JOB NO.: TCS01216/21

WSD Contract No.: 3/WSD/20 -

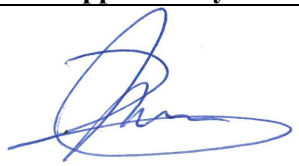
Reclaimed Water Supply to Sheung Shui and Fanling

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT (NO.25) – DECEMBER 2023

PREPARED FOR

WATER SUPPLIES DEPARTMENT

Quality Index

Date	Reference No.	Prepared By	Approved By
10 January 2024	TCS01216/21/600/R0093v1	 Martin Li Environmental Consultant	 TW Tam Environmental Team Leader

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1	10 January 2024	First Submission

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Date: 12th January 2024

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 December 2023

We refer to the monthly EM&A Report for December 2023 for WSD Contract No.: 3/WSD/20 – Reclaimed Water Supply to Sheung Shui and Fanling certified by the Environmental Team Leader on 10th January 2024. 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 8493 5543.

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 **25th** monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from **1** to **31 December 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	4
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 December 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 December 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 December 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, 15, 19 and 28 December 2023***. No non-compliance was noted during the site inspection.

ES.13 IEC inspection was conducted on ***15 December 2023***.

FUTURE KEY ISSUES

ES.14 E&M work at ReWPS & HCF, and fence wall construction work at SWHWRP will be the major construction work in the coming month. The Contractor should pay attention to potential water quality impact from fence wall construction work and waste impact from E&M Work, and implement mitigation measures according to the ISEMM.

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 December 2021***. Also, construction activities of the Contract were commencement on ***7 December 2021***.

1.1.11 This is **25th** monthly EM&A report to presenting the monitoring results and inspection findings from ***1*** to ***31 December 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***.
- ReWPS (Pump Hall & Pump sump) – installation of main pumps & associated pipe works, installation of Stoplog and Penstock
- CLP Cable Laying Work
- External Works at SWHWRP – Fence wall footing & Stem wall, Drainage Pipe & Catchpit, CLP Ducts & Drawpits, E&M Ducts & Drawpits, Reclaimed Water Mains, DN450 Overflow pipe, NS180 FS Pipe, NS32 & NS40 Fresh Water Pipe & Flushing Water Pipe, installation of Surge Vessel
- Optical Fiber at SWHWRP

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

Item	Description	Licence/Permit Status		
		Ref. no.	Effective Date	Expiry Date
3	Chemical Waste Producer Registration	Application was made on 3 Aug 2021	3 Aug 2021	Till the Contract ends
4	Water Pollution Control Ordinance – Discharge Licence	Discharge Licence No.: WT00039707-2021	17 Nov 2021	30 Nov 2026
5	Construction Noise Permit	CNP No. GW-RN1156-23	27 Nov 2023	26 Mar 2024

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 – 75

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 **4** 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))
8-Dec-23	13:30	60
13-Dec-23	9:30	57
22-Dec-23	9:28	65
29-Dec-23	15:44	62
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 ***Five (5)*** 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	37	391
Waterbirds	15	238

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	17
Eastern Cattle Egret	Bubulcus coromandus	牛背鷺	22
Grey Heron	Ardea cinerea	蒼鷺	31
Great Egret	Ardea alba	大白鷺	47
Little Egret	Egretta garzetta	小白鷺	48
Great Cormorant	Phalacrocorax carbo	普通鸕鷀	18

5.2.3 The result was compared with the Monthly data, and decline in abundance of Chinese Pond Heron and Grey Heron 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 As discussed in previous reporting period, the decline of individual waterbird species should not be the result of increased disturbances from the Project or its surrounding on-going projects, as increased disturbance would discourage multiple waterbird species from foraging near the transect and point count locations instead. Thus it is concluded that the decline in the two bird species are not related to the construction works of the Project.

5.2.5 In addition, the construction works by other Projects around the survey transects observed in previous month are still active during the reporting month. A playback device for bird calls was seen to be installed near the pond in T1 during the survey in early April 2023 by other Project but the playback device was not switched on during the report month. However, Egret dummies were observed being tied on the trees of the same pond since the survey on 17th October 2023 and may attract roosting ardeids. This may potentially lower the number of waterbirds and representative waterbirds visiting P1 and P2 as the birds would be incentivized to forage away from these two points and in the pond instead.

5.2.6 Road enhancement and sewerage system upgrade works by other Project was observed remain active along T2 near P3.

5.2.7 An extension of this sewerage system upgrade was observed to be in operation at the Eastern bank of Shek Sheung River near P5 since the survey in late August 2023. Machinery and stockpiles were observed within its construction area, which may be a potential source of disturbance that discourages birds from foraging near P5.

5.2.8 The construction work by other Project near P7 was also observed active throughout the entire reporting month. Also, discharge from the same site to Shek Sheung River was observed during the survey on 15th December 2023. Piling works of the same construction was also observed at T3, roughly midway between P6 and P7, and since the survey on 11th September 2023, excavators were observed on the opposite bank to the survey transect. Additionally, concrete blocks were observed in the river next to the piling site during the survey on 29th November 2023.

5.2.9 Additionally, cylindrical tubes of concrete were observed to be placed into Shek Sheung River near pond 6 during the survey on 25th October 2023, the tubes were observed to be filled with soil and planted with vegetation on two of the tubes during the survey on 11th December 2023.

5.2.10 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)	0.543	-
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)	0.543	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)	0.016	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, 15, 19 and 28 December 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 December 2023	• The Contractor should remove or cover opened cement bag.	The opened cement bag was removed.
15 December 2023	• No environmental issue was observed during site inspection.	NA
19 December 2023	• No environmental issue was observed during site inspection.	NA
28 December 2023	• No 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 December 2023	0	0	NA

Table 8-1-2 Statistical Summary of Environmental Summons

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

Table 8-1-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 December 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:

- ReWPS (Pump Hall & Pump Sump) - Main pump and associated pipe work, installation of Stoplog and Penstock
- CLP Cable Laying Work
- External Works at SWHWRP
- Optical Fiber construction at SWHWRP
- Penstocks installation works and E&M Works at HCF

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:

Fence wall construction and cable laying work at SWHWRP

- Cover the excavated material from pipe laying work with impervious sheet to avoid water quality impact during rainy days.
- 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;
- Proper management of general refuse and chemical waste generated on site.
- Keep review the temporary drainage system on site during rainy reason
- Chemical label for chemical container should be regularly checked and provided.
- Sufficient secondary containment for chemical containers should be provided at work area.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

10.1.1 This is **25th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 December 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, 15, 19 and 28 December 2023***. The mitigation measures implemented was considered satisfactory. No non-compliance observed during the site inspection.

10.2 RECOMMENDATIONS

10.2.1 E&M work at ReWPS & HCF, and fence wall construction work at SWHWRP will be the major construction work in the coming month. The Contractor should pay attention to potential water quality impact from fence wall construction work and waste impact from E&M Work, and implement mitigation measures according to the ISEMM.

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

N

830100 E

841700 N

841600 N

SURGE VESSEL

UNDERGROUND FLOWMETER CHAMBER

ANCILLARY ROOMS

MOTOR HALL

RECLAIMED WATER REFILLING STATION WITH UNDERGEOUND WATER TANK

ANCILLARY ROOMS

BUFFER TANK

HYPO-CHLORINATION CONTACT TANK

INLET CHAMBER

SHEUNG SHUI SLAUGHTER HOUSE

TO BE CONNECTED WITH PROPOSED PEOMENADE TO BE CONSTRUCTED BY OTHERS

NG TUNG RIVER (RIVER INDUS)

Ramp

Platform

Outfall

CUL

FP

TS

Road

Sheung Shui Slaughter House

PLAN
SCALE 1 : 400

N

830300 E

FU TEI AU ROAD

導管

SHEUNG YUE RIVER

石上河

SHEK SHEUNG

CHUK WAN STREET

污水處理廠
Sewage Treatment Works

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

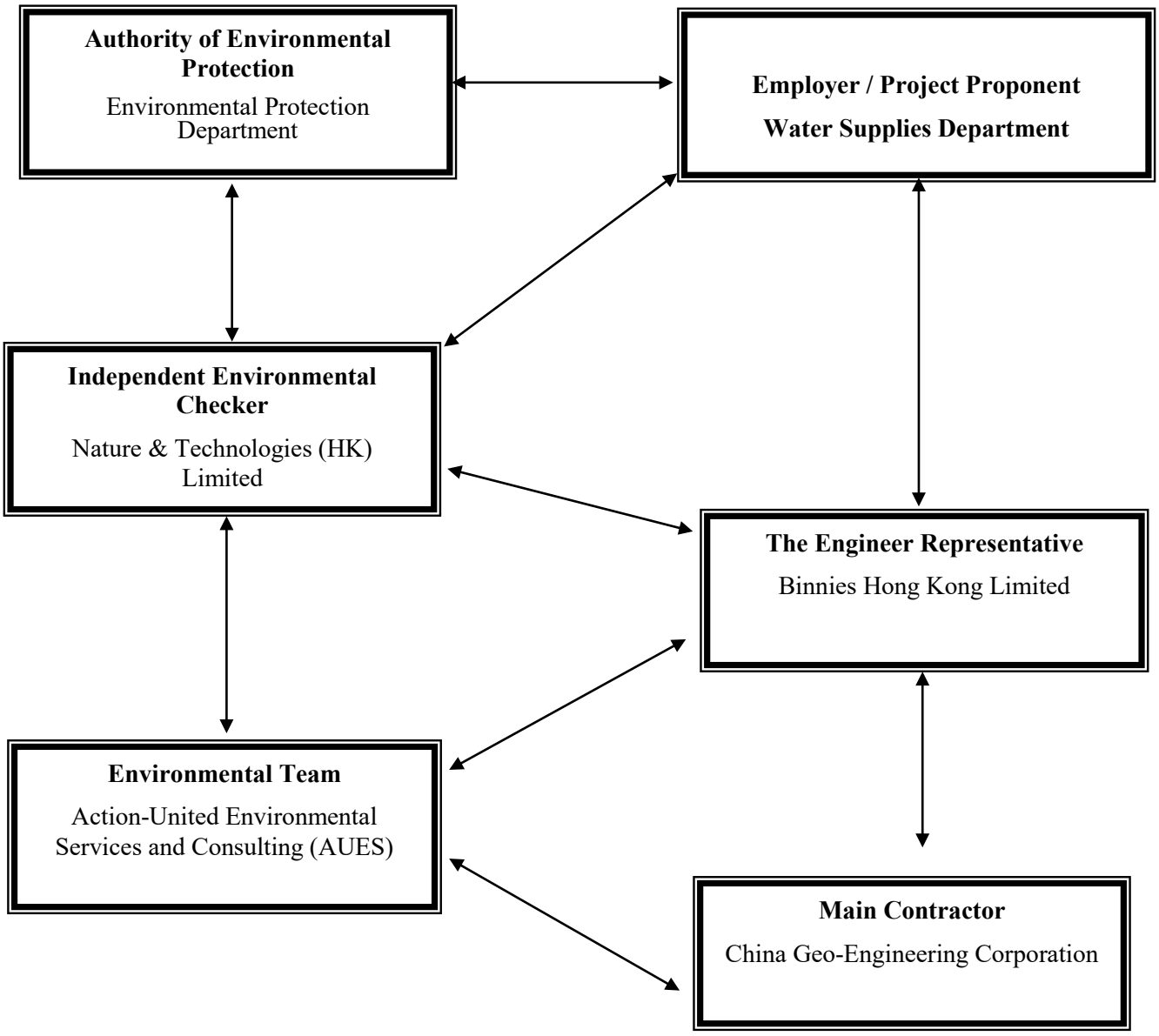
Plot Date: 3/15/2021 11:20:19 AM

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	Anny Yuen	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	Chedison Lau	6274 3903	3wsd20@gmail.com
AUES	Environmental Team Leader	T. W. Tam	2959 6059	twtam@fordbusiness.com
AUES	Environmental Consultant	Martin Li	2959 6059	martinli@fordbusiness.com

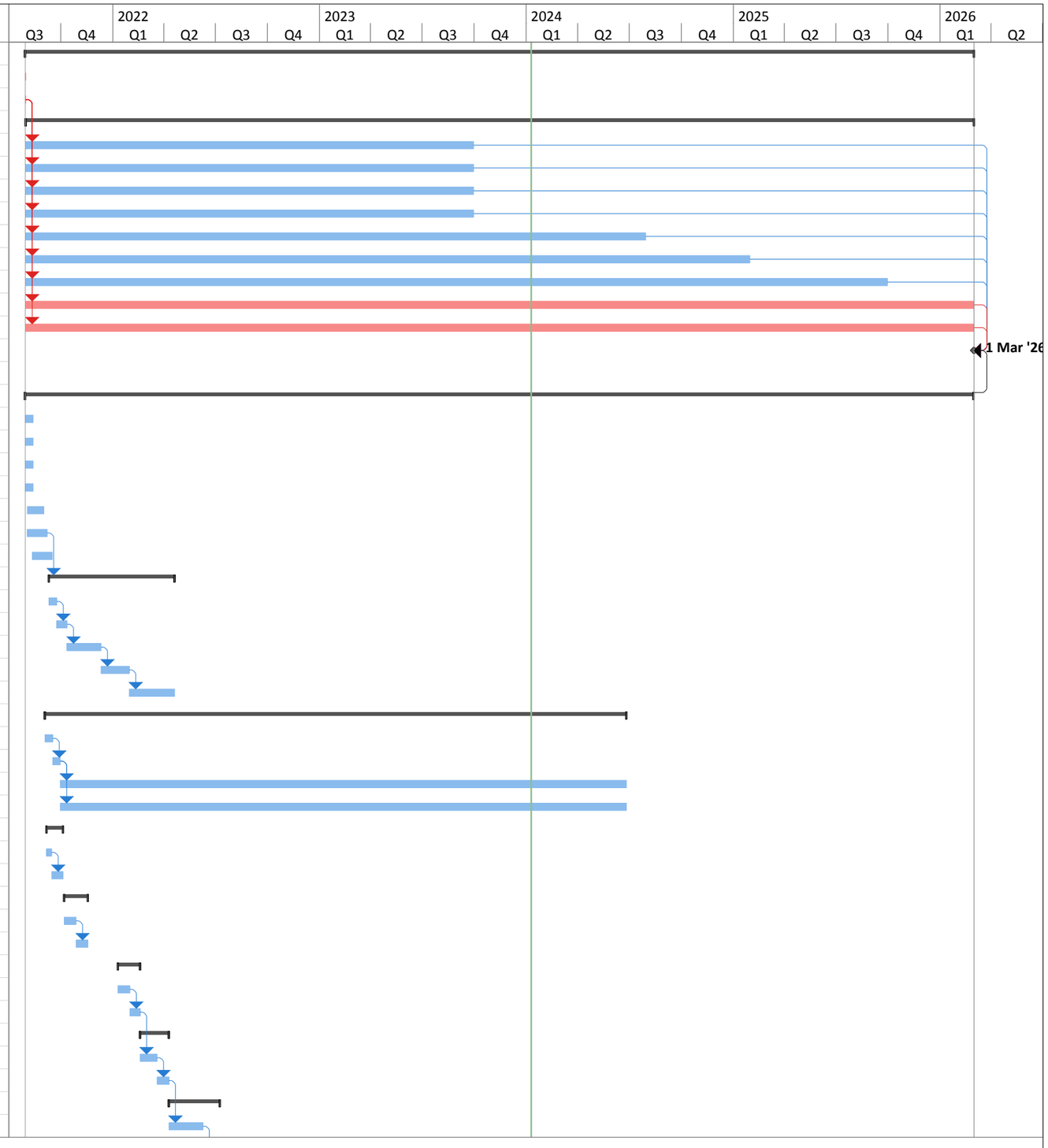
Legend:

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

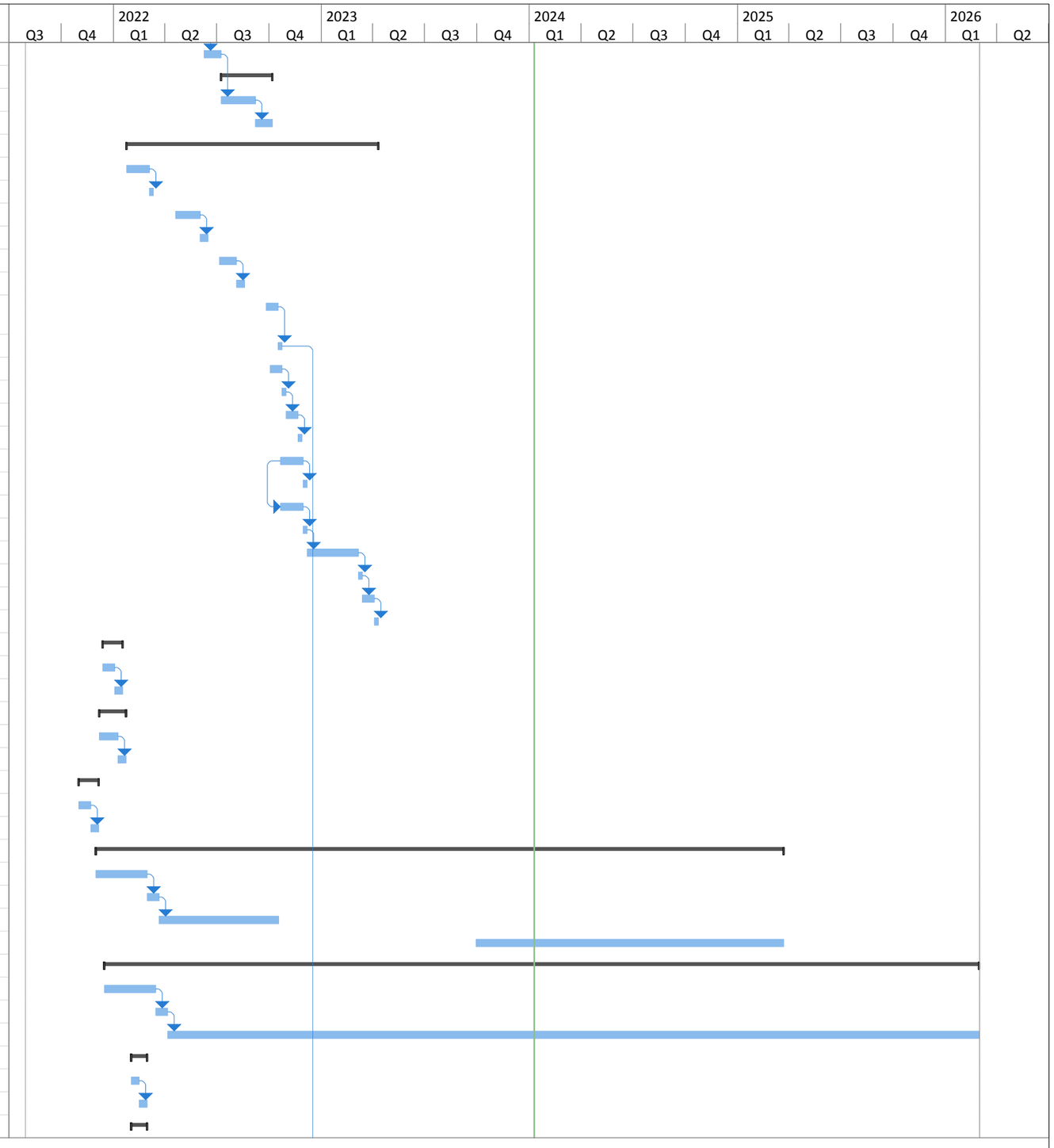
ID	Task Name	Duration	Start
1	**Key Dates**	**1676 days**	**30/7/21**
2	Contract Date	1 day	30/7/21
3	Starting Date	1 day	30/7/21
4	**Contract Period**	**1675 days**	**31/7/21**
5	Section 1 - Shek Wu Hui Water Reclamation Plant (SWHWRP)	791 days	31/7/21
6	Section 2 - Landscaping works of SWHWRP	791 days	31/7/21
7	Section 3 - Modification of Table Hill Reclaimed Water Service Reservoir	791 days	31/7/21
8	Section 4 - Mainlaying works in part 3 of the Site	791 days	31/7/21
9	Section 5 - Mainlaying works in part 4 of the Site	1095 days	31/7/21
10	Section 6 - Mainlaying works in part 5 of the Site	1279 days	31/7/21
11	Section 7 - Mainlaying works in part 6 of the Site	1522 days	31/7/21
12	Section 8 - Mainlaying works in part 7 of the Site & remaining WM works	1675 days	31/7/21
13	Section 9 - Conversion works of reclaimed water	1675 days	31/7/21
14	**Contract Completion date**	**0 days**	**1/3/26**
15			
16	**Preliminary & General**	**1675 days**	**30/7/21**
17	Submission of Draft Safety Plan	14 days	30/7/21
18	Submission of Draft Environmental Management Plan	14 days	30/7/21
19	Submission of Sub-contractor Management Plan	14 days	30/7/21
20	Notification & request for UU record from utility undertakers	14 days	30/7/21
21	Submission and acceptance of selection procedure for supplier	29 days	3/8/21
22	Submission and acceptance of selection procedure for subcontractor	35 days	3/8/21
23	Agreement on preliminary office layout	35 days	12/8/21
24	Provision of Project Manager's Accommodation	222 days	10/9/21
25	Submission and acceptance of subletting package	14 days	10/9/21
26	Selection of Subcontractor	18 days	24/9/21
27	Submission and acceptance of design and material	60 days	12/10/21
28	Manufacture and delivery of MiC office	50 days	11/12/21
29	Erection of Project Manager's Accommodation	80 days	30/1/22
30	**Selection of Traffic Consultant**	**1027 days**	**3/9/21**
31	Submission and acceptance of subletting package	14 days	3/9/21
32	Selection of traffic consultant	13 days	17/9/21
33	XP application for different Sections	1000 days	30/9/21
34	TTA application and Attend TMLG Meetings for different Sections	1000 days	30/9/21
35	**Selection of Concrete Supplier**	**29 days**	**6/9/21**
36	Submission and acceptance of subletting package	9 days	6/9/21
37	Selection of concrete supplier	20 days	15/9/21
38	**Selection of Subcontractor for Excavation and ELS Works at SWHWRP**	**42 days**	**7/10/21**
39	Submission and acceptance of subletting package	21 days	7/10/21
40	Selection of subcontractor	21 days	28/10/21
41	**Selection of Subcontractor for Structural Works**	**39 days**	**10/1/22**
42	Submission and acceptance of subletting package	21 days	10/1/22
43	Selection of subcontractor	18 days	31/1/22
44	**Selection of Subcontractor for Roadworks**	**51 days**	**18/2/22**
45	Submission and acceptance of subletting package	30 days	18/2/22
46	Selection of subcontractor	21 days	20/3/22
47	**Selection of Subcontractor for Architectural Works**	**90 days**	**10/4/22**
48	Submission and acceptance of subletting package	60 days	10/4/22



Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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
49	Selection of subcontractor	30 days	9/6/22
50	**Selection of Subcontractor for Landscape Works**	**90 days**	**9/7/22**
51	Submission and acceptance of subletting package	60 days	9/7/22
52	Selection of subcontractor	30 days	7/9/22
53	**Selection of Subcontractor for Mainlaying Works**	**442 days**	**24/1/22**
54	Submission and acceptance of subletting package - open trench (for Section 4)	40 days	24/1/22
55	Selection of subcontractor - open trench (for Section 4)	7 days	5/3/22
56	Submission and acceptance of subletting package - open trench (for Section 5)	43 days	20/4/22
57	Selection of subcontractor - open trench (for Section 5)	14 days	2/6/22
58	Submission and acceptance of subletting package - open trench (SC-028)	30 days	6/7/22
59	Selection of subcontractor - open trench (SC-028)	14 days	5/8/22
60	Submission and acceptance of subletting package - open trench (Shek Wu Hui) (SC-035)	21 days	26/9/22
61	Selection of subcontractor - open trench (Shek Wu Hui) (SC-035)	7 days	17/10/22
62	Submission and acceptance of subletting package - open trench (Remaining) (SC-036)	21 days	3/10/22
63	Selection of subcontractor - open trench (Remaining) (SC-036)	7 days	24/10/22
64	Submission and acceptance of subletting package - road marking	21 days	31/10/22
65	Selection of subcontractor - road marking	7 days	21/11/22
66	Submission and acceptance of subletting package - trenchless (SC-029)	40 days	21/10/22
67	Selection of subcontractor - trenchless (SC-029)	7 days	30/11/22
68	Submission and acceptance of subletting package - trenchless (SC-042)	40 days	21/10/22
69	Selection of subcontractor - trenchless (SC-042)	7 days	30/11/22
70	Submission and acceptance of subletting package - trenchless (SC-051)	90 days	7/12/22
71	Selection of subcontractor - trenchless (SC-051)	7 days	7/3/23
72	Submission and acceptance of subletting package - trenchless (SC-052)	21 days	14/3/23
73	Selection of subcontractor - trenchless (SC-052)	7 days	4/4/23
74	**Selection of Supplier for Survey Equipment**	**35 days**	**13/12/21**
75	Submission and acceptance of subletting package	21 days	13/12/21
76	Selection of subcontractor	14 days	3/1/22
77	**Selection of Supplier for Computer Facilities**	**47 days**	**7/12/21**
78	Submission and acceptance of subletting package	33 days	7/12/21
79	Selection of subcontractor	14 days	9/1/22
80	**Selection of Environment Team**	**35 days**	**1/11/21**
81	Submission and acceptance of subletting package	21 days	1/11/21
82	Selection of Environment Team	14 days	22/11/21
83	**BEAM Plus**	**1208 days**	**1/12/21**
84	Submission and acceptance of subletting package	90 days	1/12/21
85	Selection of BEAM plus consultant	21 days	1/3/22
86	BEAM Plus PA submission	210 days	22/3/22
87	BEAM Plus FA submission	540 days	30/9/23
88	**BIM**	**1536 days**	**16/12/21**
89	Submission and acceptance of subletting package	90 days	16/12/21
90	Selection of BIM consultant	21 days	16/3/22
91	Execution of BIM (rebar BIM, CSD and CBWD coordination and production)	1425 days	6/4/22
92	**Selection of Contractor's Designer for foundation works**	**28 days**	**1/2/22**
93	Submission and acceptance of subletting package	14 days	1/2/22
94	Selection of Contractor's Designer	14 days	15/2/22
95	**Selection of Independent Checking Engineer (ICE) for Permanent Works (foundation)**	**28 days**	**1/2/22**



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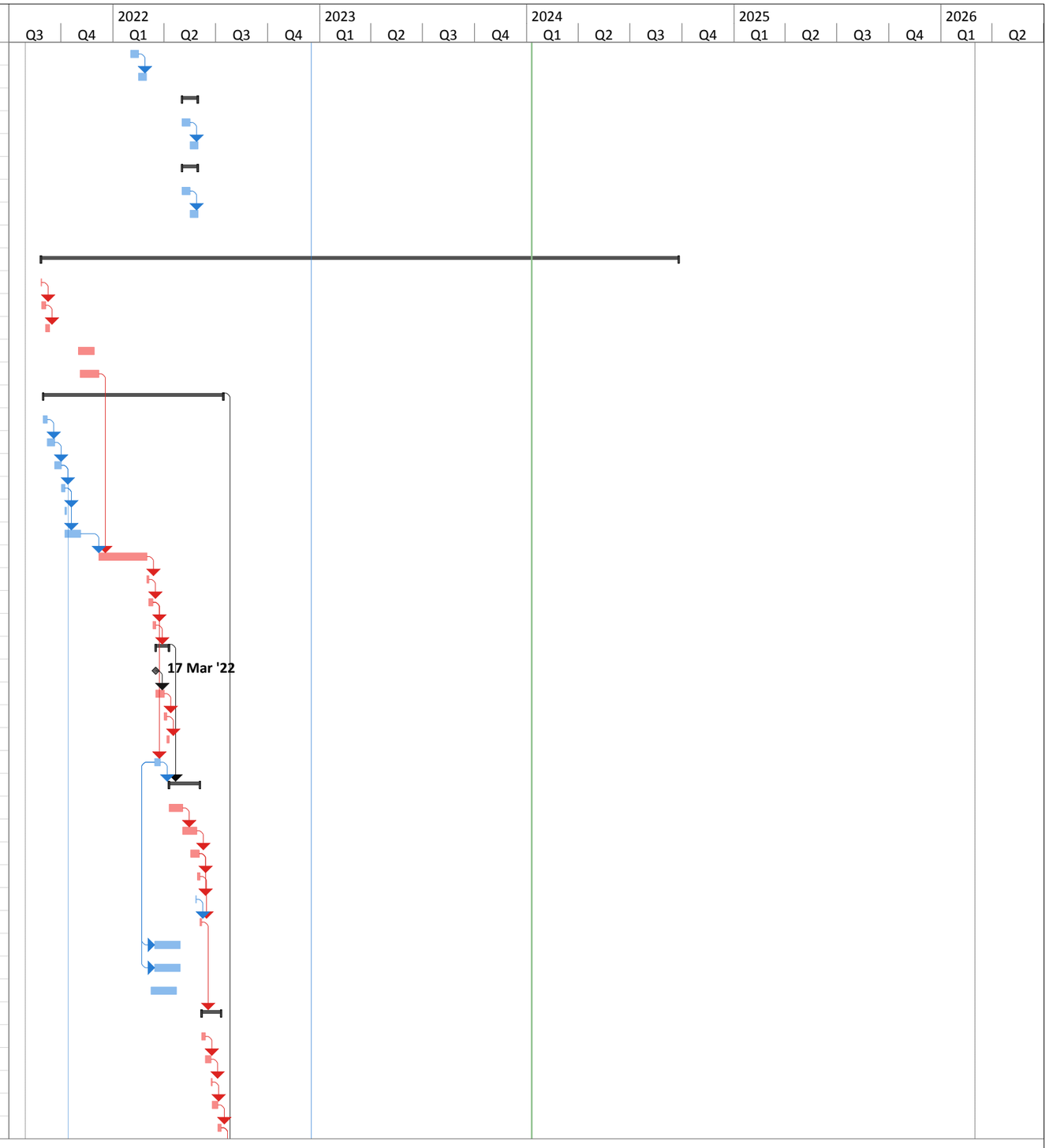
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
96	Submission and acceptance of subletting package	14 days	1/2/22
97	Selection of ICE for Permanent Works	14 days	15/2/22
98	**Selection of Contractor's Designer for Civil & Structural Works**	**28 days**	**3/5/22**
99	Submission and acceptance of subletting package	14 days	3/5/22
100	Selection of Contractor's Designer	14 days	17/5/22
101	**Selection of Independent Checking Engineer (ICE) for Permanent Works (Civil & Structural)**	**28 days**	**3/5/22**
102	Submission and acceptance of subletting package	14 days	3/5/22
103	Selection of ICE for Permanent Works	14 days	17/5/22
104			
105	**Section 1 & 2 - Construction of SWHWRP and Landscaping Works**	**1125.5 days**	**27/8/21**
106	Access Date (part 1 of the Site)	1 day	27/8/21
107	Site clearance	7 days	28/8/21
108	Initial survey	7 days	4/9/21
109	Installation of monitoring instruments and take initial readings	28 days	1/11/21
110	Environmental baseline montioring by ET	33 days	4/11/21
111	**Foundation Works - ReWPS**	**318 days**	**31/8/21**
112	Submission and approval of subletting package for pre-drilling works	7 days	31/8/21
113	Selection of pre-drilling subcontractor	13 days	7/9/21
114	Pre-drilling works (15 nos.)	12 days	20/9/21
115	Pre-drill log report and Point Load Test	6 days	2/10/21
116	CE-020 _ Inclement Weather in October 2021	3 days	8/10/21
117	Design review for foundation works	28 days	8/10/21
118	Piling works (54 nos. of pre-bored H piles) - Total length = 2387m	85 days	7/12/21
119	CE-040 _ Inclement Weather in February 2022	3.5 days	2/3/22
120	Installation of King Post	7 days	5/3/22
121	CE-041 _ Inclement Weather in March 2022	5 days	12/3/22
122	**Testing of pre-bored H-pile - tension load test**	**23.5 days**	**17/3/22**
123	Site ready for setting up of tension load test	0 days	17/3/22
124	(CE-044) EoT due to Shortage of Acetylene Gas Supply	15 days	17/3/22
125	Setting up of load test	4.5 days	1/4/22
126	Tension Load Test	4 days	6/4/22
127	Sheet piling works for ELS - 300 pcs (length 12m)	10 days	15/3/22
128	**Excavation works (6900m3) and ELS installation**	**54.5 days**	**10/4/22**
129	(CE-044) EoT due to Shortage of Acetylene Gas Supply	24 days	10/4/22
130	ELS installation and excavation	25 days	4/5/22
131	Welding of pile head capping plate	15 days	18/5/22
132	CE-052 _ Inclement Weather in May 2022 (under assessment)	4.5 days	30/5/22
133	Laying of blinding layer (1st pour)	1 day	27/5/22
134	Laying of blinding layer (2nd pour)	3 days	3/6/22
135	Submission and acceptance of method statement for pile cap construction	45 days	15/3/22
136	Submission and acceptance of water proofing material	45 days	15/3/22
137	Concrete mix submission, plant trial and acceptance of Grade 50 concrete	45 days	9/3/22
138	**Construction of pile cap**	**34.5 days**	**6/6/22**
139	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	6/6/22
140	Installation of water proofing system and testing	10 days	13/6/22
141	CE-025 _ GI works of Contract ND/2021/01	2 days	23/6/22
142	Rebar fixing	10 days	25/6/22
143	Concreting of pile cap (996 m3)	6 days	5/7/22



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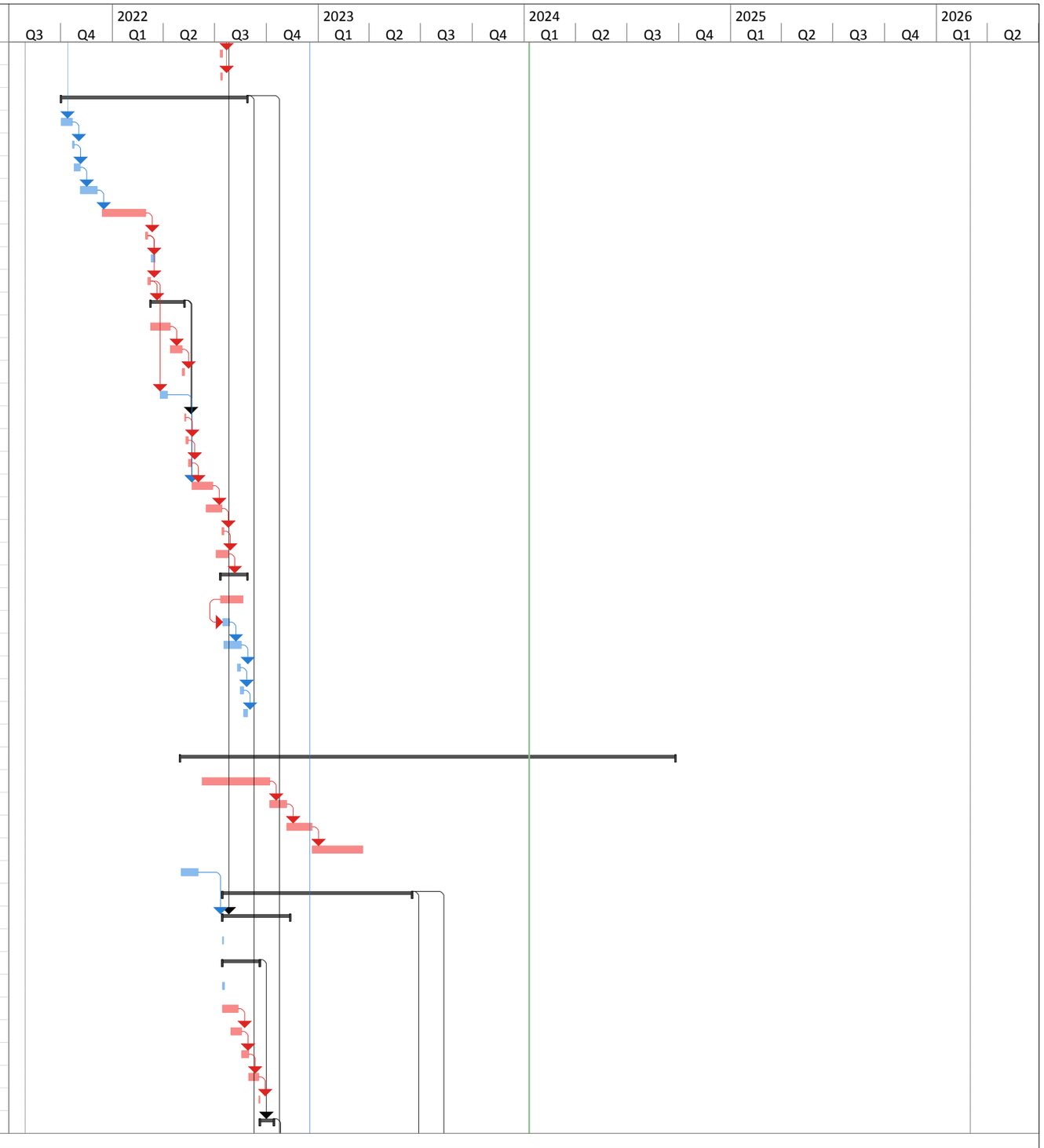
ID	Task Name	Duration	Start
144	Backfilling to pile cap top level	4 days	11/7/22
145	Rebar fixing (horizontal bars at starter bars from pile cap)	3 days	12/7/22
146	**Foundation Works - HCF**	**330.5 days**	**2/10/21**
147	Pre-drilling works (25 nos.)	20 days	2/10/21
148	CE-020 _ Inclement Weather in October 2021	3 days	22/10/21
149	Pre-drill log report and Point Load Test	11 days	25/10/21
150	Design review for foundation works	30 days	5/11/21
151	Piling works - HCF (56 nos. of pre-bored H piles) - Total length = 1871m	77 days	14/12/21
152	CE-040 _ Inclement Weather in February 2022	3.5 days	1/3/22
153	Testing of pre-bored H-pile - proof drilling	7 days	10/3/22
154	CE-041 _ Inclement Weather in March 2022	5 days	4/3/22
155	**Testing of pre-bored H-pile - compression load test**	**60.5 days**	**9/3/22**
156	(CE-044) EoT due to Shortage of Acetylene Gas Supply	35 days	9/3/22
157	Construction of mini-piles and setting up of load test	21 days	13/4/22
158	Compression load test	4.5 days	4/5/22
159	Sheet piling works for ELS - 425 pcs (length 6m)	13 days	26/3/22
160	CE-025 _ GI works of Contract ND/2021/01	2 days	9/5/22
161	CE-052 _ Inclement Weather in May 2022	4.5 days	11/5/22
162	CE-053 _ Inclement Weather in June 2022	6.5 days	15/5/22
163	Excavation works (7600m3)	37 days	22/5/22
164	Welding of pile head capping plate	28 days	16/6/22
165	CE-054 _ Inclement Weather in July 2022	3.5 days	14/7/22
166	Laying of blinding layer	22 days	3/7/22
167	**Construction of pile cap**	**48 days**	**11/7/22**
168	Formwork erection	40 days	11/7/22
169	Installation of water proofing system and testing	12 days	15/7/22
170	Rebar fixing	31 days	17/7/22
171	Concreting of pile cap - 1600m3	5 days	10/8/22
172	Concreting of pile cap - 400m3	6 days	15/8/22
173	Concreting of pile cap - 1000m3	7 days	21/8/22
174			
175	**Construction of SWHWRP**	**878.5 days**	**1/5/22**
176	Submission and acceptance of DfMA proposal	120 days	9/6/22
177	Selection of Designer & Supplier for DfMA	30 days	7/10/22
178	Manufacture of DfMA Precast Segments	45 days	6/11/22
179	Installation of DfMA segments	90 days	21/12/22
180	Submission and acceptance of method statement for construction of ReWPS and HCF	30 days	3/5/22
181	**Construction of RC structure of ReWPS**	**336.5 days**	**15/7/22**
182	**Construction of basement (below ground) - Grid Line 1-4**	**120.5 days**	**15/7/22**
183	Removal of ELS strut and wailing (2nd layer)	2 days	15/7/22
184	Construction of external walls, W6, W8-W15 (+0mPD to +3.6mPD)	66.5 days	15/7/22
185	CE-054 _ Inclement Weather in July 2022	3.5 days	15/7/22
186	Scaffolding and Falsework erection	28 days	15/7/22
187	Formwork erection	19 days	30/7/22
188	CE-068 _ Inclement Weather in August 2022	12.5 days	18/8/22
189	Rebar fixing (up to +7.2mPD) and formwork erection (up to +3.6mPD)	18 days	30/8/22
190	Concreting	2 days	17/9/22
191	Construction of external walls, W6, W8-W15 (+3.6mPD to +5.7mPD)	25 days	19/9/22



