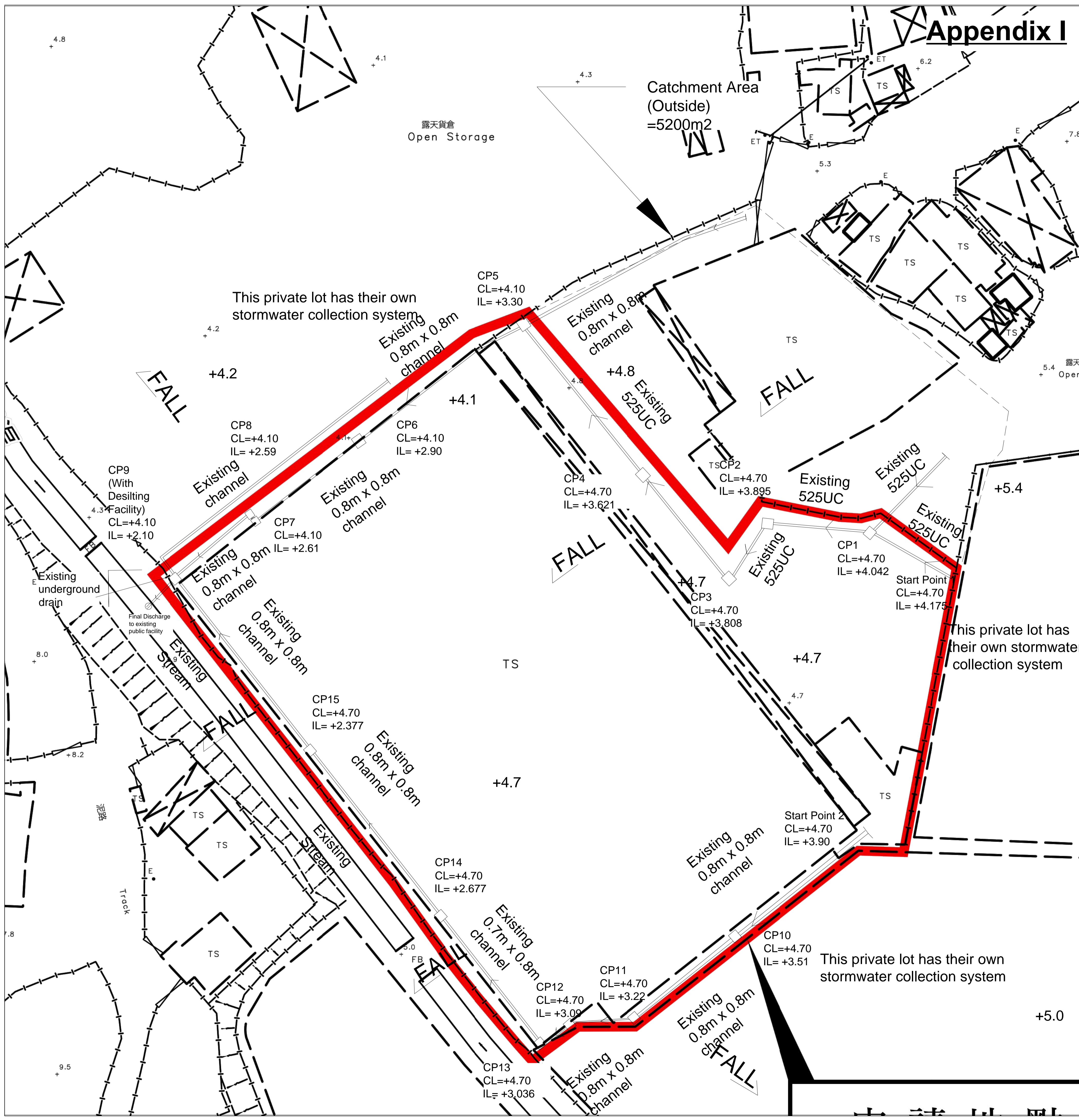


Appendix I



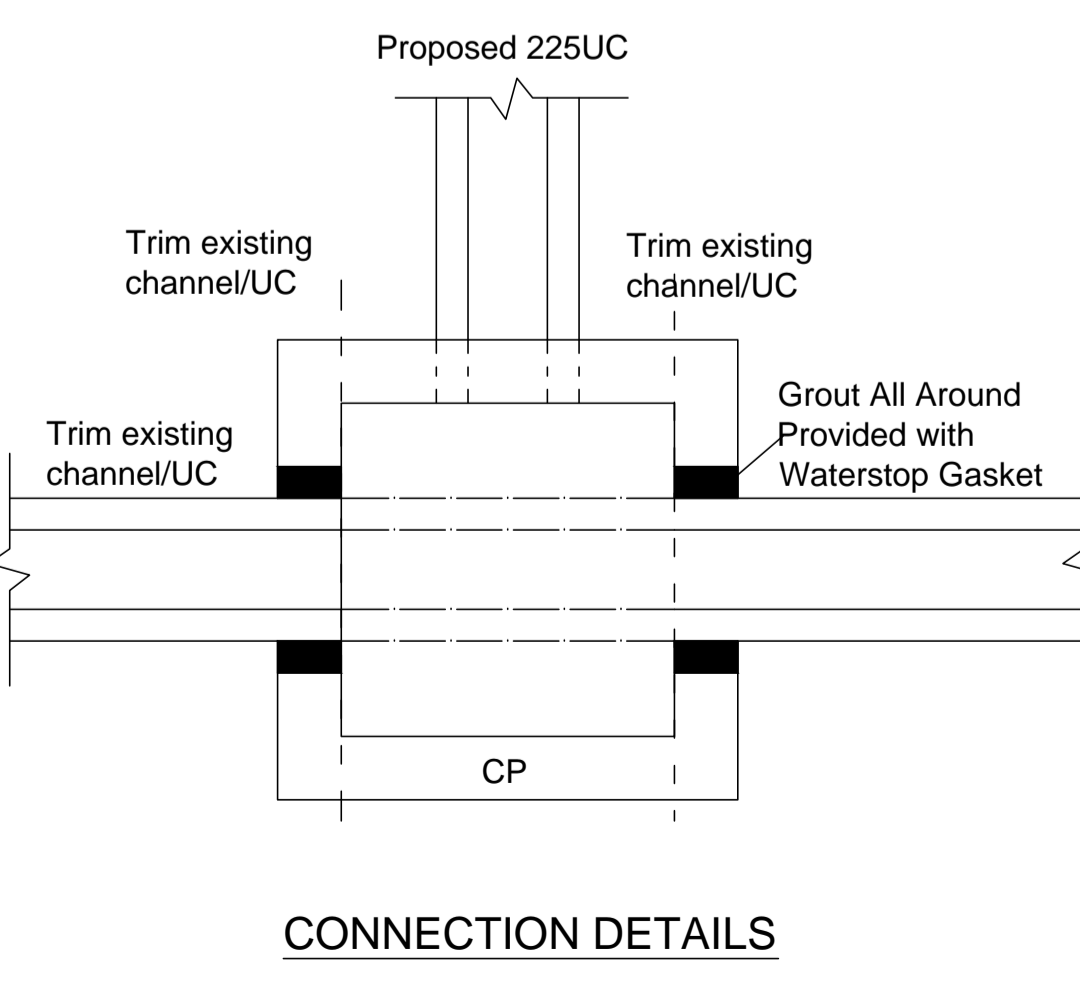
- Note:**
1. No solid fence wall to be erected.
 2. Catchpit (CP9) with desilting facility shall follow CEDD standard drawing No. C2406I.
 3. U-Channel and Catchpit follows Typical Details of Geotechnical Manual for Slope Fig. 8.11 and Fig.8.10 respectively.
 4. All proposed UC shall be covered by cast iron
 5. Gradient of Existing 525UC is 1:150
 6. Gradient of 0.8m x 0.8m channel is 1:100

- Legend:**
- Proposed UC (1:100) with cast iron cover/UPVC
 - Proposed Catchpit
 - == Existing UC/pipe
 - FALL ↘ Fall Direction

