JOB NO.: TCS01216/21

WSD Contract No.: 3/WSD/20 -

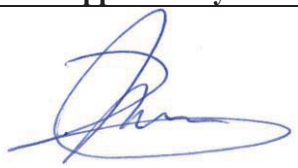
Reclaimed Water Supply to Sheung Shui and Fanling

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT (NO.14) – JANUARY 2023

PREPARED FOR

WATER SUPPLIES DEPARTMENT

Quality Index

Date	Reference No.	Prepared By	Approved By
9 February 2023	TCS01216/21/600/R0066v1	 Martin Li Environmental Consultant	 TW Tam Environmental Team Leader

Version	Date	Description
1	9 February 2023	First Submission

NATURE & TECHNOLOGIES (HK) LIMITED
科 技 環 保（香 港）有 限 公 司
Unit 1102, 11/F, 88 Gloucester Road, Wan Chai, Hong Kong
香港灣仔告士打道 88 號 11 樓 1102 室
Tel 電話: (852) 2877 3122 Fax 傳真: (852) 2511 0922
Email 電郵 : enquiry@nt.com.hk Website 網址 : http://www.nt.com.hk

Date: 14th February 2023

Project Manager
Water Supplies Department
Immigration Tower, 7 Gloucester Road,
Wan Chai, Hong Kong
Attn: Mr. Tim Wong

Dear Sir,

Agreement No. CE67/2017(WS)
Reclaimed Water Supply to Sheung Shi and Fanling – Investigation, Design and Construction
Independent Environmental Checker (IEC) Services for
Shek Wu Hui Water Reclamation Plant under Contract No. 3/WSD/20

Monthly EM&A Monitoring Report for January 2023

We refer to the monthly EM&A Report for January 2023 for WSD Contract No.: 3/WSD/20 – Reclaimed Water Supply to Sheung Shui and Fanling certified by the Environmental Team Leader on 9th February 2023. Please note we have no adverse comments on the captioned submission. The captioned submission is hereby verified in accordance with the requirement stipulated in Condition 3.4 of Environmental Permit No. FEP-01/470/2013.

Should you have any query, please feel free to contact the undersigned at 6113 2368.

Yours Sincerely,

Vega Wong
Independent Environmental Checker
c.c.
- ET Leader –- AUES (Attn: Mr. T.W. Tam) [by Email: twtam@fordbusiness.com]
- Resident Engineer – Binnies Hong Kong Limited (Attn: Mr. Chester Chan) [by Email: chancw@binnies.com]

EXECUTIVE SUMMARY

ES.01 Water Supplies Department (WSD) is the Project Proponent and the Permit Holder of **Reclaimed Water Supply to Sheung Shui and Fanling** (hereinafter referred as "the Contract Works"), which is a Designated Project to be implemented under Further Environmental Permit number FEP-01/470/2013 (hereinafter referred as "the FEP-01/470/2013" or "the FEP").

ES.02 In according with the Updated EM&A Manual stipulation and the location of Contract Works, only construction noise monitoring and waterbird of ecological monitoring are required during the construction phase of the Contract Works.

ES.03 As part of the EM&A programme, Baseline Monitoring Report which determined Action and Limit Levels (A/L Levels) based on the baseline data, has been verified by Independent Environmental Checker (IEC) and submitted to EPD endorsement on ***24 November 2021***. Also, construction activities under the Contract Works were commenced on ***7 December 2021***.

ES.04 This is the **14th** monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from **1** to **31 January 2023** (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES.06 Environmental monitoring activities under the EM&A programme in the Reporting Period are summarized in the following table.

Table ES-1 Environmental monitoring activities in the Reporting Period

Environmental Aspect	Environmental Monitoring Parameters / Inspection	Total Occasions during Reporting Period
Construction Noise	$L_{eq(30min)}$ Daytime	**5**
Ecology	Waterbirds	**4**
Site Inspection / Audit	ET, the Contractor and RE joint site Environmental Inspection	**4**

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES.07 In the Reporting Period, no construction noise limit level exceedance construction noise was recorded and no noise complaint (i.e. Action Level) was received. No action and limit level exceedance for waterbirds survey was recorded in the Reporting Period. No Notifications of Exceedances (NOEs) was issued to the Resident Engineer (RE), IEC and the Main Contractor. The statistics of environmental exceedance, NOE issued and investigation of exceedance are summarized in the following table.

Table ES-2 Breach of Action and Limit (A/L) Levels in the Reporting Period

Environmental Aspect	Monitoring Parameters	Action Level	Limit Level	Event & Action		
				NOE Issued	Investigation	Corrective Actions
Construction Noise	$L_{eq(30min)}$ Daytime	0	0	0	0	0
Ecology	Waterbirds Abundance	0	0	0	0	0

ENVIRONMENTAL COMPLAINT

ES.08 No environmental complaint was recorded or received in this Reporting Month. The statistics of environmental complaint are summarized in the following table.

Table ES-3 Environmental Complaint Summaries in the Reporting Month

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

ES.09 In addition, no complaint received and emergency events relating to violation of environmental legislation for illegal dumping and landfilling were received.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES.10 No environmental summons or successful prosecution was recorded in this Reporting Month. The statistics of summons or successful prosecutions are summarized in the following tables.

Table ES-4 Environmental Summons Summaries in the Reporting Month

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

Table ES-5 Environmental Prosecution Summaries in the Reporting Month

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

REPORTING CHANGE

ES.11 No report change in the reporting period.

SITE INSPECTION

ES.12 Weekly site inspections to evaluate the site environmental performance have been carried out by the RE, ET and the Main Contractor on ***5, 13, 17*** and ***27 January 2023***. No non-compliance was noted during the site inspection.

ES.13 No site visit was undertaken by EPD within the Reporting Period. IEC inspection was conducted on 31 January 2023.

FUTURE KEY ISSUES

ES.14 Construction of reinforced concrete structure of ReWPS and HCF will still be the major construction work in the coming month. Noise mitigation measures such as using soft face hammer for hammering work and erect barrier for wood/steel bar cutting machines were recommended to reduce noise impact generated from rebar fixing and formwork erection work. In addition, the Contractor should pay attention to potential water quality impact from concreting works and implement measure to collect spilt cement/concrete washings during concreting works.

ES.15 As the coming month will be dry season, the Contractor was general reminded to paid attention to air quality mitigation measures such as regularly water at dry haul road and cover any stockpile on site when not in use to reduce dust generation.

ES.16 Details of the future issues in the coming month are described in Section 9.4.

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1. INTRODUCTION

1.1 BACKGROUND

1.1.1 Water Supplies Department (WSD) is the Project Proponent of Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works. On 30th July 2021, China Geo-Engineering Corporation (hereinafter named as "the Main-Contractor") was awarded WSD Contract Works 3/WSD/20 - Reclaimed Water Supply to Sheung Shui and Fanling (hereinafter referred as "the Contract Works").

1.1.2 The reclaimed water supply to Sheung Shui and Fanling (SSF) comprises a Shek Wu Hui Water Reclamation Plant (SWHWRP), part of pumping water mains to Table Hill Reclaimed Water Service Reservoir (TBHRWSR), and Kwu Tung North (KTN) New Development Area (NDA) and distribution water mains to SSF area.

1.1.3 The SWHWRP, which comprises Hypo-Chlorination Facilities (HCF) and Reclaimed Water Pumping Station (ReWPS), will be located at a long-stripped area between Ng Tung River and Sheung Shui Slaughter House at the northwest of the Shek Wu Hui Sewage Treatment Works (SWHSTW).

1.1.4 The HCF, which consists of a hypo-chlorination dosing plant, a chlorine contact tank, dye dosing system, water refilling station, other post-treatment facilitates and storage areas for chemicals, would produce reclaimed water by further treatment of the treated sewage effluent (TSE) pumped from the discharge outlet of the SWHSTW. The treatment capacity of the SWHWRP will be 73,000m3/day.

1.1.5 The Reclaimed Water P/S, which will be located at the northwest of the HCF, will receive reclaimed water by gravity from the HCF and deliver to the TBHRWSR serving SSF areas, Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR) serving KTN NDA and Fanling North Flushing Water Service Reservoir (FLN FLWSR) serving Fanling North (FLN) NDA

1.1.6 This Work Contract mainly comprise construction of Shek Wu Hui Water Reclamation Plant and laying of the associated water main to produce reclaimed water for supply to the Northeast New Territories areas for non-potable used. It is estimated that about 22 million cubic metres of fresh water can be saved each year ultimately.

1.1.7 The construction of Shek Wu Hui Water Reclamation Plant under the Work Contract is a Designated Project to be implemented under Further Environmental Permit number FEP-01/470/2013 (hereinafter referred as "the FEP-01/470/2013" or "the FEP"). Location of Shek Wu Hui Water Reclamation Plant is shown in ***Appendix A***.

1.1.8 The major work of the Work Contract under FEP included:

- Civil engineering construction works, including structures, foundations and earthworks for the SWHWRP and ancillary buildings;
- Electrical and mechanical (E&M), building services, fire services installations, and treatment process system engineering work;
- Other associated systems and facilities for the SWHWRP.

1.1.9 Pursuant to the FEP stipulation, the Main Contractor has commissioned Action-United Environmental Services & Consulting (hereinafter referred as "AUES") as Environmental Team (hereinafter referred as "ET") perform relevant EM&A programme and as well as the associated duties.

1.1.10 As part of the EM&A programme, Baseline Monitoring Report which determined Action and Limit Levels (A/L Levels) based on the baseline data, has been verified by Independent Environmental Checker (IEC) and submitted to EPD endorsement on ***24 November 2021***. Also, construction activities of the Contract were commencement on ***7 December 2021***.

1.1.11 This is **14th** monthly EM&A report to presenting the monitoring results and inspection findings from ***1*** to ***31 January 2023*** of the Reporting Period.

1.2 REPORT STRUCTURE

1.2.1 The report was structured into the following sections:-

Section 1	*Introduction*
Section 2	*Project Organization and Construction Progress*
Section 3	*Summary of Impact Monitoring Requirements*
Section 4	*Construction Noise Monitoring*
Section 5	*Ecology Waterbirds Monitoring*
Section 6	*Waste Management*
Section 7	*Site Inspections*
Section 8	*Environmental Complaints and Non-Compliance*
Section 9	*Implementation Status of Mitigation Measures*
Section 10	*Conclusions and Recommendations*

2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 PROJECT ORGANIZATION

2.1.1 The project organization is shown in ***Appendix B***. The roles and responsibilities of the various parties involved in the EM&A process and the organizational structure of the organizations responsible for implementing the EM&A programme are outlined below.

Water Supplies Department (WSD)

2.1.2 WSD is the Project Proponent and the Permit Holder of the EP of the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by WSD to audit the results of the EM&A works carried out by the ET.

Environmental Protection Department (EPD)

2.1.3 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Engineer or Engineers Representative (ER)

2.1.4 The ER is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the ER with respect to EM&A are:

- Supervise the Contractor's activities and ensure that the requirements in the Contract Works Specific EM&A Manual are fully complied with;
- Inform the Contractor when action is required to reduce impacts in accordance with the Even and Action Plans;
- Employ an IEC to audit the results of the EM&A works carried out by the ET; and
- Comply with the agreed Event Contingency Plan in the event of any exceedance.

The Main Contractor

2.1.5 The Main Contractor is responsible perform construction works and for ensuring that the works are undertaken compliance with the specification and contract requirements. The duties and responsibilities of the Main Contractor with respect to EM&A are:

- Employ an Environmental Team (ET) to undertake monitoring, laboratory analysis and reporting of environmental monitoring and audit;
- Provide assistance to ET in carrying out monitoring and auditing;
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event and Action Plans;
- Implement measures to reduce impact where Action and Limit levels are exceeded; and
- Adhere to the agreed procedures for carrying out compliant investigation.

Environmental Team (ET)

2.1.6 The ET is responsible perform implementation EM&A programmes of the Contract Works as stipulated in the Updated EM&A Manual ensure the works are fully compliance with environmental regulations. The duties and responsibilities of the ET with respect to EM&A are:

- Set up all the required environmental monitoring stations;
- Monitor various environmental parameters as required in the EM&A Manual;
- Analyze the EM&A data and review the success of EM&A programme to cost effectively confirm the adequacy of mitigation measures implemented and the validity of the EIA predictions and to identify any adverse environmental impacts arising;
- Carry out site inspection to investigate and audit the Contractors' site practice, equipment and work methodologies with respect to pollution control and environmental mitigation, and take proactive actions to pre-empt problems;
- Audit and prepare audit reports on the environmental monitoring data and site environmental conditions;
- Report on the EM&A results to the IEC, Contractor, the ER and EPD or its delegated representative;
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of

Action and Limit levels in accordance with the Event and Action Plans;
- Undertake regular and ad-hoc on-site audits / inspections and report to the Contractor and the ER of any potential non-compliance; and
- Follow up and close out non-compliance actions.

Independent Environmental Checker (IEC)

2.1.7 The duties and responsibilities of IEC with respect to EM&A are:
- Review the EM&A works performed by the ET (at not less than monthly intervals);
- Audit the monitoring activities and results (at not less than monthly intervals);
- Report the audit results to the ER and EPD in parallel;
- Review the EM&A reports (monthly summary reports) submitted by the ET;
- Review the proposal on mitigation measures submitted by the Contractor in accordance with the Event and Action Plans;
- Check the mitigation measures submitted by the Contractor in accordance with the Event and Action Plans;
- Check the mitigation measures that have been recommended in the EIA and this Manual, and ensure they are properly implemented in a timely manner, when necessary;
- Report the findings of site inspections and other environmental performance reviews to ER and EPD;
- Coordinate the monitoring and auditing works for all the on-going contracts in the area in order to identify possible sources / causes of exceedances and recommend suitable remedial actions where appropriate; and
- Coordinate the assessment and response to complaints / enquires from locals, green groups, district councils or the public at large.

2.2 CONSTRUCTION PROGRESS

2.2.1 In the Reporting Period, the major construction activities of the Contract Works under FEP are listed in below. Moreover, the master construction program and site overview photo in the reporting period are enclosed in ***Appendix C***.
- Construction of R.C. Structure of HCF – Formwork erection, rebar fixing and concreting work at Roof Floor
- Construction of R.C. Structure of ReWPS – Concreting for bearing wall for CLP TX room; concreting for Beam & Slab at ground level; Formwork Erection work for Corbel

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 To according with the FEP stipulation, the required documents has submitted to EPD for retention as listed below:
- Project Location Plans;
- Updated Environmental Monitoring and Audit Manual of Project Specific (*TCS01176/21/600/R0012v2*); and
- Baseline Monitoring Report (*TCS01216/21/600/R0017v3*) for the Project.

2.3.2 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project is presented in ***Table 2-3-1***.

Table 2-3-1 Status of Environmental Licenses and Permits

Item	Description	Licence/Permit Status		
		Ref. no.	Effective Date	Expiry Date
1	Air Pollution Control (Construction Dust) Regulation	Notification was made on 3 Aug 2021	3 Aug 2021	Till the Contract ends
2	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account No.: 7041397	8 Aug 2021	Till the Contract ends
3	Chemical Waste Producer Registration	Application was made on 3 Aug 2021	3 Aug 2021	Till the Contract ends
4	Water Pollution Control	Discharge Licence No.:	17 Nov 2021	30 Nov 2026

Item	Description	Licence/Permit Status		
		Ref. no.	Effective Date	Expiry Date
	Ordinance – Discharge Licence	WT00039707-2021		
5	Construction Noise Permit	CNP No. GW-RN0880-22	27 Sept 2022	26 Jan 2023
		CNP No. GW-RN1226-22	27 Jan 2023	26 April 2023

3. SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

3.1.1 According to the Updated EM&A Manual and the location of the Contract Works, only construction noise monitoring and waterbirds ecological of environmental monitoring are related the Contract Works during the construction phase. Details requirement of noise and waterbirds ecological impact monitoring are presented sub-sections as below.

3.2 REQUIREMENT OF CONSTRUCTION NOISE MONITORING

3.2.1 One set of $L_{eq(30min)}$ as 6 consecutive $L_{eq(5min)}$ between 0700-1900 hours on normal weekdays and once every week during course of works. If construction work necessary to carry out at other time periods, i.e. restricted time period (19:00 to 07:00 the next morning and whole day on public holidays) (hereinafter referred as "the restricted hours"), $L_{eq(5min)}$ measurement will be carried out in accordance with the CNP requirements. Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

3.2.2 Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.3 LOCATION OF CONSTRUCTION NOISE IMPACT MONITORING

3.3.1 According to the Updated EM&A Manual of CEDD Contract No. NDO 14/2018 - *Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas*, four noise sensitive receivers are designated on Fanling North New Development Areas for construction noise monitoring.

3.3.2 According to the geographic location of proposed Shek Wu Hui Water Reclamation Plant and all the recommended designated construction noise monitoring stations, only the designated noise monitoring station CP-KTN-NMS5 (prior named "CP-NMS7") shown in ***Appendix D***, is located near the proposed Shek Wu Hui Water Reclamation Plant within 300m (distance about 110m). Therefore, the designated noise monitoring station CP-KTN-NMS5 is recommended for the Contract Works to undertake construction noise monitoring. If the recommended noise monitoring location CP-KTN-NMS5 not available, the ET shall propose alternative monitoring locations/additional monitoring locations and seek approval from the Supervisor of the proposal. When alternative/new monitoring location is proposed, the monitoring location shall be chosen based on the following criteria:

(i) at locations close to the major site activities which are likely to have noise impacts;
(ii) close to the noise sensitive receivers; and
(iii) for monitoring locations located in the vicinity of the sensitive receivers, care shall be taken to cause minimal disturbance to the occupants during monitoring.

3.3.3 The construction noise monitoring station shall normally be at a point 1 m from the exterior of the sensitive receivers building façade and be a position 1.2m above the ground. If there is problem with access to the normal monitoring position, an alternative position may be chosen, and a correction to the measurements shall be made to the free field measurements. The ET shall agree with the Supervisor on the monitoring station that is chosen for impact monitoring.

3.4 ACTION AND LIMIT LEVEL FOR CONSTRUCTION NOISE

3.4.1 The Action and Limit levels for construction noise are defined in ***Table 3-4-1***. Should non-compliance of the criteria occur, action in accordance with the Action Plan which shown in Section 4 of this report**,** shall be carried out.

Table 3-4-1 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
CP-KTN-NMS5	When one or more documented complaints are received	75 dB(A)[Note 1]
Note 1: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the NCA have to be followed.		

3.5 NOISE MONITORING METHODOLOGY

Monitoring Equipment

3.5.1 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications was used for carrying out the noise monitoring. Noise equipment used for impact monitoring is listed in ***Table 3-5-1***.

Table 3-5-1 Equipment of Noise Impact Monitoring

Equipment	Model
Integrating Sound Level Meter	Rion NL – 52
Calibrator	Rion NC – 73

Remark: Sound level meter IEC 60651:1979 (Type 1) was replaced by 60672 (Type 1) in 2002 (Ref: https://webstore.iec.ch/publication/17086

3.5.2 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis. The valid calibration certificates of the monitoring equipment are shown in ***Appendix E***.

3.6 MONITORING PROCEDURE

3.6.1 All noise measurements were performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). $Leq_{(30min)}$ in six consecutive $Leq_{(5min)}$ measurements was used as the monitoring parameter for the time period between 07:00-19:00 hours during the baseline monitoring.

3.6.2 In general, the sound level meter would be mounted on a tripod at a height of 1.2 m and placed at the assessment point and oriented such that the microphone was pointed to the site with the microphone facing perpendicular to the line of sight. The windshield would be fitted for all measurement. Where a measurement was to be carried out at a building, the assessment point would normally be at a position 1 m from the exterior of the building façade. Where a measurement was to be made for noise being received at a place other than a building, the assessment point would be at a position 1.2 m above the ground in a free-field situation, i.e. at least 3.5 m away from reflective surfaces such as adjacent buildings or walls.

3.6.3 Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.

3.6.4 Noise measurements would not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed would be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.7 DATA MANAGEMENT AND DATA QA/QC CONTROL

3.7.1 The monitoring data recorded in the equipment would be downloaded directly from the equipment at each monitoring day. The downloaded monitoring data would input into a computerized database properly maintained and handled by the ET's in-house data recording and management system.

3.8 REQUIREMENT OF WATERBIRDS ECOLOGICAL IMPACT MONITORING

3.8.1 Where development under the NDAs project is undertaken within 200m (the maximum distance at which it is predicted there may be some disturbance, and hence a reduction in numbers, of large waterbirds) of the Ng Tung, Sheung Yue and Shek Sheung Rivers and Long Valley the monitoring protocol detailed in the updated EM&A Manual Table 12.1 should be followed. A transect should be undertaken throughout the sections of the rivers where NDA construction activities are proposed; as the sensitive receivers (large waterbirds) are easily visible, the transect route needs only follow one bank of the rivers. The transect route should remain the same during the different phases in order to ensure that data are comparable. Monitoring of large waterbirds should be conducted in pre-construction, construction and operational phases of the concerned development.

3.8.2 The proposed Shek Wu Hui Water Reclamation Plant location is located less than 200m to Ng Tung River, Sheung Yue River and Shek Sheung River, waterbirds ecological monitoring included pre-construction (i.e. baseline), construction (i.e. impact) and post-construction (i.e. operating) should be requires. The detailed monitoring protocol is listed in ***Table 3-8-1***.

Table 3-8-1 Monitoring of Measures to Minimize Disturbance to Waterbirds on the Ng Tung, Sheung Yue and Shek Sheung Rivers

Phase	Methodology
Pre-construction (baseline)	Weekly transect at both high and low tides to identify and enumerate all bird species utilising the river channels for 12 months prior to the commencement of construction.
Construction	Weekly transect at both high and low tides to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period.
Post-construction	Weekly transect at both high and low tides to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to operational activities for 12 months following the completion of the construction period.

3.8.3 Waterbirds ecological baseline monitoring at Ng Tung River, Sheung Yue River and Shek Sheung River was conducted by DSD between ***December 2017*** and ***June 2019*** (total 19 months baseline monitoring)**,** in compliance with the Updated EM&A Manual. Thus, the action and limit levels and responses to evidence of disturbance to waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers will be made reference during construction phase of the Project.

3.9 MONITORING METHODOLOGY FOR WATERBIRDS ECOLOGICAL IMPACT MONITORING

3.9.1 Three transects and seven point count locations were selected at the Ng Tung, Sheung Yue and Shek Sheung River. These locations are shown in Appendix L and summarized in ***Table 3-9-1***.

Table 3-9-1 Ecological Monitoring Stations

Monitoring Stations	Descriptions	Influenced by Tidal Action
Transect T1	Along Ng Tung River	No
Transect T2		
Point Count Location P1		
Point Count Location P2		
Point Count Location P3		
Point Count Location P4		
Point Count Location P5	At Shek Sheung River (Low-flow Channel)	No
Transect T3	Along Shek Sheung River & Sheung Yue River	Yes
Point Count Location P6	At Shek Sheung River	Yes
Point Count Location P7	At Intersection between Sheung Yue and Shek Sheung River	Yes

3.9.2 Surveys will be conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station).

3.9.3 All avifauna species that were seen or heard would be identified and quantified along transects and at point count locations. Survey data would be recorded continuously by the surveyor as they walk along the transects, while survey data of each point count location would be collected for 5-minutes after surveyor reaches the designated point count location.

3.9.4 Noticeable behaviours such as breeding, nesting, roosting, feeding and presences of recently fledged juveniles were recorded and reported. In the case which such behaviours were observed for species of conservation importance, the Resident Engineer (RE), the Contractor and the Independent Environmental Checker (IEC) would be immediately notified after the survey such that the Contractor could review the current construction programme and minimize disturbances due to construction activities.

3.10 EVENT ACTION PLAN

Noise

3.10.1 Should non-compliance of the construction noise criteria occur, action in accordance with the Action Plan in **Table 3-10-1** shall be carried out.

Table 3-10-1 Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level Exceedance	1. Notify the IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analyzed noise problem; 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to the ER and IEC and copy to the ET; 2. Implement noise mitigation proposals.
Limit Level Exceedance	1. Identify sources. 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of the Contractor's working procedures with the ER and Contractor to determine possible mitigations to be implemented; 6. Inform IEC, ER, EPD and Contractor the causes and	1. Discuss amongst the ER, ET and Contractor on the potential remedial actions; 2. Review the Contractor's remedial action whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analyzed noise problems; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues,	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial action to the ER and IEC and copy to the ET within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit

Event	Action			
	ET	IEC	ER	Contractor
	actions taken for the exceedances; 7. Assess the effectiveness of the Contractor's remedial action with the ER and keep the IEC informed of the results; 8. If exceedance stops, cease additional monitoring.		consider what portion of work is responsible and instruct the Contractor to stop that portion of works until the exceedance is abated.	proposals if problems still not under control; stop the relevant portion of works as determined by the ER until the exceedance is abated.

Waterbird of Ecological

3.10.2 Should any exceedance encountered during construction phase, action in accordance with the Action Plan listed in ***Table 3-10-2*** shall be carried out.

Table 3-10-2 Event and Action Plan of Waterbirds of Ecological

Action Level	Response	Limit Level	Response
Construction Phase			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.

(*) W*aterbird numbers refer to combined numbers using the channels*

4. CONSTRUCTION NOISE MONITORING

4.1 GENERAL

4.1.1 The noise monitoring schedule is presented in ***Appendix F*** and the monitoring results are presented in the following sections.

4.2 RESULTS OF NOISE MONITORING

4.2.1 In the Reporting Period, a total of **5** occasions noise monitoring were carried out at the designated location CP-KTN-NMS5. The sound level meter was set in free-field situation, and therefore, façade correction (+3dB) is added according to acoustical principles and EPD guidelines. The noise monitoring results at the designated locations are summarized in ***Tables 4-2-1.*** The detailed noise monitoring data is presented in ***Appendix G*** and the relevant graphical plot shown in ***Appendix H***.

Table 4-2-1 Summaries of Noise Monitoring Results of CP-KTN-NMS5

Date	Start Time	$L_{Aeq30min}$ (dB(A))
3-Jan-23	9:20	62
10-Jan-23	13:30	57
17-Jan-23	15:12	61
27-Jan-23	9:16	56
30-Jan-23	10:23	60
Limit Level		**75 dB(A)**

Note: façade correction +3dB has added according to acoustical principles and EPD guidelines

4.2.2 During construction noise monitoring, no rain was encountered and wind speed is below 5m/s and gusts not exceeding 10m/s.

4.2.3 As shown in ***Table 4-2-1***, the noise level measured at the designated monitoring location was below 75dB(A). Furthermore, there were no noise complaints (Action Level exceedance) received by the RE, Contractor, WSD or EPD in the Reporting Period. Therefore, no Action or Limit Level exceedance was triggered and no corrective action was therefore required.

4.2.4 During the reporting period, no construction work was carried out during restricted hours.

5. ECOLOGY WATERBIRD MONITORING

5.1 GENERAL

5.1.1 Ecological monitoring for waterbirds shall be performed as transects and point count surveys along Ng Tung River, Sheung Yue River and Shek Sheung River in accordance with general surveying practices.

5.1.2 The surveying shall be undertaken by a qualified ecologist and he/she shall be a member of the ET. Throughout the construction period, weekly transect shall be conducted at both high and low tides to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to construction activities.

5.1.3 Since occurrence of waterbirds has distinctive seasonal pattern, the construction phase data for all waterbirds and representative waterbirds shall be compared with the baseline data for the respective month and season. Total number of Waterbirds and six representative Waterbird species are used as an indicator of the level disturbance to water birds at each of the survey location. The representatives of waterbirds are listed in ***Table 5-1-1***.

Table 5-1-1 Representative Waterbirds

Species Name	Common Name	Chinese Name
Egretta garzetta	Little Egret	小白鷺
Ardea alba	Great Egret	大白鷺
Ardea cinerea	Grey Heron	蒼鷺
Ardeola bacchus	Chinese Pond Heron	池鷺
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺
Phalacrocorax carbo	Great Cormorant	普通鸕鷀

5.2 RESULTS OF WATERBIRDS SURVEY

5.2.1 ***Four (4)*** occasion of waterbirds survey were conducted in the Reporting Month.

5.2.2 Abundance and diversity of total bird species and key waterbirds species in the Reporting Month are summarized in **Table 5-2-1** and **Table 5-2-2**.

Table 5-2-1 Total Bird Species and Abundance at Point Count Locations in the Reporting Month

Category	Number of Species	Abundance
All Avifauna	34	404
Waterbirds	14	253

Table 5-2-2 Abundance of Representative Waterbirds at Point Count Locations in the Reporting Month

Common Name	Species Name	Chinese Name	Abundance
Chinese Pond Heron	Ardeola bacchus	池鷺	13
Eastern Cattle Egret	Bubulcus coromandus	牛背鷺	3
Grey Heron	Ardea cinerea	蒼鷺	42
Great Egret	Ardea alba	大白鷺	75
Little Egret	Egretta garzetta	小白鷺	40
Great Cormorant	Phalacrocorax carbo	普通鸕鷀	19

5.2.3 The result was compared with the baseline data and decline in abundance of Chinese Pond Heron and Eastern Cattle Egret were recorded. A table showing the waterbirds abundance comparison with baseline data was provided in **Appendix L**. (Appendix C of the waterbirds survey report).

5.2.4 According to surveyors, the construction works by other Projects around the survey transects observed in previous month are still active during the reporting month.

5.2.5 Concrete blocks laying work was observed across Ng Tung River at P2 and P3 by other Project since November 2022. Although the laying work was completed in November 2022, the presence of the concrete blocks throughout the entire reporting month and intentional damming of Ng Tung River caused the water level at the entire Ng Tung River covering T1, T2, P1, P2, P3 and P4 to be visibly higher when compared to previous months. As observed on 11 January 2023, part of the blocks at P2 were removed and the rubber dam was observed to be deflated. However, the water level remained relatively high compared to previous months.

5.2.6 In addition, the construction involving excavation and sheet piling work right next to P3 by other Projects were both observed active throughout the entire reporting month.

5.2.7 The decline of individual waterbird species was concluded not be the result of increased disturbances from the Project, as increased disturbance would discourage all waterbirds from foraging near the transect and point count locations instead. Thus it is suggested that the decline in the number of multiple species of waterbirds is not related to the construction works of the Project.

5.2.8 The details of the waterbirds survey for the Reporting Month can be referred to the full waterbirds survey report provided in **Appendix L**.

6. WASTE MANAGEMENT

6.1 GENERAL WASTE MANAGEMENT

6.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

6.2 RECORDS OF WASTE QUANTITIES

6.2.1 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil.

6.2.2 The quantities of waste for disposal in this Reporting Period are summarized in ***Tables 6-2-1*** and ***6-2-2*** and the Monthly Summary Waste Flow Table is shown in ***Appendix I***. Whenever possible, materials were reused on-site as far as practicable.

Table 6-2-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (in '000m^3)	0.1842	-
Reused in this Contract (Inert) (in '000 m^3)	0	-
Reused in other Contracts/ Projects (Inert) (in '000 m^3)	0	-
Disposal as Public Fill (Inert) (in '000 m^3)	0.1842	TM38

Table 6-2-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity	Disposal Location
Recycled Metal (‘000kg)	0	-
Recycled Paper / Cardboard Packing (‘000kg)	0	-
Recycled Plastic (‘000kg)	0	-
Chemical Wastes (‘000kg)	0	-
General Refuses (‘000m^3)	0.0034	SENT

7. SITE INSPECTION

7.1 REQUIREMENTS

7.1.1 According to the approved Updated EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

7.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

7.2.1 In the Reporting Month, weekly regular site inspection by the RE, the Main Contractor and ET was carried out on ***5, 13, 17*** and ***27 January 2023*** to evaluate site environmental performance of the Contract Works. During the site inspections, no non-compliance was noted.

7.2.2 The findings/deficiencies of the Contract Works observed that during the weekly site inspection are listed in ***Table 7-2-1***.

Table 7-2-1 Site Observations

Date	Findings / Deficiencies	Follow-Up Status
5 January 2023	• The Contractor should dispose of cumulated construction waste regularly within site area.	Construction waste was disposed regularly.
13 January 2023	• Accumulated construction waste should be disposed properly. (near ReWPS)	Construction waste was disposed.
17 January 2023	• Dusty stockpiles should be covered with impervious sheet to reduce dust generation. (Near site office)	Dusty stockpiles are covered with tarpaulin sheet to reduce dust generation.
27 January 2023	• No adverse environmental issue was observed during site inspection.	NA

8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

8.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.1.1 For the Contract Works, no environmental complaint, summons and prosecution was received in the Reporting Period. The statistical summary table of environmental complaint is presented in ***Tables 8-1-1, 8-1-2*** and ***8-1-3***.

Table 8-1-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

Table 8-1-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

Table 8-1-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2023	0	0	NA

9. IMPLEMENTATION STATUS OF MITIGATION MEASURES

9.1 GENERAL REQUIREMENTS

9.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved Updated EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix J.***

9.2 IMPLEMENTATION STATUS OF THE MITIGATION MEASURES IN THE REPORTING PERIOD

9.2.1 The Contract Works shall be implementing the required environmental mitigation measures according to the approved Updated EM&A Manual as subject to the site condition. Environmental mitigation measures implemented by the Main Contractor in this Reporting Month are summarized in ***Table 9-1-1***. An as-built drawing of site temporary drainage is shown in ***Appendix K***.

Table 9-1-1 Environmental Mitigation Measures Implemented in the Reporting Period

Issues	Environmental Mitigation Measures
Air Quality	• All vehicles must be washed before leaving the site; • Sprayed water during excavation works; • Stockpile of dusty material was covered entirely with impervious sheeting or sprayed with water so as to maintain the entire surface wet; • Water spraying on haul road and dry site area was provided regularly; and • Where a vehicle leaving the works site is carrying a load of dusty materials, the load has covered entirely with clean impervious sheeting;
Constriction Noise	• Keep all vehicles/plants in good condition to minimize noise impact; • Shut down the plants when not in used; • Provided quiet powered mechanical equipment to use onsite; • Avoided using multiple vehicles at the same time as far as practicable
Water Quality	• All the surface runoff are collected to sedimentation pit and tanks for sedimentation prior discharged • Sand bag bund was provided along the boundary of the site area near Ng Tung River to divert the surface runoff to sedimentation pit and avoid direct discharge of surface runoff. • Standby water pumps were provided on site to pump the runoff water collected at pit to the sedimentation tank for sedimentation. • Standby sedimentation tanks were provided on site to ensure sufficient sedimentation capacity. • Complied with the requirement under the discharge license. • Avoid spilt concrete during concreting works • Haul road was hard paved to reduce muddy runoff during rainy days.
Waste and Chemical Management	• Disposal of C&D wastes to any designated public filling facility and/or landfill followed a trip ticket system; • Debris and refuse generated on-site collected regularly; • Oils and fuels were stored in designated areas; • Kept the site tidy and clean.

9.3 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

9.3.1 The tentative construction works schedule of the Contract Works under FEP in the coming month are listed below:

- Construction of R.C. Structure of HCF – Rebar fixing and concreting at Roof level (involve tower crane for lifting materials and concrete lorry mixer)
- Construction of R.C. Structure of ReWPS – Formwork Erection, rebar fixing and concreting for Corbel (involve tower crane for lifting materials and concrete lorry mixer)

9.4 KEY ISSUES FOR THE COMING MONTH

9.4.1 Key issues to be considered in the coming month for the Contract Works under FEP include:

R.C. Structure of HCF and ReWPS (Formwork erection, rebar fixing and concreting work)

- Collect spilt cement/concrete washings during concreting works to avoid water quality impact
- Erect barrier for wood/steel bar cutting machine to reduce noise impact;
- Using soft face hammer for hammering work
- Restrict operation time of PME from 07:00 to 19:00 on any working day;

General

- Ensure the sand bag bund at site boundary near the Ng Tung River is properly maintained to avoid muddy discharge during heavy rain;
- Ensure sufficient capacity of sedimentation pit and tanks for wastewater sedimentation;
- Ensure all surface runoff are diverted to sedimentation pit and tanks properly;
- Sufficient stock of standby pump should be available on site for pumping the runoff water/wastewater to the sedimentation tank.
- Cover the dusty stockpile on site to reduce potential fugitive dust quality impact;
- Spraying water at dry haul road more frequently to reduce dust generation;
- All the vehicles should be properly washed prior leaving the site;
- Use Quiet powered mechanical equipment (QPME) whenever applicable;
- Minimize the number of plants used at the same time to reduce cumulative noise impact;
- Properly management of general refuse and chemical waste generated on site.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

10.1.1 This is **14th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 January 2023**.

10.1.2 No noise complaint (which is an Action Level exceedance) was received and no construction noise measurement results that exceeded the Limit Level were recorded in the Reporting Period. No NOEs or the associated corrective actions were therefore issued.

10.1.3 Four (4) occasions of the weekly waterbirds survey has been taken in the Reporting Period. Although decline in waterbirds were recorded in the Reporting Period, the cause of decline was considered unlikely due to the Project. No action and limit level exceedance was considered triggered in the Reporting Month.

10.1.4 No documented complaint, notification of summons or successful prosecution was received by either the RE or WSD or the Main Contractor.

10.1.5 Weekly site inspection by the RE, ET and the Main Contractor had carried out on ***5, 13, 17*** and ***27 January 2023***. The mitigation measures implemented was considered satisfactory. No non-compliance observed during the site inspection.

