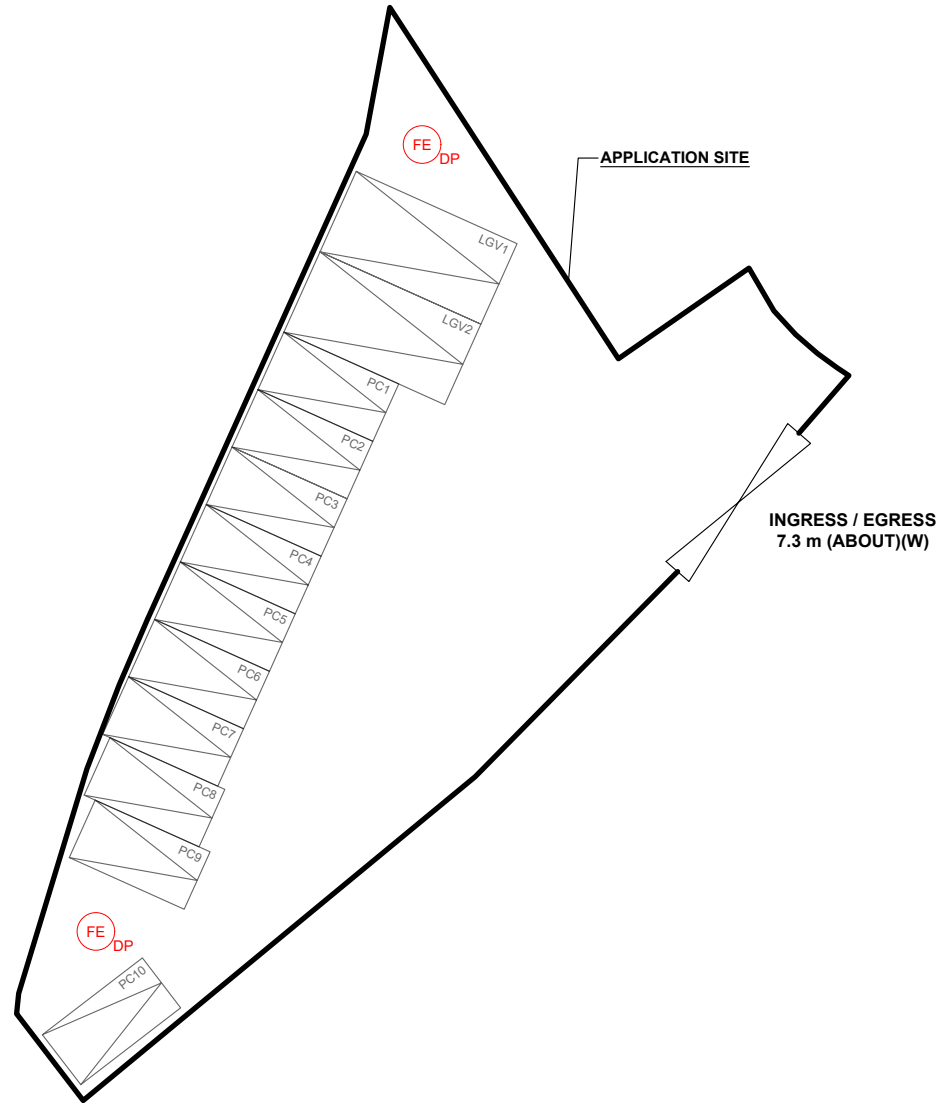


**DEVELOPMENT PARAMETERS**


APPLICATION SITE AREA : 554 m<sup>2</sup> (ABOUT)  
 COVERED AREA : NOT APPLICABLE  
 UNCOVERED AREA : 554 m<sup>2</sup> (ABOUT)

**PARKING PROVISIONS**





NO. OF PRIVATE CAR PARKING SPACE : 10  
 DIMENSION OF PARKING SPACE : 5 m (L) X 2.5 m (W)  
 NO. OF LIGHT GOODS VEHICLE PARKING SPACE : 2  
 DIMENSION OF PARKING SPACE : 7 m (L) X 3.5m (W)

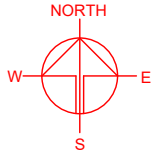


**FIRE SERVICE INSTALLATIONS**

 5 KG DRY POWDER TYPE FIRE EXTINGUISHER

**LEGEND**

-  APPLICATION SITE
-  PARKING SPACE (PC)
-  PARKING SPACE (LGV)
-  INGRESS / EGRESS



PLANNING CONSULTANT



PROJECT

PROPOSED TEMPORARY  
 PUBLIC VEHICLE PARK  
 (EXCLUDING CONTAINER  
 VEHICLE) FOR A PERIOD OF 5  
 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 117, SHUI  
 TSIU SAN TSUEN, TAI TONG,  
 YUEN LONG, NEW TERRITORIES

SCALE  
 1 : 300 @ A4

DRAWN BY MN	DATE 23.2.2024
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CHECKED BY	DATE
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APPROVED BY	DATE
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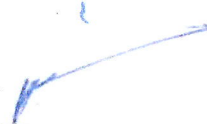
DWG. TITLE  
 FSIs PROPOSAL

DWG NO. APPENDIX I	VER. 001
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**Proposed Temporary Public Vehicle Park (Excluding Container Vehicle)  
for a Period of 5 Years  
Lots 25 RP (Part), 27 and 35 (Part) in D.D. 117  
Shui Tsiu San Tsuen, Tai Tong, Yuen Long  
(Planning Application No.: A/YL-TT/611)**

**Stormwater Drainage Proposal Report**

April 2026



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**LI KOK KEUNG**  
MEng MICE MStructE  
MHKIE CEng RPE

## **Contents**

### **Responses to Comments from DSD**

- 1. Introduction**
- 2. The Existing Site**
- 3. Existing Drainage Facilities**
- 4. Proposed Drainage Facilities**
- 5. Conclusion**

