

Note:

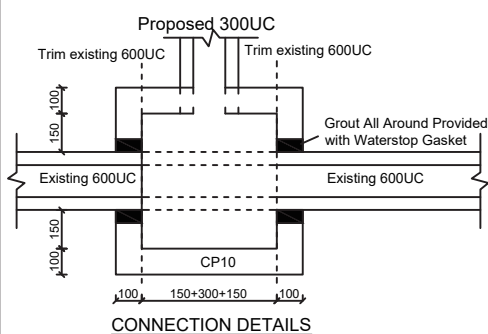
1. Catchpits (CP5 & CP9) with desilting facility shall follow CEDD standard drawing No. C24061.

2. Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.

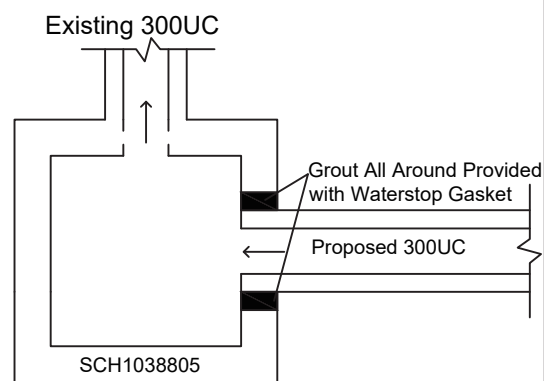
3. Adjacent area which is developed or occupied, which has their stormwater collection system.

LEGEND

- ☐ CP Proposed CatchPit
- (a) Proposed 300UC (1:250) with cast iron cover
- (b) Proposed 300UC (1:50) with cast iron cover (OUTFALL)
- ☒ CP Existing CatchPit
- (size) Existing 300UC/450UC/600UC



CONNECTION DETAILS



CONNECTION DETAILS

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANTS CO.

Title:

Drainage Proposal

D01

Project:

Proposed Temporary Open Storage of Construction Materials for a Period of 3 Years at Lots 1972 (Part), 1973 and 1974 RP (Part) in D.D.130, Lam Tei, Tuen Mun, New Territories

Drawn by:

DM

Date:

2-5-2025

Check by:

DM

Scale:

Calculation of Runoff from the Proposed Development,

$$Q = 0.278 C i A$$

Check inside the site (Critical for Catchment Area 2)

$$C = 0.95 \quad (\text{P.42 of Stormwater Drainage Manual})$$

$$\begin{aligned} A &= 963 \quad \text{m}^2 \\ &= 0.000963 \quad \text{km}^2 \end{aligned} \quad (\text{Consider half of the site})$$

$$\begin{aligned} t &= 0.14465 L / H^{0.2} A^{0.1} \\ &= 0.14465 * 29 / 1^{0.2} * 963^{0.1} \\ &= 2.110 \quad \text{min} \end{aligned}$$

$$\begin{aligned} i &= 1.111 * a / (t + b)^c \quad (50 \text{ yrs return period, Table 3a, Corrigendum 2024, SDM) and (11.1\% increase due to climate change)} \\ &= 1.111 * 55.5 / (2.110 + 3.29)^{0.355} \\ &= 308.6 \quad \text{mm/hr} \end{aligned}$$

$$\begin{aligned} \text{Therefore, } Q &= 0.278 * 0.95 * 308.6 * 0.000963 \\ &= 0.0785 \quad \text{m}^3/\text{sec} \\ &= 4709 \quad \text{lit/min} \end{aligned}$$

Provid 300UC (1:250) is OK inside the site area

Check Outfall (Catchment Area (2+3) + Outside Catchment Area

$$C = 0.95 \quad (\text{P.42 of Stormwater Drainage Manual})$$

$$\begin{aligned} A &= 2373 \quad \text{m}^2 \\ &= 0.002373 \quad \text{km}^2 \end{aligned} \quad (\text{Consider half of the site})$$

$$\begin{aligned} i &= 308.6 \quad \text{mm/hr} \quad (50 \text{ yrs return period, Table 3a, Corrigendum 2024, SDM) and (11.1\% increase due to climate change)} \end{aligned}$$