10.2 RECOMMENDATIONS

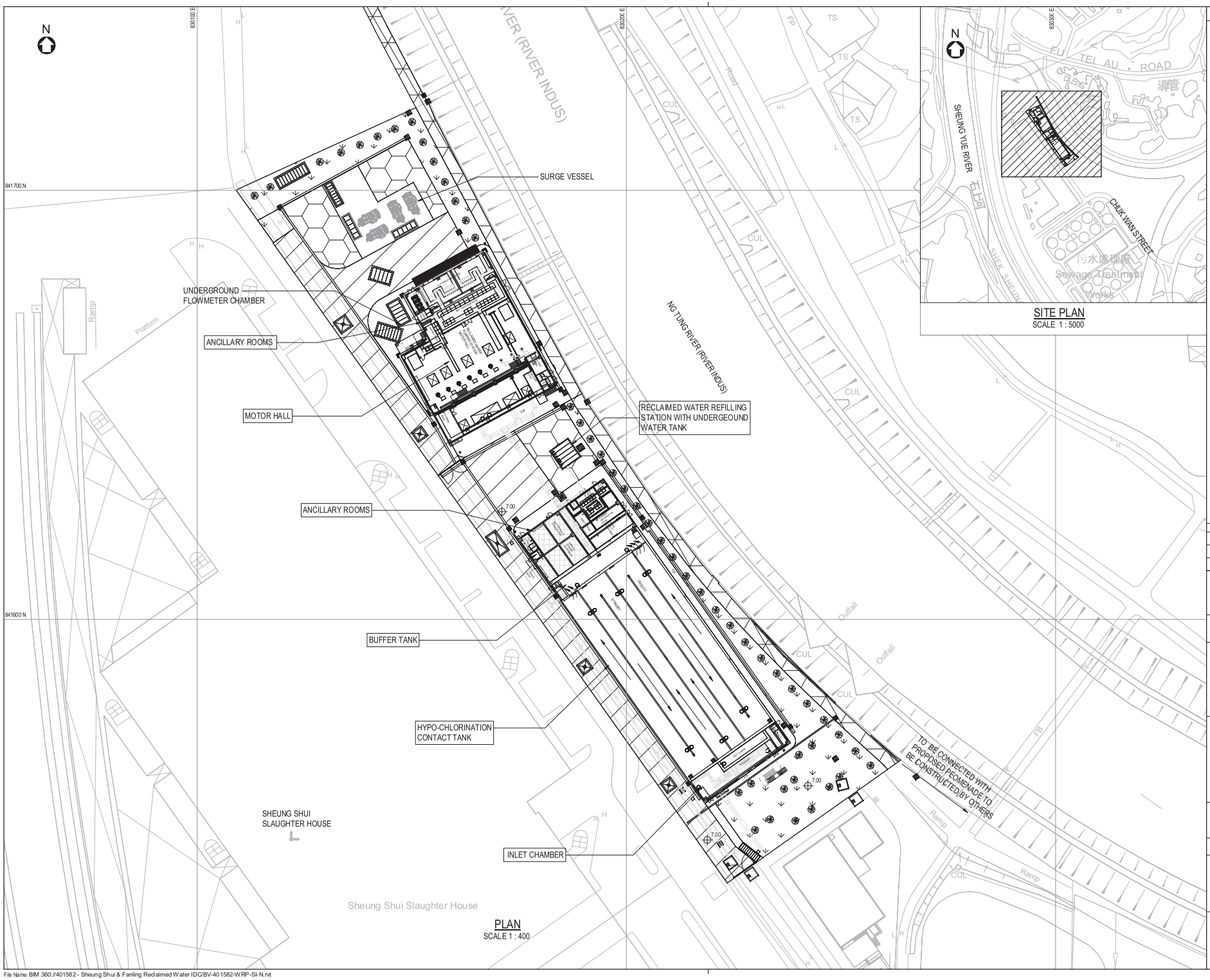
10.2.1 Construction of reinforced concrete structure of ReWPS and HCF will still be the major construction work in the coming month. Noise mitigation measures such as using soft face hammer for hammering work and erect barrier for wood/steel bar cutting machines were recommended to reduce noise impact generated from rebar fixing and formwork erection work. In addition, the Contractor should pay attention to potential water quality impact from concreting works and implement measure to collect spilt cement/concrete washings during concreting works.

10.2.2 As the coming month will be dry season, the Contractor was general reminded to paid attention to air quality mitigation measures such as regularly water at dry haul road and cover any stockpile on site when not in use to reduce dust generation.

10.2.3 The Contractor was reminded to pay attention to the key issues for the coming month mentioned in Section 9.4.

Appendix A

Location of Shek Wu Hui Water Reclamation Plant



PLAN
SCALE 1 : 400

SITE PLAN
SCALE 1 : 5000

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFED.
2. THE BASE PLAN IS EXTRACTED FROM SURVEY SHEET NOS. 2-SE ADN 3-SW.
3. TOP SLABS OF STRUCTURES ARE NOT SHOWN FOR CLARITY.

LEGEND:

- SITE BOUNDARY OF SWHWRP
- FENCING
- EVA
- PLANTER GREENING AREA
- GRASSCRETE
- RIVERSIDE PROMENADE
- GROUND LEVEL
- TREE (INDICATIVE)
- F/P — FOOTPATH
- MANHOLE/CABLE PIT
- ACCESS GATE

Revision	Date	Description			Initial
	Designed	Checked	Drawn		Checked
Initial	CWC	GC	SZ		GC
Date	02/21	02/21	02/21		02/21

Approved

Contract No.
3 / WSD / 20

Contract Title
RECLAIMED WATER SUPPLY TO SHEUNG SHUI AND FANLING

Drawing Title
GENERAL ARRANGEMENT OF SWHWRP - GENERAL PLAN

Drawing No.
401582/B&V/WRP/GA/101

Revision
-

Scale
AS SHOWN

水務署 Water Supplies Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

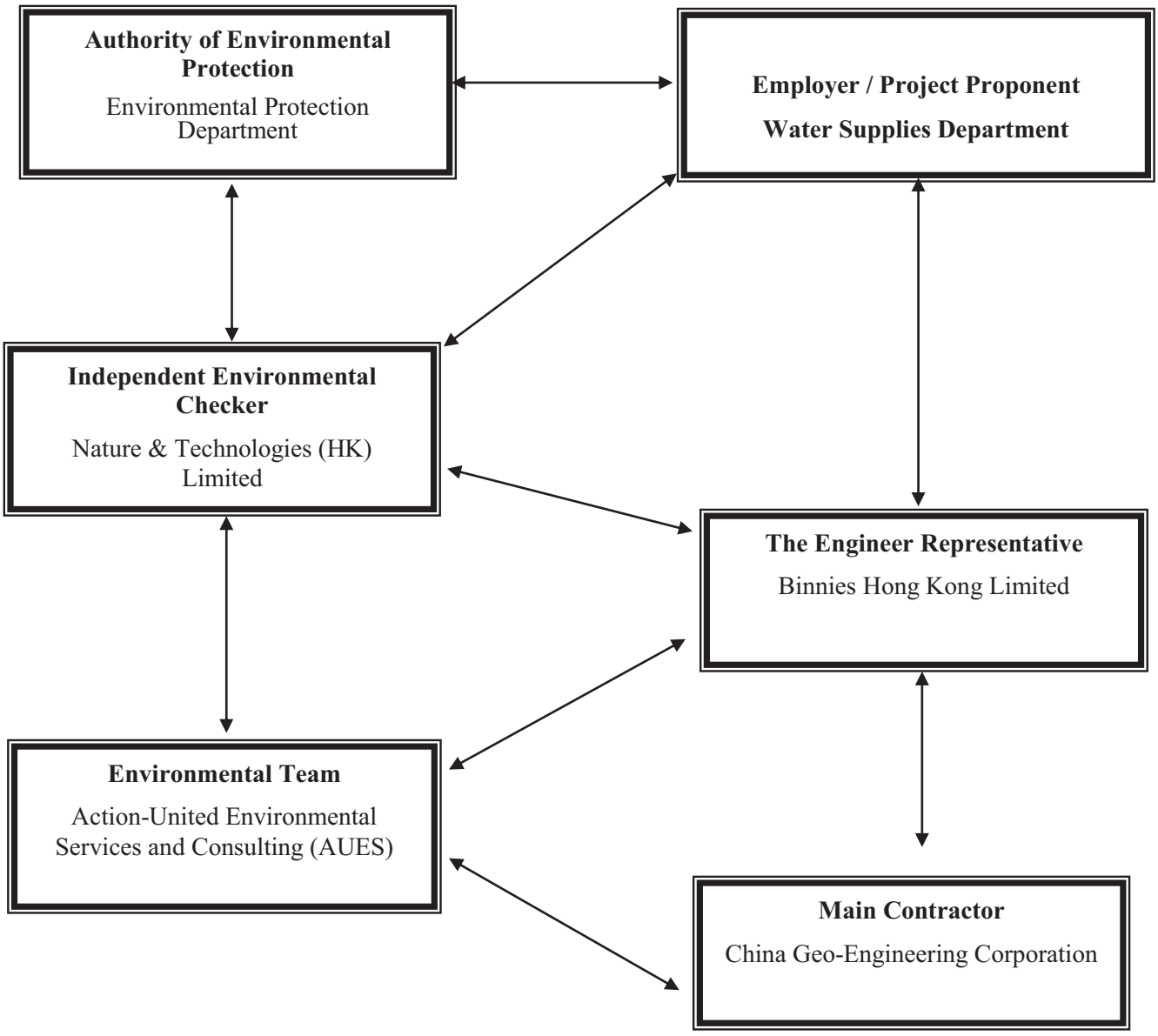
Plot Date: 3/15/2021 11:20:19 AM

File Name: BIM 360://401582 - Sheung Shui & Fanling Reclaimed Water IDC/BV-401582-WRP-SI-N.rvt

Appendix B

Project Organization

Project Organization Chart



Contact Details of Key Personnel for the Project

Organization	Project Role	Name of Key Staff	Tel No.	Email
WSD	Project Proponent	Tim Wong	2829 5638	tim_cw_wong@wsd.gov.hk
Binnies	Senior Resident Engineer	S.H. Chung	2608 7380	sre.3wsd20@gmail.com
Binnies	Resident Engineer	Chester Chan,	2608 7380	chancw@binnies.com
N&T	Independent Environmental Checker	Vega Wong	2877 3122	vegawong@nt.com.hk
CGC	Site Agent	Wong Fai	9785 2545	3wsd20@gmail.com
CGC	Environmental Officer	Walter Man	6711 9155	cgc.walterman@gmail.com
AUES	Environmental Team Leader	T. W. Tam	2959 6059	twtam@fordbusiness.com
AUES	Environmental Consultant	Nicola Hon	2959 6059	nicolahon@fordbusiness.com
AUES	Environmental Consultant	Martin Li	2959 6059	martinli@fordbusiness.com
AUES	Assistant Environmental Consultant	Fai So	2959 6059	faiso@fordbusiness.com

Legend:

WSD (Employer) – Water Supplies Department
Binnies (Engineer Representative) – Binnies Hong Kong Limited
CGC (Main Contractor) –China Geo-Engineering Corporation
N&T (IEC) –Nature & Technologies (HK) Limited
AUES (ET) – Action-United Environmental Services and Consulting (AUES)

Appendix C

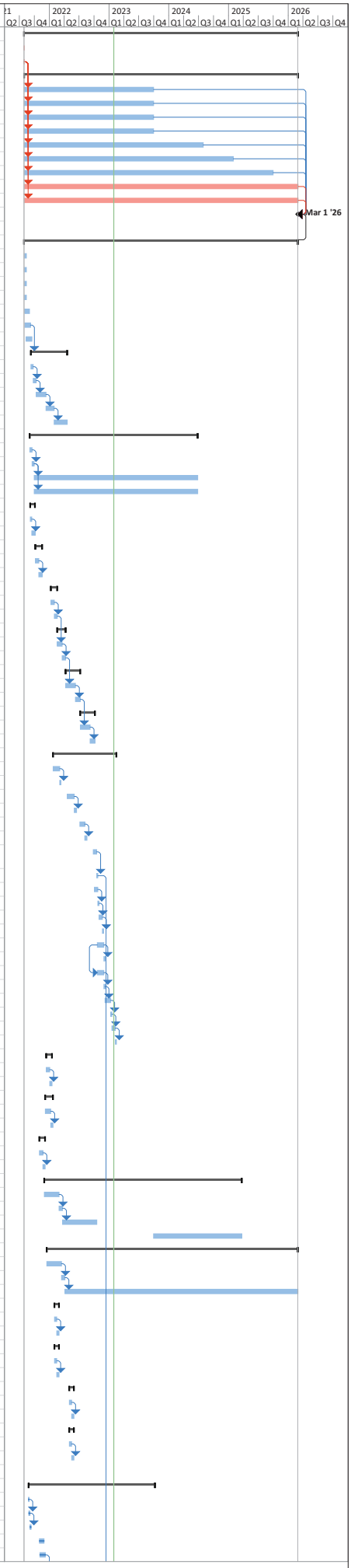
Master Construction Program and Site Overview Photo in the Reporting Period

SITE OVERVIEW PHOTO IN THE REPORTING PERIOD

R.C.Structure of HCF - Formwork erection, rebar fixing and concreting work at Roof Floor

R.C. Structure of ReWSP - Concreting for Beam & Slab at ground level; Formwork Erection work for Corbel

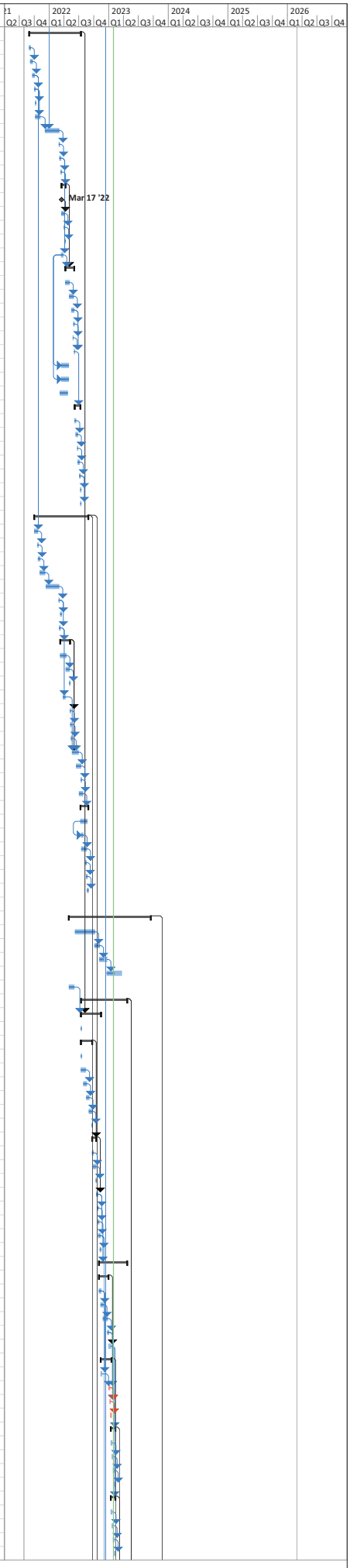
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1	**Key Dates**	**1676 days**	**Jul 30 '21**	**Mar 1 '26**				**0%**
2	Contract Date	1 day	Jul 30 '21	Jul 30 '21				0%
3	Starting Date	1 day	Jul 30 '21	Jul 30 '21			5,6,7,8,9,10,11	0%
4	**Contract Period**	**1675 days**	**Jul 31 '21**	**Mar 1 '26**				**0%**
5	Section 1 - Shek Wu Hui Water Reclamation Plant (SWHWRP)	791 days	Jul 31 '21	Sep 29 '23		3	14FF	0%
6	Section 2 - Landscaping works of SWHWRP	791 days	Jul 31 '21	Sep 29 '23		3	14FF	0%
7	Section 3 - Modification of Table Hill Reclaimed Water Service Reservoir	791 days	Jul 31 '21	Sep 29 '23		3	14FF	0%
8	Section 4 - Mainlaying works in part 3 of the Site	791 days	Jul 31 '21	Sep 29 '23		3	14FF	0%
9	Section 5 - Mainlaying works in part 4 of the Site	1095 days	Jul 31 '21	Jul 29 '24		3	14FF	0%
10	Section 6 - Mainlaying works in part 5 of the Site	1279 days	Jul 31 '21	Jan 29 '25		3	14FF	0%
11	Section 7 - Mainlaying works in part 6 of the Site	1522 days	Jul 31 '21	Sep 29 '25		3	14FF	0%
12	Section 8 - Mainlaying works in part 7 of the Site & remaining WM works	1675 days	Jul 31 '21	Mar 1 '26		3	14FF	0%
13	Section 9 - Conversion works of reclaimed water	1675 days	Jul 31 '21	Mar 1 '26		3	14FF	0%
14	**Contract Completion date**	**0 days**	**Mar 1 '26**	**Mar 1 '26**		**5FF,6FF,7FF,8FF,**		**0%**
15								
16	**Preliminary & General**	**1675 days**	**Jul 30 '21**	**Feb 28 '26**			**14FF**	**0%**
17	Submission of Draft Safety Plan	14 days	Jul 30 '21	Aug 12 '21				0%
18	Submission of Draft Environmental Management Plan	14 days	Jul 30 '21	Aug 12 '21				0%
19	Submission of Sub-contractor Management Plan	14 days	Jul 30 '21	Aug 12 '21				0%
20	Notification & request for UU record from utility undertakers	14 days	Jul 30 '21	Aug 12 '21				0%
21	Submission and acceptance of selection procedure for supplier	29 days	Aug 3 '21	Aug 31 '21				0%
22	Submission and acceptance of selection procedure for subcontractor	35 days	Aug 3 '21	Sep 6 '21			24	0%
23	Agreement on preliminary office layout	35 days	Aug 12 '21	Sep 15 '21				0%
24	Provision of Project Manager's Accommodation	222 days	Sep 10 '21	Apr 19 '22		22		0%
25	Submission and acceptance of subletting package	14 days	Sep 10 '21	Sep 23 '21			26	0%
26	Selection of Subcontractor	18 days	Sep 24 '21	Oct 11 '21		25	27	0%
27	Submission and acceptance of design and material	60 days	Oct 12 '21	Dec 10 '21		26	28	0%
28	Manufacture and delivery of MiC office	50 days	Dec 11 '21	Jan 29 '22		27	29	0%
29	Erection of Project Manager's Accommodation	80 days	Jan 30 '22	Apr 19 '22		28		0%
30	**Selection of Traffic Consultant**	**1027 days**	**Sep 3 '21**	**Jun 25 '24**				**0%**
31	Submission and acceptance of subletting package	14 days	Sep 3 '21	Sep 16 '21			32	0%
32	Selection of traffic consultant	13 days	Sep 17 '21	Sep 29 '21		31	33,34	0%
33	XP application for different Sections	1000 days	Sep 30 '21	Jun 25 '24		32		0%
34	TTA application and Attend TMLG Meetings for different Sections	1000 days	Sep 30 '21	Jun 25 '24		32		0%
35	**Selection of Concrete Supplier**	**29 days**	**Sep 6 '21**	**Oct 4 '21**				**0%**
36	Submission and acceptance of subletting package	9 days	Sep 6 '21	Sep 14 '21			37	0%
37	Selection of concrete supplier	20 days	Sep 15 '21	Oct 4 '21		36		0%
38	**Selection of Subcontractor for Excavation and ELS Works at SWHWRP**	**42 days**	**Oct 7 '21**	**Nov 17 '21**				**0%**
39	Submission and acceptance of subletting package	21 days	Oct 7 '21	Oct 27 '21			40	0%
40	Selection of subcontractor	21 days	Oct 28 '21	Nov 17 '21		39		0%
41	**Selection of Subcontractor for Structural Works**	**39 days**	**Jan 10 '22**	**Feb 17 '22**				**0%**
42	Submission and acceptance of subletting package	21 days	Jan 10 '22	Jan 30 '22			43	0%
43	Selection of subcontractor	18 days	Jan 31 '22	Feb 17 '22		42	45	0%
44	**Selection of Subcontractor for Roadworks**	**51 days**	**Feb 18 '22**	**Apr 9 '22**				**0%**
45	Submission and acceptance of subletting package	30 days	Feb 18 '22	Mar 19 '22		43	46	0%
46	Selection of subcontractor	21 days	Mar 20 '22	Apr 9 '22		45	48	0%
47	**Selection of Subcontractor for Architectural Works**	**90 days**	**Apr 10 '22**	**Jul 8 '22**				**0%**
48	Submission and acceptance of subletting package	60 days	Apr 10 '22	Jun 8 '22		46	49	0%
49	Selection of subcontractor	30 days	Jun 9 '22	Jul 8 '22		48	51	0%
50	**Selection of Subcontractor for Landscape Works**	**90 days**	**Jul 9 '22**	**Oct 6 '22**				**0%**
51	Submission and acceptance of subletting package	60 days	Jul 9 '22	Sep 6 '22		49	52	0%
52	Selection of subcontractor	30 days	Sep 7 '22	Oct 6 '22		51		0%
53	**Selection of Subcontractor for Mainlaying Works**	**387 days**	**Jan 24 '22**	**Feb 14 '23**				**0%**
54	Submission and acceptance of subletting package - open trench (for Section 4)	40 days	Jan 24 '22	Mar 4 '22			55	0%
55	Selection of subcontractor - open trench (for Section 4)	7 days	Mar 5 '22	Mar 11 '22		54		0%
56	Submission and acceptance of subletting package - open trench (for Section 5)	43 days	Apr 20 '22	Jun 1 '22			57	0%
57	Selection of subcontractor - open trench (for Section 5)	14 days	Jun 2 '22	Jun 15 '22		56		0%
58	Submission and acceptance of subletting package - open trench (SC-028)	30 days	Jul 6 '22	Aug 4 '22			59	0%
59	Selection of subcontractor - open trench (SC-028)	14 days	Aug 5 '22	Aug 18 '22		58		0%
60	Submission and acceptance of subletting package - open trench (Shek Wu Hui) (SC-035)	21 days	Sep 26 '22	Oct 16 '22			61	0%
61	Selection of subcontractor - open trench (Shek Wu Hui) (SC-035)	7 days	Oct 17 '22	Oct 23 '22		60	1248	0%
62	Submission and acceptance of subletting package - open trench (Remaining) (SC-036)	21 days	Oct 3 '22	Oct 23 '22			63	0%
63	Selection of subcontractor - open trench (Remaining) (SC-036)	7 days	Oct 24 '22	Oct 30 '22		62	64	0%
64	Submission and acceptance of subletting package - road marking	21 days	Oct 31 '22	Nov 20 '22		63	65	0%
65	Selection of subcontractor - road marking	7 days	Nov 21 '22	Nov 27 '22		64		0%
66	Submission and acceptance of subletting package - trenchless (SC-029)	40 days	Oct 21 '22	Nov 29 '22			67,68SS	0%
67	Selection of subcontractor - trenchless (SC-029)	7 days	Nov 30 '22	Dec 6 '22		66		0%
68	Submission and acceptance of subletting package - trenchless (SC-042)	40 days	Oct 21 '22	Nov 29 '22		66SS	69	0%
69	Selection of subcontractor - trenchless (SC-042)	7 days	Nov 30 '22	Dec 6 '22		68	70	0%
70	Submission and acceptance of subletting package - trenchless (SC-051)	35 days	Dec 7 '22	Jan 10 '23		69	71	0%
71	Selection of subcontractor - trenchless (SC-051)	7 days	Jan 11 '23	Jan 17 '23		70	72	0%
72	Submission and acceptance of subletting package - trenchless (SC-052)	21 days	Jan 18 '23	Feb 7 '23		71	73	0%
73	Selection of subcontractor - trenchless (SC-052)	7 days	Feb 8 '23	Feb 14 '23		72		0%
74	**Selection of Supplier for Survey Equipment**	**35 days**	**Dec 13 '21**	**Jan 16 '22**				**0%**
75	Submission and acceptance of subletting package	21 days	Dec 13 '21	Jan 2 '22			76	0%
76	Selection of subcontractor	14 days	Jan 3 '22	Jan 16 '22		75		0%
77	**Selection of Supplier for Computer Facilities**	**47 days**	**Dec 7 '21**	**Jan 22 '22**				**0%**
78	Submission and acceptance of subletting package	33 days	Dec 7 '21	Jan 8 '22			79	0%
79	Selection of subcontractor	14 days	Jan 9 '22	Jan 22 '22		78		0%
80	**Selection of Environment Team**	**35 days**	**Nov 1 '21**	**Dec 5 '21**				**0%**
81	Submission and acceptance of subletting package	21 days	Nov 1 '21	Nov 21 '21			82	0%
82	Selection of Environment Team	14 days	Nov 22 '21	Dec 5 '21		81		0%
83	**BEAM Plus**	**1208 days**	**Dec 1 '21**	**Mar 22 '25**				**0%**
84	Submission and acceptance of subletting package	90 days	Dec 1 '21	Feb 28 '22			85	0%
85	Selection of BEAM plus consultant	21 days	Mar 1 '22	Mar 21 '22		84	86	0%
86	BEAM Plus PA submission	210 days	Mar 22 '22	Oct 17 '22		85		0%
87	BEAM Plus FA submission	540 days	Sep 30 '23	Mar 22 '25				0%
88	**BIM**	**1536 days**	**Dec 16 '21**	**Feb 28 '26**				**0%**
89	Submission and acceptance of subletting package	90 days	Dec 16 '21	Mar 15 '22			90	0%
90	Selection of BIM consultant	21 days	Mar 16 '22	Apr 5 '22		89	91	0%
91	Execution of BIM (rebar BIM, CSD and CBWD coordination and production)	1425 days	Apr 6 '22	Feb 28 '26		90		0%
92	**Selection of Contractor's Designer for foundation works**	**28 days**	**Feb 1 '22**	**Feb 28 '22**				**0%**
93	Submission and acceptance of subletting package	14 days	Feb 1 '22	Feb 14 '22			94	0%
94	Selection of Contractor's Designer	14 days	Feb 15 '22	Feb 28 '22		93		0%
95	**Selection of Independent Checking Engineer (ICE) for Permanent Works (foundation)**	**28 days**	**Feb 1 '22**	**Feb 28 '22**				**0%**
96	Submission and acceptance of subletting package	14 days	Feb 1 '22	Feb 14 '22			97	0%
97	Selection of ICE for Permanent Works	14 days	Feb 15 '22	Feb 28 '22		96		0%
98	**Selection of Contractor's Designer for Civil & Structural Works**	**28 days**	**May 3 '22**	**May 30 '22**				**0%**
99	Submission and acceptance of subletting package	14 days	May 3 '22	May 16 '22			100	0%
100	Selection of Contractor's Designer	14 days	May 17 '22	May 30 '22		99		0%
101	**Selection of Independent Checking Engineer (ICE) for Permanent Works (Civil & Structural)**	**28 days**	**May 3 '22**	**May 30 '22**				**0%**
102	Submission and acceptance of subletting package	14 days	May 3 '22	May 16 '22			103	0%
103	Selection of ICE for Permanent Works	14 days	May 17 '22	May 30 '22		102		0%
104								
105	**Section 1 & 2 - Construction of SWHWRP and Landscaping Works**	**773 days**	**Aug 27 '21**	**Oct 8 '23**				**11%**
106	Access Date (part 1 of the Site)	1 day	Aug 27 '21	Aug 27 '21			107	100%
107	Site clearance	7 days	Aug 28 '21	Sep 3 '21		106	108	100%
108	Initial survey	7 days	Sep 4 '21	Sep 10 '21		107		100%
109	Installation of monitoring instruments and take initial readings	28 days	Nov 1 '21	Nov 28 '21				100%
110	Environmental baseline montioring by ET	33 days	Nov 4 '21	Dec 6 '21			118	100%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

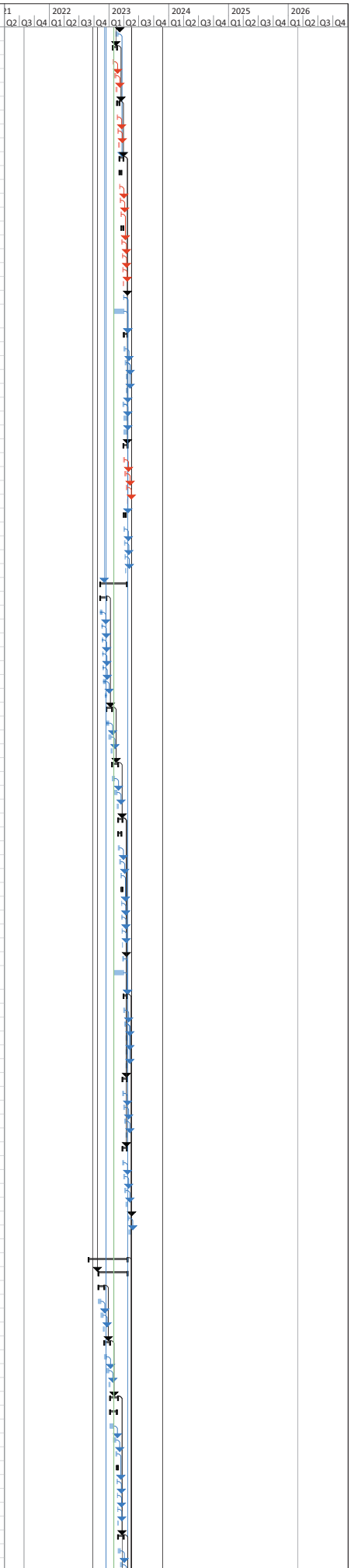
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
111	**Foundation Works - ReWPS**	**318 days**	**Aug 31 '21**	**Jul 14 '22**			**182**	**100%**
112	Submission and approval of subletting package for pre-drilling works	7 days	Aug 31 '21	Sep 6 '21			113	100%
113	Selection of pre-drilling subcontractor	13 days	Sep 7 '21	Sep 19 '21		112	114	100%
114	Pre-drilling works (15 nos.)	12 days	Sep 20 '21	Oct 1 '21		113	147,115	100%
115	Pre-drill log report and Point Load Test	6 days	Oct 2 '21	Oct 7 '21		114	117,116	100%
116	CE-020 _ Inclement Weather in October 2021	3 days	Oct 8 '21	Oct 10 '21		115		100%
117	Design review for foundation works	28 days	Oct 8 '21	Nov 4 '21		115	118	100%
118	Piling works (54 nos. of pre-bored H piles) - Total length = 2387m	85 days	Dec 7 '21	Mar 1 '22		110,117	119	100%
119	CE-040 _ Inclement Weather in February 2022	3.5 days	Mar 2 '22	Mar 5 '22		118	120	100%
120	Installation of King Post	7 days	Mar 5 '22	Mar 12 '22		119	127FS+3 days,1	100%
121	CE-041 _ Inclement Weather in March 2022	5 days	Mar 12 '22	Mar 17 '22		120	122	100%
122	**Testing of pre-bored H-pile - tension load test**	**23.5 days**	**Mar 17 '22**	**Apr 9 '22**		**121**	**128**	**100%**
123	Site ready for setting up of tension load test	0 days	Mar 17 '22	Mar 17 '22			124	100%
124	(CE-044) EoT due to Shortage of Acetylene Gas Supply	15 days	Mar 17 '22	Apr 1 '22		123	125	100%
125	Setting up of load test	4.5 days	Apr 1 '22	Apr 5 '22		124	126	100%
126	Tension Load Test	4 days	Apr 6 '22	Apr 9 '22		125		100%
127	Sheet piling works for ELS - 300 pcs (length 12m)	10 days	Mar 15 '22	Mar 25 '22		120FS+3 days	128,135SS,136	100%
128	**Excavation works (6900m3) and ELS installation**	**54.5 days**	**Apr 10 '22**	**Jun 3 '22**		**122,127**		**100%**
129	(CE-044) EoT due to Shortage of Acetylene Gas Supply	24 days	Apr 10 '22	May 3 '22			130	100%
130	ELS installation and excavation	25 days	May 4 '22	May 28 '22		129	131FS-11 days	100%
131	Welding of pile head capping plate	15 days	May 18 '22	Jun 1 '22		130FS-11 days	132FS-3 days,1	100%
132	CE-052 _ Inclement Weather in May 2022 (under assessment)	4.5 days	May 30 '22	Jun 3 '22		131FS-3 days	134	100%
133	Laying of blinding layer (1st pour)	1 day	May 27 '22	May 27 '22		131FS-6 days	134	100%
134	Laying of blinding layer (2nd pour)	3 days	Jun 3 '22	Jun 6 '22		132,133	138	100%
135	Submission and acceptance of method statement for pile cap construction	45 days	Mar 15 '22	Apr 29 '22		127SS		100%
136	Submission and acceptance of water proofing material	45 days	Mar 15 '22	Apr 29 '22		127SS		100%
137	Concrete mix submission, plant trial and acceptance of Grade 50 concrete	45 days	Mar 9 '22	Apr 22 '22				100%
138	**Construction of pile cap**	**34.5 days**	**Jun 6 '22**	**Jul 10 '22**		**134**		**100%**
139	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	Jun 6 '22	Jun 12 '22			140	100%
140	Installation of water proofing system and testing	10 days	Jun 13 '22	Jun 22 '22		139	141	100%
141	CE-025 _ GI works of Contract ND/2021/01	2 days	Jun 23 '22	Jun 24 '22		140	142	100%
142	Rebar fixing	10 days	Jun 25 '22	Jul 4 '22		141	143	100%
143	Concreting of pile cap (996 m3)	6 days	Jul 5 '22	Jul 10 '22		142	144,145	100%
144	Backfilling to pile cap top level	4 days	Jul 11 '22	Jul 14 '22		143		100%
145	Rebar fixing (horizontal bars at starter bars from pile cap)	3 days	Jul 12 '22	Jul 14 '22		143		100%
146	**Foundation Works - HCF**	**331 days**	**Oct 2 '21**	**Aug 28 '22**			**310FS+60 days**	**100%**
147	Pre-drilling works (25 nos.)	20 days	Oct 2 '21	Oct 21 '21		114	148	100%
148	CE-020 _ Inclement Weather in October 2021	3 days	Oct 22 '21	Oct 24 '21		147	149	100%
149	Pre-drill log report and Point Load Test	11 days	Oct 25 '21	Nov 4 '21		148	150	100%
150	Design review for foundation works	30 days	Nov 5 '21	Dec 4 '21		149	151	100%
151	Piling works - HCF (56 nos. of pre-bored H piles) - Total length = 1871m	77 days	Dec 14 '21	Feb 28 '22		150	152	100%
152	CE-040 _ Inclement Weather in February 2022	3.5 days	Mar 1 '22	Mar 4 '22		151	154,153FS+6 d	100%
153	Testing of pre-bored H-pile - proof drilling	7 days	Mar 10 '22	Mar 17 '22		152FS+6 days		100%
154	CE-041 _ Inclement Weather in March 2022	5 days	Mar 4 '22	Mar 9 '22		152	155,159FS+17	100%
155	**Testing of pre-bored H-pile - compression load test**	**60.5 days**	**Mar 9 '22**	**May 8 '22**		**154**	**163,160**	**100%**
156	(CE-044) EoT due to Shortage of Acetylene Gas Supply	35 days	Mar 9 '22	Apr 13 '22			157	100%
157	Construction of mini-piles and setting up of load test	21 days	Apr 13 '22	May 4 '22		156	158	100%
158	Compression load test	4.5 days	May 4 '22	May 8 '22		157		100%
159	Sheet piling works for ELS - 425 pcs (length 6m)	13 days	Mar 26 '22	Apr 8 '22	3	154FS+17 days	163	100%
160	CE-025 _ GI works of Contract ND/2021/01	2 days	May 9 '22	May 10 '22		155	161	100%
161	CE-052 _ Inclement Weather in May 2022 (under assessment)	4.5 days	May 11 '22	May 15 '22		160	162	100%
162	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	May 15 '22	May 21 '22		161	163	100%
163	Excavation works (7600m3)	37 days	May 22 '22	Jun 27 '22		155,159,162	164FS-12 days	100%
164	Welding of pile head capping plate	28 days	Jun 16 '22	Jul 13 '22		163FS-12 days	165	100%
165	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Jul 14 '22	Jul 17 '22		164	166FS-14 days	100%
166	Laying of blinding layer	22 days	Jul 4 '22	Jul 25 '22		165FS-14 days	167FS-14 days	100%
167	**Construction of pile cap**	**48 days**	**Jul 12 '22**	**Aug 28 '22**		**166FS-14 days**		**100%**
168	Formwork erection	40 days	Jul 12 '22	Aug 20 '22			169SS+4 days	100%
169	Installation of water proofing system and testing	12 days	Jul 16 '22	Jul 27 '22		168SS+4 days	170FS-10 days	100%
170	Rebar fixing	31 days	Jul 18 '22	Aug 17 '22		169FS-10 days	171FS-7 days	100%
171	Concreting of pile cap - 1600m3	5 days	Aug 11 '22	Aug 15 '22		170FS-7 days	172	100%
172	Concreting of pile cap - 400m3	6 days	Aug 16 '22	Aug 21 '22		171	173	100%
173	Concreting of pile cap - 1000m3	7 days	Aug 22 '22	Aug 28 '22		172		100%
174								
175	**Construction of SWHWRP**	**503 days**	**May 1 '22**	**Sep 15 '23**			**574FF**	**15%**
176	Submission and acceptance of DfMA proposal	120 days	Jun 9 '22	Oct 6 '22			177	100%
177	Selection of Designer & Supplier for DfMA	30 days	Oct 7 '22	Nov 5 '22		176	178	100%
178	Manufacture of DfMA Precast Segments	45 days	Nov 6 '22	Dec 20 '22		177	179	50%
179	Installation of DfMA segments	90 days	Dec 21 '22	Mar 20 '23		178		50%
180	Submission and acceptance of method statement for construction of ReWPS and HCF	30 days	May 3 '22	Jun 1 '22			182	100%
181	**Construction of RC structure of ReWPS**	**284 days**	**Jul 15 '22**	**Apr 24 '23**			**432,306**	**30%**
182	**Construction of basement (below ground) - Grid Line 1-4**	**123 days**	**Jul 15 '22**	**Nov 14 '22**		**111,180**		**100%**
183	Removal of ELS strut and wailing (2nd layer)	2 days	Jul 15 '22	Jul 16 '22				100%
184	Construction of external walls, W6, W8-W15 (+0mPD to +3.6mPD)	69 days	Jul 15 '22	Sep 21 '22			191	100%
185	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Jul 15 '22	Jul 18 '22				100%
186	Scaffolding and Falsework erection	28 days	Jul 15 '22	Aug 11 '22			187FS-13 days	100%
187	Formwork erection	19 days	Jul 30 '22	Aug 17 '22		186FS-13 days	188	100%
188	CE-068 _ Inclement Weather in August 2022	15 days	Aug 18 '22	Sep 1 '22		187	189	100%
189	Rebar fixing (up to +7.2mPD) and formwork erection (up to +3.6mPD)	18 days	Sep 2 '22	Sep 19 '22		188	190	100%
190	Concreting	2 days	Sep 20 '22	Sep 21 '22		189		100%
191	Construction of external walls, W6, W8-W15 (+3.6mPD to +5.7mPD)	25 days	Sep 22 '22	Oct 16 '22		184	195	100%
192	C.J. preparation at +3.6mPD	7 days	Sep 22 '22	Sep 28 '22			193	100%
193	Formwork erection	15 days	Sep 29 '22	Oct 13 '22		192	194	100%
194	Concreting	3 days	Oct 14 '22	Oct 16 '22		193		100%
195	Removal of formwork (+0mPD to +5.7mPD)	9 days	Oct 17 '22	Oct 25 '22		191	197,196FS-4 d	100%
196	Rectification of exposed piles between G.L. 4-5	7 days	Oct 22 '22	Oct 28 '22		195FS-4 days	198	100%
197	Installation and testing of water proofing system (+0mPD to +5.7mPD)	7 days	Oct 26 '22	Nov 1 '22		195	200	100%
198	Backfilling of sand (+0mPD to +4.4mPD)	10 days	Oct 29 '22	Nov 7 '22		196	261,199	100%
199	Removal of ELS strut and wailing	7 days	Nov 8 '22	Nov 14 '22		198		100%
200	**Construction of Superstructure (above ground) - Grid Line 1-4**	**174 days**	**Nov 2 '22**	**Apr 24 '23**		**197**		**14%**
201	Construction of Beams and Slabs at +7.2mPD	59 days	Nov 2 '22	Dec 30 '22			206	100%
202	Falsework erection	11 days	Nov 2 '22	Nov 12 '22			203,208	100%
203	Formwork erection	14 days	Nov 13 '22	Nov 26 '22		202	204	100%
204	Rebar fixing	27 days	Nov 27 '22	Dec 23 '22		203	205	100%
205	Concreting (+5.7mPD to +7.2mPD)	7 days	Dec 24 '22	Dec 30 '22		204	210,209	100%
206	Partial Removal of formwork and falsework below +7.2mPD	14 days	Dec 31 '22	Jan 13 '23		201	212,217	0%
207	Construction of Beams and Slabs at +9.1mPD	66 days	Nov 13 '22	Jan 17 '23			223FS+7 days	0%
208	Falsework erection	7 days	Nov 13 '22	Nov 19 '22		202	209	0%
209	Formwork erection	7 days	Dec 31 '22	Jan 6 '23		208,205	210	0%
210	Rebar fixing	4 days	Jan 7 '23	Jan 10 '23		205,209	211	0%
211	Concreting (+7.2mPD to +9.1mPD)	7 days	Jan 11 '23	Jan 17 '23		210		0%
212	Construction of Beams and Slabs at +3.6mPD	28 days	Jan 14 '23	Feb 10 '23		206	222	0%
213	Scaffolding and falsework erection	7 days	Jan 14 '23	Jan 20 '23			214	0%
214	Formwork erection	7 days	Jan 21 '23	Jan 27 '23		213	215	0%
215	Rebar fixing	7 days	Jan 28 '23	Feb 3 '23		214	216	0%
216	Concreting (+3.6mPD)	7 days	Feb 4 '23	Feb 10 '23		215		0%
217	Construction of Staircase ST1, ST2 (+0mPD to +7.2mPD)	28 days	Jan 14 '23	Feb 10 '23		206	222	0%
218	Scaffolding and falsework erection	7 days	Jan 14 '23	Jan 20 '23			219	0%
219	Formwork erection	7 days	Jan 21 '23	Jan 27 '23		218	220	0%
220	Rebar fixing	7 days	Jan 28 '23	Feb 3 '23		219	221	0%
221	Concreting	7 days	Feb 4 '23	Feb 10 '23		220		0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

