

☐Urgent ☐Return receipt ☐Expand Group ☐Restricted ☐Prevent Copy ☐Confidential

Timothy Wai Pui WU/PLAND

寄件者: TsangShun Qi <[REDACTED]>
寄件日期: 2026年08月25日星期二 12:30
收件者: Timothy Wai Pui WU/PLAND
主旨: TKLN 129 response to DSD comment
附件: 752 drainage proposal.pdf; layout plan.pdf; response to dsd comment.pdf
類別: Internet Email

Dear Sir,

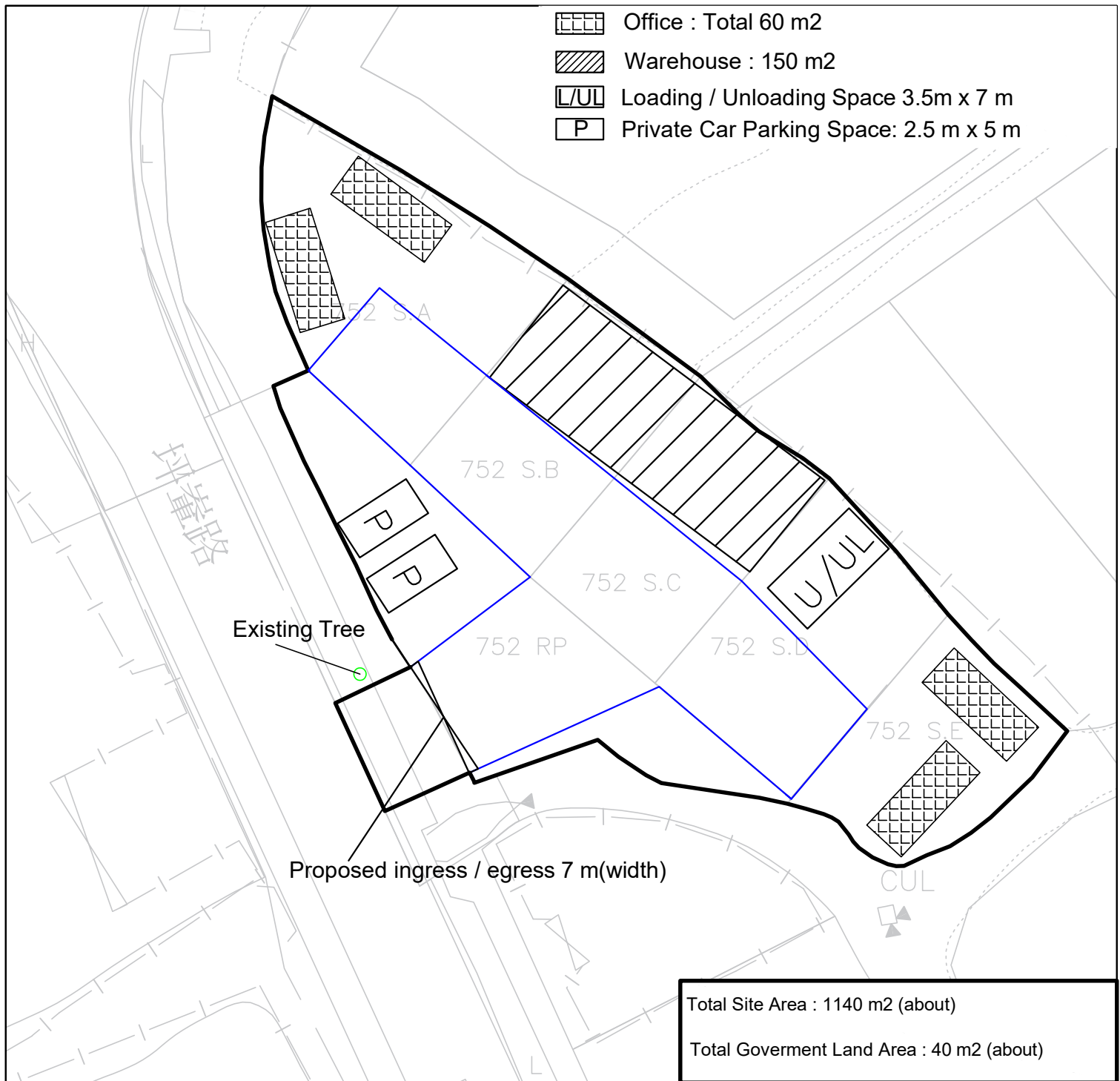
Please find attached the revised layout plan, drainage proposal, and our formal response to the DSD comments for your review.

For your reference, the total site area is approximately 1,140 m², which includes about 40 m² of government land. The width of the proposed ingress/egress point is 7 m.

Please note that this submission supersedes all emails sent on 24 August.

Thanks

Carter Tsang
[REDACTED]



Layout Plan

Lots. 752 S.A,752 S.B,752 S.C,752 S.D,
752 S.E,752 RP In D.D. 82

YING SHING
(HOPEWELL)
ENGINEERING
CO.LTD.

Not to Scale

Annex 1

Response to DSD General Comment

Comment 1
The applicant should be advised that the limited desk-top checking by Government on the drainage proposal covers only the fundamental aspects of the drainage design which will by no means relieve his obligations to ensure that (i) the proposed drainage works will not cause any adverse drainage or environmental impacts in the vicinity; and (ii) the proposed drainage works and the downstream drainage systems have the adequate capacity and are in good conditions to accommodate all discharge water collected from his lot and all upstream catchments. The applicant shall effect any subsequent upgrading of these proposed works and the downstream drainage systems whenever necessary.
Response
We fully acknowledge and sincerely thank the Government for its valuable advice. We clearly understand that the limited desk-top checking covers only the fundamental aspects of the drainage design and that the primary responsibility rests entirely with the applicant to ensure that (i) the proposed drainage works will not cause any adverse drainage or environmental impacts in the vicinity, and (ii) the proposed drainage works and the downstream drainage systems have adequate capacity and are in good condition to accommodate all discharge water collected from the lot and all upstream catchments. We further undertake that the applicant shall effect any subsequent upgrading of these proposed works and the downstream drainage systems whenever necessary, and we remain fully committed to fulfilling all such responsibilities.

Comment 2
The cover levels of proposed u-channels and catch pits should be flush with the adjoining ground level.
Response
The cover levels of proposed u-channels and catch pits adjusted to the adjoining ground level. Please refer to drainage proposal.

Comment 3
The applicant should check and ensure that the existing drainage system to which the proposed connection will be made have adequate capacity and satisfactory condition to cater for the additional discharge from the captioned lot. He should also ensure that the flow from this site will not overload the existing drainage system.
Response
Noted.

Comment 5
The existing discharge location to which the applicant proposed to discharge the stormwater from the subject site is not maintained by DSD. The applicant should identify the owner of the existing discharge location to which the proposed connection will be made and obtain agreement from the owner prior to commencement of proposed works.
Response
Noted.

Comment 9
The applicant should make good all the adjacent affected areas upon the completion of the drainage works. The applicant is reminded that all existing flow paths as well as the run-off falling onto and passing through the site should be intercepted and disposed of via proper discharge points. The applicant shall also ensure that no works,
Response
Noted.
Interfere with the free flow condition of the existing drain, channels and watercourses on or in the vicinity of the subject site any time during or after the works.
Response
Noted.

Comment 7
The proposed drainage works, whether within or outside the lot boundary, should be constructed and maintained by the applicant at his own expense.
Response
Noted.

Comment 8
For works to be undertaken outside the lot boundary, the applicant should obtain prior agreement from the District Lands Officer/North, Lands Department and/or relevant private lot owners.
Response
Noted.

Comment 9
The applicant should make good all the adjacent affected areas upon the completion of the drainage works.
Response
Noted.

Comment 10
The applicant should construct and maintain the proposed drainage works properly and rectify the system if it is found to be inadequate or ineffective during operation.
Response
Noted.

Comment 11
As usual, Government should be empowered to inspect conditions of the private drainage system and to enforce its cleansing by the owners, if necessity arises (e.g. upon receipt of complaints).
Response
Noted.