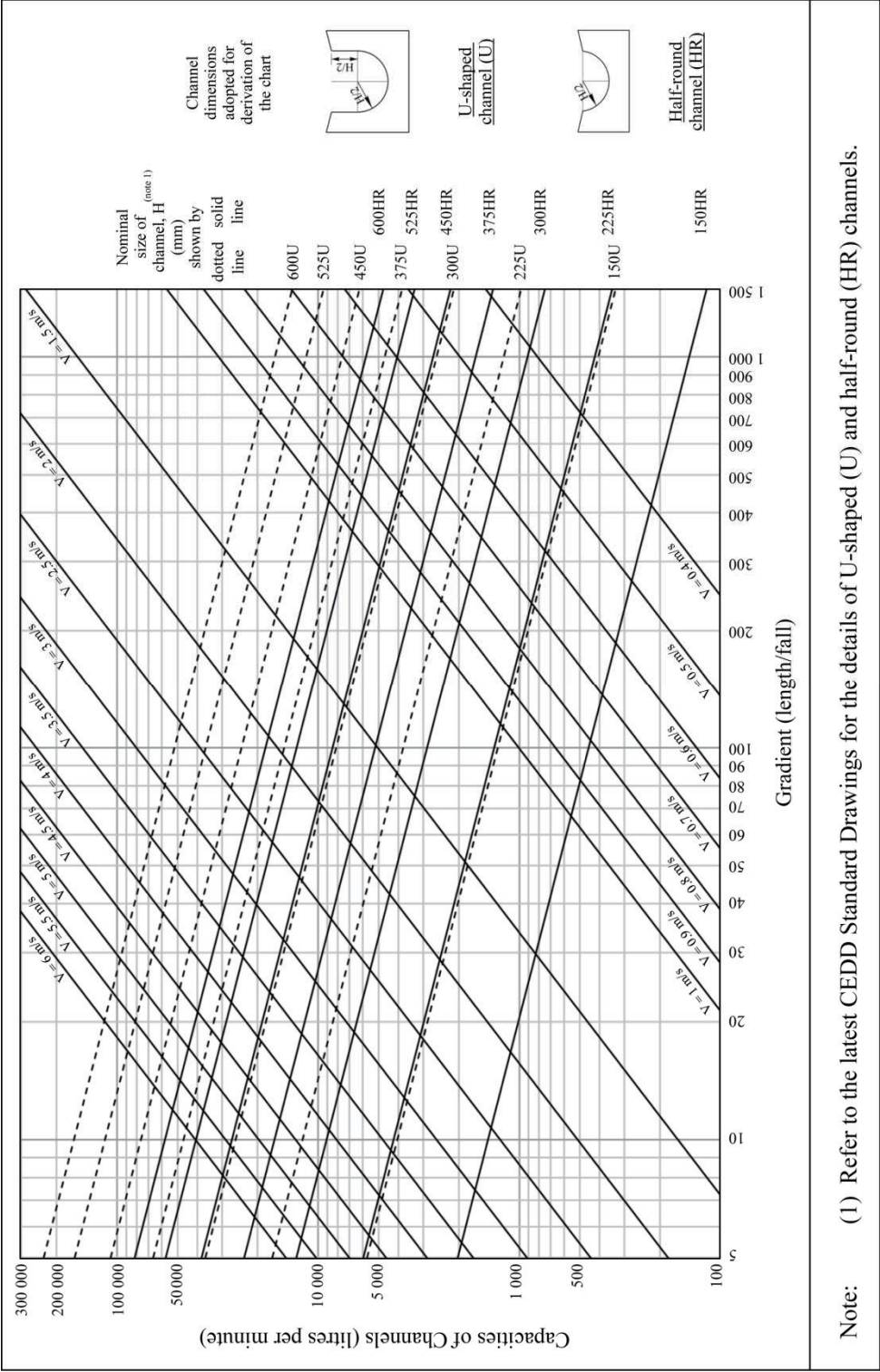
$$\begin{aligned} \text{Therefore, } Q &= 0.278 * 0.95 * 308.6 * 0.002373 \\ &= 0.1934 \quad \text{m}^3/\text{sec} \\ &= 11605 \quad \text{lit/min} \end{aligned}$$

