

# ROAD DESIGN PRESENTATION STANDARDS

## DP007 – DRAINAGE CATCHMENT

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DEPARTMENT OF  
PLANNING, TRANSPORT  
AND INFRASTRUCTURE



**Government of South Australia**  
Department of Planning,  
Transport and Infrastructure

## Document Amendment Record

Rev	Change Description	Date	Author	Checked	Authorised
1	Initial Issue	1 December 2010			Noel O'Callaghan
2	General review of text and example drawings	23 December 2011	Natasha Stone Alison Freer	Jeremy Champion	Noel O'Callaghan

## Document Management

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To be read in conjunction with CAD Manual & Presentation Guidelines DP001  
(Master Specification PC-EDM7)

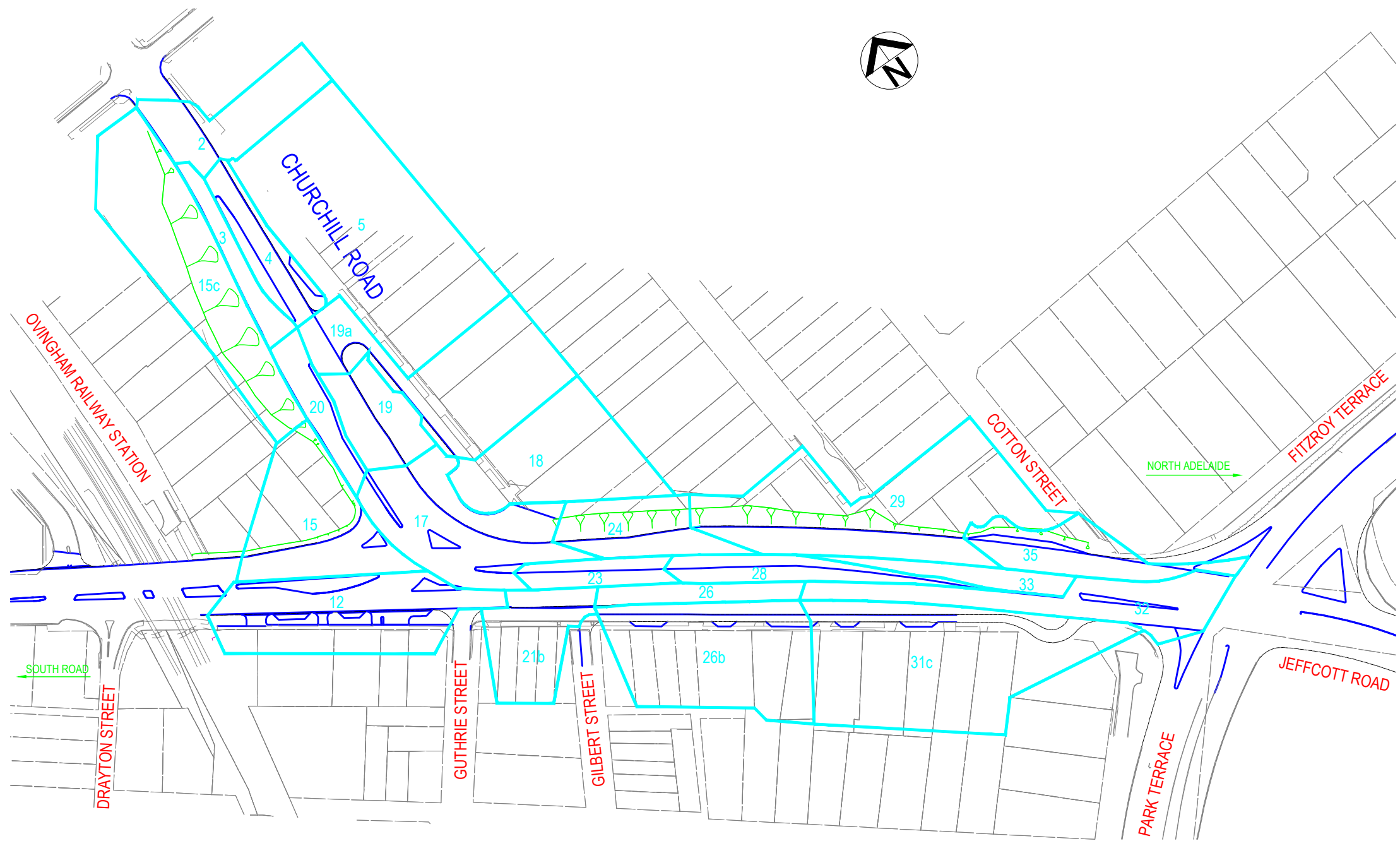
# DP007 DRAINAGE CATCHMENT

## 1 Purpose

- 1.1 The 'Drainage Catchment' drawing is used to show the catchment area information used in the drainage design of the project.
- 1.2 For examples of this standard see attached drawings.