Comment 12
The existing drainage facilities, watercourse, river, channel and the like should not be affected and obstructed by the construction materials, waste or debris from the proposed development.
Response
Noted.

Response to DSD Specific Comments

Comment 1
Layout plan refers. a. The applicant should indicate the following on the plan: (i) the location of catch pit to be demolished; (ii) cover and invert levels of the existing/proposed u-channels at the most upstream ends; (iii) cover and invert level of CP13; (iv) gradients of the u-channels and pipes. b. Thickness of concrete cover/grating should be considered when determining the invert levels of catch pits and u-channels to ensure the depths of u-channels are adequate. For instance, the depth of 300UC at CP5 is less than 300mm. c. The applicant should supplement connection details between the proposed 375mm concrete pipe and the existing streamcourse. d. The applicant should consider providing a catch pit at the connection between the proposed 300mm pipe and the existing 300UC. e. The applicant should consider enlarging the proposed 300mm pipe and provide an additional pipe to reduce risk of blockage. f. It is noted that the formation level of the subject site is higher than the adjacent lands. It appears that the existing flow paths of run-off falling onto and passing through the site would be affected. Peripheral channels with proper discharge shall be provided at the toe of the raised platform so as to ensure no adverse drainage impact to lands and premises adjoining the site.
Response
1. The layout plan is revised in proper scale and added the request indication. 2. The Peripheral channels is proposed and indicated on layout plan to ensure no adverse drainage impact to lands and premises adjoining the site. 3. Please find revised drainage proposal.

Comment 2
The applicant should supplement design of the proposed 300mm pipe, catch pit with trap, grating for u-channel.
Response
Please find revised drainage proposal.

Comment 3
The applicant should supplement photos showing the conditions of the existing u-channel and the streamcourse. A plan should be submitted to indicate the locations of the camera and directions of all photos taken.
Response
Please find revised drainage proposal.

Drainage Proposal

1. Site particulars

1.1 The application site is located at Lots. 752 S.A,752 S.B,752 S.C,752 S.D,752 S.E,752 RP in D.D. 82. The site area is approximately 1140 m². The site location is shown in Figure 1.

1.2 The existing site is fully paved with approximate levels of +9.0 mPD. No significant site formation works are anticipated for the proposed development.

1.3 The site can access from Ping Che Road. The surrounding area is predominantly rural, comprising temporary structures Village House and government facilities.