HANDSHIP ENGINEERING CO. LTD

PROJECT:
Proposed Temporary Logistics Centre with Ancillary Office and Canteen for a Period of 3 Years at Various Lots in D.D.129 and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

TITLE:
Drainage Proposal



| | |
|------------------|------------------------------------|
| File: | DWG NO. App I |
| Scale: | |
| Rev. | |
| Date: 14-09-2021 | |

Company: HANDSHIP ENGINEERING LTD CO.
Project :

Date: 2021/9/14

Calculation for channels:

Catchment Area of site

Site Catchment Area = 18505 m²
= 0.018505 km²

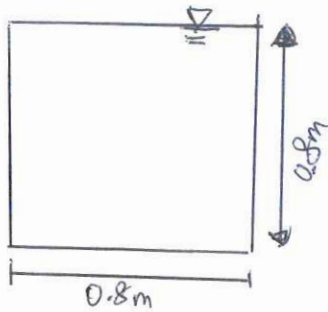
Peak runoff in m³/s = 0.278 x 0.95 x 250 mm/hr x 0.018505 km²
= 1.221792625 m³/s
= 73308 liter/min

Outside Catchment Zone Area = 5200 m²
at northern side = 0.0052 km²

Peak runoff in m³/s = 0.278 x 0.95 x 250 mm/hr x 0.0052 km²
= 0.34333 m³/s
= 20600 liter/min

Total Peak runoff in m³/s = 1.221792625 + 0.3433
= 1.565122625 m³/s
= 93907 liter/min

CHECK EXISTING 0.8m x 0.8m channel capacity



$$S = 1:100 = 0.01$$

$$\text{MANNING'S } n = 0.015$$

(TABLE B OF DSD SD M, 2018).

CROSS-SECTIONAL AREA

$$= 0.8 \times 0.8 = \cancel{0.8} 0.64 \text{ m}^2$$

$$\text{Perimeter } P = 3 \times 0.8 = 2.4 \text{ m}$$

$$R = \frac{A}{P} = \frac{0.64}{2.4} = 0.267$$

By MANNING'S EQUATION,

FLOW CAPACITY Q

$$= \frac{A \times R^{\frac{2}{3}} \times S^{\frac{1}{2}}}{n}$$

$$= \frac{(0.64) (0.267)^{\frac{2}{3}} (0.01)^{\frac{1}{2}}}{0.015}$$

$$= 1.77 \text{ m}^3/\text{s}$$

$$> 1.565 \text{ m}^3/\text{s}$$

\therefore EXISTING channel has adequate capacity to cater the surface runoff.

Also, according to Fig 8.7 - chart for the Rapid Design of channels.