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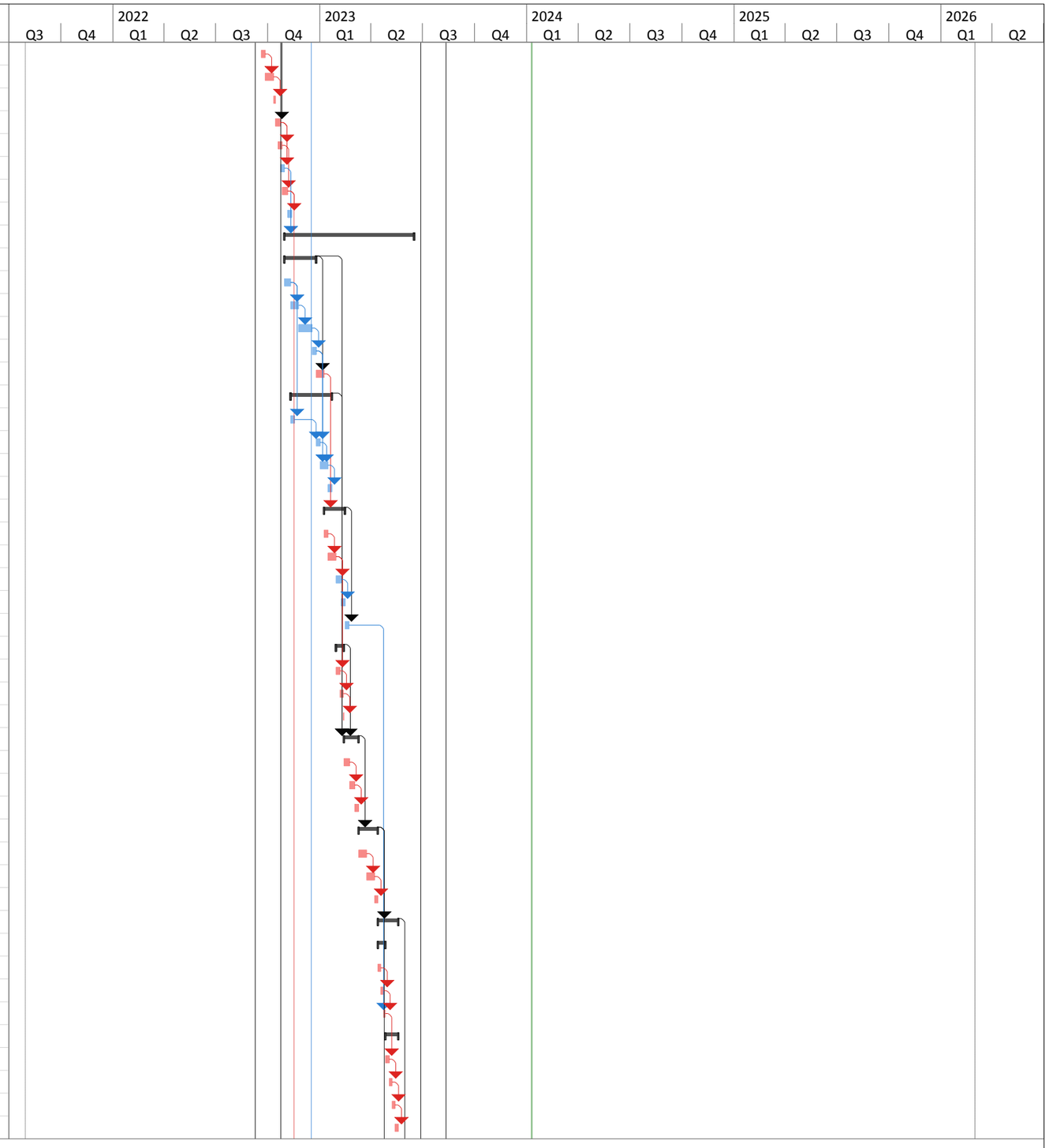
ID	Task Name	Duration	Start
192	C.J. preparation at +3.6mPD	7 days	19/9/22
193	Formwork erection	15 days	26/9/22
194	Concreting	3 days	11/10/22
195	Removal of formwork (+0mPD to +5.7mPD)	9 days	14/10/22
196	Rectification of exposed piles between G.L. 4-5	7 days	19/10/22
197	Installation and testing of water proofing system (+0mPD to +5.7mPD)	7 days	23/10/22
198	Backfilling of sand (+0mPD to +4.4mPD)	10 days	26/10/22
199	Removal of ELS strut and wailing	7 days	5/11/22
200	**Construction of Superstructure (above ground) - Grid Line 1-4**	**229 days**	**30/10/22**
201	Construction of Beams and Slabs at +7.2mPD	56 days	30/10/22
202	Falsework erection	11 days	30/10/22
203	Formwork erection	14 days	10/11/22
204	Rebar fixing	24 days	24/11/22
205	Concreting (+5.7mPD to +7.2mPD)	7 days	18/12/22
206	Partial Removal of formwork and falsework below +7.2mPD	14 days	25/12/22
207	Construction of Beams and Slabs at +9.1mPD	73 days	10/11/22
208	Falsework erection	7 days	10/11/22
209	Formwork erection	7 days	25/12/22
210	Rebar fixing	14 days	1/1/23
211	Concreting (+7.2mPD to +9.1mPD)	7 days	15/1/23
212	Construction of Beams and Slabs at +3.6mPD and ST6	37 days	8/1/23
213	Scaffolding and falsework erection	7 days	8/1/23
214	Formwork erection	14 days	15/1/23
215	Rebar fixing	9 days	29/1/23
216	Concreting (+3.6mPD)	7 days	7/2/23
217	Re-instatement of falsework below +7.2mPD	7 days	14/2/23
218	Construction of Staircase ST4 & ST5 (+7.2mPD to +8.85mPD)	14 days	29/1/23
219	Formwork erection	7 days	29/1/23
220	Rebar fixing	6 days	5/2/23
221	Concreting	1 day	11/2/23
222	Construction of Walls and Columns (+7.2mPD/+9.1mPD to +12.2mPD)	26 days	12/2/23
223	Scaffolding erection and Formwork erection	10 days	12/2/23
224	Rebar fixing and Formwork erection	9 days	22/2/23
225	Concreting	7 days	3/3/23
226	Construction of Walls and Columns (+12.2mPD to +15.2mPD)	34 days	10/3/23
227	Scaffolding erection and Formwork erection	14 days	10/3/23
228	Rebar fixing and Formwork erection	14 days	24/3/23
229	Concreting	6 days	7/4/23
230	Construction of Beams and Slabs at +15.2mPD	36 days	13/4/23
231	Construction of Beams	13 days	13/4/23
232	Falsework and formwork erection for beam	5 days	13/4/23
233	Rebar fixing for beam	5 days	18/4/23
234	Concreting and curing of concrete for beam	3 days	23/4/23
235	Construction of Slabs	23 days	26/4/23
236	Installation of precast segments (65 nos.)	7 days	26/4/23
237	Formwork erection for half slab	5 days	3/5/23
238	Rebar fixing for half slab	5 days	8/5/23
239	Concreting for half slab and curing of concrete	6 days	13/5/23



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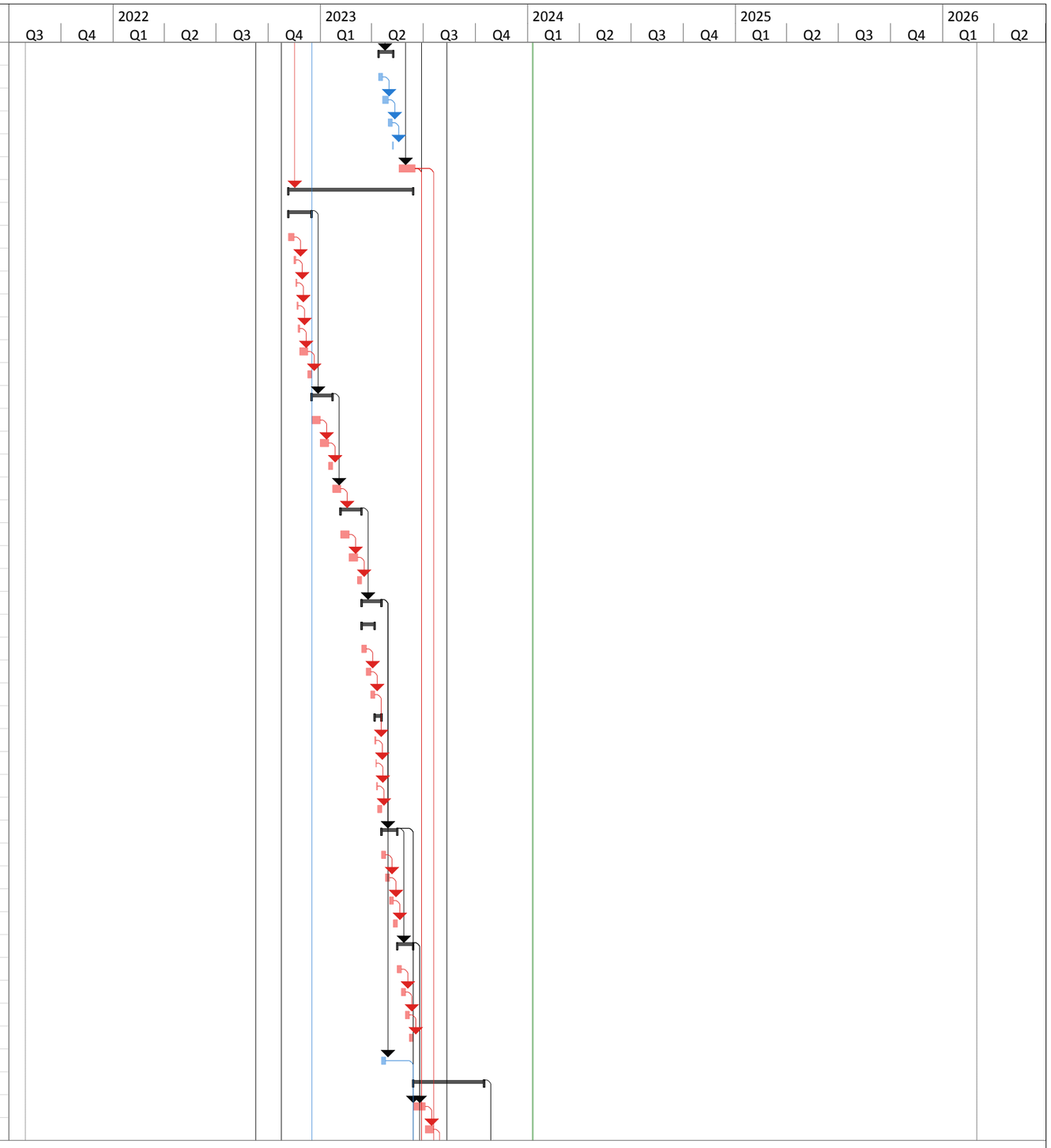
ID	Task Name	Duration	Start
240	Construction of Parapet Walls (+15.2mPD to +16.6mPD)	26 days	13/4/23
241	Scaffolding erection	7 days	13/4/23
242	Rebar fixing	10 days	20/4/23
243	Formwork erection	7 days	30/4/23
244	Concreting	2 days	7/5/23
245	Removal of formwork and falsework below +15.2mPD	28 days	19/5/23
246	**Construction of Superstructure (above ground) - Grid Line 4-6**	**220 days**	**5/11/22**
247	Construction of base slab (+4.45mPD to +5.95mPD & +5.6mPD to +7.1mPD)	41 days	5/11/22
248	Open-cut excavation to formation level	10 days	5/11/22
249	Welding of pile head capping plate (11 nos.)	3 days	15/11/22
250	Laying of blinding layer	2 days	18/11/22
251	Installation of water proofing system and testing	2 days	20/11/22
252	Formwork erection	3 days	22/11/22
253	Rebar fixing	14 days	25/11/22
254	Concreting	7 days	9/12/22
255	Construction of Bearing walls and Slabs (+5.95mPD to +7.2mPD)	37 days	16/12/22
256	Formwork erection and Rebar fixing	15 days	16/12/22
257	Formwork erection	15 days	31/12/22
258	Concreting	7 days	15/1/23
259	Backfilling of pile cap edge	14 days	22/1/23
260	Construction of Columns, Walls, Beams & Slabs (+7.2mPD to +11.8mPD)	37 days	5/2/23
261	Scaffolding erection and formwork erection	15 days	5/2/23
262	Rebar fixing and formwork erection	15 days	20/2/23
263	Concreting	7 days	7/3/23
264	Construction of Columns, Walls, Beams & Slabs (+11.8mPD to +13.25mPD)	35 days	14/3/23
265	Construction of Columns, Walls and Beams (+11.8mPD to +13.05mPD)	23 days	14/3/23
266	Falsework and formwork erection	8 days	14/3/23
267	Rebar fixing	8 days	22/3/23
268	Concreting and curing of concrete	7 days	30/3/23
269	Construction of Slabs at +13.25mPD	12 days	6/4/23
270	Installation of precast segments (22 nos.)	2 days	6/4/23
271	Formwork erection for half slab	1 day	8/4/23
272	Rebar fixing for half slab	2 days	9/4/23
273	Concreting for half slab	7 days	11/4/23
274	Construction of Parapet Walls (+13.25mPD to +14.65mPD)	28 days	18/4/23
275	Scaffolding erection	7 days	18/4/23
276	Rebar fixing	7 days	25/4/23
277	Formwork erection	7 days	2/5/23
278	Concreting	7 days	9/5/23
279	Construction of Staircase ST3 (+7.1mPD to +15.45mPD)	28 days	16/5/23
280	Scaffolding and falsework erection	7 days	16/5/23
281	Formwork erection	7 days	23/5/23
282	Rebar fixing	7 days	30/5/23
283	Concreting	7 days	6/6/23
284	Removal of formwork and falsework below +11.8mPD & +13.25mPD	7 days	18/4/23
285	**Roof Works**	**125 days**	**13/6/23**
286	Water tightness test for roof slab of ReWPS	21 days	13/6/23
287	Construction of water proofing system at roof slab of ReWPS	14 days	4/7/23



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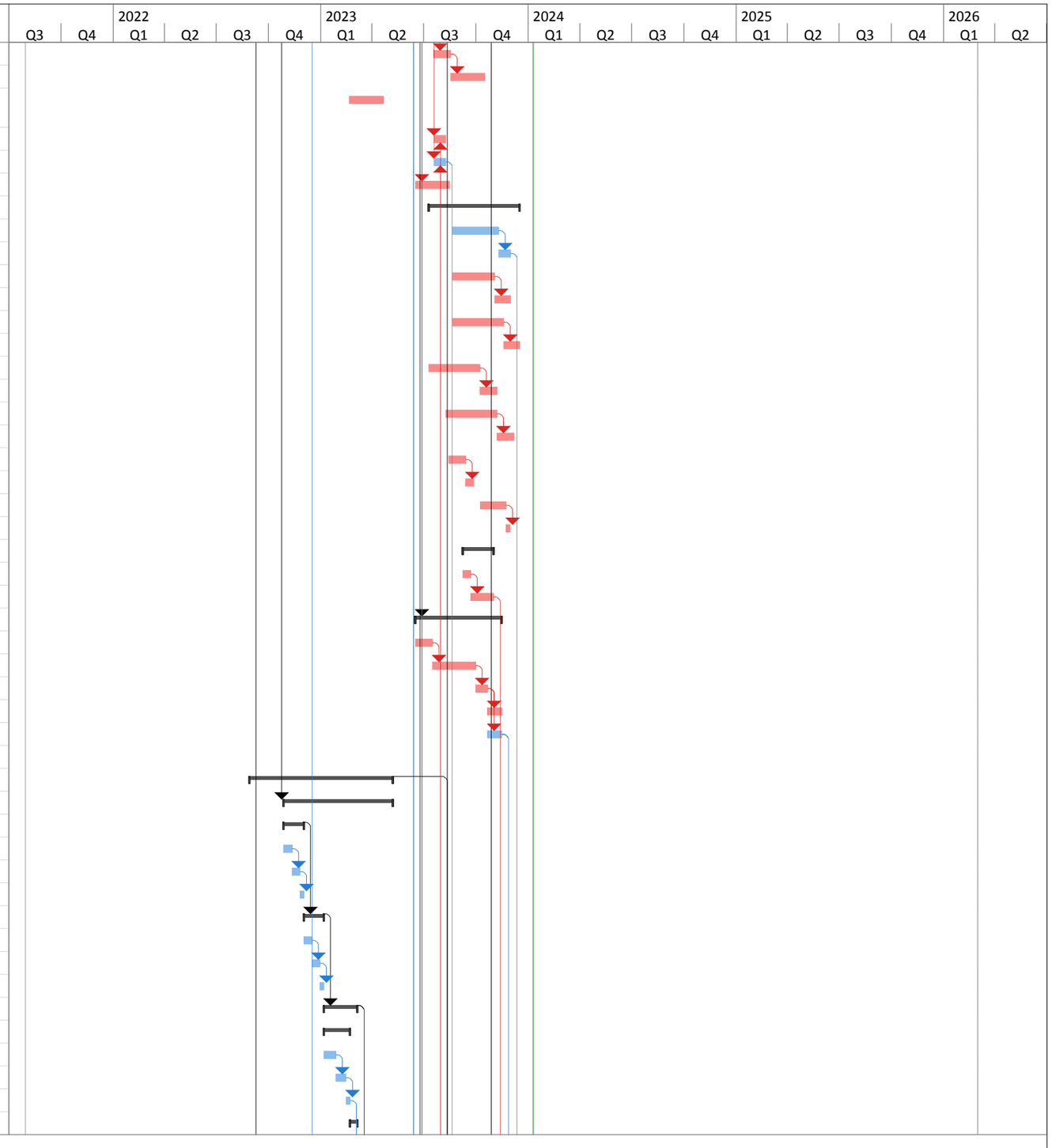
ID	Task Name	Duration	Start
288	Construction of Screeding	30 days	18/7/23
289	Construction of Drainage System	60 days	17/8/23
290	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	20/2/23
291	Fitting out Works for Motor Hall & Maintenance Room	21 days	19/7/23
292	Waterproofing & Fitting out Works for Pump Hall	21 days	19/7/23
293	Fitting out Works for Other Rooms	60 days	16/6/23
294	**Steelworks and Staircases**	**160 days**	**10/7/23**
295	Ordering and Manufacturing of Louvres	81 days	21/8/23
296	Installation of Louvres	21 days	10/11/23
297	Ordering and Manufacturing of Steel Doors	74 days	21/8/23
298	Installation of Steel Doors	28 days	3/11/23
299	Ordering and Manufacturing of Roller Shutter	90 days	21/8/23
300	Installation of Roller Shutter	28 days	19/11/23
301	Ordering and Manufacturing of FRP Staircase ST1	90 days	10/7/23
302	Installation of Staircase ST1	30 days	8/10/23
303	Ordering and Manufacturing of FRP Staircase ST2	90 days	9/8/23
304	Installation of Staircase ST2	30 days	7/11/23
305	Ordering and Manufacturing of Chequer Plates	30 days	14/8/23
306	Installation of Chequer Plates at Switchroom	14 days	13/9/23
307	Manufacturing of Concrete Staircase ST7 by DfMA	45 days	9/10/23
308	Installation of Staircase ST7 and Concreting for Wet Joints	7 days	23/11/23
309	**Black Rainstorm Signal on 8 September 2023**	**54 days**	**8/9/23**
310	Water Pumping and Cleaning of Flooded Pump Hall	14 days	8/9/23
311	Remedial Works for Damaged Fitting out at Pump Hall due to Black Rainstorm	40 days	22/9/23
312	**Pump Sump**	**152 days**	**16/6/23**
313	Trial of Watertightness Test	30 days	16/6/23
314	Additional Modification Works of Dividing Walls	76 days	16/7/23
315	Watertightness Test	21 days	30/9/23
316	Application of Waterproofing Materials	25 days	21/10/23
317	Site Clearance	25 days	21/10/23
318			
319	**Construction of RC structure of HCF**	**252.5 days**	**28/8/22**
320	**Construction of Superstructure (above ground) - Grid Line 1-3**	**192.5 days**	**27/10/22**
321	Construction of Columns and Walls (+5.55mPD to +10.2mPD)	36 days	27/10/22
322	Scaffolding erection and formwork erection	15 days	27/10/22
323	Rebar fixing and formwork erection	14 days	11/11/22
324	Concreting	7 days	25/11/22
325	Construction of Columns and Walls (+10.2mPD to +13.00mPD)	35 days	2/12/22
326	Scaffolding erection and formwork erection	14 days	2/12/22
327	Rebar fixing and formwork erection	14 days	16/12/22
328	Concreting	7 days	30/12/22
329	Construction of Beams and Slabs at +13.00mPD	59 days	6/1/23
330	Construction of Beams	46 days	6/1/23
331	Falsework and formwork erection for beam	21 days	6/1/23
332	Rebar fixing for beam	18 days	27/1/23
333	Concreting and curing of concrete for beam	7 days	14/2/23
334	Construction of Slabs	13 days	21/2/23



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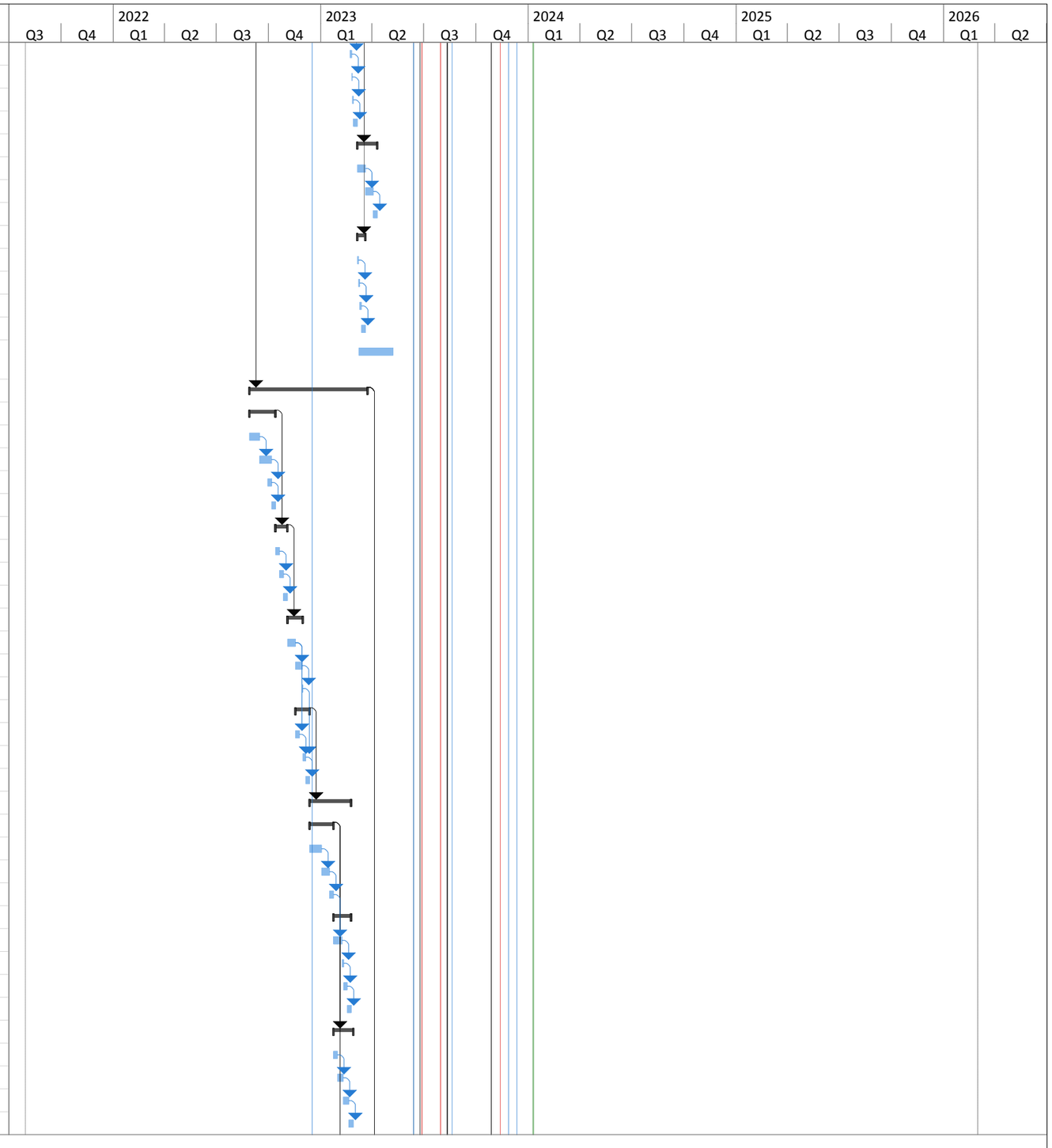
335	Installation of precast segments (32 nos.)	3 days	21/2/23
336	Formwork erection for half slab	1 day	24/2/23
337	Rebar fixing for half slab	2 days	25/2/23
338	Concreting for half slab	7 days	27/2/23
339	Construction of Bearing walls and Slabs (+5.55mPD to +7.1mPD)	35 days	6/3/23
340	Formwork erection	14 days	6/3/23
341	Rebar fixing and formwork erection	14 days	20/3/23
342	Concreting	7 days	3/4/23
343	Construction of Parapet Walls (+13.00mPD to +15.1mPD)	14 days	6/3/23
344	Scaffolding erection	2 days	6/3/23
345	Rebar fixing	2 days	8/3/23
346	Formwork erection	3 days	10/3/23
347	Concreting	7 days	13/3/23
348	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	9/3/23
349	**Construction of Superstructure (above ground) - Grid Line 3-7**	**208 days**	**28/8/22**
350	Construction of Walls W2, W3, W5, W6 and columns within G.L. 3-5	46 days	28/8/22
351	Scaffolding erection and Formwork erection	18 days	28/8/22
352	Rebar fixing and Formwork erection	21 days	15/9/22
353	Concreting of walls W2, W3 and Columns	7 days	29/9/22
354	Concreting of walls W5, W6 and Columns	7 days	6/10/22
355	Construction of remaining walls and columns within G.L. 3-5	21 days	13/10/22
356	Scaffolding erection and Formwork erection	7 days	13/10/22
357	Rebar fixing and Formwork erection	7 days	20/10/22
358	Concreting	7 days	27/10/22
359	Construction of walls and columns within G.L. 5-7 (+4.55mPD to +9.2mPD)	27 days	3/11/22
360	Scaffolding erection and Formwork erection	14 days	3/11/22
361	Rebar fixing and Formwork erection	12 days	17/11/22
362	Concreting	1 day	29/11/22
363	Construction of walls and columns within G.L. 5-7 (+9.2mPD to +10.8mPD)	**25 days**	**17/11/22**
364	Scaffolding erection and Formwork erection	7 days	17/11/22
365	Rebar fixing and Formwork erection	5 days	30/11/22
366	Concreting	7 days	5/12/22
367	Construction of Beams and Slabs at +10.4mPD and +10.8mPD	73 days	12/12/22
368	Construction of Beams	42 days	12/12/22
369	Falsework and formwork erection for beam	21 days	12/12/22
370	Rebar fixing for beam	14 days	2/1/23
371	Concreting and curing of concrete	7 days	16/1/23
372	Construction of Slabs	31 days	23/1/23
373	Installation of precast segments (156 nos.)	15 days	23/1/23
374	Formwork erection for half slab	3 days	7/2/23
375	Rebar fixing for half slab	6 days	10/2/23
376	Concreting for half slab	7 days	16/2/23
377	Construction of Parapet Walls (+10.4mPD/+10.8mPD to +12.5mPD)	35 days	23/1/23
378	Scaffolding erection	7 days	23/1/23
379	Rebar fixing	10 days	30/1/23
380	Formwork erection	10 days	9/2/23
381	Concreting	8 days	19/2/23



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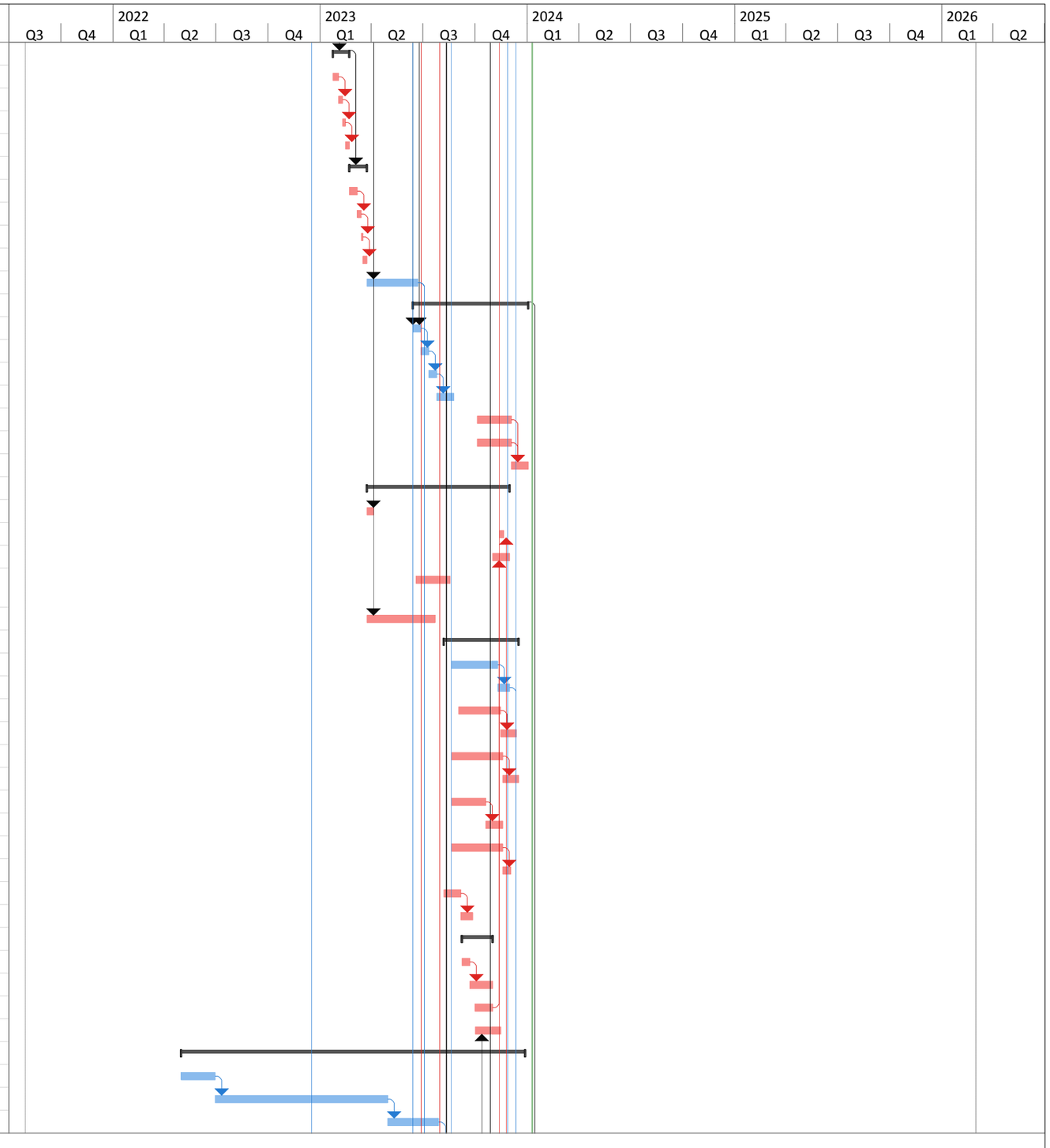
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
382	Construction of Staircase ST01 (+7.1mPD to +11.35mPD)	29 days	23/1/23
383	Scaffolding and falsework erection	10 days	23/1/23
384	Rebar fixing	7 days	2/2/23
385	Formwork erection	5 days	9/2/23
386	Concreting	7 days	14/2/23
387	Construction of Staircase ST02 (+10.4mPD to +13.95mPD)	31 days	21/2/23
388	Scaffolding and falsework erection	14 days	21/2/23
389	Rebar fixing	7 days	7/3/23
390	Formwork erection	3 days	14/3/23
391	Concreting	7 days	17/3/23
392	Backfilling of general fill material up to +7.2mPD, and removal of ELS	90 days	24/3/23
393	**Roof Works**	**203.5 days**	**13/6/23**
394	Water tightness test for roof slab of ReWPS	14 days	13/6/23
395	Construction of water proofing system at roof slab of ReWPS	14 days	27/6/23
396	Construction of Screeding	14 days	11/7/23
397	Construction of Drainage System	30 days	25/7/23
398	Forming Additional Roof Opening at Outlet Channel	60 days	5/10/23
399	Forming Additional Roof Opening at Inlet Channel	60 days	5/10/23
400	Construction of Footpath	30 days	4/12/23
401	**Contact Tank**	**251.5 days**	**24/3/23**
402	Overall water retaining structure at HCF	12 days	24/3/23
403	Application of Floor Screeding to Level the Ground Slab	7 days	13/11/23
404	Application of Waterproofing Materials	30 days	1/11/23
405	Detailed Design for Internal Façade Treatment for Assess Road and Interior Fitting for Internal Rooms	60 days	19/6/23
406	Fitting out Works for Rooms	120 days	24/3/23
407	**Steelworks**	**132 days**	**7/8/23**
408	Ordering and Manufacturing of Louvres	81 days	21/8/23
409	Installation of Louvres	21 days	10/11/23
410	Ordering and Manufacturing of Steel Doors	74 days	2/9/23
411	Installation of Steel Doors	28 days	15/11/23
412	Ordering and Manufacturing of Roller Shutter	90 days	21/8/23
413	Installation of Roller Shutter	28 days	19/11/23
414	Ordering and Manufacturing of Cat-ladders and Covers	60 days	21/8/23
415	Installation of Cat-ladders and Covers	30 days	20/10/23
416	Ordering and Manufacturing of Gratings at Chemical Rooms	90 days	21/8/23
417	Installation of Gratings at Chemical Rooms	14 days	19/11/23
418	Ordering and Manufacturing of Chequer Plates	30 days	7/8/23
419	Installation of Chequer Plates at CLP room, Switchroom and Electrical Room	21 days	6/9/23
420	**Black Rainstorm Signal on 8 September 2023**	**54 days**	**8/9/23**
421	Water Pumping and Cleaning of Flooded Pipe Gallery	14 days	8/9/23
422	Remedial Works for Damaged Fitting out at Pipe Gallery due to Black Rainstorm	40 days	22/9/23
423	Re-Ordering of Flooded Waterproofing Materials for Contact Tank	31 days	1/10/23
424	Additional Corridor at Chemical Room	45 days	1/10/23
425	**Provisional of Fire Service, Flushing and Fresh Water Supply by WSD**	**606.5 days**	**1/5/22**
426	WWO542 design submission for Fire Service, Flushing and Fresh Water Supply	60 days	1/5/22
427	Withhold Acceptance of WWO542 submission by WSD due to EVA Issue	304 days	30/6/22
428	Re-Submission of WWO542	90 days	30/4/23