Photo 1



Photo 2



Photo 3



Photo 4

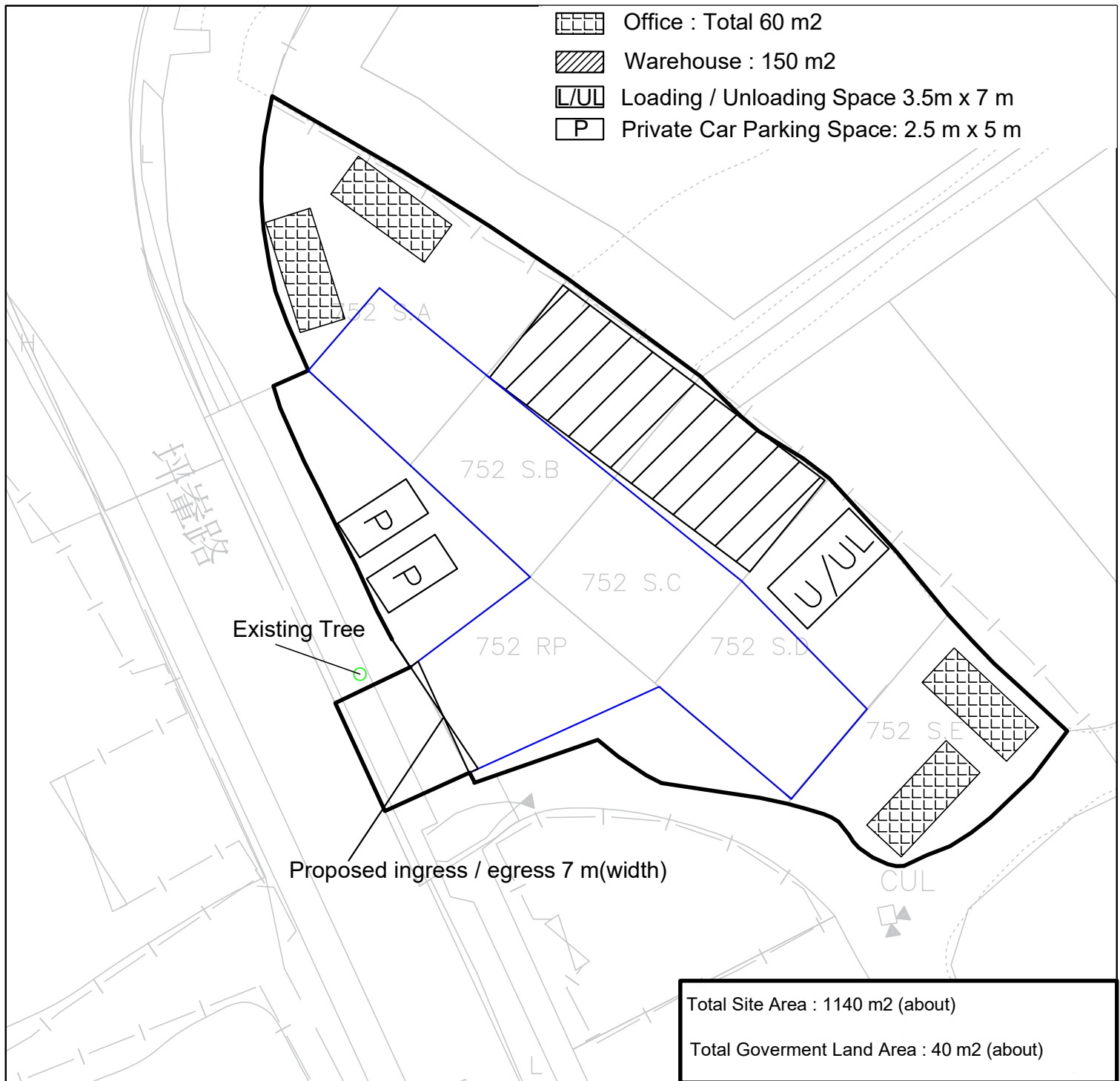


Photo 5



Photo 6





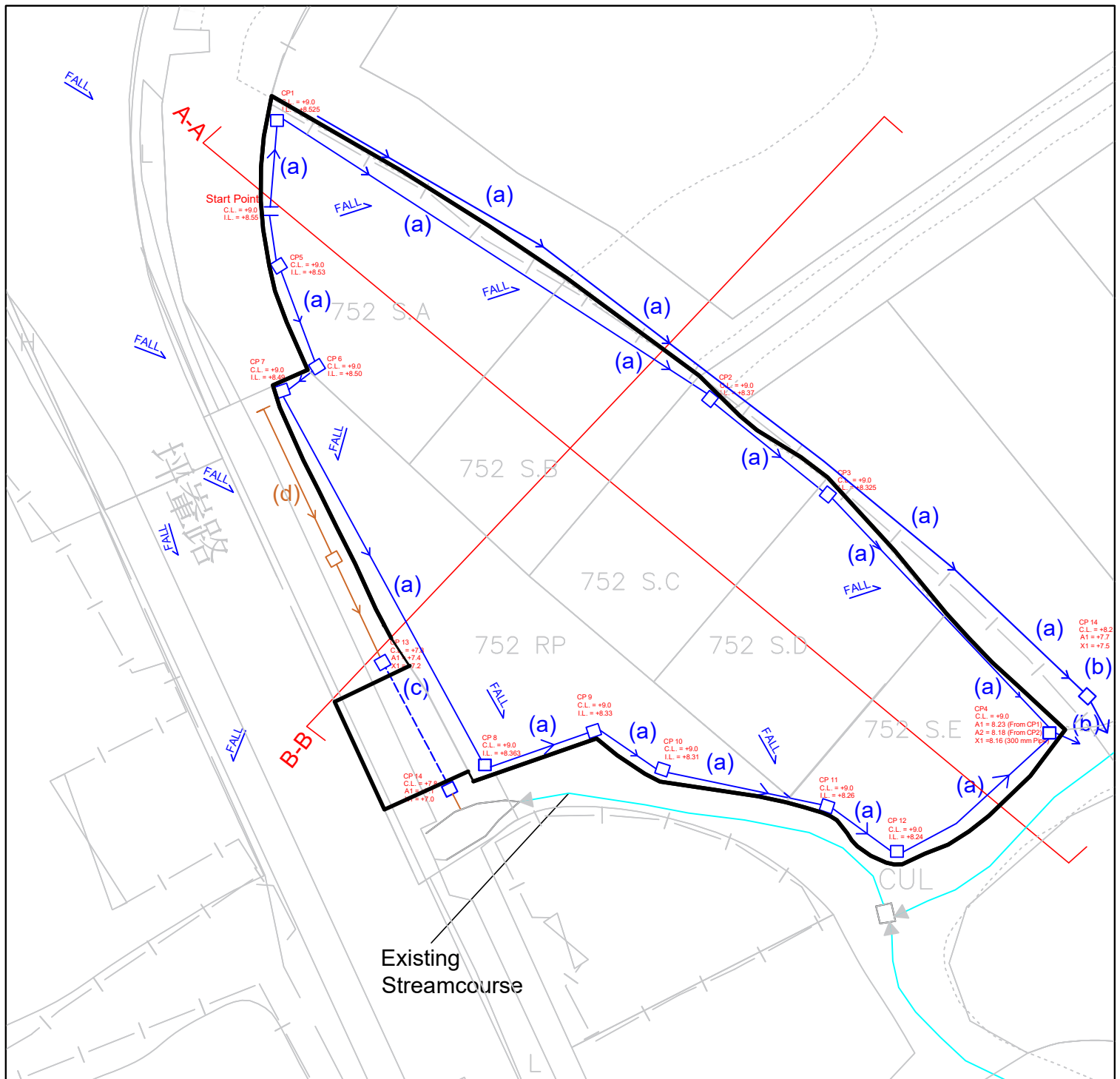
Layout Plan

Lots. 752 S.A, 752 S.B, 752 S.C, 752 S.D,
 752 S.E, 752 RP In D.D. 82

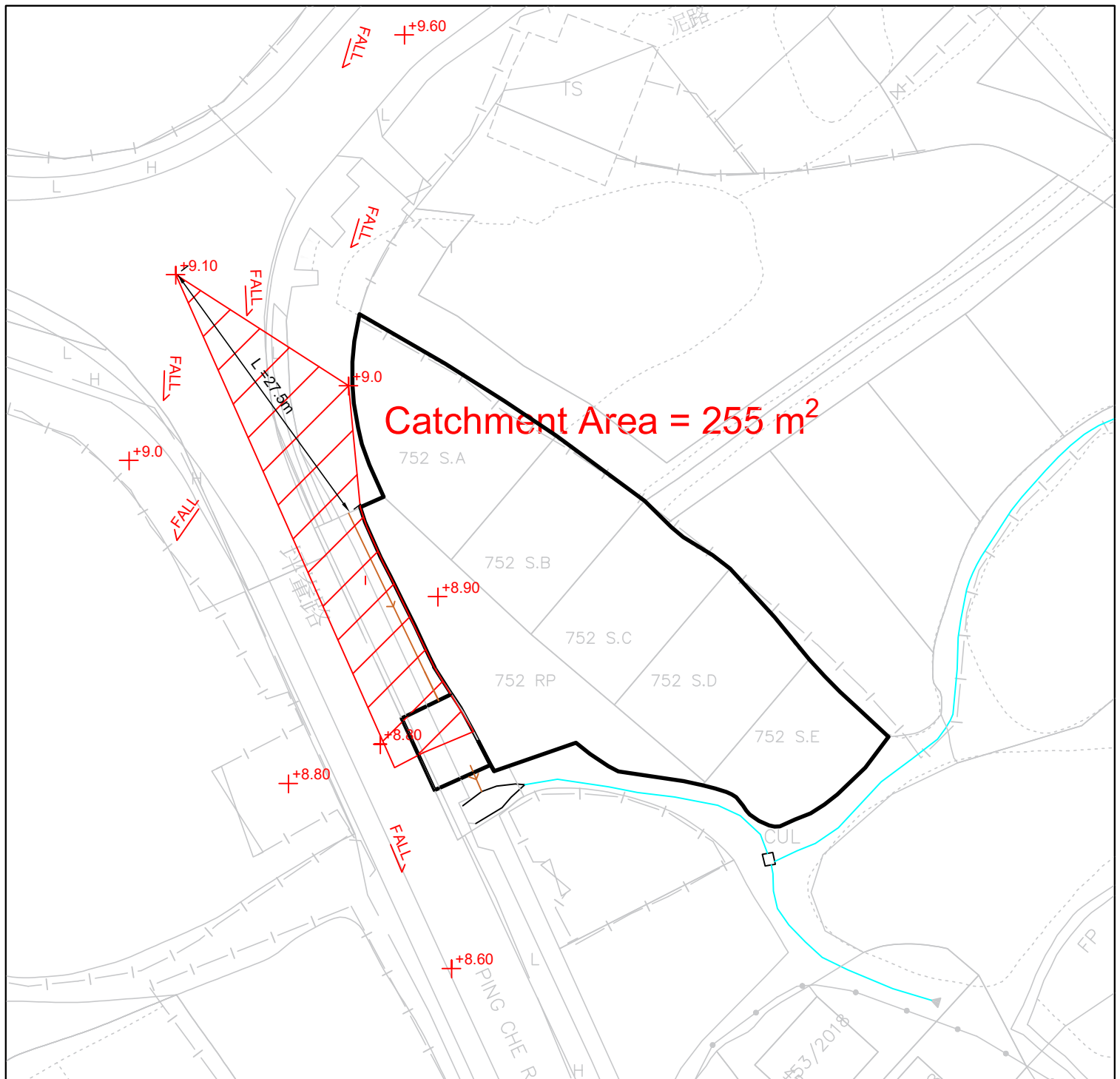
YING SHING
 (HOPEWELL)
 ENGINEERING
 CO.LTD.