### **Appendix A – Planning Application Approval Letter**

### **Appendix B – Proposed Site Location**

### **Appendix C – Proposed Site Layout Plan**

### **Appendix D – Drainage Plan Showing Existing Drainage Arrangements**

### **Appendix E – Proposed Drainage Layout Plan**

### **Appendix F – Drainage Design Calculation with Sub-catchment areas and Cross Sections**

### **Appendix G – Site Photos of the Application Site and Existing Drainage Facilities**

**Responses to Comments from Government Departments on Planning Application No. A/YL-TT/611**

COMMENTS		RESPONSES	
<i>Drainage Service Department (DSD)</i>		<i>Applicant</i>	
i)	A last catchpit/terminal manhole with sand trap or provision alike should be provided within the application site before the collected runoff is discharged to the public drainage facilities.	i)	Noted. A last desilting catchpit C5 was proposed within the application site before the collected runoff is discharged to the desilting catchpit C3 to be constructed at the existing 700mm surcharge channel. All proposed catchpits will be constructed with desilting trap in accordance with CEDD standard drawings. In addition, the application site and its adjacent areas are developed villages with paved access and footpath. The amount of silt in the runoff should be minimal.
ii)	Please advise the type (u-channel or pipe), the size and the gradient of the proposed drain connecting from the proposed terminal manhole to C3. The details should be clearly indicated on the drainage plan for reference.	ii)	The length of the last catchpit C5 to the proposed connecting catchpit C3 is short. It is proposed to use a new 225 u-channel for connection with the construction details and gradient the same as the proposed channel within the site.
iii)	The existing 700mm surface channel, to which the applicant proposed to discharge the stormwater from the subject site was not maintained by this office. The applicant(s) shall resolve any conflict/disagreement arisen for discharging the runoff from the application site(s) to the proposed discharge point(s). In the case that it is a local village drains, DO/YL should be consulted. Moreover, the applicant(s) should ensure that this drainage system and the existing downstream drains/channels/streams have adequate capacity to convey the additional runoff from the application site(s). Regular maintenance should be carried out by the applicant(s) to avoid blockage of the system.	iii)	Noted. The applicant(s) commits to resolve any conflict/disagreement arisen for discharging the runoff from the application site(s) to the proposed discharge point(s). In addition, prior to commencement of works, DO/YL will be consulted if the 700mm surface channel is a local village drain and seek permission for drainage connections. The site is at the vicinity of a big rectangular drainage channel, SCP1012865 and a 700mm covered surface channel. The design calculation showed that the surface channel had adequate capacity to convey the runoff from the application site and its adjacent areas. The application will not have adverse impact on the existing drainage system. The rainwater from the site has long been naturally flowed to the existing drainage system and caused no flooding in the downstream areas of the site. The application site will not overload the existing drainage system. Regular maintenance will be carried out by the applicant to avoid blockage of the system.
iv)	Please make reference to the latest Technical Note No. 1 – Technical Note to prepare a Drainage Submission issued by	iv)	Noted, agreed and will strictly follow.

	DSD for more details in preparing the drainage proposal. Please review the drainage facilities size accordingly.	
v)	Catchpit should be provided at the turning point of the proposed u-channel, please review.	v) Noted and a catchpit C4 is added
vi)	Please advise if any site formation/levelling works to be carried out under this application.	vi) The application site is presently well formed and covered with concrete paving. No site formation/levelling works will be carried out under this application.
vii)	According to R-to-C, it is noted that no wall or hoarding to be erected or laid along the site boundary under this planning application. If affirmative, please clearly indicate on the drainage plan for record.	vii) Noted. A note stating that no wall or hoarding is to be erected or laid along the site boundary is added in the drainage plan.
viii)	The proposed drainage facilities should be clearly shown on the cross sections (Section A-A and B-B) for clarity.	viii) Noted.
ix)	Please take more photos showing the internal condition of the existing 700mm surface channel for review. Please also take more photos at different locations and views for this channel for reference.	ix) Noted. Photo Nos. 6 and 7 showing the existing 700mm u-channel and the internal condition of the channel are added for reference.
x)	The development should neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.	vi) Noted, agreed and will strictly follow. The proposed development involves no filling works and will not change the infiltration characteristics of the site. No additional runoff will be generated from the application site. The development will neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.
xi)	The applicant should resolve any conflict/disagreement with relevant lot owners(s) and seek permission from DLOYL for laying new drains/channels and/or modifying / upgrading existing ones in other private lots or on government Land, where required, outside the application site(s).	vii) Noted. The applicant(s) commits to resolve any conflict/disagreement arisen for discharging the runoff from the application site(s) to the proposed discharge point(s) and seek permission from DLOYL for laying new drains/channels and/or modifying / upgrading existing ones in other private lots or on government Land, where required, outside the application site(s).

## **1. Introduction**

The owner of the captioned lots submitted a town planning application to the Town Planning Board (TPB) seeking planning permission for using the Application Site for temporary public vehicle park (excluding container vehicle) for a period of 5 years. The Planning Department approved the application on 27 October 2023 under section 16 of the Town Planning Ordinance. A copy of the approval letter is enclosed in **Appendix A** of this report for reference.

One of the approval conditions mentioned in the approval letter is the submission and implementation of a drainage proposal to the satisfaction of the Director of Drainage Services or of the Town Planning Board. The implemented drainage facilities on the site shall be maintained at all times during the planning approval period.

This report outlines the existing drainage facilities on the proposed site and proposes the drainage facilities to be implemented on the site during the planning approved period. This report also includes the responses to the comments given by the DSD in the previous submissions.

## **2. The Existing Site**

The proposed site is generally flat with site area of about 554m<sup>2</sup>. The Site is currently occupied by the applied use without valid planning permission. The Site is accessible via a local track from Tai Tong Road. Plans showing the vehicular access and site location plan submitted by the Applicant are at Drawings A-1 and A-2 respectively enclosed in **Appendix B**. The proposed Site Layout Plan is enclosed in **Appendix C**.

According to the applicant, the proposed development comprises 12 parking spaces with no structure to be erected. In addition, no site formation work will be performed.

The surroundings of the Site are predominantly rural residential in nature intermixed with parking of vehicles, a refuse collection point, agricultural land and vacant unused land.

## **3. Existing Drainage Facilities**

### Existing Public Drainage Facilities

Drainage records for the Application Site and its surrounding areas were retrieved from the Geoinfo Map, a copy of which is enclosed in **Appendix D** of the report. The drainage records showed that there is an existing open rectangular drainage channel, SCP1012865, located about 15m west of the Application Site running in a south to north direction. The drainage channel enters into a 6.5m x 3.0m box culvert, SBP1015082, and eventually discharges into Deep Bay. There is a 700mm covered surface channel running along the western boundary of the site discharging water to the drainage channel SCP1012865. The stormwaters collected from within the Application Site and its adjacent areas fall naturally towards this existing surface channel with no past flooding records.

## **4. Proposed Drainage Facilities**

No site formation/filling/levelling works will be carried out in the Application Site and its adjacent areas. The existing levels of the Application Site with respect to the adjacent areas will be maintained throughout the application period. Cross sections A-A and B-B are included in the

**Appendix B.** The site is at the vicinity of a big rectangular drainage channel, SCP1012865 and is well drained by an existing 700mm covered surface channel at the western boundary of the site without records of flooding. It is proposed to keep the drainage path unchanged. In consideration that there may be inflows from the adjacent lots to the Application Site, a 225mm covered peripheral surface u-channel with desilting catchpits as is proposed to collect and convey the water to the existing 700mm U-channel as shown in the proposed drainage plan in **Appendix E**. The Proposed 225mm peripheral surface channels are provided at lower/existing level inside the application site to collect the surface runoff accrued on the application site and to intercept the overland flow from the adjacent lands. In addition, catchpits with desilting arrangement are provided at all changes in directions and at intersections.

The design calculation in accordance with GEO Technical Guidance Note No. 43 with sub-catchment areas plan demonstrating that the proposed drainage system has sufficient capacity to collect the surface runoff accrued on the Application Site and to intercept the overland flow from the adjacent lands are enclosed in **Appendix F**. The Application will not have adverse impact on the existing drainage system. The rainwater from the site has long been naturally flowed to the existing drainage system and caused no flooding in the downstream areas of the site. The proposed development will not change the infiltration characteristics of the site. No additional runoff will be generated from the Application Site. The application site will not overload the existing drainage system.

All proposed catchpits will be constructed with desilting trap in accordance with CEDD standard drawings. In addition, the Application Site and its adjacent areas are developed villages with paved access and footpath. The amount of silt in the runoff should be minimal. Regular maintenance will be carried out by the Applicant to avoid blockage of the system.