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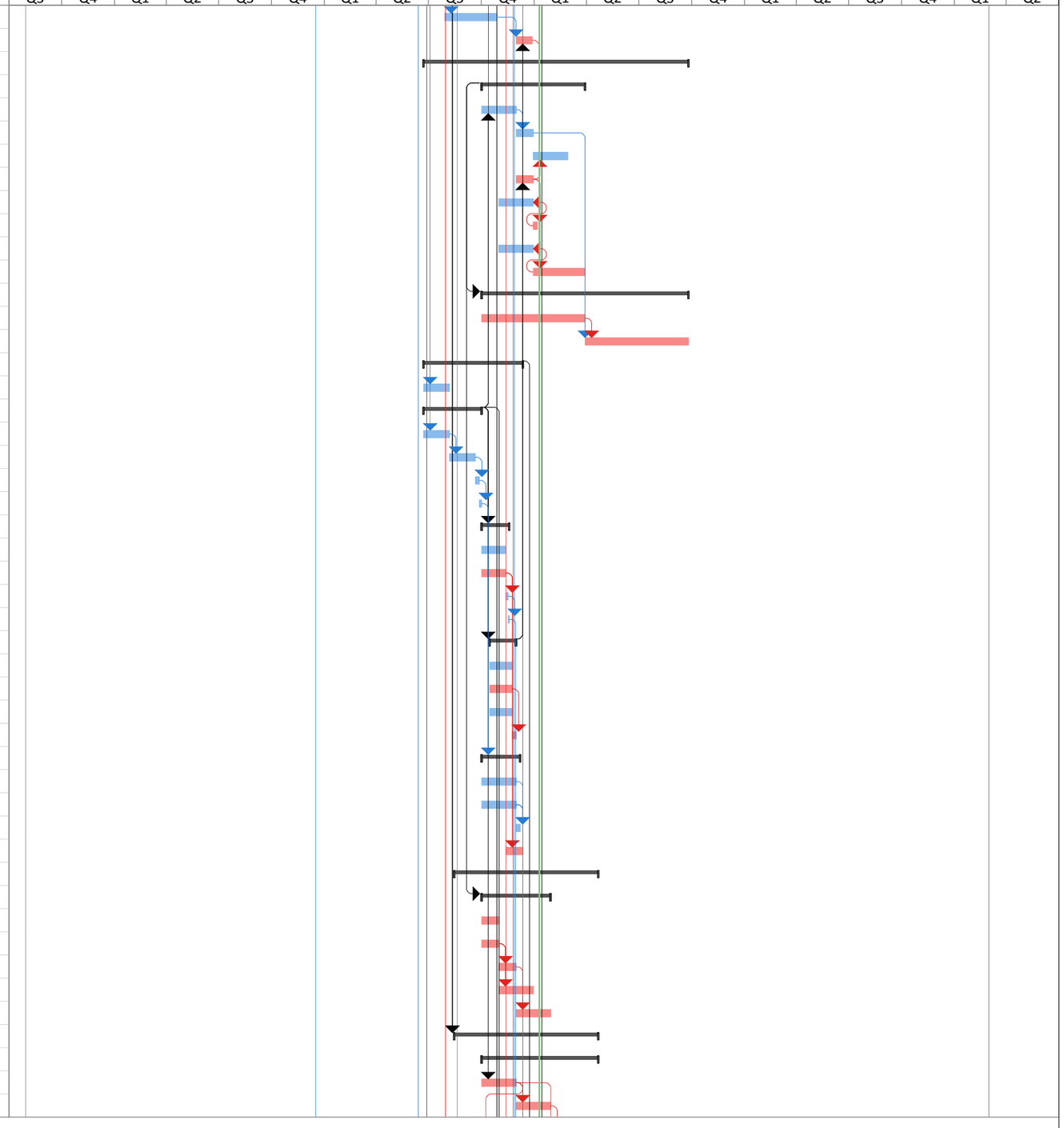
Manual Progress

ID	Task Name	Duration	Start
429	Acceptance of WWO542 by WSD	90 days	29/7/23
430	Provision of water supply to Part 1 by WSD	28 days	30/11/23
431	**Construction of roadworks**	**461 days**	**22/6/23**
432	**Construction of fence wall**	**180 days**	**1/10/23**
433	Upper Wall near Slaughter House	60 days	1/10/23
434	Upper Wall at Surge Vessel Area	30 days	30/11/23
435	Upper Wall near Ng Tung River	60 days	30/12/23
436	Upper Wall near STW	30 days	30/11/23
437	Fabrication of Entrance Gates and Logo Feature	60 days	31/10/23
438	Installation of Gate 1 and Gate 2	7 days	30/12/23
439	Fabrication of steelworks	60 days	31/10/23
440	Installation of wall finishes and steelworks	90 days	30/12/23
441	**Construction of River Promenade**	**360 days**	**1/10/23**
442	Detailed design of River Promenade	180 days	1/10/23
443	Construction of River Promenade	180 days	29/3/24
444	**Construction of underground utilities**	**173 days**	**22/6/23**
445	Construction of CLP Drawpits and Ducts	45 days	22/6/23
446	**EVA near Slaughter House**	**101 days**	**22/6/23**
447	Fence Wall Footing	45 days	22/6/23
448	UU and Chambers	45 days	6/8/23
449	Backfilling of Type B Material	7 days	20/9/23
450	Concreting of EVA	4 days	27/9/23
451	**Surge Vessel Area**	**48 days**	**1/10/23**
452	Fence Wall Footing	42 days	1/10/23
453	UU and Chambers	42 days	1/10/23
454	Backfilling of Type B Material	4 days	12/11/23
455	Concreting of EVA	2 days	16/11/23
456	**near STW**	**46 days**	**15/10/23**
457	Fence Wall Footing	39 days	15/10/23
458	UU and Chambers	39 days	15/10/23
459	Construction of Additional Water Meter Room	39 days	15/10/23
460	Backfilling of Type B Material	7 days	23/11/23
461	**Riverside**	**67 days**	**1/10/23**
462	Fence Wall Footing	60 days	1/10/23
463	HKT Cable Drawpits and Ducts	60 days	1/10/23
464	Backfilling of Type B Material	7 days	30/11/23
465	Watertightness Test of Laid Mains	30 days	12/11/23
466	**External Finishing Works**	**250.5 days**	**15/8/23**
467	**Design submission and fabrication of steelwork system for the aluminum fin**	**120 days**	**1/10/23**
468	Detailed Design for External Façade Treatment and Vertical Green Wall	30 days	1/10/23
469	Design submission of steelwork system for vertical aluminum fin at ReWPS	30 days	1/10/23
470	Design submission of steelwork system for horizontal aluminum fin at HCF	30 days	31/10/23
471	Fabrication of vertical aluminum fin for ReWPS	60 days	31/10/23
472	Fabrication of horizontal aluminum fin for HCF	60 days	30/11/23
473	**Installation of architectural works**	**250.5 days**	**15/8/23**
474	**Installation of architectural works for RWPS**	**203 days**	**1/10/23**
475	Laying of artificial granite tile at the sides of slaughter house and CLP rooms	60 days	1/10/23
476	Laying of artificial granite tile at other sides	60 days	30/11/23



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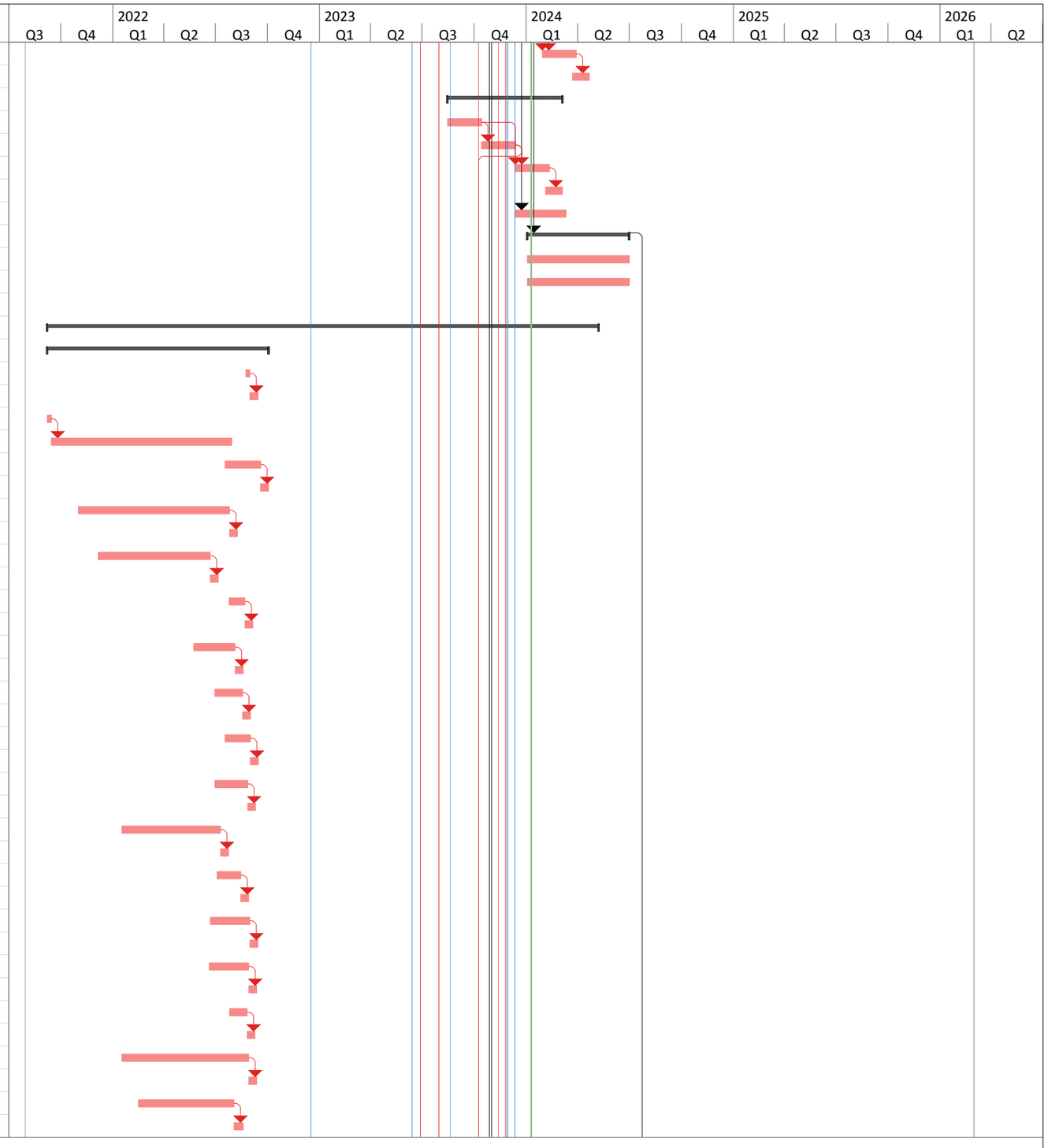
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
477	Installation of steelworks	60 days	29/1/24
478	Installation of cladding	30 days	22/3/24
479	**Installation of architectural works for HCF**	**203 days**	**15/8/23**
480	Laying of artificial granite tile at riverside	60 days	15/8/23
481	Laying of artificial granite tile at other sides	60 days	14/10/23
482	Installation of steelworks	60 days	13/12/23
483	Installation of cladding	30 days	4/2/24
484	**Pavement Works**	**90 days**	**12/12/23**
485	**Landscape works**	**180 days**	**3/1/24**
486	Landscape works at roof top	180 days	3/1/24
487	Landscape works within SWHWRP	180 days	3/1/24
488			
489	**E&M Works of SWHWRP**	**974 days**	**7/9/21**
490	**Design and Submission Stage**	**391 days**	**7/9/21**
491	Submission of Surge Analysis Report	7 days	24/8/22
492	Acceptance of Surge Analysis Report	14 days	31/8/22
493	Submission and review of Reclaimed Water Main Pumps	7 days	7/9/21
494	Acceptance of Reclaimed Water Main Pumps	319 days	14/9/21
495	Submission and review of Surge Vessels and Air Compressors	63 days	18/7/22
496	Acceptance of Surge Vessels and Air Compressors	14 days	19/9/22
497	Submission and review of Penstock & Stoplog	267 days	1/11/21
498	Acceptance of Penstock & Stoplog	14 days	26/7/22
499	Submission and review of Chemical Dosing System & Static In-line Mixer	198 days	6/12/21
500	Acceptance of Chemical Dosing System & Static In-line Mixer	14 days	22/6/22
501	Submission and review of Air Blower and Air Diffuser	28 days	25/7/22
502	Acceptance of Air Blower and Air Diffuser	14 days	22/8/22
503	Submission and review of Lifting Appliances	73 days	24/5/22
504	Acceptance of Lifting Appliances	14 days	5/8/22
505	Submission and review of Minor Mechanical Equipment	49 days	30/6/22
506	Acceptance of Minor Mechanical Equipment	14 days	18/8/22
507	Submission and review of LV switchboard	45 days	18/7/22
508	Acceptance of LV switchboard	14 days	1/9/22
509	Submission and review of DCS	58 days	30/6/22
510	Acceptance of DCS	14 days	27/8/22
511	Submission and review of Instrumenation & Water Monitoring Equipment	174 days	17/1/22
512	Acceptance of Instrumenation & Water Monitoring Equipment	14 days	10/7/22
513	Submission and review of Misc. Electrical Items	42 days	4/7/22
514	Acceptance of Misc. Electrical Items	14 days	15/8/22
515	Submission and review of Fire Services Equipment	70 days	22/6/22
516	Acceptance of Fire Services Equipment	14 days	31/8/22
517	Submission and review of MVAC Equipment	70 days	20/6/22
518	Acceptance of MVAC Equipment	14 days	29/8/22
519	Submission and review of Plumbing & Drainage Equipment	31 days	26/7/22
520	Acceptance of Plumbing & Drainage Equipment	14 days	26/8/22
521	Submission and review of General Arrangement Drawing	224 days	17/1/22
522	Acceptance of General Arrangement Drawing	14 days	29/8/22
523	Submission and review of Civil Requirement Drawing	169 days	15/2/22
524	Acceptance of Civil Requirement Drawing	16 days	3/8/22



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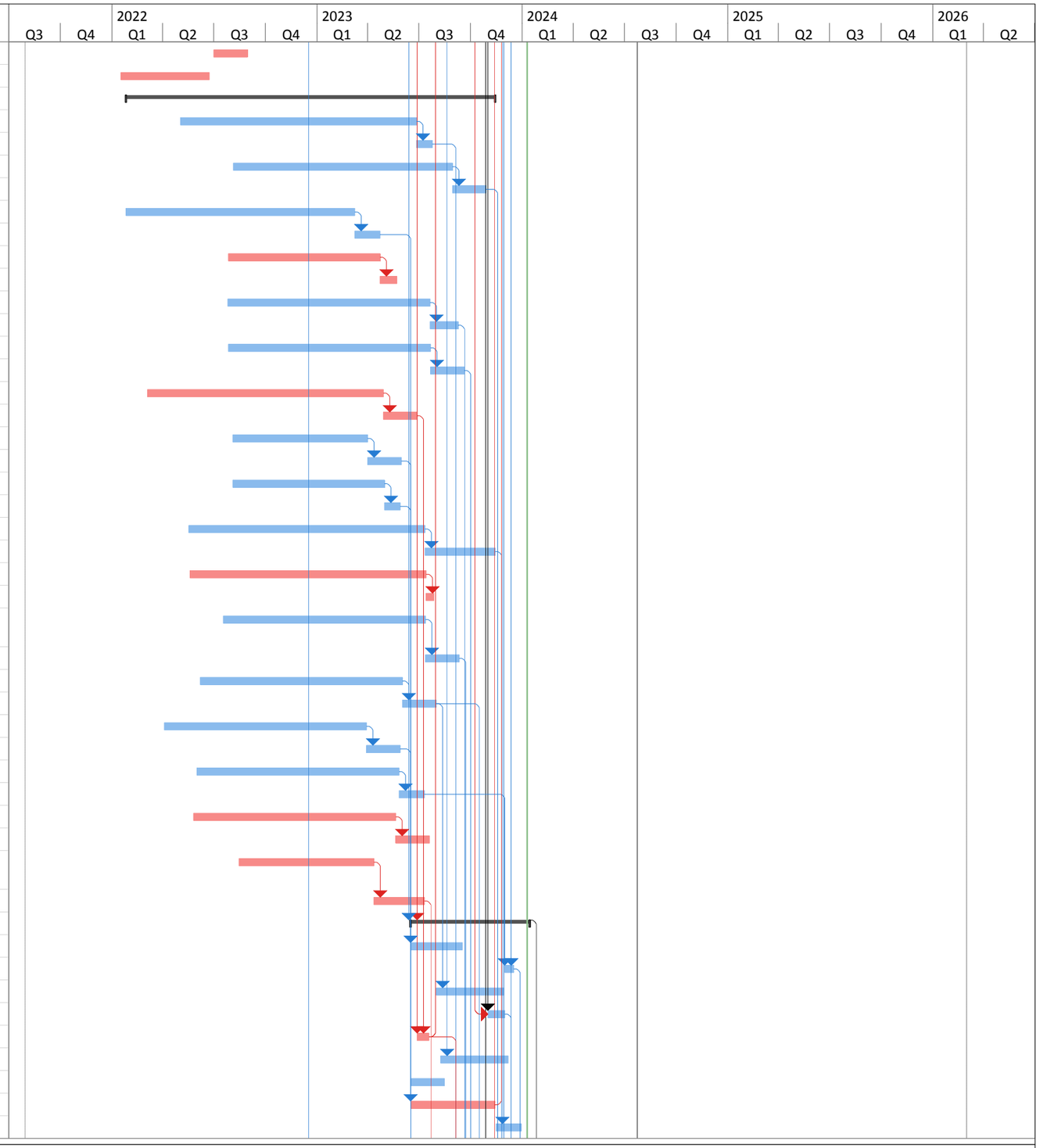
ID	Task Name	Duration	Start
525	Submission and acceptance of method statement for E&M installation works	60 days	1/7/22
526	CSD, CBWD coordination	157 days	17/1/22
527	**Procurement and Delivery of Equipment**	**657 days**	**26/1/22**
528	Procerement and manufacturing of Reclaimed Water Main Pumps (6 nos.)	420 days	3/5/22
529	Delivery of Reclaimed Water Main Pumps (6 nos.)	28 days	27/6/23
530	Procerement and manufacturing of Surge Vessels and Air Compressors	390 days	5/8/22
531	Delivery of Surge Vessels and Air Compressors	60 days	30/8/23
532	Procerement and manufacturing of Penstock & Stoplog	407 days	26/1/22
533	Delivery of Penstock & Stoplog	45 days	9/3/23
534	Procerement and manufacturing of Chemical Dosing System	270 days	27/7/22
535	Delivery of Chemical Dosing System	30 days	23/4/23
536	Procerement and manufacturing of Static In-line Mixer	360 days	26/7/22
537	Delivery of Static In-line Mixer	50 days	21/7/23
538	Procerement and manufacturing of Air Blower and Air Diffuser	360 days	27/7/22
539	Delivery of Air Blower and Air Diffuser	60 days	22/7/23
540	Procerement and manufacturing of Lifting Appliances	420 days	5/3/22
541	Delivery of Lifting Appliances	60 days	29/4/23
542	Procerement and manufacturing of Sump Pumps	240 days	4/8/22
543	Delivery of Sump Pumps	60 days	1/4/23
544	Procerement and manufacturing of Pipework and Valves	270 days	4/8/22
545	Delivery of Pipework and Valves	28 days	1/5/23
546	Procerement and manufacturing of LV switchboard	420 days	18/5/22
547	Delivery of LV switchboard	125 days	12/7/23
548	Procerement and manufacturing of DCS	420 days	20/5/22
549	Delivery of DCS	14 days	14/7/23
550	Procerement and manufacturing of Instrumenation and Water Monitoring Equipment	360 days	18/7/22
551	Delivery of Instrumenation and Water Monitoring Equipment	60 days	13/7/23
552	Procerement and manufacturing of Misc. Electrical Items (PV Panel, Earthing, etc)	360 days	7/6/22
553	Delivery of Misc. Electrical Items (PV Panel, Earthing, etc)	60 days	2/6/23
554	Procerement and manufacturing of Fire Services Equipment	360 days	4/4/22
555	Delivery of Fire Services Equipment	60 days	30/3/23
556	Procerement and manufacturing of MVAC Equipment	360 days	1/6/22
557	Delivery of MVAC Equipment	45 days	27/5/23
558	Procerement and manufacturing of Plumbing & Drainage Equipment	360 days	26/5/22
559	Delivery of Plumbing & Drainage Equipment	60 days	21/5/23
560	Procerement and manufacturing of Misc. Electrical Items (Cables, Cable Containment, Lightings)	240 days	15/8/22
561	Delivery of Misc. Electrical Items (Cables, Cable Containment, Lightings)	90 days	12/4/23
562	**Installation Works except Main Pumps**	**212 days**	**16/6/23**
563	Installation of FS Equipment	92 days	16/6/23
564	Installation of MVAC Equipment	16 days	1/12/23
565	Installation of Internal BS/lighting Equipment	120 days	1/8/23
566	Installation of External Lighting for EVA	30 days	1/11/23
567	Installation of Lifting Appliance at Motor Hall & Maintenance Room of RWPS	21 days	28/6/23
568	Installation of Lifting Appliance at Pump Hall of RWPS	120 days	9/8/23
569	Installation of Lifting Appliance at Pipe Gallery of HCF	60 days	16/6/23
570	Installation of Penstocks at HCF	150 days	16/6/23
571	Installation of Penstocks at RWPS	45 days	15/11/23



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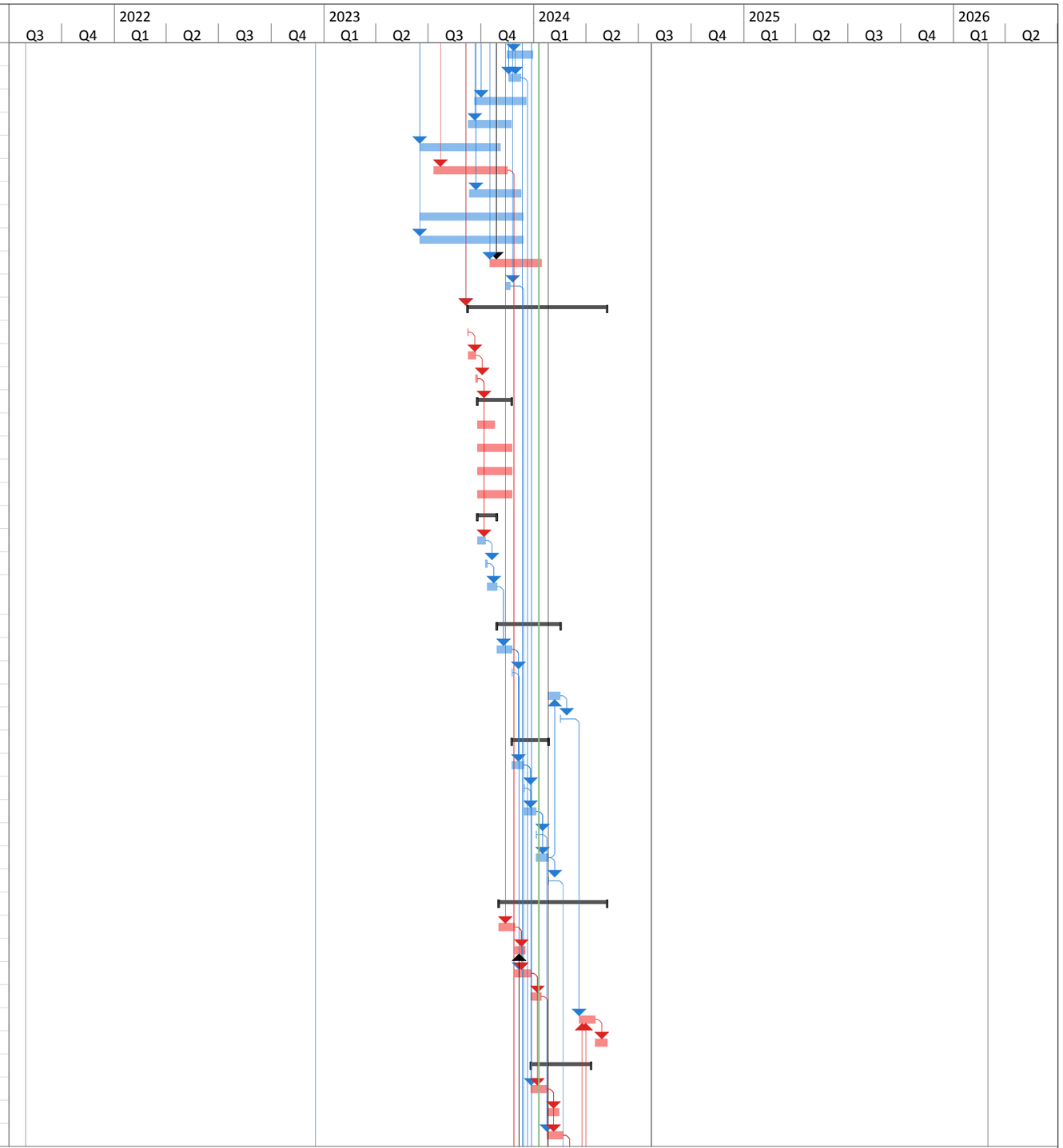
ID	Task Name	Duration	Start
572	Installation of Stoplogs at RWPS	45 days	15/11/23
573	Installation of Surge Vessel (4 Nos.) & Air Compressor (2 Nos.)	21 days	18/11/23
574	Installation of Air Blower (2 Nos.) & Air Diffuser (1 set)	90 days	20/9/23
575	Installation of tanks (14 nos.) & Chemical Pumps (12 nos.)	75 days	9/9/23
576	Installation of Pipeworks (DI, Chemical pipe, Air pipe)	140 days	16/6/23
577	Installation of Cabling, MCC & DCS	128 days	11/7/23
578	Installation of Instrumentation and Monitoring Stations	90 days	11/9/23
579	Installation of ELV System (CCTV & Access Control)	180 days	16/6/23
580	Installation of Plumbing & Drainage Equipment	180 days	16/6/23
581	Installation of PV Panels	90 days	16/10/23
582	Installation of LV Switchborad / MCC	7 days	14/11/23
583	**Installation of Reclaimed Water Pumps (6 Nos.)**	**243 days**	**8/9/23**
584	Black Rainstorm Signal on 8 September 2023	1 day	8/9/23
585	Preliminary Investigation on the Flooded Pumps (5 Nos.)	13 days	9/9/23
586	Ordering of Parts for Reparing based on Investigation Results	3 days	22/9/23
587	**Delivery of Parts**	**60 days**	**25/9/23**
588	Delivery of Bearings	30 days	25/9/23
589	Delivery of RTD	60 days	25/9/23
590	Delivery of Casing Open up Spare Kit	60 days	25/9/23
591	Delivery of Paint (Internal Coating)	60 days	25/9/23
592	**Detailed Investigation**	**34 days**	**25/9/23**
593	Confirmation of Work Details to Local Workshop	14 days	25/9/23
594	Delivery of Flooded Pumps to Workshop	3 days	9/10/23
595	Open Half Casing of Pump No.2 (KTN) for Full Inspection and Obtain Consent from Tori Japan	17 days	12/10/23
596	**KTN Pump Repairing**	**111 days**	**29/10/23**
597	Repair Pump No.2 in Workshop	26 days	29/10/23
598	Return Pump No.2 to Site	1 day	24/11/23
599	Repair Pump No.3 in Workshop	21 days	26/1/24
600	Return Pump No.3 to Site	1 day	16/2/24
601	**TBH Pump Repairing**	**64 days**	**24/11/23**
602	Repair Pump No.1 in Workshop	21 days	24/11/23
603	Return Pump No.1 to Site	1 day	15/12/23
604	Repair Pump No.2 in Workshop	21 days	15/12/23
605	Return Pump No.2 to Site	1 day	5/1/24
606	Repair Pump No.3 in Workshop	21 days	5/1/24
607	Return Pump No.3 to Site	1 day	26/1/24
608	**KTN Pump Installation**	**189 days**	**1/11/23**
609	Installation of Pump No.1 (Good Condition)	28 days	1/11/23
610	SAT for Pump No.1	18 days	29/11/23
611	Installation of Pump No.2 (Repaired)	28 days	29/11/23
612	SAT for Pump No.2	18 days	27/12/23
613	Installation of Pump No.3 (Repaired)	28 days	20/3/24
614	SAT for Pump No.3	21 days	17/4/24
615	**TBH Pump Installation**	**105 days**	**27/12/23**
616	Installation of Pump No.1 (Repaired)	28 days	27/12/23
617	SAT for Pump No.1	21 days	24/1/24
618	Installation of Pump No.2 (Repaired)	28 days	24/1/24



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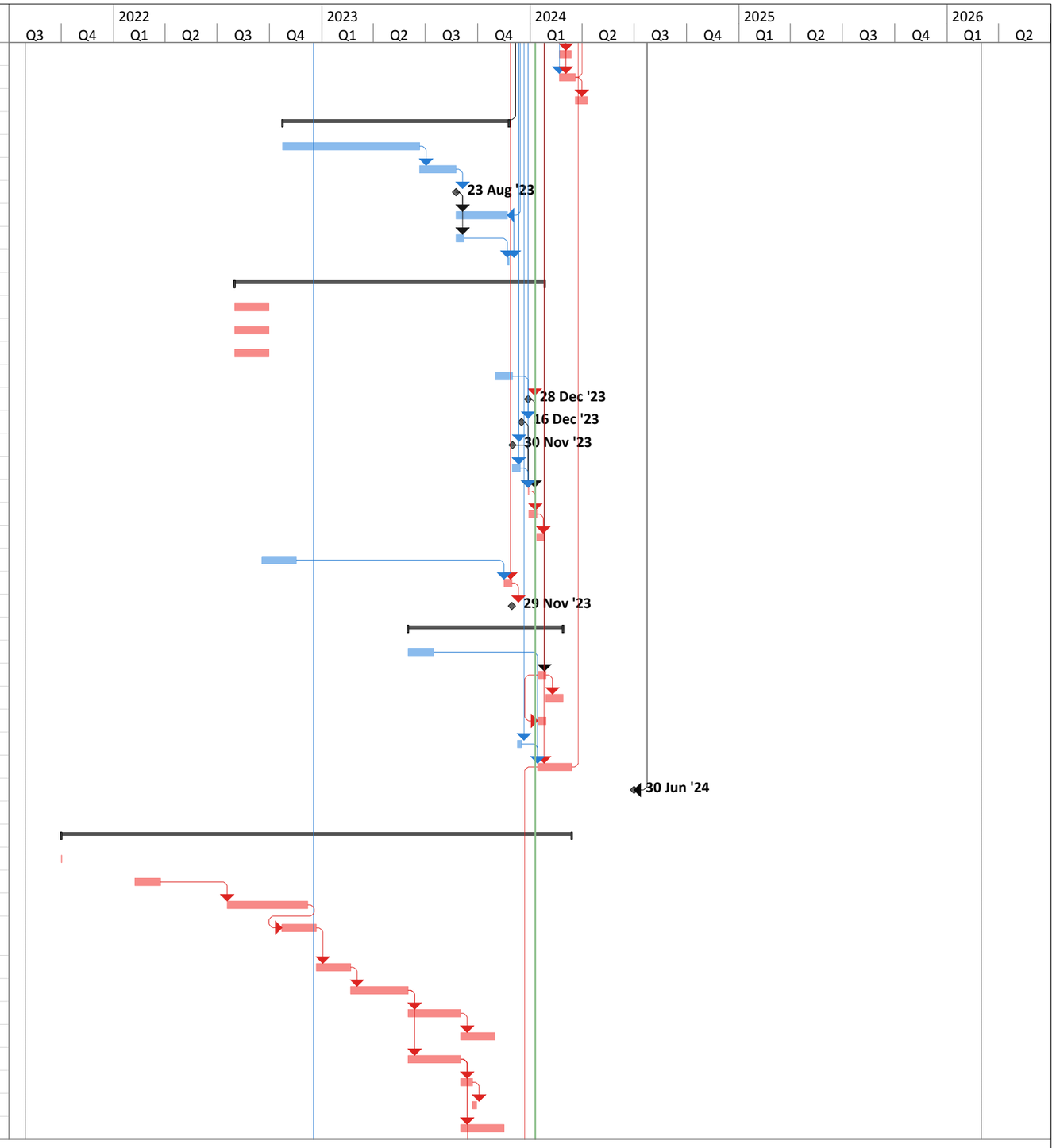
619	SAT for Pump No.2	21 days	21/2/24
620	Installation of Pump No.3 (Repaired)	28 days	21/2/24
621	SAT for Pump No.3	21 days	20/3/24
622	**Power Energization Related Items**	**397 days**	**24/10/22**
623	CLP meter application	240 days	24/10/22
624	CLP Room & Drawpits Handover Inspections	64 days	21/6/23
625	Handover of Transformer Room to CLP	0 days	23/8/23
626	Cabling by CLP	90 days	24/8/23
627	Installation of Transformers by CLP	14 days	24/8/23
628	Power Energization	3 days	22/11/23
629	**FS / DG Inspection Related Items**	**543.5 days**	**1/8/22**
630	VAC Desgin Submission to FSD	60 days	1/8/22
631	FS related statutory submission to FSD	60 days	1/8/22
632	Submission of General Building Plan (GBP) to FSD	60 days	1/8/22
633	Construction of Additional R.C. Corridor and Sealing off Roller Shutter Opening	30 days	1/11/23
634	Completion of FS Water Supply	0 days	28/12/23
635	Completion of MVAC	0 days	16/12/23
636	Completion of EVA Lighting	0 days	30/11/23
637	Direct Link Cabling to FSD Laid by HKT	14 days	30/11/23
638	Submission of FSI 314 & 501	1 day	28/12/23
639	Target FS Inpsection	14 days	29/12/23
640	Obtain FSD approval letter (Form FS172 Fire Certificate)	14 days	12/1/24
641	DG Design Submission to FSD	60 days	18/9/22
642	DG Inspection	14 days	16/11/23
643	Obtain DG License	0 days	29/11/23
644	**Submission**	**271.5 days**	**1/6/23**
645	Submission of Testing Procedures & Commissioning Plan	45 days	1/6/23
646	Submission of As Fitted Drawings	14 days	14/1/24
647	Submission of O&M Manual	30 days	28/1/24
648	Submission of Training Material	14 days	14/1/24
649	**Registration of Surge Vessels**	7 days	9/12/23
650	**System Commissioning Test (2 nos. of Pumps)**	**60 days**	**14/1/24**
651	Planned completion for section 2	0 days	30/6/24
652			
653	**Section 3 - Modification of Table Hill Reclaimed Water Service Reservoir**	**895 days**	**1/10/21**
654	Access Date (part 2 of the Site)	1 day	1/10/21
655	Initial survey and condition survey	45 days	7/2/22
656	Design submission and acceptance of the supplementary dosing and dyeing system (E&M)	141 days	19/7/22
657	Submission and acceptance of method statement for supplementary dosing and dyeing system	60 days	23/10/22
658	Selection of sub-contractor	60 days	22/12/22
659	Construction of Chemical Dosing Room	101 days	20/2/23
660	Hole Coring and Installation of Pipes into Service Reservoir	92 days	1/6/23
661	Construction of Pipe Trough from Dosing Room to Service Reservoir	60 days	1/9/23
662	Fitting out Works	92 days	1/6/23
663	Watertightness Test of Roof Slab	21 days	1/9/23
664	Waterproofing Application on Roof Slab	7 days	22/9/23
665	Installation of Steelworks	76 days	1/9/23



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Task
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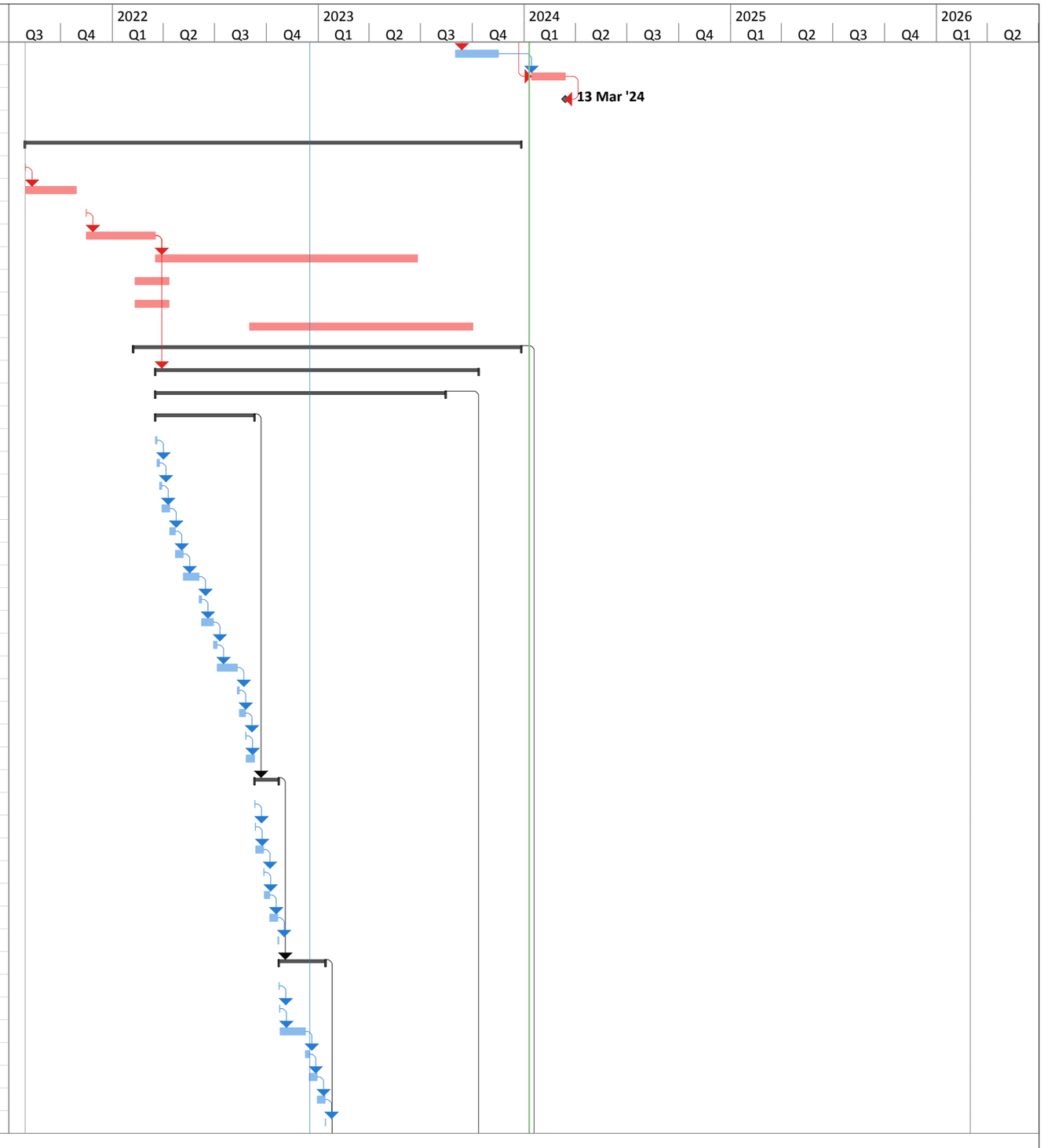
Manual Progress