Not to Scale

Annex 1



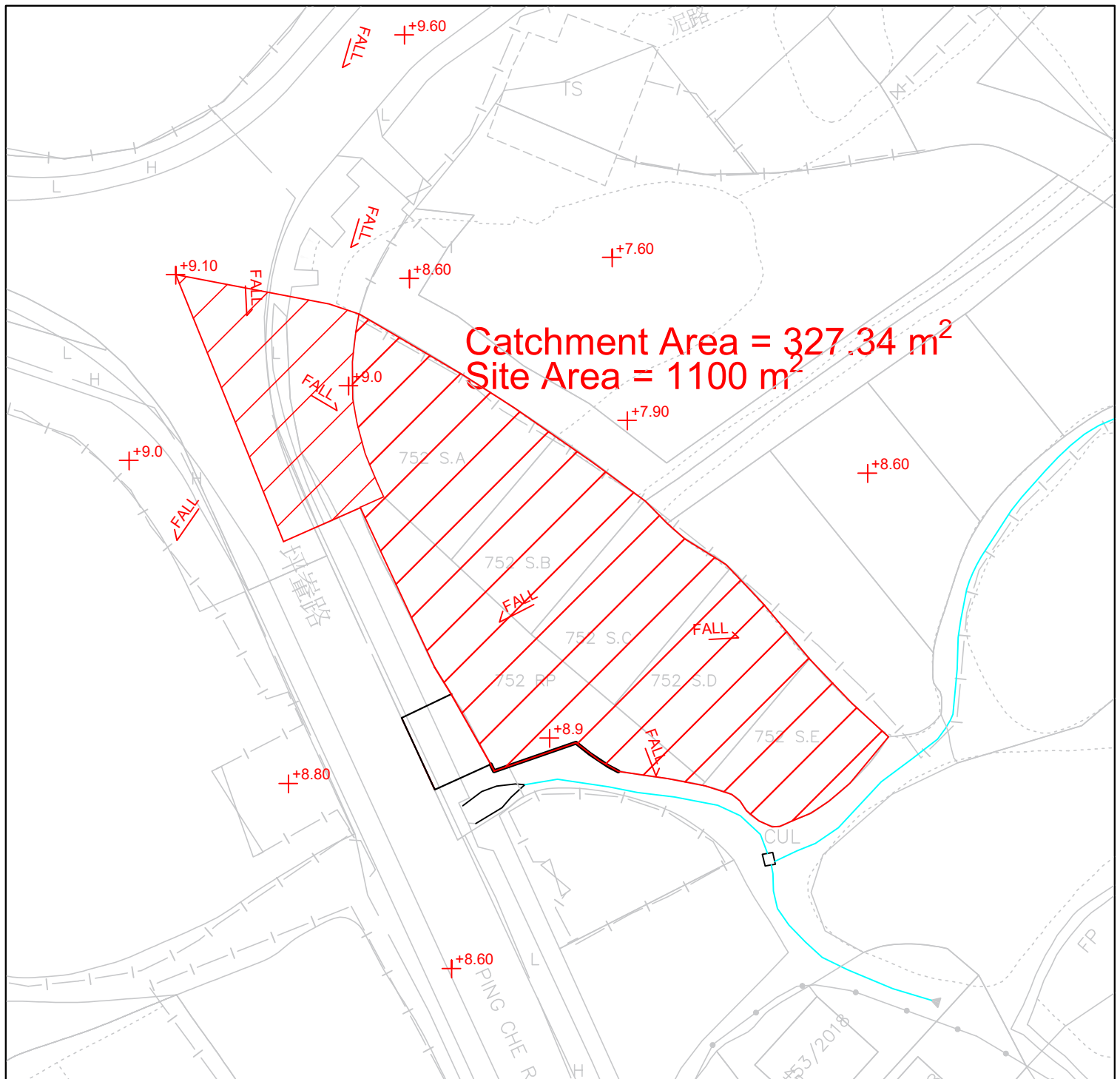
(a) Proposed 300 mm U- Channel (1:200) (b) Proposed 375 mm Concrete Pipe (1:200) (c) Proposed 375 mm Concrete Pipe (1:200)	Proposed Catch Pit (d) Existing 300 mm U- Channel Existing Catch Pit should be demolished	1:1000
Drainage Proposal - Layout Plan Lots. 752 S.A, 752 S.B, 752 S.C, 752 S.D, 752 S.E, 752 RP In D.D. 82		Annex 1



Catchment Area Plan
(Existing U-Channel)

1:1000

Annex 2

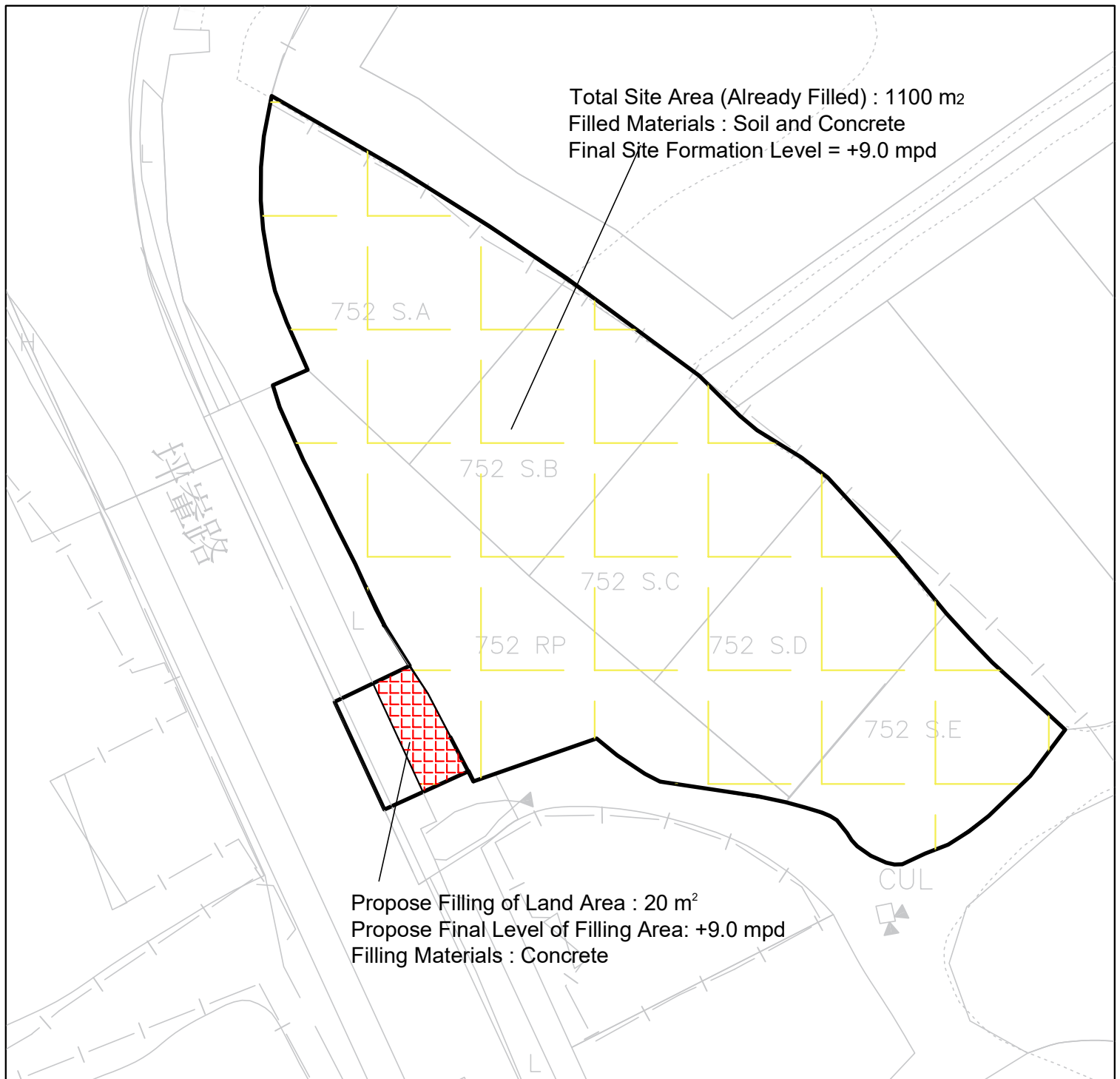


Catchment Area Plan
(Application Site)

YING SHING
(HOPEWELL)
ENGINEERING
CO.LTD.

1:1000

Annex 3



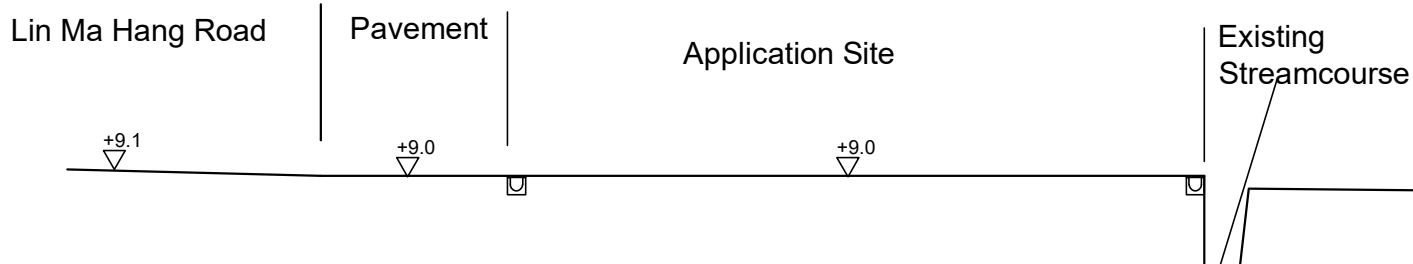
Filling of Land Plan

Lots. 752 S.A, 752 S.B, 752 S.C,
 752 S.D, 752 S.E, 752 RP In D.D. 82

YING SHING
 (HOPEWELL)
 ENGINEERING
 CO.LTD.

