

# RIVERWOOD NORTH RESIDENTIAL RENEWAL PROJECT

## CONCEPT PLAN APPLICATION

### STORMWATER DRAINAGE & WATER SENSITIVE URBAN DESIGN

#### LEGEND

##### CIVIL DRAINAGE SYMBOLS

	STW	STORMWATER DRAINAGE PIPE
	STWRM	STORMWATER RISING MAIN
		STORMWATER DRAINAGE CHANNEL
	RW	RAINWATER
	SS	SUB SOIL DRAINAGE WITH CLEAN OUT
	SSRM	SUB SOIL RISING MAIN
	EB-LF	EARTH BANK LOW FLOW
	EB-HF	EARTH BANK HIGH FLOW
	EM	EXCAVATED MATERIAL
		FLUME
	DD	DIVERSION DRAIN
		DIVERSION DRAIN
	OPF	OVERFLOW PATH
	OFD	OVERFLOW DRAIN
	CLD	CONCRETE LINED DRAIN
	RLD	ROCK LINED DRAIN
	TD	TABLE DRAIN
		V DRAIN (L)
		V DRAIN (R)
		SWALE or SPEED HUMP

		OVERLAND FLOW DIRECTIONAL ARROW
		OVERLAND FLOW PATH
	DP	DOWN PIPE
		PAVED AREA DRAIN

		DROP TO OR RISE FROM
		RISE TO OR DROP FROM
		TEE DROP
		TEE RISE
	VERT	VERTICAL RISER IN DRAINAGE
		FLOW DIRECTIONAL ARROWS ON ALL PIPING SERVICES
		PIPELINE TERMINATED WITH BLANK FLANGE
		PIPELINE PLUGGED OFF
	CO	CLEAROUT
	F.P.	FLUSHING POINT
		NEW PIPE

		RISER
		SERVICE
		SIZE
		DROPPER
		NON-RETURN FLAP VALVE ON INSIDE FACE OF PIT AT ALL DOWN PIPES & SUB SOIL DRAINAGE LINES TO OSD SYSTEM

##### CIVIL ABBREVIATIONS

BWL	DRAINAGE LEVELS
IL	BOTTOM WATER LEVEL
OL	INVERT LEVEL
SL	OBVERT LEVEL
TWL	SURFACE LEVEL
	TOP WATER LEVEL
LD	GRATES & COVERS
MD	LIGHT DUTY CLASS 'B'
HD	MEDIUM DUTY CLASS 'C'
EHD	HEAVY DUTY CLASS 'D'
MP	EXTRA HEAVY DUTY CLASS 'E'
	MULTI PART COVER OR GRATE
CDS	PITS
DCP	CDS TECHNOLOGIES, STORMWATER TRAPS
DGGP	DISCHARGE CONTROL PIT
	DOUBLE GRATED GULLY PIT (CAST IRON)
GPT	GROSS POLLUTANT TRAP
JP	JUNCTION PIT
KEP	KERB ENTRY PIT
KEU	KERB ENTRY UNIT
MPC	MULTI PART COVER
MPG	MULTI PART GRATE
RR	RAINWATER REUSE
SGGP	SINGLE GRATED GULLY PIT (GMS)
SWP	STORMWATER PIT
RW	DRAINAGE LINES
SS	RAIN WATER (REUSE)
STRM	SUBSOIL DRAINAGE
STW	STORMWATER RISING MAIN
GO	STORMWATER DRAIN
OLD	GRADED DRAIN
ODU	OPEN LINED DRAIN
	OPEN UNLINED DRAIN
CO	FEATURES
DP	CLEAROUT
FP	DOWN PIPE
IO	FLUSHING POINT
OF	INSPECTION OPENING
RO	GUTTER OVERFLOW PIPE
DTU	RAINWATER OUTLET
	DRAINAGE TURNUP
OSD	OSD
PSD	ONSITE DETENTION
OPF	PERMISSIBLE SITE DISCHARGE
SWMP	OVERFLOW PATH
ESCP	STORM WATER MANAGEMENT PLAN
	EROSION & SEDIMENT CONTROL PLAN

	OSD ABOVE GROUND
	KEP - KERB ENTRY PIT
	DOUBLE GRATED GULLY PIT
	JUNCTION PIT WITH COVER
	SURFACE INLET PIT (FLUSH/RAISED)
	SURFACE INLET PIT (DEPRESSED)
	GRADED TRENCH DRAIN