ID	Task Name	Duration	Start
666	Installation of supplementary dosing and dyeing system	76 days	1/9/23
667	T&C of E&M equipment	60 days	14/1/24
668	Planned completion for section 3	0 days	13/3/24
669			
670	**Section 4 - Water main laying works in part 3 of the Site**	**880 days**	**30/7/21**
671	Access Date (part 3 of the Site)	1 day	30/7/21
672	Initial survey (utility survey, condition survey, initial photo)	90 days	31/7/21
673	1st TMLG meeting	1 day	15/11/21
674	Application and approval of XP and TTA, including local consultation	122 days	16/11/21
675	Implementation of TTA by stages	465 days	18/3/22
676	Procurement and Delivery of pipes, fittings and related materials	60 days	10/2/22
677	Submission and acceptance of method statement and material	60 days	10/2/22
678	Excavation of Inspection Pit	396 days	1/9/22
679	**Mainlaying by open trench method (RW03 & RW43)**	**688 days**	**7/2/22**
680	**RW03 : DN600 DI pipe - 1092m (XP ID: 1301128, 1301129)**	**573.5 days**	**18/3/22**
681	**Team A : CH000 - CH550**	**515 days**	**18/3/22**
682	**CH450 - CH550 (100m)**	**176 days**	**18/3/22**
683	TTA establishment	3 days	18/3/22
684	CE-041 _ Inclement Weather in March 2022	4.5 days	21/3/22
685	Hard material excavation and disposal	4 days	25/3/22
686	Soil excavation , laying sheetpile and disposal	14 days	29/3/22
687	Obstruction of uncharted 900mm pipe	10 days	12/4/22
688	Pending for setting out of DSD	14 days	22/4/22
689	Amendment of ELS	28 days	6/5/22
690	CE-052 _ Inclement Weather in May 2022	4.5 days	3/6/22
691	Treatment of bedding	21 days	8/6/22
692	CE-053 _ Inclement Weather in June 2022	6.5 days	29/6/22
693	Pipe laying D.I. & PE (DSD's pipe)	36 days	5/7/22
694	CE-054 _ Inclement Weather in July 2022	3.5 days	10/8/22
695	Backfilling sand/aggregate, concurrent bend block/chambers	11 days	14/8/22
696	Reinstatement	1 day	25/8/22
697	CE-068 _ Inclement Weather in August 2022	15 days	26/8/22
698	**CH420 - CH450 (30m)**	**43 days**	**10/9/22**
699	TTA establishment	1 day	10/9/22
700	Hard material excavation and disposal	1 day	11/9/22
701	Soil excavation , laying sheetpile and disposal	14 days	12/9/22
702	Treatment of bedding	1 day	26/9/22
703	Pipe laying D.I.	10 days	27/9/22
704	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	7/10/22
705	Reinstatement	2 days	21/10/22
706	**CH390 - CH420 (30m)**	**83 days**	**23/10/22**
707	TTA establishment	1 day	23/10/22
708	Hard material excavation and disposal	1 day	24/10/22
709	Soil excavation , laying sheetpile and disposal	45 days	25/10/22
710	Treatment of bedding	7 days	9/12/22
711	Pipe laying D.I.	14 days	16/12/22
712	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	30/12/22
713	Reinstatement	1 day	13/1/23



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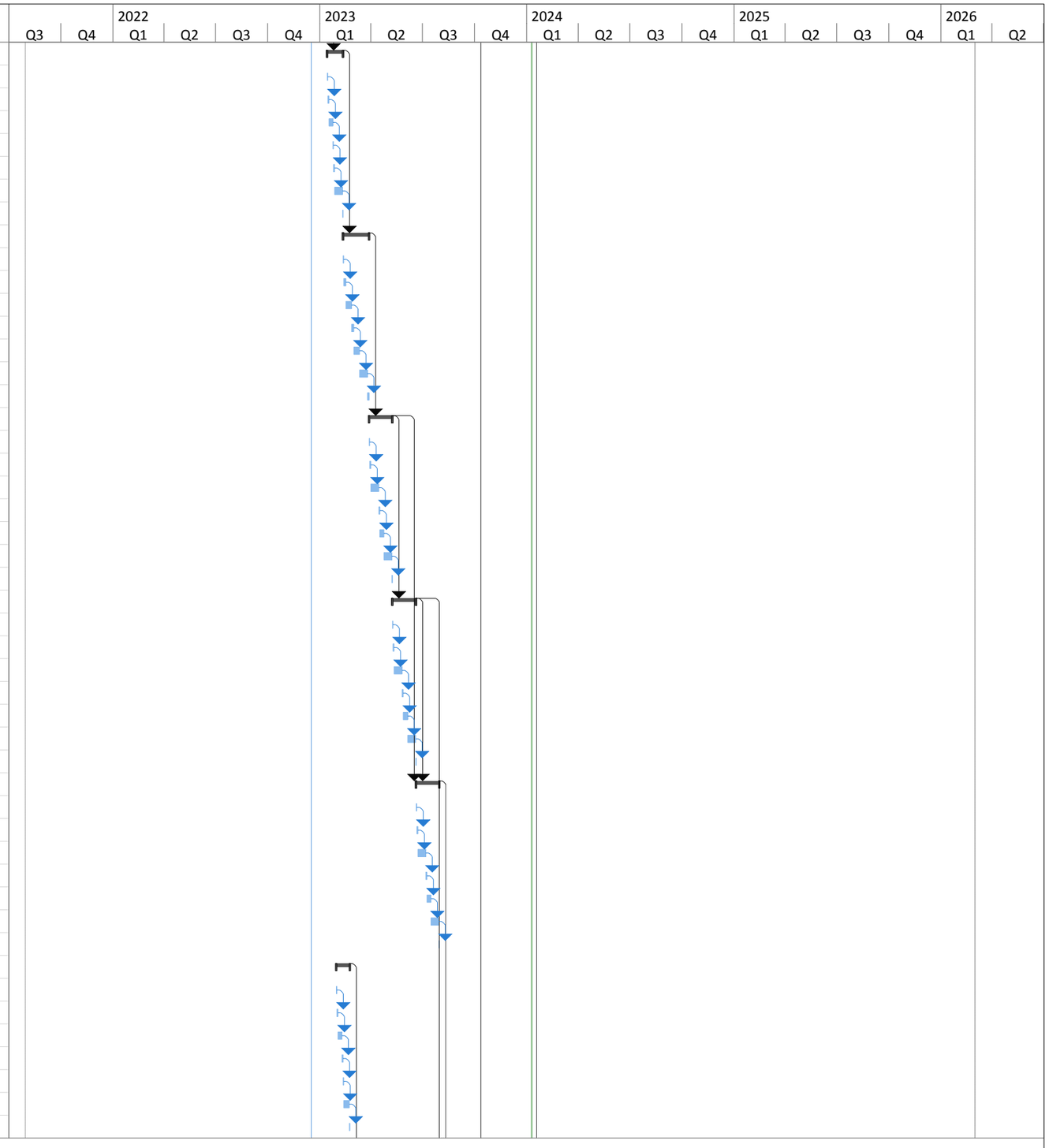
Summary	Manual Task	Finish-only	Critical Split		
Project Summary	Duration-only	External Tasks	Progress		

ID	Task Name	Duration	Start
714	**CH360 - CH390 (30m)**	**28 days**	**14/1/23**
715	TTA establishment	1 day	14/1/23
716	Hard material excavation and disposal	2 days	15/1/23
717	Soil excavation , laying sheetpile and disposal	7 days	17/1/23
718	Treatment of bedding	1 day	24/1/23
719	Pipe laying D.I.	2 days	25/1/23
720	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	27/1/23
721	Reinstatement	1 day	10/2/23
722	**CH300 - CH360 (60m)**	**46 days**	**11/2/23**
723	TTA establishment	1 day	11/2/23
724	Hard material excavation and disposal	4 days	12/2/23
725	Soil excavation , laying sheetpile and disposal	10 days	16/2/23
726	Treatment of bedding	4 days	26/2/23
727	Pipe laying D.I.	10 days	2/3/23
728	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	12/3/23
729	Reinstatement	3 days	26/3/23
730	**CH270 - CH300 (30m)**	**41 days**	**29/3/23**
731	TTA establishment	1 day	29/3/23
732	Hard material excavation and disposal	2 days	30/3/23
733	Soil excavation , laying sheetpile and disposal	14 days	1/4/23
734	Treatment of bedding	2 days	15/4/23
735	Pipe laying D.I.	7 days	17/4/23
736	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	24/4/23
737	Reinstatement	1 day	8/5/23
738	**CH190 - CH240 (50m)**	**42 days**	**9/5/23**
739	TTA establishment	1 day	9/5/23
740	Hard material excavation and disposal	2 days	10/5/23
741	Soil excavation , laying sheetpile and disposal	14 days	12/5/23
742	Treatment of bedding	2 days	26/5/23
743	Pipe laying D.I.	8 days	28/5/23
744	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	5/6/23
745	Reinstatement	1 day	19/6/23
746	**CH240 - CH270 (65m, Re-alignment)**	**41 days**	**20/6/23**
747	TTA establishment	1 day	20/6/23
748	Hard material excavation and disposal	2 days	21/6/23
749	Soil excavation , laying sheetpile and disposal	14 days	23/6/23
750	Treatment of bedding	2 days	7/7/23
751	Pipe laying D.I.	7 days	9/7/23
752	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	16/7/23
753	Reinstatement	1 day	30/7/23
754	**CH170 - CH190 (20m)**	**24 days**	**30/1/23**
755	TTA establishment	1 day	30/1/23
756	Hard material excavation and disposal	2 days	31/1/23
757	Soil excavation , laying sheetpile and disposal	7 days	2/2/23
758	Treatment of bedding	2 days	9/2/23
759	Pipe laying D.I.	1 day	11/2/23
760	Backfilling sand/aggregate, concurrent bend block/chambers	10 days	12/2/23
761	Reinstatement	1 day	22/2/23



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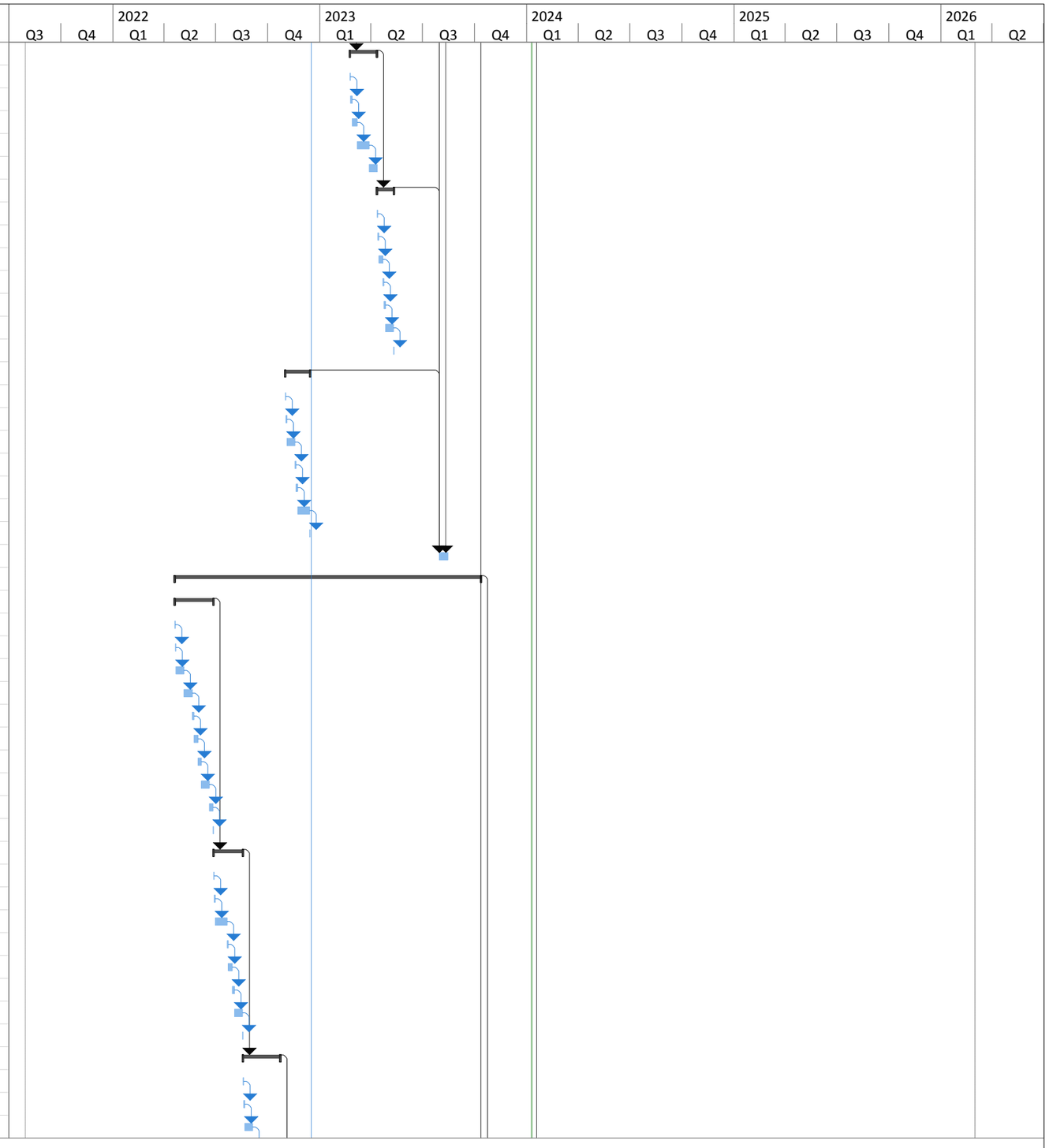
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
762	**CH120 - CH170 (50m)**	**48 days**	**23/2/23**
763	TTA establishment	1 day	23/2/23
764	Removal of existing railing	3 days	24/2/23
765	Installation of mild steel pipe	9 days	27/2/23
766	Construction of thrust block	21 days	8/3/23
767	Reinstatement of railing	14 days	29/3/23
768	**CH080 - CH120 (40m)**	**30 days**	**12/4/23**
769	TTA establishment	1 day	12/4/23
770	Hard material excavation and disposal	2 days	13/4/23
771	Soil excavation , laying sheetpile and disposal	7 days	15/4/23
772	Treatment of bedding	2 days	22/4/23
773	Pipe laying D.I.	3 days	24/4/23
774	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	27/4/23
775	Reinstatement	1 day	11/5/23
776	**CH020 - CH080 (60m)**	**44 days**	**1/11/22**
777	TTA establishment	1 day	1/11/22
778	Hard material excavation and disposal	2 days	2/11/22
779	Soil excavation , laying sheetpile and disposal	14 days	4/11/22
780	Treatment of bedding	2 days	18/11/22
781	Pipe laying D.I.	3 days	20/11/22
782	Backfilling sand/aggregate, concurrent bend block/chambers	21 days	23/11/22
783	Reinstatement	1 day	14/12/22
784	Pressure test, swabbing and CCTV	15 days	31/7/23
785	**Team B : CH550 - CH1090 (540m)**	**540.5 days**	**20/4/22**
786	**CH970 - CH1010 (40m)**	**68.5 days**	**20/4/22**
787	TTA establishment	1 day	20/4/22
788	Hard material excavation and disposal	1 day	21/4/22
789	Soil excavation , laying sheetpile and disposal	14 days	22/4/22
790	CE-068 _ Inclement Weather in August 2022	15 days	6/5/22
791	Treatment of bedding	3 days	21/5/22
792	Pipe laying D.I.	7 days	24/5/22
793	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	31/5/22
794	Backfilling sand/aggregate	14 days	6/6/22
795	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	20/6/22
796	Reinstatement	1 day	26/6/22
797	**CH930 - CH970 (40m)**	**52 days**	**27/6/22**
798	TTA establishment	1 day	27/6/22
799	Hard material excavation and disposal	2 days	28/6/22
800	Soil excavation , laying sheetpile and disposal	21 days	30/6/22
801	Treatment of bedding	2 days	21/7/22
802	Pipe laying D.I.	7 days	23/7/22
803	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	30/7/22
804	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	3/8/22
805	Reinstatement	1 day	17/8/22
806	**CH880 - CH930 (50m)**	**66 days**	**18/8/22**
807	TTA establishment	1 day	18/8/22
808	Hard material excavation and disposal (CH880 - CH910)	2 days	19/8/22
809	Soil excavation, laying sheetpile and disposal (CH880 - CH910)	14 days	21/8/22



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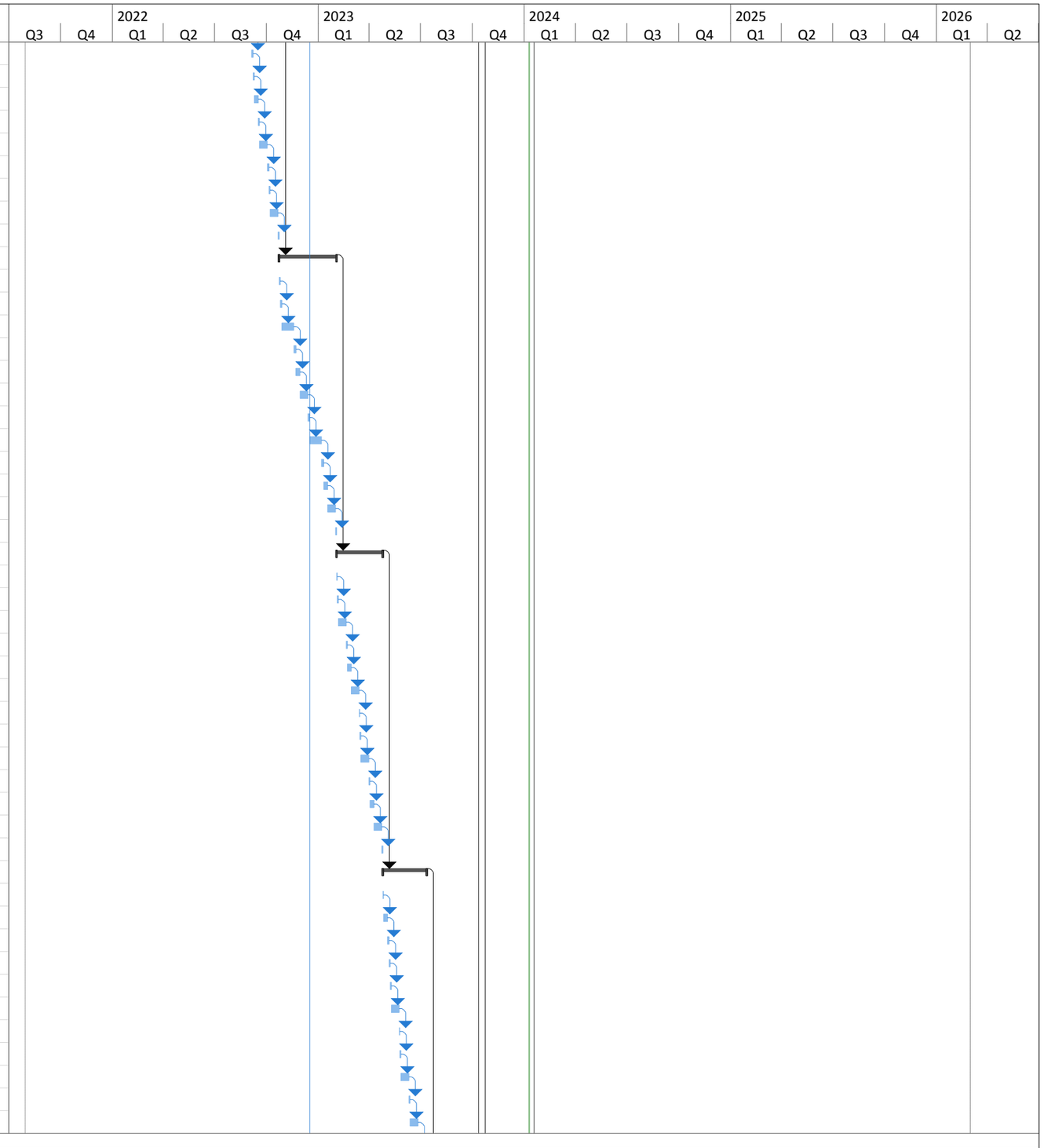
Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
810	Treatment of bedding (CH880 - CH910)	3 days	4/9/22
811	Pipe laying D.I. (CH880 - CH910)	2 days	7/9/22
812	Backfilling sand/aggregate, concurrent bend block/chambers (CH880 - CH910)	7 days	9/9/22
813	Hard material excavation and disposal (CH850 - CH880)	2 days	16/9/22
814	Soil excavation, laying sheetpile and disposal (CH850 - CH880)	14 days	18/9/22
815	Treatment of bedding (CH850 - CH880)	3 days	2/10/22
816	Pipe laying D.I. (CH850 - CH880)	2 days	5/10/22
817	Backfilling sand/aggregate, concurrent bend block/chambers (CH850 - CH880)	14 days	7/10/22
818	Reinstatement	2 days	21/10/22
819	**CH780 - CH880 (100m)**	**102 days**	**23/10/22**
820	TTA establishment	2 days	23/10/22
821	Hard material excavation and disposal (CH800 - CH850)	3 days	25/10/22
822	Soil excavation , laying sheetpile and disposal (CH800 - CH850)	21 days	28/10/22
823	Treatment of bedding (CH800 - CH850)	4 days	18/11/22
824	Pipe laying D.I. (CH800 - CH850)	7 days	22/11/22
825	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	29/11/22
826	Hard material excavation and disposal (CH750 - CH800)	3 days	13/12/22
827	Soil excavation , laying sheetpile and disposal (CH750 - CH800)	21 days	16/12/22
828	Treatment of bedding (CH750 - CH800)	4 days	6/1/23
829	Pipe laying D.I. (CH750 - CH800)	7 days	10/1/23
830	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	17/1/23
831	Reinstatement	2 days	31/1/23
832	**CH680 - CH780 (100m)**	**82 days**	**2/2/23**
833	TTA establishment	1 day	2/2/23
834	Hard material excavation and disposal (CH700 - CH750)	2 days	3/2/23
835	Soil excavation , laying sheetpile and disposal (CH700 - CH750)	14 days	5/2/23
836	Treatment of bedding (CH700 - CH750)	2 days	19/2/23
837	Pipe laying D.I. (CH700 - CH750)	7 days	21/2/23
838	Backfilling sand/aggregate, concurrent bend block/chambers (CH700 - CH750)	14 days	28/2/23
839	Reinstatement (CH700 - CH750)	1 day	14/3/23
840	Hard material excavation and disposal (CH650 - CH700)	2 days	15/3/23
841	Soil excavation , laying sheetpile and disposal (CH650 - CH700)	14 days	17/3/23
842	Treatment of bedding (CH650 - CH700)	2 days	31/3/23
843	Pipe laying D.I. (CH650 - CH700)	7 days	2/4/23
844	Backfilling sand/aggregate, concurrent bend block/chambers (CH650 - CH700)	14 days	9/4/23
845	Reinstatement	2 days	23/4/23
846	**CH580 - CH680 (100m)**	**78 days**	**25/4/23**
847	TTA establishment	1 day	25/4/23
848	Hard material excavation and disposal (CH600 - CH650)	7 days	26/4/23
849	Soil excavation , laying sheetpile and disposal (CH600 - CH650)	3 days	3/5/23
850	Treatment of bedding (CH600 - CH650)	2 days	6/5/23
851	Pipe laying D.I. (CH600 - CH650)	2 days	8/5/23
852	Backfilling sand/aggregate, concurrent bend block/chambers (CH600 - CH650)	14 days	10/5/23
853	Reinstatement (CH600 - CH650)	1 day	24/5/23
854	Hard material excavation and disposal (CH550 - CH600)	2 days	25/5/23
855	Soil excavation , laying sheetpile and disposal (CH550 - CH600)	14 days	27/5/23
856	Treatment of bedding (CH550 - CH600)	2 days	10/6/23
857	Pipe laying D.I. (CH550 - CH600)	14 days	12/6/23



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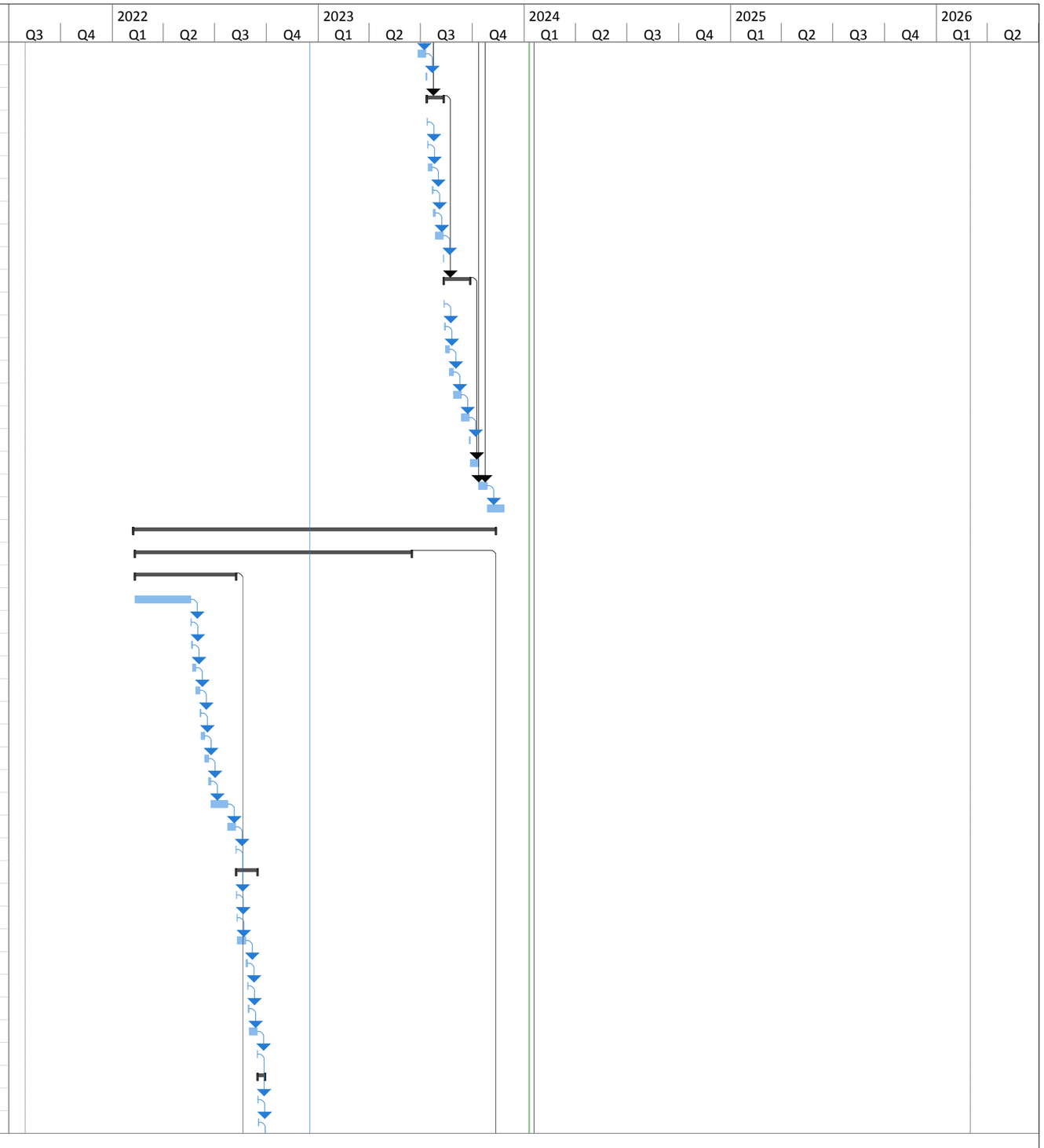
Milestone	Inactive Summary	Start-only	Critical		
Summary	Manual Task	Finish-only	Critical Split		
Project Summary	Duration-only	External Tasks	Progress		

ID	Task Name	Duration	Start
858	Backfilling sand/aggregate, concurrent bend block/chambers (CH550 - CH600)	14 days	26/6/23
859	Reinstatement	2 days	10/7/23
860	**CH1010 - CH1040 (30m)**	**30 days**	**12/7/23**
861	TTA establishment	1 day	12/7/23
862	Hard material excavation and disposal	1 day	13/7/23
863	Soil excavation , laying sheetpile and disposal	7 days	14/7/23
864	Treatment of bedding	2 days	21/7/23
865	Pipe laying D.I.	4 days	23/7/23
866	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	27/7/23
867	Reinstatement	1 day	10/8/23
868	**CH1040 - CH1090 (50m)**	**47 days**	**11/8/23**
869	TTA establishment	1 day	11/8/23
870	Hard material excavation and disposal	2 days	12/8/23
871	Soil excavation , laying sheetpile and disposal	7 days	14/8/23
872	Treatment of bedding	7 days	21/8/23
873	Pipe laying D.I.	14 days	28/8/23
874	Backfilling sand/aggregate, concurrent bend block/chambers	14 days	11/9/23
875	Reinstatement	2 days	25/9/23
876	Pressure test, swabbing and CCTV	15 days	27/9/23
877	Overall pressure test	15 days	12/10/23
878	Pipe connection and completion	30 days	27/10/23
879	**RW43 : DN150 DI pipe - 1144m (XP ID: 1301130, 1301131)**	**643 days**	**7/2/22**
880	**CH370 to CH850 (480m)**	**491 days**	**10/2/22**
881	**Team A CH640 to CH680 (40m)**	**179.5 days**	**10/2/22**
882	Pending for IIB of pipe fittings	99 days	10/2/22
883	TTA establishment	1 day	20/5/22
884	Hard material excavation and disposal	2 days	21/5/22
885	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	23/5/22
886	Soil excavation , laying sheetpile and disposal	7 days	29/5/22
887	Treatment of bedding	2 days	5/6/22
888	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	7/6/22
889	Pipe laying D.I.	7 days	13/6/22
890	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	20/6/22
891	Works suspended by Sheung Shui Heung	30 days	24/6/22
892	Backfilling general fill and compaction	14 days	24/7/22
893	Reinstatement	1 day	7/8/22
894	**Team A CH420 to CH450 (35m)**	**38 days**	**8/8/22**
895	TTA establishment	1 day	8/8/22
896	Hard material excavation and disposal	1 day	9/8/22
897	CE-068 _ Inclement Weather in August 2022	15 days	10/8/22
898	Soil excavation , laying sheetpile and disposal	3 days	25/8/22
899	Treatment of bedding	1 day	28/8/22
900	Pipe laying D.I.	2 days	29/8/22
901	Backfilling general fill and compaction	14 days	31/8/22
902	Reinstatement	1 day	14/9/22
903	**Team A CH410 to CH420 (10m)**	**13 days**	**15/9/22**
904	TTA establishment	1 day	15/9/22
905	Hard material excavation and disposal	1 day	16/9/22



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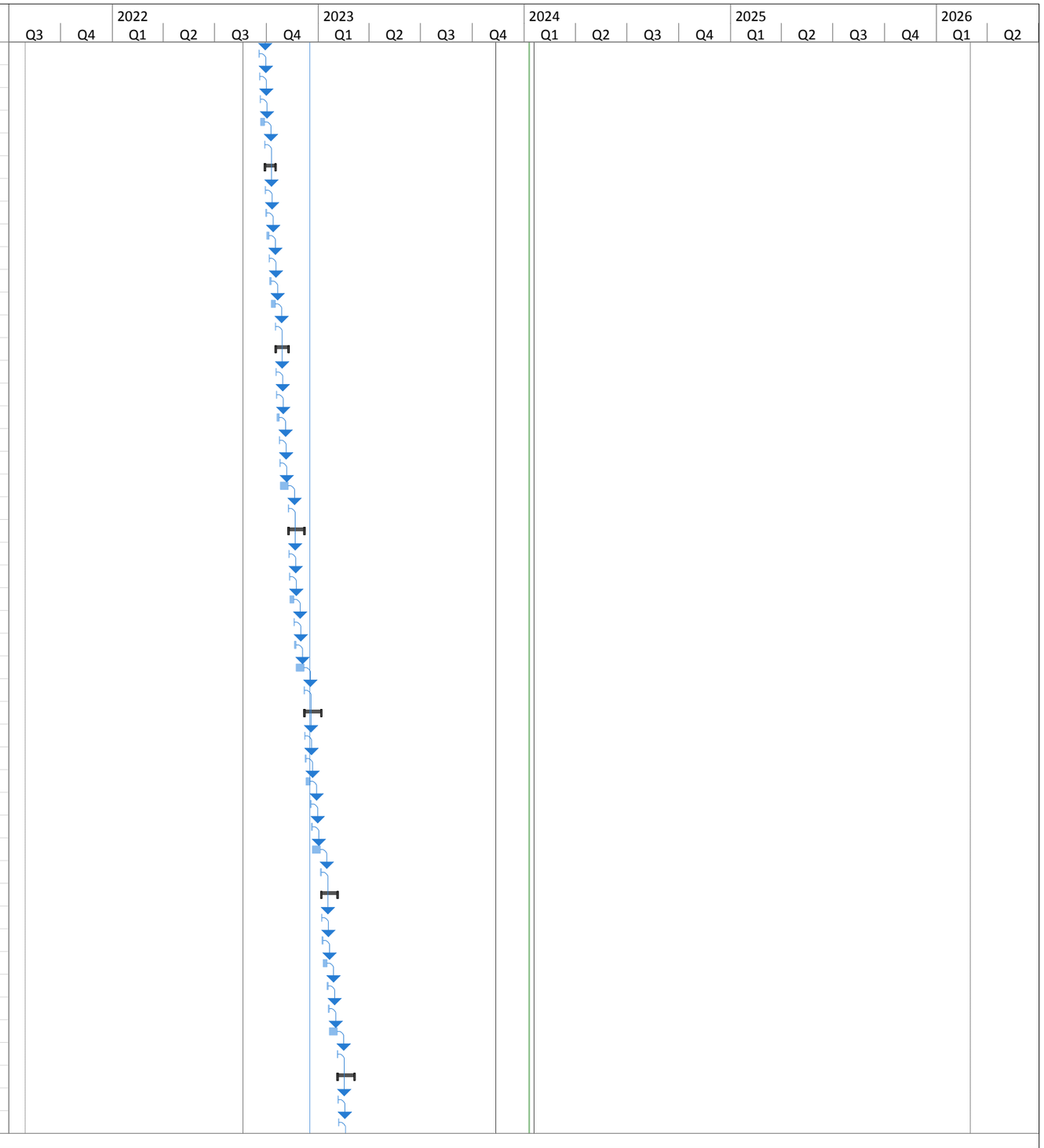
ID	Task Name	Duration	Start
906	Soil excavation , laying sheetpile and disposal	1 day	17/9/22
907	Treatment of bedding	1 day	18/9/22
908	Pipe laying D.I.	1 day	19/9/22
909	Backfilling general fill and compaction	7 days	20/9/22
910	Reinstatement	1 day	27/9/22
911	**Team A CH450 to CH500 (50m)**	**19 days**	**28/9/22**
912	TTA establishment	1 day	28/9/22
913	Hard material excavation and disposal	2 days	29/9/22
914	Soil excavation , laying sheetpile and disposal	4 days	1/10/22
915	Treatment of bedding	1 day	5/10/22
916	Pipe laying D.I.	3 days	6/10/22
917	Backfilling general fill and compaction	7 days	9/10/22
918	Reinstatement	1 day	16/10/22
919	**Team A CH400 to CH410 (10m)**	**23 days**	**17/10/22**
920	TTA establishment	1 day	17/10/22
921	Hard material excavation and disposal	1 day	18/10/22
922	Soil excavation , laying sheetpile and disposal	4 days	19/10/22
923	Treatment of bedding	1 day	23/10/22
924	Pipe laying D.I.	1 day	24/10/22
925	Backfilling general fill and compaction	14 days	25/10/22
926	Reinstatement	1 day	8/11/22
927	**Team A CH370 to CH400 (30m)**	**28 days**	**9/11/22**
928	TTA establishment	1 day	9/11/22
929	Hard material excavation and disposal	1 day	10/11/22
930	Soil excavation , laying sheetpile and disposal	7 days	11/11/22
931	Treatment of bedding	1 day	18/11/22
932	Pipe laying D.I.	3 days	19/11/22
933	Backfilling general fill and compaction	14 days	22/11/22
934	Reinstatement	1 day	6/12/22
935	**Team A CH500 to CH550 (50m)**	**30 days**	**7/12/22**
936	TTA establishment	1 day	7/12/22
937	Hard material excavation and disposal	2 days	8/12/22
938	Soil excavation , laying sheetpile and disposal	7 days	10/12/22
939	Treatment of bedding	2 days	17/12/22
940	Pipe laying D.I.	2 days	19/12/22
941	Backfilling general fill and compaction	14 days	21/12/22
942	Reinstatement	2 days	4/1/23
943	**Team A CH550 to CH580 (30m)**	**29 days**	**6/1/23**
944	TTA establishment	1 day	6/1/23
945	Hard material excavation and disposal	2 days	7/1/23
946	Soil excavation , laying sheetpile and disposal	7 days	9/1/23
947	Treatment of bedding	2 days	16/1/23
948	Pipe laying D.I.	2 days	18/1/23
949	Backfilling general fill and compaction	14 days	20/1/23
950	Reinstatement	1 day	3/2/23
951	**Team A CH580 to CH610 (30m)**	**30 days**	**4/2/23**
952	TTA establishment	1 day	4/2/23
953	Hard material excavation and disposal	1 day	5/2/23