1:1000

Annex 4



Section A-A

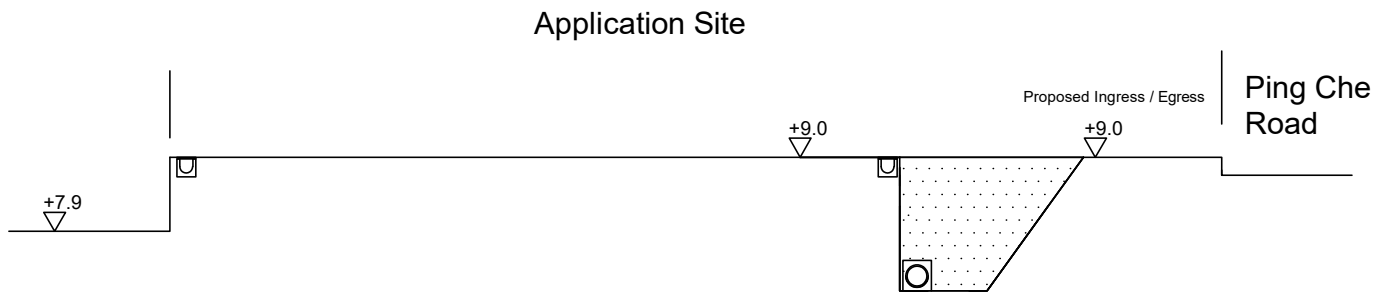
Section Plan

Lots. 752 S.A,752 S.B,752 S.C,
752 S.D,752 S.E,752 RP In D.D. 82

YING SHING
(HOPEWELL)
ENGINEERING
CO.LTD.

Not to Scale

Annex 5



Section B-B

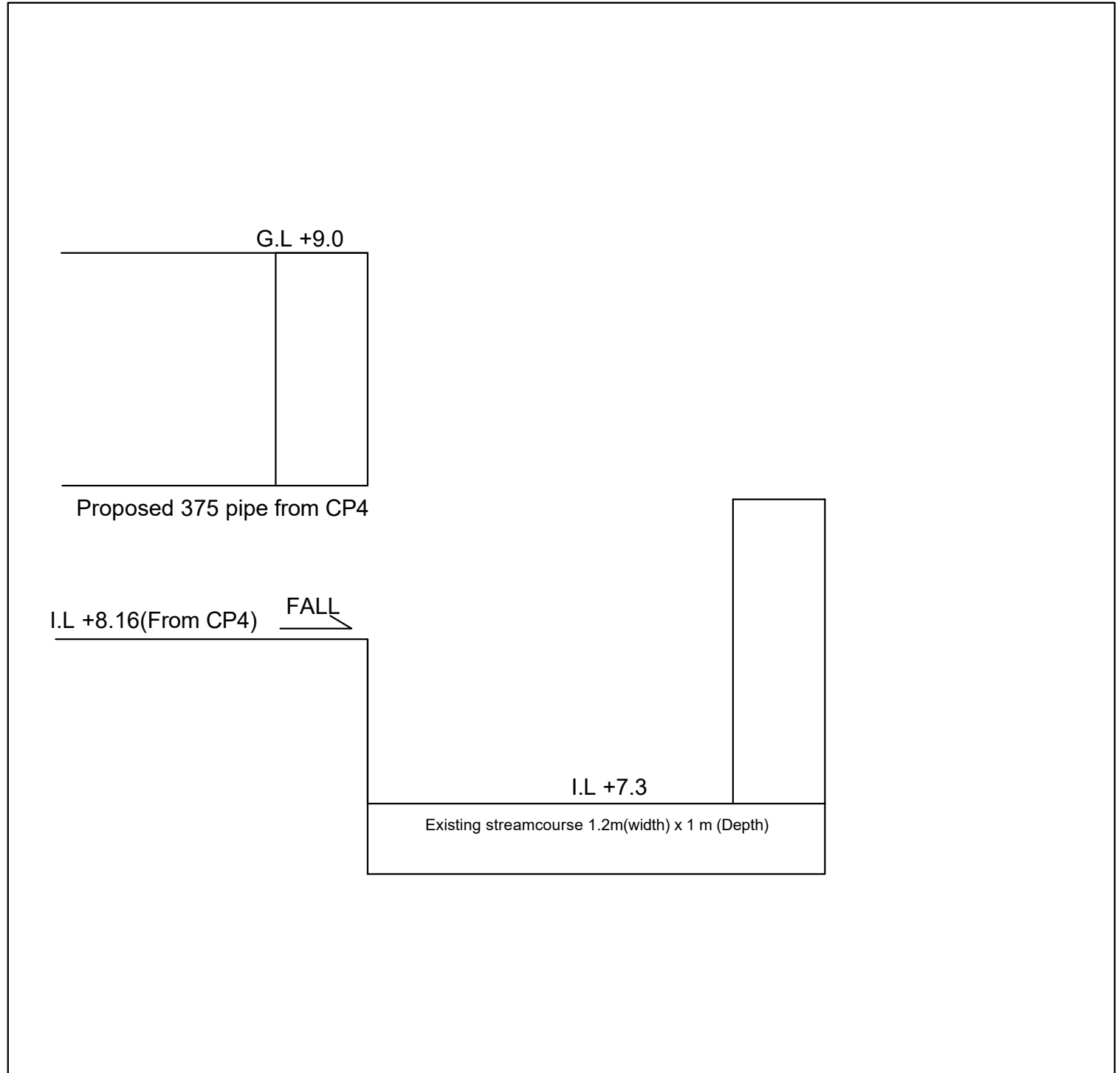
Section Plan

Lots. 752 S.A,752 S.B,752 S.C,
752 S.D,752 S.E,752 RP In D.D. 82

YING SHING
(HOPEWELL)
ENGINEERING
CO.LTD.

Not to Scale

Annex 6



	Connection Detail (CP 4 to Existing streamcourse)	YING SHING (HOPEWELL) ENGINEERING CO.LTD.
Not to Scale		Annex 7

2. Design Considerations

2.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this report. The recommendation is summarized in **Table 1** below:

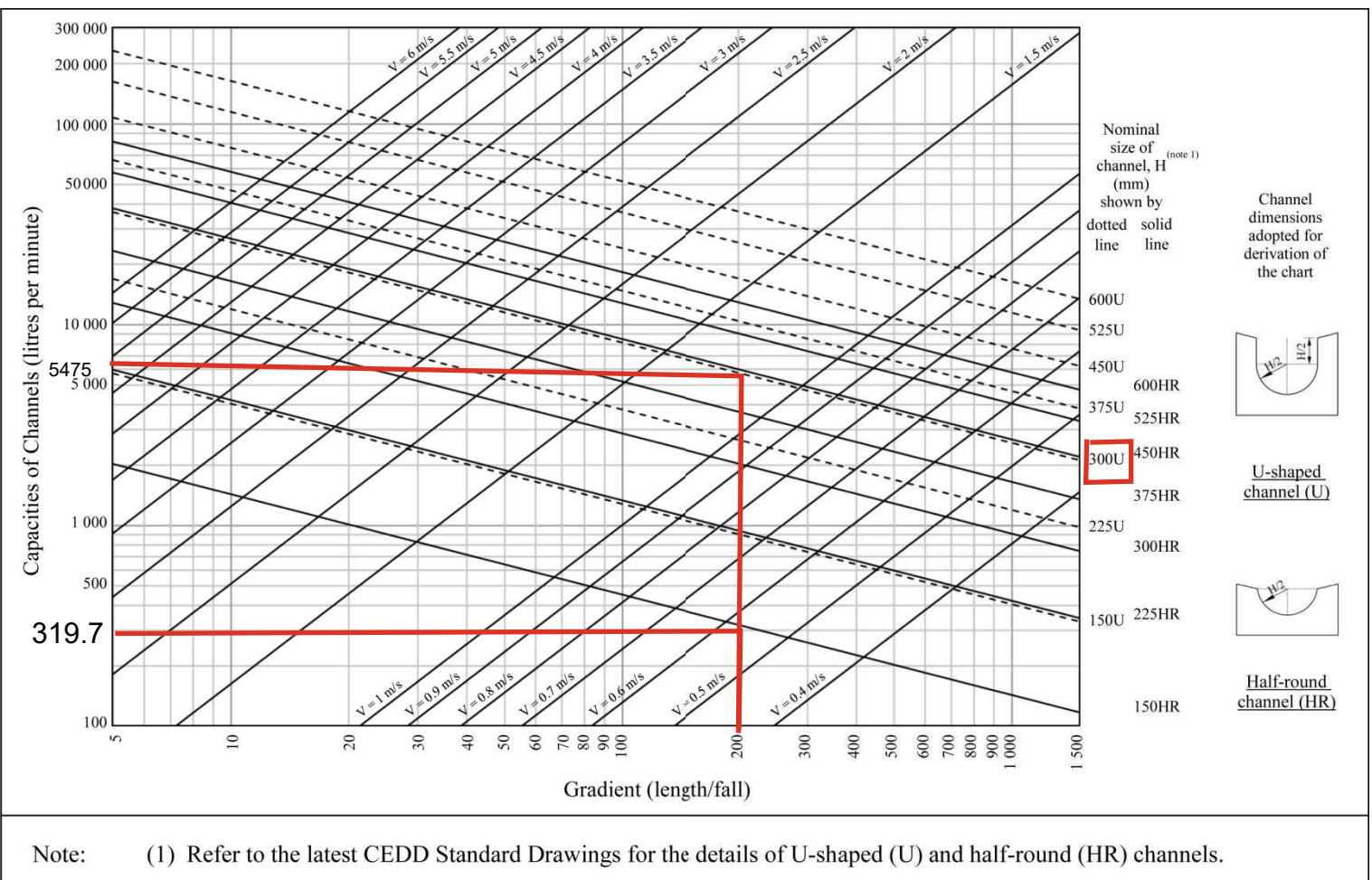
Description	Design Return Periods
Intensively Used Agricultural Land	2 – 5 Years
Village Drainage Including Internal Drainage System under a polder Scheme	10 Years
Main Rural Catchment Drainage Channels	50 Years
Urban Drainage Trunk System	200 Years
Urban Drainage Branch System	50 Years

The proposed drainage system intended to collect runoff from internal site and external catchment. 1 in 50 years return period is adopted for drainage design.

2.2 Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).

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



Outside Catchment Area, Area = 225.0 m² (C = 0.250)

THE SITE, Area = 30.0 m² (C = 0.950)

Calculation of Design Runoff of the Proposed Development

For the design of drains inside the site.

$$\Sigma Q = \Sigma 0.278 C i A$$

$$A = 225.0 + 30.0 = 255.0 \text{ m}^2$$

$$= 0.000255 \text{ km}^2$$

$$H = 100 \times (9.100 - 8.800) / 70.000 = 0.429 \text{ m/100m}$$

$$t = 0.14465 \times L / (H^{0.2} \times A^{0.1})$$

$$= 0.14465 \times 70.000 / (0.429^{0.2} \times 255.0^{0.1})$$

$$= 6.892 \text{ min}$$

$$i = \text{multiplier} \times a / (t + b)^c$$

$$= 1.111 \times 474.600 / (6.892 + 2.900)^{0.371}$$

$$= 226.165 \text{ mm/hr}$$

(50 years return period, Table 3d, Corrigendum 2024, SDM) and (11.1% increase due to climate change)

$$\text{Therefore, } Q = 0.278 \times 0.250 \times 226.165 \times 0.000225 + 0.278 \times 0.950 \times 226.165 \times 0.000030$$

$$= 0.0053 \text{ m}^3/\text{s}$$

$$= \mathbf{319.7 \text{ L/min}}$$

Provide 225U (1:200) is OK.

Confirm return period, IDF constants, climate multiplier, freeboard, debris and outlet conditions before final issue.

Check 225 mm dia. Pipe by Colebrook-White Equation

$$V = \sqrt[5]{(8gDS) \log_{10} \left[\frac{k_s}{3.7D} + \frac{2.51\nu}{D\sqrt{(2gDS)}} \right]}$$

where:

V	=	1.062 m/s	mean velocity
g	=	9.810 m/s ²	gravitational acceleration
D	=	0.225 m	internal pipe diameter
k _s	=	0.000150 m	hydraulic pipeline roughness
ν	=	1.14E-06 m ² /s	kinematic viscosity of fluid
S	=	0.0050 -	hydraulic gradient (1:200)

Therefore, design velocity of pipe capacity = 1.062 m/s

$Q_{\text{allow}} = 0.800 \times V \times A$ (capacity factor for sedimentation / maintenance allowance)

$$= 0.0338 \text{ m}^3/\text{s}$$

$$= \mathbf{2,027.6 \text{ L/min}}$$

> 319.7 L/min OK

Capacity utilization = 15.8%

Also check local losses, upstream and downstream water levels, outlet conditions and maintenance requirements.

Outside Catchment Area, Area = 327.3 m² (C = 0.250)

THE SITE, Area = 1,100.0 m² (C = 0.950)

Calculation of Design Runoff of the Proposed Development

For the design of drains inside the site.

$$\Sigma Q = \Sigma 0.278 C_i A$$

$$A = 327.3 + 1,100.0 = 1,427.3 \text{ m}^2$$

$$= 0.001427 \text{ km}^2$$

$$H = 100 \times (9.100 - 8.900) / 27.500 = 0.727 \text{ m/100m}$$

$$t = 0.14465 \times L / (H^{0.2} \times A^{0.1})$$

$$= 0.14465 \times 27.500 / (0.727^{0.2} \times 1,427.3^{0.1})$$

$$= 2.051 \text{ min}$$

$$i = \text{multiplier} \times a / (t + b)^c$$

$$= 1.111 \times 474.600 / (2.051 + 2.900)^{0.371}$$

$$= 291.291 \text{ mm/hr}$$

(50 years return period, Table 3d, Corrigendum 2024, SDM) and (11.1% increase due to climate change)

$$\text{Therefore, } Q = 0.278 \times 0.250 \times 291.291 \times 0.000327 + 0.278 \times 0.950 \times 291.291 \times 0.001100$$

$$= 0.0912 \text{ m}^3/\text{s}$$

$$= \mathbf{5,474.9 \text{ L/min}}$$

Provide 300U (1:200) is OK.

Check 375 mm dia. Pipe by Colebrook-White Equation

$$V = -\sqrt{(8gDS) \log_{10}[ks/(3.7D) + 2.51v/(D\sqrt{(2gDS)})]}$$

where:

V	=	1.469 m/s	mean velocity
g	=	9.810 m/s ²	gravitational acceleration
D	=	0.375 m	internal pipe diameter
ks	=	0.000150 m	hydraulic pipeline roughness
v	=	1.14E-06 m ² /s	kinematic viscosity of fluid
S	=	0.0050 -	hydraulic gradient (1:200)

Therefore, design velocity of pipe capacity = 1.469 m/s

$$Q_{allow} = 0.800 \times V \times A$$

(capacity factor for sedimentation / maintenance allowance)

$$= 0.1298 \text{ m}^3/\text{s}$$

$$= 7,789.0 \text{ L/min}$$

$$> 5,474.9 \text{ L/min} \quad \text{OK}$$

$$\text{Capacity utilization} = 70.3\%$$

Also check local losses, upstream and downstream water levels, outlet conditions and maintenance requirements.