No boundary walls or hoardings will be erected in the Application Site, the passage of surface runoff into the Application Site from the adjacent areas will not be affected. The development will neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.

## **5. Conclusions**

The proposed site is small and is at the vicinity of a big rectangular drainage channel, SCP1012865 and is well drained by an existing 700mm covered surface channel at the western boundary of the site running in a north to south direction. Storm water from within the Application Site and its adjacent areas will all flow into this existing 700mm surface channel with no records of flooding.

No site formation/filling/levelling works will be carried out in the Application Site and its adjacent areas. The proposed development will not change the infiltration characteristics of the site. No additional runoff will be generated from the Application Site. The application site will not overload the existing drainage system.

It is proposed to construct a system of 225mm peripheral surface channels and desilting catchpits in the Application Site to collect the rainwater from within the site and the adjacent lots to desilting catchpit C3 being constructed at the intersection between the proposed 225mm channel and the existing 700mm surface channel.

Boundary walls or hoardings will not be constructed, obstruction to existing overland flows is not anticipated. The owner of the site will keep monitoring the conditions of the drainage establishment within and outside the site and maintain the said system at the owner's cost.

**APPENDIX A**

**Planning Application Approval Letter**

城市規劃委員會  
香港北角渣華道三百三十三號  
北角政府合署十五樓

TOWN PLANNING BOARD  
15/F., North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.

傳 真 Fax: 2877 0245 / 2522 8426

By Post & Fax (2323 3662)

電 話 Tel: 2231 4810

來函檔號 Your Reference:

覆函請註明本會檔號  
In reply please quote this ref.: TPB/A/YL-TT/611

27 October 2023

R-riches Property Consultants Ltd.  
208F, Kat Hing Wai  
Kam Tin  
Yuen Long, New Territories  
(Attn.: Orpheus Lee / Louis Tse)

Dear Sir/Madam,

**Temporary Public Vehicle Park (Excluding Container Vehicle)  
for a Period of 5 Years in "Village Type Development" Zone, Lots 25 RP (Part),  
27 and 35 RP (Part) in D.D. 117, Shui Tsui San Tsuen, Tai Tong, Yuen Long**

I refer to my letter to you dated 12.10.2023.

After giving consideration to the application, the Town Planning Board (TPB) approved the application for permission under section 16 of the Town Planning Ordinance on the terms of the application as submitted to the TPB. The permission shall be valid on a temporary basis for a period of 5 years until 13.10.2028 and is subject to the following conditions :

- (a) no vehicle without valid licences issued under the Road Traffic Ordinance, as proposed by you, is allowed to be parked/stored on the Site at any time during the planning approval period;
- (b) only private car and light goods vehicles as defined in the Road Traffic Ordinance, as proposed by you, are allowed to be parked/stored on or enter/exit the Site at any time during the planning approval period;
- (c) the submission of a drainage proposal within 6 months from the date of planning approval to the satisfaction of the Director of Drainage Services or of the TPB by 13.4.2024;
- (d) in relation to (c) above, the implementation of the drainage proposal within 9 months from the date of planning approval to the satisfaction of the Director of Drainage Services or of the TPB by 13.7.2024;
- (e) in relation to (d) above, the implemented drainage facilities on the Site shall be maintained at all times during the planning approval period;
- (f) the submission of a fire service installations proposal within 6 months from the date of planning approval to the satisfaction of the Director of Fire Services or of the TPB by 13.4.2024;

- (g) in relation to (f) above, the implementation of the fire service installations proposal within 9 months from the date of planning approval to the satisfaction of the Director of Fire Services or of the TPB by 13.7.2024;
- (h) if any of the above planning condition (a), (b) or (c) is not complied with during the planning approval period, the approval hereby given shall cease to have effect and shall be revoked immediately without further notice; and
- (i) if any of the above planning condition (c), (d), (f) or (g) is not complied with by the specified date, the approval hereby given shall cease to have effect and shall on the same date be revoked without further notice.

The TPB also agreed to advise you to note the advisory clauses as set out at Appendix IV of the TPB Paper.

You are reminded to strictly adhere to the time limit for complying with the above planning conditions. If any of the above planning conditions are not complied with by the specified time limit, the permission given shall be revoked without further notice and the development will be subject to enforcement action. If you wish to apply for extension of time for compliance with planning conditions, you should submit a section 16A application to the TPB no less than six weeks before the expiry of the specified time limit. This is to allow sufficient time for processing of the application in consultation with the concerned departments. The TPB will not consider any application for extension of time if the time limit specified in the permission has already expired at the time of consideration by the TPB. For details, including the total time period for compliance that might be granted, please refer to the TPB Guidelines No. 34D and 36B. The Guidelines, application form (Form No. S16A) and the Guidance Notes for applications are available at the TPB's website (<https://www.tpb.gov.hk/en/resources/index.html>), the Planning Enquiry Counters of the Planning Department (Hotline : 2231 5000) at 17/F, North Point Government Offices, 333 Java Road, North Point; 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin; and the Secretariat of the TPB at 15/F, North Point Government Offices.

This temporary permission will lapse on 14.10.2028. You may submit an application to the TPB for renewal of the temporary permission no less than two months and normally no more than four months before its expiry by completing an application form (Form No. S16-D). Application submitted more than four months before expiry of the temporary approval may only be considered based on the individual merits and exceptional circumstances of each case. For details, please refer to TPB Guidelines No. 34D. However, the TPB is under no obligation to renew the temporary permission.

For amendments to the approved development that may be permitted with or without application under section 16A, please refer to TPB Guidelines No. 36B for details.

The TPB Paper in respect of the application (except the supplementary planning statement/technical report(s), if any) is available at this link ([https://www.tpb.gov.hk/en/meetings/RNTPC/Agenda/728\\_rnt\\_agenda.html](https://www.tpb.gov.hk/en/meetings/RNTPC/Agenda/728_rnt_agenda.html)) and the relevant extract of minutes of the TPB meeting held on 13.10.2023 is enclosed herewith for your reference.

Under section 17(1) of the Town Planning Ordinance, an applicant aggrieved by a decision of the TPB may apply to the TPB for a review of the decision. If you wish to seek a review, you should inform me within 21 days from the date of this letter (on or before 17.11.2023). I will then contact you to arrange a hearing before the TPB which you and/or your authorized representative will be invited to attend. The TPB is required to consider a review application within three months of receipt of the application for review. Please note that any review application will be published for three weeks for public comments.

This permission by the TPB under section 16 of the Town Planning Ordinance should not be taken to indicate that any other government approval which may be needed in connection with the development, will be given. You should approach the appropriate government departments on any such matter.

If you have any queries regarding this planning permission, please contact Ms. L.C. Cheung of Tuen Mun & Yuen Long West District Planning Office at 2158 6000. In case you wish to consult the relevant Government departments on matters relating to the above approval conditions, a list of the concerned Government officers is attached herewith for your reference.

