# Appendix VIII

*Sewerage Impact Assessment*

Prepared for

Fruit Design and Build Limited

Prepared by

Ramboll Hong Kong Limited

# PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE DEVELOPMENT SCHEME TO INCLUDE WETLAND RESTORATION PROPOSAL AND PROPOSED FILLING OF PONDS/LAND AND EXCAVATION OF LAND IN "OU(CDWRA)" ZONE AT VARIOUS LOTS IN D.D. 104, NORTH OF KAM POK ROAD EAST, POK WAI, YUEN LONG, NEW TERRITORIES

## SEWERAGE IMPACT ASSESSMENT

| | |
|---|---|
| Date | 14 March 2023 |
| Prepared by | Crystal Lui *et. al*<br>Graduate Environmental Consultant |
| Signed |  |
| Approved by | Henry Ng<br>Principal Consultant |
| Signed |  |
| Project Reference | FDBNPWWREA00 |
| Document No. | R8934_SIA V1.2.docx |



Ramboll Hong Kong Limited

21/F, BEA Harbour View Centre
56 Gloucester Road, Wan Chai, Hong Kong

Tel: (852) 3465 2888
Fax: (852) 3465 2899

Email: hkinfo@ramboll.com

Q:\Projects\FDBNPWWREA00\04 Deliverables\03 SIA\R8934_SIA V1.2.docx

# CHAPTERS



# FIGURES



# APPENDICES

# 1. INTRODUCTION

1.1.1 The applicant proposes to develop the Application Site at various lots in DD104, north of Kam Pok Road East, Yuen Long, into a residential development cum wetland restoration area. The zoning of the Application Site is "Other Specified Uses – Comprehensive Development to include Wetland Restoration Area" (OU(CDWRA)) on the approved Nam Sang Wai Outline Zoning Plan S/YL-NSW/8. A S16 application is required for the proposed development.

1.1.2 Ramboll Hong Kong Limited has been commissioned by the Project Proponent to conduct this Sewerage Impact Assessment (SIA) for the proposed development under this application. Architectural drawings and technical information of the Application Site were provided respectively by the project architect and other project team members.

1.1.3 The Application Site is also the subject of a previous planning application under the application no. A/YL-NSW/290 and a SIA report (R7191) was previously submitted in support of that planning application (Previous SIA). Since then, the layout plan of proposed development has been further reviewed taking into account the concerns of AFCD with respect to the layout of proposed wetland restoration area. Compared to the previous scheme in Previous SIA, the application boundary in current application remains the same. Thus, this SIA serves as an update to the above-mentioned previous submitted SIA report based on the current proposed development.

## 1.2 Application Site and its Environs

1.2.1 The Application Site is about 51,073 $m^2$, and it is immediate southeast of an existing low-rise residential development, Man Yuen Chuen and north of the Kam Pok Road East. The Application Site is partly occupied by abandoned fishponds and partly by soiled ground.

1.2.2 Figure 1.1 shows the location of the Application Site and the environs.

## 1.3 Proposed Development

1.3.1 The proposed development comprises a total of 114 units in 108 housing blocks of 3- to 5-storey high (i.e. 89 in the form of 2- to 4-storey on top of 1-level of communal basement carpark and 25 in 2-storey on top of 1-level of carport), two 2-storeys clubhouses, an underground sewage pumping station (SPS) and a proposed wetland restoration area (WRA).

1.3.2 The indicative Master Layout Plan (MLP) and sections of the Proposed Development are provided in Appendix 1.1.

# 2. SEWERAGE IMPACT ASSESSMENT ("SIA")

## 2.1 Introduction

2.1.1 The Proposed Development is a comprehensive development scheme to include wetland restoration proposal. This section gives a brief review on the current environmental legislation and standards and assess the impacts arising from the proposed development. Recommendations on mitigation measures will be formulated if there is any adverse effect induced by the proposed development.

## 2.2 Existing and Planned Sewerage Infrastructure

2.2.1 The site falls within the Yuen Long / Kam Tin sewerage catchment and is classified as an unsewered area under the Yuen Long / Kam Tin Sewerage Master Plan (YLKT SMP). A set of existing 225mm public sewerage system (from feature no. MH540 to MH235) is identified along Kam Pok Road East, which is currently not in use and could serve the Project Site.

2.2.2 The existing Yuen Long Sewage Treatment Works (YLSTW) serves Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas with a design capacity of 70,000$m^3$/day (ADWF). It provides primary and secondary treatments with effluent discharges to the Shan Pui River and then to Deep Bay.

2.2.3 The public sewerage facility located closest to the Project Site is Nam Sang Wai Sewage Pumping Station (SPS), as shown in Figure 1.1.

## 2.3 Assessment Methodology and Assumptions

2.3.1 An analysis of the capacity of the sewage pipes and the SPS has been carried out to evaluate the adequacy of the proposed sewerage system. The design assumptions and basis are shown in Table 2-1.

Table 2-1 Design Assumption and Basis

| Items | Values |
|---|---|
| Design Standard | DSD Sewerage Design Manual, Part 1 & 2 |
| Flow Formula Used | Colebrook White Formula |
| Unit Flow Factor | EPD Guideline for Estimating Sewerage Flows for Sewerage Infrastructure Planning (GESF)<br>0.37 $m^3$/d/head (Domestic, Private R3) for residents<br>0.28 $m^3$/d/head (Commercial, J11) for clubhouse staff |

## 2.4 Estimate of Sewage Flow

2.4.1 The sewage flow to be generated from the projected residential population, as well as activities at the two clubhouses and the associated facilities has been estimated in accordance with "EPD Guideline for Estimating Sewage Flows for Sewage Infrastructure Planning" (GESF). Major contributions of sewage flow from the Proposed Development include the projected residential population of 401 people. The estimated sewage flow is shown in Table 2-2.