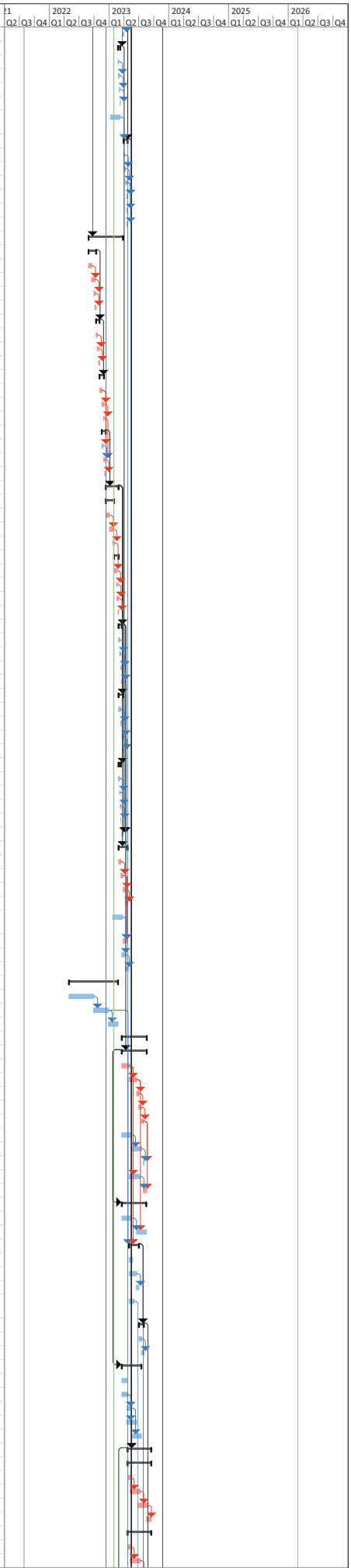
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
222	Re-instatement of formwork and falsework below +7.2mPD	14 days	Feb 11 '23	Feb 24 '23		212,217	231	0%
223	Construction of Walls and Columns (+7.2mPD/+9.1mPD to +12.2mPD)	25 days	Jan 25 '23	Feb 18 '23		207FS+7 days	227	0%
224	Scaffolding erection and Formwork erection	4 days	Jan 25 '23	Jan 28 '23			225	0%
225	Rebar fixing and Formwork erection	14 days	Jan 29 '23	Feb 11 '23		224	226	0%
226	Concreting	7 days	Feb 12 '23	Feb 18 '23		225		0%
227	Construction of Walls and Columns (+12.2mPD to +15.2mPD)	15 days	Feb 19 '23	Mar 5 '23		223	231	0%
228	Scaffolding erection and Formwork erection	4 days	Feb 19 '23	Feb 22 '23			229	0%
229	Rebar fixing and Formwork erection	4 days	Feb 23 '23	Feb 26 '23		228	230	0%
230	Concreting	7 days	Feb 27 '23	Mar 5 '23		229		0%
231	Construction of Beams and Slabs at +15.2mPD	24 days	Mar 6 '23	Mar 29 '23		227,222	251,241	0%
232	Construction of Beams	12 days	Mar 6 '23	Mar 17 '23				0%
233	Falsework and formwork erection for beam	3 days	Mar 6 '23	Mar 8 '23			234	0%
234	Rebar fixing for beam	5 days	Mar 9 '23	Mar 13 '23		233	235	0%
235	Concreting and curing of concrete for beam	4 days	Mar 14 '23	Mar 17 '23		234	237	0%
236	Construction of Slabs	12 days	Mar 18 '23	Mar 29 '23				0%
237	Installation of precast segments (65 nos.)	6 days	Mar 18 '23	Mar 23 '23		235	238	0%
238	Formwork erection for half slab	1 day	Mar 24 '23	Mar 24 '23		237	239	0%
239	Rebar fixing for half slab	4 days	Mar 25 '23	Mar 28 '23		238	240	0%
240	Concreting for half slab and curing of concrete	1 day	Mar 29 '23	Mar 29 '23		239		0%
241	Removal of formwork and falsework	3 days	Mar 30 '23	Apr 1 '23		231	248FS-7 days,2	0%
242	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	Feb 1 '23	Apr 1 '23			243	0%
243	Installation of internal finishing works above ground (above +7.2mPD & 9.1mPD)	21 days	Apr 2 '23	Apr 22 '23		241,242		0%
244	Plaster and paint at wall and soffit	7 days	Apr 2 '23	Apr 8 '23			245	0%
245	Epoxy painting on floor finish	7 days	Apr 9 '23	Apr 15 '23		244	246,247	0%
246	Chequer plate system at cable trench	7 days	Apr 16 '23	Apr 22 '23		245		0%
247	SS door and aluminum louver	7 days	Apr 16 '23	Apr 22 '23		245		0%
248	Installation of water proofing system below ground (below +7.2mPD & +9.1mPD)	7 days	Mar 26 '23	Apr 1 '23		241FS-7 days	249,250	0%
249	Watertightness test (G.L. 2-3, below +9.1mPD)	21 days	Apr 2 '23	Apr 22 '23		248		0%
250	Installation of internal finishing works (G.L. 3-4, below +7.2mPD)	21 days	Apr 2 '23	Apr 22 '23		248		0%
251	Construction of Parapet Walls (+15.2mPD to +16.6mPD)	26 days	Mar 30 '23	Apr 24 '23		231		0%
252	Scaffolding erection	7 days	Mar 30 '23	Apr 5 '23			253	0%
253	Rebar fixing	10 days	Apr 6 '23	Apr 15 '23		252	254	0%
254	Formwork erection	7 days	Apr 16 '23	Apr 22 '23		253	255	0%
255	Concreting	2 days	Apr 23 '23	Apr 24 '23		254		0%
256	Construction of Staircase ST4 & ST5 (+7.2mPD to +8.85mPD)	12 days	Apr 2 '23	Apr 13 '23		241		0%
257	Scaffolding and falsework erection	3 days	Apr 2 '23	Apr 4 '23			258	0%
258	Formwork erection	3 days	Apr 5 '23	Apr 7 '23		257	259	0%
259	Rebar fixing	3 days	Apr 8 '23	Apr 10 '23		258	260	0%
260	Concreting	3 days	Apr 11 '23	Apr 13 '23		259		0%
261	**Construction of Superstructure (above ground) - Grid Line 4-6**	**164 days**	**Nov 8 '22**	**Apr 20 '23**		**198**		**17%**
262	Construction of base slab (+4.45mPD to +5.95mPD & +5.6mPD to +7.1mPD)	38 days	Nov 8 '22	Dec 15 '22			270	100%
263	Open-cut excavation to formation level	10 days	Nov 8 '22	Nov 17 '22			264	100%
264	Welding of pile head capping plate (11 nos.)	3 days	Nov 18 '22	Nov 20 '22		263	265	100%
265	Laying of blinding layer	2 days	Nov 21 '22	Nov 22 '22		264	266	100%
266	Installation of water proofing system and testing	2 days	Nov 23 '22	Nov 24 '22		265	267	100%
267	Formwork erection	2 days	Nov 25 '22	Nov 26 '22		266	268	100%
268	Rebar fixing	12 days	Nov 27 '22	Dec 8 '22		267	269	100%
269	Concreting	7 days	Dec 9 '22	Dec 15 '22		268		100%
270	Construction of Bearing walls and Slabs (+5.95mPD to +7.2mPD)	35 days	Dec 16 '22	Jan 19 '23		262	274	32%
271	Formwork erection and Rebar fixing	14 days	Dec 16 '22	Dec 29 '22			272	80%
272	Formwork erection	14 days	Dec 30 '22	Jan 12 '23		271	273	0%
273	Concreting	7 days	Jan 13 '23	Jan 19 '23		272		0%
274	Construction of Columns, Walls, Beams & Slabs (+7.2mPD to +11.8mPD)	37 days	Jan 20 '23	Feb 25 '23		270	278	0%
275	Scaffolding erection and formwork erection	15 days	Jan 20 '23	Feb 3 '23			276	0%
276	Rebar fixing and formwork erection	15 days	Feb 4 '23	Feb 18 '23		275	277	0%
277	Concreting	7 days	Feb 19 '23	Feb 25 '23		276		0%
278	Construction of Columns, Walls, Beams & Slabs (+11.8mPD to +13.25mPD)	26 days	Feb 26 '23	Mar 23 '23		274	296,288,301	0%
279	Construction of Columns, Walls and Beams (+11.8mPD to +13.05mPD)	20 days	Feb 26 '23	Mar 17 '23				0%
280	Falsework and formwork erection	8 days	Feb 26 '23	Mar 5 '23			281	0%
281	Rebar fixing	8 days	Mar 6 '23	Mar 13 '23		280	282	0%
282	Concreting and curing of concrete	4 days	Mar 14 '23	Mar 17 '23		281	284	0%
283	Construction of Slabs at +13.25mPD	6 days	Mar 18 '23	Mar 23 '23				0%
284	Installation of precast segments (22 nos.)	2 days	Mar 18 '23	Mar 19 '23		282	285	0%
285	Formwork erection for half slab	1 day	Mar 20 '23	Mar 20 '23		284	286	0%
286	Rebar fixing for half slab	2 days	Mar 21 '23	Mar 22 '23		285	287	0%
287	Concreting for half slab	1 day	Mar 23 '23	Mar 23 '23		286		0%
288	Removal of formwork and falsework	7 days	Mar 24 '23	Mar 30 '23		278	290	0%
289	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	Jan 30 '23	Mar 30 '23			290	0%
290	Installation of internal finishing works for Grid Line 4-6	21 days	Mar 31 '23	Apr 20 '23		288,289	542	0%
291	Plaster and paint at wall and soffit	7 days	Mar 31 '23	Apr 6 '23			292	0%
292	Epoxy painting on floor finish	7 days	Apr 7 '23	Apr 13 '23		291	293,294,295	0%
293	Chequer plate system at cable trench and aerator room	7 days	Apr 14 '23	Apr 20 '23		292		0%
294	Steel grating floor system	7 days	Apr 14 '23	Apr 20 '23		292		0%
295	SS door and aluminum louver	7 days	Apr 14 '23	Apr 20 '23		292		0%
296	Construction of Parapet Walls (+13.25mPD to +14.65mPD)	28 days	Mar 24 '23	Apr 20 '23		278		0%
297	Scaffolding erection	7 days	Mar 24 '23	Mar 30 '23			298	0%
298	Rebar fixing	7 days	Mar 31 '23	Apr 6 '23		297	299	0%
299	Formwork erection	7 days	Apr 7 '23	Apr 13 '23		298	300	0%
300	Concreting	7 days	Apr 14 '23	Apr 20 '23		299		0%
301	Construction of Staircase ST3 (+7.1mPD to +15.45mPD)	28 days	Mar 24 '23	Apr 20 '23		278		0%
302	Scaffolding and falsework erection	7 days	Mar 24 '23	Mar 30 '23			303	0%
303	Formwork erection	7 days	Mar 31 '23	Apr 6 '23		302	304	0%
304	Rebar fixing	7 days	Apr 7 '23	Apr 13 '23		303	305	0%
305	Concreting	7 days	Apr 14 '23	Apr 20 '23		304		0%
306	Construction of water proofing system at roof slab of ReWPS	7 days	Apr 25 '23	May 1 '23		181	307	0%
307	Water tightness test for roof slab of ReWPS	15 days	May 2 '23	May 16 '23		306		0%
308								
309	**Construction of RC structure of HCF**	**239 days**	**Aug 29 '22**	**Apr 24 '23**			**432**	**0%**
310	**Construction of Superstructure (above ground) - Grid Line 1-3**	**179 days**	**Oct 28 '22**	**Apr 24 '23**		**146FS+60 days**		**0%**
311	Construction of Columns and Walls (+5.55mPD to +10.2mPD)	36 days	Oct 28 '22	Dec 2 '22			315	0%
312	Scaffolding erection and formwork erection	15 days	Oct 28 '22	Nov 11 '22			313	0%
313	Rebar fixing and formwork erection	14 days	Nov 12 '22	Nov 25 '22		312	314	0%
314	Concreting	7 days	Nov 26 '22	Dec 2 '22		313		0%
315	Construction of Columns and Walls (+10.2mPD to +13.00mPD)	35 days	Dec 3 '22	Jan 6 '23		311	319	0%
316	Scaffolding erection and formwork erection	14 days	Dec 3 '22	Dec 16 '22			317	0%
317	Rebar fixing and formwork erection	14 days	Dec 17 '22	Dec 30 '22		316	318	0%
318	Concreting	7 days	Dec 31 '22	Jan 6 '23		317		0%
319	Construction of Beams and Slabs at +13.00mPD	49 days	Jan 7 '23	Feb 24 '23		315	333,329	0%
320	Construction of Beams	42 days	Jan 7 '23	Feb 17 '23				0%
321	Falsework and formwork erection for beam	21 days	Jan 7 '23	Jan 27 '23			322	0%
322	Rebar fixing for beam	14 days	Jan 28 '23	Feb 10 '23		321	323	0%
323	Concreting and curing of concrete for beam	7 days	Feb 11 '23	Feb 17 '23		322	325	0%
324	Construction of Slabs	7 days	Feb 18 '23	Feb 24 '23				0%
325	Installation of precast segments (32 nos.)	3 days	Feb 18 '23	Feb 20 '23		323	326	0%
326	Formwork erection for half slab	1 day	Feb 21 '23	Feb 21 '23		325	327	0%
327	Rebar fixing for half slab	2 days	Feb 22 '23	Feb 23 '23		326	328	0%
328	Concreting for half slab	1 day	Feb 24 '23	Feb 24 '23		327		0%
329	Construction of Bearing walls and Slabs (+5.55mPD to +7.1mPD)	35 days	Feb 25 '23	Mar 31 '23		319	339	0%
330	Formwork erection	14 days	Feb 25 '23	Mar 10 '23			331	0%
331	Rebar fixing and formwork erection	14 days	Mar 11 '23	Mar 24 '23		330	332	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

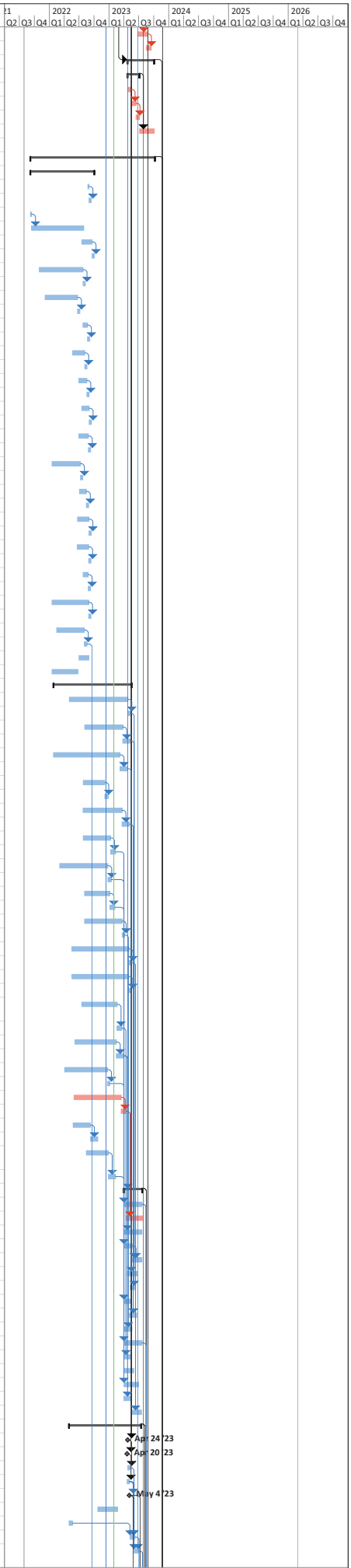
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
332	Concreting	7 days	Mar 25 '23	Mar 31 '23		331		0%
333	Construction of Parapet Walls (+13.00mPD to +15.1mPD)	13 days	Feb 25 '23	Mar 9 '23		319	389	0%
334	Scaffolding erection	3 days	Feb 25 '23	Feb 27 '23			335	0%
335	Rebar fixing	5 days	Feb 28 '23	Mar 4 '23		334	336	0%
336	Formwork erection	4 days	Mar 5 '23	Mar 8 '23		335	337	0%
337	Concreting	1 day	Mar 9 '23	Mar 9 '23		336		0%
338	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	Jan 9 '23	Mar 9 '23			339	0%
339	Installation of internal finishing works for Grid Line 1-3	24 days	Apr 1 '23	Apr 24 '23		338,329	541	0%
340	Waterproofing system at slabs	3 days	Apr 1 '23	Apr 3 '23			341	0%
341	Plaster and paint at wall and soffit	7 days	Apr 4 '23	Apr 10 '23		340	342	0%
342	Epoxy painting on floor finish	7 days	Apr 11 '23	Apr 17 '23		341	343,344,345	0%
343	Chequer plate system at cable trench and aerator room	7 days	Apr 18 '23	Apr 24 '23		342		0%
344	Steel grating floor system at chemical storage rooms	7 days	Apr 18 '23	Apr 24 '23		342		0%
345	SS door and aluminum louver	7 days	Apr 18 '23	Apr 24 '23		342		0%
346	**Construction of Superstructure (above ground) - Grid Line 3-7**	**211 days**	**Aug 29 '22**	**Mar 27 '23**		**146**		**0%**
347	Construction of Walls W2, W3, W5, W6 and columns within G.L. 3-5	46 days	Aug 29 '22	Oct 13 '22			352	0%
348	Scaffolding erection and Formwork erection	18 days	Aug 29 '22	Sep 15 '22			349	0%
349	Rebar fixing and Formwork erection	21 days	Sep 16 '22	Oct 6 '22		348	350FS-7 days	0%
350	Concreting of walls W2, W3 and Columns	7 days	Sep 30 '22	Oct 6 '22		349FS-7 days	351	0%
351	Concreting of walls W5, W6 and Columns	7 days	Oct 7 '22	Oct 13 '22		350		0%
352	Construction of remaining walls and columns within G.L. 3-5	21 days	Oct 14 '22	Nov 3 '22		347	356	0%
353	Scaffolding erection and Formwork erection	7 days	Oct 14 '22	Oct 20 '22			354	0%
354	Rebar fixing and Formwork erection	7 days	Oct 21 '22	Oct 27 '22		353	355	0%
355	Concreting	7 days	Oct 28 '22	Nov 3 '22		354		0%
356	Construction of walls and columns within G.L. 5-7 (+4.55mPD to +9.2mPD)	27 days	Nov 4 '22	Nov 30 '22		352		0%
357	Scaffolding erection and Formwork erection	14 days	Nov 4 '22	Nov 17 '22			358,361	0%
358	Rebar fixing and Formwork erection	12 days	Nov 18 '22	Nov 29 '22		357	359	0%
359	Concreting	1 day	Nov 30 '22	Nov 30 '22		358	362	0%
360	Construction of walls and columns within G.L. 5-7 (+9.2mPD to +10.8mPD)	**25 days**	**Nov 18 '22**	**Dec 12 '22**			**364**	**0%**
361	Scaffolding erection and Formwork erection	7 days	Nov 18 '22	Nov 24 '22		357	362	0%
362	Rebar fixing and Formwork erection	5 days	Dec 1 '22	Dec 5 '22		359,361	363	0%
363	Concreting	7 days	Dec 6 '22	Dec 12 '22		362		0%
364	Construction of Beams and Slabs at +10.4mPD and +10.8mPD	77 days	Dec 13 '22	Feb 27 '23		360	374,379,384,39	0%
365	Construction of Beams	50 days	Dec 13 '22	Jan 31 '23				0%
366	Falsework and formwork erection for beam	21 days	Dec 13 '22	Jan 2 '23			367	0%
367	Rebar fixing for beam	21 days	Jan 3 '23	Jan 23 '23		366	368	0%
368	Concreting and curing of concrete	8 days	Jan 24 '23	Jan 31 '23		367	370	0%
369	Construction of Slabs	27 days	Feb 1 '23	Feb 27 '23				0%
370	Installation of precast segments (156 nos.)	15 days	Feb 1 '23	Feb 15 '23		368	371	0%
371	Formwork erection for half slab	3 days	Feb 16 '23	Feb 18 '23		370	372	0%
372	Rebar fixing for half slab	6 days	Feb 19 '23	Feb 24 '23		371	373	0%
373	Concreting for half slab	3 days	Feb 25 '23	Feb 27 '23		372		0%
374	Construction of Parapet Walls (+10.4mPD/+10.8mPD to +12.5mPD)	20 days	Feb 28 '23	Mar 19 '23		364	389,404	0%
375	Scaffolding erection	7 days	Feb 28 '23	Mar 6 '23			376	0%
376	Rebar fixing	7 days	Mar 7 '23	Mar 13 '23		375	377	0%
377	Formwork erection	5 days	Mar 14 '23	Mar 18 '23		376	378	0%
378	Concreting	1 day	Mar 19 '23	Mar 19 '23		377	397	0%
379	Construction of Staircase ST01 (+7.1mPD to +11.35mPD)	28 days	Feb 28 '23	Mar 27 '23		364		0%
380	Scaffolding and falsework erection	14 days	Feb 28 '23	Mar 13 '23			381	0%
381	Rebar fixing	7 days	Mar 14 '23	Mar 20 '23		380	382	0%
382	Formwork erection	5 days	Mar 21 '23	Mar 25 '23		381	383	0%
383	Concreting	2 days	Mar 26 '23	Mar 27 '23		382		0%
384	Construction of Staircase ST02 (+10.4mPD to +13.95mPD)	14 days	Feb 28 '23	Mar 13 '23		364		0%
385	Scaffolding and falsework erection	7 days	Feb 28 '23	Mar 6 '23			386	0%
386	Rebar fixing	3 days	Mar 7 '23	Mar 9 '23		385	387	0%
387	Formwork erection	3 days	Mar 10 '23	Mar 12 '23		386	388	0%
388	Concreting	1 day	Mar 13 '23	Mar 13 '23		387		0%
389	Backfilling of general fill material up to +7.2mPD, and removal of ELS	8 days	Mar 20 '23	Mar 27 '23		374,333		0%
390	**Watertightness test in stages**	**56 days**	**Feb 28 '23**	**Apr 24 '23**		**364**		**0%**
391	Inlet Channel and Outlet Channel	14 days	Feb 28 '23	Mar 13 '23			392	0%
392	On duty contact tank	14 days	Mar 14 '23	Mar 27 '23		391	393,396	0%
393	Standby contact tank	14 days	Mar 28 '23	Apr 10 '23		392	394	0%
394	Overall water retaining structure at HCF	14 days	Apr 11 '23	Apr 24 '23		393		0%
395	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	Jan 23 '23	Mar 23 '23			396	0%
396	Installation of internal finishing works for Grid Line 3-7	28 days	Mar 28 '23	Apr 24 '23		392,395		0%
397	Construction of water proofing system at roof slab of HCF	21 days	Mar 20 '23	Apr 9 '23		378	398	0%
398	Water tightness test for roof slab of HCF	21 days	Apr 10 '23	Apr 30 '23		397		0%
399	**Provisional of Fire Service, Flushing and Fresh Water Supply by WSD**	**300 days**	**May 1 '22**	**Feb 24 '23**				**0%**
400	WWO542 design submission for Fire Service, Flushing and Fresh Water Supply	150 days	May 1 '22	Sep 27 '22			401	0%
401	Acceptance of WWO542 submission by WSD	90 days	Sep 28 '22	Dec 26 '22		400	402,418	0%
402	Provision of water supply to Part 1 by WSD	60 days	Dec 27 '22	Feb 24 '23		401		0%
403	**Construction of roadworks**	**153 days**	**Mar 20 '23**	**Aug 19 '23**				**0%**
404	**Construction of fence wall**	**153 days**	**Mar 20 '23**	**Aug 19 '23**		**374**	**426SS,415SS**	**0%**
405	Type-2 & Type-3 fence wall at West side (198m)	45 days	Mar 20 '23	May 3 '23			406,418,413	0%
406	Type-1 fence wall at East side (189m)	45 days	May 4 '23	Jun 17 '23		405	407,417	0%
407	Type-3 fence wall at North side (44m)	14 days	Jun 18 '23	Jul 1 '23		406	408	0%
408	Type-4 fence wall at middle (28m)	14 days	Jul 2 '23	Jul 15 '23		407	409	0%
409	Type-2 & Type-3 fence wall at South side (37m)	14 days	Jul 16 '23	Jul 29 '23		408	412,414	0%
410	Detailed design of Entrance Logo Feature	60 days	Mar 20 '23	May 18 '23			411	0%
411	Fabrication of Entrance Gates and Logo Feature	60 days	May 19 '23	Jul 17 '23		410	412	0%
412	Installation of Gate 1 and Gate 2	3 days	Jul 30 '23	Aug 1 '23		409,411		0%
413	Fabrication of steelworks	66 days	May 4 '23	Jul 8 '23		405	414	0%
414	Installation of wall finishes and steelworks	21 days	Jul 30 '23	Aug 19 '23		413,409		0%
415	**Construction of River Promenade**	**150 days**	**Mar 20 '23**	**Aug 16 '23**		**404SS**		**0%**
416	Detailed design of River Promenade	60 days	Mar 20 '23	May 18 '23			417	0%
417	Construction of River Promenade	60 days	Jun 18 '23	Aug 16 '23		406,416		0%
418	**Construction of underground utilities**	**60 days**	**May 4 '23**	**Jul 2 '23**		**401,405**	**423,550**	**0%**
419	Laying of pipe work system outside ReWPS and HCF	21 days	May 4 '23	May 24 '23				0%
420	Construction of chambers and water refilling station	45 days	May 4 '23	Jun 17 '23			421	0%
421	Installation of surge vessels	15 days	Jun 18 '23	Jul 2 '23		420		0%
422	Construction of underground utilities (Drainage, Telecom ducts, CLP cable ducts & drawpits, Fire Service, Flushing & Fresh Watermain, etc.)	30 days	May 4 '23	Jun 2 '23			549	0%
423	**Construction of EVA road pavement**	**30 days**	**Jul 3 '23**	**Aug 1 '23**		**418**	**557**	**0%**
424	Construction of road pavement near ReWPS	15 days	Jul 3 '23	Jul 17 '23			425	0%
425	Construction of road pavement near HCF	15 days	Jul 18 '23	Aug 1 '23		424		0%
426	**Design submission and fabrication of steelwork system for the aluminum fin**	**120 days**	**Mar 20 '23**	**Jul 17 '23**		**404SS**		**0%**
427	Detailed Design for External Façade Treatment and Vertical Green Wall	30 days	Mar 20 '23	Apr 18 '23				0%
428	Design submission of steelwork system for vertical aluminum fin at ReWPS	30 days	Mar 20 '23	Apr 18 '23			429,430	0%
429	Design submission of steelwork system for horizontal aluminum fin at HCF	30 days	Apr 19 '23	May 18 '23		428	431	0%
430	Fabrication of vertical aluminum fin for ReWPS	60 days	Apr 19 '23	Jun 17 '23		428		0%
431	Fabrication of horizontal aluminum fin for HCF	60 days	May 19 '23	Jul 17 '23		429		0%
432	**Installation of architectural works**	**144 days**	**Apr 25 '23**	**Sep 15 '23**		**181,309**	**443SS**	**0%**
433	**Installation of architectural works near ReWPS**	**144 days**	**Apr 25 '23**	**Sep 15 '23**				**0%**
434	Erection of working platform	15 days	Apr 25 '23	May 9 '23			435	0%
435	Laying of artificial granite tile at external wall	60 days	May 10 '23	Jul 8 '23		434	436FS-14 days	0%
436	Installation of steelworks	60 days	Jun 25 '23	Aug 23 '23		435FS-14 days	437FS-7 days	0%
437	Installation of cladding	30 days	Aug 17 '23	Sep 15 '23		436FS-7 days		0%
438	**Installation of architectural works near HCF**	**144 days**	**Apr 25 '23**	**Sep 15 '23**				**0%**
439	Erection of working platform	15 days	Apr 25 '23	May 9 '23			440	0%
440	Laying of artificial granite tile at external wall	60 days	May 10 '23	Jul 8 '23		439	441FS-14 days	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

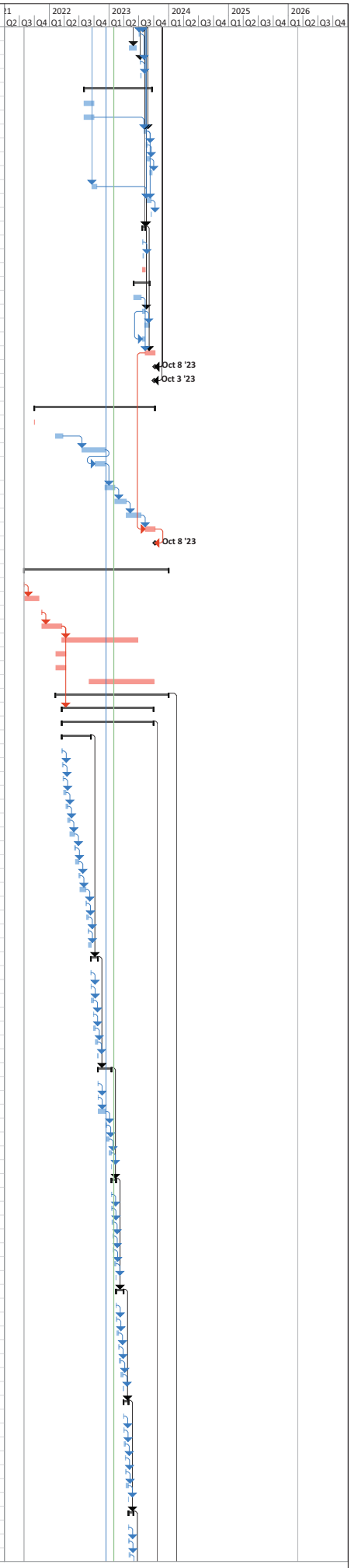
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
441	Installation of steelworks	60 days	Jun 25 '23	Aug 23 '23		440FS-14 days	442FS-7 days	0%
442	Installation of cladding	30 days	Aug 17 '23	Sep 15 '23		441FS-7 days		0%
443	**Landscape works**	**162 days**	**Apr 25 '23**	**Oct 3 '23**		**432SS**	**575FF**	**0%**
444	**Landscape works at roof top**	**72 days**	**Apr 25 '23**	**Jul 5 '23**			**448**	**0%**
445	Installation of composite timber decking with pedestal	21 days	Apr 25 '23	May 15 '23			446	0%
446	Laying of artificial granite floor tile / paver block	30 days	May 16 '23	Jun 14 '23		445	447	0%
447	Construciton of roof drainage system	21 days	Jun 15 '23	Jul 5 '23		446		0%
448	Landscape works within SWHWRP	90 days	Jul 6 '23	Oct 3 '23		444		0%
449								
450	**E&M Works of SWHWRP**	**762 days**	**Sep 7 '21**	**Oct 8 '23**			**574FF**	**0%**
451	**Design and Submission Stage**	**391 days**	**Sep 7 '21**	**Oct 2 '22**				**0%**
452	Submission of Surge Analysis Report	7 days	Aug 24 '22	Aug 30 '22			453	0%
453	Acceptance of Surge Analysis Report	14 days	Aug 31 '22	Sep 13 '22		452		0%
454	Submission and review of Reclaimed Water Main Pumps	7 days	Sep 7 '21	Sep 13 '21			455	0%
455	Acceptance of Reclaimed Water Main Pumps	319 days	Sep 14 '21	Jul 29 '22		454		0%
456	Submission and review of Surge Vessels and Air Compressors	63 days	Jul 18 '22	Sep 18 '22			457	0%
457	Acceptance of Surge Vessels and Air Compressors	14 days	Sep 19 '22	Oct 2 '22		456		0%
458	Submission and review of Penstock & Stoplog	267 days	Nov 1 '21	Jul 25 '22			459	0%
459	Acceptance of Penstock & Stoplog	14 days	Jul 26 '22	Aug 8 '22		458		0%
460	Submission and review of Chemical Dosing System & Static In-line Mixer	198 days	Dec 6 '21	Jun 21 '22			461	0%
461	Acceptance of Chemical Dosing System & Static In-line Mixer	14 days	Jun 22 '22	Jul 5 '22		460		0%
462	Submission and review of Air Blower and Air Diffuser	28 days	Jul 25 '22	Aug 21 '22			463	0%
463	Acceptance of Air Blower and Air Diffuser	14 days	Aug 22 '22	Sep 4 '22		462		0%
464	Submission and review of Lifting Appliances	73 days	May 24 '22	Aug 4 '22			465	0%
465	Acceptance of Lifting Appliances	14 days	Aug 5 '22	Aug 18 '22		464		0%
466	Submission and review of Minor Mechanical Equipment	49 days	Jun 30 '22	Aug 17 '22			467	0%
467	Acceptance of Minor Mechanical Equipment	14 days	Aug 18 '22	Aug 31 '22		466		0%
468	Submission and review of LV switchboard	45 days	Jul 18 '22	Aug 31 '22			469	0%
469	Acceptance of LV switchboard	14 days	Sep 1 '22	Sep 14 '22		468		0%
470	Submission and review of DCS	58 days	Jun 30 '22	Aug 26 '22			471	0%
471	Acceptance of DCS	14 days	Aug 27 '22	Sep 9 '22		470		0%
472	Submission and review of Instrumenation & Water Monitoring Equipment	174 days	Jan 17 '22	Jul 9 '22			473	0%
473	Acceptance of Instrumenation & Water Monitoring Equipment	14 days	Jul 10 '22	Jul 23 '22		472		0%
474	Submission and review of Misc. Electrical Items	42 days	Jul 4 '22	Aug 14 '22			475	0%
475	Acceptance of Misc. Electrical Items	14 days	Aug 15 '22	Aug 28 '22		474		0%
476	Submission and review of Fire Services Equipment	70 days	Jun 22 '22	Aug 30 '22			477	0%
477	Acceptance of Fire Services Equipment	14 days	Aug 31 '22	Sep 13 '22		476		0%
478	Submission and review of MVAC Equipment	70 days	Jun 20 '22	Aug 28 '22			479	0%
479	Acceptance of MVAC Equipment	14 days	Aug 29 '22	Sep 11 '22		478		0%
480	Submission and review of Plumbing & Drainage Equipment	31 days	Jul 26 '22	Aug 25 '22			481	0%
481	Acceptance of Plumbing & Drainage Equipment	14 days	Aug 26 '22	Sep 8 '22		480		0%
482	Submission and review of General Arrangement Drawing	224 days	Jan 17 '22	Aug 28 '22			483	0%
483	Acceptance of General Arrangement Drawing	14 days	Aug 29 '22	Sep 11 '22		482		0%
484	Submission and review of Civil Requirement Drawing	169 days	Feb 15 '22	Aug 2 '22			485	0%
485	Acceptance of Civil Requirement Drawing	16 days	Aug 3 '22	Aug 18 '22		484	561FS+30 days	0%
486	Submission and acceptance of method statement for E&M installation works	60 days	Jul 1 '22	Aug 29 '22				0%
487	CSD, CBWD coordination	157 days	Jan 17 '22	Jun 22 '22				0%
488	**Procurement and Delivery of Equipment**	**478 days**	**Jan 26 '22**	**May 18 '23**				**0%**
489	Procerement and manufacturing of Reclaimed Water Main Pumps (6 nos.)	358 days	May 3 '22	Apr 25 '23			490	0%
490	Delivery of Reclaimed Water Main Pumps (6 nos.)	14 days	Apr 26 '23	May 9 '23		489	528	0%
491	Procerement and manufacturing of Surge Vessels and Air Compressors	233 days	Aug 5 '22	Mar 25 '23			492	0%
492	Delivery of Surge Vessels and Air Compressors	45 days	Mar 26 '23	May 9 '23		491	530	0%
493	Procerement and manufacturing of Penstock & Stoplog	407 days	Jan 26 '22	Mar 8 '23			494	0%
494	Delivery of Penstock & Stoplog	45 days	Mar 9 '23	Apr 22 '23		493	529	0%
495	Procerement and manufacturing of Chemical Dosing System	132 days	Jul 27 '22	Dec 5 '22			496	0%
496	Delivery of Chemical Dosing System	21 days	Dec 6 '22	Dec 26 '22		495		0%
497	Procerement and manufacturing of Static In-line Mixer	238 days	Jul 26 '22	Mar 20 '23			498	0%
498	Delivery of Static In-line Mixer	45 days	Mar 21 '23	May 4 '23		497	532	0%
499	Procerement and manufacturing of Air Blower and Air Diffuser	167 days	Jul 27 '22	Jan 9 '23			500	0%
500	Delivery of Air Blower and Air Diffuser	30 days	Jan 10 '23	Feb 8 '23		499	531	0%
501	Procerement and manufacturing of Lifting Appliances	294 days	Mar 5 '22	Dec 23 '22			502	0%
502	Delivery of Lifting Appliances	21 days	Dec 24 '22	Jan 13 '23		501	527	0%
503	Procerement and manufacturing of Sump Pumps	155 days	Aug 4 '22	Jan 5 '23			504	0%
504	Delivery of Sump Pumps	30 days	Jan 6 '23	Feb 4 '23		503	537	0%
505	Procerement and manufacturing of Pipework and Valves	230 days	Aug 4 '22	Mar 21 '23			506	0%
506	Delivery of Pipework and Valves	14 days	Mar 22 '23	Apr 4 '23		505	533	0%
507	Procerement and manufacturing of LV switchboard	350 days	May 18 '22	May 2 '23			508	0%
508	Delivery of LV switchboard	16 days	May 3 '23	May 18 '23		507	539	0%
509	Procerement and manufacturing of DCS	347 days	May 20 '22	May 1 '23			510	0%
510	Delivery of DCS	14 days	May 2 '23	May 15 '23		509		0%
511	Procerement and manufacturing of Instrumenation and Water Monitoring Equipment	216 days	Jul 18 '22	Feb 18 '23			512	0%
512	Delivery of Instrumenation and Water Monitoring Equipment	30 days	Feb 19 '23	Mar 20 '23		511	535	0%
513	Procerement and manufacturing of Misc. Electrical Items (PV Panel, Earthing, etc)	252 days	Jun 7 '22	Feb 13 '23			514	0%
514	Delivery of Misc. Electrical Items (PV Panel, Earthing, etc)	45 days	Feb 14 '23	Mar 30 '23		513	526,538	0%
515	Procerement and manufacturing of Fire Services Equipment	262 days	Apr 4 '22	Dec 21 '22			516	0%
516	Delivery of Fire Services Equipment	14 days	Dec 22 '22	Jan 4 '23		515	524	0%
517	Procerement and manufacturing of MVAC Equipment	288 days	Jun 1 '22	Mar 15 '23			518	0%
518	Delivery of MVAC Equipment	30 days	Mar 16 '23	Apr 14 '23		517	525	0%
519	Procerement and manufacturing of Plumbing & Drainage Equipment	106 days	May 26 '22	Sep 8 '22			520	0%
520	Delivery of Plumbing & Drainage Equipment	45 days	Sep 9 '22	Oct 23 '22		519		0%
521	Procerement and manufacturing of Misc. Electrical Items (Cables, Cable Containment, Lightings)	134 days	Aug 15 '22	Dec 26 '22			522	0%
522	Delivery of Misc. Electrical Items (Cables, Cable Containment, Lightings)	45 days	Dec 27 '22	Feb 9 '23		521	534	0%
523	**Installation Works**	**113 days**	**Apr 2 '23**	**Jul 23 '23**		**241**	**564,570**	**0%**
524	Installation FS Equipment	110 days	Apr 2 '23	Jul 20 '23		516	557	0%
525	Installation of MVAC Equipment	100 days	Apr 15 '23	Jul 23 '23		518		0%
526	Installation of BS Equipment	110 days	Apr 2 '23	Jul 20 '23		514		0%
527	Installation of Lifting Appliance (12 nos.)	50 days	Apr 2 '23	May 21 '23		502	528	0%
528	Installation of Reclaimed Water Pumps (6 Nos.)	60 days	May 22 '23	Jul 20 '23		490,527		0%
529	Installation of penstocks (10 nos.) & Stoplogs (2 nos.)	60 days	Apr 23 '23	Jun 21 '23		494		0%
530	Installation of Surge Vessel (4 Nos.) & Air Compressor (4 Nos.)	30 days	May 10 '23	Jun 8 '23		492		0%
531	Installation of Air Blower (2 Nos.) & Air Diffuser (1 set)	45 days	Apr 2 '23	May 16 '23		500		0%
532	Installation of tanks (14 nos.) & Chemical Pumps (12 nos.)	45 days	May 5 '23	Jun 18 '23		498		0%
533	Installation of Pipeworks (DI, Chemical pipe, Air pipe)	45 days	Apr 5 '23	May 19 '23		506		0%
534	Installation of Cabling, MCC & DCS	110 days	Apr 2 '23	Jul 20 '23		522	562	0%
535	Installation of Instrumentation and Monitoring Stations	40 days	Apr 2 '23	May 11 '23		512		0%
536	Installation of ELV System (CCTV & Access Control)	60 days	Apr 2 '23	May 31 '23				0%
537	Installation of Plumbing & Drainage Equipment	90 days	Apr 2 '23	Jun 30 '23		504		0%
538	Installation of PV Panels	45 days	Apr 2 '23	May 16 '23		514		0%
539	Installation of LV Switchborad / MCC	60 days	May 19 '23	Jul 17 '23		508		0%
540	**Power Energization Related Items**	**441 days**	**May 1 '22**	**Jul 15 '23**			**564,557**	**0%**
541	CLP Room Ready for BS installation (HCF)	0 days	Apr 24 '23	Apr 24 '23		339	543	0%
542	CLP Room Ready for BS installation (ReWPS)	0 days	Apr 20 '23	Apr 20 '23		290	544	0%
543	Installation of BS Equipment (HCF)	14 days	Apr 25 '23	May 8 '23		541	548	0%
544	Installation of BS Equipment (ReWPS)	14 days	Apr 21 '23	May 4 '23		542	548,549,545	0%
545	Handover of Transformer Room to CLP	0 days	May 4 '23	May 4 '23		544	551,552	0%
546	CLP meter application	120 days	Oct 24 '22	Feb 20 '23				0%
547	Cable laying by CLP in DSD's EVA	21 days	May 1 '22	May 21 '22			548	0%
548	Lead time for CLP installation works	30 days	May 9 '23	Jun 7 '23		543,544,547	550	0%
549	CLP's Inspection for Transformer Room(ReWPS), CLP Room(HCF), draw pit and accsociated cable ducts	28 days	Jun 3 '23	Jun 30 '23		544,422	550	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