## 2 Content

- 2.1 Layers to be shown as per the DPTI Layer Matrix (DP001, Appendix A)
- 2.2 The following CAD entities are required:
  - a) All information in DP001 – General requirements.
  - b) Lines showing the catchment boundaries. (layer = "D-DRAI-Drainage Catchment Bdy+ID Label")
  - c) Text identifying the Catchment boundary identifiers. (layer = "D-DRAI-Drainage Catchment Bdy+ID Label") (Paper Space text height = 5mm)
  - d) Specific Drainage design notes. (layer = "D-ENHA-General Notes")
  - e) Drainage Catchment details schedule. (layer = "D-ENHA-Schedules")
  - f) Minimum scale of drawing 1:2500.
- 2.3 Survey on the Drainage Catchment Drawing shall be trimmed. (ie survey detail should only be shown outside the extents of the design)



**DRAIN CATCHMENT DETAILS**

AREA ID	STRUCTURE ID	AREA (Ha)	PAVED (%)	SUPPLEMENTARY PAVED (%)	GRASSED (%)	DESIGN STANDARD (ARI)
2	D2	0.07	90	5	5	5
3	D3	0.08	100	0	0	5
4	D4	0.11	100	0	0	5
5	D5	0.68	55	5	40	5
12	D12	0.31	100	0	0	5
15	D15	0.25	45	5	50	5
15c	D15c	0.41	0	0	100	5
17	D17	0.2	80	0	20	5
18	D18	55	10	35	35	5
19	D19	0.12	100	0	0	5
19a	D19a	0.36	52	10	38	5
20	D20	0.09	100	0	0	5
21b	D21b	0.18	46	0	54	5
23	D23	0.08	100	0	0	5
24	D24	0.16	48	5	47	5
26	D26	0.07	100	0	0	5
26b	D26b	0.38	30	15	55	5
28	D28	0.1	100	0	0	5
29	D29	0.39	36	5	59	5
31c	D31c	0.40	50	20	30	5
32	D32	0.2	100	0	0	5
33	D33	0.08	100	0	0	5
35	D35	0.15	75	5	20	5

**NOTES:**

- THE DESIGN AVERAGE RECURRENCE INTERVAL (ARI) FOR DRAINAGE OF ROAD PAVEMENT IS 5 YEARS.
- RAINFALL (TEMPORAL PATTERNS) AND INTENSITIES FOR ZONE 6 FROM AUSTRALIAN RAINFALL AND RUNOFF. (THE INSTITUTE OF ENGINEERS, AUSTRALIA, 1987).
- HYDRAULIC DESIGN:
  - FRICTION LOSSES USING COLEBROOK-WHITE 'K' = 0.15
  - JUNCTION LOSSES FROM 'PRESSURE CHANGES AT STORM JUNCTIONS', SANGSTER ET AL.
  - UNIVERSITY OF MISSOURI, 1958 AND HYDRAULIC GRADE LINE DESIGN MANUAL, MESSNER 1983

No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE

100 MILLIMETRES ON ORIGINAL DRAWING

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE

**Government of South Australia**  
Department of Planning, Transport and Infrastructure

PROJECT No.: 10930	FILE No.: 98/10376
DESIGN No.: 19980418	SURVEY No.: 101086
PROJECT START ROAD RUNNING DISTANCE: MCTR; CH 700 = 7.97 km	
PROJECT END ROAD RUNNING DISTANCE: MCTR; CH 240 = 7.51 km	

SCALES:  
20 0 10 20 30 40

ROAD No. 5639  
**TORRENS ROAD**  
RAILWAY CROSSING - PARK TERRACE; Ovingham

**DRAINAGE CATCHMENT**

DESIGNED: PM	DRAFTED: AEF	ACCEPTED FOR USE: A.SMITH	ACCEPTANCE FORM KNET No.: 12345678	DRAWING No.: 2894	SHEET No.: 17	AMEND No.: 0
CHECKED: DK	CHECKED: NKS	TITLE: MANAGER	DATE: 30/02/2010	UNCONTROLLED COPY WHEN PRINTED		

CAD FILE NAME: DP007 EXAMPLE.TDWG