Table 2-2 Estimated Sewage Flow from the Proposed Development

| Calculation for Sewerage Generation Rate of the Proposed Development | | | | |
|---|---|---|---|---|
| 1. | Houses | | | |
| 1a. | Total number of residential units | = | 114 | Units |
| 1b. | Total number of residents | = | 401 | people – (Assume Average Household Size of 3.52) |
| 1c. | Unit flow factor | = | 370 | litre/person/day – (Private R2 in Table T-1 of GESF) |
| 1d. | Sewerage generation rate | = | 148.5 | $m^3$/day |
| | | | | |
| 2. | Clubhouse | | | |
| 2a. | Total number of employees | = | 34 | employees |
| 2b. | Unit flow factor | = | 280 | litre/employee/day – (J11 in Table T-2 of GESF) |
| 2c. | Sewerage generation rate | = | 9.5 | $m^3$/day |
| | | | | |
| Total Flow from Proposed Development | | | | |
| Flow rate | | = | 158.0 | $m^3$/day |
| Calculated "Contributing Population" * | | = | 585 | People |
| Peaking factor | | = | 8 | – (Table T-5 of GESF for population <1,000 incl. stormwater allowance) |
| Peak flow | | = | 14.63 | litre/sec |

Remark: * according to the calculation method in GESF for the so-called "Contributing Population" for peaking factor selection.

2.4.2 The average flow and the peak flow from the Application Site will be approximately 158.0 $m^3$/day and 14.63 L/s, respectively.

## 2.5 Sewerage Impact Assessment

2.5.1 It is proposed that the sewage generated from the Proposed Development will be discharged to an existing 225mm diameter sewer at the south of the Application Site and together with proposed sewer to Nam Sang Wai SPS for disposal at YLSTW. The proposed possible sewage disposal scheme is shown in Figure 2.1. The hydraulic checking of existing and proposed sewers starting from the discharge point to Nam Sang Wai SPS is provided in Appendix 2.1 and it is found to be adequate to serve the Proposed Development with a segment of pipe upgrading works.

2.5.2 There are existing stormwater pipe and box culvert along Pok Wai South Road. They are located in vicinity of the proposed sewage system. The indicative cross-sectional drawings of the proposed sewers and the existing utilities are shown in Figure 2.2 to 2.3.

2.5.3 Based on the information provided by the Drainage Services Department (DSD), the design capacity of Nam Sang Wai SPS is 42,921 $m^3$/day. Its design capacity of peak flow is 1,476 L/s as stated in the approved EIA Report for Comprehensive Development and Wetland Protection Near Yau Mei San Tsuen (Register No. AEIAR-189/2015). The sewage generation from the Application Site will take up about 0.38% of the design daily flow of the SPS, while take up 0.23% of YLSTW, which is insignificant.

2.5.4 Subject to further liaison with DSD and the future developments, if any, near the Application Site, the sewerage system proposed under this Application will be a private property to be managed and maintained by the future management party of the Proposed Development. Regular inspection and maintenance will be conducted in accordance with Chapter 8 of DSD's Sewerage Manual in order to ensure normal operation, hence no blockage or overflow, of the proposed sewerage system is anticipated.

2.5.5 New connections from the adjacent lots on Government Land to the proposed sewerage system shall be allowed, if any. In event of the proposed sewerage system to be served as a public sewer, the Applicant and the future owners of the Proposed Development shall hand over the sewer to DSD to undertake subsequent management and maintenance works.

2.5.6 The design details of proposed sewerage, including the alignment, location, diameter, length and invert levels of the proposed sewerage system, location and number of the proposed manholes, are subject to the detailed design of the Project. Since detailed design will only be available in later detailed design stage, the current SIA is prepared to illustrate the approach of sewerage arrangement for the Proposed Development for the purpose of this planning application. Further survey on underground utilities will normally be carried out during detailed design stage and the future design will take into account how to avoid those facilities. If necessary, should there be updated information on planned public sewers to be provided in the area, the Applicant will also consider feasibility of connecting to public sewer through the discharge of planning approval condition stage.

# 3. CONCLUSION

3.1.1 The proposed residential development area is located north of Kam Pok Road East, Pok Wai, Yuen Long. There is a set of existing 225mm public sewerage system in the vicinity serving the Proposed Development. The Application Site, with a maximum of 401 residents and 34 staff, will generate an average daily sewage flow of 158.0 $m^3$/d. It is proposed to be discharged to the existing 225mm public sewers, and further conveyed to existing Nam Sang Wai SPS.

3.1.2 Sewage generation from the Application Site will take up about 0.38% of the design capacity of Nam Sang Wai SPS. The capacity Nam Sang Wai Sewage Pumping Station is adequately able to cater for the additional flow from the operation of the Proposed Development. Regular inspection and maintenance will be conducted in accordance with Chapter 8 of DSD's Sewerage Manual in order to ensure normal operation, hence no blockage or overflow, of the proposed sewerage system, is anticipated.