Yours faithfully,

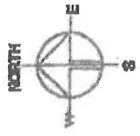


( Leticia LEUNG )  
for Secretary, Town Planning Board

**APPENDIX B**

**Proposed Site Location Plans**





PROPOSED TEMPORARY PUBLIC VEHICLE EXCHANGING CONTAINER VEHICLES FOR A PERIOD OF 6 YEARS

UNAPPORTIONED LOTS 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

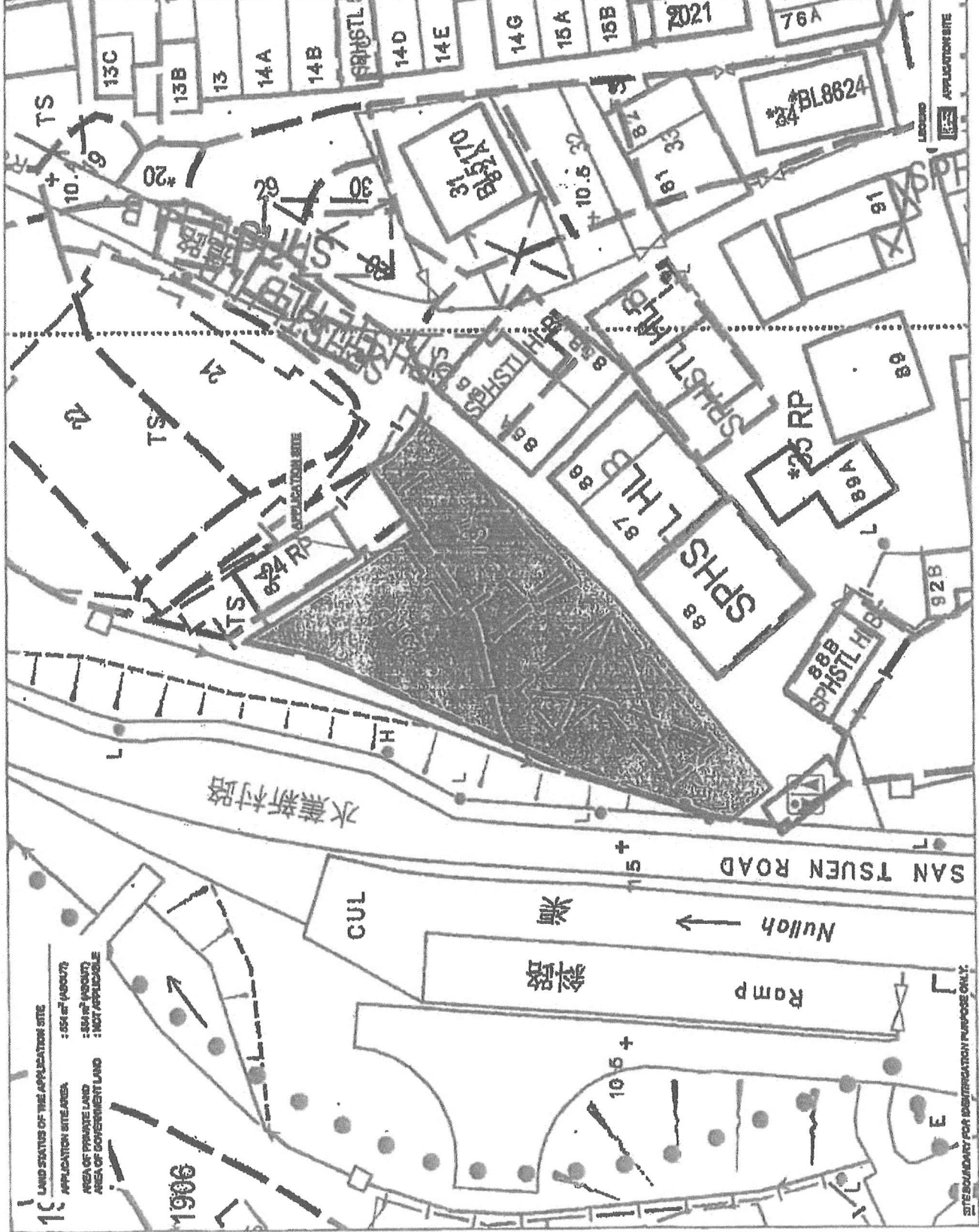
11-000 @ 44

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04/2021

LAND STATUS OF THE SITE

PLATE A2



LAND STATUS OF THE APPLICATION SITE  
 APPLICATION SITE AREA : 554 m<sup>2</sup> (130077)  
 AREA OF PRIVATE LAND : 554 m<sup>2</sup> (130077)  
 AREA OF GOVERNMENT LAND : NOT APPLICABLE

SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

**APPENDIX C**

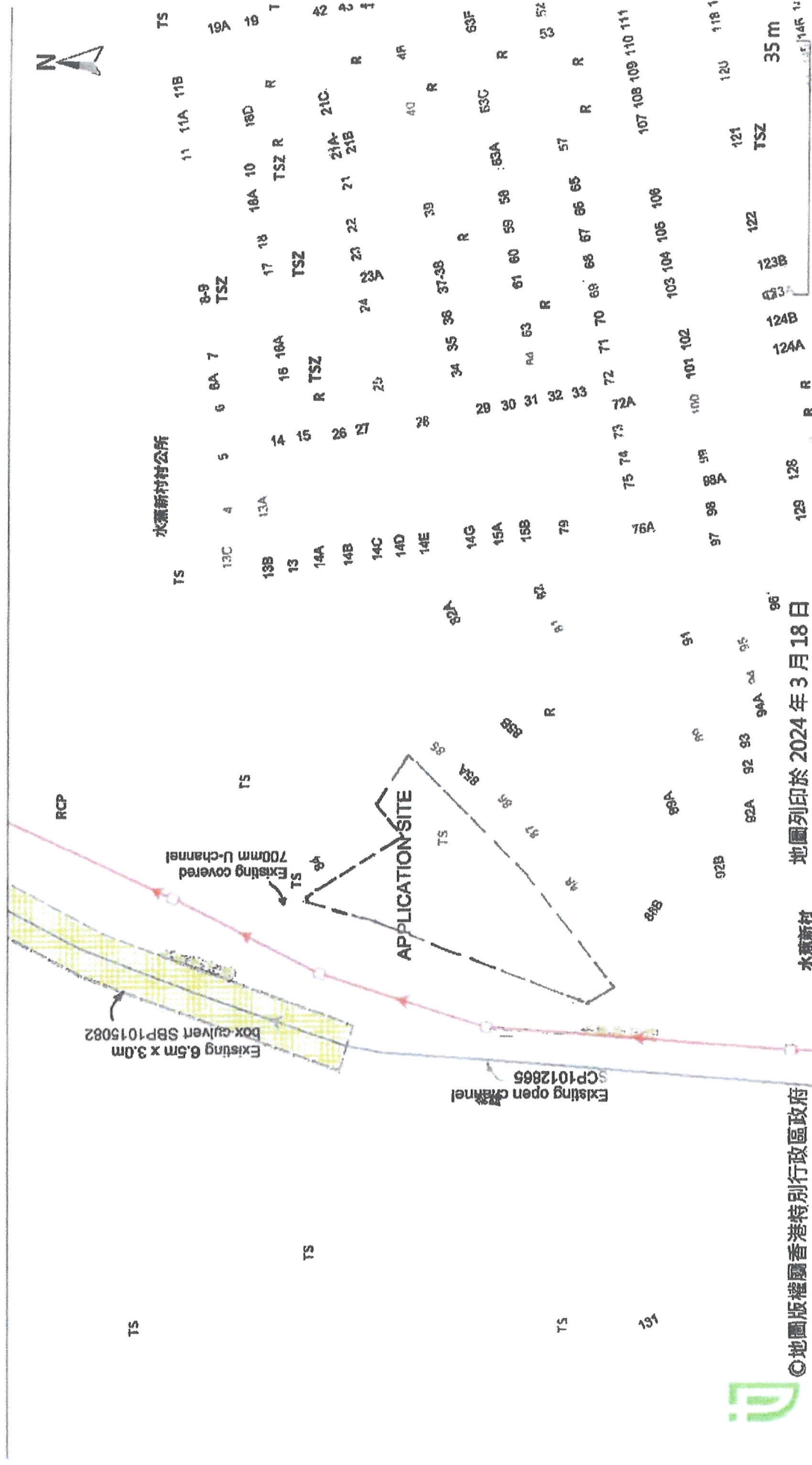
**Site Layout Plan**



**APPENDIX D**

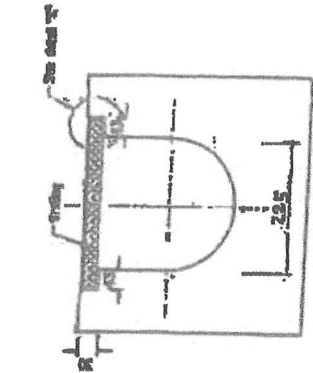
**Drainage Plan Showing Existing Drainage Arrangements**

前往地圖: <https://www.map.gov.hk/gm/geo:22.4251,114.0273?z=564>



**APPENDIX E**  
**Proposed Drainage Plan**

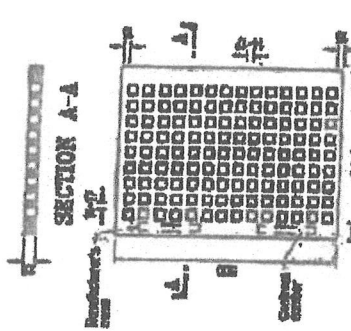




**TYPICAL CROSS SECTION OF CHANNEL**

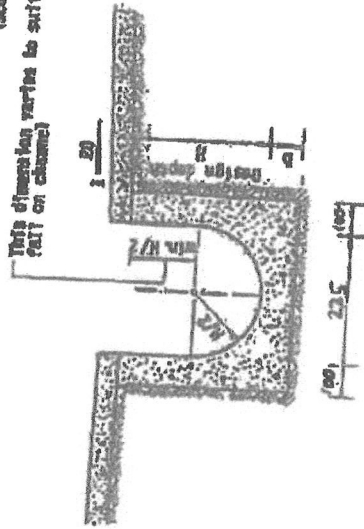


23.5 in. dia of channel top  
 1/2 in. depth of channel  
 1/4 in. width of channel  
**DETAIL "X"**  
 (Scale 75)  
 This dimension varies to suit  
 (Call on channel)

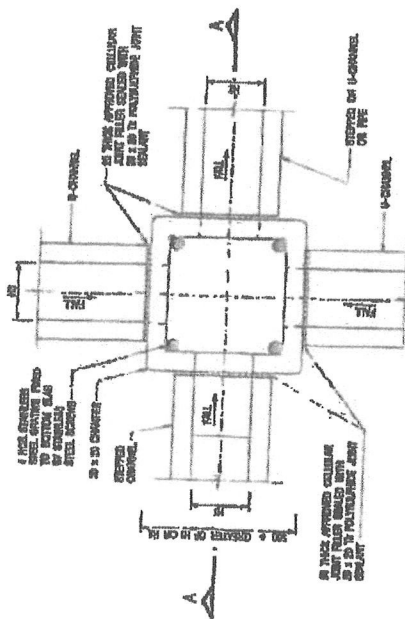


**GRATING - SQUARE HOLES PATTERN**

All holes are 20x20 in size and are set on 1/4 in. centers. Exact no. of holes and size to be ordered to suit channel width.