##### EROSION & SEDIMENTATION SYMBOLS

	FENCES
	BARRIER FENCE
	SEDIMENT FENCE
	SILT FENCE ON LEVEL
	SILT FENCE ON GRADE
	WIND FENCE
	BANKS
	DIVERSION CHANNEL/BANK
	LEVEL SPREADER
	EARTH BANK
	EBLF
	EBHF
	EM
	TRAPS
	GEOTEXTILE SEDIMENT TRAP
	CHECK DAMS (STRAW BALE OR ROCK)
	CONCRETE ENERGY DISSIPATOR
	STABILISED CONSTRUCTION SITE VEHICLE ENTRY/EXIT GRID
	SEDIMENT TRAP
	GEOTEXTILE FILTER BAGS OR SOCK

##### ROAD LANE MARKING SYMBOLS

	C1 CONTINUITY LINE 1m, 3m, w0.200
	E1 EDGE LINE 35m, 1m, w0.120
	L1 LANE LINE 3m, 9m, w0.080
	S1 SEPARATION LINE 3m, 9m, w0.100
	S2 SEPARATION LINE 6m, 6m, w0.100
	S3 SEPARATION LINE 3m, 3m, w0.100
	T1 TURN LINE 0.6m, 0.6m, w0.100
	TB GIVEWAY LINE 0.6m, 0.6m, w0.200
	PAVEMENT MARKERS SQ, 1m CTS

#### LEGEND

##### SURVEY & MAPPING SYMBOLS

	PROPERTY BOUNDARY
	EASEMENT
	FENCE OFF BOUNDARY
	FENCE ALONG BOUNDARY
	FENCE ON BOUNDARY
	STATE BOUNDARY
	COUNTY BOUNDARY
	PARISH BOUNDARY
	SHIRE/MUNICIPALITY BOUNDARY
	NATIONAL PARK BOUNDARY
	STATE RECREATION BOUNDARY
	STATE FOREST BOUNDARY
	TELSTRA EXCHANGE BOUNDARY

##### GENERAL ABBREVIATIONS

CTS	CENTERS
CL	CENTRE LINE
DIA	DIAMETER
DMR	DEPARTMENT OF MAIN ROADS
DWG	DRAWING
EX.	EXISTING
GALV	GALVANIZED
HD GALV	HOT DIPED GALVANIZED
ID	INTERNAL DIAMETER
L.O.C.	LIMIT OF CONTRACT
MAX	MAXIMUM
MIN	MINIMUM
NB	NOMINAL BORE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
REV	REVISION
RTA	ROADS AND TRAFFIC AUTHORITY
SQ	SQUARE
SRA	STATE RAIL AUTHORITY
STD	STANDARD
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL

##### LEVELS ABBREVIATIONS

CL	CEILING LEVEL
FFL	FINISHED FLOOR LEVEL
FGL	FINISHED GROUND LEVEL
GL	EXISTING GROUND LEVEL
HL	HIGH LEVEL
HP	HIGH POINT
LL	LOW LEVEL
ML	MID LEVEL
NS	NATURAL SURFACE LEVEL
PL	PLATFORM LEVEL
RL	REDUCED LEVEL
US	UNDER SIDE
USFL	UNDERSIDE FLOOR

##### ROAD PAVEMENT ABBREVIATIONS

AC	ASPHALTIC CONCRETE
CBR	CALIFORNIA BEARING RATIO
DGB	DENSELY GRADED BASE COURSE
DGS	DENSELY GRADED SUB BASE
DSL	DESIGN SUBGRADE LEVEL
F.C.R.	FINE CRUSHED ROCK
O.T.R.	OTHER THEN ROCK
RC	REINFORCED CONCRETE
SF	STRIP FOOTING
?	RECYCLED CONCRETE JOINTS
BJ	BUTT JOINT
CJ	CRACK INDUCED JOINT
CJ	CONSTRUCTION JOINT
CJ	CONTRACTION JOINT
CJ	CONTROL JOINT
DJ	DOWELLED JOINT
DKJ	DOWELLED KEY JOINT
EJ	EXPANSION JOINT
IJ	ISOLATION JOINT
KJ	KEYED JOINT
SC	SAW CUT
TJ	TOOL JOINT
TKJ	TOBY KEYED JOINT
	FEATURES
JK	NEW JERSEY KERB BARRIER
LP	LIGHT POLE
NKL	NOMINAL KERB LINE
PP	POWER POLE
SL	STREET LIGHT
TL	TRAFFIC LIGHT

##### SURVEY ABBREVIATIONS

AHD	AUSTRALIAN HEIGHT DATUM
BK	BOTTOM OF KERB
BM	BENCH MARK
CL	CENTRE LINE
D.E.	DRAINAGE EASEMENT
DH&W	DRILL HOLE & WING
FD	FOUND
INV	INVERT
K & G	KERB & GUTTER
R.O.W.	RIGHT OF CARRIAGEWAY
SSM	STATE SURVEY MARK
TK	TOP OF KERB

