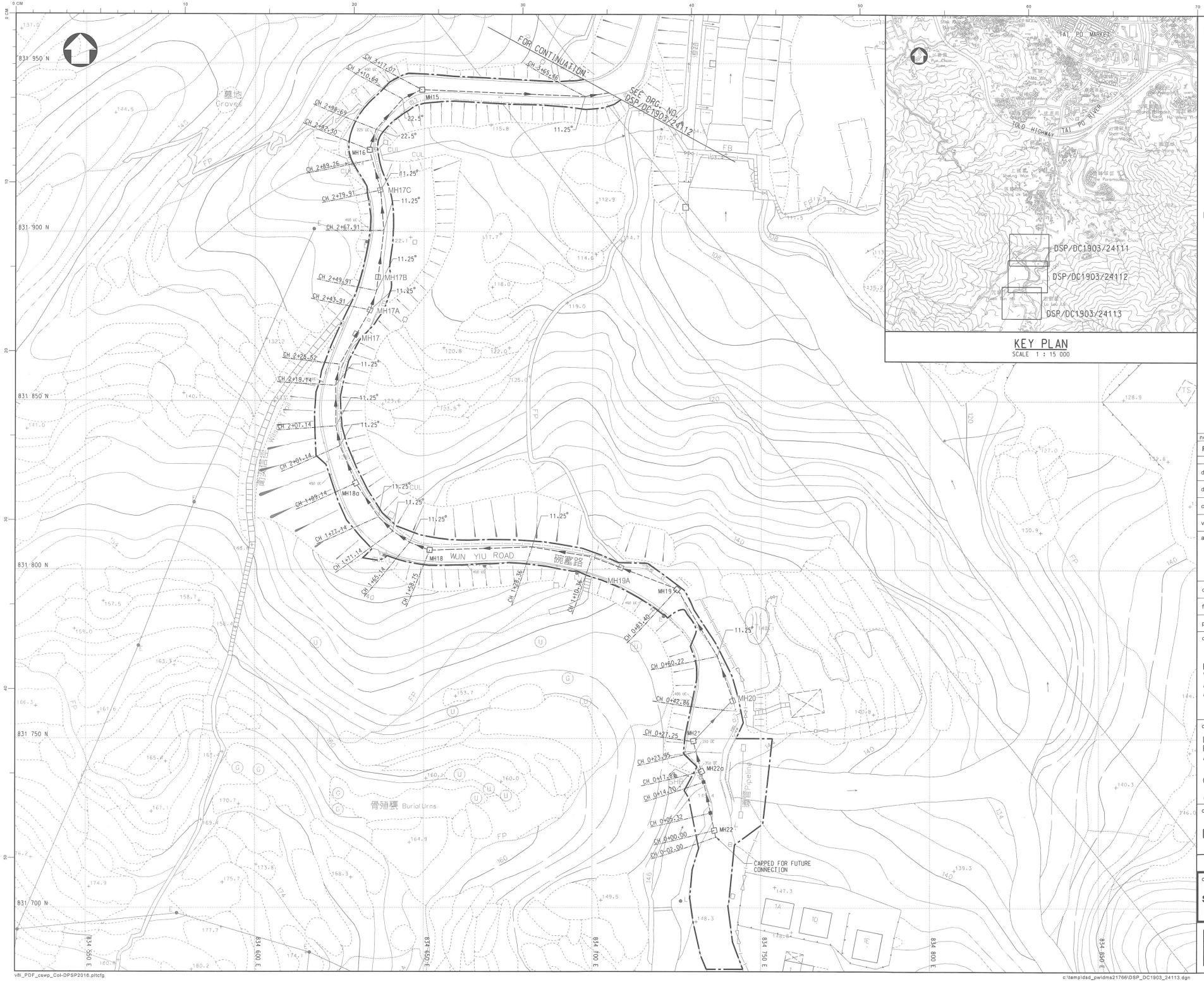
scale

1 : 500
OR
AS SHOWN

office

SEWERAGE PROJECTS DIVISION

DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION



KEY PLAN
SCALE 1 : 15 000

NOTES :