**TYPICAL DETAILS OF CHANNEL**



**PLAN**

ITEM NO.	DESCRIPTION	QTY
1	1" x 1" x 1/4" CHANNEL	1
2	20" x 20" SQUARE HOLE	1
3	20" x 20" SQUARE HOLE	1

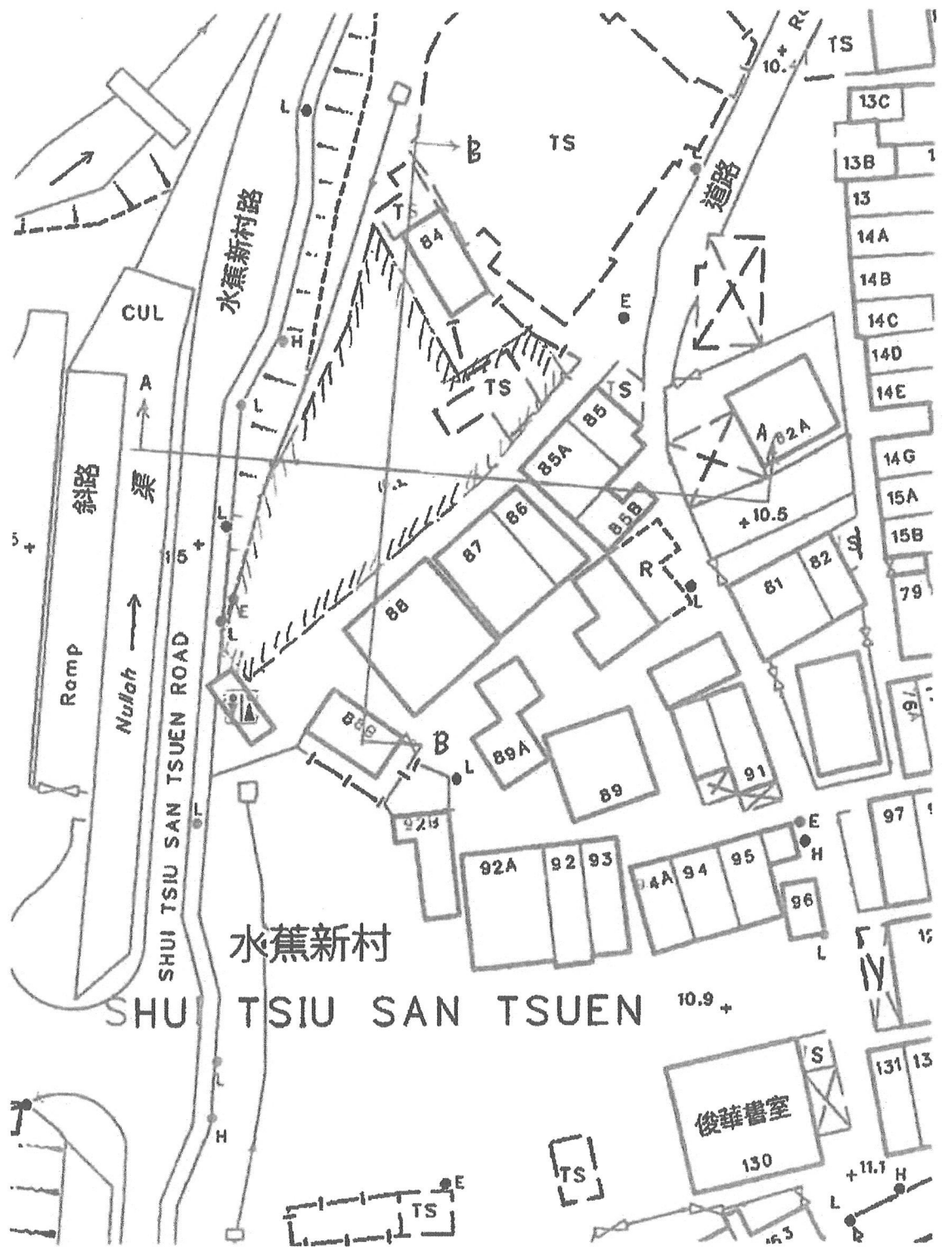


**SECTION A - A**

**NOTES**  
 1. ALL DIMENSIONS ARE IN MILLIMETERS.  
 2. REFER TO SHEET 2 FOR OTHER DETAILS.

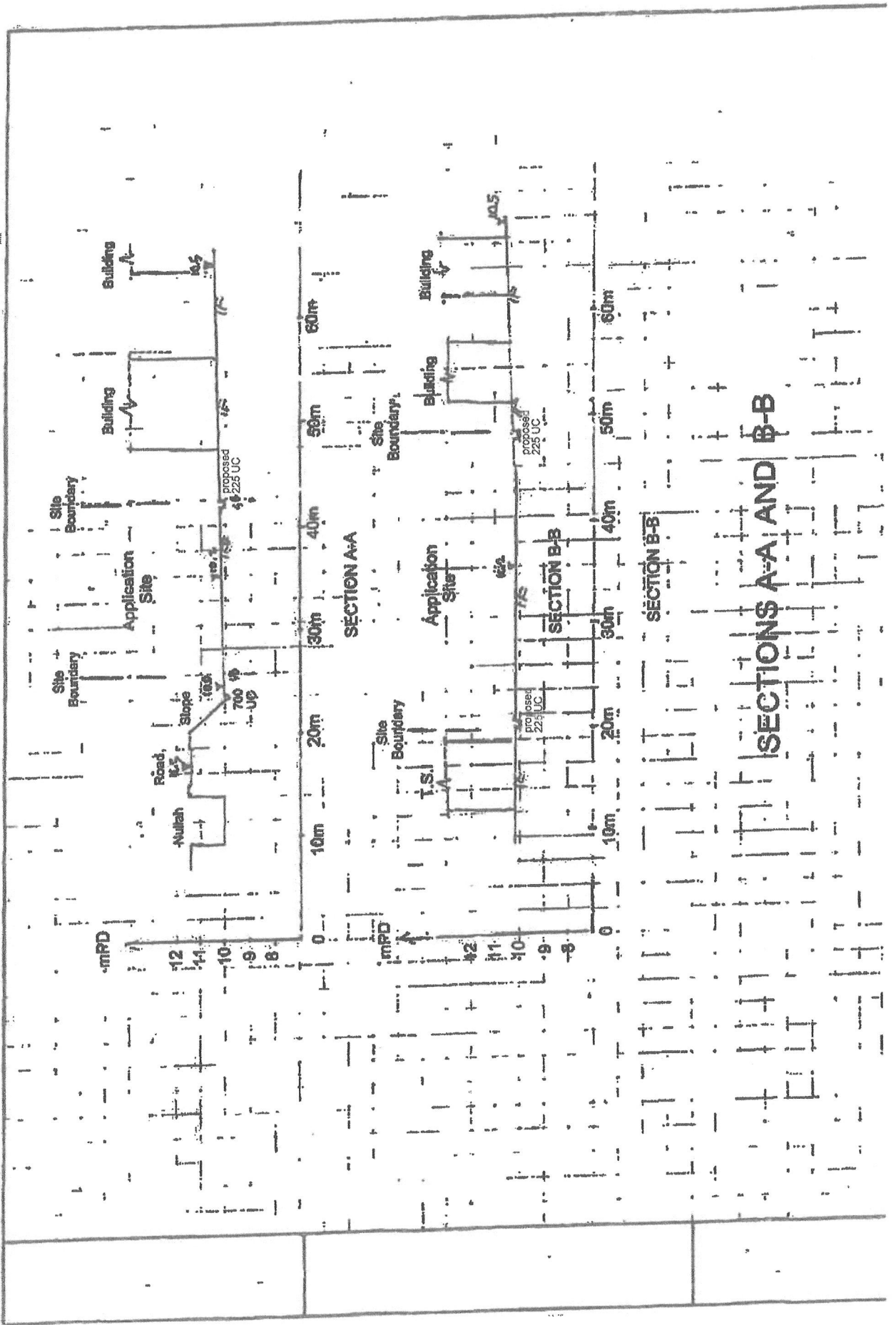
**TYPICAL DETAILS OF CATCHMENT**

**APPENDIX F**  
**Drainage Design Calculation**

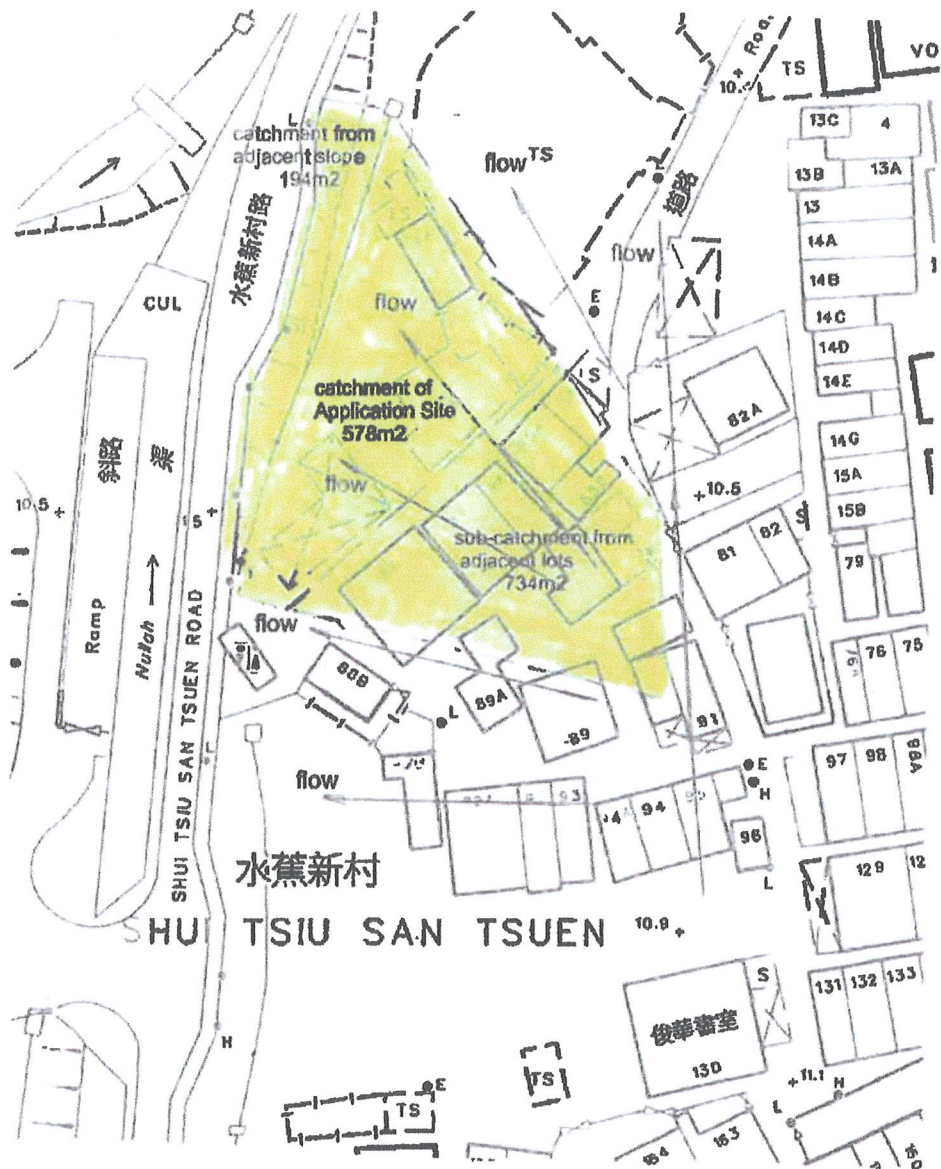


CROSS SECTIONS





**SECTIONS A-A AND B-B**



## SUB-CATCHMENTS PLAN

sub-catchment to proposed 225 UC = 734m<sup>2</sup>

Total catchment to existing 700mm UC = 734+578+194  
= 1506m<sup>2</sup>

## Drainage Design Calculation

### Catchments

With reference to the sub-catchments plan,

The proposed site area = 578m<sup>2</sup>

Inflow from adjacent lots = 734 m<sup>2</sup>

Catchments to existing 700mm surface channel = 578+734+194 (slope west of channel) = 1506 m<sup>2</sup>

### **Checking of Capacity of Proposed 225mm Covered Channels :-**

The proposed 225mm u-channel is mainly to collect the flows from adjacent lots

Catchment area = 578 m<sup>2</sup>

Runoff coefficient k = 1.0 (conservatively assumed)

Rainstorm return period = 1 in 50 year