3.1.3 Based on the calculation, the existing and proposed sewers would have sufficient capacity to cater the sewage flow from the Proposed Development and other planned developments. No adverse sewerage impact on the local area is anticipated due to the operation of the Proposed Development. Thus, the Proposed Development is considered technically feasible from sewerage impact point of view.

# Figures

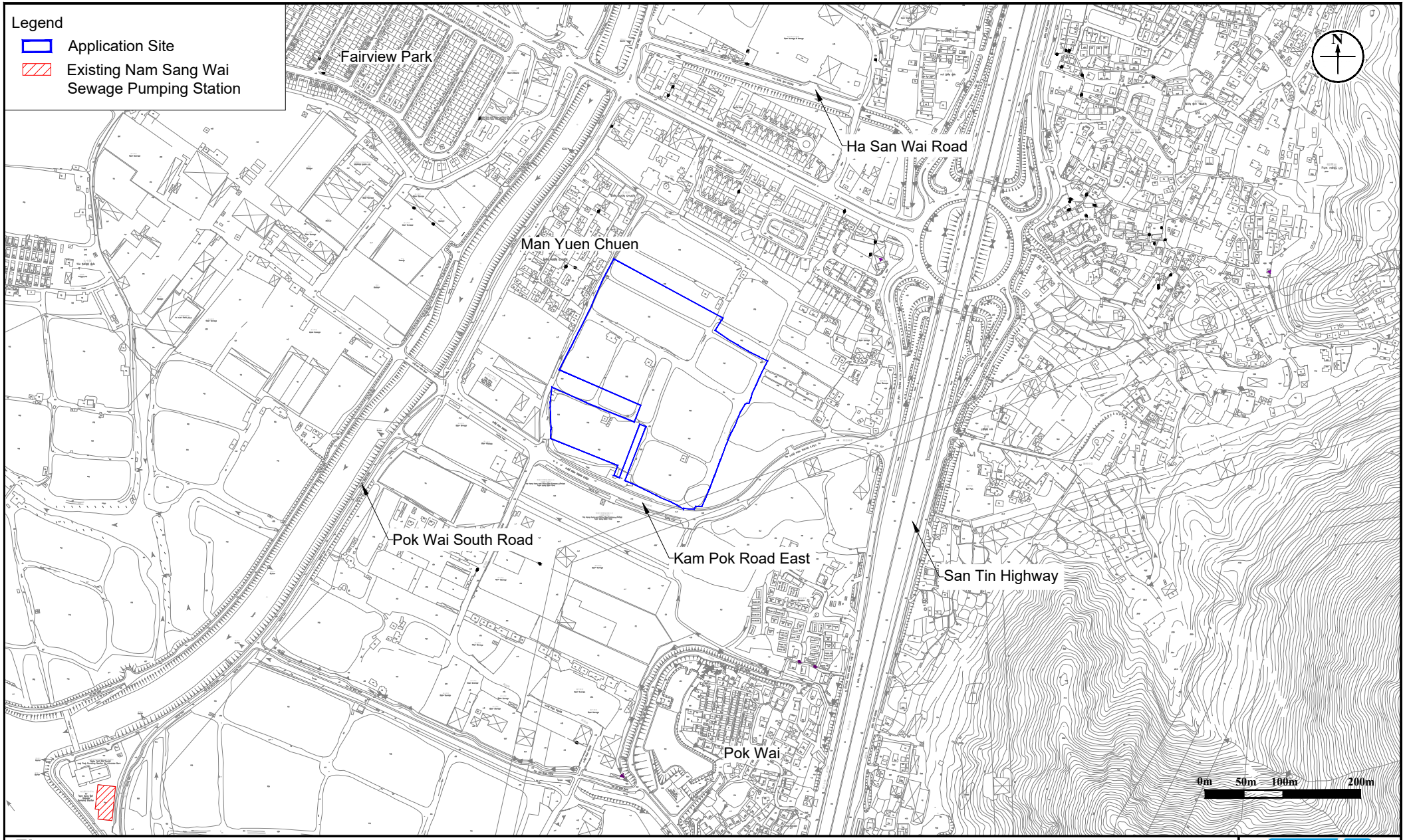



**Figure:** 1.1

**Title:** Application Site and Its Environs

RAMBOLL

Drawn by: SN

Checked by: HN

**Project:** Planning Application for Proposed Comprehensive Development Scheme to include Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories

Rev.: 1.2

Date: Mar 2023

\\APHKFPS3\DRIVE Q\PROJECTS\FDBNPWWREA00\04 DELIVERABLES\03 SIA\01 FIGURE\R7191_V4.0\SOURCE\FIGURE 1.1 APPLICATION SITE AND ITS ENVIRONS.DWG