1. FOR GENERAL NOTES, SEE DSP/DC1903/24101.

LEGEND :

- PROPOSED GRAVITY SEWER
- SITE BOUNDARY
- PROPOSED SEWER MANHOLE
- PROPOSED CONCRETE SADDLE SUPPORT

no.	date	description	initial
REVISION			

	name	date
designed	Y. L. LU	24/9/19
drawn	C. S. YU	24-9-2019
checked	W. Y. CHEUNG	24.9.2019
vetted	W. W. LAU	24.9.2019

approved

W. Y. LEUNG
Chief Engineer

3.10.2019
Date

contract no. DC/2019/03

file no. SP 7/1/129

project no.

contract

REVITALISATION WORKS OF JORDAN VALLEY NULLAH AND MINOR DRAINAGE AND SEWERAGE WORKS IN URBAN AREA AND NEW TERRITORIES

drawing title

LOCATION B4-
PROVISION OF TRUNK SEWERS
AT WUN YIU ROAD

GENERAL LAYOUT

(SHEET 3 OF 3)

drawing no.

DSP/DC1903/24113

scale

1 : 500
OR
AS SHOWN

office

SEWERAGE PROJECTS DIVISION

DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION

Appendix C

IEC Site Audit Checklists

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. :	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	10-01-2022
	Project Manager / Supervisor:	**Time Period**	10:30 ~ 11:80

Part I Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☐ High ☑ Moderate ☐ Low
Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong
Temperature 19 °C

No.	Part I Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☐	☑	☐	☐	Obs IV
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part II Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part III Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☑	☐	☐	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part IV-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☑	☐	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☐	☐	☐	☐	☑	☐	Obs IV
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☐	☑	☐	Obs IV
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☐	☐	☑	☐	Obs IV
12	Are there sedimentation tanks for settling runoff prior to disposal?	☐	☐	☐	☐	☑	☐	Obs IV
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☐	☐	☐	☐	☑	☐	Obs IV
13b	with adequate capacity?	☐	☐	☐	☐	☑	☐	Obs IV
13c	free from silt and sediment?	☐	☐	☐	☐	☑	☐	Obs IV
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☐	☐	☐	☐	☑	☐	Obs IV
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☐	☐	☐	☐	☑	☐	Obs IV
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☐	☐	☐	☐	☑	☐	Obs I
20	Are vehicles and plant cleaned of earth, mud and debris before leaving the site?	☐	☑	☐	☐	☐	☐	
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☐	☐	☑	☐	Obs II
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☑	☐	☐	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☑	☒	☐	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☐	☑	☐	☐	☐	

No.	**Part IV-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☐	☐	☑	☐	Obs II
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☐	☐	☑	☐	Obs II
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☐	☑	☐	Obs II
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Vehicle/equipment movements ☐ Loading/unloading of materials ☑ Others							Construction activities

No.	**Part IV-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☐	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☐	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐			
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐			
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐			
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐			
13	Major noise source(s)	☐ Traffic			☑ Construction activities inside of site					
		☐ Construction activities outside of site			☐ Others					

Part VIII Follow-up for the Pervious Site Audit

Part X Signatures

IEC's Representative

(Name: Hffan TAM)
(Date: 10 Jan 2022)

Engineer's Representative

(Name: Felix CHAN)
(Date: 10 Jan 2022)

Contractor's Representative

(Name: C.K. Ko)
(Date: 10/1/2022)

Part IX Remarks

Obs I : Drip tray or Impermeable sheet shall be placed under the chemicals, generators and while replacing hydraulic ~~components~~ components.

Obs II : Dusty materials shall be covered Impermeable sheets or sprayed with water.

Obs III : NRMM labels shall be displayed on the appropriate Mobile Machinery.

Obs IV : Sedimentary tanks shall be deployed to collect site run out.