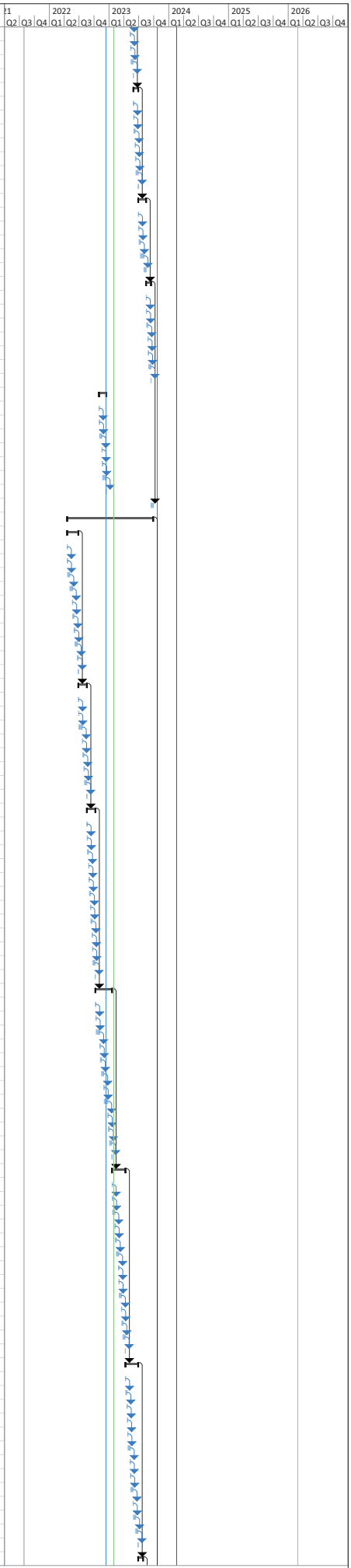
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
550	CLP to install Transformers and Cabling	7 days	Jul 3 '23	Jul 9 '23		548,549,418	552	0%
551	Lead time for power energization	42 days	May 5 '23	Jun 15 '23		545		0%
552	Power Energization from CLP Transformer to LVSB	3 days	Jul 10 '23	Jul 12 '23		550,545	553	0%
553	Power Energization from LVSB to All Equipment	3 days	Jul 13 '23	Jul 15 '23		552		0%
554	**FS / DG Inspection Related Items**	**416 days**	**Aug 1 '22**	**Sep 20 '23**				**0%**
555	VAC Desgin Submission to FSD	60 days	Aug 1 '22	Sep 29 '22				0%
556	FS related statutory submission to FSD	60 days	Aug 1 '22	Sep 29 '22			557	0%
557	T&C of FS Related Installation (Integrated Test & Rehearsal)	14 days	Aug 2 '23	Aug 15 '23		423,524,540,55	558,562	0%
558	Submission of FSI 314 & 501	7 days	Aug 16 '23	Aug 22 '23		557	559	0%
559	Target FS Inpsection	15 days	Aug 23 '23	Sep 6 '23		558	560	0%
560	Obtain FSD approval letter (Form FS172 Fire Certificate)	14 days	Sep 7 '23	Sep 20 '23		559		0%
561	DG Design Submission to FSD	30 days	Sep 18 '22	Oct 17 '22		485FS+30 days	562	0%
562	DG Inspection	30 days	Aug 16 '23	Sep 14 '23		534,557,561	563	0%
563	Obtain DG License	1 day	Sep 15 '23	Sep 15 '23		562		0%
564	**Preliminary Test of Equipment**	**17 days**	**Jul 24 '23**	**Aug 9 '23**		**523,540**	**573**	**0%**
565	Inspection of Equipment/System with SOR	3 days	Jul 24 '23	Jul 26 '23			566	0%
566	Trial Run of Equipment/System	4 days	Jul 27 '23	Jul 30 '23		565		0%
567	Site Acceptance Test (SAT) of Equipment/Systems with SOR	17 days	Jul 24 '23	Aug 9 '23				0%
568	**Submission**	**97 days**	**Jun 1 '23**	**Sep 5 '23**				**0%**
569	Submission of Testing Procedures & Commissioning Plan	45 days	Jun 1 '23	Jul 15 '23			573	0%
570	Submission of As Fitted Drawings	14 days	Jul 24 '23	Aug 6 '23		523	571,572SS	0%
571	Submission of Manual	30 days	Aug 7 '23	Sep 5 '23		570		0%
572	Submission of Training Material	14 days	Jul 24 '23	Aug 6 '23		570SS		0%
573	**System Commissioning Test**	**60 days**	**Aug 10 '23**	**Oct 8 '23**		**564,569**	**585SS**	**0%**
574	Planned completion for section 1	0 days	Oct 8 '23	Oct 8 '23		175FF,450FF		0%
575	Planned completion for section 2	0 days	Oct 3 '23	Oct 3 '23		443FF		0%
576								
577	**Section 3 - Modification of Table Hill Reclaimed Water Service Reservoir**	**738 days**	**Oct 1 '21**	**Oct 8 '23**				**0%**
578	Access Date (part 2 of the Site)	1 day	Oct 1 '21	Oct 1 '21				0%
579	Initial survey and condition survey	45 days	Feb 7 '22	Mar 23 '22			580FS+117 day	0%
580	Design submission and acceptance of the supplementary dosing and dyeing system (E&M)	141 days	Jul 19 '22	Dec 6 '22		579FS+117 days	581FS-60 days	0%
581	Submission and acceptance of method statement for supplementary dosing and dyeing system	60 days	Oct 8 '22	Dec 6 '22		580FS-60 days	582	0%
582	Selection of sub-contractor	60 days	Dec 7 '22	Feb 4 '23		581	583	0%
583	Construction of chemical room	70 days	Feb 5 '23	Apr 15 '23		582	584	0%
584	Installation of supplementary dosing and dyeing system	90 days	Apr 16 '23	Jul 14 '23		583	585	0%
585	T&C of E&M equipment	60 days	Aug 10 '23	Oct 8 '23		584,573SS	586FF	0%
586	Planned completion for section 3	0 days	Oct 8 '23	Oct 8 '23		585FF		0%
587								
588	**Section 4 - Water main laying works in part 3 of the Site**	**884.5 days**	**Jul 30 '21**	**Dec 31 '23**				**0%**
589	Access Date (part 3 of the Site)	1 day	Jul 30 '21	Jul 30 '21			590	0%
590	Initial survey (utility survey, condition survey, initial photo)	90 days	Jul 31 '21	Oct 28 '21		589		0%
591	1st TMLG meeting	1 day	Nov 15 '21	Nov 15 '21			592	0%
592	Application and approval of XP and TTA, including local consultation	122 days	Nov 16 '21	Mar 17 '22		591	593,598	0%
593	Implementation of TTA by stages	465 days	Mar 18 '22	Jun 25 '23		592		0%
594	Procurement and Delivery of pipes, fittings and related materials	60 days	Feb 10 '22	Apr 10 '22				0%
595	Submission and acceptance of method statement and material	60 days	Feb 10 '22	Apr 10 '22				0%
596	Excavation of Inspection Pit	396 days	Sep 1 '22	Oct 1 '23				0%
597	**Mainlaying by open trench method (RW03 & RW43)**	**692.5 days**	**Feb 7 '22**	**Dec 31 '23**			**1000FF**	**0%**
598	**RW03 : DN600 DI pipe - 1092m (XP ID: 1301128, 1301129)**	**561 days**	**Mar 18 '22**	**Sep 29 '23**		**592**		**0%**
599	**Team A : CH000 - CH550**	**561 days**	**Mar 18 '22**	**Sep 29 '23**			**787**	**0%**
600	**CH450 - CH550 (100m)**	**178 days**	**Mar 18 '22**	**Sep 11 '22**			**616**	**0%**
601	TTA establishment	3 days	Mar 18 '22	Mar 20 '22			602	0%
602	CE-041 _ Inclement Weather in March 2022	4.5 days	Mar 21 '22	Mar 25 '22		601	603	0%
603	Hard material excavation and disposal	4 days	Mar 25 '22	Mar 29 '22		602	604	0%
604	Soil excavation , laying sheetpile and disposal	14 days	Mar 29 '22	Apr 12 '22		603	605	0%
605	Obstruction of unchart 900mm pipe	10 days	Apr 12 '22	Apr 22 '22		604	606	0%
606	Pending for setting out of DSD	14 days	Apr 22 '22	May 6 '22		605	607	0%
607	Amendment of ELS	28 days	May 6 '22	Jun 3 '22		606	608	0%
608	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	Jun 3 '22	Jun 9 '22		607	609	0%
609	Treatment of bedding	21 days	Jun 9 '22	Jun 30 '22		608	610	0%
610	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	Jun 30 '22	Jul 6 '22		609	611	0%
611	Pipe laying D.I. & PE (DSD's pipe)	36 days	Jul 7 '22	Aug 11 '22		610	612	0%
612	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Aug 12 '22	Aug 15 '22		611	613	0%
613	Backfilling sand/aggregate, concurrent bend block/chambers	11 days	Aug 16 '22	Aug 26 '22		612	614	0%
614	Reinstatement	1 day	Aug 27 '22	Aug 27 '22		613	615	0%
615	CE-068 _ Inclement Weather in August 2022	15 days	Aug 28 '22	Sep 11 '22		614		0%
616	**CH420 - CH450 (30m)**	**43 days**	**Sep 12 '22**	**Oct 24 '22**		**600**	**624**	**0%**
617	TTA establishment	1 day	Sep 12 '22	Sep 12 '22			618	0%
618	Hard material excavation and disposal	1 day	Sep 13 '22	Sep 13 '22		617	619	0%
619	Soil excavation , laying sheetpile and disposal	14 days	Sep 14 '22	Sep 27 '22		618	620	0%
620	Treatment of bedding	1 day	Sep 28 '22	Sep 28 '22		619	621	0%
621	Pipe laying D.I.	10 days	Sep 29 '22	Oct 8 '22		620	622	0%
622	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Oct 9 '22	Oct 22 '22		621	623	0%
623	Reinstatement	2 days	Oct 23 '22	Oct 24 '22		622		0%
624	**CH390 - CH420 (30m)**	**83 days**	**Oct 25 '22**	**Jan 15 '23**		**616**	**632**	**0%**
625	TTA establishment	1 day	Oct 25 '22	Oct 25 '22			626	0%
626	Hard material excavation and disposal	1 day	Oct 26 '22	Oct 26 '22		625	627	0%
627	Soil excavation , laying sheetpile and disposal	45 days	Oct 27 '22	Dec 10 '22		626	628	0%
628	Treatment of bedding	7 days	Dec 11 '22	Dec 17 '22		627	629	0%
629	Pipe laying D.I.	14 days	Dec 18 '22	Dec 31 '22		628	630	0%
630	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Jan 1 '23	Jan 14 '23		629	631	0%
631	Reinstatement	1 day	Jan 15 '23	Jan 15 '23		630		0%
632	**CH360 - CH390 (30m)**	**28 days**	**Jan 16 '23**	**Feb 12 '23**		**624**	**640**	**0%**
633	TTA establishment	1 day	Jan 16 '23	Jan 16 '23			634	0%
634	Hard material excavation and disposal	2 days	Jan 17 '23	Jan 18 '23		633	635	0%
635	Soil excavation , laying sheetpile and disposal	7 days	Jan 19 '23	Jan 25 '23		634	636	0%
636	Treatment of bedding	1 day	Jan 26 '23	Jan 26 '23		635	637	0%
637	Pipe laying D.I.	2 days	Jan 27 '23	Jan 28 '23		636	638	0%
638	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Jan 29 '23	Feb 11 '23		637	639	0%
639	Reinstatement	1 day	Feb 12 '23	Feb 12 '23		638		0%
640	**CH290 - CH360 (70m)**	**46 days**	**Feb 13 '23**	**Mar 30 '23**		**632**	**648**	**0%**
641	TTA establishment	1 day	Feb 13 '23	Feb 13 '23			642	0%
642	Hard material excavation and disposal	4 days	Feb 14 '23	Feb 17 '23		641	643	0%
643	Soil excavation , laying sheetpile and disposal	10 days	Feb 18 '23	Feb 27 '23		642	644	0%
644	Treatment of bedding	4 days	Feb 28 '23	Mar 3 '23		643	645	0%
645	Pipe laying D.I.	10 days	Mar 4 '23	Mar 13 '23		644	646	0%
646	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Mar 14 '23	Mar 27 '23		645	647	0%
647	Reinstatement	3 days	Mar 28 '23	Mar 30 '23		646		0%
648	**CH250 - CH290 (40m)**	**30 days**	**Mar 31 '23**	**Apr 29 '23**		**640**	**656**	**0%**
649	TTA establishment	1 day	Mar 31 '23	Mar 31 '23			650	0%
650	Hard material excavation and disposal	2 days	Apr 1 '23	Apr 2 '23		649	651	0%
651	Soil excavation , laying sheetpile and disposal	7 days	Apr 3 '23	Apr 9 '23		650	652	0%
652	Treatment of bedding	2 days	Apr 10 '23	Apr 11 '23		651	653	0%
653	Pipe laying D.I.	3 days	Apr 12 '23	Apr 14 '23		652	654	0%
654	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Apr 15 '23	Apr 28 '23		653	655	0%
655	Reinstatement	1 day	Apr 29 '23	Apr 29 '23		654		0%
656	**CH210 - CH250 (40m)**	**30 days**	**Apr 30 '23**	**May 29 '23**		**648**	**664**	**0%**
657	TTA establishment	1 day	Apr 30 '23	Apr 30 '23			658	0%
658	Hard material excavation and disposal	2 days	May 1 '23	May 2 '23		657	659	0%
659	Soil excavation , laying sheetpile and disposal	7 days	May 3 '23	May 9 '23		658	660	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

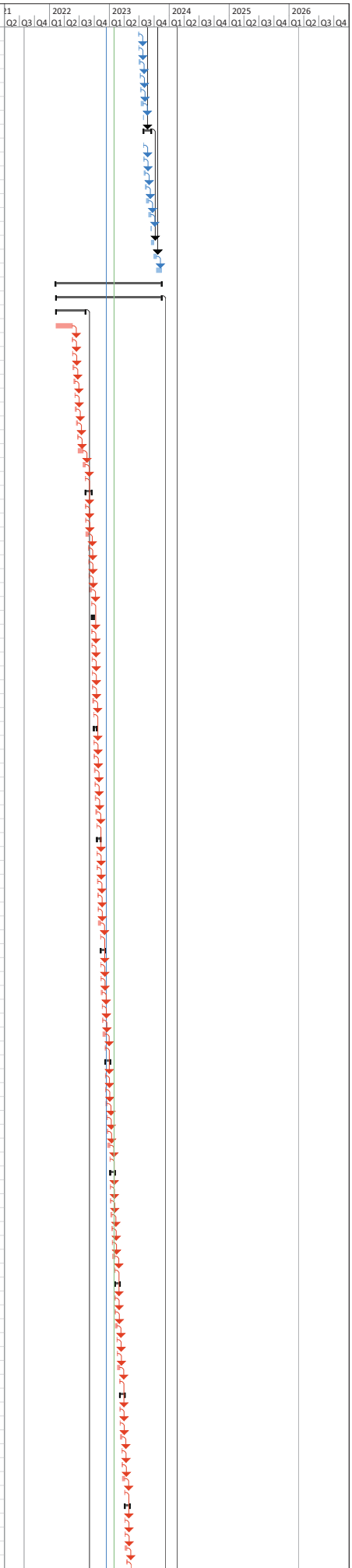
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
660	Treatment of bedding	2 days	May 10 '23	May 11 '23		659	661	0%
661	Pipe laying D.I.	3 days	May 12 '23	May 14 '23		660	662	0%
662	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	May 15 '23	May 28 '23		661	663	0%
663	Reinstatement	1 day	May 29 '23	May 29 '23		662		0%
664	**CH170 - CH210 (40m)**	**30 days**	**May 30 '23**	**Jun 28 '23**		**656**	**672**	**0%**
665	TTA establishment	1 day	May 30 '23	May 30 '23			666	0%
666	Hard material excavation and disposal	2 days	May 31 '23	Jun 1 '23		665	667	0%
667	Soil excavation , laying sheetpile and disposal	7 days	Jun 2 '23	Jun 8 '23		666	668	0%
668	Treatment of bedding	2 days	Jun 9 '23	Jun 10 '23		667	669	0%
669	Pipe laying D.I.	3 days	Jun 11 '23	Jun 13 '23		668	670	0%
670	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Jun 14 '23	Jun 27 '23		669	671	0%
671	Reinstatement	1 day	Jun 28 '23	Jun 28 '23		670		0%
672	**CH120 - CH170 (50m)**	**48 days**	**Jun 29 '23**	**Aug 15 '23**		**664**	**678**	**0%**
673	TTA establishment	1 day	Jun 29 '23	Jun 29 '23			674	0%
674	Removal of existing railing	3 days	Jun 30 '23	Jul 2 '23		673	675	0%
675	Installation of mild steel pipe	9 days	Jul 3 '23	Jul 11 '23		674	676	0%
676	Construction of thrust block	21 days	Jul 12 '23	Aug 1 '23		675	677	0%
677	Reinstatement of railing	14 days	Aug 2 '23	Aug 15 '23		676		0%
678	**CH080 - CH120 (40m)**	**30 days**	**Aug 16 '23**	**Sep 14 '23**		**672**	**694**	**0%**
679	TTA establishment	1 day	Aug 16 '23	Aug 16 '23			680	0%
680	Hard material excavation and disposal	2 days	Aug 17 '23	Aug 18 '23		679	681	0%
681	Soil excavation , laying sheetpile and disposal	7 days	Aug 19 '23	Aug 25 '23		680	682	0%
682	Treatment of bedding	2 days	Aug 26 '23	Aug 27 '23		681	683	0%
683	Pipe laying D.I.	3 days	Aug 28 '23	Aug 30 '23		682	684	0%
684	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Aug 31 '23	Sep 13 '23		683	685	0%
685	Reinstatement	1 day	Sep 14 '23	Sep 14 '23		684		0%
686	**CH020 - CH080 (60m)**	**44 days**	**Nov 1 '22**	**Dec 14 '22**				**0%**
687	TTA establishment	1 day	Nov 1 '22	Nov 1 '22			688	0%
688	Hard material excavation and disposal	2 days	Nov 2 '22	Nov 3 '22		687	689	0%
689	Soil excavation , laying sheetpile and disposal	14 days	Nov 4 '22	Nov 17 '22		688	690	0%
690	Treatment of bedding	2 days	Nov 18 '22	Nov 19 '22		689	691	0%
691	Pipe laying D.I.	3 days	Nov 20 '22	Nov 22 '22		690	692	0%
692	Backfilling sand/aggregate, concurrent bend block/chambers	21 days	Nov 23 '22	Dec 13 '22		691	693	0%
693	Reinstatement	1 day	Dec 14 '22	Dec 14 '22		692		0%
694	Pressure test, swabbing and CCTV	15 days	Sep 15 '23	Sep 29 '23		678		0%
695	**Team B : CH550 - CH1090 (540m)**	**526.5 days**	**Apr 20 '22**	**Sep 28 '23**			**787**	**0%**
696	**CH970 - CH1010 (40m)**	**68.5 days**	**Apr 20 '22**	**Jun 27 '22**			**707**	**0%**
697	TTA establishment	1 day	Apr 20 '22	Apr 20 '22			698	0%
698	Hard material excavation and disposal	1 day	Apr 21 '22	Apr 21 '22		697	699	0%
699	Soil excavation , laying sheetpile and disposal	14 days	Apr 22 '22	May 5 '22		698	700	0%
700	CE-068 _ Inclement Weather in August 2022	15 days	May 6 '22	May 20 '22		699	701	0%
701	Treatment of bedding	3 days	May 21 '22	May 23 '22		700	702	0%
702	Pipe laying D.I.	7 days	May 24 '22	May 30 '22		701	703	0%
703	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	May 31 '22	Jun 5 '22		702	704	0%
704	Backfilling sand/aggregate	14 days	Jun 6 '22	Jun 19 '22		703	705	0%
705	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	Jun 20 '22	Jun 26 '22		704	706	0%
706	Reinstatement	1 day	Jun 26 '22	Jun 27 '22		705		0%
707	**CH930 - CH970 (40m)**	**52 days**	**Jun 27 '22**	**Aug 18 '22**		**696**	**716**	**0%**
708	TTA establishment	1 day	Jun 27 '22	Jun 28 '22			709	0%
709	Hard material excavation and disposal	2 days	Jun 28 '22	Jun 30 '22		708	710	0%
710	Soil excavation , laying sheetpile and disposal	21 days	Jun 30 '22	Jul 21 '22		709	711	0%
711	Treatment of bedding	2 days	Jul 21 '22	Jul 23 '22		710	712	0%
712	Pipe laying D.I.	7 days	Jul 23 '22	Jul 30 '22		711	713	0%
713	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Jul 30 '22	Aug 3 '22		712	714	0%
714	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Aug 3 '22	Aug 17 '22		713	715	0%
715	Reinstatement	1 day	Aug 17 '22	Aug 18 '22		714		0%
716	**CH880 - CH930 (50m)**	**52 days**	**Aug 18 '22**	**Oct 9 '22**		**707**	**729**	**0%**
717	TTA establishment	1 day	Aug 18 '22	Aug 19 '22			718	0%
718	Hard material excavation and disposal (CH880 - CH910)	2 days	Aug 19 '22	Aug 21 '22		717	719	0%
719	Soil excavation, laying sheetpile and disposal (CH880 - CH910)	7 days	Aug 21 '22	Aug 28 '22		718	720	0%
720	Treatment of bedding (CH880 - CH910)	3 days	Aug 28 '22	Aug 31 '22		719	721	0%
721	Pipe laying D.I. (CH880 - CH910)	2 days	Aug 31 '22	Sep 2 '22		720	722	0%
722	Backfilling sand/aggregate, concurrent bend block/chambers (CH880 - CH910)	7 days	Sep 2 '22	Sep 9 '22		721	723	0%
723	Hard material excavation and disposal (CH850 - CH880)	2 days	Sep 9 '22	Sep 11 '22		722	724	0%
724	Soil excavation, laying sheetpile and disposal (CH850 - CH880)	7 days	Sep 11 '22	Sep 18 '22		723	725	0%
725	Treatment of bedding (CH850 - CH880)	3 days	Sep 18 '22	Sep 21 '22		724	726	0%
726	Pipe laying D.I. (CH850 - CH880)	2 days	Sep 21 '22	Sep 23 '22		725	727	0%
727	Backfilling sand/aggregate, concurrent bend block/chambers (CH850 - CH880)	14 days	Sep 23 '22	Oct 7 '22		726	728	0%
728	Reinstatement	2 days	Oct 7 '22	Oct 9 '22		727		0%
729	**CH780 - CH880 (100m)**	**102 days**	**Oct 9 '22**	**Jan 19 '23**		**716**	**742**	**0%**
730	TTA establishment	2 days	Oct 9 '22	Oct 11 '22			731	0%
731	Hard material excavation and disposal (CH800 - CH850)	3 days	Oct 11 '22	Oct 14 '22		730	732	0%
732	Soil excavation , laying sheetpile and disposal (CH800 - CH850)	21 days	Oct 14 '22	Nov 4 '22		731	733	0%
733	Treatment of bedding (CH800 - CH850)	4 days	Nov 4 '22	Nov 8 '22		732	734	0%
734	Pipe laying D.I. (CH800 - CH850)	7 days	Nov 8 '22	Nov 15 '22		733	735	0%
735	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Nov 15 '22	Nov 29 '22		734	736	0%
736	Hard material excavation and disposal (CH750 - CH800)	3 days	Nov 29 '22	Dec 2 '22		735	737	0%
737	Soil excavation , laying sheetpile and disposal (CH750 - CH800)	21 days	Dec 2 '22	Dec 23 '22		736	738	0%
738	Treatment of bedding (CH750 - CH800)	4 days	Dec 23 '22	Dec 27 '22		737	739	0%
739	Pipe laying D.I. (CH750 - CH800)	7 days	Dec 27 '22	Jan 3 '23		738	740	0%
740	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Jan 3 '23	Jan 17 '23		739	741	0%
741	Reinstatement	2 days	Jan 17 '23	Jan 19 '23		740		0%
742	**CH680 - CH780 (100m)**	**82 days**	**Jan 19 '23**	**Apr 11 '23**		**729**	**756**	**0%**
743	TTA establishment	1 day	Jan 19 '23	Jan 20 '23			744	0%
744	Hard material excavation and disposal (CH700 - CH750)	2 days	Jan 20 '23	Jan 22 '23		743	745	0%
745	Soil excavation , laying sheetpile and disposal (CH700 - CH750)	14 days	Jan 22 '23	Feb 5 '23		744	746	0%
746	Treatment of bedding (CH700 - CH750)	2 days	Feb 5 '23	Feb 7 '23		745	747	0%
747	Pipe laying D.I. (CH700 - CH750)	7 days	Feb 7 '23	Feb 14 '23		746	748	0%
748	Backfilling sand/aggregate, concurrent bend block/chambers (CH700 - CH750)	14 days	Feb 14 '23	Feb 28 '23		747	749	0%
749	Reinstatement (CH700 - CH750)	1 day	Feb 28 '23	Mar 1 '23		748	750	0%
750	Hard material excavation and disposal (CH650 - CH700)	2 days	Mar 1 '23	Mar 3 '23		749	751	0%
751	Soil excavation , laying sheetpile and disposal (CH650 - CH700)	14 days	Mar 3 '23	Mar 17 '23		750	752	0%
752	Treatment of bedding (CH650 - CH700)	2 days	Mar 17 '23	Mar 19 '23		751	753	0%
753	Pipe laying D.I. (CH650 - CH700)	7 days	Mar 19 '23	Mar 26 '23		752	754	0%
754	Backfilling sand/aggregate, concurrent bend block/chambers (CH650 - CH700)	14 days	Mar 26 '23	Apr 9 '23		753	755	0%
755	Reinstatement	2 days	Apr 9 '23	Apr 11 '23		754		0%
756	**CH580 - CH680 (100m)**	**78 days**	**Apr 11 '23**	**Jun 28 '23**		**742**	**770**	**0%**
757	TTA establishment	1 day	Apr 11 '23	Apr 12 '23			758	0%
758	Hard material excavation and disposal (CH600 - CH650)	7 days	Apr 12 '23	Apr 19 '23		757	759	0%
759	Soil excavation , laying sheetpile and disposal (CH600 - CH650)	3 days	Apr 19 '23	Apr 22 '23		758	760	0%
760	Treatment of bedding (CH600 - CH650)	2 days	Apr 22 '23	Apr 24 '23		759	761	0%
761	Pipe laying D.I. (CH600 - CH650)	2 days	Apr 24 '23	Apr 26 '23		760	762	0%
762	Backfilling sand/aggregate, concurrent bend block/chambers (CH600 - CH650)	14 days	Apr 26 '23	May 10 '23		761	763	0%
763	Reinstatement (CH600 - CH650)	1 day	May 10 '23	May 11 '23		762	764	0%
764	Hard material excavation and disposal (CH550 - CH600)	2 days	May 11 '23	May 13 '23		763	765	0%
765	Soil excavation , laying sheetpile and disposal (CH550 - CH600)	14 days	May 13 '23	May 27 '23		764	766	0%
766	Treatment of bedding (CH550 - CH600)	2 days	May 27 '23	May 29 '23		765	767	0%
767	Pipe laying D.I. (CH550 - CH600)	14 days	May 29 '23	Jun 12 '23		766	768	0%
768	Backfilling sand/aggregate, concurrent bend block/chambers (CH550 - CH600)	14 days	Jun 12 '23	Jun 26 '23		767	769	0%
769	Reinstatement	2 days	Jun 26 '23	Jun 28 '23		768		0%
770	**CH1010 - CH1040 (30m)**	**30 days**	**Jun 28 '23**	**Jul 28 '23**		**756**	**778**	**0%**