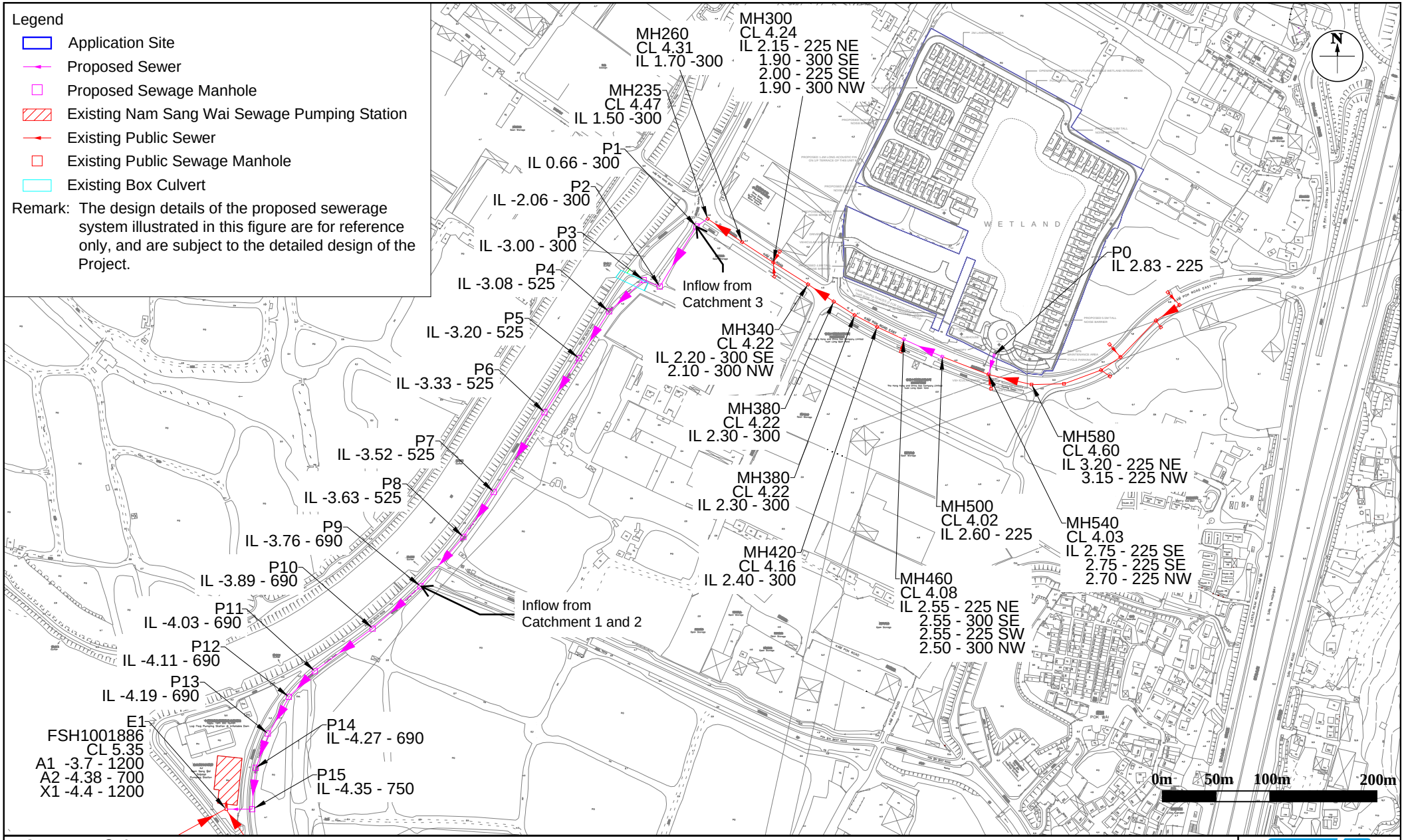



**Figure:** 2.1

**Title:** Proposed Sewerage System for the Application Site

RAMBOLL

Drawn by: CL

Checked by: HN

**Project:** Planning Application for Proposed Comprehensive Development Scheme to include Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories

Rev.: 1.2

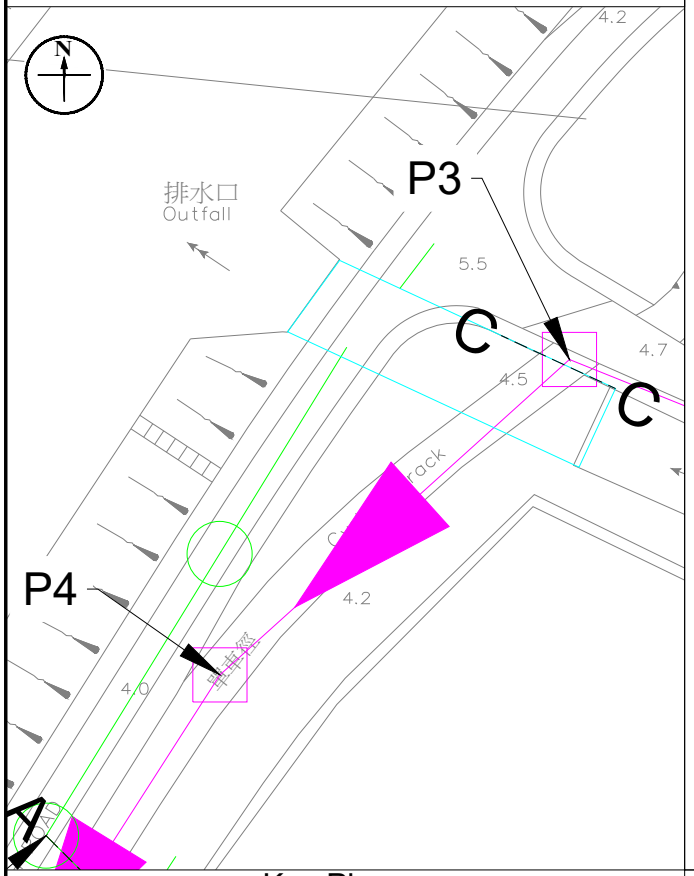
Date: Mar 2023

\\APHKFPS3\DRIVE Q\PROJECTS\FDBNPWWREA00\04 DELIVERABLES\03 SIA\01 FIGURE\R7191_V6.1\SOURCE\FIGURE 2.1 PROPOSED SEWER_SCENARIO 2_220812.DWG