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	17-02-2022
	Project Manager / Supervisor:	Time Period	9:30 ~ 12:00

Part I Weather

Condition: ☐ Sunny ☐ Fine ☐ Overcast ☐ Storm ☑ Rain ☐ Drizzle ☐ Hazy
Humidity: ☑ High ☐ Moderate ☐ Low
Wind: ☐ Calm ☑ Light ☐ Breeze ☐ Strong
Temperature: 14 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☐	☐	☐	☐	☑	☐	Obs I
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☐	☐	☐	☐	☑	☐	Obs I
9b	traps and baffles?	☐	☐	☐	☐	☑	☐	Obs I
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☐	☑	☐	Obs I
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☐	☐	☑	☐	Obs I
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☐	☐	☐	☐	☑	☐	Obs II
20	Are vehicles and plant cleaned of earth, mud and debris before	☐	☑	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

		N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☐	☑	☐	☐	~~Obs III~~ Rdr I
25	Are open stockpiles covered during heavy rain?	☐	☐	☐	☑	☐	☐	~~Obs III~~ Rdr I
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☐	☑	☐	☐	~~Obs III~~ Rdr I
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☑	☐	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☑	☐	☐	☐	☐	
13	Major noise source(s) [ ] Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI Follow-up for the Pervious Site Audit

Part VII Remarks

Obs I = Sedimentary tanks shall be deployed to collect site runoff or wastewater generated from site.

Obs II = Drip tray or impermeable sheet shall be placed under the chemicals, generators and while replacing hydraulic components.

Rdr I = Dusty materials / open stockpiles / exposed slope surface shall be covered by impermeable sheet.

Part VIII Signatures

IEC's Representative

(Name: Hilton TAM)
(Date: 17-02-2022)

Engineer's Representative

(Name: Felix CHAN)
(Date: 17/2/2022)

Contractor's Representative

(Name:)
(Date: 17/02/2022.)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC Contractor	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	31-03-2022
	Project Manager / Supervisor:	Time Period	9:30 ~ 12:00

Part I Weather

Condition: ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity: ☐ High ☑ Moderate ☐ Low
Wind: ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature: 26 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☐	☐	☑	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☐	☐	☑	☐	☐	☐	
9b	traps and baffles?	☐	☐	☑	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☑	☐	☐	☐	
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☑	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☐	☐	☐	☑	☐	☐	Rdr 1
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☑	☐	☐	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rvd II
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☑	☐	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr I: Chemicals and generators shall be placed on drip tray.
II: Sand bags and other construction debris shall be removed after completion of construction at correspondance section, to maintain good house keeping.

Part VIII **Signatures**

IEC's Representative

(Name: Hilda TAM)
(Date: 2022-03-31)

Engineer's Representative

(Name: Felix CHAN)
(Date: 13/4/2022)

Contractor's Representative

(Name: K.L. CHAN)
(Date: 2022-03-31)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.
Project: Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po
Contract No.
Inspected By: IEC's Rep.: Hilton Tam; Contractor's Rep.:; Project Manager / Supervisor:
IEC: Ove Arup & Partners Hong Kong Ltd.
Contractor:
Engineer:
Inspection Date: 28-04-2022
Time Period: 9:30 ~ 12:00

Part I Weather

Condition: ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity: ☐ High ☑ Moderate ☐ Low
Wind: ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature: 31 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

		N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☐	☑	☐	☐	Rdr 1
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☐	☑	☐	☐	Rdr 1
25	Are open stockpiles covered during heavy rain?	☐	☐	☐	☑	☐	☐	Rdr 1
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rdr II
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr I : Dusty Materials / open stockpiles / exposed slope surface shall be covered by impermeable sheet.