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

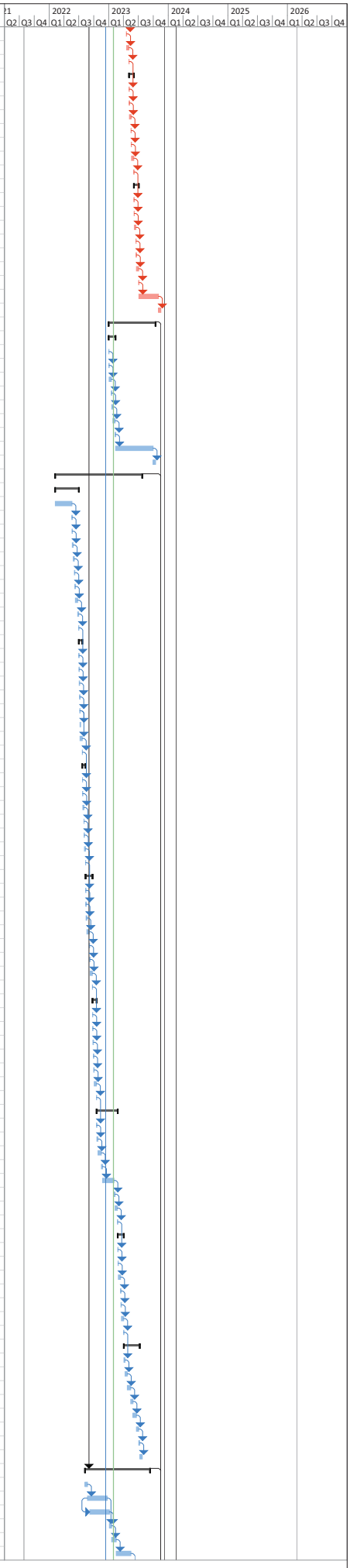
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
771	TTA establishment	1 day	Jun 28 '23	Jun 29 '23			772	0%
772	Hard material excavation and disposal	1 day	Jun 29 '23	Jun 30 '23		771	773	0%
773	Soil excavation , laying sheetpile and disposal	7 days	Jun 30 '23	Jul 7 '23		772	774	0%
774	Treatment of bedding	2 days	Jul 7 '23	Jul 9 '23		773	775	0%
775	Pipe laying D.I.	4 days	Jul 9 '23	Jul 13 '23		774	776	0%
776	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Jul 13 '23	Jul 27 '23		775	777	0%
777	Reinstatement	1 day	Jul 27 '23	Jul 28 '23		776		0%
778	**CH1040 - CH1090 (50m)**	**47 days**	**Jul 28 '23**	**Sep 13 '23**		**770**	**786**	**0%**
779	TTA establishment	1 day	Jul 28 '23	Jul 29 '23			780	0%
780	Hard material excavation and disposal	2 days	Jul 29 '23	Jul 31 '23		779	781	0%
781	Soil excavation , laying sheetpile and disposal	7 days	Jul 31 '23	Aug 7 '23		780	782	0%
782	Treatment of bedding	7 days	Aug 7 '23	Aug 14 '23		781	783	0%
783	Pipe laying D.I.	14 days	Aug 14 '23	Aug 28 '23		782	784	0%
784	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	Aug 28 '23	Sep 11 '23		783	785	0%
785	Reinstatement	2 days	Sep 11 '23	Sep 13 '23		784		0%
786	Pressure test, swabbing and CCTV	15 days	Sep 13 '23	Sep 28 '23		778		0%
787	Overall pressure test	15 days	Sep 30 '23	Oct 14 '23		599,695	788	0%
788	Pipe connection and completion	30 days	Oct 15 '23	Nov 13 '23		787		0%
789	**RW43 : DN150 DI pipe - 1144m (XP ID: 1301130, 1301131)**	**647.5 days**	**Feb 7 '22**	**Nov 16 '23**				**0%**
790	**Team A CH370 to CH850 (480m)**	**644.5 days**	**Feb 10 '22**	**Nov 16 '23**			**998**	**0%**
791	**Team A CH640 to CH680 (40m)**	**179.5 days**	**Feb 10 '22**	**Aug 8 '22**			**986**	**0%**
792	Pending for IIB of pipe fittings	99 days	Feb 10 '22	May 19 '22			793	0%
793	TTA establishment	1 day	May 20 '22	May 20 '22		792	794	0%
794	Hard material excavation and disposal	2 days	May 21 '22	May 22 '22		793	795	0%
795	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	May 23 '22	May 28 '22		794	796	0%
796	Soil excavation , laying sheetpile and disposal	7 days	May 29 '22	Jun 4 '22		795	797	0%
797	Treatment of bedding	2 days	Jun 5 '22	Jun 6 '22		796	798	0%
798	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	Jun 7 '22	Jun 13 '22		797	799	0%
799	Pipe laying D.I.	7 days	Jun 13 '22	Jun 20 '22		798	800	0%
800	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Jun 20 '22	Jun 24 '22		799	801	0%
801	Works suspended by Sheung Shui Heung	30 days	Jun 24 '22	Jul 24 '22		800	802	0%
802	Backfilling general fill and compaction	14 days	Jul 24 '22	Aug 7 '22		801	803	0%
803	Reinstatement	1 day	Aug 7 '22	Aug 8 '22		802	805	0%
804	**Team A CH420 to CH450 (35m)**	**38 days**	**Aug 8 '22**	**Sep 15 '22**				**0%**
805	TTA establishment	1 day	Aug 8 '22	Aug 9 '22		803	806	0%
806	Hard material excavation and disposal	1 day	Aug 9 '22	Aug 10 '22		805	807	0%
807	CE-068 _ Inclement Weather in August 2022	15 days	Aug 10 '22	Aug 25 '22		806	808	0%
808	Soil excavation , laying sheetpile and disposal	3 days	Aug 25 '22	Aug 28 '22		807	809	0%
809	Treatment of bedding	1 day	Aug 28 '22	Aug 29 '22		808	810	0%
810	Pipe laying D.I.	2 days	Aug 29 '22	Aug 31 '22		809	811	0%
811	Backfilling general fill and compaction	14 days	Aug 31 '22	Sep 14 '22		810	812	0%
812	Reinstatement	1 day	Sep 14 '22	Sep 15 '22		811	814	0%
813	**Team A CH410 to CH420 (10m)**	**13 days**	**Sep 15 '22**	**Sep 28 '22**				**0%**
814	TTA establishment	1 day	Sep 15 '22	Sep 16 '22		812	815	0%
815	Hard material excavation and disposal	1 day	Sep 16 '22	Sep 17 '22		814	816	0%
816	Soil excavation , laying sheetpile and disposal	1 day	Sep 17 '22	Sep 18 '22		815	817	0%
817	Treatment of bedding	1 day	Sep 18 '22	Sep 19 '22		816	818	0%
818	Pipe laying D.I.	1 day	Sep 19 '22	Sep 20 '22		817	819	0%
819	Backfilling general fill and compaction	7 days	Sep 20 '22	Sep 27 '22		818	820	0%
820	Reinstatement	1 day	Sep 27 '22	Sep 28 '22		819	822	0%
821	**Team A CH450 to CH500 (50m)**	**19 days**	**Sep 28 '22**	**Oct 17 '22**				**0%**
822	TTA establishment	1 day	Sep 28 '22	Sep 29 '22		820	823	0%
823	Hard material excavation and disposal	2 days	Sep 29 '22	Oct 1 '22		822	824	0%
824	Soil excavation , laying sheetpile and disposal	4 days	Oct 1 '22	Oct 5 '22		823	825	0%
825	Treatment of bedding	1 day	Oct 5 '22	Oct 6 '22		824	826	0%
826	Pipe laying D.I.	3 days	Oct 6 '22	Oct 9 '22		825	827	0%
827	Backfilling general fill and compaction	7 days	Oct 9 '22	Oct 16 '22		826	828	0%
828	Reinstatement	1 day	Oct 16 '22	Oct 17 '22		827	830	0%
829	**Team A CH400 to CH410 (10m)**	**23 days**	**Oct 17 '22**	**Nov 9 '22**				**0%**
830	TTA establishment	1 day	Oct 17 '22	Oct 18 '22		828	831	0%
831	Hard material excavation and disposal	1 day	Oct 18 '22	Oct 19 '22		830	832	0%
832	Soil excavation , laying sheetpile and disposal	4 days	Oct 19 '22	Oct 23 '22		831	833	0%
833	Treatment of bedding	1 day	Oct 23 '22	Oct 24 '22		832	834	0%
834	Pipe laying D.I.	1 day	Oct 24 '22	Oct 25 '22		833	835	0%
835	Backfilling general fill and compaction	14 days	Oct 25 '22	Nov 8 '22		834	836	0%
836	Reinstatement	1 day	Nov 8 '22	Nov 9 '22		835	838	0%
837	**Team A CH370 to CH400 (30m)**	**28 days**	**Nov 9 '22**	**Dec 7 '22**				**0%**
838	TTA establishment	1 day	Nov 9 '22	Nov 10 '22		836	839	0%
839	Hard material excavation and disposal	1 day	Nov 10 '22	Nov 11 '22		838	840	0%
840	Soil excavation , laying sheetpile and disposal	7 days	Nov 11 '22	Nov 18 '22		839	841	0%
841	Treatment of bedding	1 day	Nov 18 '22	Nov 19 '22		840	842	0%
842	Pipe laying D.I.	3 days	Nov 19 '22	Nov 22 '22		841	843	0%
843	Backfilling general fill and compaction	14 days	Nov 22 '22	Dec 6 '22		842	844	0%
844	Reinstatement	1 day	Dec 6 '22	Dec 7 '22		843	846	0%
845	**Team A CH500 to CH550 (50m)**	**30 days**	**Dec 7 '22**	**Jan 6 '23**				**0%**
846	TTA establishment	1 day	Dec 7 '22	Dec 8 '22		844	847	0%
847	Hard material excavation and disposal	2 days	Dec 8 '22	Dec 10 '22		846	848	0%
848	Soil excavation , laying sheetpile and disposal	7 days	Dec 10 '22	Dec 17 '22		847	849	0%
849	Treatment of bedding	2 days	Dec 17 '22	Dec 19 '22		848	850	0%
850	Pipe laying D.I.	2 days	Dec 19 '22	Dec 21 '22		849	851	0%
851	Backfilling general fill and compaction	14 days	Dec 21 '22	Jan 4 '23		850	852	0%
852	Reinstatement	2 days	Jan 4 '23	Jan 6 '23		851	854	0%
853	**Team A CH550 to CH580 (30m)**	**29 days**	**Jan 6 '23**	**Feb 4 '23**				**0%**
854	TTA establishment	1 day	Jan 6 '23	Jan 7 '23		852	855	0%
855	Hard material excavation and disposal	2 days	Jan 7 '23	Jan 9 '23		854	856	0%
856	Soil excavation , laying sheetpile and disposal	7 days	Jan 9 '23	Jan 16 '23		855	857	0%
857	Treatment of bedding	2 days	Jan 16 '23	Jan 18 '23		856	858	0%
858	Pipe laying D.I.	2 days	Jan 18 '23	Jan 20 '23		857	859	0%
859	Backfilling general fill and compaction	14 days	Jan 20 '23	Feb 3 '23		858	860	0%
860	Reinstatement	1 day	Feb 3 '23	Feb 4 '23		859	862	0%
861	**Team A CH580 to CH610 (30m)**	**30 days**	**Feb 4 '23**	**Mar 6 '23**				**0%**
862	TTA establishment	1 day	Feb 4 '23	Feb 5 '23		860	863	0%
863	Hard material excavation and disposal	1 day	Feb 5 '23	Feb 6 '23		862	864	0%
864	Soil excavation , laying sheetpile and disposal	10 days	Feb 6 '23	Feb 16 '23		863	865	0%
865	Treatment of bedding	1 day	Feb 16 '23	Feb 17 '23		864	866	0%
866	Pipe laying D.I.	2 days	Feb 17 '23	Feb 19 '23		865	867	0%
867	Backfilling general fill and compaction	14 days	Feb 19 '23	Mar 5 '23		866	868	0%
868	Reinstatement	1 day	Mar 5 '23	Mar 6 '23		867	870	0%
869	**Team A CH610 to CH640 (30m)**	**30 days**	**Mar 6 '23**	**Apr 5 '23**				**0%**
870	TTA establishment	1 day	Mar 6 '23	Mar 7 '23		868	871	0%
871	Hard material excavation and disposal	1 day	Mar 7 '23	Mar 8 '23		870	872	0%
872	Soil excavation , laying sheetpile and disposal	10 days	Mar 8 '23	Mar 18 '23		871	873	0%
873	Treatment of bedding	1 day	Mar 18 '23	Mar 19 '23		872	874	0%
874	Pipe laying D.I.	2 days	Mar 19 '23	Mar 21 '23		873	875	0%
875	Backfilling general fill and compaction	14 days	Mar 21 '23	Apr 4 '23		874	876	0%
876	Reinstatement	1 day	Apr 4 '23	Apr 5 '23		875	878	0%
877	**Team A CH640 to CH670 (30m)**	**30 days**	**Apr 5 '23**	**May 5 '23**				**0%**
878	TTA establishment	1 day	Apr 5 '23	Apr 6 '23		876	879	0%
879	Hard material excavation and disposal	1 day	Apr 6 '23	Apr 7 '23		878	880	0%
880	Soil excavation , laying sheetpile and disposal	10 days	Apr 7 '23	Apr 17 '23		879	881	0%
881	Treatment of bedding	1 day	Apr 17 '23	Apr 18 '23		880	882	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

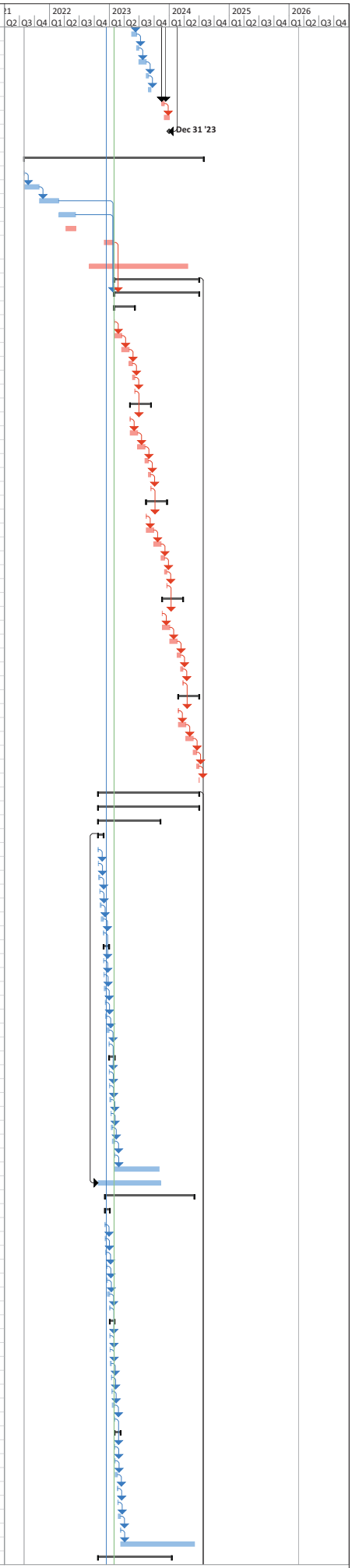
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
882	Pipe laying D.I.	2 days	Apr 18 '23	Apr 20 '23		881	883	0%
883	Backfilling general fill and compaction	14 days	Apr 20 '23	May 4 '23		882	884	0%
884	Reinstatement	1 day	May 4 '23	May 5 '23		883	886	0%
885	**Team A CH640 to CH670 (30m)**	**30 days**	**May 5 '23**	**Jun 4 '23**				**0%**
886	TTA establishment	1 day	May 5 '23	May 6 '23		884	887	0%
887	Hard material excavation and disposal	1 day	May 6 '23	May 7 '23		886	888	0%
888	Soil excavation , laying sheetpile and disposal	10 days	May 7 '23	May 17 '23		887	889	0%
889	Treatment of bedding	1 day	May 17 '23	May 18 '23		888	890	0%
890	Pipe laying D.I.	2 days	May 18 '23	May 20 '23		889	891	0%
891	Backfilling general fill and compaction	14 days	May 20 '23	Jun 3 '23		890	892	0%
892	Reinstatement	1 day	Jun 3 '23	Jun 4 '23		891	894	0%
893	**Team A CH640 to CH670 (30m)**	**30 days**	**Jun 4 '23**	**Jul 4 '23**				**0%**
894	TTA establishment	1 day	Jun 4 '23	Jun 5 '23		892	895	0%
895	Hard material excavation and disposal	1 day	Jun 5 '23	Jun 6 '23		894	896	0%
896	Soil excavation , laying sheetpile and disposal	10 days	Jun 6 '23	Jun 16 '23		895	897	0%
897	Treatment of bedding	1 day	Jun 16 '23	Jun 17 '23		896	898	0%
898	Pipe laying D.I.	2 days	Jun 17 '23	Jun 19 '23		897	899	0%
899	Backfilling general fill and compaction	14 days	Jun 19 '23	Jul 3 '23		898	900	0%
900	Reinstatement	1 day	Jul 3 '23	Jul 4 '23		899	901	0%
901	**Team A CH670 to CH850 (180m)**	120 days	Jul 4 '23	Nov 1 '23		900	902	0%
902	Pressure test, swabbing and CCTV	15 days	Nov 1 '23	Nov 16 '23		901		0%
903	**Team A1 : CH850 to CH1130 (280m)**	**287 days**	**Jan 1 '23**	**Oct 14 '23**			**998**	**0%**
904	**Team A1 CH1115 to CH1130 (15m)**	**42 days**	**Jan 1 '23**	**Feb 11 '23**				**0%**
905	TTA establishment	1 day	Jan 1 '23	Jan 1 '23			906	0%
906	Hard material excavation and disposal	1 day	Jan 2 '23	Jan 2 '23		905	907	0%
907	Soil excavation , laying sheetpile and disposal	14 days	Jan 3 '23	Jan 16 '23		906	908	0%
908	Treatment of bedding	2 days	Jan 17 '23	Jan 18 '23		907	909	0%
909	Pipe laying D.I.	7 days	Jan 19 '23	Jan 25 '23		908	910	0%
910	Backfilling general fill and compaction	14 days	Jan 26 '23	Feb 8 '23		909	911	0%
911	Reinstatement	3 days	Feb 9 '23	Feb 11 '23		910	912	0%
912	Team A1 CH850 to CH1115 (265m)	230 days	Feb 12 '23	Sep 29 '23		911	913	0%
913	Pressure test, swabbing and CCTV	15 days	Sep 30 '23	Oct 14 '23		912		0%
914	**Team B CH000 to CH370 (370m)**	**533.5 days**	**Feb 7 '22**	**Jul 25 '23**			**998**	**0%**
915	**Team B CH220 to CH245 (25m)**	**144.5 days**	**Feb 7 '22**	**Jul 1 '22**				**0%**
916	Pending for release of TTA from other Contractor	102 days	Feb 7 '22	May 19 '22			917	0%
917	TTA establishment	1 day	May 20 '22	May 20 '22		916	918	0%
918	Hard material excavation and disposal	1 day	May 21 '22	May 21 '22		917	919	0%
919	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	May 22 '22	May 27 '22		918	920	0%
920	Soil excavation , laying sheetpile and disposal	7 days	May 28 '22	Jun 3 '22		919	921	0%
921	Treatment of bedding	3 days	Jun 4 '22	Jun 6 '22		920	922	0%
922	Pipe laying D.I.	3 days	Jun 7 '22	Jun 9 '22		921	923	0%
923	Backfilling general fill and compaction	14 days	Jun 10 '22	Jun 23 '22		922	924	0%
924	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	Jun 24 '22	Jun 30 '22		923	925	0%
925	Reinstatement	1 day	Jun 30 '22	Jul 1 '22		924	927	0%
926	**Team B CH190 to CH220 (30m)**	**22 days**	**Jul 1 '22**	**Jul 23 '22**				**0%**
927	TTA establishment	1 day	Jul 1 '22	Jul 2 '22		925	928	0%
928	Hard material excavation and disposal	1 day	Jul 2 '22	Jul 3 '22		927	929	0%
929	Soil excavation , laying sheetpile and disposal	3 days	Jul 3 '22	Jul 6 '22		928	930	0%
930	Treatment of bedding	1 day	Jul 6 '22	Jul 7 '22		929	931	0%
931	Pipe laying D.I.	1 day	Jul 7 '22	Jul 8 '22		930	933,932	0%
932	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	Jul 8 '22	Jul 12 '22		931		0%
933	Backfilling general fill and compaction	14 days	Jul 8 '22	Jul 22 '22		931	934	0%
934	Reinstatement	1 day	Jul 22 '22	Jul 23 '22		933	936	0%
935	**Team B CH245 to CH285 (40m)**	**20 days**	**Jul 23 '22**	**Aug 12 '22**				**0%**
936	TTA establishment	1 day	Jul 23 '22	Jul 24 '22		934	937	0%
937	Hard material excavation and disposal	1 day	Jul 24 '22	Jul 25 '22		936	938	0%
938	Soil excavation , laying sheetpile and disposal	7 days	Jul 25 '22	Aug 1 '22		937	939	0%
939	Treatment of bedding	1 day	Aug 1 '22	Aug 2 '22		938	940	0%
940	Pipe laying D.I.	2 days	Aug 2 '22	Aug 4 '22		939	941	0%
941	Backfilling general fill and compaction	7 days	Aug 4 '22	Aug 11 '22		940	942	0%
942	Reinstatement	1 day	Aug 11 '22	Aug 12 '22		941	944	0%
943	**Team B CH285 to CH315 (30m)**	**42 days**	**Aug 12 '22**	**Sep 23 '22**				**0%**
944	TTA establishment	1 day	Aug 12 '22	Aug 13 '22		942	945	0%
945	Hard material excavation and disposal	1 day	Aug 13 '22	Aug 14 '22		944	946	0%
946	Soil excavation , laying sheetpile and disposal	5 days	Aug 14 '22	Aug 19 '22		945	947	0%
947	CE-068 _ Inclement Weather in August 2022	15 days	Aug 19 '22	Sep 3 '22		946	948	0%
948	Treatment of bedding	2 days	Sep 3 '22	Sep 5 '22		947	949	0%
949	Pipe laying D.I.	3 days	Sep 5 '22	Sep 8 '22		948	950	0%
950	Backfilling general fill and compaction	14 days	Sep 8 '22	Sep 22 '22		949	951	0%
951	Reinstatement	1 day	Sep 22 '22	Sep 23 '22		950	953	0%
952	**Team B CH315 to CH340 (25m)**	**25 days**	**Sep 23 '22**	**Oct 18 '22**				**0%**
953	TTA establishment	1 day	Sep 23 '22	Sep 24 '22		951	954	0%
954	Hard material excavation and disposal	1 day	Sep 24 '22	Sep 25 '22		953	955	0%
955	Soil excavation , laying sheetpile and disposal	4 days	Sep 25 '22	Sep 29 '22		954	956	0%
956	Treatment of bedding	1 day	Sep 29 '22	Sep 30 '22		955	957	0%
957	Pipe laying D.I.	3 days	Sep 30 '22	Oct 3 '22		956	958	0%
958	Backfilling general fill and compaction	14 days	Oct 3 '22	Oct 17 '22		957	959	0%
959	Reinstatement	1 day	Oct 17 '22	Oct 18 '22		958	961	0%
960	**Team B CH0 to CH150 (150m)**	**130 days**	**Oct 18 '22**	**Feb 25 '23**				**0%**
961	TTA establishment	1 day	Oct 18 '22	Oct 19 '22		959	962	0%
962	Hard material excavation and disposal	7 days	Oct 19 '22	Oct 26 '22		961	963	0%
963	Soil excavation , laying sheetpile and disposal	21 days	Oct 26 '22	Nov 16 '22		962	964	0%
964	Treatment of bedding	7 days	Nov 16 '22	Nov 23 '22		963	965	0%
965	Pending for confirmation of design alignment	70 days	Nov 23 '22	Feb 1 '23		964	966	0%
966	Pipe laying D.I.	7 days	Feb 1 '23	Feb 8 '23		965	967	0%
967	Backfilling gerneral fill and compaction	14 days	Feb 8 '23	Feb 22 '23		966	968	0%
968	Reinstatement	3 days	Feb 22 '23	Feb 25 '23		967	970	0%
969	**Team B CH150 to CH190 (40m)**	**37 days**	**Feb 25 '23**	**Apr 3 '23**				**0%**
970	TTA establishment	1 day	Feb 25 '23	Feb 26 '23		968	971	0%
971	Hard material excavation and disposal	2 days	Feb 26 '23	Feb 28 '23		970	972	0%
972	Soil excavation , laying sheetpile and disposal	14 days	Feb 28 '23	Mar 14 '23		971	973	0%
973	Treatment of bedding	2 days	Mar 14 '23	Mar 16 '23		972	974	0%
974	Pipe laying D.I.	3 days	Mar 16 '23	Mar 19 '23		973	975	0%
975	Backfilling general fill and compaction	14 days	Mar 19 '23	Apr 2 '23		974	976	0%
976	Reinstatement	1 day	Apr 2 '23	Apr 3 '23		975	978	0%
977	**Team B CH340 to CH370 (30m)**	**98 days**	**Apr 3 '23**	**Jul 10 '23**				**0%**
978	TTA establishment	7 days	Apr 3 '23	Apr 10 '23		976	979	0%
979	Hard material excavation and disposal	14 days	Apr 10 '23	Apr 24 '23		978	980	0%
980	Soil excavation , laying sheetpile and disposal	21 days	Apr 24 '23	May 15 '23		979	981	0%
981	Treatment of bedding	14 days	May 15 '23	May 29 '23		980	982	0%
982	Pipe laying D.I.	21 days	May 29 '23	Jun 19 '23		981	983	0%
983	Backfilling general fill and compaction	14 days	Jun 19 '23	Jul 3 '23		982	984	0%
984	Reinstatement	7 days	Jul 3 '23	Jul 10 '23		983	985	0%
985	Pressure test, swabbing and CCTV	15 days	Jul 10 '23	Jul 25 '23		984		0%
986	**Team C CH710 to CH970 (260m) -within the scope of Shueng Shui Hueng**	**399 days**	**Aug 8 '22**	**Sep 11 '23**		**791**	**998**	**0%**
987	CE-068 _ Inclement Weather in August 2022	15 days	Aug 8 '22	Aug 23 '22			988	0%
988	Pending agreement of Shueng Shui Hueng villagers	120 days	Aug 23 '22	Dec 21 '22		987	990,989SS+14	0%
989	XP application for alternative alignment of watermain	120 days	Sep 6 '22	Jan 4 '23		988SS+14 days	990	0%
990	TTA establishment	14 days	Jan 4 '23	Jan 18 '23		988,989	991	0%
991	Hard material excavation and disposal	28 days	Jan 18 '23	Feb 15 '23		990	992	0%
992	Soil excavation , laying sheetpile and disposal	90 days	Feb 15 '23	May 16 '23		991	993	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

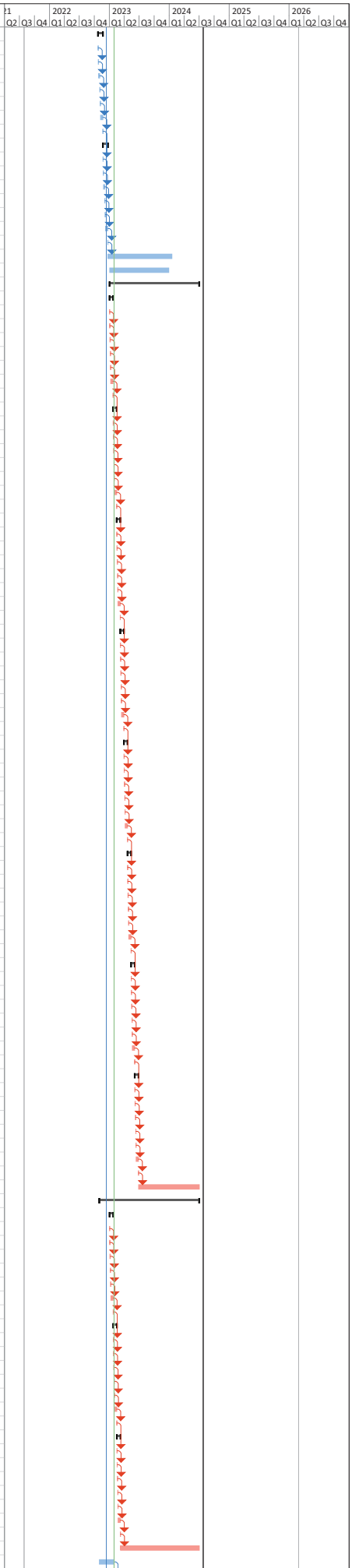
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
993	Treatment of bedding	30 days	May 16 '23	Jun 15 '23		992	994	0%
994	Pipe laying D.I.	14 days	Jun 15 '23	Jun 29 '23		993	995	0%
995	Backfilling general fill and compaction	45 days	Jun 29 '23	Aug 13 '23		994	996	0%
996	Reinstatement	14 days	Aug 13 '23	Aug 27 '23		995	997	0%
997	Pressure test, swabbing and CCTV	15 days	Aug 27 '23	Sep 11 '23		996		0%
998	Overall pressure testing	15 days	Nov 16 '23	Dec 1 '23		790,914,986,90	999	0%
999	Pipe connection and completion	30 days	Dec 1 '23	Dec 31 '23		998		0%
1000	Planned completion for section 4	0 days	Dec 31 '23	Dec 31 '23		597FF		0%
1001								
1002	**Section 5 - Water main laying works in part 4 of the Site**	**1096 days**	**Jul 30 '21**	**Jul 29 '24**				**0%**
1003	Access Date (part 4 of the Site)	1 day	Jul 30 '21	Jul 30 '21			1004	0%
1004	Initial survey (utility survey, condition survey, initial photo)	90 days	Jul 31 '21	Oct 28 '21		1003	1005	0%
1005	Application and approval of XP and TTA	116 days	Nov 1 '21	Feb 24 '22		1004	1011	0%
1006	Procurement and Delivery of pipes, fittings and related materials	100 days	Feb 28 '22	Jun 7 '22			1011	0%
1007	Submission and acceptance of method statement and material	60 days	Apr 11 '22	Jun 9 '22				0%
1008	Submission and acceptance of method statement and temp work design for trenchless works	60 days	Dec 1 '22	Jan 29 '23			1011	0%
1009	Excavation of Inspection Pit	600 days	Sep 1 '22	Apr 22 '24				0%
1010	**Mainlaying by trenchless method (RW04)**	**519 days**	**Jan 30 '23**	**Jul 1 '24**			**1222**	**0%**
1011	**RW04 : DN450 DI pipe (trenchless)**	**519 days**	**Jan 30 '23**	**Jul 1 '24**	**60**	**1005,1006,1008**		**0%**
1012	**Wo Tai Street (70m) - TBM Method**	**127 days**	**Jan 30 '23**	**Jun 5 '23**				**0%**
1013	TTA implementation	1 day	Jan 30 '23	Jan 30 '23			1014	0%
1014	Contruction of jacking pit and receiving pit	45 days	Jan 31 '23	Mar 16 '23		1013	1015	0%
1015	Trenchless works and pipe laying	45 days	Mar 17 '23	Apr 30 '23		1014	1016	0%
1016	Manhole / Chamber construction	21 days	May 1 '23	May 21 '23		1015	1017	0%
1017	Backfilling and compaction	14 days	May 22 '23	Jun 4 '23		1016	1018	0%
1018	Reinstatement	1 day	Jun 5 '23	Jun 5 '23		1017	1020FS-30 day	0%
1019	**Ma Sik Road (70m) - TBM Method**	**128 days**	**May 7 '23**	**Sep 11 '23**				**0%**
1020	TTA implementation	1 day	May 7 '23	May 7 '23		1018FS-30 days	1021	0%
1021	Contruction of jacking pit and receiving pit	45 days	May 8 '23	Jun 21 '23		1020	1022	0%
1022	Trenchless works and pipe laying	45 days	Jun 22 '23	Aug 5 '23		1021	1023	0%
1023	Manhole / Chamber construction	21 days	Aug 6 '23	Aug 26 '23		1022	1024	0%
1024	Backfilling and compaction	14 days	Aug 27 '23	Sep 9 '23		1023	1025	0%
1025	Reinstatement	2 days	Sep 10 '23	Sep 11 '23		1024	1027FS-30 day	0%
1026	**Luen Chit Street (70m) - TBM Method**	**128 days**	**Aug 13 '23**	**Dec 18 '23**				**0%**
1027	TTA implementation	1 day	Aug 13 '23	Aug 13 '23		1025FS-30 days	1028	0%
1028	Contruction of jacking pit and receiving pit	45 days	Aug 14 '23	Sep 27 '23		1027	1029	0%
1029	Trenchless works and pipe laying	45 days	Sep 28 '23	Nov 11 '23		1028	1030	0%
1030	Manhole / Chamber construction	21 days	Nov 12 '23	Dec 2 '23		1029	1031	0%
1031	Backfilling and compaction	14 days	Dec 3 '23	Dec 16 '23		1030	1032	0%
1032	Reinstatement	2 days	Dec 17 '23	Dec 18 '23		1031	1034FS-30 day	0%
1033	**Luen Sum Road (70m) - TBM Method**	**128 days**	**Nov 19 '23**	**Mar 25 '24**				**0%**
1034	TTA implementation	1 day	Nov 19 '23	Nov 19 '23		1032FS-30 days	1035	0%
1035	Contruction of jacking pit and receiving pit	45 days	Nov 20 '23	Jan 3 '24		1034	1036	0%
1036	Trenchless works and pipe laying	45 days	Jan 4 '24	Feb 17 '24		1035	1037	0%
1037	Manhole / Chamber construction	21 days	Feb 18 '24	Mar 9 '24		1036	1038	0%
1038	Backfilling and compaction	14 days	Mar 10 '24	Mar 23 '24		1037	1039	0%
1039	Reinstatement	2 days	Mar 24 '24	Mar 25 '24		1038	1041FS-30 day	0%
1040	**Fanling Lau Road (70m) - TBM Method**	**128 days**	**Feb 25 '24**	**Jul 1 '24**				**0%**
1041	TTA implementation	1 day	Feb 25 '24	Feb 25 '24		1039FS-30 days	1042	0%
1042	Contruction of jacking pit and receiving pit	45 days	Feb 26 '24	Apr 10 '24		1041	1043	0%
1043	Trenchless works and pipe laying	45 days	Apr 11 '24	May 25 '24		1042	1044	0%
1044	Manhole / Chamber construction	21 days	May 26 '24	Jun 15 '24		1043	1045	0%
1045	Backfilling and compaction	14 days	Jun 16 '24	Jun 29 '24		1044	1046	0%
1046	Reinstatement	2 days	Jun 30 '24	Jul 1 '24		1045		0%
1047	**Mainlaying by open trench method (RW04)**	**617 days**	**Oct 24 '22**	**Jul 1 '24**			**1222**	**0%**
1048	**RW04 : DN450 DI Pipe**	**617 days**	**Oct 24 '22**	**Jul 1 '24**				**0%**
1049	Ma Sik Road CH1400 to CH1700 (300m) (XP ID: 1301142, 1301146, 1301149)	381 days	Oct 24 '22	Nov 8 '23				0%
1050	CH1420 to CH1450 (30m)	34 days	Oct 24 '22	Nov 26 '22			1075SS	0%
1051	TTA establishment	1 day	Oct 24 '22	Oct 24 '22			1052	0%
1052	Hard material excavation and disposal	2 days	Oct 25 '22	Oct 26 '22		1051	1053	0%
1053	Soil excavation , laying sheetpile and disposal	7 days	Oct 27 '22	Nov 2 '22		1052	1054	0%
1054	Treatment of bedding	2 days	Nov 3 '22	Nov 4 '22		1053	1055	0%
1055	Pipe laying D.I.	7 days	Nov 5 '22	Nov 11 '22		1054	1056	0%
1056	Backfilling general fill and compaction	14 days	Nov 12 '22	Nov 25 '22		1055	1057	0%
1057	Reinstatement	1 day	Nov 26 '22	Nov 26 '22		1056	1059	0%
1058	CH1450 to CH1480 (30m)	34 days	Nov 27 '22	Dec 30 '22				0%
1059	TTA establishment	1 day	Nov 27 '22	Nov 27 '22		1057	1060	0%
1060	Hard material excavation and disposal	2 days	Nov 28 '22	Nov 29 '22		1059	1061	0%
1061	Soil excavation , laying sheetpile and disposal	7 days	Nov 30 '22	Dec 6 '22		1060	1062	0%
1062	Treatment of bedding	2 days	Dec 7 '22	Dec 8 '22		1061	1063	0%
1063	Pipe laying D.I.	7 days	Dec 9 '22	Dec 15 '22		1062	1064	0%
1064	Backfilling general fill and compaction	14 days	Dec 16 '22	Dec 29 '22		1063	1065	0%
1065	Reinstatement	1 day	Dec 30 '22	Dec 30 '22		1064	1067	0%
1066	CH930 to CH960 (30m)	34 days	Dec 31 '22	Feb 2 '23				0%
1067	TTA establishment	1 day	Dec 31 '22	Dec 31 '22		1065	1068	0%
1068	Hard material excavation and disposal	2 days	Jan 1 '23	Jan 2 '23		1067	1069	0%
1069	Soil excavation , laying sheetpile and disposal	7 days	Jan 3 '23	Jan 9 '23		1068	1070	0%
1070	Treatment of bedding	2 days	Jan 10 '23	Jan 11 '23		1069	1071	0%
1071	Pipe laying D.I.	7 days	Jan 12 '23	Jan 18 '23		1070	1072	0%
1072	Backfilling general fill and compaction	14 days	Jan 19 '23	Feb 1 '23		1071	1073	0%
1073	Reinstatement	1 day	Feb 2 '23	Feb 2 '23		1072	1074	0%
1074	CH1490 to 1700 (210m)	270 days	Feb 3 '23	Oct 30 '23	60	1073		0%
1075	Construction of valve chambers	381 days	Oct 24 '22	Nov 8 '23		1050SS		0%
1076	Ma Sik Road CH1700 to CH2180 (480m) (XP ID: 1301142, 1301146, 1301149)	546 days	Dec 5 '22	Jun 2 '24				0%
1077	CH1920 to CH1950 (30m)	30 days	Dec 5 '22	Jan 3 '23				0%
1078	TTA establishment	1 day	Dec 5 '22	Dec 5 '22			1079	0%
1079	Hard material excavation and disposal	2 days	Dec 6 '22	Dec 7 '22		1078	1080	0%
1080	Soil excavation , laying sheetpile and disposal	7 days	Dec 8 '22	Dec 14 '22		1079	1081	0%
1081	Treatment of bedding	2 days	Dec 15 '22	Dec 16 '22		1080	1082	0%
1082	Pipe laying D.I.	3 days	Dec 17 '22	Dec 19 '22		1081	1083	0%
1083	Backfilling general fill and compaction	14 days	Dec 20 '22	Jan 2 '23		1082	1084	0%
1084	Reinstatement	1 day	Jan 3 '23	Jan 3 '23		1083	1086	0%
1085	CH1950 to CH1990 (40m)	29 days	Jan 4 '23	Feb 1 '23				0%
1086	TTA establishment	1 day	Jan 4 '23	Jan 4 '23		1084	1087	0%
1087	Hard material excavation and disposal	1 day	Jan 5 '23	Jan 5 '23		1086	1088	0%
1088	Soil excavation , laying sheetpile and disposal	7 days	Jan 6 '23	Jan 12 '23		1087	1089	0%
1089	Treatment of bedding	2 days	Jan 13 '23	Jan 14 '23		1088	1090	0%
1090	Pipe laying D.I.	3 days	Jan 15 '23	Jan 17 '23		1089	1091	0%
1091	Backfilling general fill and compaction	14 days	Jan 18 '23	Jan 31 '23		1090	1092	0%
1092	Reinstatement	1 day	Feb 1 '23	Feb 1 '23		1091	1094	0%
1093	CH1990 to CH2020 (30m)	37 days	Feb 2 '23	Mar 10 '23				0%
1094	TTA establishment	1 day	Feb 2 '23	Feb 2 '23		1092	1095	0%
1095	Hard material excavation and disposal	2 days	Feb 3 '23	Feb 4 '23		1094	1096	0%
1096	Soil excavation , laying sheetpile and disposal	14 days	Feb 5 '23	Feb 18 '23		1095	1097	0%
1097	Treatment of bedding	2 days	Feb 19 '23	Feb 20 '23		1096	1098	0%
1098	Pipe laying D.I.	3 days	Feb 21 '23	Feb 23 '23		1097	1099	0%
1099	Backfilling general fill and compaction	14 days	Feb 24 '23	Mar 9 '23		1098	1100	0%
1100	Reinstatement	1 day	Mar 10 '23	Mar 10 '23		1099	1101	0%
1101	CH1790 to 2180 (390m)	450 days	Mar 11 '23	Jun 2 '24	60	1100		0%
1102	Ma Sik Road CH2180 to CH2400 (220m) (XP ID: 1301142, 1301146, 1301149)	450 days	Oct 24 '22	Jan 16 '24				0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress	
Split	Inactive Milestone	Manual Summary	Deadline		
Milestone	Inactive Summary	Start-only	Critical		
Summary	Manual Task	Finish-only	Critical Split		
Project Summary	Duration-only	External Tasks	Progress		