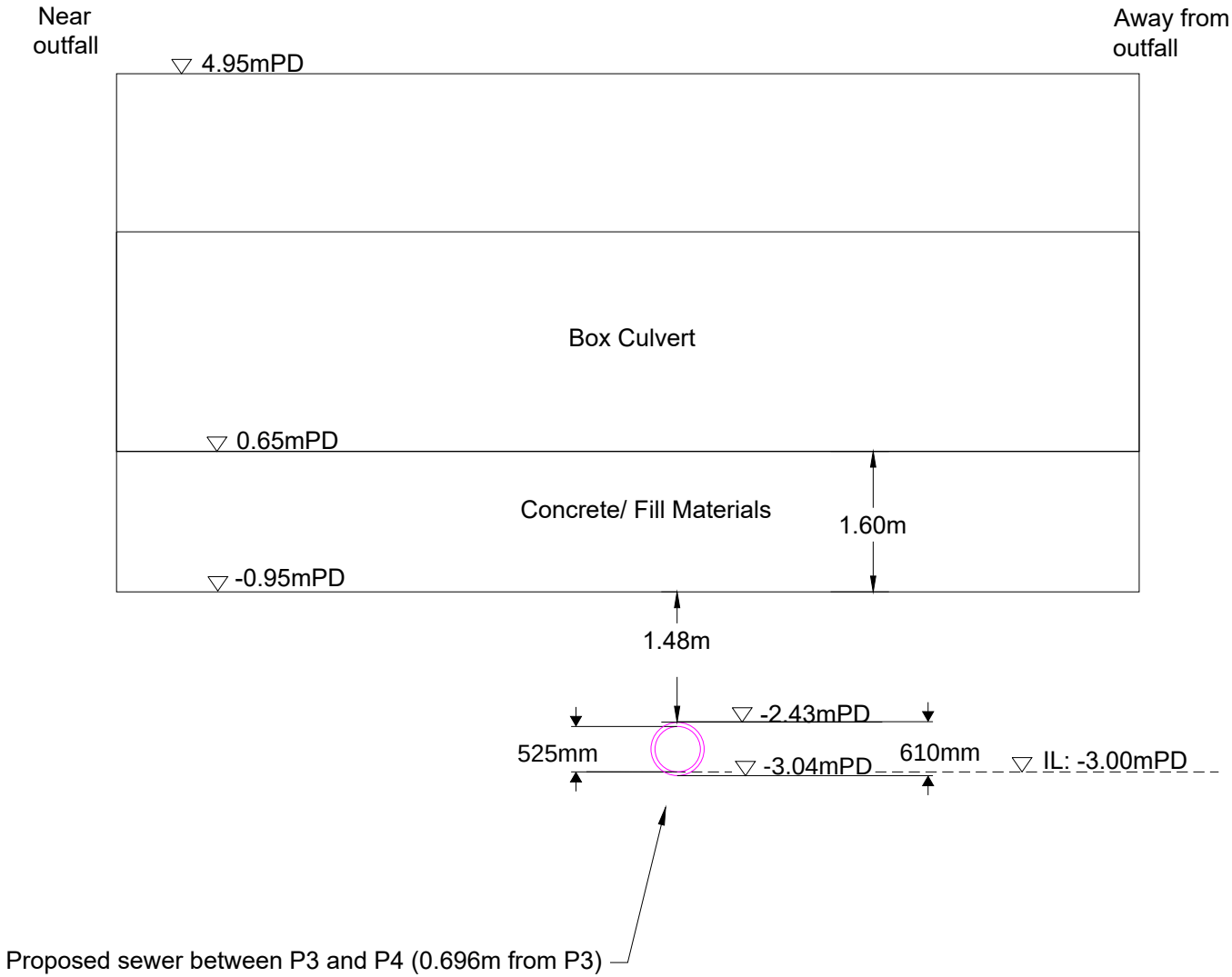
Legend

- Application Site
- Proposed Sewer
- Proposed Sewage Manhole
- Existing Stormwater Pipe
- Existing Storwater Manhole / Catchpit / Outfall
- Existing Box Culvert

Remark: The design details of the proposed sewerage system illustrated in this figure are for reference only, and are subject to the detailed design of the Project.




Key Plan




Section C-C

**Figure:** 2.2

**Title:** Indicative Cross Section Diagrams (Sheet 1 of 2)

RAMBOLL

Drawn by: CL

Checked by: HN

**Project:** Planning Application for Proposed Comprehensive Development Scheme to include Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories

Rev.: 1.2

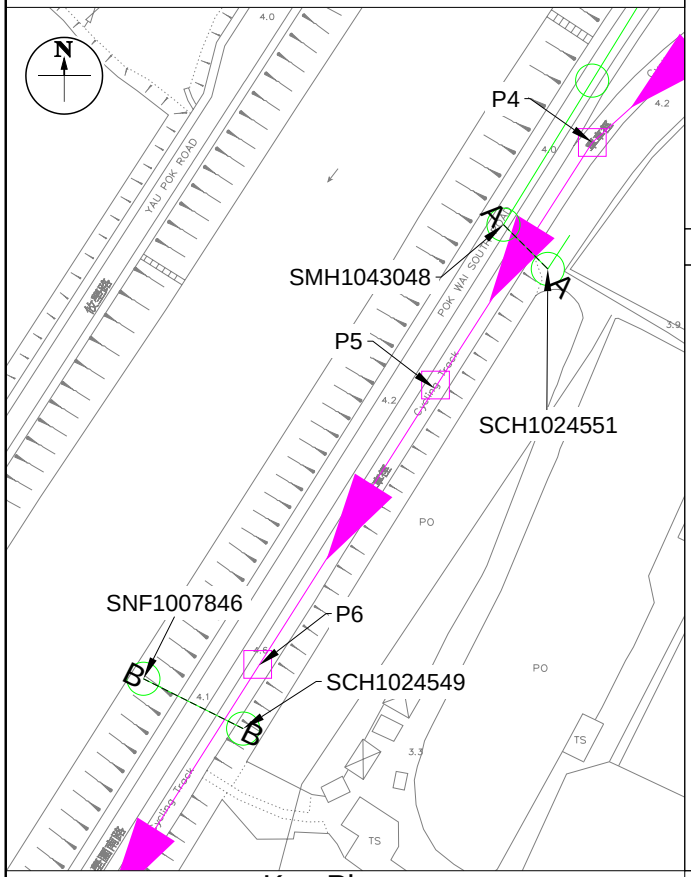
Date: Mar 2023

\\APHKFPS3\DRIVE Q\PROJECTS\FDBNPWWREA00\04 DELIVERABLES\03 SIA\01 FIGURE\R7191_V6.1\SOURCE\FIGURE 2.1 PROPOSED SEWER_SCENARIO 2_220812.DWG

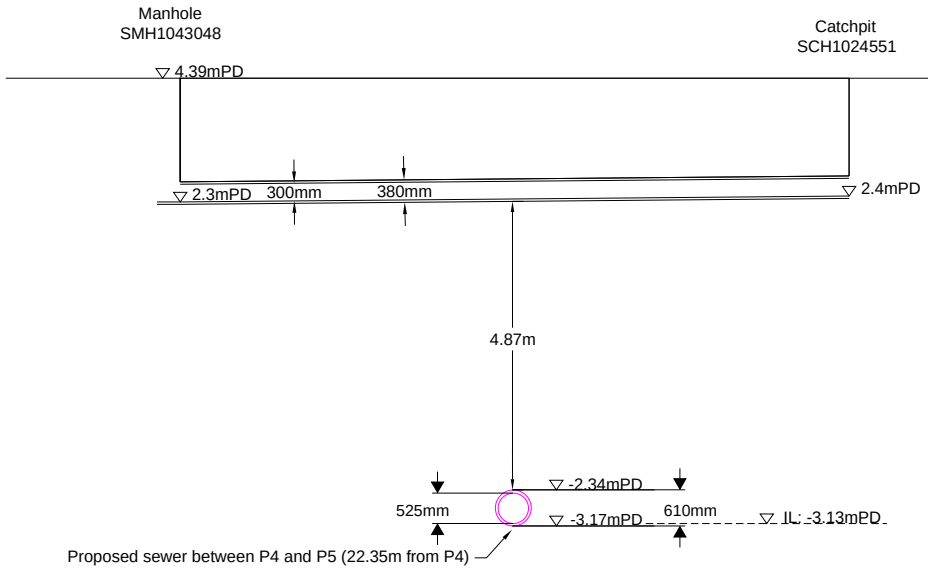
Legend

- Application Site
- Proposed Sewer
- Proposed Sewage Manhole
- Existing Stormwater Pipe
- Existing Storwater Manhole / Catchpit / Outfall

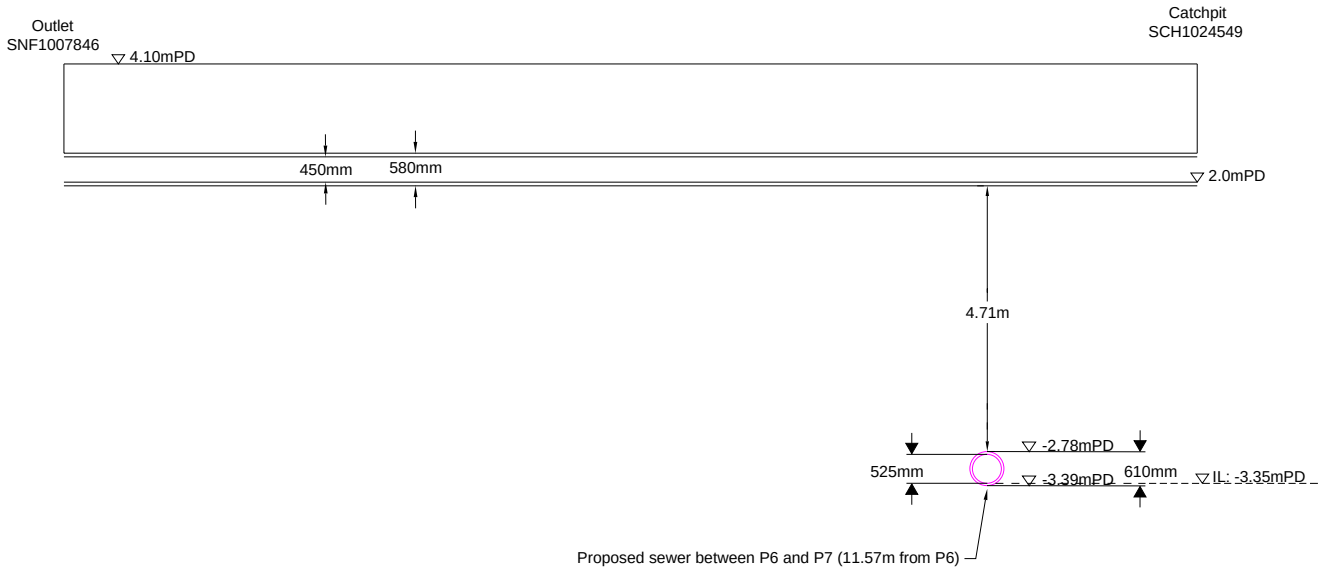
Remark: The design details of the proposed sewerage system illustrated in this figure are for reference only, and are subject to the detailed design of the Project.