RL 165.40	PROPOSED SURFACE LEVEL
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##### SERVICES & UTILITIES SYMBOLS

	A	AIR
	C	CABLES
	D	DRAINS
	E	ELECTRICAL
	LV	LOW VOLTAGE
	HV	HIGH VOLTAGE
	V	TRANSMISSION POWER LINES
	EFF	COMMON EFFLUENT
	ERM	EFFLUENT RISING MAIN
	F	FUEL
	G	GAS
	G(HP)	GAS HIGH PRESSURE
	G(MP)	GAS MEDIUM PRESSURE
	G(LP)	GAS LOW PRESSURE
	GAS	GAS
	NG	NATURAL GAS
	H	HYDRAULIC POWER
	I	IRRIGATION
	RTA	RTA ROADS & TRAFFIC AUTHORITY
	SRA	SRA STATE RAIL SERVICE
	S	SEWER
	SRM	SEWER RISING MAIN
	T	TELECOMMUNICATIONS TELSTRA
	OF	OPTICAL FIBRE OF
	SMOF	OPTICAL FIBRE CABLE SMOF
	OP	OPTUS
	OCC	OVERHEAD COMMUNICATION CABLE
	W	WATER
	WRM	WATER RISING MAIN
	MS	MISCELLANEOUS SERVICE
	X	X
	Y	Y
	Z	Z
		DRAINAGE CULVERTS & PIPE SIZES GREATER THAN & INCLUDING 450 DIA TO BE SHOWN IN FULL WIDTH

NOTE:-  
'e' ON SERVICE LINE REPRESENTS EXISTING SERVICE OR THE USE OF LOWER CASE LETTER.  
'x' ON SERVICE LINE REPRESENTS SERVICE TO BE ABANDONED.

##### DRAFTING SYMBOLS

	SCALE BARS
	SCALE 1:200
	SCALE 1:200

	SECTION SYMBOL
	SECTION No. C-03
	REFERENCE DRAWING
	PIT No. 22/33
	LINE No. 10771

##### WATER & SEWER ABBREVIATIONS

AC	ACCESS CHAMBER
BT	BOUNDARY TRAP
GM	GRAVITY MAIN
HYD	HYDRANT
IO	INSPECTION OUTLET
LH	LAMP HOLE
MH	MAN HOLE
PS	PUMP STATION
RM	RISING MAIN
SV	STOP VALVE
SWW	SYDNEY WATER WATERMAIN
WM	WATER METER
	PROPOSED SYDNEY WATER SEWER
	FUTURE SYDNEY WATER SEWER
	EXISTING SYDNEY WATER SEWER
	EXISTING SYDNEY WATER SEWER
	EXISTING SYDNEY WATER SEWER TO BE DISUSED.

##### MATERIALS

Br	BRASS
CI	CAST IRON
CICL	CAST IRON CEMENT LINED
CONC	CONCRETE
CP	CHROMIUM PLATED
Cu	COPPER
DICL	DUCTILE IRON CEMENT LINED
FRC	FIBRE REINFORCED CEMENT GALVANISED
GMS	MILD STEEL
MS	MILD STEEL
NY	NYLON
PE	POLYETHYLENE
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RHS	RECTANGULAR HOLLOW SECTION
SS	STAINLESS STEEL

##### CATCHMENT SYMBOLS

	PIT CATCHMENT
	LINE CATCHMENT
	MAJOR CATCHMENT
	SUB CATCHMENT
	LIMIT OF CATCHMENT

##### CATCHMENT ABBREVIATIONS

P()	PAVED CATCHMENT AREA
R()	ROOFED CATCHMENT AREA
A()	LANDSCAPE CATCHMENT AREA
T()	TERRACE CATCHMENT AREA
ARI	AVERAGE RECURRENCE INTERVAL
CA	CATCHMENT AREA
Ha	HECTARE
L/s	LITRES PER SECOND (VELOCITY)
m/s	METRES PER SECOND (VELOCITY)
CUMECs	CUBIC METRES PER SECOND
Q	QUANTITY OF FLOW

##### DRAWING LIST

C-01	TITLE, DRAWING LIST, LEGEND, ABBREVIATIONS & NOTES
C-02	SPECIFICATION NOTES
C-03	EXISTING SITE SURVEY PLAN
C-04	STORMWATER DRAINAGE EXISTING CATCHMENT PLAN
C-05	STORMWATER DRAINAGE EXISTING LAYOUT PLAN
C-06	STORMWATER DRAINAGE PROPOSED CATCHMENT PLAN
C-07	STORMWATER DRAINAGE PROPOSED LAYOUT PLAN

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PRELIMINARY ISSUE

TITLE  
TITLE, DRAWING LIST, LEGEND, ABBREVIATIONS & NOTES

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