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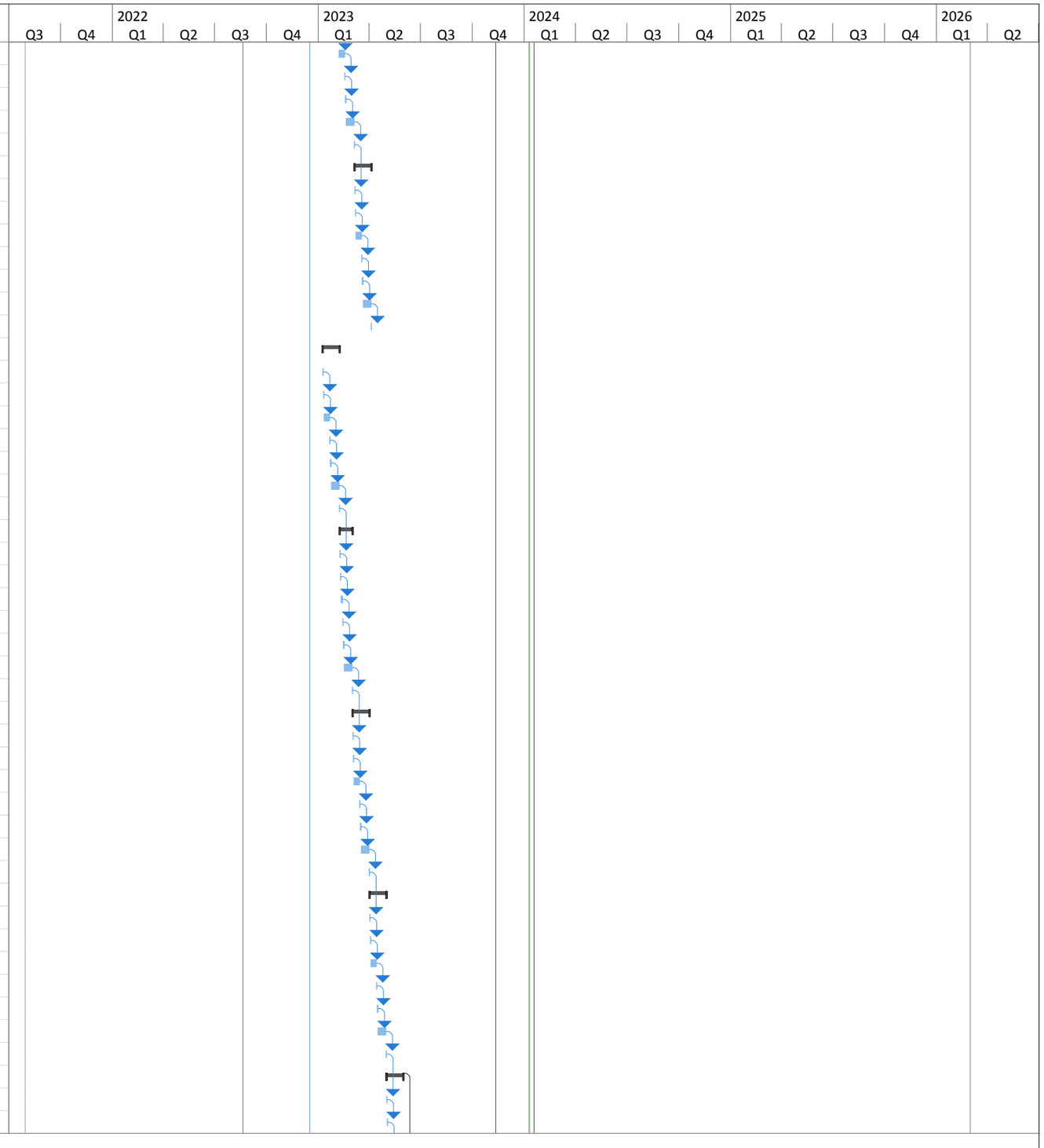
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
954	Soil excavation , laying sheetpile and disposal	10 days	6/2/23
955	Treatment of bedding	1 day	16/2/23
956	Pipe laying D.I.	2 days	17/2/23
957	Backfilling general fill and compaction	14 days	19/2/23
958	Reinstatement	1 day	5/3/23
959	**Team A CH610 to CH640 (30m)**	**30 days**	**6/3/23**
960	TTA establishment	1 day	6/3/23
961	Hard material excavation and disposal	1 day	7/3/23
962	Soil excavation , laying sheetpile and disposal	10 days	8/3/23
963	Treatment of bedding	1 day	18/3/23
964	Pipe laying D.I.	2 days	19/3/23
965	Backfilling general fill and compaction	14 days	21/3/23
966	Reinstatement	1 day	4/4/23
967	**Team A CH640 to CH680 (40m) _ re-alignmet**	**30 days**	**9/1/23**
968	TTA establishment	1 day	9/1/23
969	Hard material excavation and disposal	1 day	10/1/23
970	Soil excavation , laying sheetpile and disposal	10 days	11/1/23
971	Treatment of bedding	1 day	21/1/23
972	Pipe laying D.I.	2 days	22/1/23
973	Backfilling general fill and compaction	14 days	24/1/23
974	Reinstatement	1 day	7/2/23
975	**Team A CH680 to CH740 (60m) _ re-alignmet**	**23 days**	**8/2/23**
976	TTA establishment	1 day	8/2/23
977	Hard material excavation and disposal	1 day	9/2/23
978	Soil excavation , laying sheetpile and disposal	3 days	10/2/23
979	Treatment of bedding	1 day	13/2/23
980	Pipe laying D.I.	2 days	14/2/23
981	Backfilling general fill and compaction	14 days	16/2/23
982	Reinstatement	1 day	2/3/23
983	**Team A CH740 to CH770 (30m) _ re-alignmet**	**30 days**	**3/3/23**
984	TTA establishment	1 day	3/3/23
985	Hard material excavation and disposal	1 day	4/3/23
986	Soil excavation , laying sheetpile and disposal	10 days	5/3/23
987	Treatment of bedding	1 day	15/3/23
988	Pipe laying D.I.	2 days	16/3/23
989	Backfilling general fill and compaction	14 days	18/3/23
990	Reinstatement	1 day	1/4/23
991	**Team A CH770 to CH810 (30m) _ re-alignmet**	**30 days**	**2/4/23**
992	TTA establishment	1 day	2/4/23
993	Hard material excavation and disposal	1 day	3/4/23
994	Soil excavation , laying sheetpile and disposal	10 days	4/4/23
995	Treatment of bedding	1 day	14/4/23
996	Pipe laying D.I.	2 days	15/4/23
997	Backfilling general fill and compaction	14 days	17/4/23
998	Reinstatement	1 day	1/5/23
999	**Team A CH810 to CH850 (30m) _ re-alignmet**	**30 days**	**2/5/23**
1000	TTA establishment	1 day	2/5/23
1001	Hard material excavation and disposal	1 day	3/5/23



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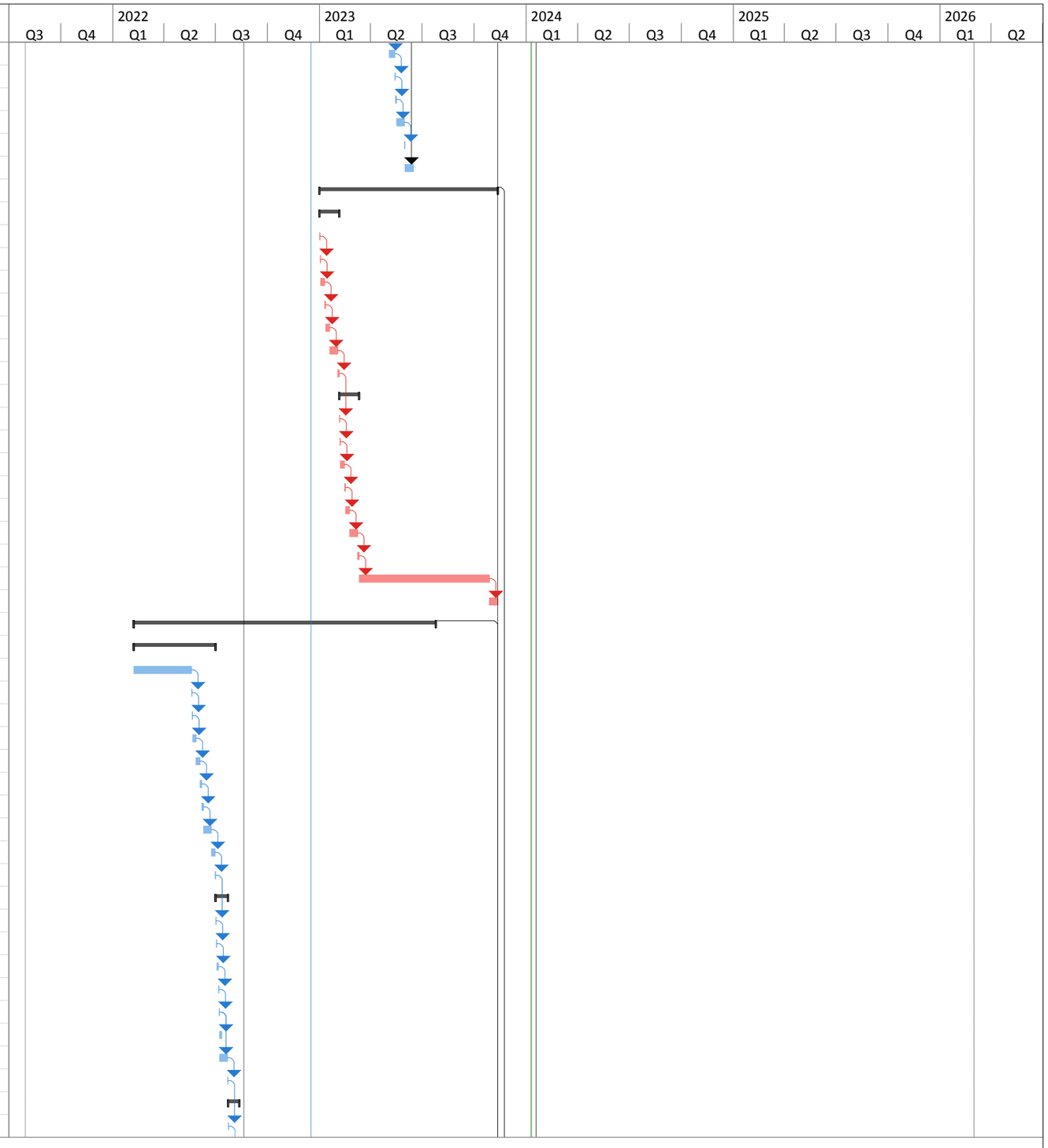
Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
1002	Soil excavation , laying sheetpile and disposal	10 days	4/5/23
1003	Treatment of bedding	1 day	14/5/23
1004	Pipe laying D.I.	2 days	15/5/23
1005	Backfilling general fill and compaction	14 days	17/5/23
1006	Reinstatement	1 day	31/5/23
1007	Pressure test, swabbing and CCTV	15 days	1/6/23
1008	**CH850 to CH1130 (280m)**	**315 days**	**1/1/23**
1009	**Team A1 CH1115 to CH1130 (15m)**	**35 days**	**1/1/23**
1010	TTA establishment	1 day	1/1/23
1011	Hard material excavation and disposal	1 day	2/1/23
1012	Soil excavation , laying sheetpile and disposal	7 days	3/1/23
1013	Treatment of bedding	2 days	10/1/23
1014	Pipe laying D.I.	7 days	12/1/23
1015	Backfilling general fill and compaction	14 days	19/1/23
1016	Reinstatement	3 days	2/2/23
1017	**Team A1 CH1130 to CH1145 (15m)**	**35 days**	**5/2/23**
1018	TTA establishment	1 day	5/2/23
1019	Hard material excavation and disposal	1 day	6/2/23
1020	Soil excavation , laying sheetpile and disposal	7 days	7/2/23
1021	Treatment of bedding	2 days	14/2/23
1022	Pipe laying D.I.	7 days	16/2/23
1023	Backfilling general fill and compaction	14 days	23/2/23
1024	Reinstatement	3 days	9/3/23
1025	Team A1 CH850 to CH1115 (265m)	230 days	12/3/23
1026	Pressure test, swabbing and CCTV	15 days	28/10/23
1027	**CH000 to CH370 (370m)**	**533.5 days**	**7/2/22**
1028	**Team B CH220 to CH245 (25m)**	**144.5 days**	**7/2/22**
1029	Pending for release of TTA from other Contractor	102 days	7/2/22
1030	TTA establishment	1 day	20/5/22
1031	Hard material excavation and disposal	1 day	21/5/22
1032	CE-052 _ Inclement Weather in May 2022 (under assessment)	6 days	22/5/22
1033	Soil excavation , laying sheetpile and disposal	7 days	28/5/22
1034	Treatment of bedding	3 days	4/6/22
1035	Pipe laying D.I.	3 days	7/6/22
1036	Backfilling general fill and compaction	14 days	10/6/22
1037	CE-053 _ Inclement Weather in June 2022 (under assessment)	6.5 days	24/6/22
1038	Reinstatement	1 day	30/6/22
1039	**Team B CH190 to CH220 (30m)**	**22 days**	**1/7/22**
1040	TTA establishment	1 day	1/7/22
1041	Hard material excavation and disposal	1 day	2/7/22
1042	Soil excavation , laying sheetpile and disposal	3 days	3/7/22
1043	Treatment of bedding	1 day	6/7/22
1044	Pipe laying D.I.	1 day	7/7/22
1045	CE-054 _ Inclement Weather in July 2022 (under assessment)	4 days	8/7/22
1046	Backfilling general fill and compaction	14 days	8/7/22
1047	Reinstatement	1 day	22/7/22
1048	**Team B CH245 to CH285 (40m)**	**20 days**	**23/7/22**
1049	TTA establishment	1 day	23/7/22



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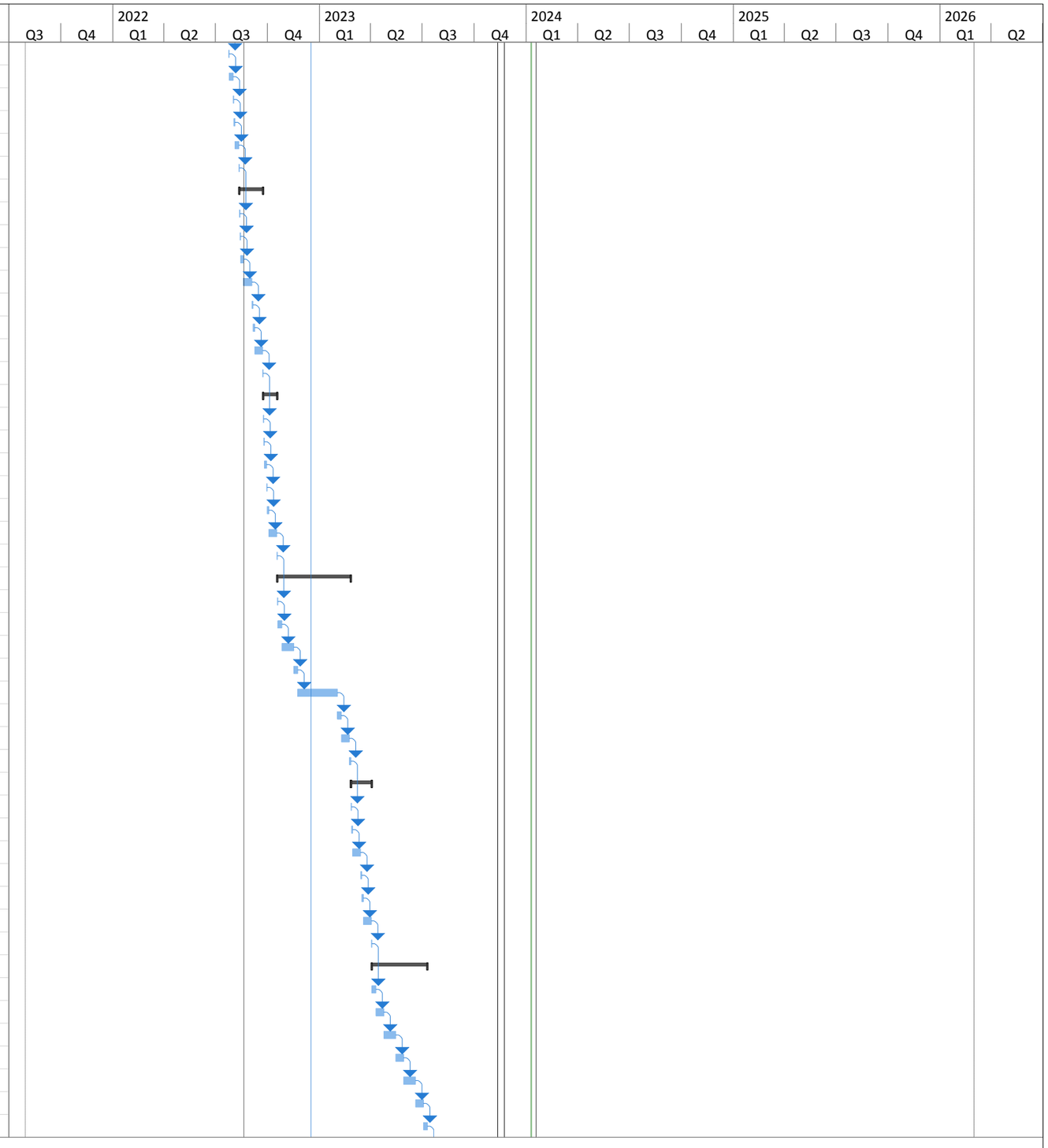
ID	Task Name	Duration	Start
1050	Hard material excavation and disposal	1 day	24/7/22
1051	Soil excavation , laying sheetpile and disposal	7 days	25/7/22
1052	Treatment of bedding	1 day	1/8/22
1053	Pipe laying D.I.	2 days	2/8/22
1054	Backfilling general fill and compaction	7 days	4/8/22
1055	Reinstatement	1 day	11/8/22
1056	**Team B CH285 to CH315 (30m)**	**42 days**	**12/8/22**
1057	TTA establishment	1 day	12/8/22
1058	Hard material excavation and disposal	1 day	13/8/22
1059	Soil excavation , laying sheetpile and disposal	5 days	14/8/22
1060	CE-068 _ Inclement Weather in August 2022	15 days	19/8/22
1061	Treatment of bedding	2 days	3/9/22
1062	Pipe laying D.I.	3 days	5/9/22
1063	Backfilling general fill and compaction	14 days	8/9/22
1064	Reinstatement	1 day	22/9/22
1065	**Team B CH315 to CH340 (25m)**	**25 days**	**23/9/22**
1066	TTA establishment	1 day	23/9/22
1067	Hard material excavation and disposal	1 day	24/9/22
1068	Soil excavation , laying sheetpile and disposal	4 days	25/9/22
1069	Treatment of bedding	1 day	29/9/22
1070	Pipe laying D.I.	3 days	30/9/22
1071	Backfilling general fill and compaction	14 days	3/10/22
1072	Reinstatement	1 day	17/10/22
1073	**Team B CH0 to CH150 (150m)**	**130 days**	**18/10/22**
1074	TTA establishment	1 day	18/10/22
1075	Hard material excavation and disposal	7 days	19/10/22
1076	Soil excavation , laying sheetpile and disposal	21 days	26/10/22
1077	Treatment of bedding	7 days	16/11/22
1078	Pending for confirmation of design alignment	70 days	23/11/22
1079	Pipe laying D.I.	7 days	1/2/23
1080	Backfilling gerneral fill and compaction	14 days	8/2/23
1081	Reinstatement	3 days	22/2/23
1082	**Team B CH150 to CH190 (40m)**	**37 days**	**25/2/23**
1083	TTA establishment	1 day	25/2/23
1084	Hard material excavation and disposal	2 days	26/2/23
1085	Soil excavation , laying sheetpile and disposal	14 days	28/2/23
1086	Treatment of bedding	2 days	14/3/23
1087	Pipe laying D.I.	3 days	16/3/23
1088	Backfilling general fill and compaction	14 days	19/3/23
1089	Reinstatement	1 day	2/4/23
1090	**Team B CH340 to CH370 (30m)**	**98 days**	**3/4/23**
1091	TTA establishment	7 days	3/4/23
1092	Hard material excavation and disposal	14 days	10/4/23
1093	Soil excavation , laying sheetpile and disposal	21 days	24/4/23
1094	Treatment of bedding	14 days	15/5/23
1095	Pipe laying D.I.	21 days	29/5/23
1096	Backfilling general fill and compaction	14 days	19/6/23
1097	Reinstatement	7 days	3/7/23



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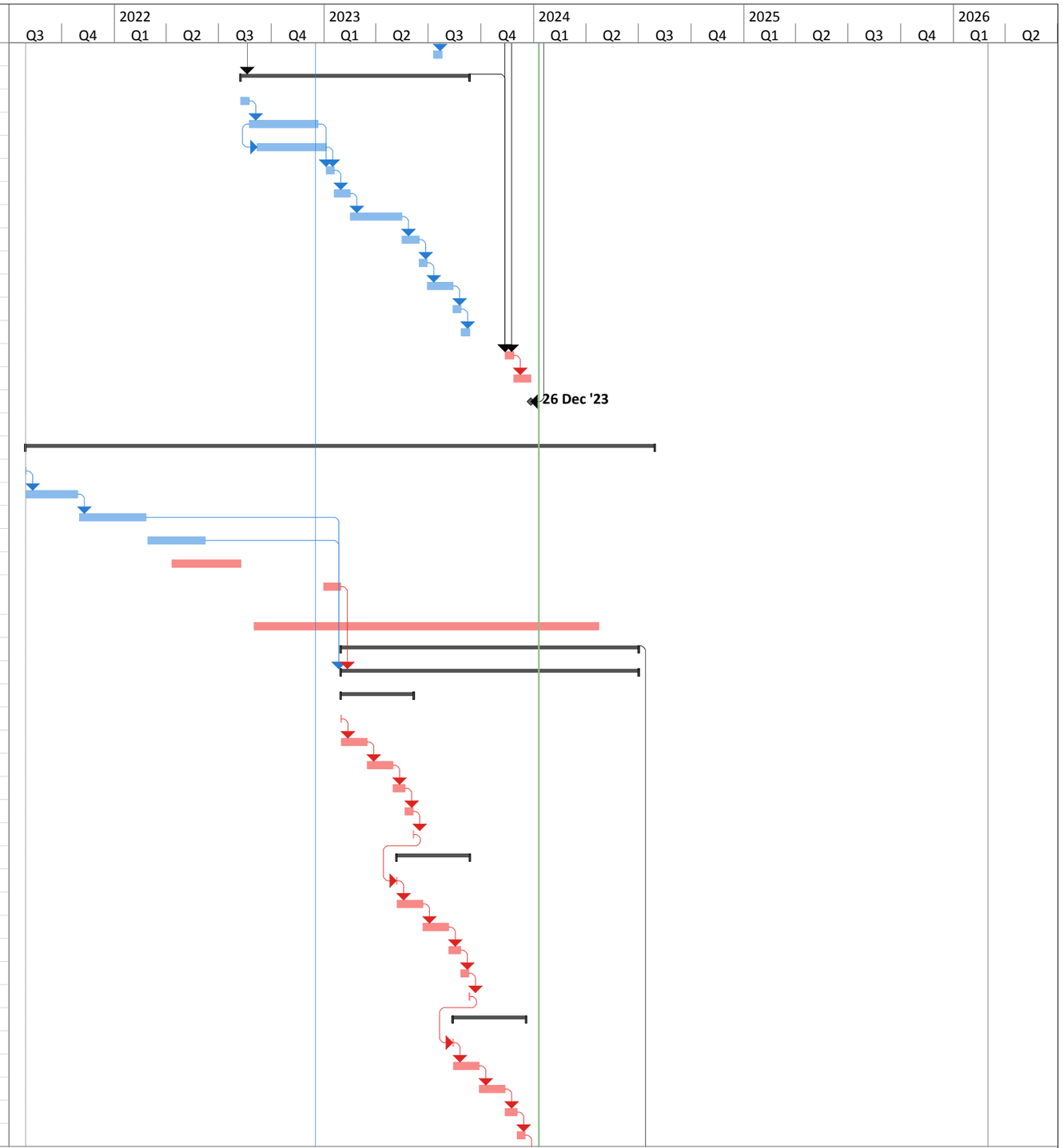
Project Summary	Duration-only	External Tasks	Progress		

ID	Task Name	Duration	Start
1098	Pressure test, swabbing and CCTV	15 days	10/7/23
1099	**CH710 to CH970 (260m) -within the scope of Shueng Shui Hueng**	**399 days**	**8/8/22**
1100	CE-068 _ Inclement Weather in August 2022	15 days	8/8/22
1101	Pending agreement of Shueng Shui Hueng villagers	120 days	23/8/22
1102	XP application for alternative alignment of watermain	120 days	6/9/22
1103	TTA establishment	14 days	4/1/23
1104	Hard material excavation and disposal	28 days	18/1/23
1105	Soil excavation , laying sheetpile and disposal	90 days	15/2/23
1106	Treatment of bedding	30 days	16/5/23
1107	Pipe laying D.I.	14 days	15/6/23
1108	Backfilling general fill and compaction	45 days	29/6/23
1109	Reinstatement	14 days	13/8/23
1110	Pressure test, swabbing and CCTV	15 days	27/8/23
1111	Overall pressure testing	15 days	12/11/23
1112	Pipe connection and completion	30 days	27/11/23
1113	Planned completion for section 4	0 days	26/12/23
1114			
1115	**Section 5 - Water main laying works in part 4 of the Site**	**1096 days**	**30/7/21**
1116	Access Date (part 4 of the Site)	1 day	30/7/21
1117	Initial survey (utility survey, condition survey, initial photo)	90 days	31/7/21
1118	Application and approval of XP and TTA	116 days	1/11/21
1119	Procurement and Delivery of pipes, fittings and related materials	100 days	28/2/22
1120	Submission and acceptance of method statement and material	120 days	11/4/22
1121	Submission and acceptance of method statement and temp work design for trenchless works	30 days	31/12/22
1122	Excavation of Inspection Pit	600 days	1/9/22
1123	**Mainlaying by trenchless method (RW04)**	**519 days**	**30/1/23**
1124	**RW04 : DN450 DI pipe (trenchless)**	**519 days**	**30/1/23**
1125	**Wo Tai Street (70m) - TBM Method**	**127 days**	**30/1/23**
1126	TTA implementation	1 day	30/1/23
1127	Contruction of jacking pit and receiving pit	45 days	31/1/23
1128	Trenchless works and pipe laying	45 days	17/3/23
1129	Manhole / Chamber construction	21 days	1/5/23
1130	Backfilling and compaction	14 days	22/5/23
1131	Reinstatement	1 day	5/6/23
1132	**Ma Sik Road (70m) - TBM Method**	**128 days**	**7/5/23**
1133	TTA implementation	1 day	7/5/23
1134	Contruction of jacking pit and receiving pit	45 days	8/5/23
1135	Trenchless works and pipe laying	45 days	22/6/23
1136	Manhole / Chamber construction	21 days	6/8/23
1137	Backfilling and compaction	14 days	27/8/23
1138	Reinstatement	2 days	10/9/23
1139	**Luen Chit Street (70m) - TBM Method**	**128 days**	**13/8/23**
1140	TTA implementation	1 day	13/8/23
1141	Contruction of jacking pit and receiving pit	45 days	14/8/23
1142	Trenchless works and pipe laying	45 days	28/9/23
1143	Manhole / Chamber construction	21 days	12/11/23
1144	Backfilling and compaction	14 days	3/12/23



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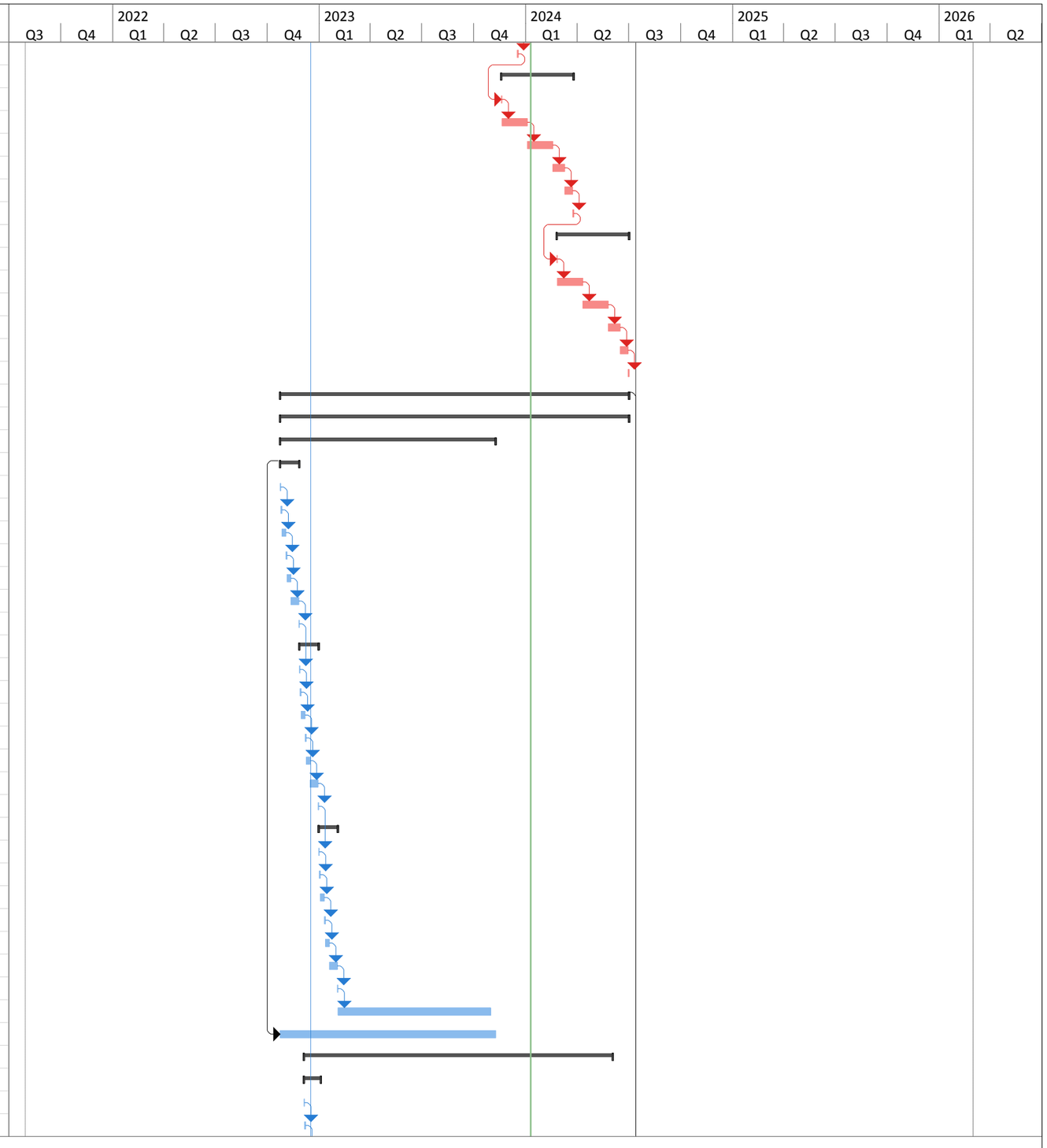
ID	Task Name	Duration	Start
1145	Reinstatement	2 days	17/12/23
1146	**Luen Sum Road (70m) - TBM Method**	**128 days**	**19/11/23**
1147	TTA implementation	1 day	19/11/23
1148	Contruction of jacking pit and receiving pit	45 days	20/11/23
1149	Trenchless works and pipe laying	45 days	4/1/24
1150	Manhole / Chamber construction	21 days	18/2/24
1151	Backfilling and compaction	14 days	10/3/24
1152	Reinstatement	2 days	24/3/24
1153	**Fanling Lau Road (70m) - TBM Method**	**128 days**	**25/2/24**
1154	TTA implementation	1 day	25/2/24
1155	Contruction of jacking pit and receiving pit	45 days	26/2/24
1156	Trenchless works and pipe laying	45 days	11/4/24
1157	Manhole / Chamber construction	21 days	26/5/24
1158	Backfilling and compaction	14 days	16/6/24
1159	Reinstatement	2 days	30/6/24
1160	**Mainlaying by open trench method (RW04)**	**617 days**	**24/10/22**
1161	**RW04 : DN450 DI Pipe**	**617 days**	**24/10/22**
1162	Ma Sik Road CH1400 to CH1700 (300m) (XP ID: 1301142, 1301146, 1301149)	381 days	24/10/22
1163	CH1420 to CH1450 (30m)	34 days	24/10/22
1164	TTA establishment	1 day	24/10/22
1165	Hard material excavation and disposal	2 days	25/10/22
1166	Soil excavation , laying sheetpile and disposal	7 days	27/10/22
1167	Treatment of bedding	2 days	3/11/22
1168	Pipe laying D.I.	7 days	5/11/22
1169	Backfilling general fill and compaction	14 days	12/11/22
1170	Reinstatement	1 day	26/11/22
1171	CH1450 to CH1480 (30m)	34 days	27/11/22
1172	TTA establishment	1 day	27/11/22
1173	Hard material excavation and disposal	2 days	28/11/22
1174	Soil excavation , laying sheetpile and disposal	7 days	30/11/22
1175	Treatment of bedding	2 days	7/12/22
1176	Pipe laying D.I.	7 days	9/12/22
1177	Backfilling general fill and compaction	14 days	16/12/22
1178	Reinstatement	1 day	30/12/22
1179	CH910 to CH960 (50m)	34 days	31/12/22
1180	TTA establishment	1 day	31/12/22
1181	Hard material excavation and disposal	2 days	1/1/23
1182	Soil excavation , laying sheetpile and disposal	7 days	3/1/23
1183	Treatment of bedding	2 days	10/1/23
1184	Pipe laying D.I.	7 days	12/1/23
1185	Backfilling general fill and compaction	14 days	19/1/23
1186	Reinstatement	1 day	2/2/23
1187	CH1490 to 1700 (210m)	270 days	3/2/23
1188	Construction of valve chambers	381 days	24/10/22
1189	Ma Sik Road CH1700 to CH2180 (480m) (XP ID: 1301142, 1301146, 1301149)	546 days	5/12/22
1190	CH1920 to CH1950 (30m)	30 days	5/12/22
1191	TTA establishment	1 day	5/12/22
1192	Hard material excavation and disposal	2 days	6/12/22