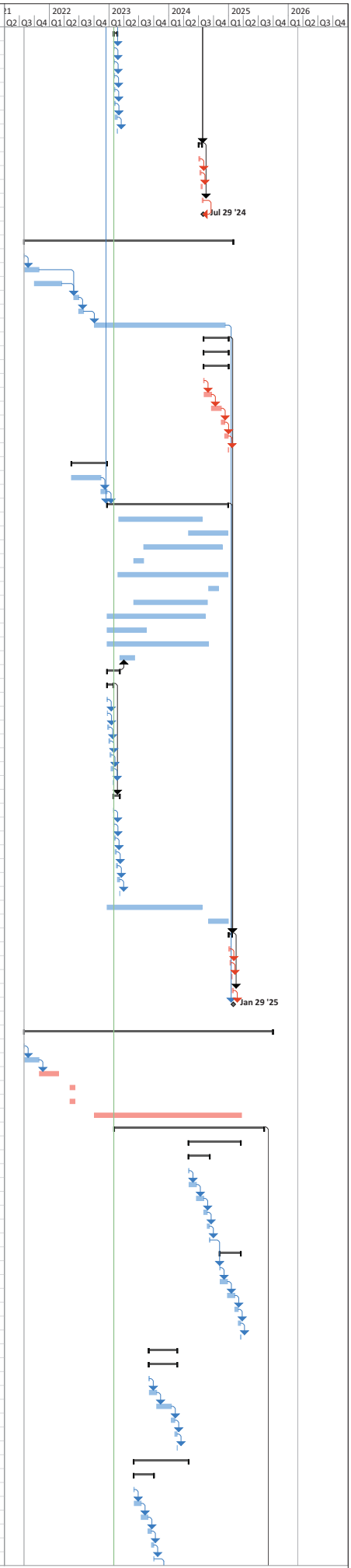
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1103	CH2210 to CH2240 (30m)	30 days	Oct 24 '22	Nov 22 '22				0%
1104	TTA establishment	1 day	Oct 24 '22	Oct 24 '22			1105	0%
1105	Hard material excavation and disposal	2 days	Oct 25 '22	Oct 26 '22		1104	1106	0%
1106	Soil excavation , laying sheetpile and disposal	7 days	Oct 27 '22	Nov 2 '22		1105	1107	0%
1107	Treatment of bedding	2 days	Nov 3 '22	Nov 4 '22		1106	1108	0%
1108	Pipe laying D.I.	3 days	Nov 5 '22	Nov 7 '22		1107	1109	0%
1109	Backfilling general fill and compaction	14 days	Nov 8 '22	Nov 21 '22		1108	1110	0%
1110	Reinstatement	1 day	Nov 22 '22	Nov 22 '22		1109	1112	0%
1111	CH2240 to CH2270 (30m)	30 days	Nov 23 '22	Dec 22 '22				0%
1112	TTA establishment	1 day	Nov 23 '22	Nov 23 '22		1110	1113	0%
1113	Hard material excavation and disposal	2 days	Nov 24 '22	Nov 25 '22		1112	1114	0%
1114	Soil excavation , laying sheetpile and disposal	7 days	Nov 26 '22	Dec 2 '22		1113	1115	0%
1115	Treatment of bedding	2 days	Dec 3 '22	Dec 4 '22		1114	1116	0%
1116	Pipe laying D.I.	3 days	Dec 5 '22	Dec 7 '22		1115	1117	0%
1117	Backfilling general fill and compaction	14 days	Dec 8 '22	Dec 21 '22		1116	1118	0%
1118	Reinstatement	1 day	Dec 22 '22	Dec 22 '22		1117	1119	0%
1119	CH2270 to CH2400 (130m)	390 days	Dec 23 '22	Jan 16 '24	60	1118		0%
1120	Ma Sik Road CH2400 to CH2600 (200m) (XP ID: 1301142, 1301146, 1301149)	360 days	Jan 3 '23	Dec 28 '23				0%
1121	Tin Ping Road (1377m) (XP ID: 1309070, 1310475)	547 days	Jan 2 '23	Jul 1 '24				0%
1122	CH450 to CH480 (30m)	22 days	Jan 2 '23	Jan 23 '23				0%
1123	TTA establishment	1 day	Jan 2 '23	Jan 2 '23			1124	0%
1124	Hard material excavation and disposal	1 day	Jan 3 '23	Jan 3 '23		1123	1125	0%
1125	Soil excavation , laying sheetpile and disposal	3 days	Jan 4 '23	Jan 6 '23		1124	1126	0%
1126	Treatment of bedding	1 day	Jan 7 '23	Jan 7 '23		1125	1127	0%
1127	Pipe laying D.I.	1 day	Jan 8 '23	Jan 8 '23		1126	1128	0%
1128	Backfilling general fill and compaction	14 days	Jan 9 '23	Jan 22 '23		1127	1129	0%
1129	Reinstatement	1 day	Jan 23 '23	Jan 23 '23		1128	1131	0%
1130	CH480 to CH510 (30m)	22 days	Jan 24 '23	Feb 14 '23				0%
1131	TTA establishment	1 day	Jan 24 '23	Jan 24 '23		1129	1132	0%
1132	Hard material excavation and disposal	1 day	Jan 25 '23	Jan 25 '23		1131	1133	0%
1133	Soil excavation , laying sheetpile and disposal	3 days	Jan 26 '23	Jan 28 '23		1132	1134	0%
1134	Treatment of bedding	1 day	Jan 29 '23	Jan 29 '23		1133	1135	0%
1135	Pipe laying D.I.	1 day	Jan 30 '23	Jan 30 '23		1134	1136	0%
1136	Backfilling general fill and compaction	14 days	Jan 31 '23	Feb 13 '23		1135	1137	0%
1137	Reinstatement	1 day	Feb 14 '23	Feb 14 '23		1136	1139	0%
1138	CH510 to CH540 (30m)	22 days	Feb 15 '23	Mar 8 '23				0%
1139	TTA establishment	1 day	Feb 15 '23	Feb 15 '23		1137	1140	0%
1140	Hard material excavation and disposal	1 day	Feb 16 '23	Feb 16 '23		1139	1141	0%
1141	Soil excavation , laying sheetpile and disposal	3 days	Feb 17 '23	Feb 19 '23		1140	1142	0%
1142	Treatment of bedding	1 day	Feb 20 '23	Feb 20 '23		1141	1143	0%
1143	Pipe laying D.I.	1 day	Feb 21 '23	Feb 21 '23		1142	1144	0%
1144	Backfilling general fill and compaction	14 days	Feb 22 '23	Mar 7 '23		1143	1145	0%
1145	Reinstatement	1 day	Mar 8 '23	Mar 8 '23		1144	1147	0%
1146	CH540 to CH570 (30m)	22 days	Mar 9 '23	Mar 30 '23				0%
1147	TTA establishment	1 day	Mar 9 '23	Mar 9 '23		1145	1148	0%
1148	Hard material excavation and disposal	1 day	Mar 10 '23	Mar 10 '23		1147	1149	0%
1149	Soil excavation , laying sheetpile and disposal	3 days	Mar 11 '23	Mar 13 '23		1148	1150	0%
1150	Treatment of bedding	1 day	Mar 14 '23	Mar 14 '23		1149	1151	0%
1151	Pipe laying D.I.	1 day	Mar 15 '23	Mar 15 '23		1150	1152	0%
1152	Backfilling general fill and compaction	14 days	Mar 16 '23	Mar 29 '23		1151	1153	0%
1153	Reinstatement	1 day	Mar 30 '23	Mar 30 '23		1152	1155	0%
1154	CH570 to CH610 (30m)	22 days	Mar 31 '23	Apr 21 '23				0%
1155	TTA establishment	1 day	Mar 31 '23	Mar 31 '23		1153	1156	0%
1156	Hard material excavation and disposal	1 day	Apr 1 '23	Apr 1 '23		1155	1157	0%
1157	Soil excavation , laying sheetpile and disposal	3 days	Apr 2 '23	Apr 4 '23		1156	1158	0%
1158	Treatment of bedding	1 day	Apr 5 '23	Apr 5 '23		1157	1159	0%
1159	Pipe laying D.I.	1 day	Apr 6 '23	Apr 6 '23		1158	1160	0%
1160	Backfilling general fill and compaction	14 days	Apr 7 '23	Apr 20 '23		1159	1161	0%
1161	Reinstatement	1 day	Apr 21 '23	Apr 21 '23		1160	1163	0%
1162	CH610 to CH640 (30m)	22 days	Apr 22 '23	May 13 '23				0%
1163	TTA establishment	1 day	Apr 22 '23	Apr 22 '23		1161	1164	0%
1164	Hard material excavation and disposal	1 day	Apr 23 '23	Apr 23 '23		1163	1165	0%
1165	Soil excavation , laying sheetpile and disposal	3 days	Apr 24 '23	Apr 26 '23		1164	1166	0%
1166	Treatment of bedding	1 day	Apr 27 '23	Apr 27 '23		1165	1167	0%
1167	Pipe laying D.I.	1 day	Apr 28 '23	Apr 28 '23		1166	1168	0%
1168	Backfilling general fill and compaction	14 days	Apr 29 '23	May 12 '23		1167	1169	0%
1169	Reinstatement	1 day	May 13 '23	May 13 '23		1168	1171	0%
1170	CH640 to CH670 (30m)	22 days	May 14 '23	Jun 4 '23				0%
1171	TTA establishment	1 day	May 14 '23	May 14 '23		1169	1172	0%
1172	Hard material excavation and disposal	1 day	May 15 '23	May 15 '23		1171	1173	0%
1173	Soil excavation , laying sheetpile and disposal	3 days	May 16 '23	May 18 '23		1172	1174	0%
1174	Treatment of bedding	1 day	May 19 '23	May 19 '23		1173	1175	0%
1175	Pipe laying D.I.	1 day	May 20 '23	May 20 '23		1174	1176	0%
1176	Backfilling general fill and compaction	14 days	May 21 '23	Jun 3 '23		1175	1177	0%
1177	Reinstatement	1 day	Jun 4 '23	Jun 4 '23		1176	1179	0%
1178	CH670 to CH710 (30m)	23 days	Jun 5 '23	Jun 27 '23				0%
1179	TTA establishment	1 day	Jun 5 '23	Jun 5 '23		1177	1180	0%
1180	Hard material excavation and disposal	2 days	Jun 6 '23	Jun 7 '23		1179	1181	0%
1181	Soil excavation , laying sheetpile and disposal	3 days	Jun 8 '23	Jun 10 '23		1180	1182	0%
1182	Treatment of bedding	1 day	Jun 11 '23	Jun 11 '23		1181	1183	0%
1183	Pipe laying D.I.	1 day	Jun 12 '23	Jun 12 '23		1182	1184	0%
1184	Backfilling general fill and compaction	14 days	Jun 13 '23	Jun 26 '23		1183	1185	0%
1185	Reinstatement	1 day	Jun 27 '23	Jun 27 '23		1184	1186	0%
1186	Remaining Section of Tin Ping Road (1287m)	370 days	Jun 28 '23	Jul 1 '24		1185		0%
1187	Sha Tau Kok Road (869m)	609 days	Nov 1 '22	Jul 1 '24				0%
1188	CH3580 to CH3550 (30m)	23 days	Jan 2 '23	Jan 24 '23				0%
1189	TTA establishment	1 day	Jan 2 '23	Jan 2 '23			1190	0%
1190	Hard material excavation and disposal	1 day	Jan 3 '23	Jan 3 '23		1189	1191	0%
1191	Soil excavation , laying sheetpile and disposal	3 days	Jan 4 '23	Jan 6 '23		1190	1192	0%
1192	Treatment of bedding	1 day	Jan 7 '23	Jan 7 '23		1191	1193	0%
1193	Pipe laying D.I.	2 days	Jan 8 '23	Jan 9 '23		1192	1194	0%
1194	Backfilling general fill and compaction	14 days	Jan 10 '23	Jan 23 '23		1193	1195	0%
1195	Reinstatement	1 day	Jan 24 '23	Jan 24 '23		1194	1197	0%
1196	CH3550 to CH3520 (30m)	22 days	Jan 25 '23	Feb 15 '23				0%
1197	TTA establishment	1 day	Jan 25 '23	Jan 25 '23		1195	1198	0%
1198	Hard material excavation and disposal	1 day	Jan 26 '23	Jan 26 '23		1197	1199	0%
1199	Soil excavation , laying sheetpile and disposal	3 days	Jan 27 '23	Jan 29 '23		1198	1200	0%
1200	Treatment of bedding	1 day	Jan 30 '23	Jan 30 '23		1199	1201	0%
1201	Pipe laying D.I.	1 day	Jan 31 '23	Jan 31 '23		1200	1202	0%
1202	Backfilling general fill and compaction	14 days	Feb 1 '23	Feb 14 '23		1201	1203	0%
1203	Reinstatement	1 day	Feb 15 '23	Feb 15 '23		1202	1205	0%
1204	CH3520 to CH3490 (30m)	22 days	Feb 16 '23	Mar 9 '23				0%
1205	TTA establishment	1 day	Feb 16 '23	Feb 16 '23		1203	1206	0%
1206	Hard material excavation and disposal	1 day	Feb 17 '23	Feb 17 '23		1205	1207	0%
1207	Soil excavation , laying sheetpile and disposal	3 days	Feb 18 '23	Feb 20 '23		1206	1208	0%
1208	Treatment of bedding	1 day	Feb 21 '23	Feb 21 '23		1207	1209	0%
1209	Pipe laying D.I.	1 day	Feb 22 '23	Feb 22 '23		1208	1210	0%
1210	Backfilling general fill and compaction	14 days	Feb 23 '23	Mar 8 '23		1209	1211	0%
1211	Reinstatement	1 day	Mar 9 '23	Mar 9 '23		1210	1212	0%
1212	Remaining Section of Sha Tau Kok Road	480 days	Mar 10 '23	Jul 1 '24		1211		0%
1213	Interface coordination with Contract ND/2019/04	90 days	Nov 1 '22	Jan 29 '23			1215	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

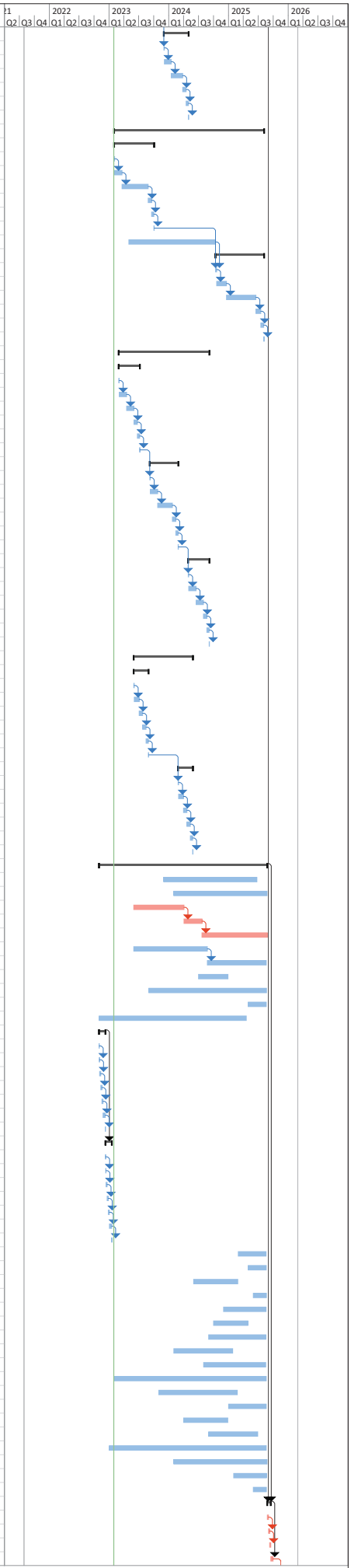
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1214	CH2600 to CH2800 (200m)	22 days	Jan 30 '23	Feb 20 '23				0%
1215	TTA establishment	1 day	Jan 30 '23	Jan 30 '23		1213	1216	0%
1216	Hard material excavation and disposal	1 day	Jan 31 '23	Jan 31 '23		1215	1217	0%
1217	Soil excavation , laying sheetpile and disposal	3 days	Feb 1 '23	Feb 3 '23		1216	1218	0%
1218	Treatment of bedding	1 day	Feb 4 '23	Feb 4 '23		1217	1219	0%
1219	Pipe laying D.I.	1 day	Feb 5 '23	Feb 5 '23		1218	1220	0%
1220	Backfilling general fill and compaction	14 days	Feb 6 '23	Feb 19 '23		1219	1221	0%
1221	Reinstatement	1 day	Feb 20 '23	Feb 20 '23		1220		0%
1222	**Overall testing**	**21 days**	**Jul 2 '24**	**Jul 22 '24**		**1010,1047**	**1226**	**0%**
1223	Swabbing	7 days	Jul 2 '24	Jul 8 '24			1224	0%
1224	CCTV	7 days	Jul 9 '24	Jul 15 '24		1223	1225	0%
1225	Hydrostatic pressure test	7 days	Jul 16 '24	Jul 22 '24		1224		0%
1226	Pipe connection and completion	7 days	Jul 23 '24	Jul 29 '24		1222	1227FF	0%
1227	Planned completion for section 5	0 days	Jul 29 '24	Jul 29 '24		1226FF		0%
1228								
1229	**Section 6 - Water main laying works in part 5 of the Site**	**1280 days**	**Jul 30 '21**	**Jan 29 '25**				**0%**
1230	Access Date (part 5 of the Site)	1 day	Jul 30 '21	Jul 30 '21			1231	0%
1231	Initial survey (utility survey, condition survey, initial photo)	90 days	Jul 31 '21	Oct 28 '21		1230	1233	0%
1232	Application and approval of XP and TTA	167 days	Oct 1 '21	Mar 16 '22			1233	0%
1233	Procurement and Delivery of pipes, fittings and related materials	30 days	May 30 '22	Jun 28 '22		1231,1232	1234	0%
1234	Submission and acceptance of method statement and material	30 days	Jun 29 '22	Jul 28 '22		1233	1235	0%
1235	Excavation of Inspection Pit	800 days	Oct 3 '22	Dec 10 '24		1234	1284	0%
1236	**Mainlaying by trenchless method**	**154 days**	**Aug 1 '24**	**Jan 1 '25**			**1279**	**0%**
1237	**RW06 : DN300 DI pipe (trenchless)**	**154 days**	**Aug 1 '24**	**Jan 1 '25**				**0%**
1238	**Jocky Club Road (100m) - TBM Method**	**154 days**	**Aug 1 '24**	**Jan 1 '25**				**0%**
1239	TTA implementation	3 days	Aug 1 '24	Aug 3 '24			1240	0%
1240	Contruction of jacking pit and receiving pit	45 days	Aug 4 '24	Sep 17 '24		1239	1241	0%
1241	Trenchless works and pipe laying	60 days	Sep 18 '24	Nov 16 '24		1240	1242	0%
1242	Manhole / Chamber construction	21 days	Nov 17 '24	Dec 7 '24		1241	1243	0%
1243	Backfilling and compaction	21 days	Dec 8 '24	Dec 28 '24		1242	1244	0%
1244	Reinstatement	4 days	Dec 29 '24	Jan 1 '25		1243		0%
1245	**Contractor's Design and Construction of distribution mains**	**218 days**	**May 16 '22**	**Dec 19 '22**				**0%**
1246	Submission and acceptance of detailed design proposal	180 days	May 16 '22	Nov 11 '22			1247	0%
1247	Site investigation and liaison with relevant parties	38 days	Nov 12 '22	Dec 19 '22		1246	1248	0%
1248	**Mainlaying by open trench method (XP ID: 1301135, 1301136)**	**741 days**	**Dec 20 '22**	**Dec 29 '24**		**1247,61**	**1279**	**0%**
1249	RW41 (DN150) - Sheung Shui Tung Hing Road (288m)	510 days	Mar 1 '23	Jul 22 '24				0%
1250	RW42 (DN150) - No name road in Sheung Shui Heung (210m)	240 days	May 1 '24	Dec 26 '24				0%
1251	RW71 (DN150) - Jockey Club Road (308m)	480 days	Aug 1 '23	Nov 22 '24				0%
1252	RW44 (DN150) - Jockey Club Road (38m)	60 days	Jun 1 '23	Jul 30 '23				0%
1253	RW11 (DN150) - Fung Nam Road (480m)	673 days	Feb 24 '23	Dec 27 '24	30			0%
1254	RW46 (DN150) - Fung Nam Lane (38m)	60 days	Sep 1 '24	Oct 30 '24				0%
1255	RW06 (DN300) - Lung Sum Avenue (290m)	450 days	Jun 1 '23	Aug 23 '24				0%
1256	RW05 (DN400) - Jockey Club Road (377m)	600 days	Dec 20 '22	Aug 10 '24	15			0%
1257	RW15 (DN150) - Sun Fung Road / Sun Shing Road (390m)	240 days	Dec 20 '22	Aug 16 '23				0%
1258	RW18 (DN150) - San Hong Street (464m)	620 days	Dec 20 '22	Aug 30 '24				0%
1259	RW20 (DN150) - Sun Wing Street (52m)	90 days	Mar 8 '23	Jun 5 '23		1260		0%
1260	**RW45 (DN150) - Tsun Fu Street (82m)**	**78 days**	**Dec 20 '22**	**Mar 7 '23**			**1259**	**0%**
1261	**CH000 - CH040**	**39 days**	**Dec 20 '22**	**Jan 27 '23**			**1269**	**0%**
1262	TTA establishment	1 day	Dec 20 '22	Dec 20 '22			1263	0%
1263	Hard material excavation and disposal	2 days	Dec 21 '22	Dec 22 '22		1262	1264	0%
1264	Soil excavation , laying sheetpile and disposal	7 days	Dec 23 '22	Dec 29 '22		1263	1265	0%
1265	Treatment of bedding	7 days	Dec 30 '22	Jan 5 '23		1264	1266	0%
1266	Pipe laying D.I.	7 days	Jan 6 '23	Jan 12 '23		1265	1267	0%
1267	Backfilling general fill and compaction	14 days	Jan 13 '23	Jan 26 '23		1266	1268	0%
1268	Reinstatement	1 day	Jan 27 '23	Jan 27 '23		1267		0%
1269	**CH040 - CH082**	**39 days**	**Jan 28 '23**	**Mar 7 '23**		**1261**		**0%**
1270	TTA establishment	1 day	Jan 28 '23	Jan 28 '23			1271	0%
1271	Hard material excavation and disposal	2 days	Jan 29 '23	Jan 30 '23		1270	1272	0%
1272	Soil excavation , laying sheetpile and disposal	7 days	Jan 31 '23	Feb 6 '23		1271	1273	0%
1273	Treatment of bedding	7 days	Feb 7 '23	Feb 13 '23		1272	1274	0%
1274	Pipe laying D.I.	7 days	Feb 14 '23	Feb 20 '23		1273	1275	0%
1275	Backfilling general fill and compaction	14 days	Feb 21 '23	Mar 6 '23		1274	1276	0%
1276	Reinstatement	1 day	Mar 7 '23	Mar 7 '23		1275		0%
1277	RW14 (DN150) - Fu Hing Street (372m)	580 days	Dec 20 '22	Jul 21 '24				0%
1278	RW21 (DN150) - Sun Fat Street (105m)	120 days	Sep 1 '24	Dec 29 '24				0%
1279	Overall testing	21 days	Jan 2 '25	Jan 22 '25		1236,1248	1283	0%
1280	Swabbing	7 days	Jan 2 '25	Jan 8 '25			1281	0%
1281	CCTV	7 days	Jan 9 '25	Jan 15 '25		1280	1282	0%
1282	Hydrostatic pressure test	7 days	Jan 16 '25	Jan 22 '25		1281		0%
1283	Pipe connection and completion	7 days	Jan 23 '25	Jan 29 '25		1279	1284	0%
1284	Planned completion for section 6	0 days	Jan 29 '25	Jan 29 '25		1283,1235		0%
1285								
1286	**Section 7 - Water main laying works in part 6 of the Site**	**1523 days**	**Jul 30 '21**	**Sep 29 '25**				**0%**
1287	Access Date (part 6 of the Site)	1 day	Jul 30 '21	Jul 30 '21			1288	0%
1288	Initial survey (utility survey, condition survey, initial photo)	90 days	Jul 31 '21	Oct 28 '21		1287	1289	0%
1289	Application and approval of XP and TTA	117 days	Nov 1 '21	Feb 25 '22		1288		0%
1290	Procurement and Delivery of pipes, fittings and related materials	30 days	May 7 '22	Jun 5 '22				0%
1291	Submission and acceptance of method statement and material	30 days	May 7 '22	Jun 5 '22				0%
1292	Excavation of Inspection Pit	900 days	Oct 3 '22	Mar 20 '25				0%
1293	**Mainlaying by trenchless method**	**918 days**	**Feb 1 '23**	**Aug 6 '25**			**1431**	**0%**
1294	**RW05 : DN400 DI pipe (trenchless)**	**320 days**	**May 1 '24**	**Mar 16 '25**				**0%**
1295	**Fu Hing Street (75m) - TBM Method**	**130 days**	**May 1 '24**	**Sep 7 '24**				**0%**
1296	TTA implementation	3 days	May 1 '24	May 3 '24			1297	0%
1297	Contruction of jacking pit and receiving pit	45 days	May 4 '24	Jun 17 '24		1296	1298	0%
1298	Trenchless works and pipe laying	45 days	Jun 18 '24	Aug 1 '24		1297	1299	0%
1299	Manhole / Chamber construction	21 days	Aug 2 '24	Aug 22 '24		1298	1300	0%
1300	Backfilling and compaction	14 days	Aug 23 '24	Sep 5 '24		1299	1301	0%
1301	Reinstatement	2 days	Sep 6 '24	Sep 7 '24		1300	1303FS+60 day	0%
1302	**Luen Sum Road (70m) - TBM Method**	**130 days**	**Nov 7 '24**	**Mar 16 '25**				**0%**
1303	TTA implementation	3 days	Nov 7 '24	Nov 9 '24		1301FS+60 days	1304	0%
1304	Contruction of jacking pit and receiving pit	45 days	Nov 10 '24	Dec 24 '24		1303	1305	0%
1305	Trenchless works and pipe laying	45 days	Dec 25 '24	Feb 7 '25		1304	1306	0%
1306	Manhole / Chamber construction	21 days	Feb 8 '25	Feb 28 '25		1305	1307	0%
1307	Backfilling and compaction	14 days	Mar 1 '25	Mar 14 '25		1306	1308	0%
1308	Reinstatement	2 days	Mar 15 '25	Mar 16 '25		1307		0%
1309	**RW05 : DN300 DI pipe (trenchless)**	**175 days**	**Sep 1 '23**	**Feb 22 '24**				**0%**
1310	**Ma Sik Road (180m) - TBM Method**	**175 days**	**Sep 1 '23**	**Feb 22 '24**				**0%**
1311	TTA implementation	3 days	Sep 1 '23	Sep 3 '23			1312	0%
1312	Contruction of jacking pit and receiving pit	45 days	Sep 4 '23	Oct 18 '23		1311	1313	0%
1313	Trenchless works and pipe laying	90 days	Oct 19 '23	Jan 16 '24		1312	1314	0%
1314	Manhole / Chamber construction	21 days	Jan 17 '24	Feb 6 '24		1313	1315	0%
1315	Backfilling and compaction	14 days	Feb 7 '24	Feb 20 '24		1314	1316	0%
1316	Reinstatement	2 days	Feb 21 '24	Feb 22 '24		1315		0%
1317	**RW08 : DN400 DI pipe (trenchless)**	**336 days**	**Jun 1 '23**	**May 1 '24**				**0%**
1318	**Wo Muk Road (60m) - TBM Method**	**124 days**	**Jun 1 '23**	**Oct 2 '23**				**0%**
1319	TTA implementation	3 days	Jun 1 '23	Jun 3 '23			1320	0%
1320	Contruction of jacking pit and receiving pit	42 days	Jun 4 '23	Jul 15 '23		1319	1321	0%
1321	Trenchless works and pipe laying	42 days	Jul 16 '23	Aug 26 '23		1320	1322	0%
1322	Manhole / Chamber construction	21 days	Aug 27 '23	Sep 16 '23		1321	1323	0%
1323	Backfilling and compaction	14 days	Sep 17 '23	Sep 30 '23		1322	1324	0%
1324	Reinstatement	2 days	Oct 1 '23	Oct 2 '23		1323	1326FS+60 day	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

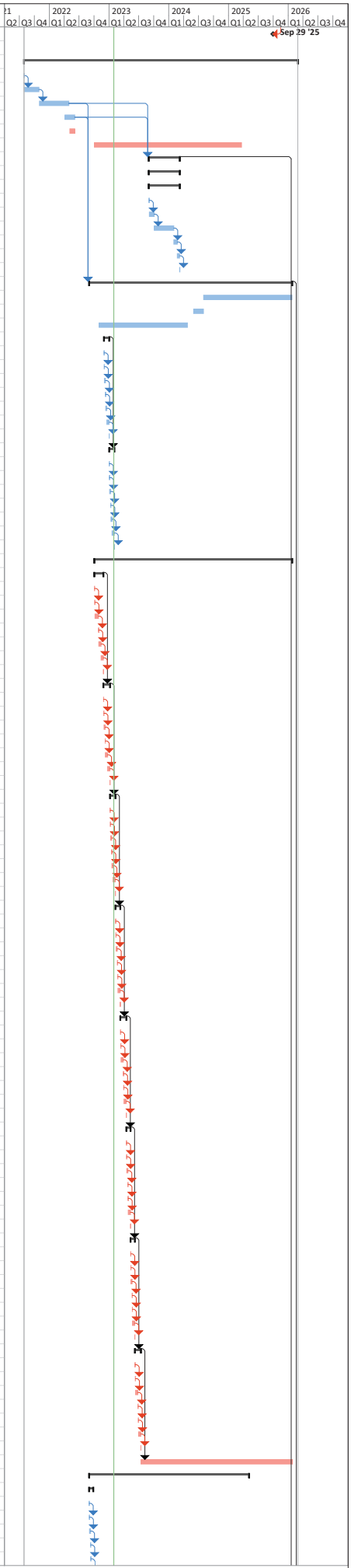
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1325	**Wo Tai Street (100m) - TBM Method**	**152 days**	**Dec 2 '23**	**May 1 '24**				**0%**
1326	TTA implementation	3 days	Dec 2 '23	Dec 4 '23		1324FS+60 days	1327	0%
1327	Contruction of jacking pit and receiving pit	42 days	Dec 5 '23	Jan 15 '24		1326	1328	0%
1328	Trenchless works and pipe laying	70 days	Jan 16 '24	Mar 25 '24		1327	1329	0%
1329	Manhole / Chamber construction	21 days	Mar 26 '24	Apr 15 '24		1328	1330	0%
1330	Backfilling and compaction	14 days	Apr 16 '24	Apr 29 '24		1329	1331	0%
1331	Reinstatement	2 days	Apr 30 '24	May 1 '24		1330		0%
1332	**RW09 : DN450 DI pipe (trenchless)**	**918 days**	**Feb 1 '23**	**Aug 6 '25**				**0%**
1333	**San Wang Road (435m) - TBM Method**	**245 days**	**Feb 1 '23**	**Oct 3 '23**				**0%**
1334	TTA implementation	3 days	Feb 1 '23	Feb 3 '23			1335	0%
1335	Contruction of jacking pit and receiving pit	45 days	Feb 4 '23	Mar 20 '23		1334	1336	0%
1336	Trenchless works and pipe laying	160 days	Mar 21 '23	Aug 27 '23		1335	1337	0%
1337	Manhole / Chamber construction	21 days	Aug 28 '23	Sep 17 '23		1336	1338	0%
1338	Backfilling and compaction	14 days	Sep 18 '23	Oct 1 '23		1337	1339	0%
1339	Reinstatement	2 days	Oct 2 '23	Oct 3 '23		1338	1342	0%
1340	Submission and acceptance of method statement by MTRC	530 days	May 2 '23	Oct 12 '24			1342	0%
1341	**MTRC (315m) - TBM Method**	**298 days**	**Oct 13 '24**	**Aug 6 '25**				**0%**
1342	TTA implementation	7 days	Oct 13 '24	Oct 19 '24		1340,1339	1343	0%
1343	Contruction of jacking pit and receiving pit	60 days	Oct 20 '24	Dec 18 '24		1342	1344	0%
1344	Trenchless works and pipe laying	180 days	Dec 19 '24	Jun 16 '25		1343	1345	0%
1345	Manhole / Chamber construction	30 days	Jun 17 '25	Jul 16 '25		1344	1346	0%
1346	Backfilling and compaction	18 days	Jul 17 '25	Aug 3 '25		1345	1347	0%
1347	Reinstatement	3 days	Aug 4 '25	Aug 6 '25		1346		0%
1348	**RW05 : DN300 DI pipe (trenchless)**	**555 days**	**Mar 1 '23**	**Sep 5 '24**				**0%**
1349	**Ling Shan Road (60m) - HDD Method**	**130 days**	**Mar 1 '23**	**Jul 8 '23**				**0%**
1350	TTA implementation	3 days	Mar 1 '23	Mar 3 '23			1351	0%
1351	Contruction of jacking pit and receiving pit	45 days	Mar 4 '23	Apr 17 '23		1350	1352	0%
1352	Trenchless works and pipe laying	45 days	Apr 18 '23	Jun 1 '23		1351	1353	0%
1353	Manhole / Chamber construction	21 days	Jun 2 '23	Jun 22 '23		1352	1354	0%
1354	Backfilling and compaction	14 days	Jun 23 '23	Jul 6 '23		1353	1355	0%
1355	Reinstatement	2 days	Jul 7 '23	Jul 8 '23		1354	1357FS+60 day	0%
1356	**San Wan Road Roundabout (130m) - HDD Method**	**175 days**	**Sep 7 '23**	**Feb 28 '24**				**0%**
1357	TTA implementation	3 days	Sep 7 '23	Sep 9 '23		1355FS+60 days	1358	0%
1358	Contruction of jacking pit and receiving pit	45 days	Sep 10 '23	Oct 24 '23		1357	1359	0%
1359	Trenchless works and pipe laying	90 days	Oct 25 '23	Jan 22 '24		1358	1360	0%
1360	Manhole / Chamber construction	21 days	Jan 23 '24	Feb 12 '24		1359	1361	0%
1361	Backfilling and compaction	14 days	Feb 13 '24	Feb 26 '24		1360	1362	0%
1362	Reinstatement	2 days	Feb 27 '24	Feb 28 '24		1361	1364FS+60 day	0%
1363	**Pak Fung Road (70m) - HDD Method**	**130 days**	**Apr 29 '24**	**Sep 5 '24**				**0%**
1364	TTA implementation	3 days	Apr 29 '24	May 1 '24		1362FS+60 days	1365	0%
1365	Contruction of jacking pit and receiving pit	45 days	May 2 '24	Jun 15 '24		1364	1366	0%
1366	Trenchless works and pipe laying	45 days	Jun 16 '24	Jul 30 '24		1365	1367	0%
1367	Manhole / Chamber construction	21 days	Jul 31 '24	Aug 20 '24		1366	1368	0%
1368	Backfilling and compaction	14 days	Aug 21 '24	Sep 3 '24		1367	1369	0%
1369	Reinstatement	2 days	Sep 4 '24	Sep 5 '24		1368		0%
1370	**RW05 : DN300 DI pipe (trenchless)**	**362 days**	**Jun 1 '23**	**May 27 '24**				**0%**
1371	**Fanling Way (35m) - Hand Shield Method**	**91 days**	**Jun 1 '23**	**Aug 30 '23**				**0%**
1372	TTA implementation	3 days	Jun 1 '23	Jun 3 '23			1373	0%
1373	Contruction of jacking pit and receiving pit	30 days	Jun 4 '23	Jul 3 '23		1372	1374	0%
1374	Trenchless works and pipe laying	21 days	Jul 4 '23	Jul 24 '23		1373	1375	0%
1375	Manhole / Chamber construction	21 days	Jul 25 '23	Aug 14 '23		1374	1376	0%
1376	Backfilling and compaction	14 days	Aug 15 '23	Aug 28 '23		1375	1377	0%
1377	Reinstatement	2 days	Aug 29 '23	Aug 30 '23		1376	1379FS+180 da	0%
1378	**CLP Station (35m) - Hand Shield Method**	**91 days**	**Feb 27 '24**	**May 27 '24**				**0%**
1379	TTA implementation	3 days	Feb 27 '24	Feb 29 '24		1377FS+180 day	1380	0%
1380	Contruction of jacking pit and receiving pit	30 days	Mar 1 '24	Mar 30 '24		1379	1381	0%
1381	Trenchless works and pipe laying	21 days	Mar 31 '24	Apr 20 '24		1380	1382	0%
1382	Manhole / Chamber construction	21 days	Apr 21 '24	May 11 '24		1381	1383	0%
1383	Backfilling and compaction	14 days	May 12 '24	May 25 '24		1382	1384	0%
1384	Reinstatement	2 days	May 26 '24	May 27 '24		1383		0%
1385	**Mainlaying by open trench method**	**1029 days**	**Nov 1 '22**	**Aug 25 '25**			**1431**	**0%**
1386	RW07 (DN300) - Ma Sik Road (360m)	570 days	Dec 1 '23	Jun 22 '25				0%
1387	RW05 (DN400) - Jockey Club Road (681m) (XP ID: 1316661, 1301141)	570 days	Feb 1 '24	Aug 23 '25				0%
1388	RW05 (DN300) - Jockey Club Road (720m) (XP ID: 1316661, 1301141)	307 days	Jun 1 '23	Apr 2 '24			1389	0%
1389	RW05 (DN300) - Pik Fung Road (270m)	110 days	Apr 3 '24	Jul 21 '24		1388	1390	0%
1390	RW05 (DN300) - Sun Wan Road (945m)	400 days	Jul 22 '24	Aug 25 '25	30	1389		0%
1391	RW08 (DN400) - Fanling Lau Road (750m) (XP ID: 1310580, 1310468)	450 days	Jun 1 '23	Aug 23 '24			1392	0%
1392	RW08 (DN400) - Lok Yip Road (616m)	360 days	Aug 24 '24	Aug 18 '25		1391		0%
1393	RW17 (DN150) - Sun Shing Road (114m)	180 days	Jul 1 '24	Dec 27 '24				0%
1394	RW16 (DN250) - Sun Fung Road / Lung Sum Avenue (741m)	720 days	Sep 1 '23	Aug 20 '25				0%
1395	RW47 (DN100) - Ben Lun Building (82m)	110 days	May 1 '25	Aug 18 '25				0%
1396	RW22 (DN150) - Chi Cheong Street (877m) (XP ID: 1310864)	900 days	Nov 1 '22	Apr 18 '25				0%
1397	**CH630 - CH700**	**39 days**	**Nov 1 '22**	**Dec 9 '22**			**1405**	**0%**
1398	TTA establishment	1 day	Nov 1 '22	Nov 1 '22			1399	0%
1399	Hard material excavation and disposal	2 days	Nov 2 '22	Nov 3 '22		1398	1400	0%
1400	Soil excavation , laying sheetpile and disposal	7 days	Nov 4 '22	Nov 10 '22		1399	1401	0%
1401	Treatment of bedding	7 days	Nov 11 '22	Nov 17 '22		1400	1402	0%
1402	Pipe laying D.I.	7 days	Nov 18 '22	Nov 24 '22		1401	1403	0%
1403	Backfilling general fill and compaction	14 days	Nov 25 '22	Dec 8 '22		1402	1404	0%
1404	Reinstatement	1 day	Dec 9 '22	Dec 9 '22		1403		0%
1405	**CH040 - CH082**	**39 days**	**Dec 10 '22**	**Jan 17 '23**		**1397**		**0%**
1406	TTA establishment	1 day	Dec 10 '22	Dec 10 '22			1407	0%
1407	Hard material excavation and disposal	2 days	Dec 11 '22	Dec 12 '22		1406	1408	0%
1408	Soil excavation , laying sheetpile and disposal	7 days	Dec 13 '22	Dec 19 '22		1407	1409	0%
1409	Treatment of bedding	7 days	Dec 20 '22	Dec 26 '22		1408	1410	0%
1410	Pipe laying D.I.	7 days	Dec 27 '22	Jan 2 '23		1409	1411	0%
1411	Backfilling general fill and compaction	14 days	Jan 3 '23	Jan 16 '23		1410	1412	0%
1412	Reinstatement	1 day	Jan 17 '23	Jan 17 '23		1411		0%
1413	RW24 (DN150) - Chi Ming Street (120m)	170 days	Mar 1 '25	Aug 17 '25				0%
1414	RW49 (DN150) - San Wan Road (75m)	110 days	May 1 '25	Aug 18 '25				0%
1415	RW23 (DN150) - Lung Wan Street (171m)	270 days	Jun 1 '24	Feb 25 '25				0%
1416	RW69 (DN150) - Lung Sum Lane (60m)	80 days	Jun 1 '25	Aug 19 '25				0%
1417	RW25 (DN150) - Road to Fanling Wai (330m)	260 days	Dec 1 '24	Aug 17 '25				0%
1418	RW26 (DN150) - Ka Siu Road (133m)	210 days	Oct 1 '24	Apr 28 '25				0%
1419	RW27 (DN150) - Fanling Station Road (273m)	350 days	Sep 1 '24	Aug 16 '25				0%
1420	RW34 (DN150) - Fan Leng Lau (380m) (XP ID: 1310580, 1310468)	360 days	Feb 1 '24	Jan 25 '25				0%
1421	RW36 (DN150) - Lok Fung Street (495m)	380 days	Aug 1 '24	Aug 15 '25				0%
1422	RW13 (DN150) - Wo Tai Street (630m)	930 days	Feb 1 '23	Aug 18 '25				0%
1423	RW28 (DN150) - Wo Mun Street (312m)	480 days	Nov 1 '23	Feb 22 '25				0%
1424	RW31 (DN150) - Luen Cheong Street (185m)	230 days	Jan 1 '25	Aug 18 '25				0%
1425	RW32 (DN150) - Luen Shing Street (185m)	270 days	Apr 1 '24	Dec 26 '24				0%
1426	RW33 (DN150) - Luen Hing Street (199m)	300 days	Sep 1 '24	Jun 27 '25				0%
1427	RW30 (DN150) - Luen On Street / Luen Wo Road / Luen Fai Street (649m)	960 days	Jan 2 '23	Aug 18 '25				0%
1428	RW29 (DN150) - Wo Muk Street / Luen Hing Street (360m)	570 days	Feb 1 '24	Aug 23 '25				0%
1429	RW12 (DN150) - Luen Chit Street (120m)	200 days	Feb 1 '25	Aug 19 '25				0%
1430	RW55 (DN150) - Mount One (44m)	80 days	Jun 1 '25	Aug 19 '25				0%
1431	Overall testing	21 days	Aug 26 '25	Sep 15 '25		1293,1385	1435	0%
1432	Swabbing	7 days	Aug 26 '25	Sep 1 '25			1433	0%
1433	CCTV	7 days	Sep 2 '25	Sep 8 '25		1432	1434	0%
1434	Hydrostatic pressure test	7 days	Sep 9 '25	Sep 15 '25		1433		0%
1435	Pipe connection and completion	14 days	Sep 16 '25	Sep 29 '25		1431	1436FF	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