For gradient 1:150, \sim 5250C will be suitable.
EXISTING

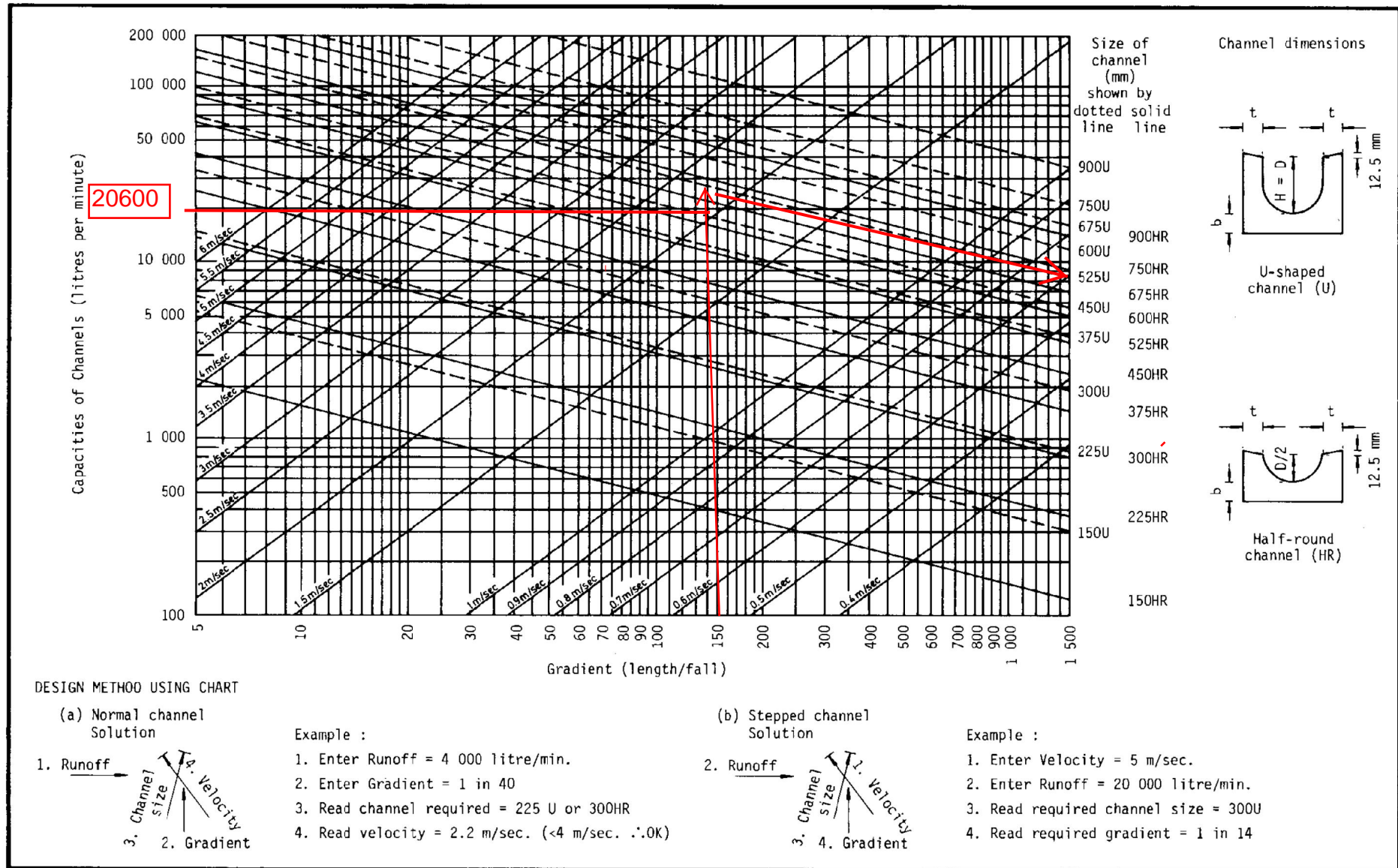
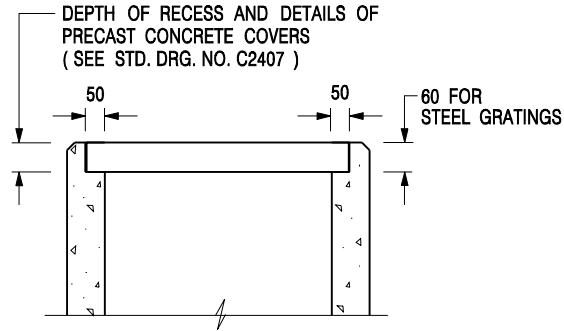


Figure 8.7 - Chart for the Rapid Design of Channels




**ALTERNATIVE TOP SECTION
FOR PRECAST CONCRETE COVERS / GRATINGS**

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'G' ON STD. DRG. NO. C2405; EXCEPT ON THE UPSLOPE SIDE) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'F' ON STD. DRG. NO. C2405.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

| | | | |
|-------------|-------------------------|------------------|-------------|
| - | FORMER DRG. NO. C2406J. | Original Signed | 03.2015 |
| REF. | REVISION | SIGNATURE | DATE |

**CATCHPIT WITH TRAP
(SHEET 2 OF 2)**

| | |
|---|--------------------|
|  CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT | |
| SCALE 1 : 20 | DRAWING NO. |
| DATE JAN 1991 | C2406 /2 |