Key Plan




Section A-A




Section B-B

**Figure:** 2.3

**Title:** Indicative Cross Section Diagrams (Sheet 2 of 2)

RAMBOLL

| | |
|---|---|
| Drawn by: | CL |
| Checked by: | HN |
| Rev.: | 1.2 |
| Date: | Mar 2023 |

**Project:** Planning Application for Proposed Comprehensive Development Scheme to include Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories

\\APHKFPS3\DRIVE Q\PROJECTS\FDBNPWWREA00\04 DELIVERABLES\03 SIA\01 FIGURE\R7191_V6.1\SOURCE\FIGURE 2.1 PROPOSED SEWER_SCENARIO 2_220812.DWG

# Appendix 1.1 Indicative Master Layout Plan

Please refer to the Planning Statement

# Appendix 2.1 Hydraulic Calculation of the Proposed Sewers for the Application Site

## Appendix 2.1 Hydraulic Calculation of the Proposed Sewers for the Application Site

### Note:

1) Colebrook-White's equation is adopted for full-bore pipe velocity calculation.
2) Backwash Flowrate generated by swimming pool from developments, if any, has been included in the Design Peak Flowrate.

| Pipe | Diameter (mm) | Upstream Invert Level (mPD) | Downstream Invert Level (mPD) | Pipe Length (m) | Gradient (1 in) | Roughness (mm) | No. of Pipes | Catchment No. | ADWF ($m^3/s$) | Contributing Population | Peak Factor | Design Peak Flowrate ($m^3/s$) | Full Bore Velocity (m/s) | Full Bore Capacity ($m^3/s$) | Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P0 to MH540 | 225 | 2.83 | 2.70 | 18.910 | 145 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.849 | 0.034 | 43.4% |
| MH540 to MH500 | 225 | 2.70 | 2.60 | 46.020 | 460 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.476 | 0.019 | 77.3% |
| MH500 to MH460 | 225 | 2.60 | 2.55 | 39.640 | 793 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.362 | 0.014 | 101.6% |
| MH460 to MH420 | 300 | 2.55 | 2.40 | 27.370 | 182 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.920 | 0.065 | 22.5% |
| MH420 to MH380 | 300 | 2.40 | 2.35 | 23.630 | 473 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.571 | 0.040 | 36.3% |
| MH380 to MH380(1) | 300 | 2.35 | 2.30 | 23.230 | 465 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.575 | 0.041 | 36.0% |
| MH380(1) to MH340 | 300 | 2.30 | 2.20 | 28.910 | 289 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.730 | 0.052 | 28.3% |
| MH340 to MH300 | 300 | 2.10 | 1.90 | 38.240 | 191 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.899 | 0.064 | 23.0% |
| MH300 to MH260 | 300 | 1.90 | 1.70 | 34.900 | 175 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.941 | 0.066 | 22.0% |
| MH260 to MH235 | 300 | 1.70 | 1.50 | 38.840 | 194 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.892 | 0.063 | 23.2% |
| MH235 to P1 | 300 | 1.50 | 0.66 | 12.590 | 15 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 3.216 | 0.227 | 6.4% |
| P1 to P2 | 300 | 0.66 | -2.06 | 65.790 | 24 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 2.531 | 0.179 | 8.2% |
| P2 to P3 | 300 | -2.06 | -3.00 | 16.250 | 17 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 2.994 | 0.212 | 6.9% |
| P3 to P4 | 525 | -3.00 | -3.08 | 43.380 | 542 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.772 | 0.167 | 8.8% |
| P4 to P5 | 525 | -3.08 | -3.20 | 52.150 | 435 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.863 | 0.187 | 7.8% |
| P5 to P6 | 525 | -3.20 | -3.33 | 59.790 | 460 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.839 | 0.182 | 8.1% |
| P6 to P7 | 525 | -3.33 | -3.52 | 88.210 | 464 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.835 | 0.181 | 8.1% |
| P7 to P8 | 525 | -3.52 | -3.63 | 50.460 | 459 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.840 | 0.182 | 8.0% |
| P8 to P9 | 525 | -3.63 | -3.76 | 61.240 | 471 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.829 | 0.179 | 8.2% |
| P9 to P10 | 690 | -3.76 | -3.89 | 59.460 | 457 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 1.005 | 0.376 | 3.9% |
| P10 to P11 | 690 | -3.89 | -4.03 | 67.200 | 480 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.981 | 0.367 | 4.0% |
| P11 to P12 | 690 | -4.03 | -4.11 | 34.060 | 426 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 1.042 | 0.390 | 3.8% |
| P12 to P13 | 690 | -4.11 | -4.19 | 39.540 | 494 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.967 | 0.362 | 4.0% |
| P13 to P14 | 690 | -4.19 | -4.27 | 33.830 | 423 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 1.046 | 0.391 | 3.7% |
| P14 to P15 | 690 | -4.27 | -4.35 | 38.830 | 485 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.976 | 0.365 | 4.0% |
| P15 to E1 | 750 | -4.35 | -4.38 | 23.630 | 788 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.808 | 0.357 | 4.1% |

# Appendix 2.2 Hydraulic Calculation of the Proposed Sewers for the Application Site (Sensitivity Test)

## Appendix 2.2 Hydraulic Calculation of the Proposed Sewers for the Application Site (Sensitivity Test)

### Note:

1) Colebrook-White's equation is adopted for full-bore pipe velocity calculation.
2) Backwash Flowrate generated by swimming pool from developments, if any, has been included in the Design Peak Flowrate.

| Pipe | Diameter (mm) | Upstream Invert Level (mPD) | Downstream Invert Level (mPD) | Pipe Length (m) | Gradient (1 in) | Roughness (mm) | No. of Pipes | Catchment No. | ADWF ($m^3/s$) | Contributing Population | Peak Factor | Design Peak Flowrate ($m^3/s$) | Full Bore Velocity (m/s) | Full Bore Capacity ($m^3/s$) | Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P0 to MH540 | 225 | 2.83 | 2.70 | 18.910 | 145 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.849 | 0.034 | 43.4% |
| MH540 to MH500 | 225 | 2.70 | 2.60 | 46.020 | 460 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.476 | 0.019 | 77.3% |
| MH500 to MH460 | 300 (225) | 2.60 | 2.55 | 39.640 | 793 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.440 | 0.031 | 47.0% |
| MH460 to MH420 | 300 | 2.55 | 2.40 | 27.370 | 182 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.920 | 0.065 | 22.5% |
| MH420 to MH380 | 300 | 2.40 | 2.35 | 23.630 | 473 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.571 | 0.040 | 36.3% |
| MH380 to MH380(1) | 300 | 2.35 | 2.30 | 23.230 | 465 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.575 | 0.041 | 36.0% |
| MH380(1) to MH340 | 300 | 2.30 | 2.20 | 28.910 | 289 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.730 | 0.052 | 28.3% |
| MH340 to MH300 | 300 | 2.10 | 1.90 | 38.240 | 191 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.899 | 0.064 | 23.0% |
| MH300 to MH260 | 300 | 1.90 | 1.70 | 34.900 | 175 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.941 | 0.066 | 22.0% |
| MH260 to MH235 | 300 | 1.70 | 1.50 | 38.840 | 194 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 0.892 | 0.063 | 23.2% |
| MH235 to P1 | 300 | 1.50 | 0.66 | 12.590 | 15 | 3.00 | 1 | 4 | 0.0018 | 585 | 8 | 0.015 | 3.216 | 0.227 | 6.4% |
| P1 to P2 | 300 | 0.66 | -2.06 | 65.790 | 24 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 2.531 | 0.179 | 68.6% |
| P2 to P3 | 300 | -2.06 | -3.00 | 16.250 | 17 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 2.994 | 0.212 | 58.0% |
| P3 to P4 | 525 | -3.00 | -3.08 | 43.380 | 542 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.772 | 0.167 | 73.4% |
| P4 to P5 | 525 | -3.08 | -3.20 | 52.150 | 435 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.863 | 0.187 | 65.7% |
| P5 to P6 | 525 | -3.20 | -3.33 | 59.790 | 460 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.839 | 0.182 | 67.6% |
| P6 to P7 | 525 | -3.33 | -3.52 | 88.210 | 464 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.835 | 0.181 | 67.9% |
| P7 to P8 | 525 | -3.52 | -3.63 | 50.460 | 459 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.840 | 0.182 | 67.5% |
| P8 to P9 | 525 | -3.63 | -3.76 | 61.240 | 471 | 3.00 | 1 | 3, 4 | 0.0245 | 7,852 | 5 | 0.123 | 0.829 | 0.179 | 68.4% |
| P9 to P10 | 690 | -3.76 | -3.89 | 59.460 | 457 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 1.005 | 0.376 | 85.1% |
| P10 to P11 | 690 | -3.89 | -4.03 | 67.200 | 480 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 0.981 | 0.367 | 87.2% |
| P11 to P12 | 690 | -4.03 | -4.11 | 34.060 | 426 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 1.042 | 0.390 | 82.1% |
| P12 to P13 | 690 | -4.11 | -4.19 | 39.540 | 494 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 0.967 | 0.362 | 88.5% |
| P13 to P14 | 690 | -4.19 | -4.27 | 33.830 | 423 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 1.046 | 0.391 | 81.9% |
| P14 to P15 | 690 | -4.27 | -4.35 | 38.830 | 485 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 0.976 | 0.365 | 87.7% |
| P15 to E1 | 750 | -4.35 | -4.38 | 23.630 | 788 | 3.00 | 1 | 1, 2, 3, 4 | 0.0800 | 25,608 | 4 | 0.320 | 0.808 | 0.357 | 89.7% |