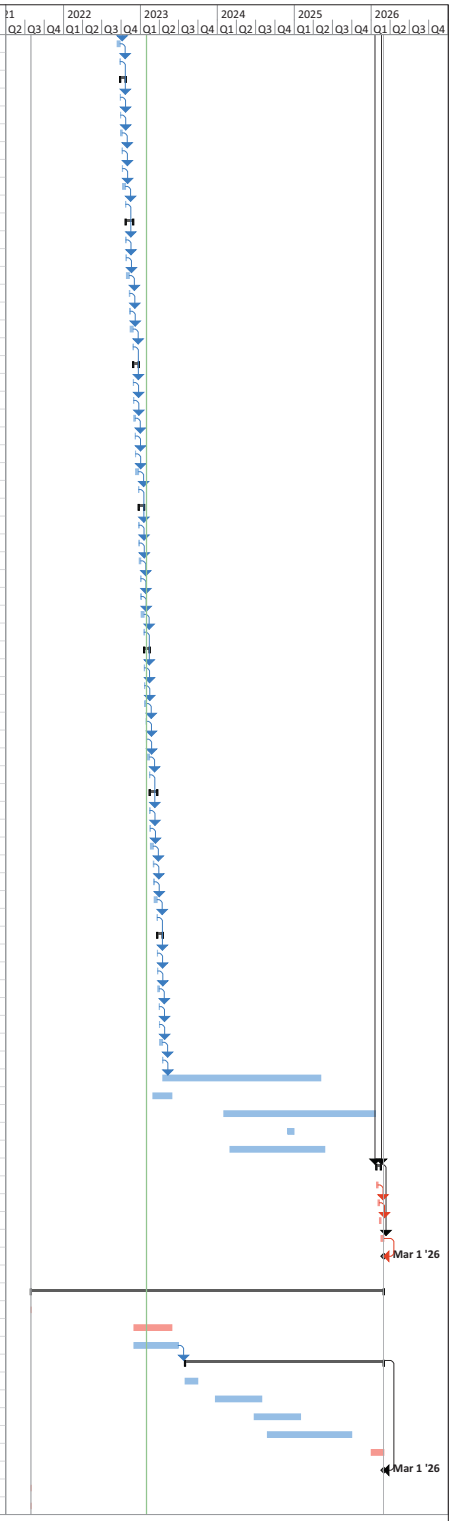
ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1436	Planned completion for section 7	0 days	Sep 29 '25	Sep 29 '25		1435FF		0%
1437								
1438	**Section 8 - Water main laying works in part 7 of the Site**	**1676 days**	**Jul 30 '21**	**Mar 1 '26**				**0%**
1439	Access Date (part 7 of the Site)	1 day	Jul 30 '21	Jul 30 '21			1440	0%
1440	Initial survey (utility survey, condition survey, initial photo)	90 days	Jul 31 '21	Oct 28 '21		1439	1441	0%
1441	Application and approval of XP and TTA	180 days	Nov 1 '21	Apr 29 '22		1440	1445,1454	0%
1442	Procurement and Delivery of pipes, fittings and related materials	60 days	Apr 6 '22	Jun 4 '22			1445,1454	0%
1443	Submission and acceptance of method statement and material	30 days	May 6 '22	Jun 4 '22				0%
1444	Excavation of Inspection Pit	900 days	Oct 3 '22	Mar 20 '25				0%
1445	**Mainlaying by trenchless method**	**190 days**	**Sep 1 '23**	**Mar 8 '24**		**1442,1441**	**1610**	**0%**
1446	**RW05 : DN300 DI pipe (trenchless)**	**190 days**	**Sep 1 '23**	**Mar 8 '24**				**0%**
1447	**Jocky Club Road (110m) - TBM Method**	**190 days**	**Sep 1 '23**	**Mar 8 '24**				**0%**
1448	TTA implementation	3 days	Sep 1 '23	Sep 3 '23			1449	0%
1449	Contruction of jacking pit and receiving pit	30 days	Sep 4 '23	Oct 3 '23		1448	1450	0%
1450	Trenchless works and pipe laying	120 days	Oct 4 '23	Jan 31 '24		1449	1451	0%
1451	Manhole / Chamber construction	21 days	Feb 1 '24	Feb 21 '24		1450	1452	0%
1452	Backfilling and compaction	14 days	Feb 22 '24	Mar 6 '24		1451	1453	0%
1453	Reinstatement	2 days	Mar 7 '24	Mar 8 '24		1452		0%
1454	**Mainlaying by open trench method**	**1243 days**	**Sep 1 '22**	**Jan 25 '26**		**1442,1441**	**1610**	**0%**
1455	RW38 (DN150) - Yip Cheong Street (351m)	540 days	Aug 1 '24	Jan 22 '26				0%
1456	RW39 (DN150) - Yip Cheong Street (14m)	60 days	Jun 1 '24	Jul 30 '24				0%
1457	RW37 (DN150) - Yip Wo Street (420m) (XP ID: 1309054)	540 days	Nov 1 '22	Apr 23 '24				0%
1458	CH210 to CH300 (90m)	32 days	Dec 1 '22	Jan 1 '23			1466	0%
1459	TTA establishment	1 day	Dec 1 '22	Dec 1 '22			1460	0%
1460	Hard material excavation and disposal	1 day	Dec 2 '22	Dec 2 '22		1459	1461	0%
1461	Soil excavation , laying sheetpile and disposal	7 days	Dec 3 '22	Dec 9 '22		1460	1462	0%
1462	Treatment of bedding	1 day	Dec 10 '22	Dec 10 '22		1461	1463	0%
1463	Pipe laying D.I.	7 days	Dec 11 '22	Dec 17 '22		1462	1464	0%
1464	Backfilling general fill and compaction	14 days	Dec 18 '22	Dec 31 '22		1463	1465	0%
1465	Reinstatement	1 day	Jan 1 '23	Jan 1 '23		1464		0%
1466	CH300 to CH360 (60m)	32 days	Jan 2 '23	Feb 2 '23		1458		0%
1467	TTA establishment	1 day	Jan 2 '23	Jan 2 '23			1468	0%
1468	Hard material excavation and disposal	1 day	Jan 3 '23	Jan 3 '23		1467	1469	0%
1469	Soil excavation , laying sheetpile and disposal	7 days	Jan 4 '23	Jan 10 '23		1468	1470	0%
1470	Treatment of bedding	1 day	Jan 11 '23	Jan 11 '23		1469	1471	0%
1471	Pipe laying D.I.	7 days	Jan 12 '23	Jan 18 '23		1470	1472	0%
1472	Backfilling general fill and compaction	14 days	Jan 19 '23	Feb 1 '23		1471	1473	0%
1473	Reinstatement	1 day	Feb 2 '23	Feb 2 '23		1472		0%
1474	RW10 (DN300) - On Lok Mun Street (930m) (XP ID: 1301294, 1311241)	1211 days	Oct 3 '22	Jan 25 '26				0%
1475	CH930 to CH1000 (70m)	56 days	Oct 3 '22	Nov 27 '22			1483	0%
1476	TTA establishment	2 days	Oct 3 '22	Oct 4 '22			1477	0%
1477	Hard material excavation and disposal	2 days	Oct 5 '22	Oct 6 '22		1476	1478	0%
1478	Soil excavation , laying sheetpile and disposal	21 days	Oct 7 '22	Oct 27 '22		1477	1479	0%
1479	Treatment of bedding	2 days	Oct 28 '22	Oct 29 '22		1478	1480	0%
1480	Pipe laying D.I.	14 days	Oct 30 '22	Nov 12 '22		1479	1481	0%
1481	Backfilling general fill and compaction	14 days	Nov 13 '22	Nov 26 '22		1480	1482	0%
1482	Reinstatement	1 day	Nov 27 '22	Nov 27 '22		1481		0%
1483	CH840 to CH930 (90m)	40 days	Nov 28 '22	Jan 6 '23		1475	1491	0%
1484	TTA establishment	1 day	Nov 28 '22	Nov 28 '22			1485	0%
1485	Hard material excavation and disposal	2 days	Nov 29 '22	Nov 30 '22		1484	1486	0%
1486	Soil excavation , laying sheetpile and disposal	7 days	Dec 1 '22	Dec 7 '22		1485	1487	0%
1487	Treatment of bedding	1 day	Dec 8 '22	Dec 8 '22		1486	1488	0%
1488	Pipe laying D.I.	14 days	Dec 9 '22	Dec 22 '22		1487	1489	0%
1489	Backfilling general fill and compaction	14 days	Dec 23 '22	Jan 5 '23		1488	1490	0%
1490	Reinstatement	1 day	Jan 6 '23	Jan 6 '23		1489		0%
1491	CH800 to CH840 (40m)	33 days	Jan 7 '23	Feb 8 '23		1483	1499	0%
1492	TTA establishment	1 day	Jan 7 '23	Jan 7 '23			1493	0%
1493	Hard material excavation and disposal	2 days	Jan 8 '23	Jan 9 '23		1492	1494	0%
1494	Soil excavation , laying sheetpile and disposal	7 days	Jan 10 '23	Jan 16 '23		1493	1495	0%
1495	Treatment of bedding	1 day	Jan 17 '23	Jan 17 '23		1494	1496	0%
1496	Pipe laying D.I.	7 days	Jan 18 '23	Jan 24 '23		1495	1497	0%
1497	Backfilling general fill and compaction	14 days	Jan 25 '23	Feb 7 '23		1496	1498	0%
1498	Reinstatement	1 day	Feb 8 '23	Feb 8 '23		1497		0%
1499	CH980 to CH1000 (20m)	30 days	Feb 9 '23	Mar 10 '23		1491	1507	0%
1500	TTA establishment	2 days	Feb 9 '23	Feb 10 '23			1501	0%
1501	Hard material excavation and disposal	2 days	Feb 11 '23	Feb 12 '23		1500	1502	0%
1502	Soil excavation , laying sheetpile and disposal	7 days	Feb 13 '23	Feb 19 '23		1501	1503	0%
1503	Treatment of bedding	2 days	Feb 20 '23	Feb 21 '23		1502	1504	0%
1504	Pipe laying D.I.	2 days	Feb 22 '23	Feb 23 '23		1503	1505	0%
1505	Backfilling general fill and compaction	14 days	Feb 24 '23	Mar 9 '23		1504	1506	0%
1506	Reinstatement	1 day	Mar 10 '23	Mar 10 '23		1505		0%
1507	CH830 to CH860 (30m)	37 days	Mar 11 '23	Apr 16 '23		1499	1515	0%
1508	TTA establishment	2 days	Mar 11 '23	Mar 12 '23			1509	0%
1509	Hard material excavation and disposal	2 days	Mar 13 '23	Mar 14 '23		1508	1510	0%
1510	Soil excavation , laying sheetpile and disposal	14 days	Mar 15 '23	Mar 28 '23		1509	1511	0%
1511	Treatment of bedding	2 days	Mar 29 '23	Mar 30 '23		1510	1512	0%
1512	Pipe laying D.I.	2 days	Mar 31 '23	Apr 1 '23		1511	1513	0%
1513	Backfilling general fill and compaction	14 days	Apr 2 '23	Apr 15 '23		1512	1514	0%
1514	Reinstatement	1 day	Apr 16 '23	Apr 16 '23		1513		0%
1515	CH800 to CH830 (30m)	26 days	Apr 17 '23	May 12 '23		1507	1523	0%
1516	TTA establishment	1 day	Apr 17 '23	Apr 17 '23			1517	0%
1517	Hard material excavation and disposal	1 day	Apr 18 '23	Apr 18 '23		1516	1518	0%
1518	Soil excavation , laying sheetpile and disposal	7 days	Apr 19 '23	Apr 25 '23		1517	1519	0%
1519	Treatment of bedding	1 day	Apr 26 '23	Apr 26 '23		1518	1520	0%
1520	Pipe laying D.I.	1 day	Apr 27 '23	Apr 27 '23		1519	1521	0%
1521	Backfilling general fill and compaction	14 days	Apr 28 '23	May 11 '23		1520	1522	0%
1522	Reinstatement	1 day	May 12 '23	May 12 '23		1521		0%
1523	CH110 to CH140 (30m)	26 days	May 13 '23	Jun 7 '23		1515	1531	0%
1524	TTA establishment	1 day	May 13 '23	May 13 '23			1525	0%
1525	Hard material excavation and disposal	1 day	May 14 '23	May 14 '23		1524	1526	0%
1526	Soil excavation , laying sheetpile and disposal	7 days	May 15 '23	May 21 '23		1525	1527	0%
1527	Treatment of bedding	1 day	May 22 '23	May 22 '23		1526	1528	0%
1528	Pipe laying D.I.	1 day	May 23 '23	May 23 '23		1527	1529	0%
1529	Backfilling general fill and compaction	14 days	May 24 '23	Jun 6 '23		1528	1530	0%
1530	Reinstatement	1 day	Jun 7 '23	Jun 7 '23		1529		0%
1531	CH080 to CH110 (30m)	37 days	Jun 8 '23	Jul 14 '23		1523	1539	0%
1532	TTA establishment	2 days	Jun 8 '23	Jun 9 '23			1533	0%
1533	Hard material excavation and disposal	2 days	Jun 10 '23	Jun 11 '23		1532	1534	0%
1534	Soil excavation , laying sheetpile and disposal	14 days	Jun 12 '23	Jun 25 '23		1533	1535	0%
1535	Treatment of bedding	2 days	Jun 26 '23	Jun 27 '23		1534	1536	0%
1536	Pipe laying D.I.	2 days	Jun 28 '23	Jun 29 '23		1535	1537	0%
1537	Backfilling general fill and compaction	14 days	Jun 30 '23	Jul 13 '23		1536	1538	0%
1538	Reinstatement	1 day	Jul 14 '23	Jul 14 '23		1537		0%
1539	Remaining Section of On Lok Mun Street (840m)	926 days	Jul 15 '23	Jan 25 '26		1531		0%
1540	RW35 (DN150) - On Chuen Street (720m) (XP ID: 1301294, 1311241)	978 days	Sep 1 '22	May 5 '25				0%
1541	CH590 to CH610 (30m)	26 days	Sep 1 '22	Sep 26 '22				0%
1542	TTA establishment	1 day	Sep 1 '22	Sep 1 '22			1543	0%
1543	Hard material excavation and disposal	1 day	Sep 2 '22	Sep 2 '22		1542	1544	0%
1544	Soil excavation , laying sheetpile and disposal	7 days	Sep 3 '22	Sep 9 '22		1543	1545	0%
1545	Treatment of bedding	1 day	Sep 10 '22	Sep 10 '22		1544	1546	0%
1546	Pipe laying D.I.	1 day	Sep 11 '22	Sep 11 '22		1545	1547	0%



Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start	Finish	TRA	Predecessors	Successors	% Complete
1547	Backfilling general fill and compaction	14 days	Sep 12 '22	Sep 25 '22		1546	1548	0%
1548	Reinstatement	1 day	Sep 26 '22	Sep 26 '22		1547	1550	0%
1549	CH560 to CH590 (30m)	26 days	Sep 27 '22	Oct 22 '22				0%
1550	TTA establishment	1 day	Sep 27 '22	Sep 27 '22		1548	1551	0%
1551	Hard material excavation and disposal	1 day	Sep 28 '22	Sep 28 '22		1550	1552	0%
1552	Soil excavation , laying sheetpile and disposal	7 days	Sep 29 '22	Oct 5 '22		1551	1553	0%
1553	Treatment of bedding	1 day	Oct 6 '22	Oct 6 '22		1552	1554	0%
1554	Pipe laying D.I.	1 day	Oct 7 '22	Oct 7 '22		1553	1555	0%
1555	Backfilling general fill and compaction	14 days	Oct 8 '22	Oct 21 '22		1554	1556	0%
1556	Reinstatement	1 day	Oct 22 '22	Oct 22 '22		1555	1558	0%
1557	CH530 to CH560 (30m)	36 days	Oct 23 '22	Nov 27 '22				0%
1558	TTA establishment	1 day	Oct 23 '22	Oct 23 '22		1556	1559	0%
1559	Hard material excavation and disposal	2 days	Oct 24 '22	Oct 25 '22		1558	1560	0%
1560	Soil excavation , laying sheetpile and disposal	14 days	Oct 26 '22	Nov 8 '22		1559	1561	0%
1561	Treatment of bedding	2 days	Nov 9 '22	Nov 10 '22		1560	1562	0%
1562	Pipe laying D.I.	2 days	Nov 11 '22	Nov 12 '22		1561	1563	0%
1563	Backfilling general fill and compaction	14 days	Nov 13 '22	Nov 26 '22		1562	1564	0%
1564	Reinstatement	1 day	Nov 27 '22	Nov 27 '22		1563	1566	0%
1565	CH500 to CH530 (30m)	26 days	Nov 28 '22	Dec 23 '22				0%
1566	TTA establishment	1 day	Nov 28 '22	Nov 28 '22		1564	1567	0%
1567	Hard material excavation and disposal	1 day	Nov 29 '22	Nov 29 '22		1566	1568	0%
1568	Soil excavation , laying sheetpile and disposal	7 days	Nov 30 '22	Dec 6 '22		1567	1569	0%
1569	Treatment of bedding	1 day	Dec 7 '22	Dec 7 '22		1568	1570	0%
1570	Pipe laying D.I.	1 day	Dec 8 '22	Dec 8 '22		1569	1571	0%
1571	Backfilling general fill and compaction	14 days	Dec 9 '22	Dec 22 '22		1570	1572	0%
1572	Reinstatement	1 day	Dec 23 '22	Dec 23 '22		1571	1574	0%
1573	CH230 to CH260 (30m)	26 days	Dec 24 '22	Jan 18 '23				0%
1574	TTA establishment	1 day	Dec 24 '22	Dec 24 '22		1572	1575	0%
1575	Hard material excavation and disposal	1 day	Dec 25 '22	Dec 25 '22		1574	1576	0%
1576	Soil excavation , laying sheetpile and disposal	7 days	Dec 26 '22	Jan 1 '23		1575	1577	0%
1577	Treatment of bedding	1 day	Jan 2 '23	Jan 2 '23		1576	1578	0%
1578	Pipe laying D.I.	1 day	Jan 3 '23	Jan 3 '23		1577	1579	0%
1579	Backfilling general fill and compaction	14 days	Jan 4 '23	Jan 17 '23		1578	1580	0%
1580	Reinstatement	1 day	Jan 18 '23	Jan 18 '23		1579	1582	0%
1581	CH200 to CH230 (30m)	26 days	Jan 19 '23	Feb 13 '23				0%
1582	TTA establishment	1 day	Jan 19 '23	Jan 19 '23		1580	1583	0%
1583	Hard material excavation and disposal	1 day	Jan 20 '23	Jan 20 '23		1582	1584	0%
1584	Soil excavation , laying sheetpile and disposal	7 days	Jan 21 '23	Jan 27 '23		1583	1585	0%
1585	Treatment of bedding	1 day	Jan 28 '23	Jan 28 '23		1584	1586	0%
1586	Pipe laying D.I.	1 day	Jan 29 '23	Jan 29 '23		1585	1587	0%
1587	Backfilling general fill and compaction	14 days	Jan 30 '23	Feb 12 '23		1586	1588	0%
1588	Reinstatement	1 day	Feb 13 '23	Feb 13 '23		1587	1590	0%
1589	CH170 to CH200 (30m)	36 days	Feb 14 '23	Mar 21 '23				0%
1590	TTA establishment	1 day	Feb 14 '23	Feb 14 '23		1588	1591	0%
1591	Hard material excavation and disposal	2 days	Feb 15 '23	Feb 16 '23		1590	1592	0%
1592	Soil excavation , laying sheetpile and disposal	14 days	Feb 17 '23	Mar 2 '23		1591	1593	0%
1593	Treatment of bedding	2 days	Mar 3 '23	Mar 4 '23		1592	1594	0%
1594	Pipe laying D.I.	2 days	Mar 5 '23	Mar 6 '23		1593	1595	0%
1595	Backfilling general fill and compaction	14 days	Mar 7 '23	Mar 20 '23		1594	1596	0%
1596	Reinstatement	1 day	Mar 21 '23	Mar 21 '23		1595	1598	0%
1597	CH000 to CH060 (60m)	26 days	Mar 22 '23	Apr 16 '23				0%
1598	TTA establishment	1 day	Mar 22 '23	Mar 22 '23		1596	1599	0%
1599	Hard material excavation and disposal	1 day	Mar 23 '23	Mar 23 '23		1598	1600	0%
1600	Soil excavation , laying sheetpile and disposal	7 days	Mar 24 '23	Mar 30 '23		1599	1601	0%
1601	Treatment of bedding	1 day	Mar 31 '23	Mar 31 '23		1600	1602	0%
1602	Pipe laying D.I.	1 day	Apr 1 '23	Apr 1 '23		1601	1603	0%
1603	Backfilling general fill and compaction	14 days	Apr 2 '23	Apr 15 '23		1602	1604	0%
1604	Reinstatement	1 day	Apr 16 '23	Apr 16 '23		1603	1605	0%
1605	Remaining Section of On Chuen Street (630m)	750 days	Apr 17 '23	May 5 '25	60	1604		0%
1606	Coordination with ND/2019/04	90 days	Mar 1 '23	May 29 '23				0%
1607	RW09 (DN450) - Wo Hing Road (436m)	720 days	Feb 1 '24	Jan 20 '26				0%
1608	RW60 (DN150) - Tee from RW09 (14m)	29 days	Dec 1 '24	Dec 29 '24	14			0%
1609	RW40 (DN200) - Tai Wo Service Road West (420m)	450 days	Mar 1 '24	May 24 '25	30			0%
1610	Overall testing	21 days	Jan 26 '26	Feb 15 '26		1454,1445	1614	0%
1611	Swabbing	7 days	Jan 26 '26	Feb 1 '26			1612	0%
1612	CCTV	7 days	Feb 2 '26	Feb 8 '26		1611	1613	0%
1613	Hydrostatic pressure test	7 days	Feb 9 '26	Feb 15 '26		1612		0%
1614	Pipe connection and completion	14 days	Feb 16 '26	Mar 1 '26		1610	1615FF	0%
1615	Planned completion for section 8	0 days	Mar 1 '26	Mar 1 '26		1614FF		0%
1616								
1617	**Section 9 - Conversion works to effect the supply of reclaimed water**	**1676 days**	**Jul 30 '21**	**Mar 1 '26**				**0%**
1618	Access Date	1 day	Jul 30 '21	Jul 30 '21				0%
1619	Initial survey by stages	180 days	Dec 1 '22	May 29 '23				0%
1620	Liaison, coordination and enabling work for conversion	210 days	Dec 1 '22	Jun 28 '23			1621	0%
1621	**Conversion works**	**944 days**	**Aug 1 '23**	**Mar 1 '26**		**1620**	**1627FF**	**0%**
1622	Section 4 (Part 3) - 3 nos.	60 days	Aug 1 '23	Sep 29 '23				0%
1623	Section 5 (Part 4) - 11 nos.	220 days	Dec 23 '23	Jul 29 '24				0%
1624	Section 6 (Part 5) - 11 nos.	220 days	Jun 24 '24	Jan 29 '25				0%
1625	Section 7 (Part 6) - 40 nos.	400 days	Aug 26 '24	Sep 29 '25				0%
1626	Section 8 (Part 7) - 3 nos.	60 days	Jan 1 '26	Mar 1 '26				0%
1627	Planned completion for section 9	0 days	Mar 1 '26	Mar 1 '26		1621FF		0%
1628		1 day?	Jul 30 '21	Jul 30 '21				0%
1629		1 day?	Jul 30 '21	Jul 30 '21				0%

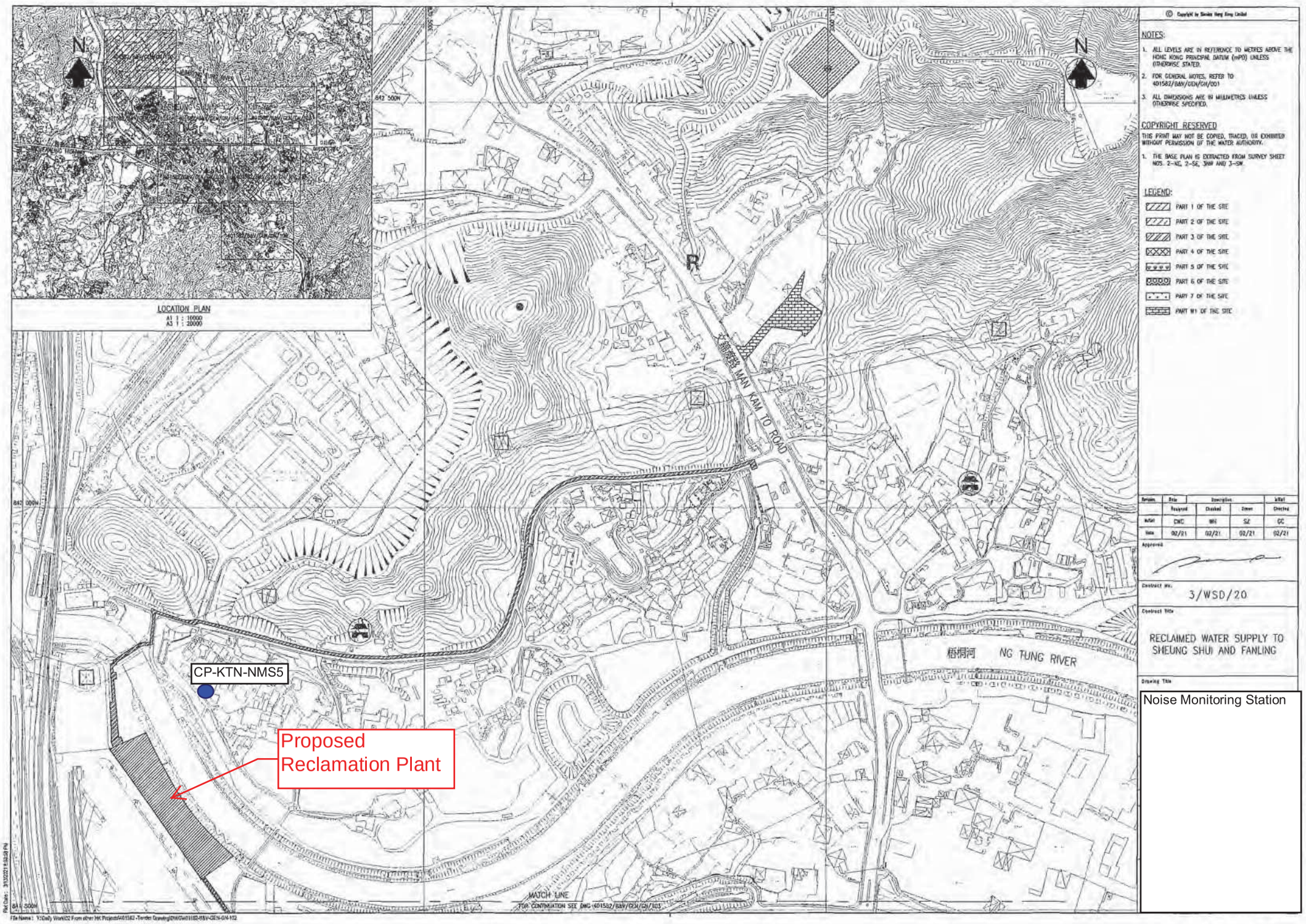


Project: 3WSD20 Programme
Date: Jan 30 '23

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

Appendix D

Location of Designated Noise Monitoring Station CP-KTN-NMS5


LOCATION PLAN
A1 1 : 10000
A3 1 : 20000
LUNG MAN KAM TO ROAD
NG TUNG RIVER
CP-KTN-NMS5
Proposed
Reclamation Plant
MATCH LINE
FOR CONTINUATION SEE DWG 401582/BAV/GEN/GN/103
NOTES:
1. ALL LEVELS ARE IN REFERENCE TO METRES ABOVE THE HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. FOR GENERAL NOTES, REFER TO 401582/BAV/GEN/GN/001
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
COPYRIGHT RESERVED
THIS PRINT MAY NOT BE COPIED, TRACED, OR EXHIBITED WITHOUT PERMISSION OF THE WATER AUTHORITY.
1. THE BASE PLAN IS EXTRACTED FROM SURVEY SHEET NOS. 2-NC, 2-SE, 3NW AND 3-SW.
LEGEND:
PART 1 OF THE SITE
PART 2 OF THE SITE
PART 3 OF THE SITE
PART 4 OF THE SITE
PART 5 OF THE SITE
PART 6 OF THE SITE
PART 7 OF THE SITE
PART W1 OF THE SITE
Contract No.
3/WSD/20
RECLAIMED WATER SUPPLY TO SHEUNG SHUI AND FANLING
Noise Monitoring Station

Appendix E

Valid Calibration Certificates of Monitoring Equipment

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C224779
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC22-1539) Date of Receipt / 收件日期 : 4 August 2022

Description / 儀器名稱 : Sound Level Calibrator (EQ085)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10655561
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 20 August 2022

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification & user's specified acceptance criteria.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong
Assistant Engineer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 23 August 2022

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C224779
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C223647
CL281	Multifunction Acoustic Calibrator	AV210017
TST150A	Measuring Amplifier	C221750

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	User's Spec.	Uncertainty of Measured Value (Hz)
1	0.953	1 kHz ± 6 %	± 1

Remarks : - The user's specified acceptance criteria (user's spec.) is a customer pre-defined operating tolerance of the UUT, suitable for one's own intended use.

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C221365
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC22-0258) Date of Receipt / 收件日期 : 14 February 2022

Description / 儀器名稱	:	Sound Level Meter (EQ018)
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-52
Serial No. / 編號	:	00809405
Supplied By / 委託者	:	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 12 March 2022

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Fluke Everett Service Center, USA
- Agilent Technologies / Keysight Technologies

Tested By 測試 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 16 March 2022

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C221365
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C220381
CL281	Multifunction Acoustic Calibrator	AV210017

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.0	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	L_A	A	Fast	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.0	Ref.
			Slow			94.0	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C221365
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_A	A	Fast	94.00	63 Hz	67.8	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.5
					250 Hz	85.4	-8.6 ± 1.4
					500 Hz	90.8	-3.2 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	95.0	+1.2 ± 1.6
					4 kHz	94.7	+1.0 ± 1.6
					8 kHz	92.9	-1.1 (+2.1 ; -3.1)
					16 kHz	85.5	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_C	C	Fast	94.00	63 Hz	93.2	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.5
					250 Hz	94.0	0.0 ± 1.4
					500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	93.6	-0.2 ± 1.6
					4 kHz	92.9	-0.8 ± 1.6
					8 kHz	91.0	-3.0 (+2.1 ; -3.1)
					16 kHz	83.5	-8.5 (+3.5 ; -17.0)

Certificate of Calibration
校正證書

Certificate No. : C221365
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 16463

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	16 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Appendix F

Monitoring Schedule of the Reporting Month and Coming Month

The Reporting Monitoring Schedule (January 2023)

Date		Noise Monitoring (Leq30min)	Ecology Monitoring (Water Bird) *Note*
Sun	1-Jan-23		
Mon	2-Jan-23		
Tue	3-Jan-23	✓	
Wed	4-Jan-23		✓ **(High Tide)**
Thu	5-Jan-23		
Fri	6-Jan-23		✓ **(Low Tide)**
Sat	7-Jan-23		
Sun	8-Jan-23		
Mon	9-Jan-23		
Tue	10-Jan-23	✓	✓ **(Low Tide)**
Wed	11-Jan-23		
Thu	12-Jan-23		✓ **(High Tide)**
Fri	13-Jan-23		
Sat	14-Jan-23		
Sun	15-Jan-23		
Mon	16-Jan-23		
Tue	17-Jan-23	✓	
Wed	18-Jan-23		
Thu	19-Jan-23		
Fri	20-Jan-23		✓ **(High Tide & Low Tide)**
Sat	21-Jan-23		
Sun	22-Jan-23		
Mon	23-Jan-23		
Tue	24-Jan-23		
Wed	25-Jan-23		
Thu	26-Jan-23		✓ **(High Tide)**
Fri	27-Jan-23	✓	
Sat	28-Jan-23		✓ **(Low Tide)**
Sun	29-Jan-23		
Mon	30-Jan-23	✓	
Tue	31-Jan-23		

✓	Monitoring Day
	Sunday or Public Holiday

The Coming Month Monitoring Schedule (February 2023)

Date		Noise Monitoring (Leq30min)	Ecology Monitoring (Water Bird) *Note*
Wed	1-Feb-23		
Thu	2-Feb-23		✓
Fri	3-Feb-23		
Sat	4-Feb-23		
Sun	5-Feb-23		
Mon	6-Feb-23		
Tue	7-Feb-23		
Wed	8-Feb-23		
Thu	9-Feb-23		✓
Fri	10-Feb-23	✓	
Sat	11-Feb-23		
Sun	12-Feb-23		
Mon	13-Feb-23		
Tue	14-Feb-23		
Wed	15-Feb-23		✓
Thu	16-Feb-23	✓	
Fri	17-Feb-23		
Sat	18-Feb-23		
Sun	19-Feb-23		
Mon	20-Feb-23		
Tue	21-Feb-23		✓
Wed	22-Feb-23	✓	
Thu	23-Feb-23		
Fri	24-Feb-23		
Sat	25-Feb-23		
Sun	26-Feb-23		
Mon	27-Feb-23	✓	
Tue	28-Feb-23		✓

Note:

Ecology monitoring dates are tentative and are subject to change

✓	Monitoring Day
	Sunday or Public Holiday

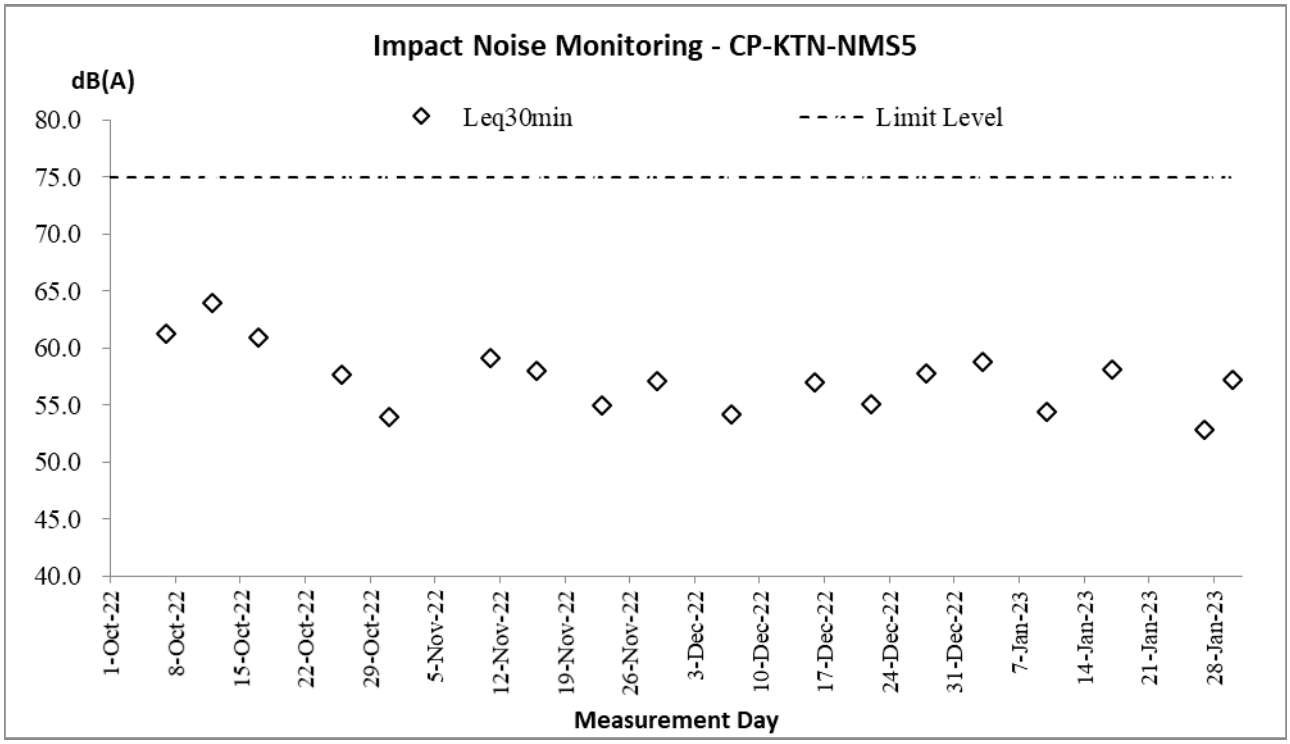
Appendix G

Database of Monitoring Result

Daytime Noise Measurement Results (dB) at CP-KTN-NMS5																				
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Corrected Leq30min dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
3-Jan-23	9:20	58.2	61.1	57.6	58.9	60.6	57.7	58.8	61.0	57.9	59.3	60.9	58.3	58.9	60.7	58.0	58.4	59.9	57.7	58.8	61.8
10-Jan-23	13:30	51.2	53.4	50.5	55.2	55.8	50.8	56.6	58.4	51.1	54.4	54.8	51.1	53.3	53.2	51.7	54.1	55.9	50.9	54.4	57.4
17-Jan-23	15:12	56.8	59.2	53.3	58.2	61.3	54.2	59.1	62.1	56.0	59.3	62.3	56.2	58.4	61.3	54.6	56.2	59.5	53.8	58.1	61.1
27-Jan-23	9:16	53.6	57.8	48.0	52.6	54.6	48.5	53.0	54.4	49.0	52.5	54.2	49.3	51.1	54.1	47.8	53.8	56.9	50.1	52.9	55.9
30-Jan-23	10:23	56.2	58.0	54.5	58.3	61.5	56.0	55.7	58.0	54.0	56.8	58.0	55.0	58.3	60.5	56.5	57.4	60.0	56.0	57.2	60.2