Rdr II : Contractor shall maintain good house keeping.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 2022/04/28)

Engineer's Representative

(Name: Felix CHAN)
(Date: 5 May 2022)

Contractor's Representative

(Name: C.K.Lo)
(Date: 28 Apr 2022)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	24-05-2022
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☑ High ☐ Moderate ☐ Low
Wind ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature 26 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rdr
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials	☐ Vehicle/equipment movements ☑ Others						construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site	☑ Construction activities inside of site ☐ Others						

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr : Contractor shall remain good housekeeping.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 2022-05-24)

Engineer's Representative

(Name: Felix CHAN AE/D8)
(Date: 24/5/2022)

Contractor's Representative

(Name: C.K.Ko)
(Date: ~~24/05/2022~~ 24/05/2022)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC Contractor	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	27-06-2022
	Project Manager / Supervisor:	Time Period	9:30 ~ 12:00

Part I Weather

Condition: ☐ Sunny ☑ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity: ☐ High ☑ Moderate ☐ Low
Wind: ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature: 30 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohibited from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 2
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rdr 1
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials	☐ Vehicle/equipment movements ☑ Others						construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site	☑ Construction activities inside of site ☐ Others						

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr 1: Contractor shall remain good house keeping.

Rdr 2: Sandbags or similar shall be ready for rain season to prohibit site run out entering river channel.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 27/06/2022)

Engineer's Representative

(Name: Felix CHAN)
(Date: 20/7/2022)

Contractor's Representative

(Name: C.F.Ko)
(Date: 27/06/2022)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC Contractor	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep.: Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	29-07-2022
	Project Manager / Supervisor:	Time Period	9:30 ~ 12:00

Part I Weather

Condition: ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity: ☐ High ☑ Moderate ☐ Low

Wind: ☑ Calm ☐ Light ☐ Breeze ☐ Strong

Temperature: 33 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 2
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

		N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rdr 1
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☑	☐	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr 1: Contractor shall remain good housekeeping.

Rdr 2: Sand bags ~~or~~, barrier or similar shall be provided for rain season to prohibit site run-out entering river channel.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 29/7/2022)

Engineer's Representative

(Name: Felix CHAN E108)
(Date: 29/7/2022)

Contractor's Representative

(Name: C.K. KO)
(Date: 29/7/2022)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	30-08-2022
	Project Manager / Supervisor:	Time Period	9:30 ~ 12:00

Part I Weather

Condition: ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity: ☐ High ☑ Moderate ☐ Low
Wind: ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature: 32 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 2
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☐	☑	☐	☐	Rdr 1
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr 1: Constractor shall maintain good House keeping.

Rdr 2: Constractor shale remone the stockpile as soon as possible to prevent site run-out entering ~~st~~ the river channel and provide mitigation measures

Obs 1: Water quality monitoring ended.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 30/08/2022)

Engineer's Representative

(Name: Felix CHAN EI/S)
(Date: 30/8/2022)

Contractor's Representative

(Name:)
(Date: C.K.KO 30/08/22)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC Contractor**	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	15-09-2022
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity ☐ High ☑ Moderate ☐ Low

Wind ☑ Calm ☐ Light ☐ Breeze ☐ Strong

Temperature 32 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☐	☑	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☐	☑	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☐	☑	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

		N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☑ Others							construction activities

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Rdr 1: Contractor shall maintain good house-keeping.

Rdr 2: Contractor shall cover the ~~over~~ opened ~~soil~~ soil ~~Soil~~ surface with impervious to prevent ~~Soil~~ soil erosion, and ~~to conduct~~ start reinstatement as soon as possible.

Obs 1: Water quality monitoring ended, but ~~the~~ contractor shall resume water monitoring as per EPD ~~and~~ comment and Monitoring Plan approved.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 15 Sep 2022)

Engineer's Representative

(Name: Felix CHAN EDB)
(Date: 15 Sept 2022)

Contractor's Representative

(Name: K. L. CHAN)
(Date: 15 Sept 2022)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	IEC Contractor	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	Engineer	
	Contractor's Rep. :	Inspection Date	27-10-2022
	Project Manager / Supervisor:	Time Period	9:30 to 12:00

Part I Weather

Condition: ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity: ☐ High ☐ Moderate ☑ Low

Wind: ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Temperature: 26 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?						
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐

No.	Part V-II Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Vehicle/equipment movements ☐ Loading/unloading of materials ☐ Others							

No.	Part V-III Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Obs 1: Water quality monitoring ended.