Assume time of concentration = 3 minute,

i = 240 mm/hr (From enclosed Intensity-Duration Frequency Curve)

Using Rational Formula:

Max. flow u-channel,  $Q = kAi/3600 = 1 \times 578 \times 240 / 3600 = 38.5 \text{ l/s} = 1312 \text{ l/min.}$

From Figure 1 of GEO Technical Guidance Note No. 43,

For 225 UC of gradient of 1 : 130,

$Q = 3,100 \text{ l/min.} > 1312 \text{ l/min.}$  O.K. Figure 1 of GEO Technical Guidance Note No. 43

Flow velocity = 1.35 m/s > 1.3 m/s O.K.

Usage of u-channel =  $1312 / 3100 \times 100\% = 42.3\%$

### **Checking of Capacity of Existing 700mm Covered Channel:-**

Design total catchment area for the discharge channel, A = 1506 m<sup>2</sup>

Runoff coefficient k = 1.0 (conservatively assumed)

Rainstorm return period = 1 in 50 year

Assume time of concentration = 3 minute,

i = 240 mm/hr (From enclosed Intensity-Duration Frequency Curve)

Using Rational Formula:

Max. flow u-channel,  $Q = kAi/3600 = 1 \times 1506 \times 240 / 3600 = 100.4 \text{ l/s} = 6024 \text{ l/min.}$

From Figure 1 of GEO Technical Guidance Note No. 43,

For 700 UC of gradient of 1 : 100,

$Q = 70,000 \text{ l/min.} >> 6024 \text{ l/min.}$  O.K.

Flow velocity = 3.0 m/s > 1.3 m/s O.K.