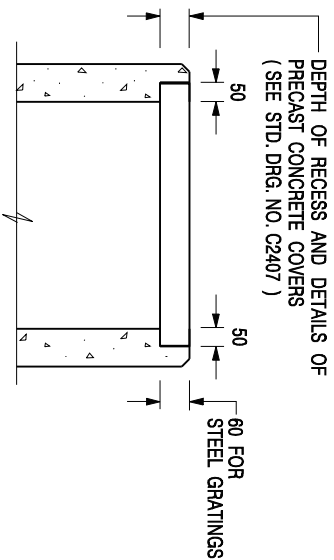
Provid 300UC (1:50) is OK inside the site area

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

Issue No.: 1 Revision: - Date: 05.06.2014 Page: 3 of 3

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





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

 **CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20 **DRAWING NO.**
DATE JAN 1991 **C2406 /2**

CATCHPIT WITH TRAP (SHEET 2 OF 2)

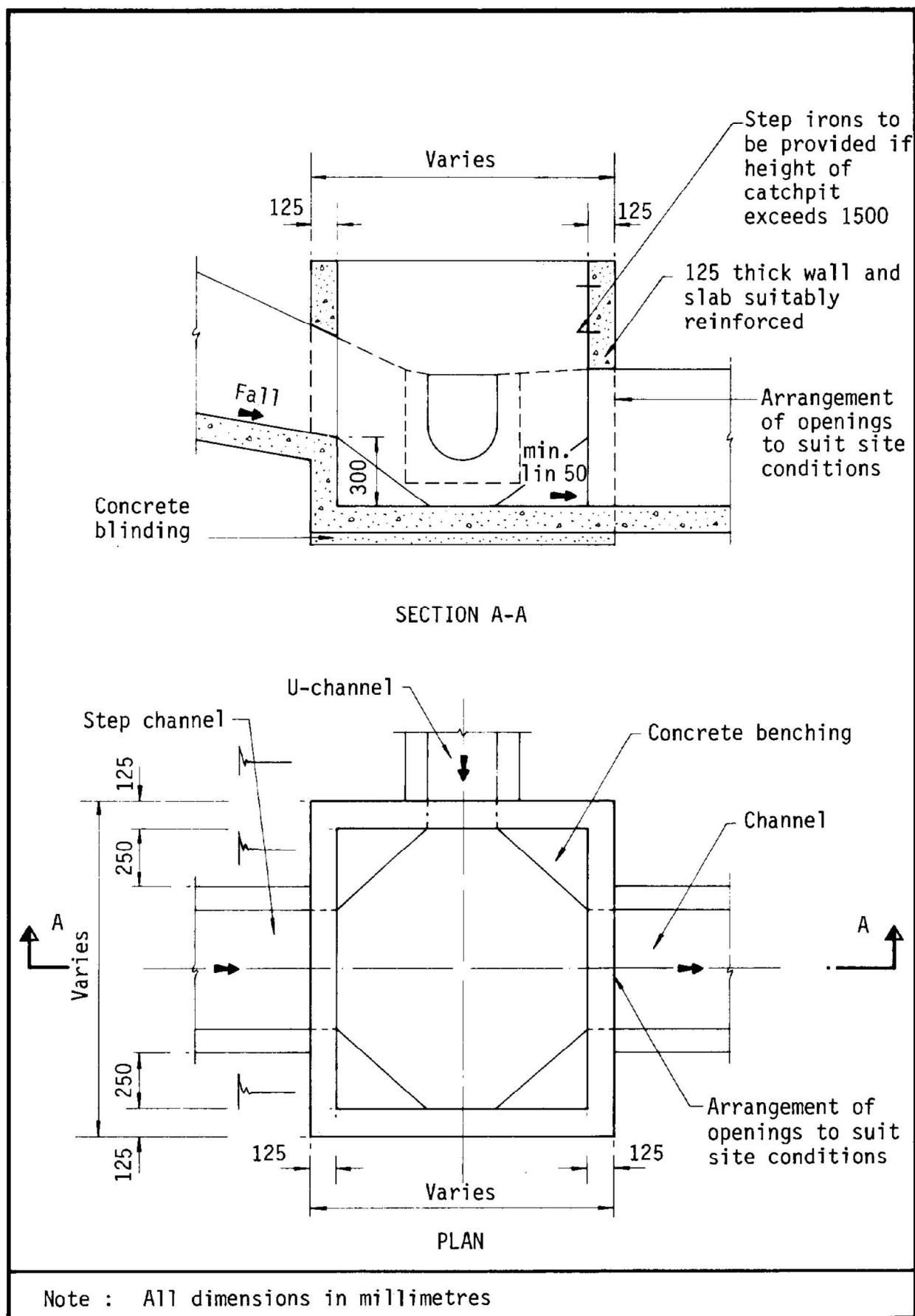
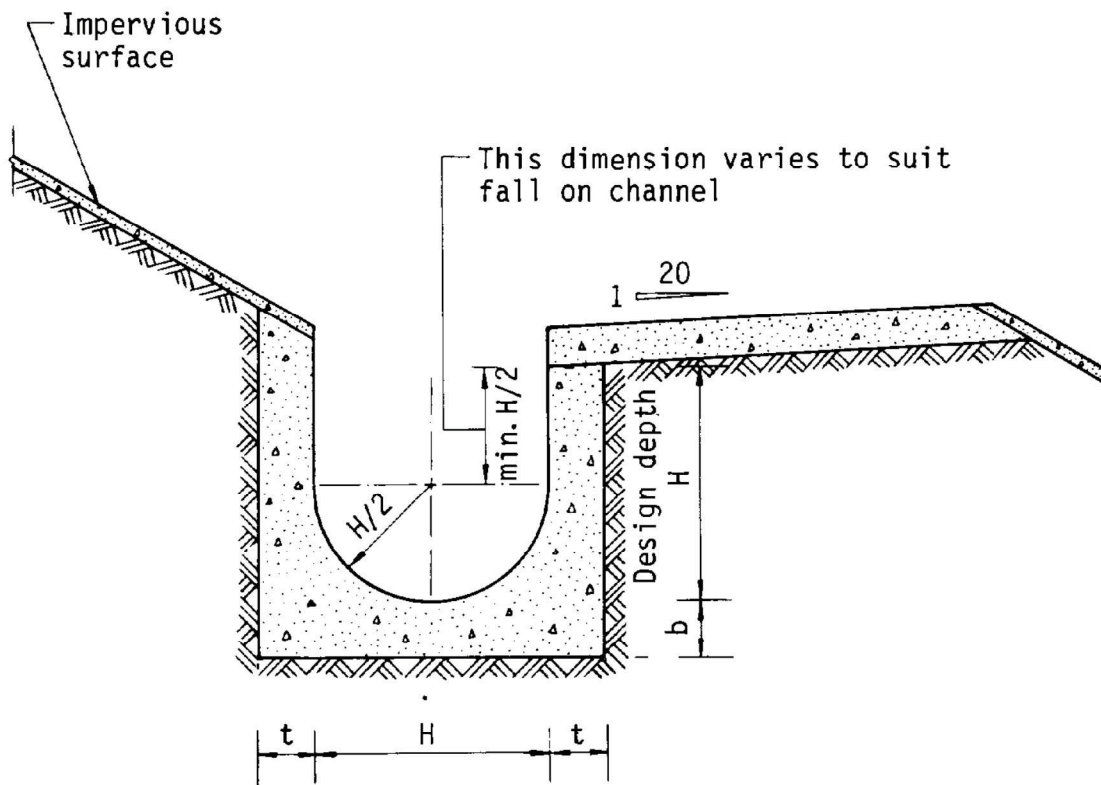


Figure 8.10 - Typical Details of Catchpits



Dimensions of U - channel

Nominal size of channel H (mm)	Thickness t (mm)	Thickness b (mm)
225 to 600	150	150
675 to 1200	175	225

Figure 8.11 - Typical U-channel Details