Rdr 1: Contractor shall maintain good house keeping.

Rdr 2: Contractor shall plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 27 Oct 2022)

Engineer's Representative

(Name: Felix CHAN, EDSD)
(Date: 28 Oct 2022)

Contractor's Representative

(Name: ERIK [illegible])
(Date: 27/10/22)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	28-11-2022
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☑ High ☐ Moderate ☐ Low
Wind ☐ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature 24 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☑	☐	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Obs 1 : Water quality monitoring ended.

Rdr 1 : Contractor shall maintain good housekeeping.

Rdr 2 : Contractor shall plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 28/11/2022)

Engineer's Representative

(Name: Felix CHAN)
(Date: 28/11/2022)

Contractor's Representative

(Name: [illegible])
(Date: 28/11/22)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	30-12-2022
	Project Manager / Supervisor:	**Time Period**	9:30 to 12:00

Part I Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity ☐ High ☐ Moderate ☑ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong **Temperature** 13 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Vehicle/equipment movements ☐ Loading/unloading of materials ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Obs 1: Water quality monitoring ended.
Rdr 1: Contractor shall maintain good house keeping.
Rdr 2: Contractor shale plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 30/12/2022)

Engineer's Representative

(Name: Felix CHAN)
(Date: 30/12/2022)

Contractor's Representative

(Name: Tick CHANG)
(Date: 30/12/22)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	30-01-2023
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity ☐ High ☐ Moderate ☑ Low

Wind ☑ Calm ☐ Light ☐ Breeze ☐ Strong

Temperature 16 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Obs 1: Water quality monitoring ended.
Rdr 1: Contractor shall maintain good house keeping
Rdr 2: Contractor shall plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 30/01/2023)

Engineer's Representative

(Name: Felix CHAN)
(Date: 30/1/2023)

Contractor's Representative

(Name: Chan Ka Wai)
(Date: 30/01/2023)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC** / **Contractor**	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	27-02-2023
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☐ High ☐ Moderate ☑ Low
Wind ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature 18 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐	
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Loading/unloading of materials ☐ Vehicle/equipment movements ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site ☑ Construction activities inside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

Obs 1 : Water quality monitoring ended.

Rdr 1 : Contractor shall maintain good house keeping.

Rdr 2 : Contractor shall plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton TAM)
(Date: 27/4/2023)

Engineer's Representative

(Name: Felix CHAN)
(Date: 27/2/2023)

Contractor's Representative

(Name: Mark Chan Ka Wai)
(Date: 27/2/2023)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC** / **Contractor**	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	27-03-2023
	Project Manager / Supervisor:	**Time Period**	9:30 to 12:00

Part I Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy

Humidity ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Temperature 19 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?								
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐		
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐		
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐		
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐		
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐		
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐		
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐		
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐		
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐		
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐		
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐		
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐		
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐		

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☑	☐	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Vehicle/equipment movements ☐ Loading/unloading of materials ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☑	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI **Follow-up for the Pervious Site Audit**

Part VII **Remarks**

obs 1 = water quality monitoring ended.

Rdr 1 = contractor shall maintain good house keeping.

Rdr 2 = contractor shall plant and reinstatement as soon as possible.

Part VIII **Signatures**

IEC's Representative

(Name: Hilton Tam)
(Date: 27 Mar 2023)

Engineer's Representative

(Name: Felix CHAN)
(Date: 27/3/2023)

Contractor's Representative

(Name: [illegible])
(Date: 27/3/23)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC Contractor**	Ove Arup & Partners Hong Kong Ltd.
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	24-04-2023
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☑ High ☐ Moderate ☐ Low
Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong
Temperature 24 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☐	☐	☑	☐	☐	☐	
2	Good maintenance of waste storage areas	☐	☐	☑	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☐	☐	☑	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☐	☐	☑	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☐	☐	☑	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☐	☑	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☐	☑	☐	☐	Rdr 1
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☐	☐	☑	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?								
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐		
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐		
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐		
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐		
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐		
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐		
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐		
25	Are open stockpiles covered during heavy rain?	☐	☐	☑	☐	☐	☐		
26	Are manholes covered and sealed?	☐	☐	☑	☐	☐	☐		
27	Are accessed roads protected by crushed stones or gravels?	☐	☐	☑	☐	☐	☐		
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐		
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐		
30	Is wastewater discharge licence available for inspection?	☐	☑	☐	☐	☐	☐		

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☐	☐	☑	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☐	☐	☑	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☐	☐	☑	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☐	☐	☑	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☐	☐	☑	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☐	☑	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☐	☐	☑	☐	☐	Rdr 2
24	Is open burning avoided?	☐	☐	☑	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☐	☐	☑	☐	☐	☐	
30	Observable dust sources ☑ Wind erosion ☐ Vehicle/equipment movements ☐ Loading/unloading of materials ☐ Others							

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☐	☐	☑	☐	☐	☐	
2b	groundborne noise nuisance?	☐	☐	☑	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others							

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI Follow-up for the Pervious Site Audit

Part VII Remarks

Obs 1 : Water quality monitoring ended.

Rdr 1 : contractor shall maintain good house keeping.

Rdr 2 : Contractor shall plant and reinstatement as soon as possible.

Part VIII Signatures

IEC's Representative

(Name: Hilton TAM)
(Date: 16/5/2023)

Engineer's Representative

(Name: Felix CHAN)
(Date: 16/5/2023)

Contractor's Representative

K.L. CHAN

(Name: K.L. CHAN)
(Date: 24.4.2023)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Contract No SPW 09/2019 Independent Environmental Checker for
Provision of Trunk Sewers to 3 Villages: Ta Tit Yan, Yuen Tun Ha Lo Lau Uk in Tai Po
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Provision of Trunk Sewers to 3 villages: Ta Tit Yan, Yuen Tun Ha & Lo Lau Uk in Tai Po	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Contractor	
Contract No.			
Inspected By	IEC's Rep. : Hilton Tam	**Engineer**	
	Contractor's Rep. :	**Inspection Date**	29-05-2023
	Project Manager / Supervisor:	**Time Period**	9:30 ~ 12:00

Part I Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Storm ☐ Rain ☐ Drizzle ☐ Hazy
Humidity ☑ High ☐ Moderate ☐ Low
Wind ☑ Calm ☐ Light ☐ Breeze ☐ Strong
Temperature 29 °C

No.	Part II Water Quality and Ecological Monitoring Plan (WQEMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Provision of silt removal facilities	☐	☑	☐	☐	☐	☐	
2	No pollution or siltation occurs to the gathering ground	☐	☑	☐	☐	☐	☐	
3	Provision of silt traps at drainage	☐	☑	☐	☐	☐	☐	
4	Protection of excavated or filled surfaces for erosion control	☐	☐	☑	☐	☐	☐	
5	Regular cleaning of waterwork roads and associated drainage works	☐	☐	☑	☐	☐	☐	
6	Damage of the waterworks installations	☐	☑	☐	☐	☐	☐	
7	No excavation with depth >2m within 120 m from the centreline of WSD water tunnels except with WSD prior approval	☐	☐	☑	☐	☐	☐	
8	No obstruction of waterworks access roads	☐	☐	☑	☐	☐	☐	

No.	Part III Waste Management Plan (WMP)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Proper segregation of different wastes and reusable/recyclable materials	☑	☐	☐	☐	☐	☐	
2	Good maintenance of waste storage areas	☑	☐	☐	☐	☐	☐	
3	No accumulation of inert C&D waste on site	☐	☐	☑	☐	☐	☐	
4	Wastes are covered in enclosed containers	☑	☐	☐	☐	☐	☐	
5	Licensed waste haulers to collect and transport wastes to licensed disposal site through trip ticket system	☑	☐	☐	☐	☐	☐	
6	Proper reuse of inert C&D waste as backfill materials on site	☑	☐	☐	☐	☐	☐	