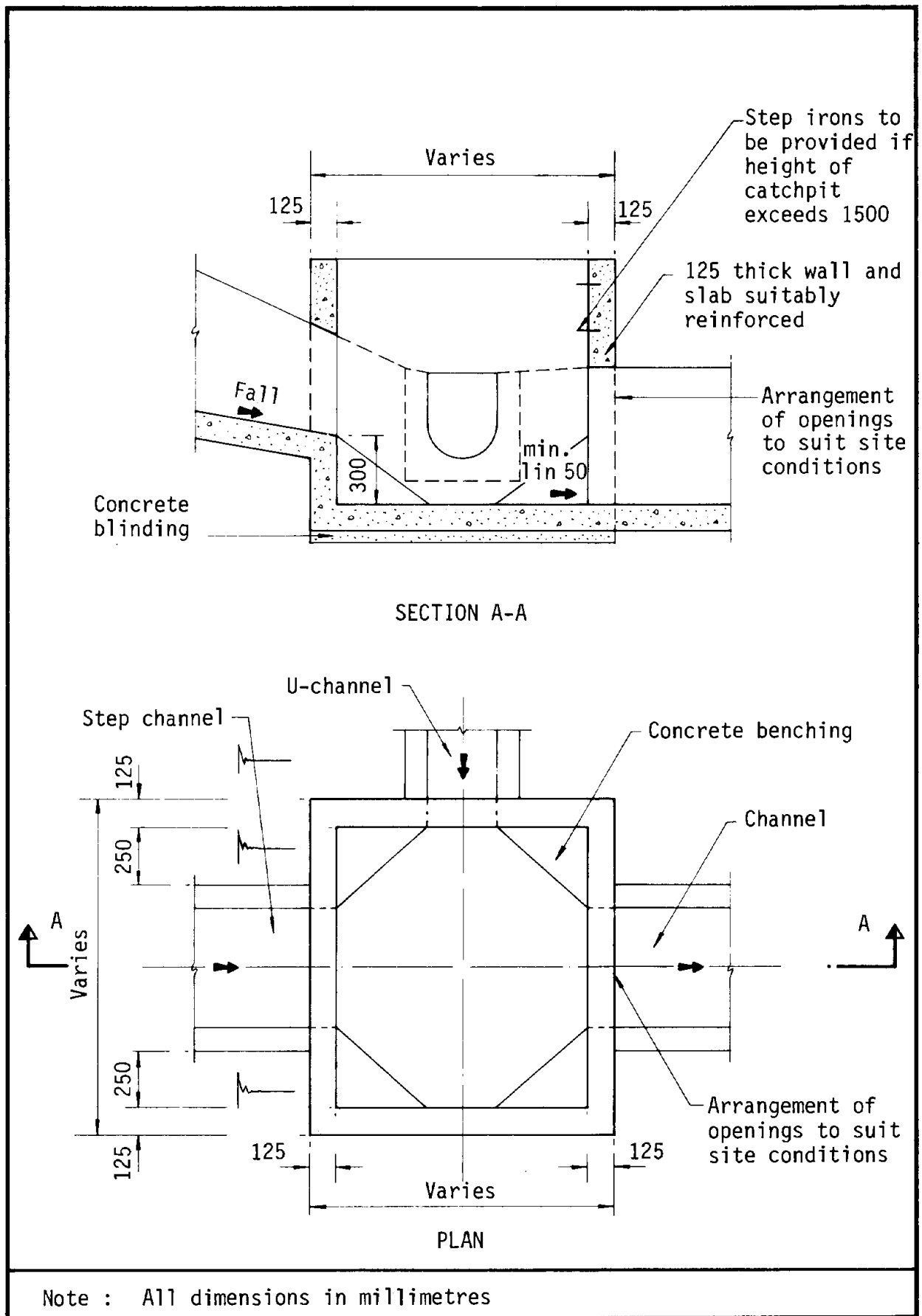
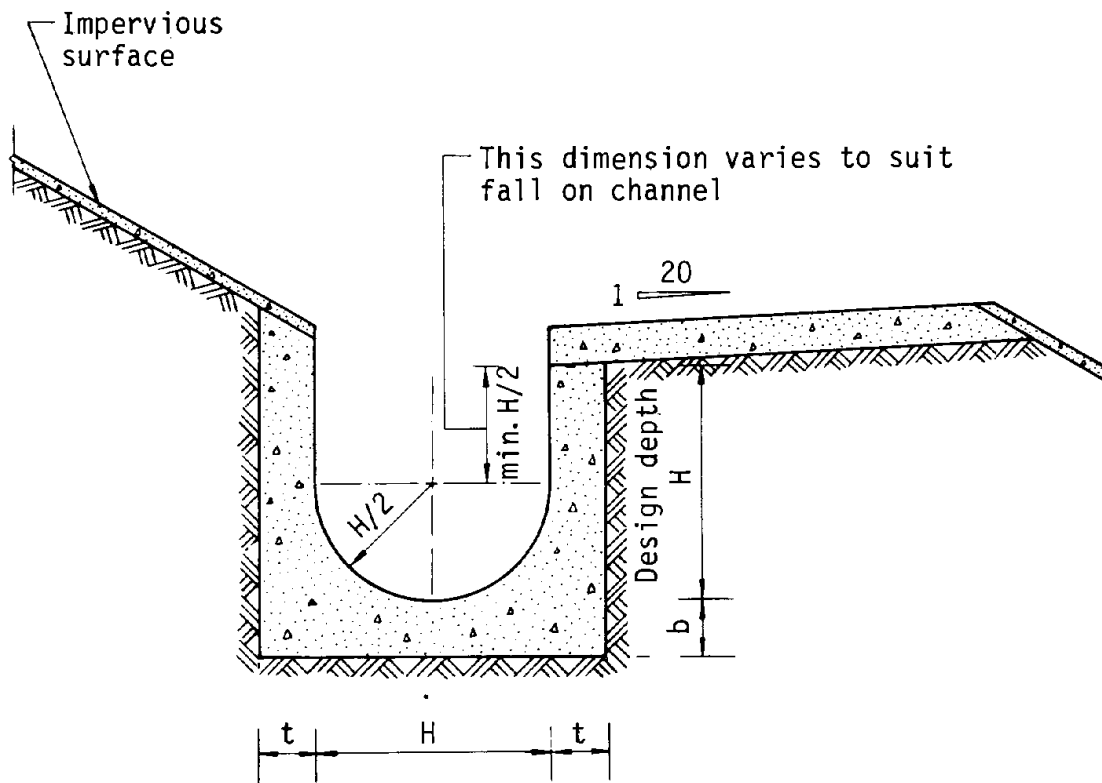


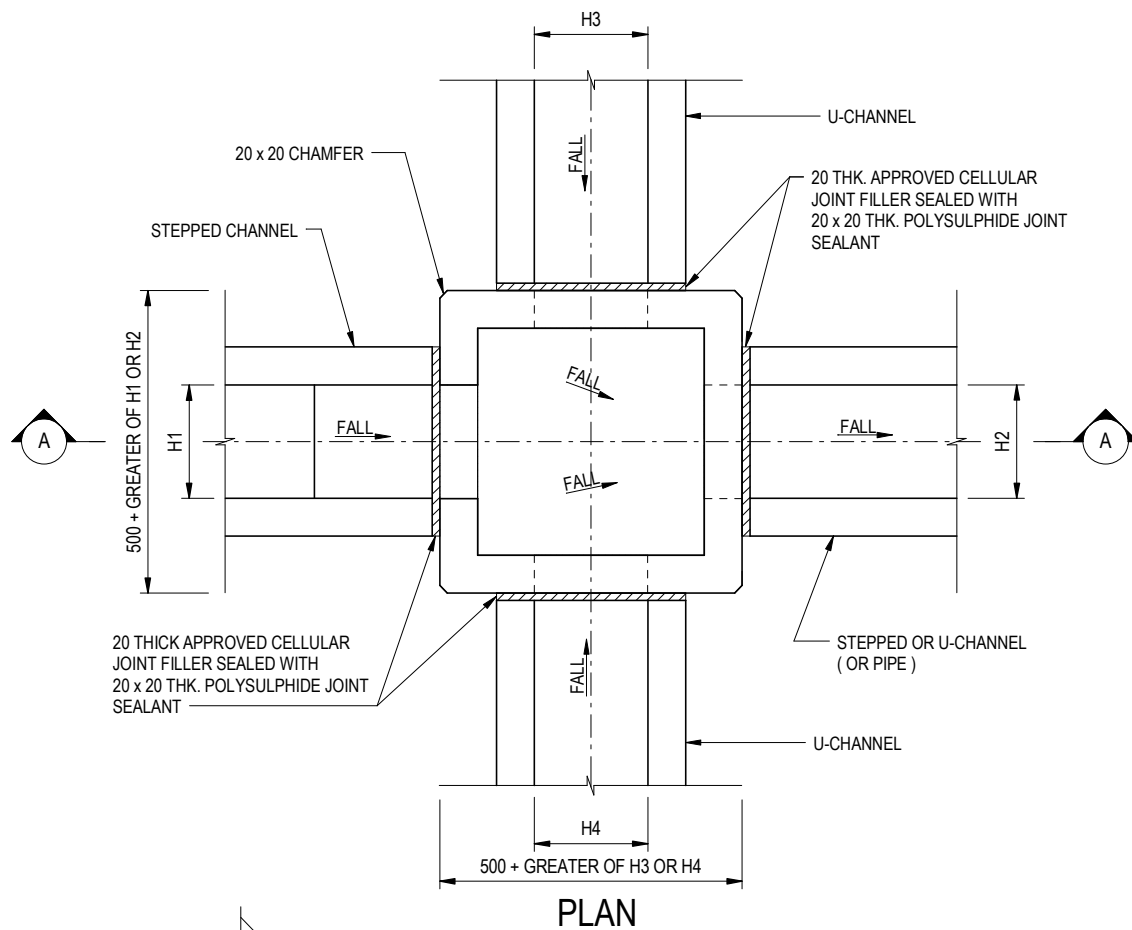
Figure 8.10 - Typical Details of Catchpits



