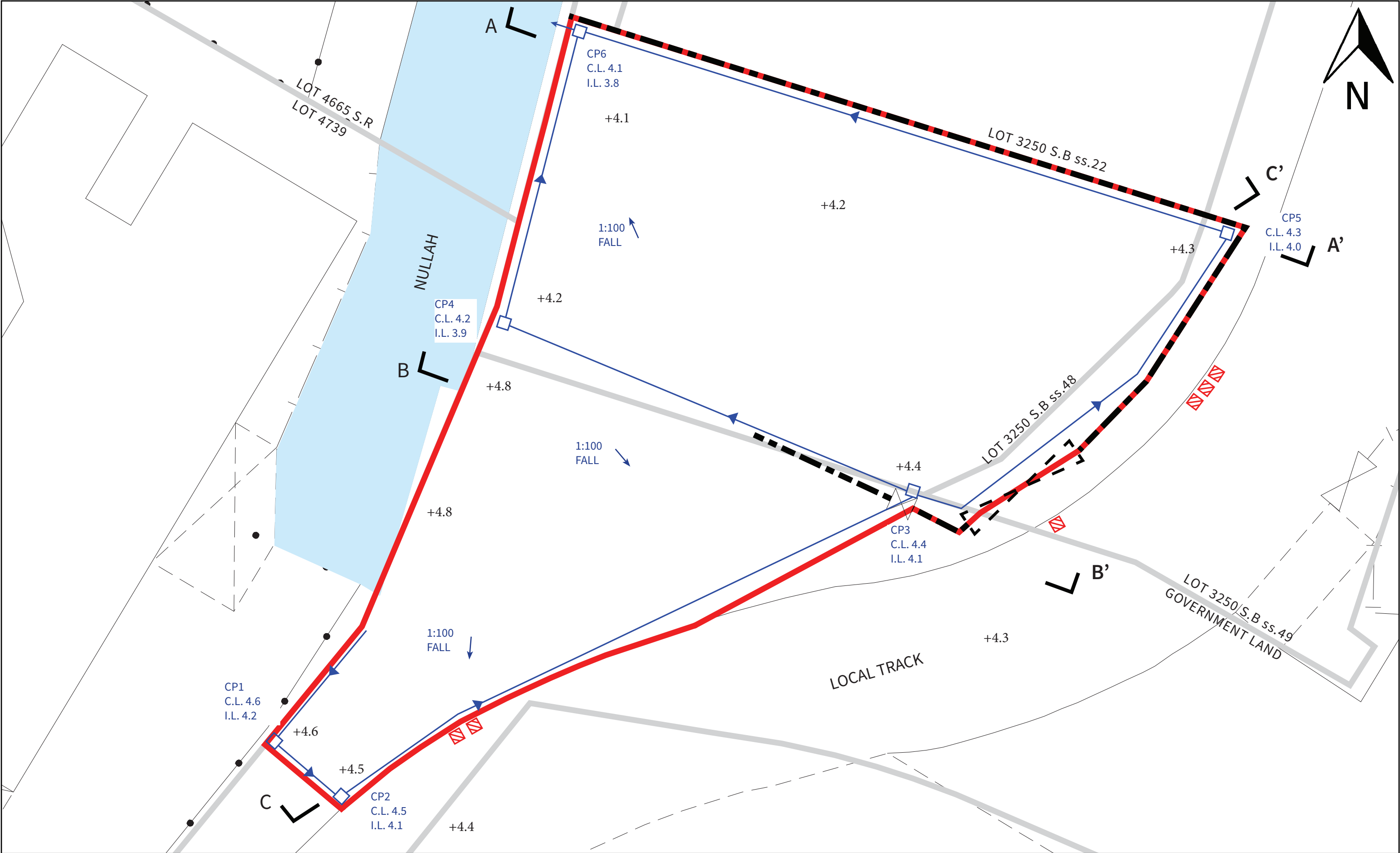
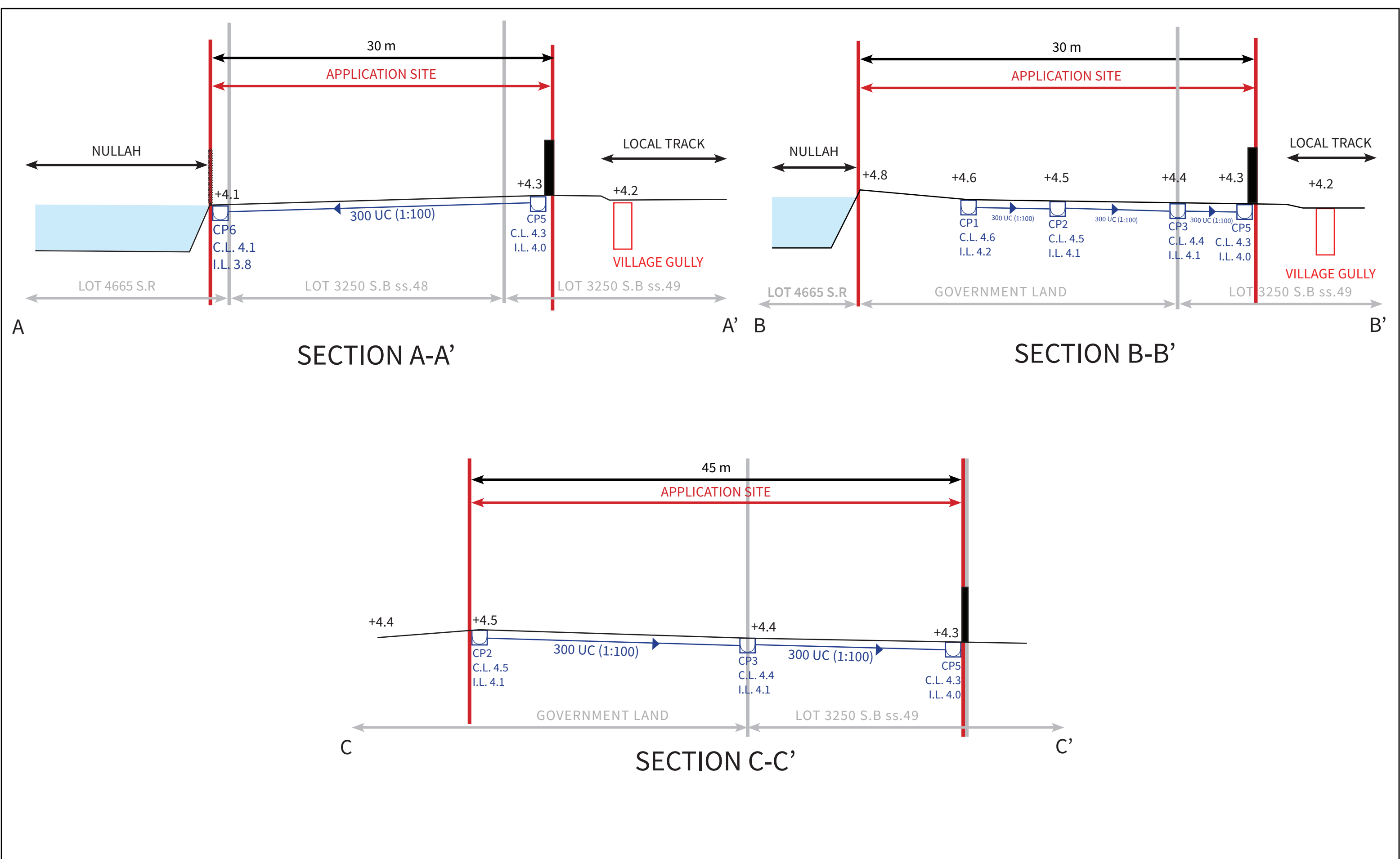