Appendix H

Graphical Plots for Monitoring Result


Impact Noise Monitoring - CP-KTN-NMS5
dB(A)
Leq30min
Limit Level
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
1-Oct-22
8-Oct-22
15-Oct-22
22-Oct-22
29-Oct-22
5-Nov-22
12-Nov-22
19-Nov-22
26-Nov-22
3-Dec-22
10-Dec-22
17-Dec-22
24-Dec-22
31-Dec-22
7-Jan-23
14-Jan-23
21-Jan-23
28-Jan-23
Measurement Day

Appendix I

Monthly Summary Waste Flow Table

Contract No. : 3/WSD/20
Contact Name: Reclaimed Water Supply to Sheung Shui and Fanling

Monthly Summary Waste Flow Table for _2023___ (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0.1842	0	0	0	0.1842	0	0	0	0	0	0.0034
Feb											
Mar											
Apr											
May											
June											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0.1842	0	0	0	0.1842	0	0	0	0	0	0.0034

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
25.472	5.386	0	0	25.472	0	0	0	0	0	0.3885

Notes:
(1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(3) The quantities of C&D material indicated in the half-yearly status report should be in tonnes. If the project offices do not have information on the densities of the material for the time being, they could initially adopt the following conversion factors for reporting purpose: insitu densities of rock and soil to be 2.5 tonnes/m3 and 2.0 tonnes/m3 respectively; and densities of imported rock and soil to be 2.0 tonnes/m3 and 1.8 tonnes/m3 respectively.
(4) Boken concrete and bitumen = 2.4 tonnes/m3
(5) Conversion to 1000m3 for general refuse is weight in 1000kg multiply by 0.002

Appendix J

Implementation Schedule for Environmental Mitigation Measures (ISEMM)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
Common Mitigation Measures (Applicable to ALL Project Components, including DPs and Non-DPs)							
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO To control the dust impact to meet HKAQO and TM-EIAO
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO To control the dust impact to meet HKAQO and TM-EIAO
S3.8	D3	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction phase: • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hard cores; • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO To control the dust impact to meet HKAQO and TM-EIAO

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; and • Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.					
Noise Impact (Construction Phase)							
S4.9	N1	Implement the following good site management practices: • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; • silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • mobile plant should be sited as far away from NSRs as possible and practicable; and • material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise	Contractor	All construction sites	Construction phase	Annex 5, TM-EIAO
S4.9	N2	Install temporary site hoarding (approx. 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level	Contractor	All construction sites	Construction phase	Annex 5, TM-EIAO

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
			zone of NSRs through partial screening.				
S4.9	N3	Install movable noise barriers, full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites	Construction phase	Annex 5, TM-EIAO
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites	Construction phase	Annex 5, TM-EIAO
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites	Construction phase	Annex 5, TM-EIAO
Water Quality Impact (Construction Phase)							
S5.7	W1	Construction Runoff In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. **Storm Water Pollution Control Plan** • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipment in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m3 capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications	Control construction runoff	Contractor	All construction sites	Construction phase	WPCO, EIAO, TM-EIAO

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		where the influent is pumped. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the Contractor prior to the commencement of construction. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff					

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		during storm events. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					
S5.7	W2	**Sewage from Workforce** • Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. • Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.	Handling of site sewage	Contractor	All construction sites	Construction phase	WPCO, EIAO, TM-EIAO

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
Waste Management (Construction Waste)							
S7.6	WM1	Waste Reduction Measures Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • proper storage and site practices to minimize the potential for damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); and • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	Waste Disposal Ordinance
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	Waste Disposal Ordinance
S7.6	WM3	**Good Site Practice** The following good site practices are recommended throughout the construction activities: • nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • provision of sufficient waste disposal points and regular collection for disposal; • appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	Waste Disposal Ordinance
S7.6	WM4	**Storage of Waste** The following recommendation should be implemented to minimize the impacts:	Minimize waste from storage impacts	Contractor	All construction	Construction phase	Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		• waste such as soil should be handled and stored well to ensure secure containment; • stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • different locations should be designated to stockpile each material to enhance reuse;			sites		
S7.6	WM5	**Collection and Transportation of Waste** The following recommendation should minimize the impacts: • remove waste in timely manner; • employ the trucks with cover or enclosed containers for waste transportation; • obtain relevant waste disposal permits from the appropriate authorities; and • disposal of waste should be done at licensed waste disposal facilities.	Minimize waste from storage impacts	Contractor	All construction sites	Construction phase	Waste Disposal Ordinance
S7.6	WM6	**Excavated and C&D Material** Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: • maintain temporary stockpiles and reuse excavated fill material for backfilling; • carry out on-site sorting; • deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • implement a recording system for the amount of waste generated, recycled and disposed of for checking; Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage. Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.	Minimize waste impacts from excavated and C&D materials	Contractor	All construction sites	Construction phase	• Land (Miscellaneous Provisions) Ordinance • Waste Disposal Ordinance • ETWB TCW No. 19/2005
S7.6	WM8	**Chemical Waste** • If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	Construction phase	• Waste Disposal (Chemical Waste) General) Regulation • Code of Practice on the Packaging, Labelling and

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.					Storage of Chemical Waste
S7.6	WM9	**General Waste** • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. • A reputable waste collector should be employed to remove general refuse on a daily basis.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	• Waste Disposal Ordinance
S7.6	WM10	**Sewage** • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	• Waste Disposal Ordinance
S7.6	WM11	**Topsoil reuse** – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor / Project Proponent	Onsite	Construction Phase	• ETWB Technical Circular (Works) No.29/2004
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space. Enhance visual amenity of the area and improve the overall landscape character	Government Developer / Detailed Design Consultant / Contractor	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phase	Hong Kong Planning Standards and Guidelines (HKPSG) issued by the Planning Department (As at Aug 2011); Sustainable Building Design Guidelines
S.12.9 MM4	LV6	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to	Protect and Preserve Trees	Government Developer / Detailed Design Consultant / Contractor	Onsite as stipulated in the planning documents for the formulation of	Prior to Construction and Construction Phase	ETWB Technical Circular Works (TCW) No. 29/2004 and 3/2006

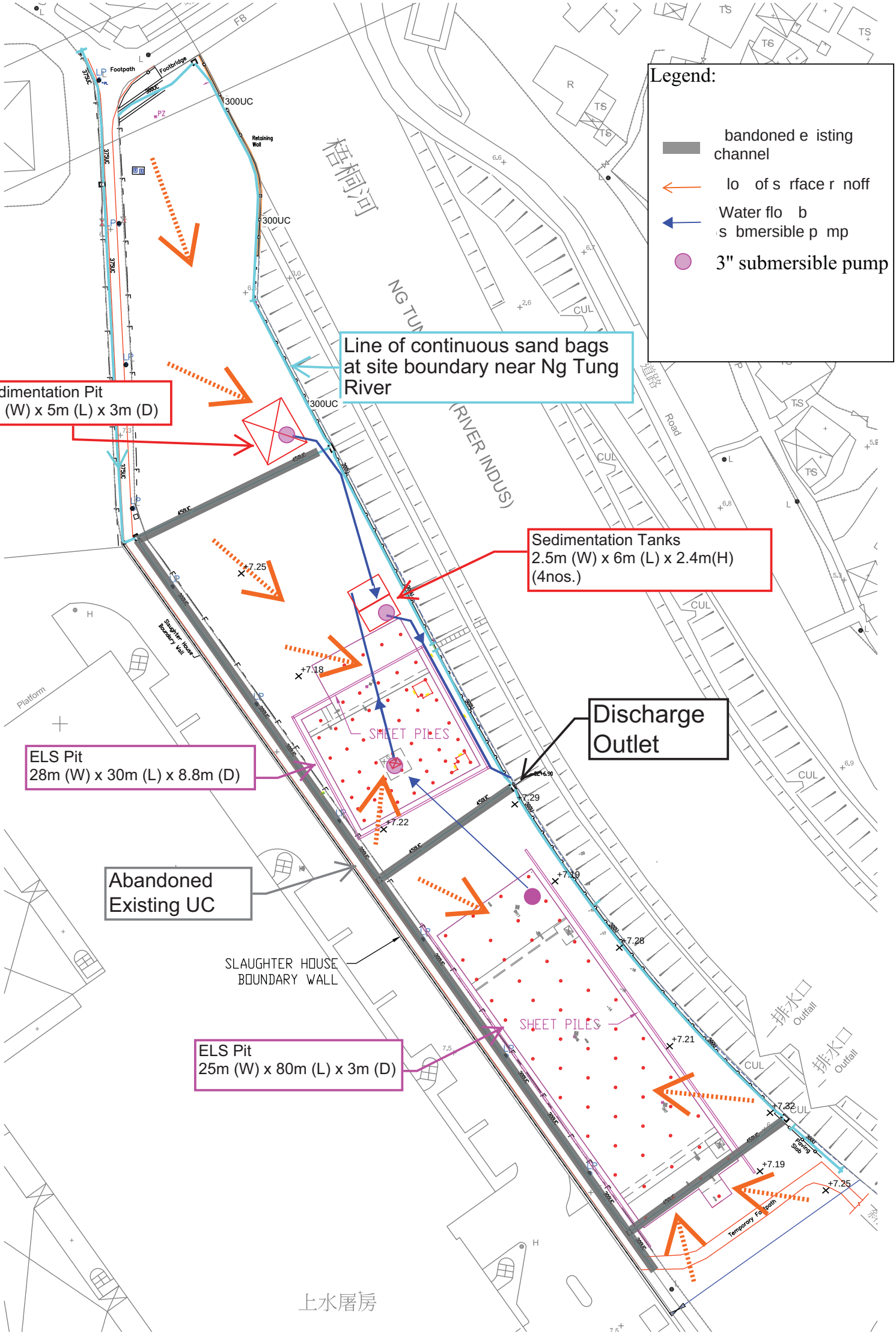
EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.			the Preliminary Layout Plan		
S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Government Developer / Detailed Design Consultant / Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	ETWB TCW 3/2006 and 2/2004 HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit
S.12.9 MM7	LV9	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government Developer / Detailed Design Consultant / Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	ETWB TCW 3/2006 and 2/2004
S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and	Project Proponent /	On appropriate	Prior to Construction,	ETWB TCW No. 11/2004 – Cyber

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
			facilities	Detailed Design Consultant / Contractor / Maintenance Authority	structures	Construction Phase & Maintenance in Operation Phase	Manual for Greening
S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Project Proponent / Detailed Design Consultant / Contractor / Maintenance Authority	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Developer / Detailed Design Consultant / Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA Maintenance and create a pleasant Contractor structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	ETWBTC 3/2006
S12.9 MM14.5	LV20	Screen Hoarding – Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	
S12.9	LV21	Light Control – Construction day and night time lighting should be controlled to	To minimize glare	Government /	Throughout	Construction	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
MM14.6		minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	impact to adjacent VSRs	Developer / Contractor	NDAs	and Operation Phases	
Ecology (Construction Phase)							
S.13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna. No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July). Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna.	Project Proponent / Detailed Design Consultant / Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	TM-EIAO.
S.13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors; Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers. Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant / Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and construction phases.	TM-EIAO.
S.13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	TM-EIAO.

Appendix K

As-built Drawing of Site Temporary Drainage


Legend:
bandoned e isting channel
lo of s rface r noff
Water flo b
s bmersible p mp
3" submersible pump
Line of continuous sand bags at site boundary near Ng Tung River
Sedimentation Pit
5m (W) x 5m (L) x 3m (D)
Sedimentation Tanks
2.5m (W) x 6m (L) x 2.4m(H)
(4nos.)
Discharge Outlet
ELS Pit
28m (W) x 30m (L) x 8.8m (D)
Abandoned Existing UC
SLAUGHTER HOUSE BOUNDARY WALL
ELS Pit
25m (W) x 80m (L) x 3m (D)
SHEET PILES
SHEET PILES
300UC
300UC
300UC
Footpath
Footbridge
Retaining Wall
Slaughter House Boundary Wall
Platform
Road
Temporary Footpath
Paving Slab
Outfall
Outfall
NG TUNG RIVER (RIVER INDUS)
上水屠房

Appendix L

Waterbirds Survey Report for the Reporting Month

ecology
biodiversity
landscape

aec

WSD Contract No. 3/WSD/20 - Reclaimed Water Supply to Sheung Shui and Fanling - Provision of EM&A (Ecological) Monitoring

Monthly Report for January 2023
(Issue 1)

Job Ref.: 21/2063/582 AUES-SWHTSE
Date: 8th February 2023

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WSD Contract No. 3/WSD/20 - Reclaimed Water Supply to Sheung Shui and Fanling - Provision of EM&A (Ecological) Monitoring

Monthly Report for Janurary 2023

(Issue 1)

February 2023

	Name	Signature
Prepared by:	**Nicholas Tam**	
Reviewed by:	**Ida Yu**	
Date:	**8th February 2023**	

Job Ref.: 21/2063/582 AUES-SWHTSE

127 Commercial Centre, Palm Springs, Yuen Long, New Territories, Hong Kong
Tel: +852 2486 2885 Email: aec@aechk.hk

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1 INTRODUCTION

1.1 According to Section 12.3.2.5 of "Updated EM&A Manual for Advance And First Stage Works of Kwu Tung North and Fanling North New Development Areas", monitor of measures to minimise disturbance to waterbirds on Ng Tung, Sheung Tue and Shek Sheung Rivers is required.

1.2 aec Ltd. has been appointed by Action-United Environmental Services & Consulting (AUES) to conduct weekly transect bird surveys at high and low tides along Ng Tung River, Sheung Yue River and Shek Sheung River; and identify sources of actual and potential disturbances to birds due to construction activities of WSD Contract No. 3/WSD/20 – Reclaimed Water Supply to Sheung Shui and Fanling. As instructed by the Contractor, the commencement date of the survey was in the week of 10th January 2022. This monthly report summarises the monitoring findings in January 2023.

2 MONITORING METHODOLOGY

2.1 The survey methodology references the methodology stated in approved Baseline Monitoring Report (Ecology) (Version 1) (prepared by Cinotech Consultants Limited (2019)) under "*Contract No. SPW 08/2019 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1*". Three transects and seven point count locations were selected within the 500m boundary of Ng Tung, Sheung Yue and Shek Sheung River. These locations are shown in **Figure 1** and summarized in **Table 1**.

Table 1 Ecological Monitoring Stations

Monitoring Stations	Descriptions	Influenced by Tidal Action
Transect T1	Along Ng Tung River	No
Transect T2		
Point Count Location P1		
Point Count Location P2		
Point Count Location P3		
Point Count Location P4		
Point Count Location P5	At Shek Sheung River (Low-flow Channel)	No
Transect T3	Along Shek Sheung River & Sheung Yue River	Yes
Point Count Location P6	At Shek Sheung River	Yes
Point Count Location P7	At Intersection between Sheung Yue and Shek Sheung River	Yes

2.2 Surveys were conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station).

2.3 All avifauna species that were seen or heard were identified and quantified along transects and at point count locations. Survey data would be recorded continuously by the surveyor as they walk along the transects, while survey data of each point count location would be collected for 5-minutes after surveyor reaches the designated point count location. During the surveys, the utilisation of Ng Tung River, Sheung Yue River and Shek Shui River and their immediate environs/habitats by waterbirds will be focused. For comparison and data analysis, the transect routes and point count locations followed Figure 1 of the approved Baseline Monitoring Report (Ecology) (Version 1). Locations of T1, T2, and P1 to P4 were adjusted to the opposite side of Ng Tung River as the original transects were inaccessible due to various construction projects.

2.4 Noticeable behaviours such as breeding, nesting, roosting, feeding and presence of recently fledged juveniles were recorded and reported. In the case which such behaviours were observed for species of conservation importance, the Resident Engineer (RE), the Contractor and the Independent Environmental Checker (IEC) would be immediately notified after the survey such that the Contractor could review the current construction programme and minimize disturbances due to construction activities.

2.5 Weather conditions, tidal information, time of the survey and other noticeable activities occurring within the vicinity of the survey area were recorded.

3 ANALYTICAL METHODOLOGY

3.1 Total numbers of waterbirds and six representative waterbird species (listed in **Table 2**) are used as an indicator of the level disturbance to waterbirds at each of the survey location. Species listed as wetland-dependant according to Carey *et al*. (2001) are defined as waterbirds. A significant decline in the abundance of all or representative waterbirds would indicate a high level of disturbance.

Table 2 Representative Waterbirds

Common Name	Species Name	Chinese Name
Chinese Pond Heron	*Ardeola bacchus*	池鷺
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺
Grey Heron	*Ardea cinerea*	蒼鷺
Great Egret	*Ardea alba*	大白鷺
Little Egret	*Egretta garzetta*	小白鷺
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀

3.2 Survey data from each month is compared to the baseline monitoring data. When a decline in the total number of Waterbirds or the number of the representative Waterbird species is recorded the survey data would be compared to the baseline data (from Shek Wu Hui Effluent Polishing Plant Baseline Monitoring Report (Ecology) by Cinotech Consultants Limited, 2019) using a two-sample one-tailed Student's t-test assuming unequal variance to analyse whether the decline is significant.

3.3 If the collected data for the reporting month shows a significant difference at the 95% confidence level, the action level will be triggered. If the collected data for the reporting month shows a significant difference at the 99% confidence level, the limit level is triggered and corresponding suggestions would be given to minimize the disturbances according to **Table 3**.

Table 3 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using Ng Tung, Sheung Yue and Shek Sheung Rivers during Construction Phase

Action Level	Response	Limit Level	Response
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause(s) and if cause(s) identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause(s) and if cause(s) identified as related to the NDAs project instigate remedial action. Review and adjust project's Long Valley Nature Park (LVNP) management measures

Action Level	Response	Limit Level	Response
			to improve conditions for affected species.
Decline in numbers of any one Waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause(s) and if cause(s) identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one Waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause(s) and if cause(s) identified as related to the NDAs project instigate remedial action. Review and adjust project's LVNP management measures to improve conditions for affected species.

Note: Whether numbers are significant depend on species and season after collection and evaluation of baseline survey data.

3.4 In order to increase the sample size and reduce the random error on each survey day, survey data would be collectively analysed on a monthly basis. The collective data of each month is also compared to the baseline data of the respective month and season instead of the entire data set, to account for the seasonal variation in the abundance of waterbirds. In this study, the Winter season is defined as October to March, while the Summer season is defined as April to September.

4 RESULTS

4.1 The weather conditions and tide levels on the survey dates are listed in the table below.

Table 4 Weather Conditions and Tidal Information of Survey Dates in the Reporting Month

High Tide				Low Tide			
Date	**Time**	**Tide (m)**	**Weather**	**Date**	**Time**	**Tide (m)**	**Weather**
4-Jan-23	17:00	1.78	Sunny	6-Jan-23	8:30	0.93	Sunny
12-Jan-23	15:00	1.64	Cloudy	10-Jan-23	8:00	0.22	Rainy
20-Jan-23	10:00	1.52	Cloudy	20-Jan-23	8:00	1.01	Cloudy
26-Jan-23	15:15	1.81	Cloudy	28-Jan-23	11:00	0.81	Sunny

4.2 Abundance and diversity of total bird species and key species are summarized in **Tables 5** and **6** respectively**.** Detailed list of avifauna recorded is provided in **Appendix A**.

Table 5 Total Bird Species and Abundance at Point Count Locations in the Reporting Month

Category	Number of Species	Abundance
All Avifauna	34	404
Waterbirds	14	253

Table 6 Abundance of Representative Waterbirds at Point Count Locations in the Reporting Month

Common Name	Species Name	Chinese Name	Abundance
Chinese Pond Heron	*Ardeola bacchus*	池鷺	13
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	3
Grey Heron	*Ardea cinerea*	蒼鷺	42
Great Egret	*Ardea alba*	大白鷺	75
Little Egret	*Egretta garzetta*	小白鷺	40
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	19

5 ANALYSIS

5.1 The results of Student's t-test for all waterbirds and representative waterbirds are compiled in **Table 7** respectively. Further details are provided in **Appendices B** and **C**.

Table 7 T-test Result for Waterbirds in the Reporting Month

Category	Monthly					Seasonal				
	T-value	*df*	*p*	Action Level	Limit Level	T-value	*df*	*p*	Action Level	Limit Level
All Waterbirds	No decline					No decline				
Chinese Pond Heron	-3.409	8	0.005	*	*	-7.312	30	0.000	*	*
Eastern Cattle Egret	-0.893	8	0.199			-2.883	41	0.003	*	*
Grey Heron	-1.352	8	0.106			-0.635	4	0.280		
Great Egret	No decline					No decline				
Little Egret	-1.260	6	0.127			-2.084	6	0.041	*	
Great Cormorant	-0.728	10	0.242			-1.356	10	0.102		

* = level triggered

5.2 Decline in abundance of Chinese Pond Heron triggered the limit level compared to previous data in January, while decline in abundance of Chinese Pond Heron and Eastern Cattle Egret triggered the limit level of the Winter average. Finally, decline in abundance of Little Egret triggered the action level when compared to the Winter average.

5.3 As discussed in previous months, the decline of individual waterbird species should not be the result of increased disturbances from the Project, as increased disturbance would discourage all waterbirds from foraging near the transect and point count locations instead. Thus it is suggested that construction of the current projects did not cause the decline in Chinese Pond Heron, Eastern Cattle Egret and Little Egrets.

5.4 However, constructions around the survey transects are still active during the reporting month and the following activities were noted:

5.5 Since the survey dated on 4th November, surveyors have recorded works involving laying concrete blocks using cranes across Ng Tung River at P2 and P3, these works were determined to be a part of the North East New Territories Sewerage System Upgrade led by Drainage Services Department. Although the laying was already completed in November, the presence of the concrete blocks throughout the entire reporting month (as seen in Photo 2 of **Appendix D**), and intentional damming of Ng Tung Rive still caused the water level at the entire Ng Tung River covering T1, T2, P1, P2, P3 and P4 to be visibly higher when compared to previous months.

5.6 Since the survey conducted on 11th January, part of the blocks at P2 were removed and the rubber dam was observe to be deflated (Photo 3 of **Appendix D**). However, the water level remained relatively high compared to previous months.

5.7 The construction involving excavation and sheet piling (similar to the previous month) right next to P3 by DSD near the Sheung Shui Slaughter House and the construction by Civil Engineering and Development Department (Photo 5 of **Appendix D**) were both observed active throughout the entire reporting month.

5.8 Monitoring work will be continued next month to evaluate any construction impact on waterbirds. The construction site should continue keeping the best site practice in noise control to minimize disturbance caused to waterbirds. No further action is advised at the moment.

6 OBSERVATIONS

6.1 The types of Waterbird behavior observed during ecological monitoring are listed below:

- Flying
- Resting
- Foraging

6.2 The anthropogenic activities observed during ecological monitoring are listed in **Table 8.**

Table 8 Observations of the anthropogenic activities during the Ecological Monitoring in the Reporting Month

Location	Observations	
	Project Related	**Non-project Related**
T1 (PC1, PC2)	/	laying of concrete and damming blocks at P2 (DSD)
T2 (PC3, PC4)	Use of crane, scaffolding	Fishing, laying of concrete blocks at P3 (DSD)
T3 (PC6, PC7)	/	Fishing, piling works at P7 (CEDD)

7 REFERENCES

Carey, G.J., Chalmers, M.L., Diskin, D.A., Kennerley, P.R., Leader, P.J., Leven, M.R., Lewthwaite, R.W., Melville, D.S., Turnbull, M., and Young, L. 2001. The Avifauna of Hong Kong. Hong Kong Bird Watching Society, Hong Kong.

Cinotech Consultants Limited. 2019. Contract No. SPW 08/2019 Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 Baseline Monitoring Report (Ecology) (Version 1). Accessed from https://shekwuhui.cinotech.hk/?page_id=24 in Jan 2022.

Appendix A Recorded Bird Species and their Abundance in the Reporting Month

Common Name	Chinese Name	Scientific Name	Waterbird	Point Count Abundance	Transect Abundance
Chinese Pond Heron	池鷺	*Ardeola bacchus*	Y	12	++
Eastern Cattle Egret	牛背鷺	*Bubulcus coromandus*	Y	3	+
Grey Heron	蒼鷺	*Ardea cinerea*	Y	42	+++++
Great Egret	大白鷺	*Ardea alba*	Y	75	++
Little Egret	小白鷺	*Egretta garzetta*	Y	40	+++
Great Cormorant	普通鸕鷀	*Phalacrocorax carbo*	Y	19	++++
Black Kite	黑鳶	*Milvus migrans*	N	1	+
White-breasted Waterhen	白胸苦惡鳥	*Amaurornis phoenicurus*	Y	1	
Black-winged Stilt	黑翅長腳鷸	*Himantopus himantopus*	Y	32	+++++
Common Sandpiper	磯鷸	*Actitis hypoleucos*	Y	5	+
Green Sandpiper	白腰草鷸	*Tringa ochropus*	Y	4	
Common Greenshank	青腳鷸	*Tringa nebularia*	Y	6	+
Rock Dove	原鴿	*Columba livia*	N		+
Spotted Dove	珠頸斑鳩	*Spilopelia chinensis*	N	11	++
Greater Coucal	褐翅鴉鵑	*Centropus sinensis*	N		+
Asian Koel	噪鵑	*Eudynamys scolopaceus*	N		+
White-throated Kingfisher	白胸翡翠	*Halcyon smyrnensis*	Y	8	+
Pied Kingfisher	斑魚狗	*Ceryle rudis*	Y	4	+
Brown Shrike	紅尾伯勞	*Lanius cristatus*	N	1	
Long-tailed Shrike	棕背伯勞	*Lanius schach*	N		+
Black Drongo	黑卷尾	*Dicrurus macrocercus*	N		+
Red-billed Blue Magpie	紅嘴藍鵲	*Urocissa erythroryncha*	N	8	
Oriental Magpie	喜鵲	*Pica serica*	N		+
House Crow	家鴉	*Corvus splendens*	N	1	
Collared Crow	白頸鴉	*Corvus torquatus*	Y	2	+
Large-billed Crow	大嘴烏鴉	*Corvus macrorhynchos*	N	3	
Cinereous Tit	蒼背山雀	*Parus cinereus*	N	3	+
Red-whiskered Bulbul	紅耳鵯	*Pycnonotus jocosus*	N	7	+++
Chinese Bulbul	白頭鵯	*Pycnonotus sinensis*	N	16	
Barn Swallow	家燕	*Hirundo rustica*	N		++
Yellow-browed Warbler	黃眉柳鶯	*Phylloscopus inornatus*	N	13	+++
Pallas's leaf Warbler	黃腰柳鶯	*Phylloscopus proregulus*	N		+
Dusky Warbler	褐柳鶯	*Phylloscopus fuscatus*	N	4	+++
Yellow-bellied Prinia	黃腹鷦鶯	*Prinia flaviventris*	N		+
Common Tailorbird	長尾縫葉鶯	*Orthotomus sutorius*	N	2	+
Masked Laughingthrush	黑臉噪鶥	*Pterorhinus perspicillatus*	N	15	++
Swinhoe's white-eye	暗綠繡眼鳥	*Zosterops simplex*	N	15	+++++
Crested Myna	八哥	*Acridotheres cristatellus*	N	28	+++++
Black-collared Starling	黑領椋鳥	*Gracupica nigricollis*	N		++
Oriental Magpie Robin	鵲鴝	*Copsychus saularis*	N	1	+
Asian Brown Flycatcher	北灰鶲	*Muscicapa dauurica*	N	3	+

Common Name	Chinese Name	Scientific Name	Waterbird	Point Count Abundance	Transect Abundance
Daurian Redstart	北紅尾鴝	*Phoenicurus auroreus*	N	2	+
Eurasian Tree Sparrow	樹麻雀	*Passer montanus*	N		+
Scaly-Breasted Munia	斑文鳥	*Lonchura punctulata*	N		+
Eastern Yellow Wagtail	東黃鶺鴒	*Motacilla tschutschensis*	N	2	+
White Wagtail	白鶺鴒	*Motacilla alba*	N	15	+++
Olive-backed Pipit	樹鷚	*Anthus hodgsoni*	N		+
		Total Point Count Abundance		404	
		Total Waterbirds		253	

For transect abundance, +: 1-10, ++: 11-20, +++: 21-30, ++++: 31-40, +++++: >40

Appendix B Total Waterbird Abundance from Point Count

Survey Information				Number of Waterbirds	
Week	**Date**	**Time**	**Tide Level**	**Individuals Recorded**	**Total**
1	4/1/2023	17:00	High	9	38
	6/1/2023	8:30	Low	29	
2	10/1/2023	8:00	Low	52	61
	12/1/2023	15:00	High	9	
3	20/1/2023	8:00	High	42	106
	20/1/2023	10:00	Low	64	
4	26/1/2023	15:15	High	10	48
	28/1/2023	11:00	Low	38	
			Survey Average		63.25
			Baseline	Janurary Average	62.75
				Winter Average	60.77

Appendix C Abundance of Representative Waterbirds from Point Count

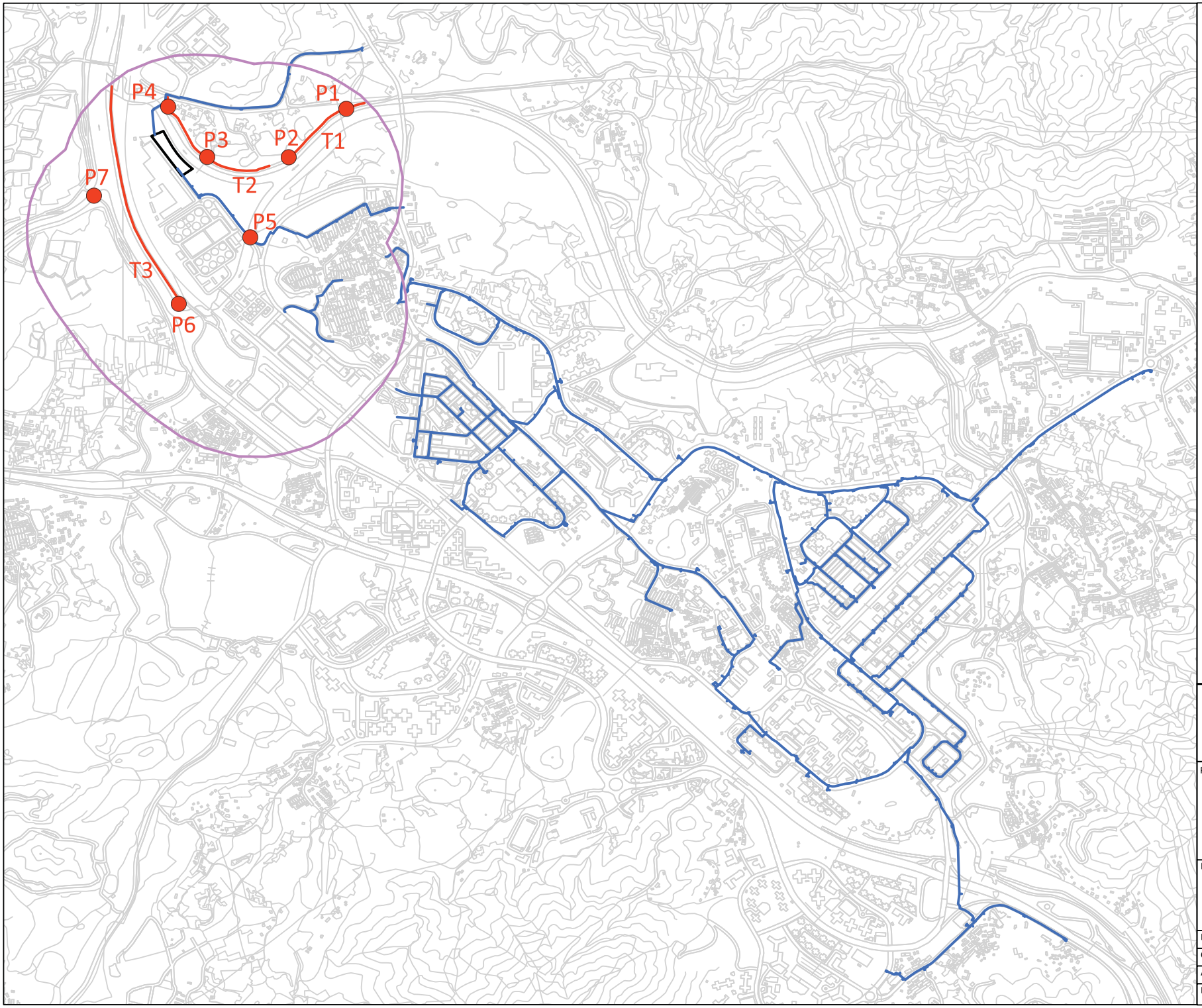
Representative Species		Recorded Abundance (Jan 2023)						Baseline	
Common Name	Species Name	Week 1	Week 2	Week 3	Week 4		Average	Jan Average	Winter Average
Chinese Pond Heron	*Ardeola bacchus*	3	2	4	3		3	8.25	9.21
Eastern Cattle Egret	*Bubulcus coromandus*	1	0	1	1		0.75	1.5	3.77
Grey Heron	*Ardea cinerea*	4	8	20	10		10.5	16.88	12.82
Great Egret	*Ardea alba*	1	23	41	10		18.75	4.75	5.15
Little Egret	*Egretta garzetta*	8	10	15	7		10	12.75	14.36
Great Cormorant	*Phalacrocorax carbo*	2	8	4	5		4.75	6.5	7.08

Appendix D Survey Photos

Photo 1 Works on current project at P4 (20/1/2023)	**Photo 2** Concrete Blocks laid by DSD and damming at P2 (4/1/2023)
	
Photo 3 Concrete Blocks at P2 (26/1/2023)	**Photo 4** Fishing activities at P4
	
Photo 5 Road works at P7 by CEDD (11/1/2023)	**Photo 6** Great Egrets at P7
	

Figure 1

Transect and Point Count Location



Proposed Shek Wu Hui Water Reclamation Plant

500m Survey Boundary

Proposed Retained Water Mains

Walk Transects

Point Count Locations

ecology biodiversity landscape aec

Project Title:

WSD Contract No. 3/WSD/20 - Reclaimed Water Supply to Sheung Shui and Fanling - Provision of EM&A (Ecological) Monitoring

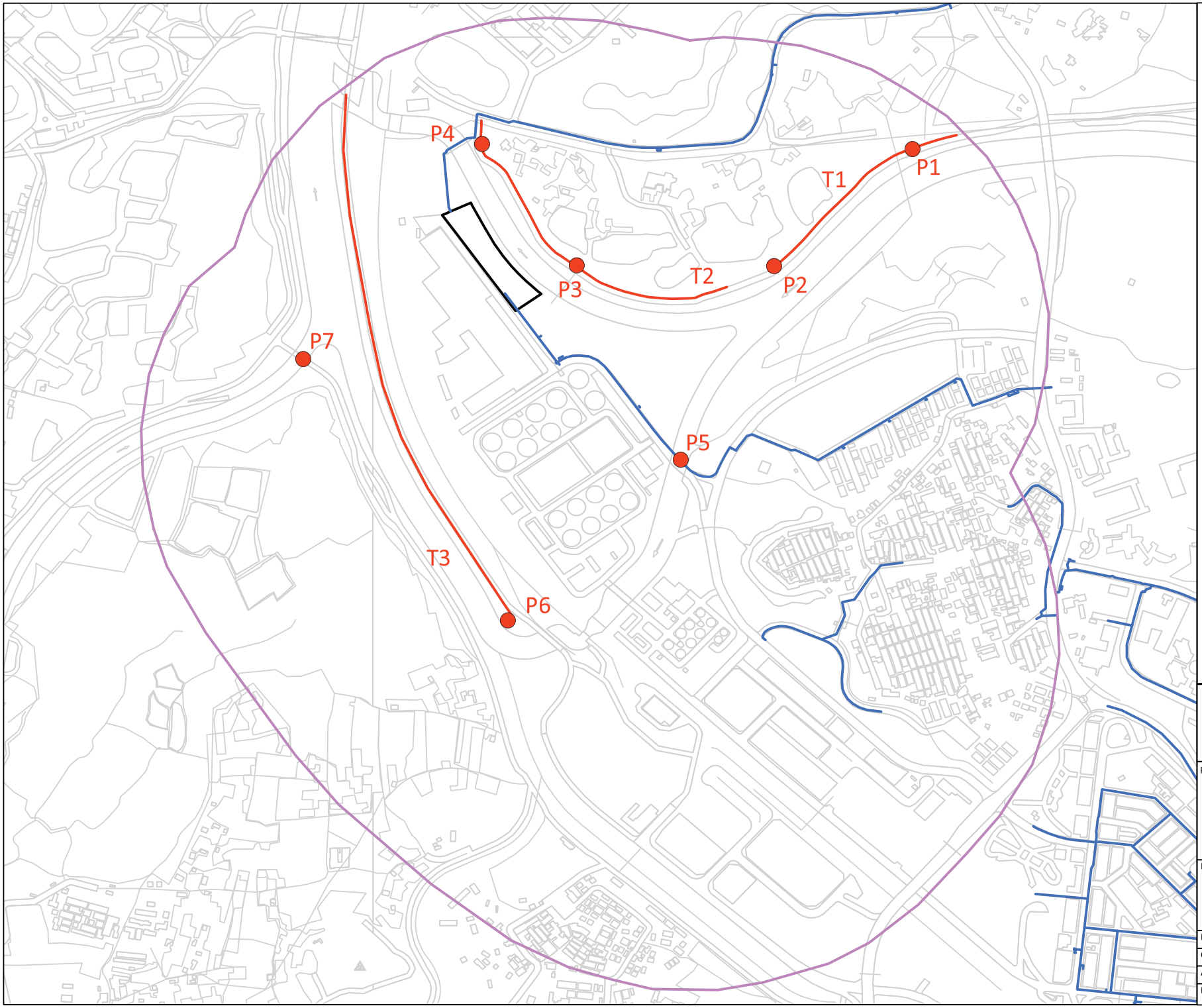
Figure Title:

Transect and Point Count Locations

Drawn by:	NT	Scale:	1:14,500 on A3
Checked By:	NT	Date:	5 July 2022
Approved by:	IY		
Figure Number:	Figure 1	Revision:	2

Figure 1a

Transect and Point Count Location (Zoomed In)



Proposed Shek Wu Hui Water Reclamation Plant

500m Survey Boundary

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ecology biodiversity landscape aec

Project Title:

WSD Contract No. 3/WSD/20 - Reclaimed Water Supply to Sheung Shui and Fanling - Provision of EM&A (Ecological) Monitoring

Figure Title:

Transect and Point Count Locations (zoomed in)

Drawn by:	NT	Scale: 1:6,000	on A3
Checked By:	NT	Date:	5 July 2022
Approved by:	IY		
Figure Number:	Figure 1a	Revision:	2