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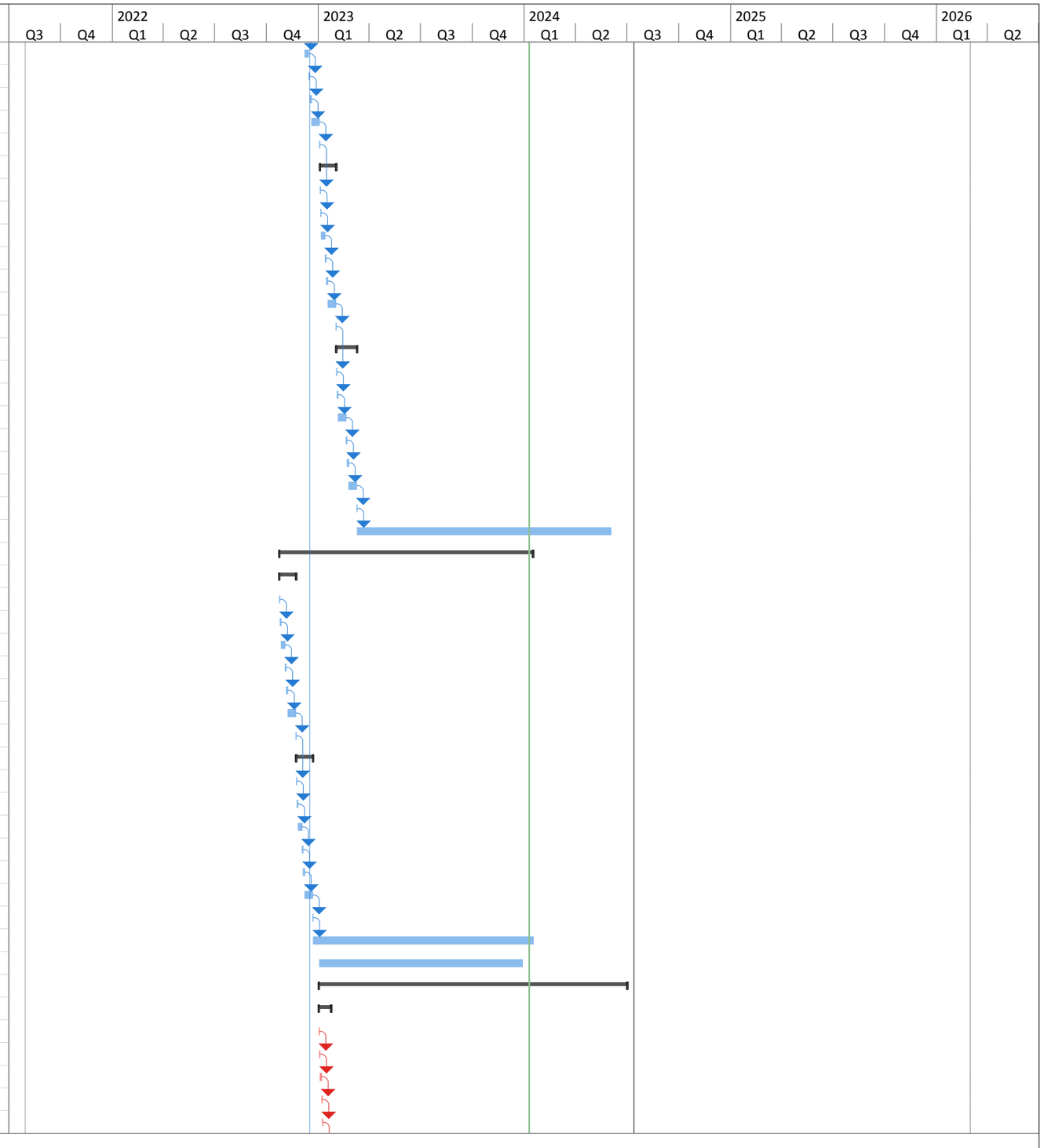
ID	Task Name	Duration	Start
1193	Soil excavation , laying sheetpile and disposal	7 days	8/12/22
1194	Treatment of bedding	2 days	15/12/22
1195	Pipe laying D.I.	3 days	17/12/22
1196	Backfilling general fill and compaction	14 days	20/12/22
1197	Reinstatement	1 day	3/1/23
1198	CH1950 to CH1990 (40m)	29 days	4/1/23
1199	TTA establishment	1 day	4/1/23
1200	Hard material excavation and disposal	1 day	5/1/23
1201	Soil excavation , laying sheetpile and disposal	7 days	6/1/23
1202	Treatment of bedding	2 days	13/1/23
1203	Pipe laying D.I.	3 days	15/1/23
1204	Backfilling general fill and compaction	14 days	18/1/23
1205	Reinstatement	1 day	1/2/23
1206	CH1990 to CH2020 (30m)	37 days	2/2/23
1207	TTA establishment	1 day	2/2/23
1208	Hard material excavation and disposal	2 days	3/2/23
1209	Soil excavation , laying sheetpile and disposal	14 days	5/2/23
1210	Treatment of bedding	2 days	19/2/23
1211	Pipe laying D.I.	3 days	21/2/23
1212	Backfilling general fill and compaction	14 days	24/2/23
1213	Reinstatement	1 day	10/3/23
1214	CH1790 to 2180 (390m)	450 days	11/3/23
1215	Ma Sik Road CH2180 to CH2400 (220m) (XP ID: 1301142, 1301146, 1301149)	450 days	24/10/22
1216	CH2210 to CH2240 (30m)	30 days	24/10/22
1217	TTA establishment	1 day	24/10/22
1218	Hard material excavation and disposal	2 days	25/10/22
1219	Soil excavation , laying sheetpile and disposal	7 days	27/10/22
1220	Treatment of bedding	2 days	3/11/22
1221	Pipe laying D.I.	3 days	5/11/22
1222	Backfilling general fill and compaction	14 days	8/11/22
1223	Reinstatement	1 day	22/11/22
1224	CH2240 to CH2270 (30m)	30 days	23/11/22
1225	TTA establishment	1 day	23/11/22
1226	Hard material excavation and disposal	2 days	24/11/22
1227	Soil excavation , laying sheetpile and disposal	7 days	26/11/22
1228	Treatment of bedding	2 days	3/12/22
1229	Pipe laying D.I.	3 days	5/12/22
1230	Backfilling general fill and compaction	14 days	8/12/22
1231	Reinstatement	1 day	22/12/22
1232	CH2270 to CH2400 (130m)	390 days	23/12/22
1233	Ma Sik Road CH2400 to CH2600 (200m) (XP ID: 1301142, 1301146, 1301149)	360 days	3/1/23
1234	Tin Ping Road (1377m) (XP ID: 1309070, 1310475)	547 days	2/1/23
1235	CH450 to CH480 (30m)	22 days	2/1/23
1236	TTA establishment	1 day	2/1/23
1237	Hard material excavation and disposal	1 day	3/1/23
1238	Soil excavation , laying sheetpile and disposal	3 days	4/1/23
1239	Treatment of bedding	1 day	7/1/23
1240	Pipe laying D.I.	1 day	8/1/23



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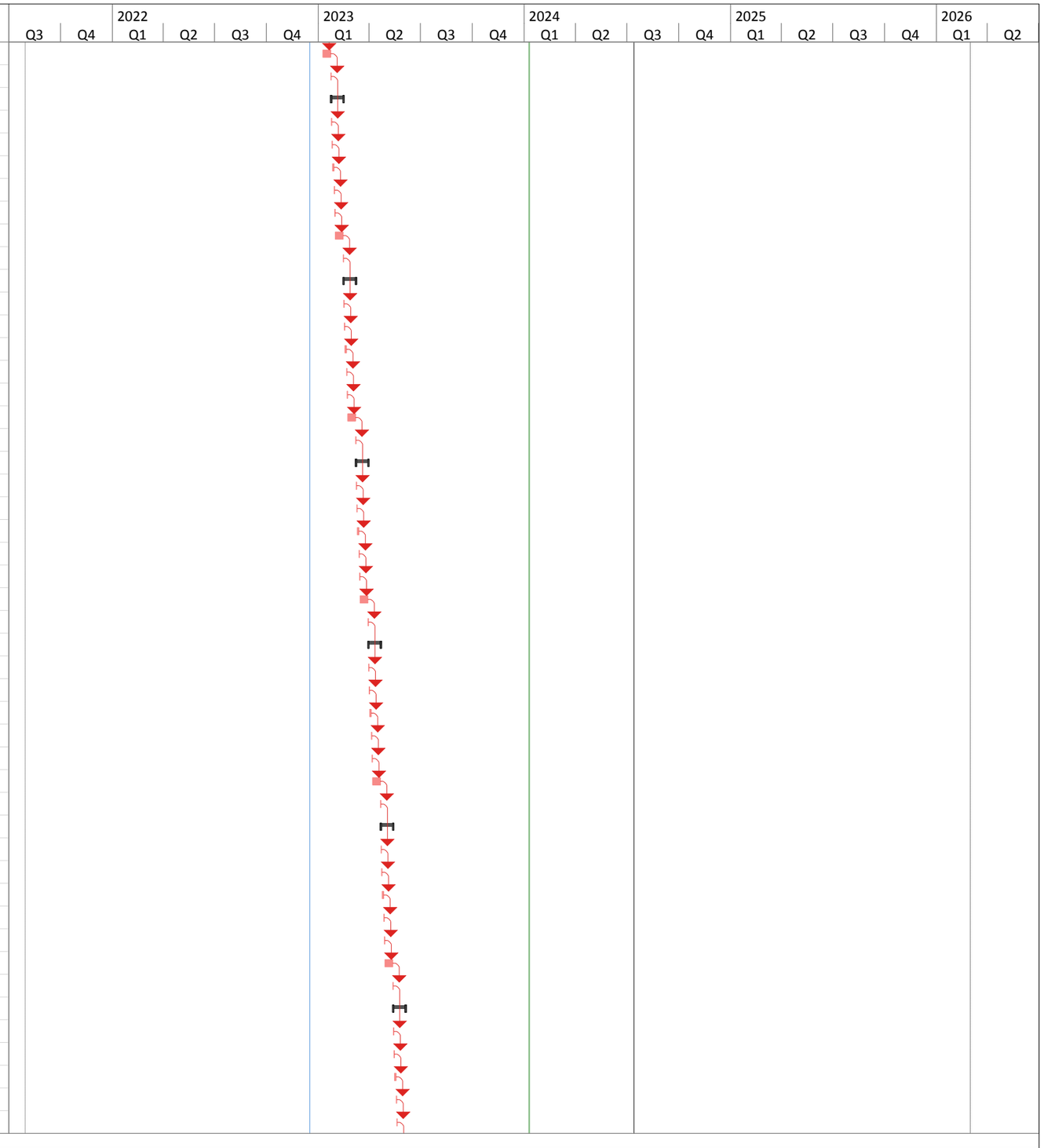
ID	Task Name	Duration	Start
1241	Backfilling general fill and compaction	14 days	9/1/23
1242	Reinstatement	1 day	23/1/23
1243	CH480 to CH510 (30m)	22 days	24/1/23
1244	TTA establishment	1 day	24/1/23
1245	Hard material excavation and disposal	1 day	25/1/23
1246	Soil excavation , laying sheetpile and disposal	3 days	26/1/23
1247	Treatment of bedding	1 day	29/1/23
1248	Pipe laying D.I.	1 day	30/1/23
1249	Backfilling general fill and compaction	14 days	31/1/23
1250	Reinstatement	1 day	14/2/23
1251	CH510 to CH540 (30m)	22 days	15/2/23
1252	TTA establishment	1 day	15/2/23
1253	Hard material excavation and disposal	1 day	16/2/23
1254	Soil excavation , laying sheetpile and disposal	3 days	17/2/23
1255	Treatment of bedding	1 day	20/2/23
1256	Pipe laying D.I.	1 day	21/2/23
1257	Backfilling general fill and compaction	14 days	22/2/23
1258	Reinstatement	1 day	8/3/23
1259	CH540 to CH570 (30m)	22 days	9/3/23
1260	TTA establishment	1 day	9/3/23
1261	Hard material excavation and disposal	1 day	10/3/23
1262	Soil excavation , laying sheetpile and disposal	3 days	11/3/23
1263	Treatment of bedding	1 day	14/3/23
1264	Pipe laying D.I.	1 day	15/3/23
1265	Backfilling general fill and compaction	14 days	16/3/23
1266	Reinstatement	1 day	30/3/23
1267	CH570 to CH610 (30m)	22 days	31/3/23
1268	TTA establishment	1 day	31/3/23
1269	Hard material excavation and disposal	1 day	1/4/23
1270	Soil excavation , laying sheetpile and disposal	3 days	2/4/23
1271	Treatment of bedding	1 day	5/4/23
1272	Pipe laying D.I.	1 day	6/4/23
1273	Backfilling general fill and compaction	14 days	7/4/23
1274	Reinstatement	1 day	21/4/23
1275	CH610 to CH640 (30m)	22 days	22/4/23
1276	TTA establishment	1 day	22/4/23
1277	Hard material excavation and disposal	1 day	23/4/23
1278	Soil excavation , laying sheetpile and disposal	3 days	24/4/23
1279	Treatment of bedding	1 day	27/4/23
1280	Pipe laying D.I.	1 day	28/4/23
1281	Backfilling general fill and compaction	14 days	29/4/23
1282	Reinstatement	1 day	13/5/23
1283	CH640 to CH670 (30m)	22 days	14/5/23
1284	TTA establishment	1 day	14/5/23
1285	Hard material excavation and disposal	1 day	15/5/23
1286	Soil excavation , laying sheetpile and disposal	3 days	16/5/23
1287	Treatment of bedding	1 day	19/5/23
1288	Pipe laying D.I.	1 day	20/5/23



Project: 3WSD20 Programme
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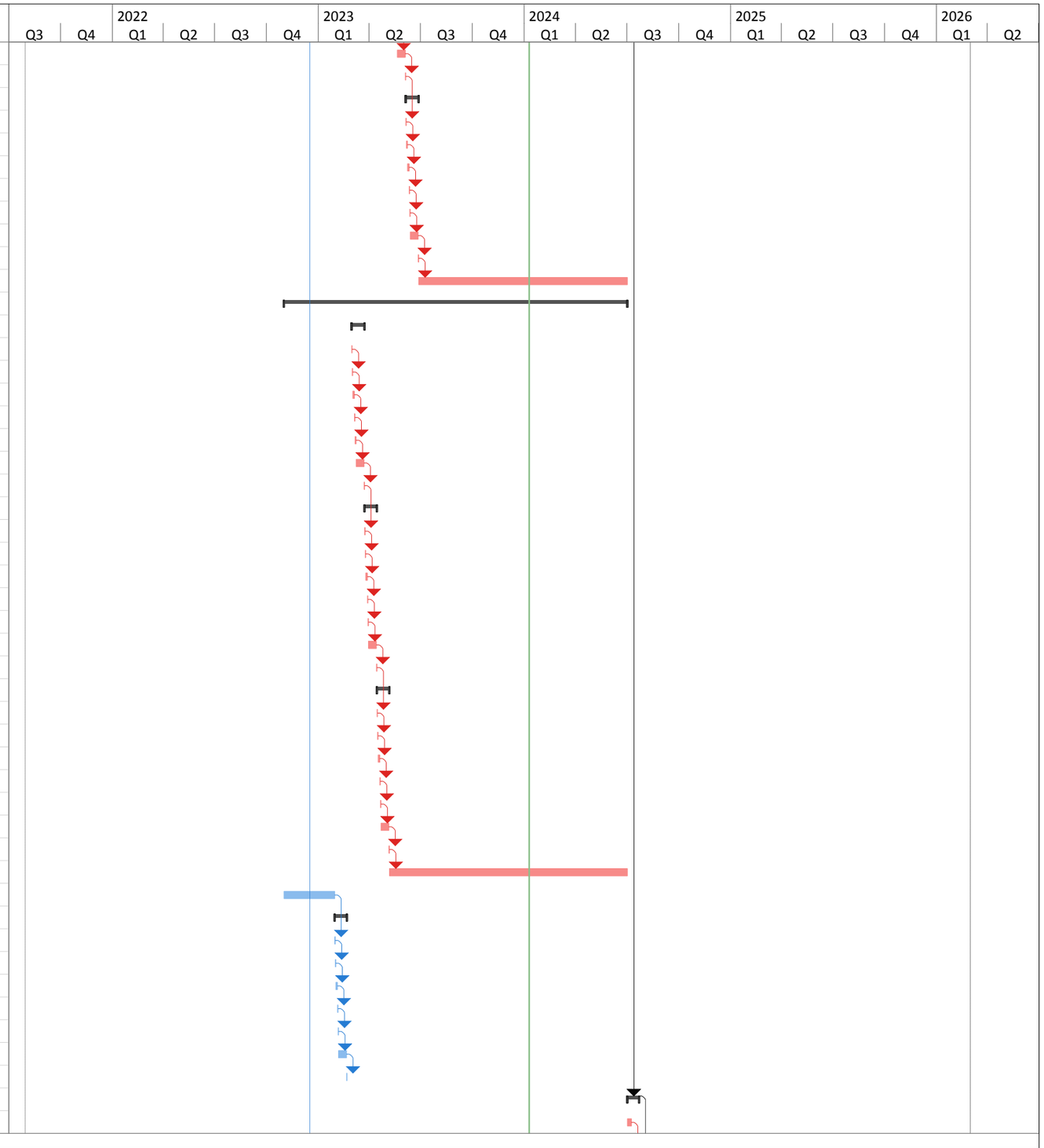
Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
1289	Backfilling general fill and compaction	14 days	21/5/23
1290	Reinstatement	1 day	4/6/23
1291	CH670 to CH710 (30m)	23 days	5/6/23
1292	TTA establishment	1 day	5/6/23
1293	Hard material excavation and disposal	2 days	6/6/23
1294	Soil excavation , laying sheetpile and disposal	3 days	8/6/23
1295	Treatment of bedding	1 day	11/6/23
1296	Pipe laying D.I.	1 day	12/6/23
1297	Backfilling general fill and compaction	14 days	13/6/23
1298	Reinstatement	1 day	27/6/23
1299	Remaining Section of Tin Ping Road (1287m)	370 days	28/6/23
1300	Sha Tau Kok Road (869m)	609 days	1/11/22
1301	CH3580 to CH3550 (30m)	23 days	1/3/23
1302	TTA establishment	1 day	1/3/23
1303	Hard material excavation and disposal	1 day	2/3/23
1304	Soil excavation , laying sheetpile and disposal	3 days	3/3/23
1305	Treatment of bedding	1 day	6/3/23
1306	Pipe laying D.I.	2 days	7/3/23
1307	Backfilling general fill and compaction	14 days	9/3/23
1308	Reinstatement	1 day	23/3/23
1309	CH3550 to CH3520 (30m)	22 days	24/3/23
1310	TTA establishment	1 day	24/3/23
1311	Hard material excavation and disposal	1 day	25/3/23
1312	Soil excavation , laying sheetpile and disposal	3 days	26/3/23
1313	Treatment of bedding	1 day	29/3/23
1314	Pipe laying D.I.	1 day	30/3/23
1315	Backfilling general fill and compaction	14 days	31/3/23
1316	Reinstatement	1 day	14/4/23
1317	CH3520 to CH3490 (30m)	22 days	15/4/23
1318	TTA establishment	1 day	15/4/23
1319	Hard material excavation and disposal	1 day	16/4/23
1320	Soil excavation , laying sheetpile and disposal	3 days	17/4/23
1321	Treatment of bedding	1 day	20/4/23
1322	Pipe laying D.I.	1 day	21/4/23
1323	Backfilling general fill and compaction	14 days	22/4/23
1324	Reinstatement	1 day	6/5/23
1325	Remaining Section of Sha Tau Kok Road	422 days	7/5/23
1326	Interface coordination with Contract ND/2019/04	90 days	1/11/22
1327	CH2600 to CH2800 (200m)	22 days	30/1/23
1328	TTA establishment	1 day	30/1/23
1329	Hard material excavation and disposal	1 day	31/1/23
1330	Soil excavation , laying sheetpile and disposal	3 days	1/2/23
1331	Treatment of bedding	1 day	4/2/23
1332	Pipe laying D.I.	1 day	5/2/23
1333	Backfilling general fill and compaction	14 days	6/2/23
1334	Reinstatement	1 day	20/2/23
1335	**Overall testing**	**21 days**	**2/7/24**
1336	Swabbing	7 days	2/7/24



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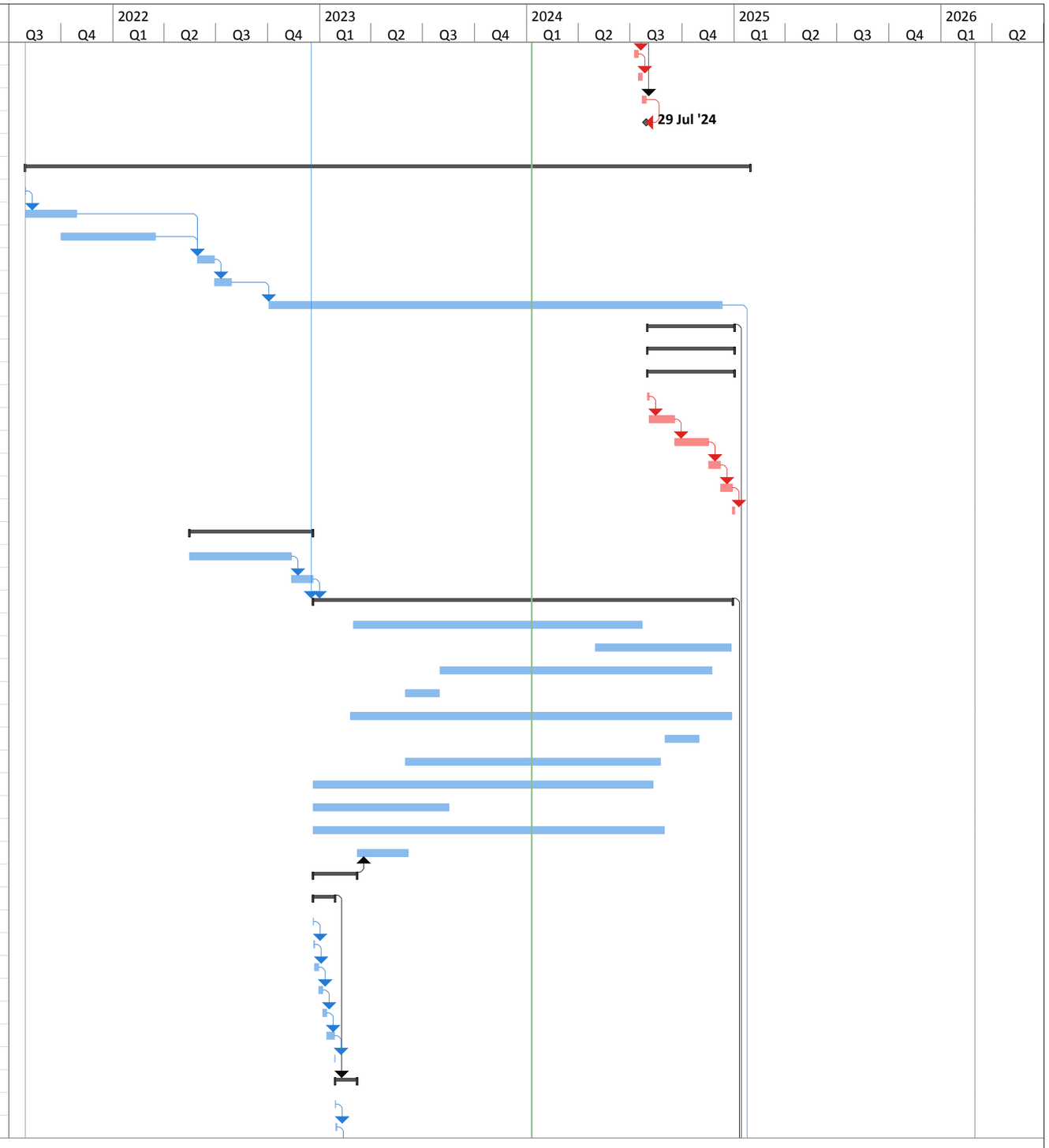
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
1337	CCTV	7 days	9/7/24
1338	Hydrostatic pressure test	7 days	16/7/24
1339	Pipe connection and completion	7 days	23/7/24
1340	Planned completion for section 5	0 days	29/7/24
1341			
1342	**Section 6 - Water main laying works in part 5 of the Site**	**1280 days**	**30/7/21**
1343	Access Date (part 5 of the Site)	1 day	30/7/21
1344	Initial survey (utility survey, condition survey, initial photo)	90 days	31/7/21
1345	Application and approval of XP and TTA	167 days	1/10/21
1346	Procurement and Delivery of pipes, fittings and related materials	30 days	30/5/22
1347	Submission and acceptance of method statement and material	30 days	29/6/22
1348	Excavation of Inspection Pit	800 days	3/10/22
1349	**Mainlaying by trenchless method**	**154 days**	**1/8/24**
1350	**RW06 : DN300 DI pipe (trenchless)**	**154 days**	**1/8/24**
1351	**Jocky Club Road (100m) - TBM Method**	**154 days**	**1/8/24**
1352	TTA implementation	3 days	1/8/24
1353	Contruction of jacking pit and receiving pit	45 days	4/8/24
1354	Trenchless works and pipe laying	60 days	18/9/24
1355	Manhole / Chamber construction	21 days	17/11/24
1356	Backfilling and compaction	21 days	8/12/24
1357	Reinstatement	4 days	29/12/24
1358	**Contractor's Design and Construction of distribution mains**	**218 days**	**16/5/22**
1359	Submission and acceptance of detailed design proposal	180 days	16/5/22
1360	Site investigation and liaison with relevant parties	38 days	12/11/22
1361	**Mainlaying by open trench method (XP ID: 1301135, 1301136)**	**741 days**	**20/12/22**
1362	RW41 (DN150) - Sheung Shui Tung Hing Road (288m)	510 days	1/3/23
1363	RW42 (DN150) - No name road in Sheung Shui Heung (210m)	240 days	1/5/24
1364	RW71 (DN150) - Jockey Club Road (308m)	480 days	1/8/23
1365	RW44 (DN150) - Jockey Club Road (38m)	60 days	1/6/23
1366	RW11 (DN150) - Fung Nam Road (480m)	673 days	24/2/23
1367	RW46 (DN150) - Fung Nam Lane (38m)	60 days	1/9/24
1368	RW06 (DN300) - Lung Sum Avenue (290m)	450 days	1/6/23
1369	RW05 (DN400) - Jockey Club Road (377m)	600 days	20/12/22
1370	RW15 (DN150) - Sun Fung Road / Sun Shing Road (390m)	240 days	20/12/22
1371	RW18 (DN150) - San Hong Street (464m)	620 days	20/12/22
1372	RW20 (DN150) - Sun Wing Street (52m)	90 days	8/3/23
1373	**RW45 (DN150) - Tsun Fu Street (82m)**	**78 days**	**20/12/22**
1374	**CH000 - CH040**	**39 days**	**20/12/22**
1375	TTA establishment	1 day	20/12/22
1376	Hard material excavation and disposal	2 days	21/12/22
1377	Soil excavation , laying sheetpile and disposal	7 days	23/12/22
1378	Treatment of bedding	7 days	30/12/22
1379	Pipe laying D.I.	7 days	6/1/23
1380	Backfilling general fill and compaction	14 days	13/1/23
1381	Reinstatement	1 day	27/1/23
1382	**CH040 - CH082**	**39 days**	**28/1/23**
1383	TTA establishment	1 day	28/1/23
1384	Hard material excavation and disposal	2 days	29/1/23



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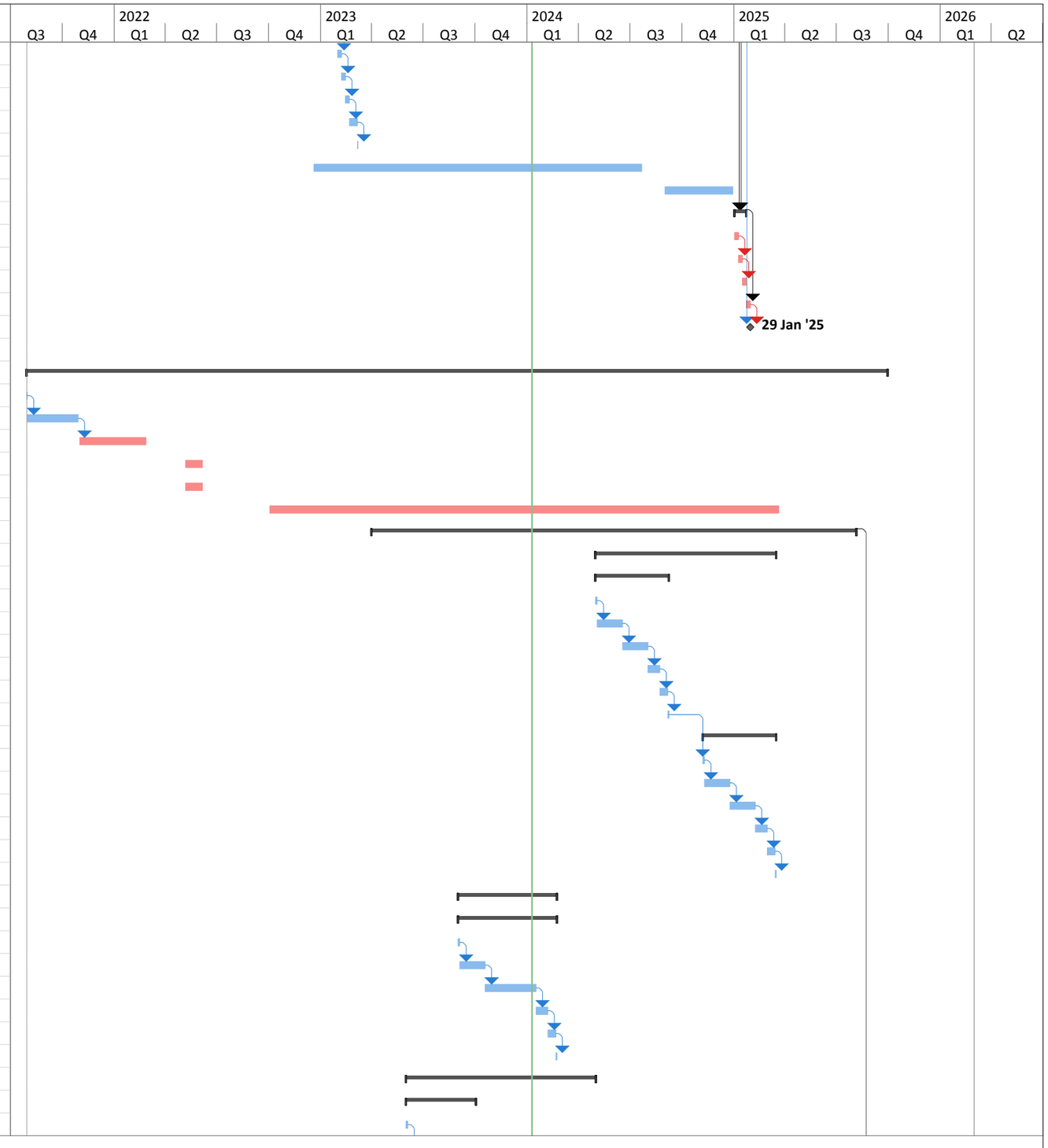
Critical
Critical Split
Progress
Manual Progress

ID	Task Name	Duration	Start
1385	Soil excavation , laying sheetpile and disposal	7 days	31/1/23
1386	Treatment of bedding	7 days	7/2/23
1387	Pipe laying D.I.	7 days	14/2/23
1388	Backfilling general fill and compaction	14 days	21/2/23
1389	Reinstatement	1 day	7/3/23
1390	RW14 (DN150) - Fu Hing Street (372m)	580 days	20/12/22
1391	RW21 (DN150) - Sun Fat Street (105m)	120 days	1/9/24
1392	Overall testing	21 days	2/1/25
1393	Swabbing	7 days	2/1/25
1394	CCTV	7 days	9/1/25
1395	Hydrostatic pressure test	7 days	16/1/25
1396	Pipe connection and completion	7 days	23/1/25
1397	Planned completion for section 6	0 days	29/1/25
1398			
1399	**Section 7 - Water main laying works in part 6 of the Site**	**1523 days**	**30/7/21**
1400	Access Date (part 6 of the Site)	1 day	30/7/21
1401	Initial survey (utility survey, condition survey, initial photo)	90 days	31/7/21
1402	Application and approval of XP and TTA	117 days	1/11/21
1403	Procurement and Delivery of pipes, fittings and related materials	30 days	7/5/22
1404	Submission and acceptance of method statement and material	30 days	7/5/22
1405	Excavation of Inspection Pit	900 days	3/10/22
1406	**Mainlaying by trenchless method**	**858 days**	**1/4/23**
1407	**RW05 : DN400 DI pipe (trenchless)**	**320 days**	**1/5/24**
1408	**Fu Hing Street (75m) - TBM Method**	**130 days**	**1/5/24**
1409	TTA implementation	3 days	1/5/24
1410	Contruction of jacking pit and receiving pit	45 days	4/5/24
1411	Trenchless works and pipe laying	45 days	18/6/24
1412	Manhole / Chamber construction	21 days	2/8/24
1413	Backfilling and compaction	14 days	23/8/24
1414	Reinstatement	2 days	6/9/24
1415	**Luen Sum Road (70m) - TBM Method**	**130 days**	**7/11/24**
1416	TTA implementation	3 days	7/11/24
1417	Contruction of jacking pit and receiving pit	45 days	10/11/24
1418	Trenchless works and pipe laying	45 days	25/12/24
1419	Manhole / Chamber construction	21 days	8/2/25
1420	Backfilling and compaction	14 days	1/3/25
1421	Reinstatement	2 days	15/3/25
1422	**RW05 : DN300 DI pipe (trenchless)**	**175 days**	**1/9/23**
1423	**Ma Sik Road (180m) - TBM Method**	**175 days**	**1/9/23**
1424	TTA implementation	3 days	1/9/23
1425	Contruction of jacking pit and receiving pit	45 days	4/9/23
1426	Trenchless works and pipe laying	90 days	19/10/23
1427	Manhole / Chamber construction	21 days	17/1/24
1428	Backfilling and compaction	14 days	7/2/24
1429	Reinstatement	2 days	21/2/24
1430	**RW08 : DN400 DI pipe (trenchless)**	**336 days**	**1/6/23**
1431	**Wo Muk Road (60m) - TBM Method**	**124 days**	**1/6/23**
1432	TTA implementation	3 days	1/6/23



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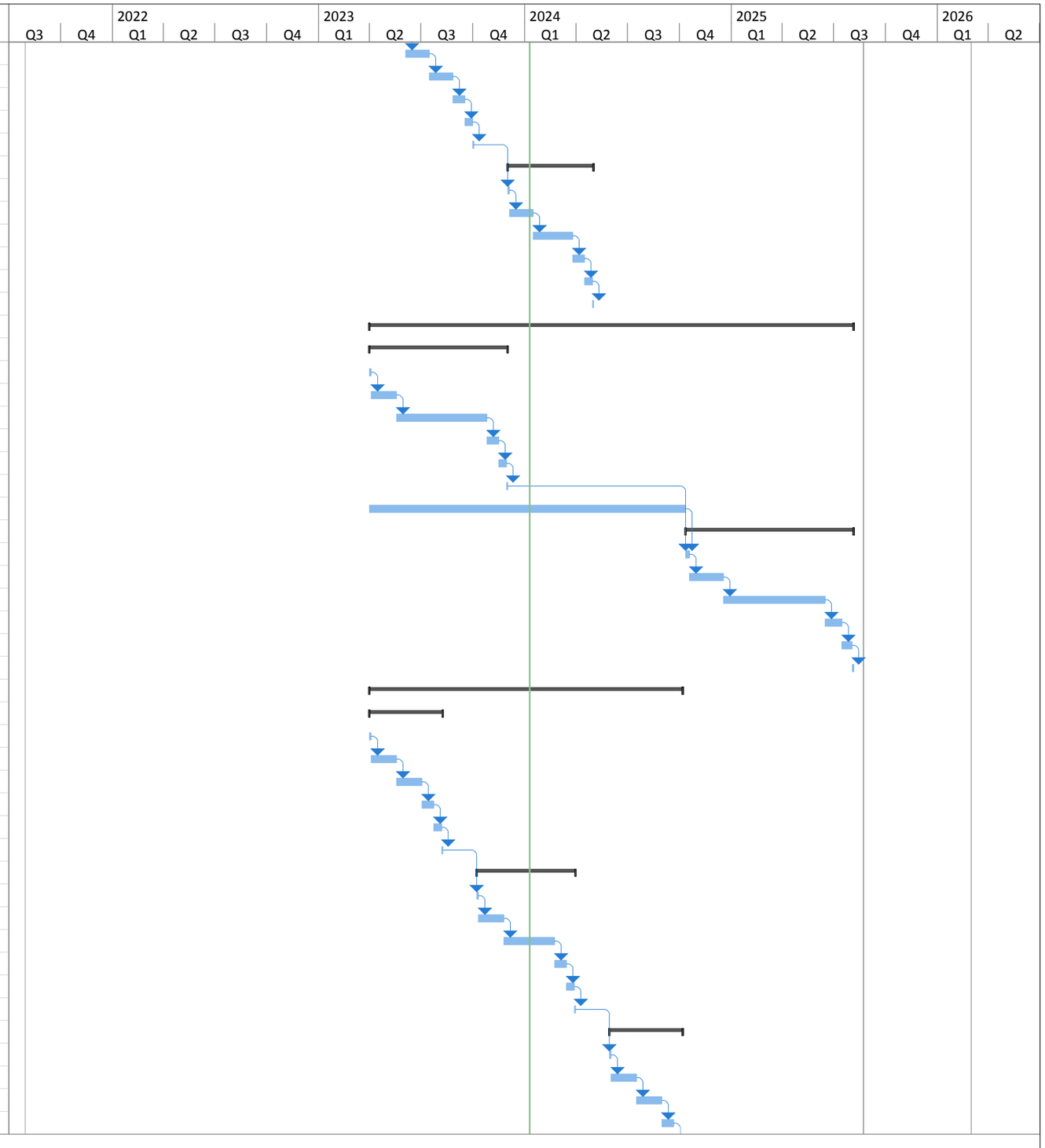
Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress	
Split	Inactive Milestone	Manual Summary	Deadline		
Milestone	Inactive Summary	Start-only	Critical		
Summary	Manual Task	Finish-only	Critical Split		
Project Summary	Duration-only	External Tasks	Progress		

ID	Task Name	Duration	Start
1433	Contruction of jacking pit and receiving pit	42 days	4/6/23
1434	Trenchless works and pipe laying	42 days	16/7/23
1435	Manhole / Chamber construction	21 days	27/8/23
1436	Backfilling and compaction	14 days	17/9/23
1437	Reinstatement	2 days	1/10/23
1438	**Wo Tai Street (100m) - TBM Method**	**152 days**	**2/12/23**
1439	TTA implementation	3 days	2/12/23
1440	Contruction of jacking pit and receiving pit	42 days	5/12/23
1441	Trenchless works and pipe laying	70 days	16/1/24
1442	Manhole / Chamber construction	21 days	26/3/24
1443	Backfilling and compaction	14 days	16/4/24
1444	Reinstatement	2 days	30/4/24
1445	**RW09 : DN450 DI pipe (trenchless)**	**858 days**	**1/4/23**
1446	**San Wang Road (435m) - TBM Method**	**245 days**	**1/4/23**
1447	TTA implementation	3 days	1/4/23
1448	Contruction of jacking pit and receiving pit	45 days	4/4/23
1449	Trenchless works and pipe laying	160 days	19/5/23
1450	Manhole / Chamber construction	21 days	26/10/23
1451	Backfilling and compaction	14 days	16/11/23
1452	Reinstatement	2 days	30/11/23
1453	Submission and acceptance of method statement by MTRC	560 days	1/4/23
1454	**MTRC (315m) - TBM Method**	**298 days**	**12/10/24**
1455	TTA implementation	7 days	12/10/24
1456	Contruction of jacking pit and receiving pit	60 days	19/10/24
1457	Trenchless works and pipe laying	180 days	18/12/24
1458	Manhole / Chamber construction	30 days	16/6/25
1459	Backfilling and compaction	18 days	16/7/25
1460	Reinstatement	3 days	3/8/25
1461	**RW05 : DN300 DI pipe (trenchless)**	**555 days**	**1/4/23**
1462	**Ling Shan Road (60m) - HDD Method**	**130 days**	**1/4/23**
1463	TTA implementation	3 days	1/4/23
1464	Contruction of jacking pit and receiving pit	45 days	4/4/23
1465	Trenchless works and pipe laying	45 days	19/5/23
1466	Manhole / Chamber construction	21 days	3/7/23
1467	Backfilling and compaction	14 days	24/7/23
1468	Reinstatement	2 days	7/8/23
1469	**San Wan Road Roundabout (130m) - HDD Method**	**175 days**	**8/10/23**
1470	TTA implementation	3 days	8/10/23
1471	Contruction of jacking pit and receiving pit	45 days	11/10/23
1472	Trenchless works and pipe laying	90 days	25/11/23
1473	Manhole / Chamber construction	21 days	23/2/24
1474	Backfilling and compaction	14 days	15/3/24
1475	Reinstatement	2 days	29/3/24
1476	**Pak Fung Road (70m) - HDD Method**	**130 days**	**30/5/24**
1477	TTA implementation	3 days	30/5/24
1478	Contruction of jacking pit and receiving pit	45 days	2/6/24
1479	Trenchless works and pipe laying	45 days	17/7/24
1480	Manhole / Chamber construction	21 days	31/8/24