Usage of u-channel =  $6024 / 70000 \times 100\% = 8.6\%$

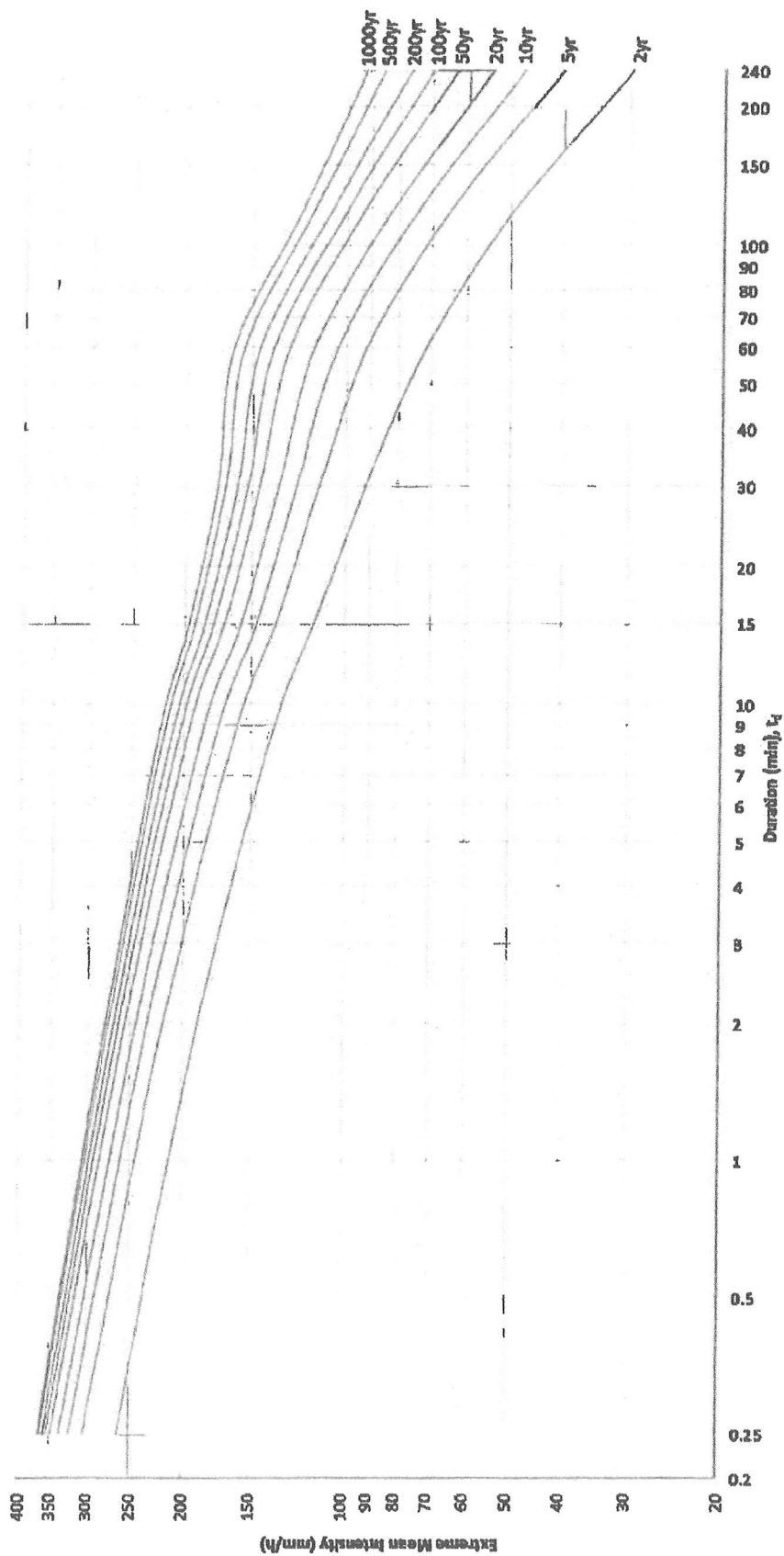
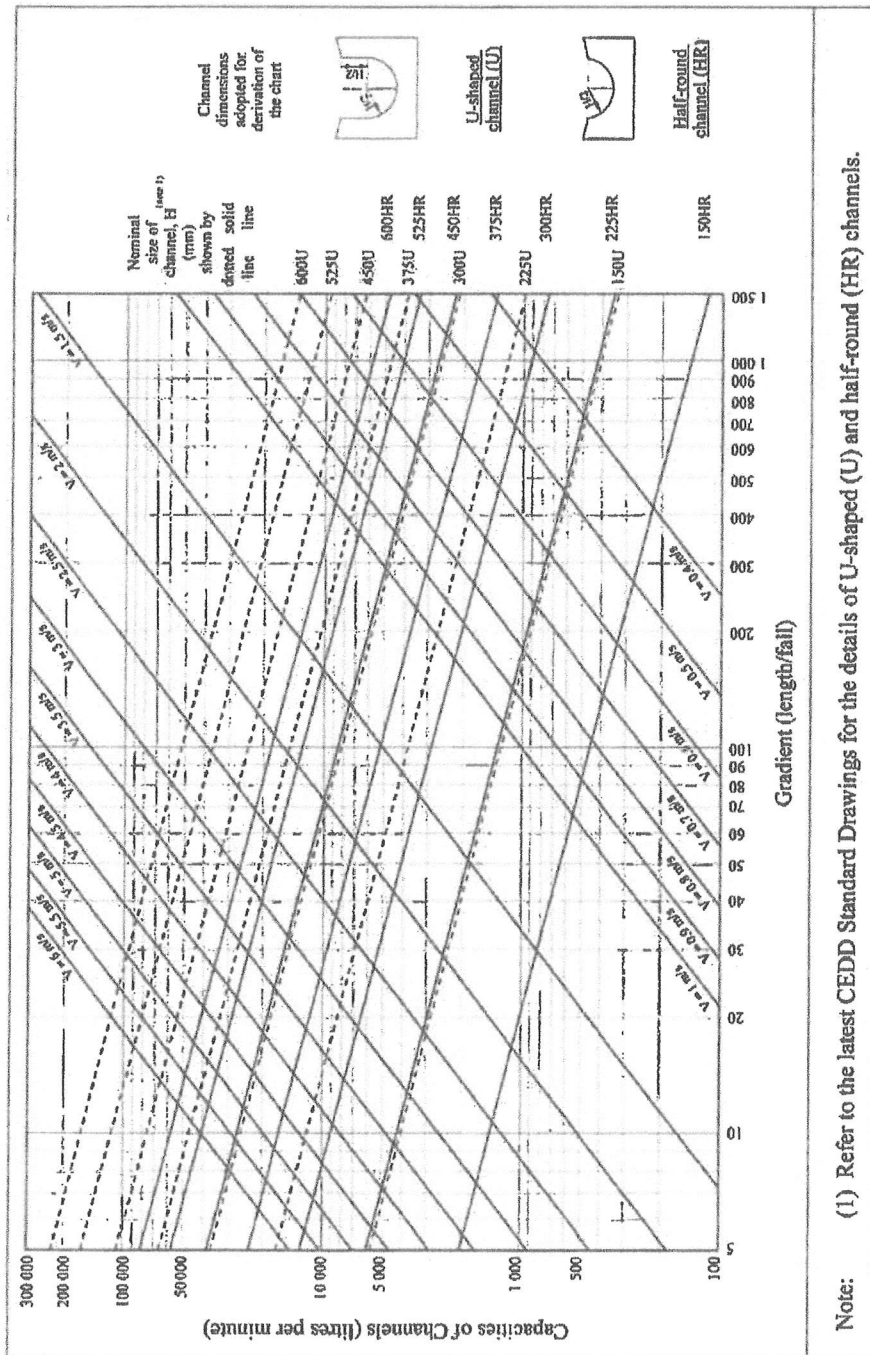


Figure 4a – Intensity-Duration-Frequency Curves of HKO Headquarters  
(for durations not exceeding 4 hours)

**GEO Technical Guidance Note No. 43 (TGN 43)**  
**Guidelines on Hydraulic Design of U-shaped and Half-round Channels on Slopes**

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Figure 1 - Chart for the rapid design of U-shaped and half-round channels up to 600 mm



**APPENDIX G**

**Site Photos of the Application Site and Existing Drainage Facilities**





**PHOTO NO. 1**  
**Existing Open Rectangular Channel**  
**West of the Application Site**



**PHOTO NO. 2**  
**Existing 700mm Covered Surface Channel**  
**Along Western Boundary of the Application Site**



**PHOTO NO. 3**  
**Existing 700mm Covered Surface Channel**  
**Along Western Boundary of the Application Site**



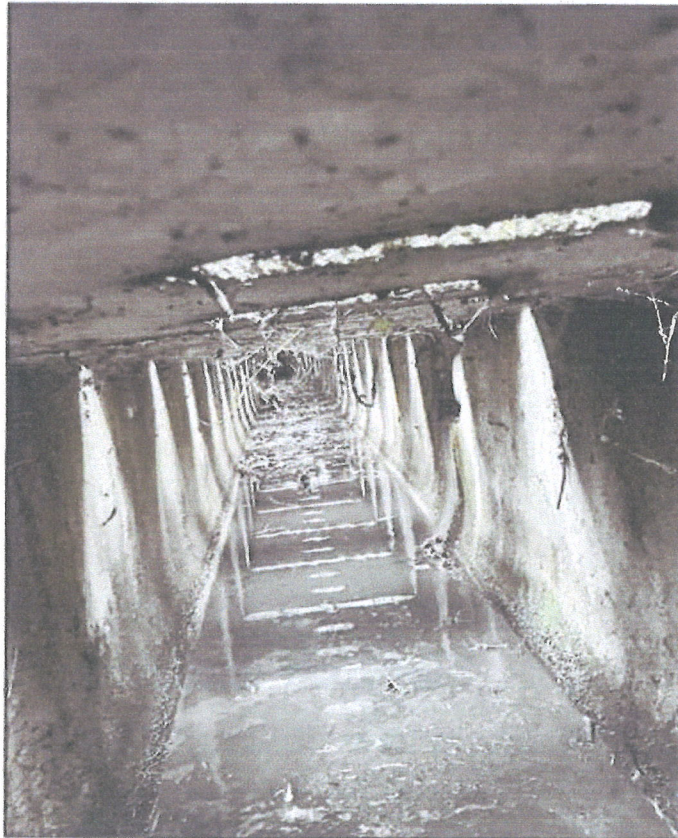
**PHOTO NO. 4**  
**Site Conditions**



**PHOTO NO. 5**  
**Conditions of the Site**



**PHOTO NO. 6 (EXISTING 700MM U-CHANNEL)**



**PHOTO NO. 7  
(Internal Condition of Existing 700mm U-Channel)**