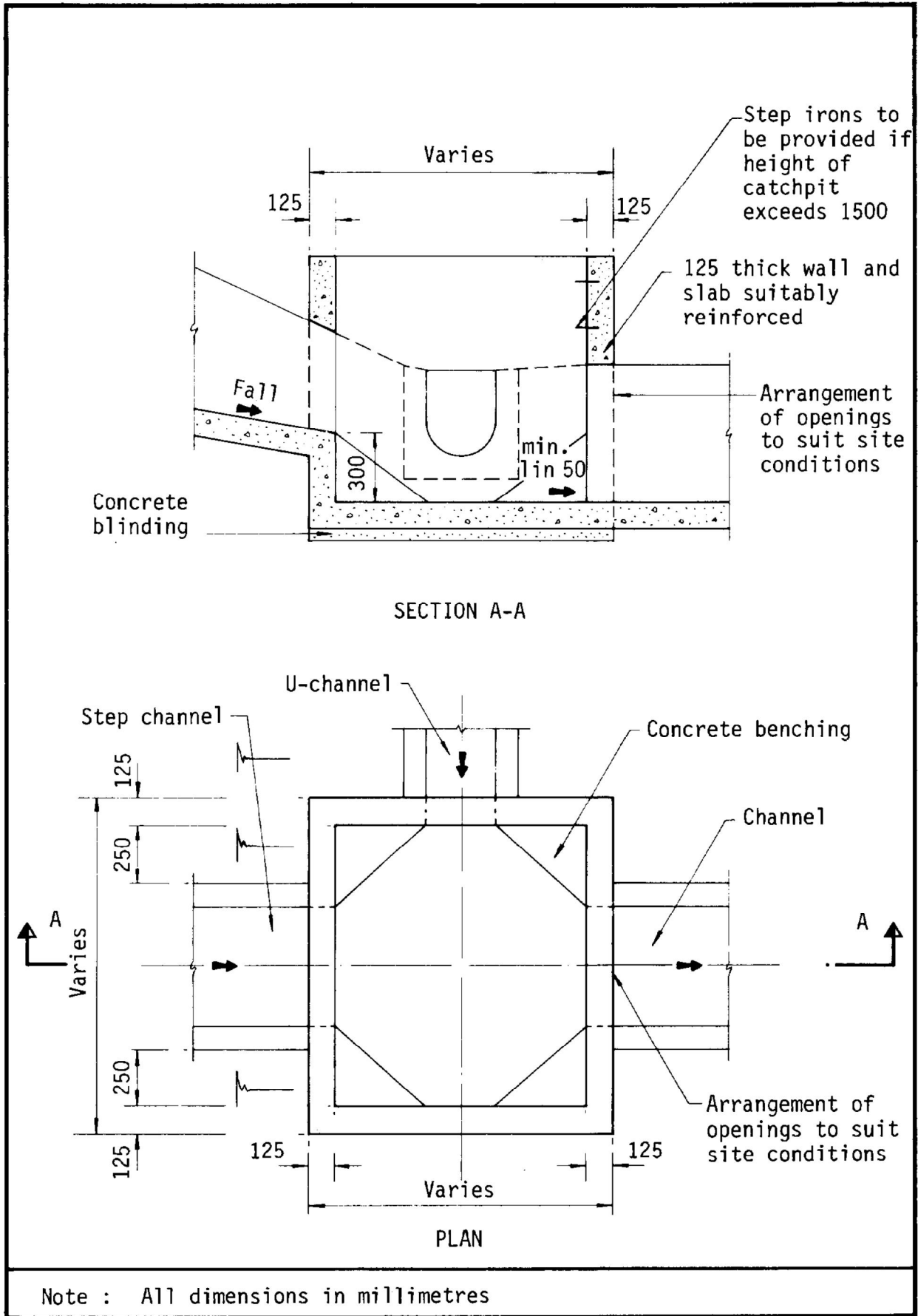
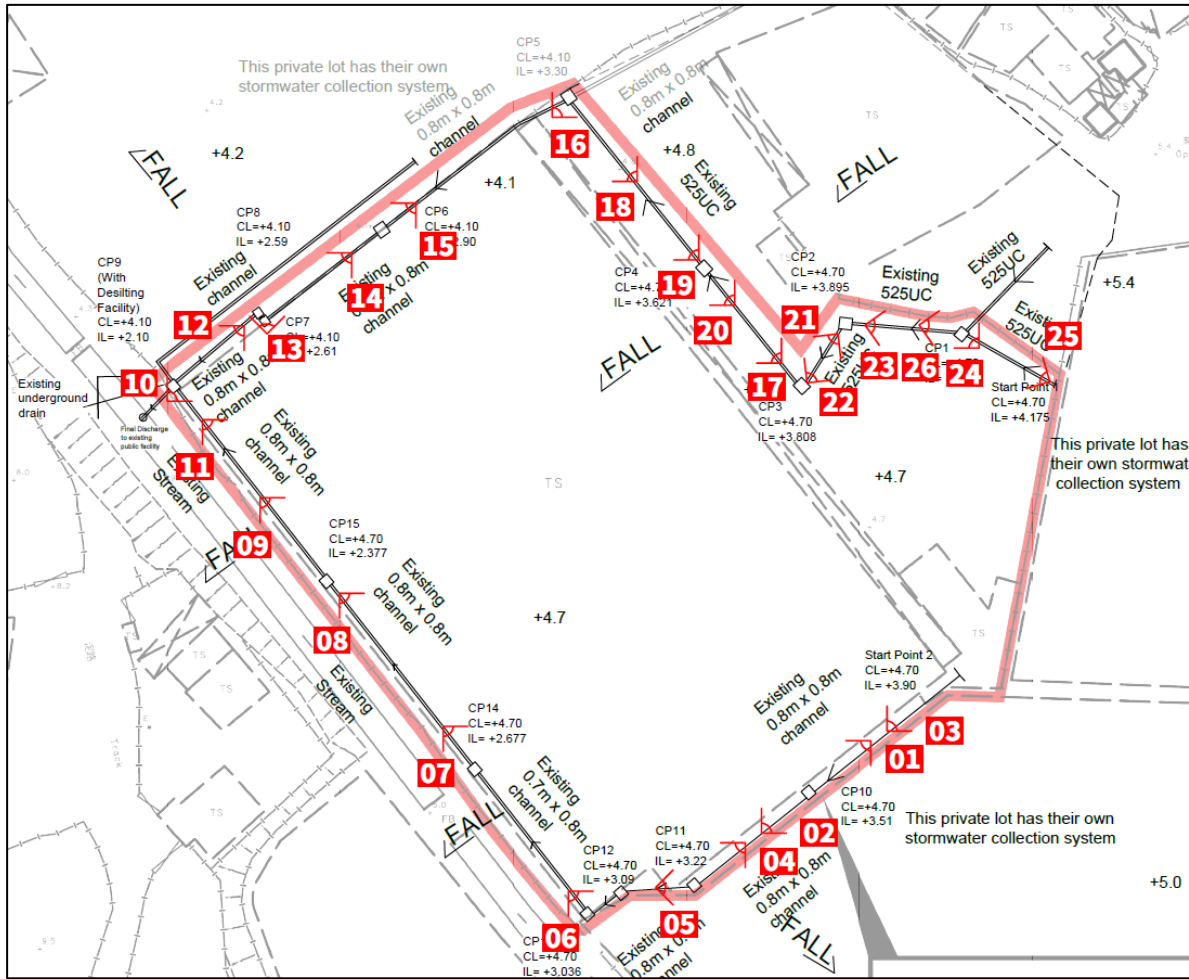


Figure 8.10 - Typical Details of Catchpits

Appendix II - Photographic Records of The Existing Drainage Facilities

(i) The photographic records of the implemented drainage facilities are provided as follows:























































Appendix IV - Photographic Records of Existing Landscape Planting

(i) The photographic records of existing landscape planting are provided as follows:

