INDEX PAGE

Ribbon Avenue Drainage Investigation and Drainage Upgrade Project

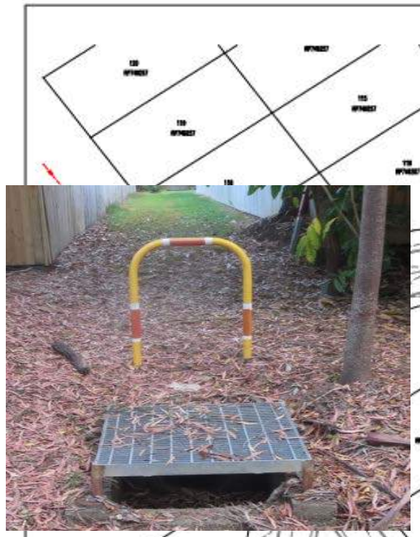
Decription and Link
Street Map
Interim Minor Works
Previous Event - 5_2_2017
Event 25_3_2018 17 Ribbon Avenue
Event 25-3-2018 15 Ribbon Avenue
Catchment Areas
Breakout Locations
Storm Water Ponding
Flood CheckAEP 1%
ENGINEERS OVERVIEW
FNQROC Design Criteria
Aerial Photo 2014
Historical Aerial Photo
Option 8

RETURN TO INDEX

RIBBON AVENUE STREET MAP

RETURN TO INDEX

INTERIM MINOR WORKS



RETURN TO INDEX

RIBBON AVENUE STREET MAP - EVENT 5/2/2017

RETURN TO INDEX

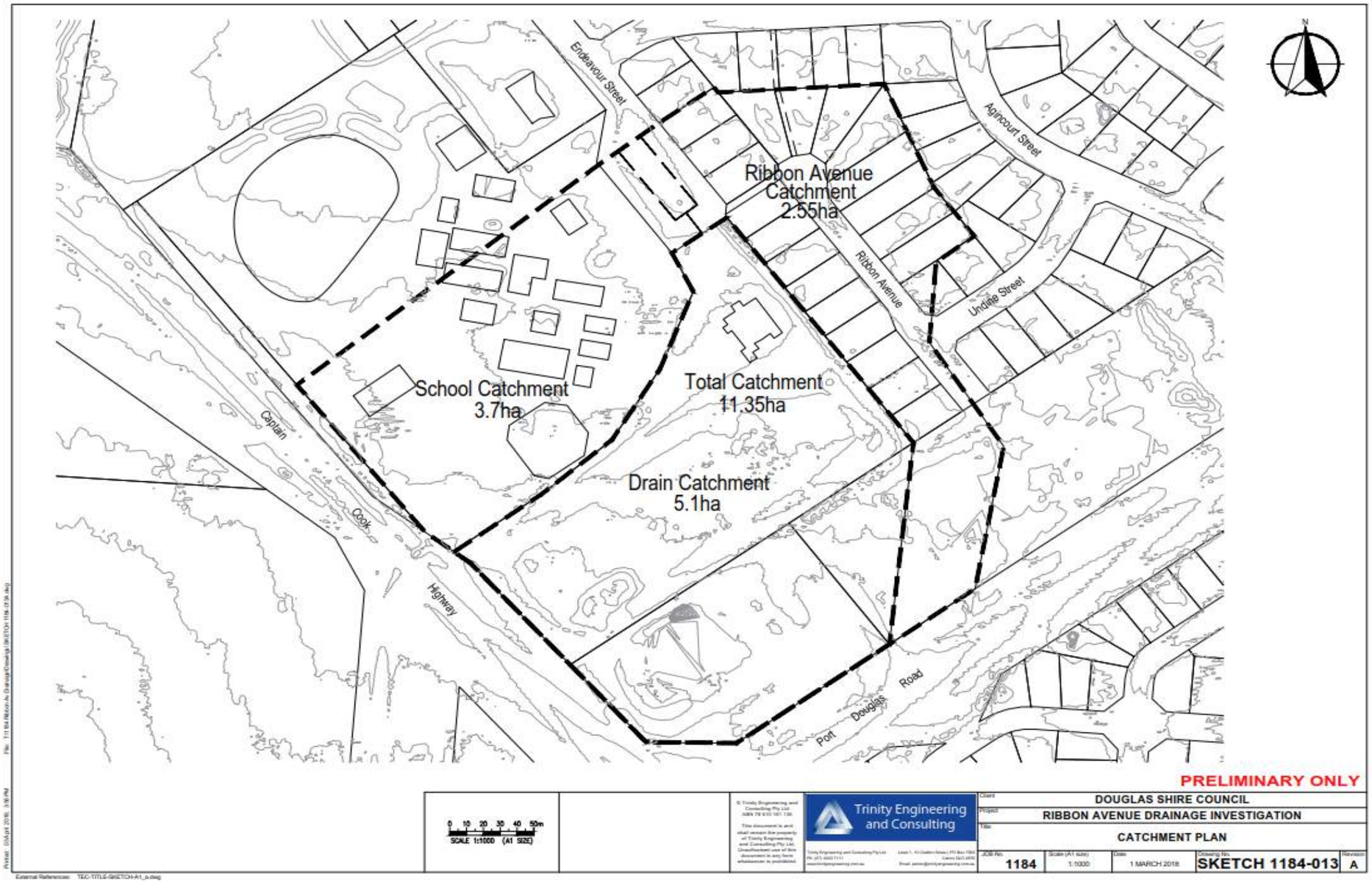
Inundation of Property - Event 25-3-2018 - No. 17 Ribbon Avenue

RETURN TO INDEX

25-3-2018 15 RIBBON AVENUE STREET MAP

RETURN TO INDEX

Drainage Catchment Areas



PRELIMINARY ONLY

0 10 20 30 40 50m
SCALE 1:1000 (A1 SIZE)

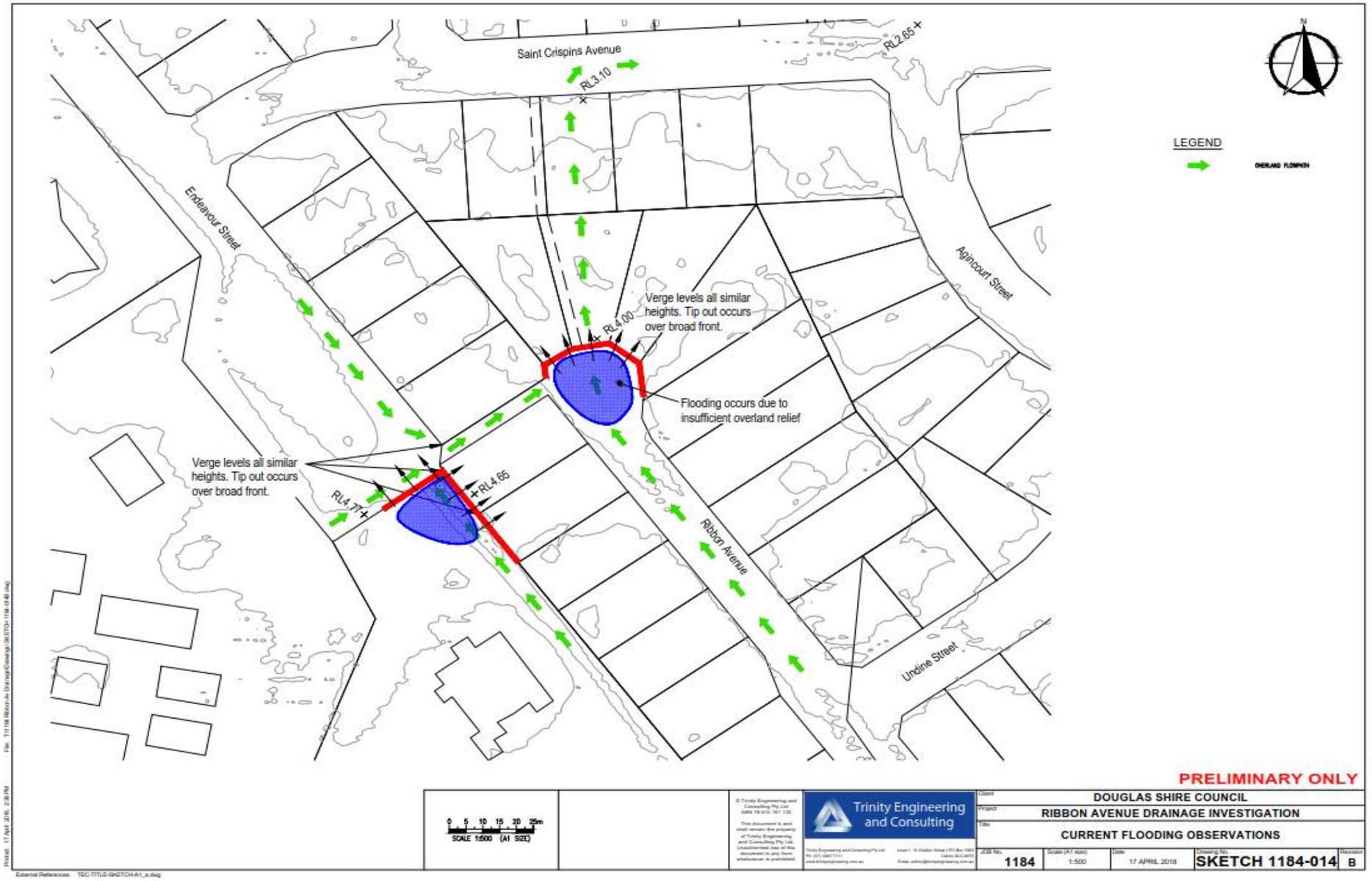
Trinity Engineering and Consulting

Client	DOUGLAS SHIRE COUNCIL
Project	RIBBON AVENUE DRAINAGE INVESTIGATION
Title	CATCHMENT PLAN

Job No.	Scale (A1 size)	Date	Drawing No.	Revision
1184	1:1000	1 MARCH 2018	SKETCH 1184-013	A

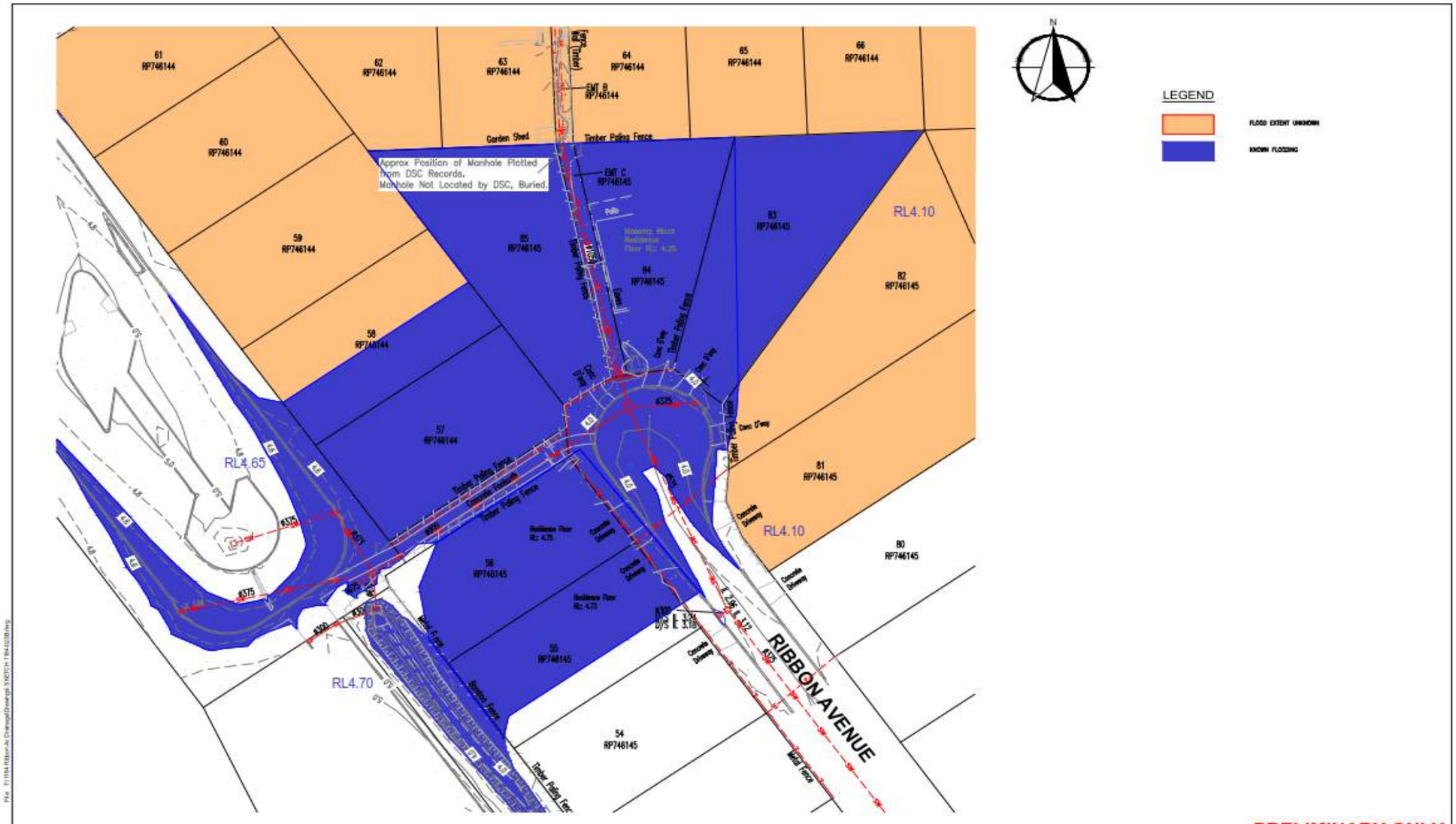
RETURN TO INDEX

RIBBON AVENUE STREET MAP



RETURN TO INDEX

STORMWATER RUNOFF AND PONDING



PRELIMINARY ONLY

NOTE :
BUND TO BE CONSTRUCTED ON TMR ROAD RESERVE BOUNDARY

0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

© Trinity Engineering and Consulting Pty Ltd
ABN 76 615 161 139
This document is and shall remain the property of Trinity Engineering and Consulting Pty Ltd. Unauthorised use of this document in any form whatsoever is prohibited.

Trinity Engineering and Consulting

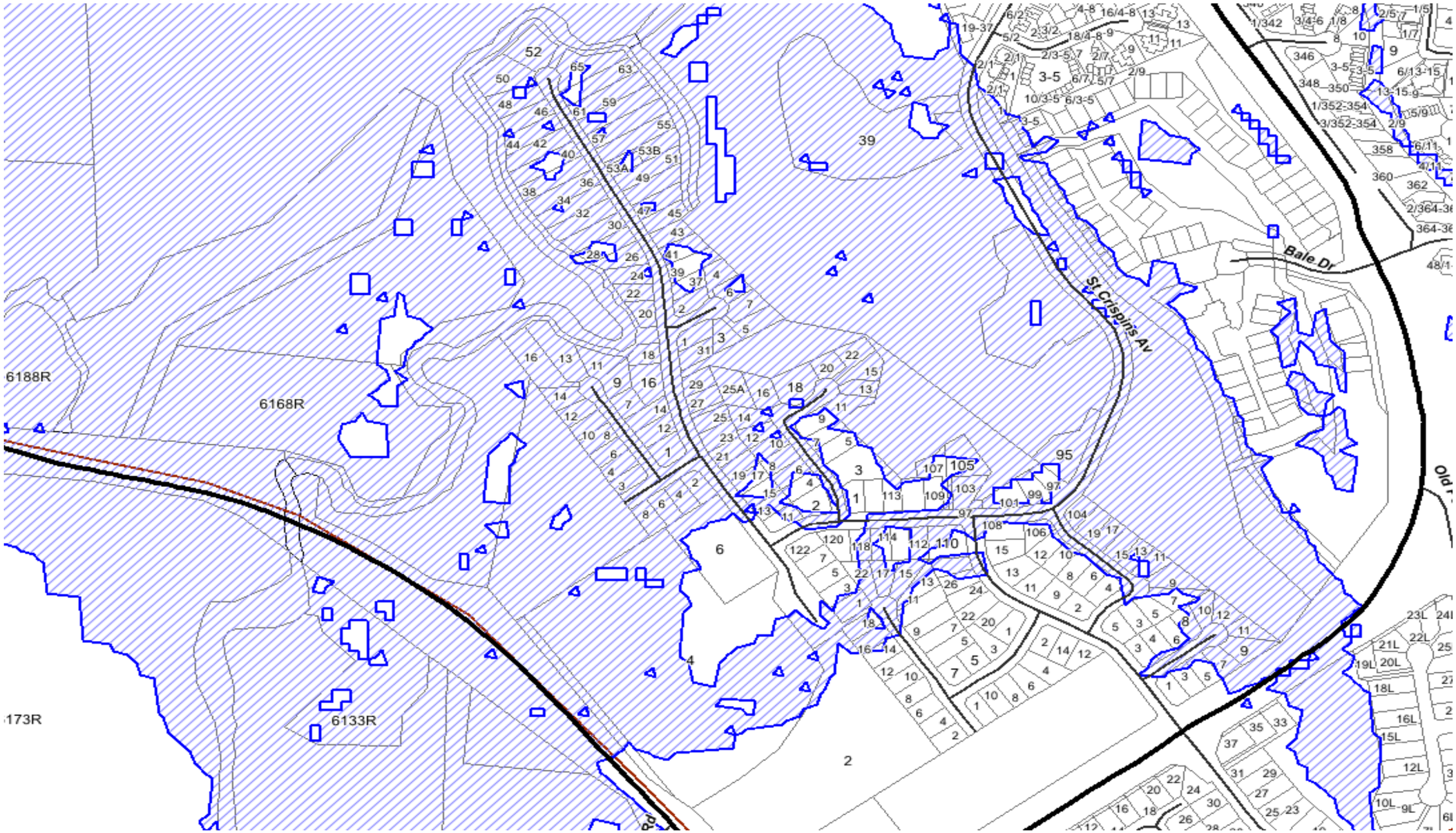
Client	DOUGLAS SHIRE COUNCIL
Project	RIBBON AVENUE DRAINAGE INVESTIGATION
Title	STORMWATER PONDING
Job No.	1184
Scale (A1 size)	1:500
Date	13 AUGUST 2018
Drawing No.	SKETCH 1184-023
Revision	B

Plotted: 14 August 2018, 9:19 AM
File: T:\1184 Ribbon Av Drainage\Drawings\SKETCH 1184-023.dwg
External References: TEC-TITLE-SKETCH-A1_a.dwg ; 1184-X-SURVEY.dwg

RETURN TO INDEX

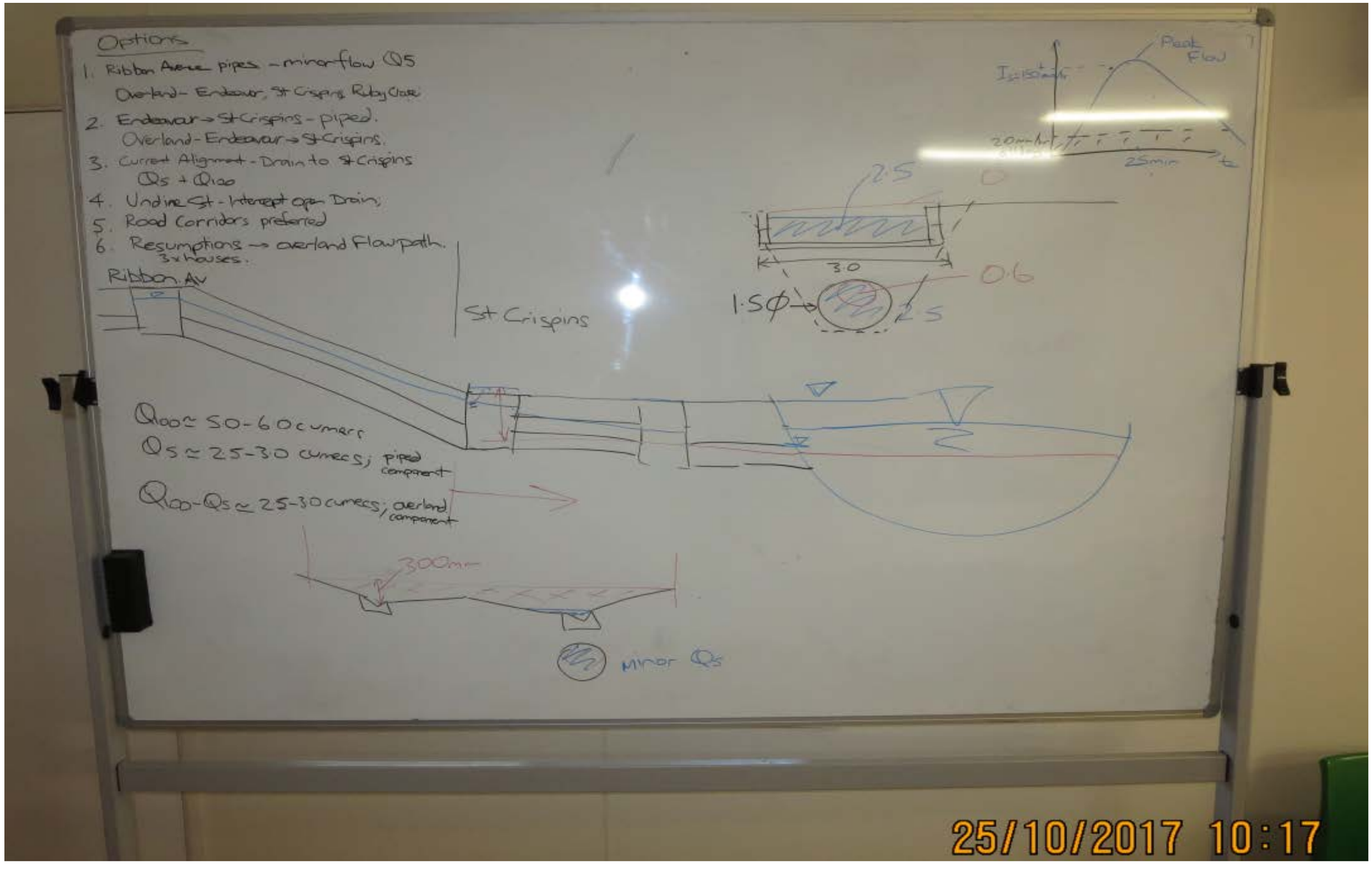
QRA FLOOD HAZARD MAPPING - PORT DOUGLAS - AEP 1%

http://dnrm-floodcheck.esriaustraliaonline.com.au/floodcheck/



RETURN TO INDEX

ENGINEERS OVERVIEW



D4.05 DESIGN AVERAGE RECURRANCE INTERVAL CRC

1. Design Average Recurrence Interval (ARI) shall be in accordance with table 4.3 "Recommended Design Average Recurrence Intervals" (modified from QUDM) unless noted otherwise in the Local Authority Specific Requirements.
2. For the purpose of drainage, a major road shall be defined as a major collector or higher order road.