DRAWING TITLE: DRAINAGE PLAN	LEGEND: APPLICATION BOUNDARY ENCLOSED STRUCTURE BOUNDARY WALL 300MM U-CHANNEL WITH GRADIENT 1:100 CATCHPIT WITH SAND TRAP	SCALE: NOT TO SCALE	PREPARED BY:  DeSPACE (International) Limited
DRAWING NO.: FIGURE 1		DATE: JUNE 2026	



DRAWING TITLE: SECTIONAL DIAGRAMS		SCALE: NOT TO SCALE	PREPARED BY:  DeSPACE (International) Limited
DRAWING NO.: FIGURE 2		DATE: JUNE 2026	



DRAWING TITLE: CATCHMENT AREA PLAN		SCALE: NOT TO SCALE	PREPARED BY:  DeSPACE (International) Limited
DRAWING NO.: FIGURE 3		DATE: JUNE 2026	

Design of Surface Drainage System

Design Statement

1. Design Based on a 200 year return period storm
2. Maximum run-off estimation is based on the "Rational Method", i.e.

$$Q = K \cdot I \cdot A / 60$$

where,

Q= Max runoff (l/min)

K= Run-off mean intensity rainfall (mm/min) which depends on the time concentration t

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

H= Average fall (m per 100m) from summit of catchment to the point of catchment to the point of des (h/L_slope) per 100m,%

L= Distance in metres measured on the line of natural flow between the design section and that point of the catchment from which water would take the longest time to reach the design section.

3. Design channels referred to Chapter 8 of the Geotechnical Manual for Slopes, GEO.
4. Design of underground pipes referred to the Municipal Group Design Handbook, 1990.

Area Ref	A (m ²)	L (m)	h (m)	L_slope (m)	H (m/100m)	t0 (min)	i table (mm/hr)	ix1.281 (mm/hr)	C	Q (l/min)
Area-A	227	18	0.20	26	0.77	1.60	450	576	1.00	2181
Area-B	380	13	0.30	24	1.28	0.99	470	602	1.00	3813

Channel Ref	Areas	Total Q (l/min)	Channel Size	Gradient	Capacity (l/min)	Velocity (m/s)	>1.3 & <4?	Check
C1	A	2181	300UC	1 in 100	8000	1.38	OK	OK
C2a	A+B	5994	300UC	1 in 100	8000	1.38	OK	OK
C2b	A+B	5994	300UC	1 in 100	8000	1.38	OK	OK