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

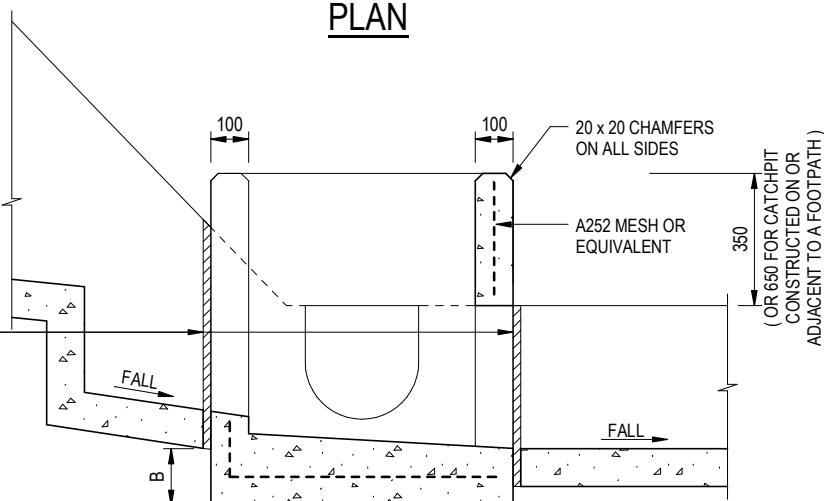
Figure 8.11 - Typical U-channel Details



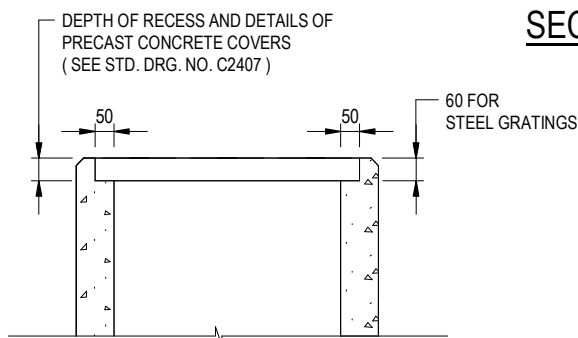
PLAN

NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4)	B
150 - 600	150
675 - 900	175

20 THICK APPROVED CELLULAR
JOINT FILLER SEALED WITH
20 x 20 THK. POLYSULPHIDE JOINT
SEALANT



SECTION A - A



DEPTH OF RECESS AND DETAILS OF
PRECAST CONCRETE COVERS
(SEE STD. DRG. NO. C2407)

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- REFER TO SHEET 5 FOR OTHER NOTES.

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

**STANDARD CATCHPIT DETAILS
(SHEET 1 OF 5)**

A	BIM OBJECT REVISION.	Original Signed	12.2025
-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE



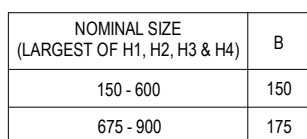
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

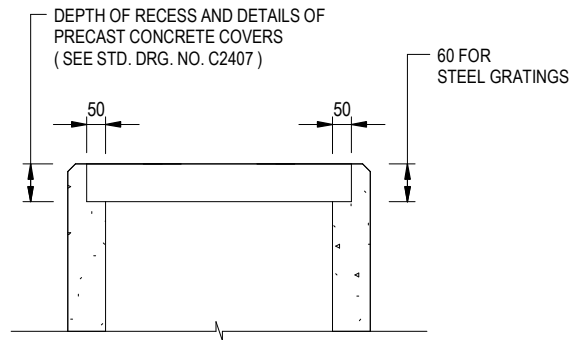
SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2405 /1A





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 /2) 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 'J' ON STD. DRG. NO. C2405 /5; 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 1000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1000 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 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

B	BIM OBJECT REVISION.	Original Signed	12.2025
A	MINOR AMENDMENT.	Original Signed	04.2016
—	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE

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



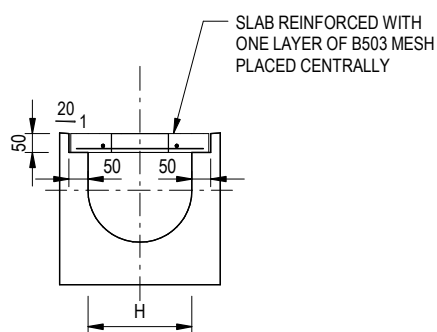
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

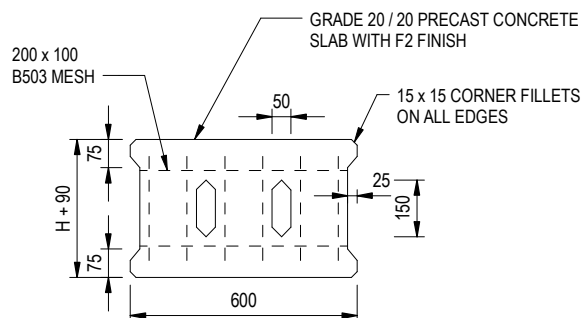
DATE JAN 1991

DRAWING NO.

C2406 /2B



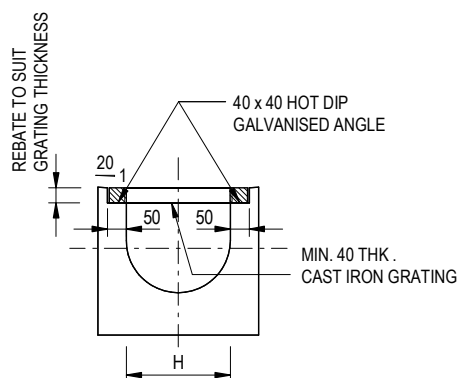
TYPICAL SECTION



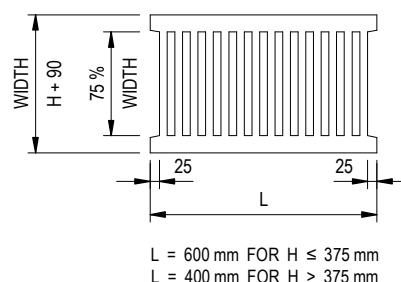
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



CAST IRON GRATING

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H = NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

F	BIM OBJECT REVISION.	Original Signed	12.2025
E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED.	Original Signed	06.2008
C	MINOR AMENDMENT. NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

**COVER SLAB AND CAST IRON
GRATING FOR CHANNELS**



**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2412F