Table 4.3 – Recommended Design Average Recurrence Intervals

(i) MAJOR SYSTEM DESIGN ARI (years)		100 [1]
(ii) MINOR SYSTEM DESIGN ARI (years)		
Development Category		
Central Business and Commercial		10
Industrial		5
Urban Residential High Density - greater than 20 dwelling units/ha		10
Urban Residential low Density - greater than 5 & up to 20 dwelling units/ha		5
Rural Residential – 2 to 5 dwelling unit/ha		5
Open Space – parks, etc.		1
Major Road	Kerb & Channel Flow	10 [2]
	Cross Drainage (Culverts)	50 [3]
Minor Road	Kerb & Channel Flow	Refer to relevant development category in QUDM
	Cross Drainage (Culverts)	10 [3]

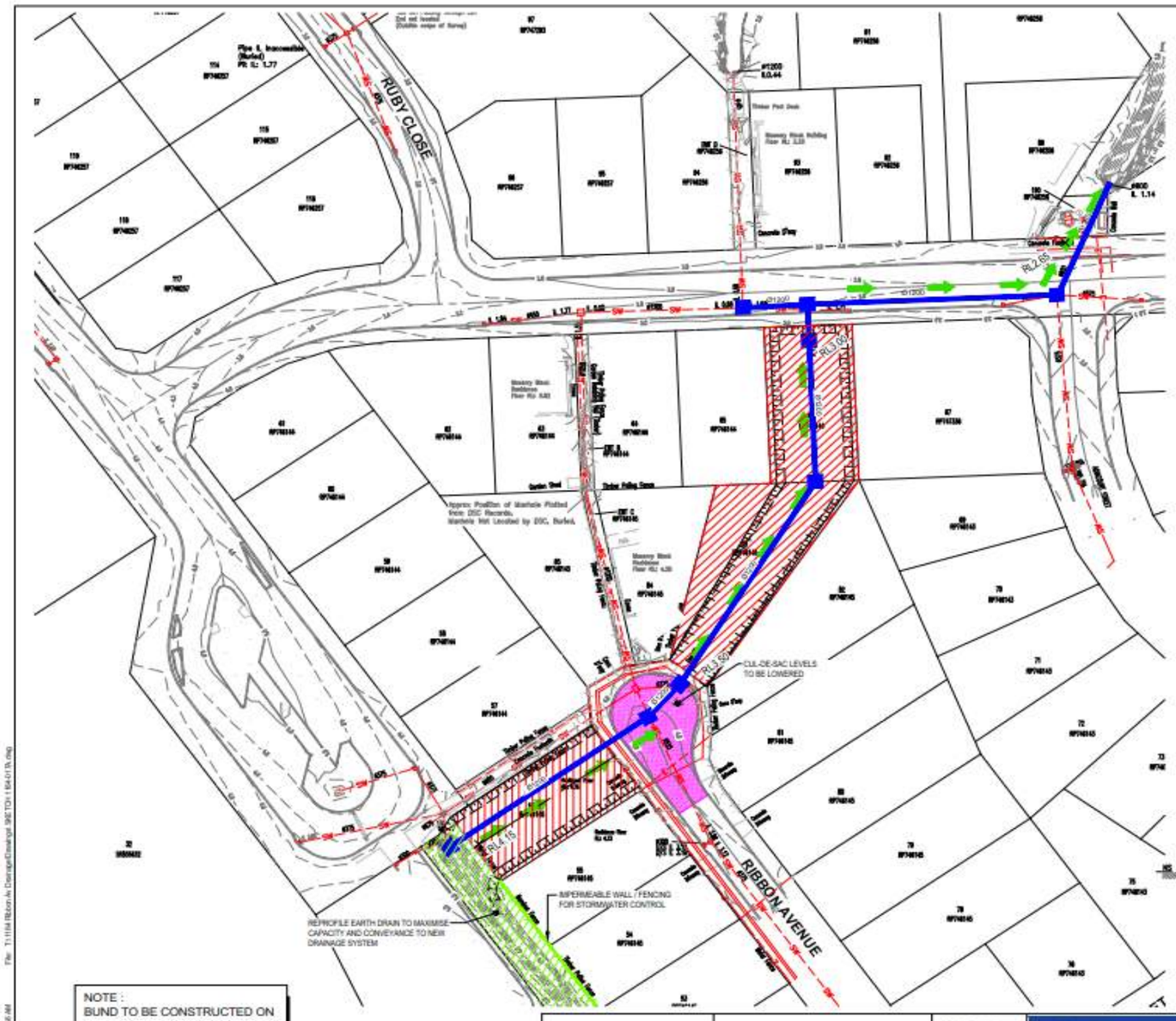
1. *State Planning Policy* recommends adoption of the 1% AEP (Annual Exceedance Probability) flood frequency for waterway flood management planning.
2. The design ARI for the minor drainage system in a major road shall be that indicated for the major road, not that for the Development Category of the adjacent area.
3. Culverts under roads should be designed to accept the full flow for the minor system ARI shown. In addition the designer must ensure adequate public safety controls (e.g. d*V product) exist and that the nominated Major Storm flow does not cause unacceptable damage to adjacent properties, or adversely affect the use of the land. If upstream properties are at a relatively low elevation, it may be necessary to install culverts of capacity greater than that for the minor system ARI design storm to ensure unacceptable flooding of upstream properties does not occur. In addition, the downstream face of causeway embankments may need protection where overtopping is likely to occur.

RETURN TO INDEX

HISTORICAL AERIAL PHOTO AND CURRENT

RETURN TO INDEX

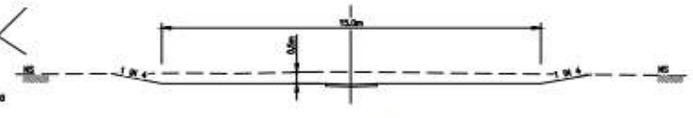
DRAINAGE OPTION 8



LEGEND

- OVERLAND FLOW DIRECTION
- RESUMPTION
- PIPE SYSTEM

BARRAGE HEIGHT	1.025m
H.A.T	1.779m
M.H.W.S	0.909m
M.H.W.N.	0.249m
M.S.L	0.019m
M.L.W.N	-0.211m
M.S.L	-0.881m
M.S.L	-1.581m



SECTION

TYPICAL OVERLAND FLOWPATH
SCALE 1:100

PRELIMINARY ONLY

© Trinity Engineering and Consulting Pty Ltd ABN 78 610 361 130
This document is and shall remain the property of Trinity Engineering and Consulting Pty Ltd. Unauthorised use of this document in any form whatsoever is prohibited.

Trinity Engineering and Consulting

Client	DOUGLAS SHIRE COUNCIL
Project	RIBBON AVENUE DRAINAGE INVESTIGATION
Title	DRAINAGE SOLUTION - OPTION 8 RESUMPTION OF LOT 56&83 ON RP746145 & LOT 66 ON RP746144

Job No.	Scale (A1 size)	Date	Drawing No.	Revision
1184	1:500	27 APRIL 2018	SKETCH 1184-017	A

Print: 27 April 2018, 11:56 AM
File: T:\1184 Ribbon Av Drainage\Drawings\ SKETCH 1 184-017A.dwg
External References: TEC-TITLE-SKETCH-A1_a.dwg ; 1184-X-SURVEY.dwg