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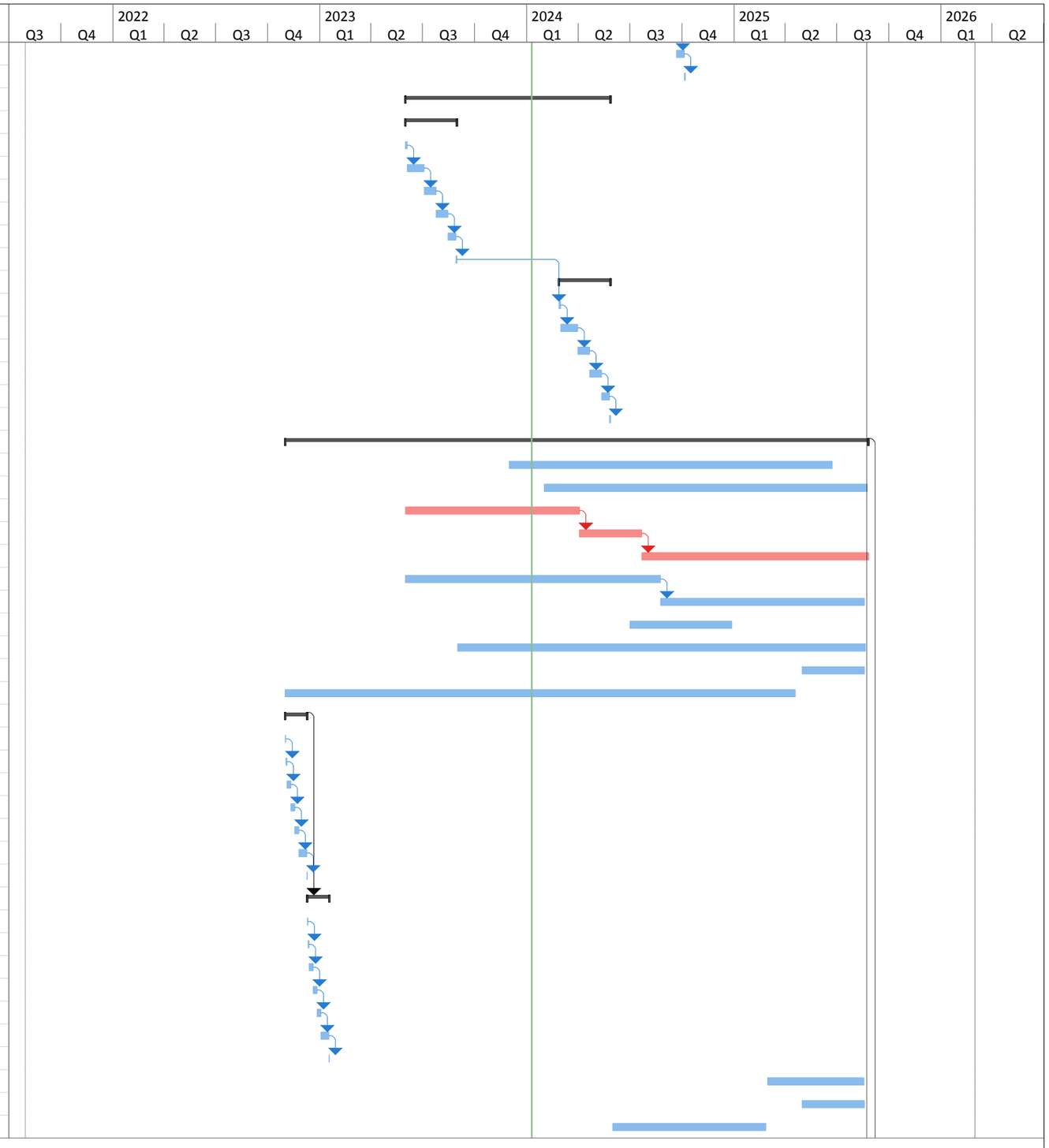
Project Summary	Duration-only	External Tasks	Progress	

ID	Task Name	Duration	Start
1481	Backfilling and compaction	14 days	21/9/24
1482	Reinstatement	2 days	5/10/24
1483	**RW05 : DN300 DI pipe (trenchless)**	**362 days**	**1/6/23**
1484	**Fanling Way (35m) - Hand Shield Method**	**91 days**	**1/6/23**
1485	TTA implementation	3 days	1/6/23
1486	Contruction of jacking pit and receiving pit	30 days	4/6/23
1487	Trenchless works and pipe laying	21 days	4/7/23
1488	Manhole / Chamber construction	21 days	25/7/23
1489	Backfilling and compaction	14 days	15/8/23
1490	Reinstatement	2 days	29/8/23
1491	**CLP Station (35m) - Hand Shield Method**	**91 days**	**27/2/24**
1492	TTA implementation	3 days	27/2/24
1493	Contruction of jacking pit and receiving pit	30 days	1/3/24
1494	Trenchless works and pipe laying	21 days	31/3/24
1495	Manhole / Chamber construction	21 days	21/4/24
1496	Backfilling and compaction	14 days	12/5/24
1497	Reinstatement	2 days	26/5/24
1498	**Mainlaying by open trench method**	**1029 days**	**1/11/22**
1499	RW07 (DN300) - Ma Sik Road (360m)	570 days	1/12/23
1500	RW05 (DN400) - Jockey Club Road (681m) (XP ID: 1316661, 1301141)	570 days	1/2/24
1501	RW05 (DN300) - Jockey Club Road (720m) (XP ID: 1316661, 1301141)	307 days	1/6/23
1502	RW05 (DN300) - Pik Fung Road (270m)	110 days	3/4/24
1503	RW05 (DN300) - Sun Wan Road (945m)	400 days	22/7/24
1504	RW08 (DN400) - Fanling Lau Road (750m) (XP ID: 1310580, 1310468)	450 days	1/6/23
1505	RW08 (DN400) - Lok Yip Road (616m)	360 days	24/8/24
1506	RW17 (DN150) - Sun Shing Road (114m)	180 days	1/7/24
1507	RW16 (DN250) - Sun Fung Road / Lung Sum Avenue (741m)	720 days	1/9/23
1508	RW47 (DN100) - Ben Lun Building (82m)	110 days	1/5/25
1509	RW22 (DN150) - Chi Cheong Street (877m) (XP ID: 1310864)	900 days	1/11/22
1510	**CH630 - CH700**	**39 days**	**1/11/22**
1511	TTA establishment	1 day	1/11/22
1512	Hard material excavation and disposal	2 days	2/11/22
1513	Soil excavation , laying sheetpile and disposal	7 days	4/11/22
1514	Treatment of bedding	7 days	11/11/22
1515	Pipe laying D.I.	7 days	18/11/22
1516	Backfilling general fill and compaction	14 days	25/11/22
1517	Reinstatement	1 day	9/12/22
1518	**CH040 - CH082**	**39 days**	**10/12/22**
1519	TTA establishment	1 day	10/12/22
1520	Hard material excavation and disposal	2 days	11/12/22
1521	Soil excavation , laying sheetpile and disposal	7 days	13/12/22
1522	Treatment of bedding	7 days	20/12/22
1523	Pipe laying D.I.	7 days	27/12/22
1524	Backfilling general fill and compaction	14 days	3/1/23
1525	Reinstatement	1 day	17/1/23
1526	RW24 (DN150) - Chi Ming Street (120m)	170 days	1/3/25
1527	RW49 (DN150) - San Wan Road (75m)	110 days	1/5/25
1528	RW23 (DN150) - Lung Wan Street (171m)	270 days	1/6/24



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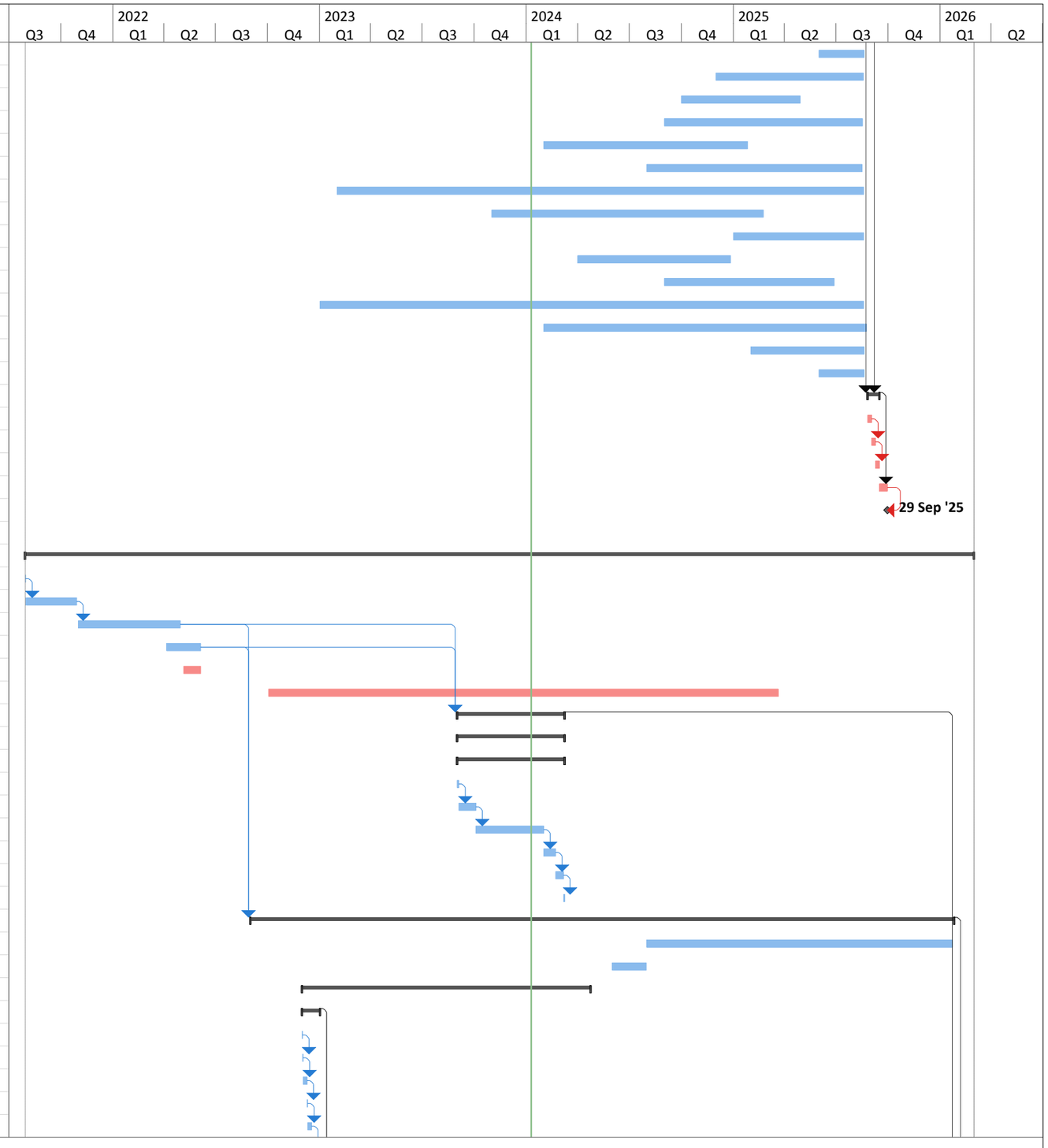
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

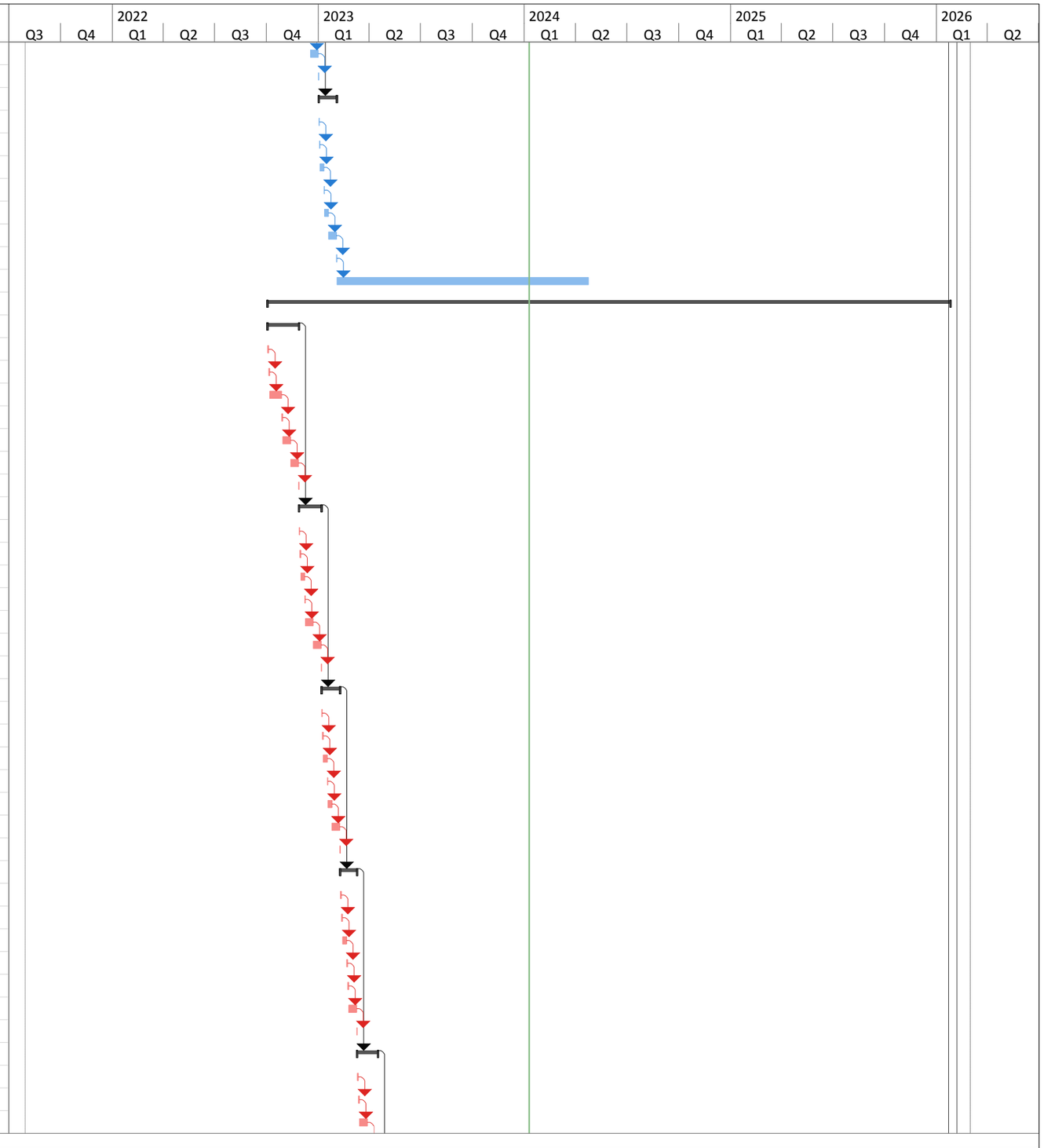
ID	Task Name	Duration	Start
1529	RW69 (DN150) - Lung Sum Lane (60m)	80 days	1/6/25
1530	RW25 (DN150) - Road to Fanling Wai (330m)	260 days	1/12/24
1531	RW26 (DN150) - Ka Siu Road (133m)	210 days	1/10/24
1532	RW27 (DN150) - Fanling Station Road (273m)	350 days	1/9/24
1533	RW34 (DN150) - Fan Leng Lau (380m) (XP ID: 1310580, 1310468)	360 days	1/2/24
1534	RW36 (DN150) - Lok Fung Street (495m)	380 days	1/8/24
1535	RW13 (DN150) - Wo Tai Street (630m)	930 days	1/2/23
1536	RW28 (DN150) - Wo Mun Street (312m)	480 days	1/11/23
1537	RW31 (DN150) - Luen Cheong Street (185m)	230 days	1/1/25
1538	RW32 (DN150) - Luen Shing Street (185m)	270 days	1/4/24
1539	RW33 (DN150) - Luen Hing Street (199m)	300 days	1/9/24
1540	RW30 (DN150) - Luen On Street / Luen Wo Road / Luen Fai Street (649m)	960 days	2/1/23
1541	RW29 (DN150) - Wo Muk Street / Luen Hing Street (360m)	570 days	1/2/24
1542	RW12 (DN150) - Luen Chit Street (120m)	200 days	1/2/25
1543	RW55 (DN150) - Mount One (44m)	80 days	1/6/25
1544	Overall testing	21 days	26/8/25
1545	Swabbing	7 days	26/8/25
1546	CCTV	7 days	2/9/25
1547	Hydrostatic pressure test	7 days	9/9/25
1548	Pipe connection and completion	14 days	16/9/25
1549	Planned completion for section 7	0 days	29/9/25
1550			
1551	**Section 8 - Water main laying works in part 7 of the Site**	**1676 days**	**30/7/21**
1552	Access Date (part 7 of the Site)	1 day	30/7/21
1553	Initial survey (utility survey, condition survey, initial photo)	90 days	31/7/21
1554	Application and approval of XP and TTA	180 days	1/11/21
1555	Procurement and Delivery of pipes, fittings and related materials	60 days	6/4/22
1556	Submission and acceptance of method statement and material	30 days	6/5/22
1557	Excavation of Inspection Pit	900 days	3/10/22
1558	**Mainlaying by trenchless method**	**190 days**	**1/9/23**
1559	**RW05 : DN300 DI pipe (trenchless)**	**190 days**	**1/9/23**
1560	**Jocky Club Road (110m) - TBM Method**	**190 days**	**1/9/23**
1561	TTA implementation	3 days	1/9/23
1562	Contruction of jacking pit and receiving pit	30 days	4/9/23
1563	Trenchless works and pipe laying	120 days	4/10/23
1564	Manhole / Chamber construction	21 days	1/2/24
1565	Backfilling and compaction	14 days	22/2/24
1566	Reinstatement	2 days	7/3/24
1567	**Mainlaying by open trench method**	**1243 days**	**1/9/22**
1568	RW38 (DN150) - Yip Cheong Street (351m)	540 days	1/8/24
1569	RW39 (DN150) - Yip Cheong Street (14m)	60 days	1/6/24
1570	**RW37 (DN150) - Yip Wo Street (420m) (XP ID: 1309054)**	**510 days**	**1/12/22**
1571	CH210 to CH300 (90m)	32 days	1/12/22
1572	TTA establishment	1 day	1/12/22
1573	Hard material excavation and disposal	1 day	2/12/22
1574	Soil excavation , laying sheetpile and disposal	7 days	3/12/22
1575	Treatment of bedding	1 day	10/12/22
1576	Pipe laying D.I.	7 days	11/12/22



Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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	

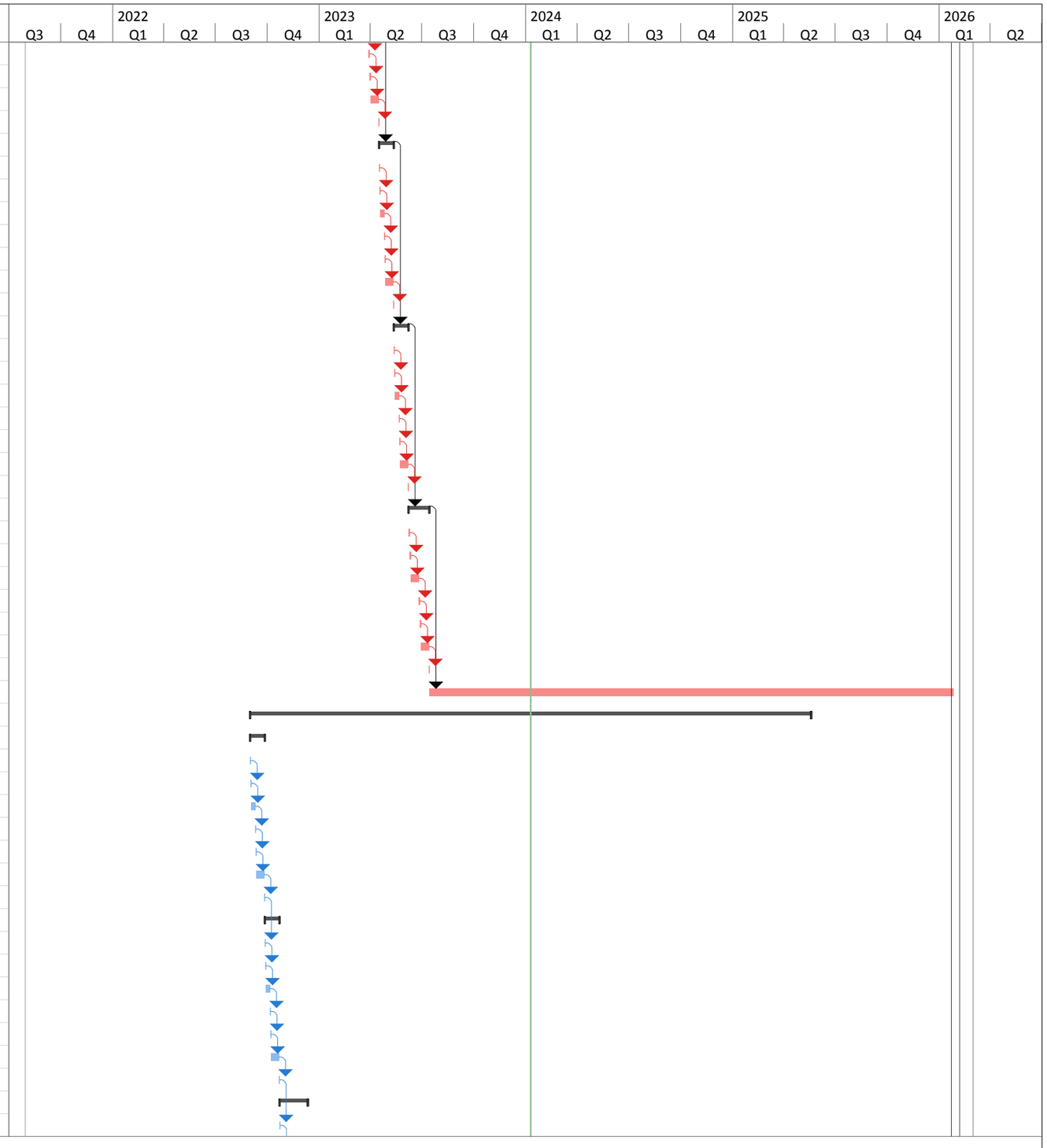
ID	Task Name	Duration	Start
1577	Backfilling general fill and compaction	14 days	18/12/22
1578	Reinstatement	1 day	1/1/23
1579	CH300 to CH360 (60m)	32 days	2/1/23
1580	TTA establishment	1 day	2/1/23
1581	Hard material excavation and disposal	1 day	3/1/23
1582	Soil excavation , laying sheetpile and disposal	7 days	4/1/23
1583	Treatment of bedding	1 day	11/1/23
1584	Pipe laying D.I.	7 days	12/1/23
1585	Backfilling general fill and compaction	14 days	19/1/23
1586	Reinstatement	1 day	2/2/23
1587	Remaining section of Yip Wo Street (270m)	446 days	3/2/23
1588	RW10 (DN300) - On Lok Mun Street (930m) (XP ID: 1301294, 1311241)	1211 days	3/10/22
1589	CH930 to CH980 (50m)	56 days	3/10/22
1590	TTA establishment	2 days	3/10/22
1591	Hard material excavation and disposal	2 days	5/10/22
1592	Soil excavation , laying sheetpile and disposal	21 days	7/10/22
1593	Treatment of bedding	2 days	28/10/22
1594	Pipe laying D.I.	14 days	30/10/22
1595	Backfilling general fill and compaction	14 days	13/11/22
1596	Reinstatement	1 day	27/11/22
1597	CH840 to CH930 (90m)	40 days	28/11/22
1598	TTA establishment	1 day	28/11/22
1599	Hard material excavation and disposal	2 days	29/11/22
1600	Soil excavation , laying sheetpile and disposal	7 days	1/12/22
1601	Treatment of bedding	1 day	8/12/22
1602	Pipe laying D.I.	14 days	9/12/22
1603	Backfilling general fill and compaction	14 days	23/12/22
1604	Reinstatement	1 day	6/1/23
1605	CH800 to CH840 (40m)	33 days	7/1/23
1606	TTA establishment	1 day	7/1/23
1607	Hard material excavation and disposal	2 days	8/1/23
1608	Soil excavation , laying sheetpile and disposal	7 days	10/1/23
1609	Treatment of bedding	1 day	17/1/23
1610	Pipe laying D.I.	7 days	18/1/23
1611	Backfilling general fill and compaction	14 days	25/1/23
1612	Reinstatement	1 day	8/2/23
1613	CH980 to CH1000 (20m)	30 days	9/2/23
1614	TTA establishment	2 days	9/2/23
1615	Hard material excavation and disposal	2 days	11/2/23
1616	Soil excavation , laying sheetpile and disposal	7 days	13/2/23
1617	Treatment of bedding	2 days	20/2/23
1618	Pipe laying D.I.	2 days	22/2/23
1619	Backfilling general fill and compaction	14 days	24/2/23
1620	Reinstatement	1 day	10/3/23
1621	CH830 to CH860 (30m)	37 days	11/3/23
1622	TTA establishment	2 days	11/3/23
1623	Hard material excavation and disposal	2 days	13/3/23
1624	Soil excavation , laying sheetpile and disposal	14 days	15/3/23



Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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	

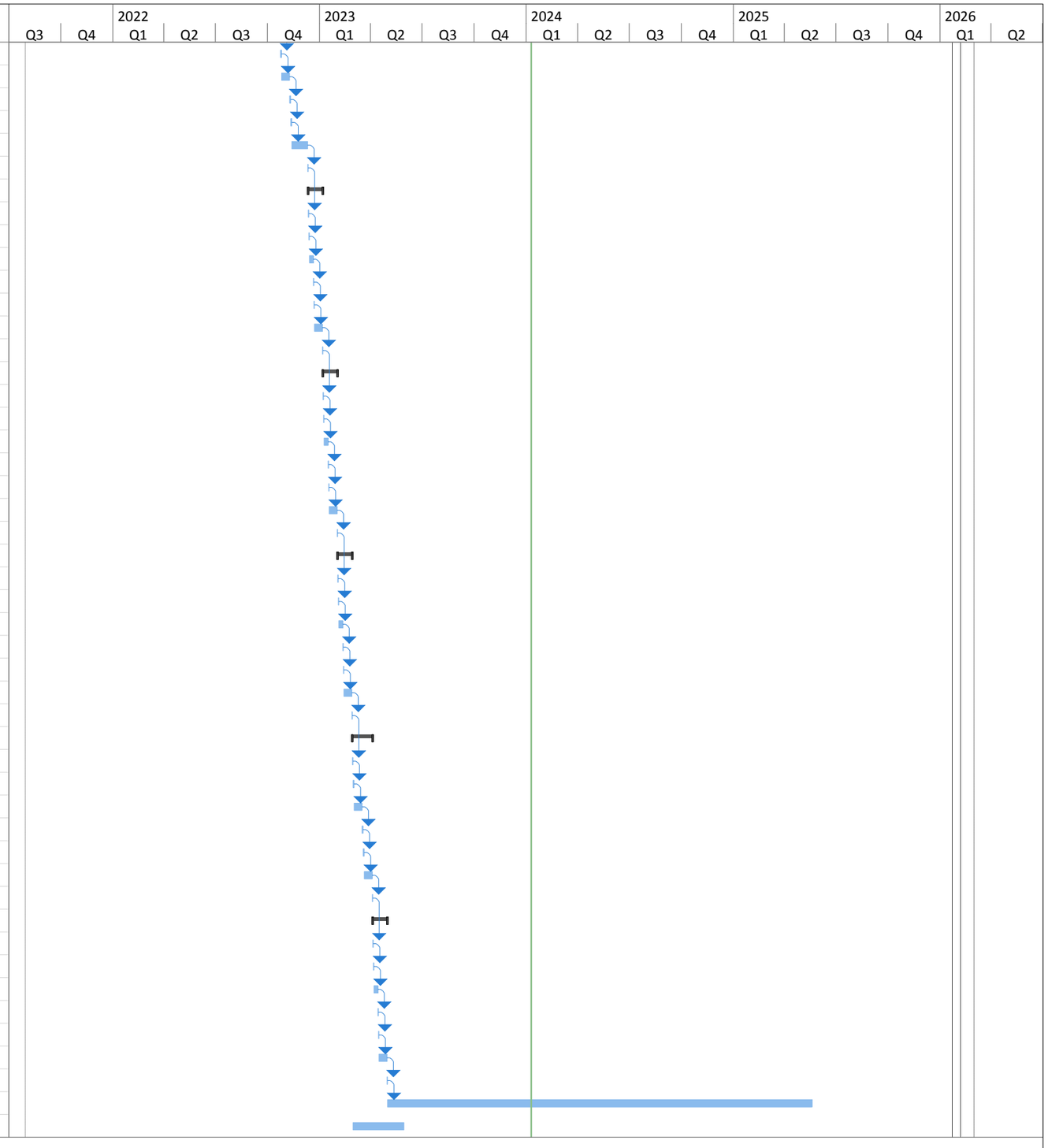
ID	Task Name	Duration	Start
1625	Treatment of bedding	2 days	29/3/23
1626	Pipe laying D.I.	2 days	31/3/23
1627	Backfilling general fill and compaction	14 days	2/4/23
1628	Reinstatement	1 day	16/4/23
1629	CH800 to CH830 (30m)	26 days	17/4/23
1630	TTA establishment	1 day	17/4/23
1631	Hard material excavation and disposal	1 day	18/4/23
1632	Soil excavation , laying sheetpile and disposal	7 days	19/4/23
1633	Treatment of bedding	1 day	26/4/23
1634	Pipe laying D.I.	1 day	27/4/23
1635	Backfilling general fill and compaction	14 days	28/4/23
1636	Reinstatement	1 day	12/5/23
1637	CH110 to CH140 (30m)	26 days	13/5/23
1638	TTA establishment	1 day	13/5/23
1639	Hard material excavation and disposal	1 day	14/5/23
1640	Soil excavation , laying sheetpile and disposal	7 days	15/5/23
1641	Treatment of bedding	1 day	22/5/23
1642	Pipe laying D.I.	1 day	23/5/23
1643	Backfilling general fill and compaction	14 days	24/5/23
1644	Reinstatement	1 day	7/6/23
1645	CH080 to CH110 (30m)	37 days	8/6/23
1646	TTA establishment	2 days	8/6/23
1647	Hard material excavation and disposal	2 days	10/6/23
1648	Soil excavation , laying sheetpile and disposal	14 days	12/6/23
1649	Treatment of bedding	2 days	26/6/23
1650	Pipe laying D.I.	2 days	28/6/23
1651	Backfilling general fill and compaction	14 days	30/6/23
1652	Reinstatement	1 day	14/7/23
1653	Remaining Section of On Lok Mun Street (840m)	926 days	15/7/23
1654	RW35 (DN150) - On Chuen Street (720m) (XP ID: 1301294, 1311241)	992 days	1/9/22
1655	CH590 to CH610 (30m)	26 days	1/9/22
1656	TTA establishment	1 day	1/9/22
1657	Hard material excavation and disposal	1 day	2/9/22
1658	Soil excavation , laying sheetpile and disposal	7 days	3/9/22
1659	Treatment of bedding	1 day	10/9/22
1660	Pipe laying D.I.	1 day	11/9/22
1661	Backfilling general fill and compaction	14 days	12/9/22
1662	Reinstatement	1 day	26/9/22
1663	CH560 to CH590 (30m)	26 days	27/9/22
1664	TTA establishment	1 day	27/9/22
1665	Hard material excavation and disposal	1 day	28/9/22
1666	Soil excavation , laying sheetpile and disposal	7 days	29/9/22
1667	Treatment of bedding	1 day	6/10/22
1668	Pipe laying D.I.	1 day	7/10/22
1669	Backfilling general fill and compaction	14 days	8/10/22
1670	Reinstatement	1 day	22/10/22
1671	CH530 to CH560 (30m)	50 days	23/10/22
1672	TTA establishment	1 day	23/10/22



Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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	

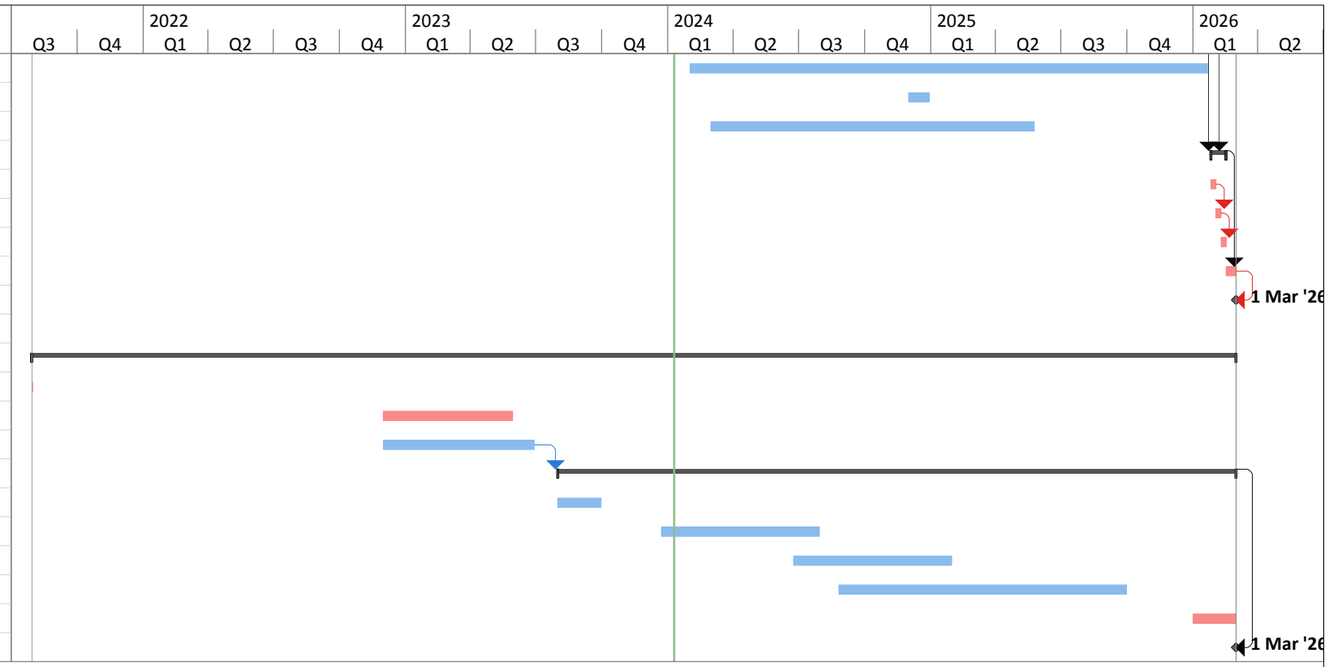
ID	Task Name	Duration	Start
1673	Hard material excavation and disposal	2 days	24/10/22
1674	Soil excavation , laying sheetpile and disposal	14 days	26/10/22
1675	Treatment of bedding	2 days	9/11/22
1676	Pipe laying D.I.	2 days	11/11/22
1677	Backfilling general fill and compaction	28 days	13/11/22
1678	Reinstatement	1 day	11/12/22
1679	CH500 to CH530 (30m)	26 days	12/12/22
1680	TTA establishment	1 day	12/12/22
1681	Hard material excavation and disposal	1 day	13/12/22
1682	Soil excavation , laying sheetpile and disposal	7 days	14/12/22
1683	Treatment of bedding	1 day	21/12/22
1684	Pipe laying D.I.	1 day	22/12/22
1685	Backfilling general fill and compaction	14 days	23/12/22
1686	Reinstatement	1 day	6/1/23
1687	CH230 to CH260 (30m)	26 days	7/1/23
1688	TTA establishment	1 day	7/1/23
1689	Hard material excavation and disposal	1 day	8/1/23
1690	Soil excavation , laying sheetpile and disposal	7 days	9/1/23
1691	Treatment of bedding	1 day	16/1/23
1692	Pipe laying D.I.	1 day	17/1/23
1693	Backfilling general fill and compaction	14 days	18/1/23
1694	Reinstatement	1 day	1/2/23
1695	CH200 to CH230 (30m)	26 days	2/2/23
1696	TTA establishment	1 day	2/2/23
1697	Hard material excavation and disposal	1 day	3/2/23
1698	Soil excavation , laying sheetpile and disposal	7 days	4/2/23
1699	Treatment of bedding	1 day	11/2/23
1700	Pipe laying D.I.	1 day	12/2/23
1701	Backfilling general fill and compaction	14 days	13/2/23
1702	Reinstatement	1 day	27/2/23
1703	CH170 to CH200 (30m)	36 days	28/2/23
1704	TTA establishment	1 day	28/2/23
1705	Hard material excavation and disposal	2 days	1/3/23
1706	Soil excavation , laying sheetpile and disposal	14 days	3/3/23
1707	Treatment of bedding	2 days	17/3/23
1708	Pipe laying D.I.	2 days	19/3/23
1709	Backfilling general fill and compaction	14 days	21/3/23
1710	Reinstatement	1 day	4/4/23
1711	CH000 to CH060 (60m)	26 days	5/4/23
1712	TTA establishment	1 day	5/4/23
1713	Hard material excavation and disposal	1 day	6/4/23
1714	Soil excavation , laying sheetpile and disposal	7 days	7/4/23
1715	Treatment of bedding	1 day	14/4/23
1716	Pipe laying D.I.	1 day	15/4/23
1717	Backfilling general fill and compaction	14 days	16/4/23
1718	Reinstatement	1 day	30/4/23
1719	Remaining Section of On Chuen Street (630m)	750 days	1/5/23
1720	Coordination with ND/2019/04	90 days	1/3/23



Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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
1721	RW09 (DN450) - Wo Hing Road (436m)	720 days	1/2/24
1722	RW60 (DN150) - Tee from RW09 (14m)	29 days	1/12/24
1723	RW40 (DN200) - Tai Wo Service Road West (420m)	450 days	1/3/24
1724	Overall testing	21 days	26/1/26
1725	Swabbing	7 days	26/1/26
1726	CCTV	7 days	2/2/26
1727	Hydrostatic pressure test	7 days	9/2/26
1728	Pipe connection and completion	14 days	16/2/26
1729	Planned completion for section 8	0 days	1/3/26
1730			
1731	**Section 9 - Conversion works to effect the supply of reclaimed water**	**1676 days**	**30/7/21**
1732	Access Date	1 day	30/7/21
1733	Initial survey by stages	180 days	1/12/22
1734	Liaison, coordination and enabling work for conversion	210 days	1/12/22
1735	**Conversion works**	**944 days**	**1/8/23**
1736	Section 4 (Part 3) - 3 nos.	60 days	1/8/23
1737	Section 5 (Part 4) - 11 nos.	220 days	23/12/23
1738	Section 6 (Part 5) - 11 nos.	220 days	24/6/24
1739	Section 7 (Part 6) - 40 nos.	400 days	26/8/24
1740	Section 8 (Part 7) - 3 nos.	60 days	1/1/26
1741	Planned completion for section 9	0 days	1/3/26

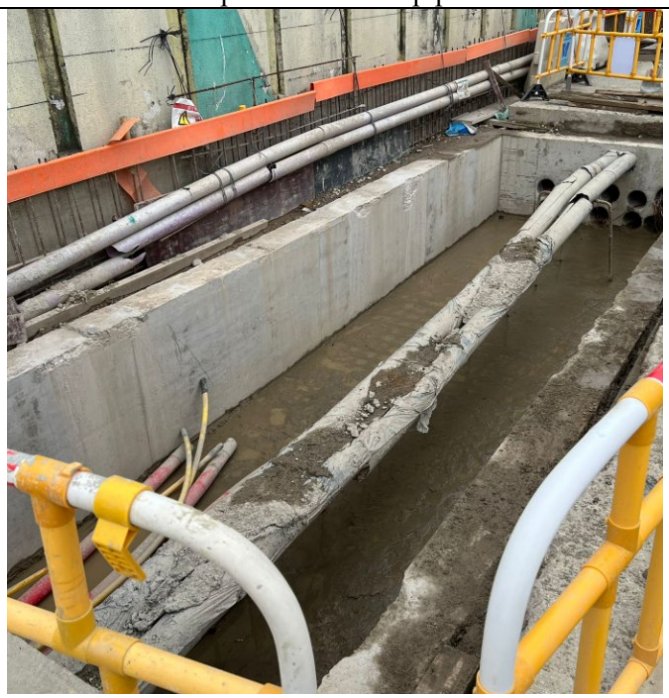


Project: 3WSD20 Programme
Programme Rev. 23
(up to 30 November 2023)

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		

SITE OVERVIEW PHOTO IN THE REPORTING PERIOD

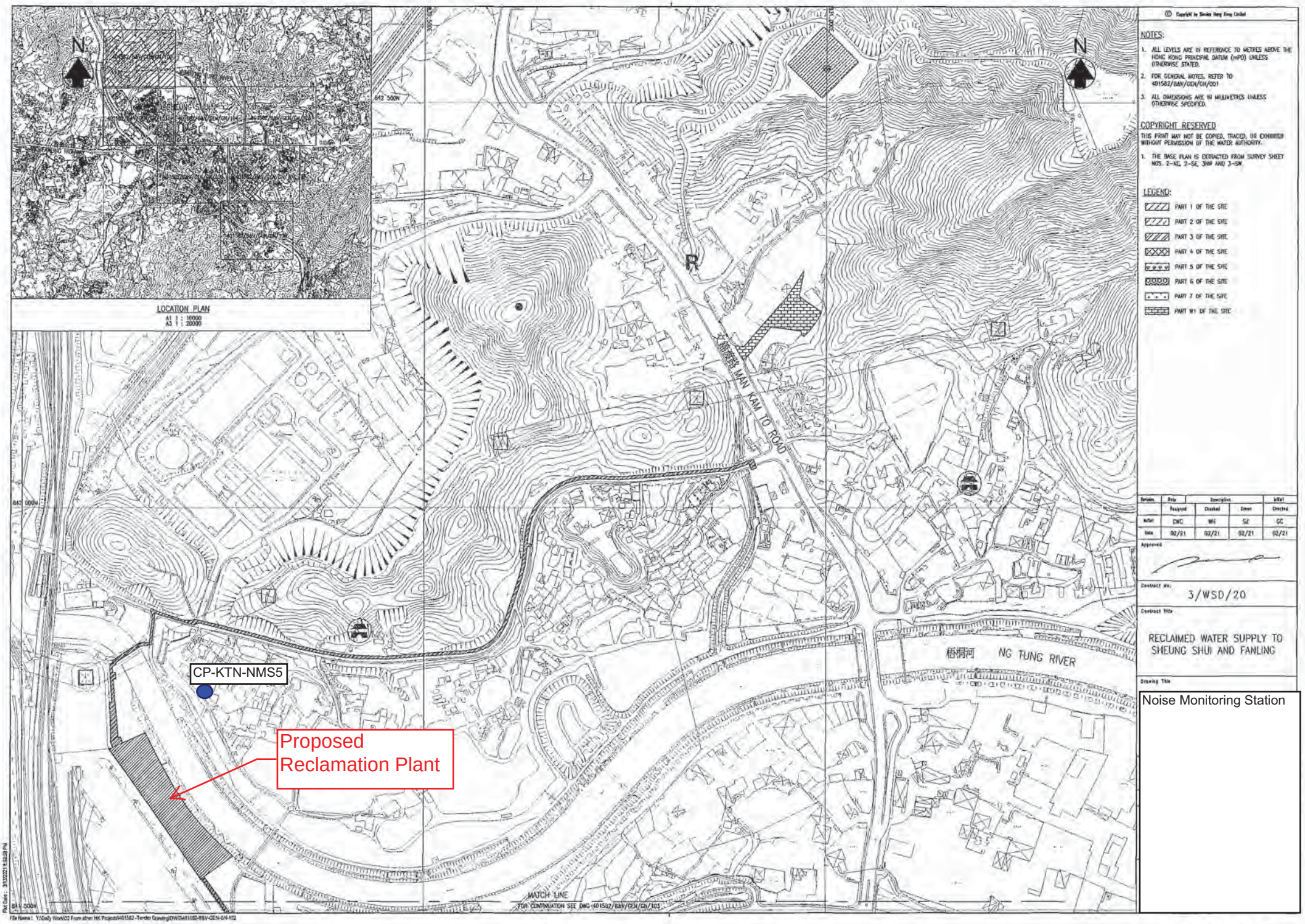
Installation of Main Pumps & associated pipe works



Cable Laying Work

Appendix D

Location of Designated Noise Monitoring Station CP-KTN-NMS5



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/GAN/GEN/GN/001
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.

1. THE BASE PLAN IS EXTRACTED FROM SURVEY SHEET NOS. 2-NG, 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

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked
Initial	CWC	WH	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
Noise Monitoring Station

Plot Date: 3/03/2021 8:03:28 PM
File Name: Y:\Daily Work\CC From other HK Projects\401582-Tender Drawing\DWG\401582-BSV-GEN-GN-102

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. : C231628
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-0436) Date of Receipt / 收件日期 : 28 February 2023

Description / 儀器名稱 : Sound Level Meter (EQ020)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-52A
Serial No. / 編號 : 00620665
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 : 21 March 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
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 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 21 March 2023

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. : C231628
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	C230306
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 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.1	± 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	94.1 (Ref.)
				104.00		104.1
				114.00		114.1

IEC 61672 Class 1 Limit : ± 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 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.1	Ref.
			Slow			94.1	± 0.3

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. : C231628
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (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	90.9	-3.2 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.6
					4 kHz	95.1	+1.0 ± 1.6
					8 kHz	93.1	-1.1 (+2.1 ; -3.1)
					16 kHz	86.1	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_C	C	Fast	94.00	63 Hz	93.3	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.5
					250 Hz	94.1	0.0 ± 1.4
					500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.3	-0.8 ± 1.6
					8 kHz	91.2	-3.0 (+2.1 ; -3.1)
					16 kHz	84.2	-8.5 (+3.5 ; -17.0)

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

Certificate of Calibration
校正證書

Certificate No. : C231628
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 21625

- Mfr's Limit : 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
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輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C231627
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-0436) Date of Receipt / 收件日期 : 28 February 2023

Description / 儀器名稱 : Sound Calibrator (EQ089)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-75
Serial No. / 編號 : 34680623
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 : 21 March 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
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 : K C Lee
Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 21 March 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
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Certificate of Calibration
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Certificate No. : C231627
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 Limit (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.1	± 0.25	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Limit	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 0.1 %	± 0.1

Remark : 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.

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Appendix F

Monitoring Schedule of the Reporting Month and Coming Month

The Reporting Monitoring Schedule (December 2023)

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

✓	Monitoring Day
	Sunday or Public Holiday

The Coming Month Monitoring Schedule (January 2024)

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

Note:

Ecology monitoring dates are tentative and are subject to change

✓	Monitoring Day
	Sunday or Public Holiday

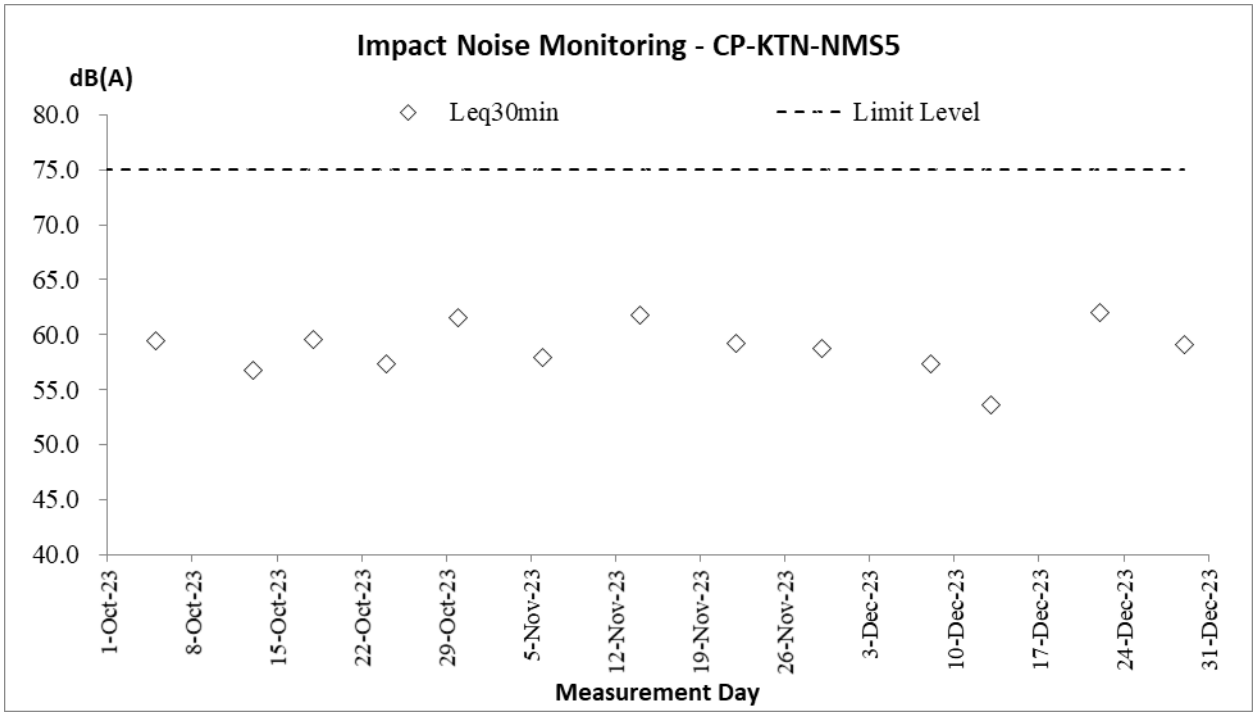
Appendix G

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)		
8-Dec-23	13:30	58.8	58.0	48.1	58.6	53.2	47.1	58.6	62.2	48.0	55.3	58.1	50.3	54.6	57.3	52.1	56.4	53.7	52.6	57.4	60.4
13-Dec-23	9:30	53.3	55.6	50.4	54.0	55.2	49.5	52.8	55.1	49.6	55.1	57.8	50.8	53.6	55.2	50.0	52.0	54.3	48.9	53.6	56.6
22-Dec-23	9:28	60.0	58.8	52.3	57.5	60.2	53.8	57.8	60.4	52.6	55.1	57.8	52.5	58.5	62.3	52.2	68.0	67.1	53.7	62.0	65.0
29-Dec-23	15:44	57.8	61.7	50.6	59.4	63.9	50.5	60.2	64.7	49.5	58.4	62.2	52.2	58.3	61.7	51.7	59.7	62.0	50.5	59.1	62.1

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-23
8-Oct-23
15-Oct-23
22-Oct-23
29-Oct-23
5-Nov-23
12-Nov-23
19-Nov-23
26-Nov-23
3-Dec-23
10-Dec-23
17-Dec-23
24-Dec-23
31-Dec-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

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	0.119	0	0	0	0.119	0	0	0	0	0	0.003
Feb	0.317	0	0	0	0.317	0	0	0	0	0	0.019
Mar	0.159	0	0	0	0.159	0	0	0	0	0	0.021
Apr	1.006	0	0	0	1.006	0	0	0	0	0	0.019
May	0.833	0	0	0	0.833	0	0	0	0	0	0.060
June	1.151	0	0	0	1.151	0	0	0	0	0	0.011
July	1.395	0	0	0	1.395	0	0	0	0	0	0.023
Aug	1.575	0	0	0	1.575	0	0	0	0	0	0.027
Sept	0.339	0	0	0	0.339	0	0	0	0	0	0.024
Oct	2.758	0	0	0	2.758	0	0	0	0	0	0.024
Nov	2.327	0	0	0	2.327	0	0	0	0	0	0.028
Dec	0.543	0	0	0	0.543	0	0	0	0	0	0.016
Total	11.926	0	0	0	11.926	0	0	0	0	0	0.259

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

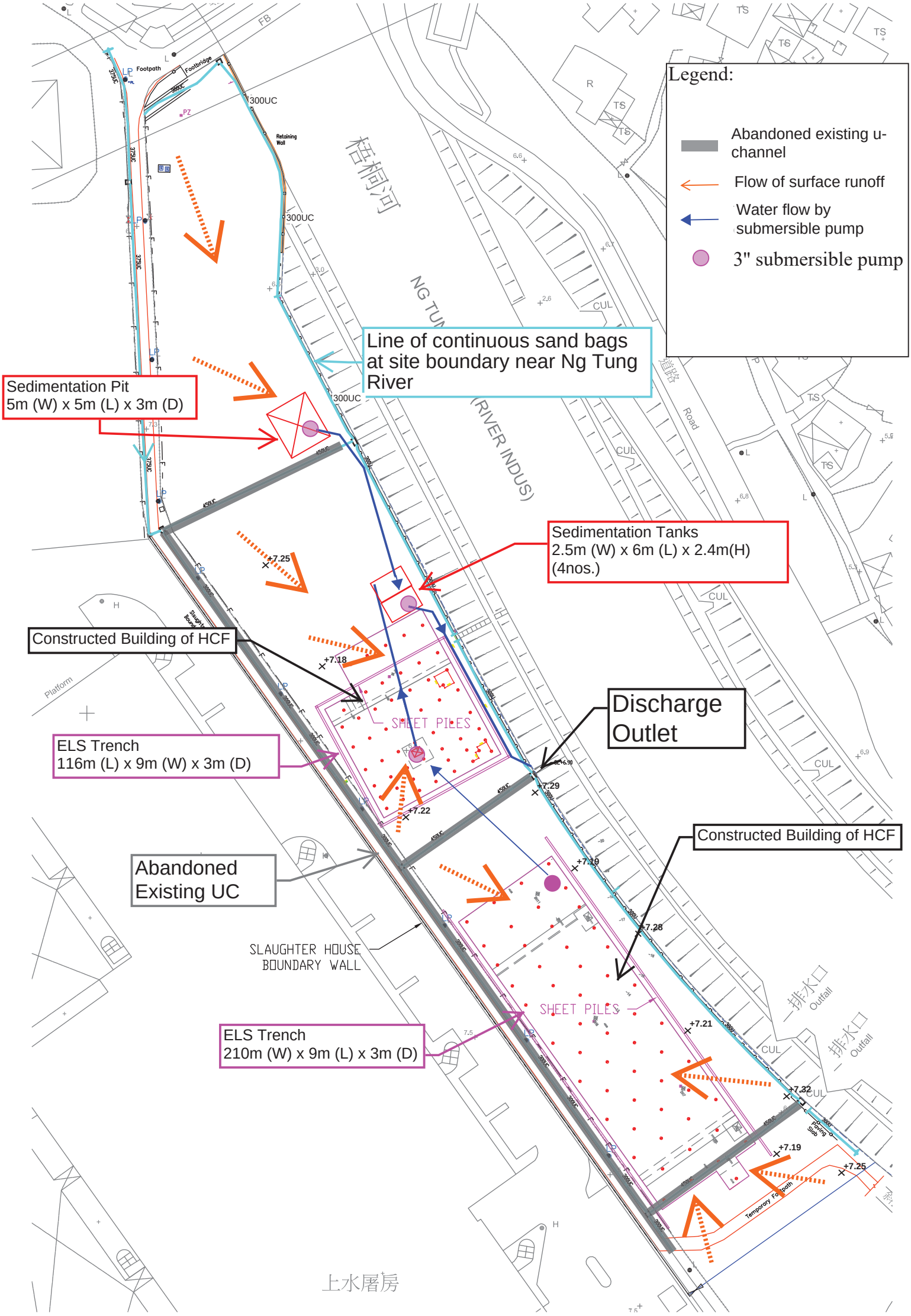
EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the Measures?	Location of the measures	When to implement the Measures?	What requirements or standards for the measures to achieve?
		undertaking any works adjacent 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:
Abandoned existing u-channel
Flow of surface runoff
Water flow by submersible pump
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.)
Constructed Building of HCF
Discharge Outlet
ELS Trench
116m (L) x 9m (W) x 3m (D)
Abandoned Existing UC
Constructed Building of HCF
SLAUGHTER HOUSE BOUNDARY WALL
ELS Trench
210m (W) x 9m (L) x 3m (D)
SHEET PILES
SHEET PILES
上水屠房
Footpath
Footbridge
Retaining Wall
300UC
Platform
Road
Temporary Footpath
Hoarding Side
Outfall
Outfall

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 December 2023
(Issue 1)

Job Ref.: 21/2063/582 AUES-SWHTSE
Date: 5th January 2024

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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 December 2023

(Issue 1)

January 2024

	Name	Signature
Prepared by:	**Nicholas Tam**	
Reviewed by:	**Ida Yu**	
Date:	**5th January 2024**	

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

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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 December 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

Survey data from each month is compared to the baseline monitoring data. Baseline monitoring data was downloaded and extracted from the Baseline Monitoring Report retrieved from the following hyperlink (the extracted summer dataset of the baseline monitoring data is shown in **Appendix D**): https://www.epd.gov.hk/eia/register/english/permit/fep1792018/documents/blmrev1/pdf/blmrev1.pdf. 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.

3.2 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	Investigate cause(s) and if cause(s) identified as related to NDAs project instigate remedial action	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the	Investigate cause(s) and if cause(s) identified as related to the NDAs project instigate remedial action.

Action Level	Response	Limit Level	Response
Monitoring such that the Action Level response is triggered.	to remove or reduce source of disturbance.	Limit Level response is triggered.	Review and adjust project's Long Valley Nature Park (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(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.

3.3 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**
06-Dec-23	16:00	1.58	Sunny	07-Dec-23	09:00	1.35	Sunny
11-Dec-23	09:00	1.6	Sunny	15-Dec-23	09:00	0.4	Windy
21-Dec-23	16:00	1.72	Windy	19-Dec-24	09:00	0.61	Windy
29-Dec-23	13:30	1.62	Sunny	28-Dec-24	09:00	0.7	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	37	391
Waterbirds	15	238

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	17
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	22
Grey Heron	*Ardea cinerea*	蒼鷺	31
Great Egret	*Ardea alba*	大白鷺	47
Little Egret	*Egretta garzetta*	小白鷺	48
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	18

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	-0.435	4	0.343			-0.063	3	0.477		
Chinese Pond Heron	-2.924	7	0.001	*	*	-3.711	6	0.004	*	*
Eastern Cattle Egret	No decline					No decline				
Grey Heron	-3.290	8	0.005	*	*	-2.589	10	0.013	*	
Great Egret	No decline					No decline				
Little Egret	-0.119	7	0.454			-0.987	5	0.184		
Great Cormorant	-1.563	7	0.081			-1.176	6	0.142		

* = level triggered

5.2 In this reporting month, decline in abundance of Chinese Pond Herons had triggered the limit level compared to the monthly and seasonal data collected at the point count locations, while the decline in Grey Heron had triggered the limit level compared to the monthly data and triggered action level when compared to the seasonal data. Nonetheless, considerable abundance of Grey Heron (> 40 individuals) was recorded from transect survey in the reporting month.

5.3 As discussed in previous reports, the decline of individual waterbird species should not be the result of increased disturbances from the Project or its surrounding on-going projects, as increased disturbance would discourage multiple waterbird species from foraging near the transect and point count locations instead. Thus, it is suggested that construction of the current project did not directly cause the decline in these two bird species.

5.4 Nevertheless, other construction and anthropogenic activities around the survey transects have still been active during the reporting month and the following activities were noted.

5.5 A playback device for bird calls was seen to be installed by AECOM near the pond in T1 since the survey on 3rd April 2023, however the playback device was not switched on during the surveys in the reporting month. Egret dummies were observed being tied on the trees of the same pond since the survey on 17th October 2023, which are assumed to attract roosting ardeids. This may potentially lower the number of waterbirds and representative waterbirds visiting P1 and P2 as the birds would be incentivized to forage and roost away from these two points and in the pond instead.

5.6 Road enhancement and sewerage system upgrade works by DSD were also observed to remain active along T2 near P3.

5.7 An extension of this sewerage system upgrade was observed to be in operation at the Eastern bank of Shek Sheung River near P5, since the survey on 23rd August 2023 (Photo 2 of **Appendix E**). Machinery and stockpiles were observed within its construction area, which may be a potential source of disturbance that discourages birds from foraging near P5.

5.8 The construction by Civil Engineering and Development Department (CEDD) near P7 was observed active throughout the entire reporting month. Additionally, discharge from the same work site to Shek Sheung River was observed during the survey on 15th December, which may be a potential source of pollution to T7 (Photo 3 of **Appendix E**). Piling works of the same construction was also observed at T3, roughly midway between P6 and P7, and since the survey on 11th September, excavators were seen to be used on the opposite bank to the survey transect as well. Concrete blocks were seen to be placed in the river next to the piling site since the survey on 29th November 2023 (Photo 4 of **Appendix E**) in a similar fashion to the inflatable dam maintenance work recorded at T2 in previous months.

5.9 Additionally, concreted cylindrical tubes were observed in Shek Sheung River near P6 since the survey on 25th October 2023. It was found that the tubes were filled with soil and planted with vegetation on two of the tubes during the survey on 11th December 2023 (Photo 5 of **Appendix E**).

5.10 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)	/	Fishing, remote boating, placement of egret dummies at nearby pond (AECOM)
T2 (PC3, PC4)	Scaffolding	Sewerage system upgrade and road enhancement (DSD)
PC5	/	Placement of construction materials on riverbank (part of the sewerage system upgrade by DSD)
T3 (PC6, PC7)	/	Fishing, piling works at P7 and along T3, use of excavator near long valley (CEDD), planting in cylindrical tubes and laying of concrete blocks

7 REFERENCES

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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	17	+
Eastern Cattle Egret	牛背鷺	*Bubulcus coromandus*	Y	22	+
Grey Heron	蒼鷺	*Ardea cinerea*	Y	31	+++++
Great Egret	大白鷺	*Ardea alba*	Y	47	++
Little Egret	小白鷺	*Egretta garzetta*	Y	48	+++
Great Cormorant	普通鸕鷀	*Phalacrocorax carbo*	Y	18	+++
Black Kite	黑鳶	*Milvus migrans*	N	3	+
White-breasted Waterhen	白胸苦惡鳥	*Amaurornis phoenicurus*	Y	2	
Black-winged Stilt	黑翅長腳鷸	*Himantopus himantopus*	Y	34	+++++
Common Sandpiper	磯鷸	*Actitis hypoleucos*	Y	8	+
Green Sandpiper	白腰草鷸	*Tringa ochropus*	Y	1	+
Common Greenshank	青腳鷸	*Tringa nebularia*	Y	1	+
Spotted Dove	珠頸斑鳩	*Spilopelia chinensis*	N	11	++
Greater Coucal	褐翅鴉鵑	*Centropus sinensis*	N		+
White-throated Kingfisher	白胸翡翠	*Halcyon smyrnensis*	Y	4	+
Common Kingfisher	普通翠鳥	*Alcedo atthis*	Y	1	
Pied Kingfisher	斑魚狗	*Ceryle rudis*	Y	1	+
Alexandrine Parakeet	亞歷山大鸚鵡	*Psittacula eupatria*	N	8	
Red-billed Blue Magpie	紅嘴藍鵲	*Urocissa erythroryncha*	N		+
Oriental Magpie	喜鵲	*Pica serica*	N	2	+
Collared Crow	白頸鴉	*Corvus torquatus*	Y	3	+
Cinereous Tit	蒼背山雀	*Parus cinereus*	N	2	+
Red-whiskered Bulbul	紅耳鵯	*Pycnonotus jocosus*	N	4	+
Chinese Bulbul	白頭鵯	*Pycnonotus sinensis*	N	6	+
Barn Swallow	家燕	*Hirundo rustica*	N		+
Yellow-browed Warbler	黃眉柳鶯	*Phylloscopus inornatus*	N	7	+
Pallas's leaf Warbler	黃腰柳鶯	*Phylloscopus proregulus*	N	5	+
Dusky Warbler	褐柳鶯	*Phylloscopus fuscatus*	N	3	+
Yellow-bellied Prinia	黃腹鷦鶯	*Prinia flaviventris*	N	5	+
Masked Laughingthrush	黑臉噪鶥	*Pterorhinus perspicillatus*	N	2	++++
Swinhoe's white-eye	暗綠繡眼鳥	*Zosterops simplex*	N	10	+
Crested Myna	八哥	*Acridotheres cristatellus*	N	42	+++++
Black-collared Starling	黑領椋鳥	*Gracupica nigricollis*	N	4	+
Oriental Magpie Robin	鵲鴝	*Copsychus saularis*	N	3	+
Daurian Redstart	北紅尾鴝	*Phoenicurus auroreus*	N	3	+
Stejneger's Stonechat	黑喉石(即鳥)	*Saxicola stejnegeri*	N		+
Eurasian Tree Sparrow	樹麻雀	*Passer montanus*	N	5	+
Eastern Yellow Wagtail	東黃鶺鴒	*Motacilla tschutschensis*	N	1	
Grey Wagtail	灰鶺鴒	*Motacilla cinerea*	N	1	
White Wagtail	白鶺鴒	*Motacilla alba*	N	21	+++
Olive-backed Pipit	樹鷚	*Anthus hodgsoni*	N	5	++

Common Name	Chinese Name	Scientific Name	Waterbird	Point Count Abundance	Transect Abundance
		Total Point Count Abundance		391	
		Total Waterbirds		238	

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	06-Dec-23	16:00	High	28	37
	07-Dec-23	09:00	Low	9	
2	11-Dec-23	09:00	High	13	35
	15-Dec-23	09:00	Low	22	
3	19-Dec-23	09:00	Low	74	118
	21-Dec-23	16:00	High	44	
4	28-Dec-23	09:00	Low	25	48
	29-Dec-23	13:30	High	23	
			Survey Average		59.50
			Baseline	Dec Average	68.83
				Winter Average	60.77

Appendix C Abundance of Representative Waterbirds from Point Count

Representative Species		Recorded Abundance (December 2023)						Baseline	
Common Name	**Species Name**	**Week 1**	**Week 2**	**Week 3**	**Week 4**		**Average**	**Dec Average**	**Winter Average**
Chinese Pond Heron	*Ardeola bacchus*	5	2	7	3		4.25	8.83	9.21
Eastern Cattle Egret	*Bubulcus coromandus*	0	2	13	7		5.50	5.33	3.77
Grey Heron	*Ardea cinerea*	7	6	12	6		7.75	16.83	12.82
Great Egret	*Ardea alba*	1	1	30	15		11.75	6.33	5.15
Little Egret	*Egretta garzetta*	14	8	17	9		12.00	12.33	14.36
Great Cormorant	*Phalacrocorax carbo*	1	9	6	2		4.50	12.00	7.08

Appendix D Baseline Survey Data (Winter)

** Only include data from "All Waterbirds" and the six representative waterbird species for data analysis*

Representative Species		Recorded Abundance (Winter Baseline)							
Common Name	**Species Name**	**21-12-17**	**29-12-17**	**04-01-18**	**09-01-18**	**19-01-18**	**26-01-18**	**01-02-18**	**09-02-18**
All Waterbirds		91	31	50	82	44	87	99	47
Chinese Pond Heron	*Ardeola bacchus*	11	5	8	1	7	4	9	5
Eastern Cattle Egret	*Bubulcus coromandus*	0	0	0	0	0	6	4	0
Grey Heron	*Ardea cinerea*	28	11	16	31	16	31	29	21
Great Egret	*Ardea alba*	7	2	3	5	5	11	7	6
Little Egret	*Egretta garzetta*	9	6	12	8	13	10	12	8
Great Cormorant	*Phalacrocorax carbo*	33	1	6	0	2	0	7	4
Representative Species		**Recorded Abundance (Winter Baseline)**							
Common Name	**Species Name**	**14-02-18**	**22-02-18**	**02-03-18**	**09-03-18**	**12-03-18**	**22-03-18**	**28-03-18**	**05-10-18**
All Waterbirds		26	30	18	86	38	81	83	36
Chinese Pond Heron	*Ardeola bacchus*	3	3	2	1	3	22	20	9
Eastern Cattle Egret	*Bubulcus coromandus*	0	0	0	27	11	8	24	0
Grey Heron	*Ardea cinerea*	11	14	7	0	0	0	0	7
Great Egret	*Ardea alba*	3	3	3	12	5	7	2	7
Little Egret	*Egretta garzetta*	6	8	4	37	15	33	32	12
Great Cormorant	*Phalacrocorax carbo*	0	0	0	3	2	0	0	0
Representative Species		**Recorded Abundance (Winter Baseline)**							
Common Name	**Species Name**	**08-10-18**	**15-10-18**	**25-10-18**	**05-11-18**	**12-11-18**	**22-11-18**	**30-11-18**	**07-12-18**
All Waterbirds		46	58	63	75	82	70	85	77
Chinese Pond Heron	*Ardeola bacchus*	14	12	12	9	15	11	10	9
Eastern Cattle Egret	*Bubulcus coromandus*	0	0	0	1	0	0	0	8
Grey Heron	*Ardea cinerea*	8	10	13	20	17	19	21	16
Great Egret	*Ardea alba*	6	9	4	8	8	3	10	8
Little Egret	*Egretta garzetta*	12	15	20	12	18	16	16	17
Great Cormorant	*Phalacrocorax carbo*	1	2	2	19	15	12	8	10
Representative Species		**Recorded Abundance (Winter Baseline)**							
Common Name	**Species Name**	**10-12-18**	**17-12-18**	**27-12-18**	**02-01-19**	**09-01-19**	**17-01-19**	**25-01-19**	**08-02-19**
All Waterbirds		75	62	77	54	59	51	75	83
Chinese Pond Heron	*Ardeola bacchus*	11	6	11	14	10	11	11	10
Eastern Cattle Egret	*Bubulcus coromandus*	0	15	9	3	3	0	0	6
Grey Heron	*Ardea cinerea*	16	15	15	10	9	8	14	13
Great Egret	*Ardea alba*	7	6	8	2	2	4	6	4
Little Egret	*Egretta garzetta*	17	11	14	11	18	12	18	19
Great Cormorant	*Phalacrocorax carbo*	9	9	10	12	5	14	13	15
Representative Species		**Recorded Abundance (Winter Baseline)**							
Common Name	**Species Name**	**14-02-19**	**22-02-19**	**25-02-19**	**08-03-19**	**15-03-19**	**22-03-19**	**25-03-19**	
All Waterbirds		72	71	60	60	33	27	26	
Chinese Pond Heron	*Ardeola bacchus*	13	13	9	9	9	11	6	
Eastern Cattle Egret	*Bubulcus coromandus*	7	2	0	3	3	0	7	
Grey Heron	*Ardea cinerea*	13	11	14	10	4	2	0	
Great Egret	*Ardea alba*	7	3	2	4	1	1	0	
Little Egret	*Egretta garzetta*	11	14	14	15	12	12	11	
Great Cormorant	*Phalacrocorax carbo*	13	13	17	15	4	0	0	

Appendix E Survey Photos

Photo 1 Works on current project at P3 (15/12/2023)	**Photo 2** Stockpile of materials at P5 (19/12/2023)
	
Photo 3 Water discharge from construction at P7 (15/12/2023)	**Photo 4** Concrete block laying at T3 (29/12/2023)
	
Photo 5 Planting near P6 (11/12/2023)	**Photo 6** Black-winged Stilt at P7 (19/12/2023)
	

Figure 1

Transect and Point Count Location

P4
P1
P3
P2
T1
T2
P7
P5
T3
P6

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

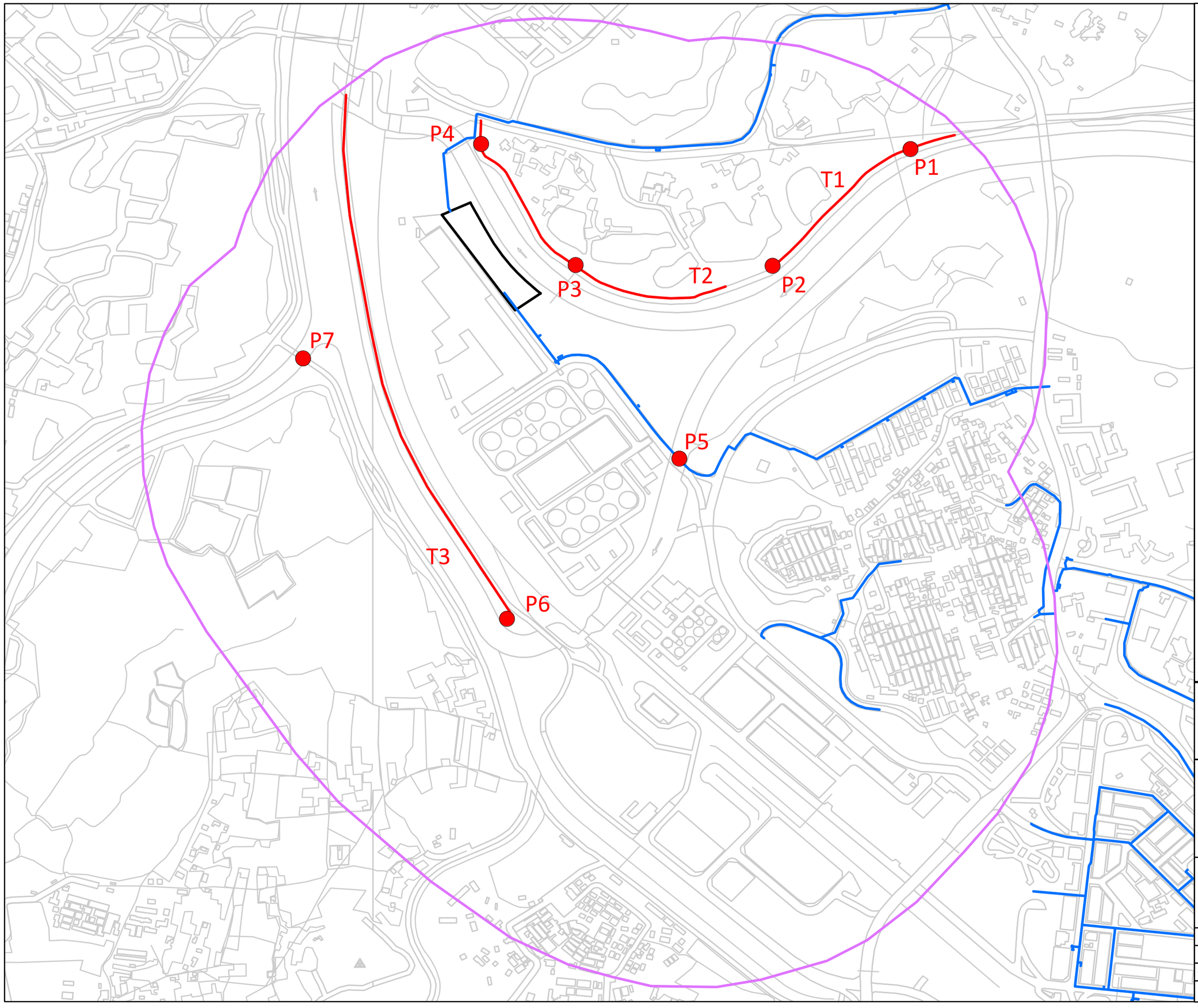
Figure Title:

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

Proposed Retained Water Mains

Walk Transect

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 (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