No.	Part IV Wun Yiu Ecologically Important Stream (WYEIS)	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Confine works area to existing roads or on the exposed dry rock surface in the Wun Yiu EIS	☑	☐	☐	☐	☐	☐	
2	Monitor the ecological and water quality in the Wun Yiu EIS	☐	☐	☐	☐	☑	☐	Obs 1
3	No construction activity within the water body of WYEIS	☐	☐	☑	☐	☐	☐	
4	No construction work shall be carried out inside WYEIS in spring and wet seasons	☐	☐	☑	☐	☐	☐	
5	Only hand-held tools may be used inside WYEIS	☑	☐	☐	☐	☐	☐	
6	The natural bottom and water flow of WYEIS shall be preserved and no access track on riverbed shall be allowed	☐	☐	☑	☐	☐	☐	
7	No dredging, river training or river diversion works were observed	☐	☐	☑	☐	☐	☐	

No.	Part V-I Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☑	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☐	☑	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☑	☐	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☑	☐	☐	☐	☐	☐	
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☑	☐	☐	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☑	☐	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☑	☐	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☑	☑	☐	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

	leaving the site?							
21	Is a wheel washing bay provided at every site exit?	☑	☐	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward wheel wash bay?	☑	☐	☐	☐	☐	☐	
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☑	☐	☐	☐	☐	☐	
26	Are manholes covered and sealed?	☑	☐	☐	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☑	☐	☐	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☑	☐	☐	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☑	☐	☐	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☑	☐	☐	☐	☐	☐	

No.	**Part V-II Air Quality**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☑	☐	☐	☐	☐	☐	
4	Are areas of site with regular traffic movement having hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☑	☐	☐	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☑	☐	☐	☐	☐	☐	
7	Does the water spraying truck work effectively?	☑	☐	☐	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☑	☐	☐	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☑	☐	☐	☐	☐	☐	
11	Does the wheel wash work effectively?	☑	☐	☐	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☑	☐	☐	☐	☐	☐	
15	Are dusty materials properly covered?	☑	☐	☐	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☑	☐	☐	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☑	☐	☐	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weighing hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☑	☐	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☑	☐	☐	☐	☐	☐	
24	Is open burning avoided?	☑	☐	☐	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☑	☐	☐	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☑	☐	☐	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☑	☐	☐	☐	☐	☐	
29	Is ULSD used in the construction activities?	☑	☐	☐	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials	☐ Vehicle/equipment movements ☑ Others N/A						

No.	**Part V-III Construction Noise Impact**	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☑	☐	☐	☐	☐	☐	
1b	groundborne noise nuisance?	☑	☐	☐	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☑	☐	☐	☐	☐	☐	
2b	groundborne noise nuisance?	☑	☐	☐	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☑	☐	☐	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☑	☐	☐	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	☐	☐	☐	
6	Are silenced equipment used where practicable?	☑	☐	☐	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☑	☐	☐	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☑	☐	☐	☐	☐	☐	
10	Do air compressors have valid noise labels?	☑	☐	☐	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site	☐ Construction activities inside of site ☑ Others N/A						

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part VI Follow-up for the Pervious Site Audit

Part VII Remarks

Obs 1: Water Quality monitoring ended.

Obs 2: C&D wastes and Equipment were removed from site. No ~~works to~~ further works will be conducted under this contract.

Part VIII Signatures

IEC's Representative

(Name: Hilton TAM)
(Date: 29 May 2023)

Engineer's Representative

(Name: Felix CHAN)
(Date: 29/5/2023)

Contractor's Representative

(Name: ERIK CHAN)
(Date: 29 MAY 23)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance