

Attachment A14-2

Flood Assessment and Stormwater Management Report

Appendix A - City of Sydney; Epsom Road Precinct Concept Design Reference Drawings

Drawing Status
CONCEPT DESIGN
NOT FOR CONSTRUCTION

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REVISIONS		
No.	Date	Description
A	23/10/2015	100% Issue
B	05/01/2016	100% Issue
C	12/02/2016	100% Issue

KEY PLAN



GENERAL NOTES:
 THESE ARE CONCEPT DRAWINGS AND ARE SUBJECT TO DETAIL DESIGN TO BE PRODUCED BY OTHERS. THESE DRAWINGS ARE FOR GUIDANCE ONLY ALL LIABILITY AND RESPONSIBILITY FOR COMPLYING WITH CITY OF SYDNEY (COS) CODES AND MANDATORY LEGISLATION RESTS WITH THE PRIVATE DEVELOPER AND THEIR CONSULTANTS AS A PART OF THEIR DETAILED DESIGN.

THE INFORMATION IS THIS DOCUMENTATION IS PRODUCED SOLELY AS CONCEPT DESIGN FOR COSTING PURPOSES. NO DUTY, RESPONSIBILITY OR LIABILITY TO ANY THIRD PARTY WHO MAY RELY ON THIS DOCUMENT IS ACCEPTED.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH COS STANDARD DRAWINGS AND SPECIFICATIONS, CITO ENGINEERING DRAWINGS AND COS STREET CODE & SYDNEY STREETS TECHNICAL SPECIFICATION. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND COS SPECIFICATION TO BE COMMUNICATED TO COS FOR APPROVAL.

ALL LIGHTING QUANTITIES ARE SUBJECT TO DETAIL DESIGN BASED ON COS PERFORMANCE SPECIFICATION AND LUMINAIRES SHOULD BE BASED ON THE LIGHTS & LUMINAIRES NOTED IN THE NOTED IN THE MATERIALS PALETTE IN THIS DRAWING PACKAGE. ALL LIGHTING LEVELS TO COMPLY WITH COS AND AUSTRALIAN STANDARDS.

RAINGARDENS AND SWALES ARE A MIXTURE OF SWALES WITH OVERFLOW PITS, INFILTRATION UNLINED SYSTEMS, SURCHARGE PITS AND LINKED SYSTEM RAINGARDENS. PLEASE SEE DRAINAGE PACKAGE FOR INTENT SUBJECT TO DETAIL DESIGN.

NOTE THAT ALL TREES INCLUDING IN ROAD PLANTER BLISTERS ARE TO HAVE A 50mm DIAMETER SLOTTED PIPE WITH GEOTEXTILE SLEEVE PLACED AROUND ROOT BALL AND TERMINATING AT KERB HOLE AS SHOWN IN DETAILS TYPE 1.2,3 OF PART D OF THE COS TECHNICAL GUIDELINES

STRUCTURAL SOIL IS TO BE USED IN TRAFFICABLE AREAS. REFER TO CD300-309. THE APPLICATION OF PLASTIC CELL SYSTEM IS UNDER CITY OF SYDNEY REVIEW IN THESE LOCATIONS (RED). FINAL SPECIFICATION IS SUBJECT TO CITY'S ASSESSMENT AND APPROVAL

DO NOT SCALE FROM THESE DRAWINGS.

DRAWING LIST	DRAWING TITLE	SCALE @A1	REVISION
CD000	COVER SHEET & DRAWING LIST	NTS	C
CD001	GENERAL ARRANGMENTS PLAN	1:500 @ A0	D
CD010	LEGEND MATERIALS PALETTE	N/A	A
CD011	LEGEND SOFTWARES PALETTE	N/A	B
CD012	LEGEND PLANT SCHEDULE	N/A	A
CD100	EXISTING CONDITIONS & EXISTING TREE PLAN	NTS	A
CD200	PUBLIC DOMAIN PLANS	1:1000	A
CD201	PUBLIC DOMAIN PLANS	1:250	A
CD202	PUBLIC DOMAIN PLANS	1:250	A
CD203	PUBLIC DOMAIN PLANS	1:250	A
CD203	PUBLIC DOMAIN PLANS	1:250	A
CD204	PUBLIC DOMAIN PLANS	1:250	A
CD205	PUBLIC DOMAIN PLANS	1:250	A
CD206	PUBLIC DOMAIN PLANS	1:250	A
CD207	PUBLIC DOMAIN PLANS	1:250	A
CD208	PUBLIC DOMAIN PLANS	1:250	A
CD209	PUBLIC DOMAIN PLANS	1:250	A
CD300	STREET TREE & SUBSOIL TREATMENT PLAN	1:1000	B
CD301	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD302	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD303	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD304	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD305	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD306	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD307	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD308	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
CD309	STREET TREE & SUBSOIL TREATMENT PLAN	1:250	B
ED400	SUBSOIL SERVICES & UNDERGROUND CARPARK PLAN	1:1000	
CD500	FURNITURE, FIXTURES & LIGHTING PLAN	1:1000	A
CD501	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD502	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD503	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD504	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD505	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD506	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD507	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD508	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD509	FURNITURE, FIXTURES & LIGHTING PLAN	1:250	A
CD600	STREET SECTION PLAN	1:1000	A
CD601	STREET SECTION ZETLAND AVE TEMPORARY & LONG TERM ARRANGEMENT	AS SHOWN	A
CD602	STREET SECTION ZETLAND AVE BETWEEN JOYNTON AVE & GEORGE JULIUS AVE	AS SHOWN	A
CD603	STREET SECTION ZETLAND AVE BETWEEN GEORGE JULIUS AVE & DEFRIES AVE	AS SHOWN	A
CD604	STREET SECTION GEORGE JULIUS AVE SOUTH OF ZETLAND AVE	AS SHOWN	A
CD605	STREET SECTION GEORGE JULIUS AVE SOUTH OF ZETLAND AVE	AS SHOWN	A
CD606	STREET SECTION DEFRIES AVE SOUTH OF ZETLAND AVE	AS SHOWN	A
CD607	STREET SECTION DEFRIES AVE NORTH OF ZETLAND AVE	AS SHOWN	A
CD608	STREET SECTION ROSE VALLEY WAY	AS SHOWN	A
CD609	STREET SECTION PETERS STREET	AS SHOWN	A
CD610	STREET SECTION GRANDSTAND PARADE & VICTORIA PARK PARADE	AS SHOWN	A
CD611	STREET SECTION GEORGE JULIUS AVE NORTH OF ZETLAND AVE	AS SHOWN	A
CD612	STREET SECTION PONY RACE STREET & FUSE STREET	AS SHOWN	A
CD613	STREET SECTION LAETITIA ST, ASCOT ST & THROUGH SITE LINK BTWN PONY RACE ST AND JOYNTON AVE	AS SHOWN	A
CD614	STREET SECTION CHIMES STREET	AS SHOWN	A
CD700	SUPPORTING DETAILS	AS SHOWN	TBC



EPSOM PARK PRECINCT

PUBLIC DOMAIN CONCEPT DESIGN



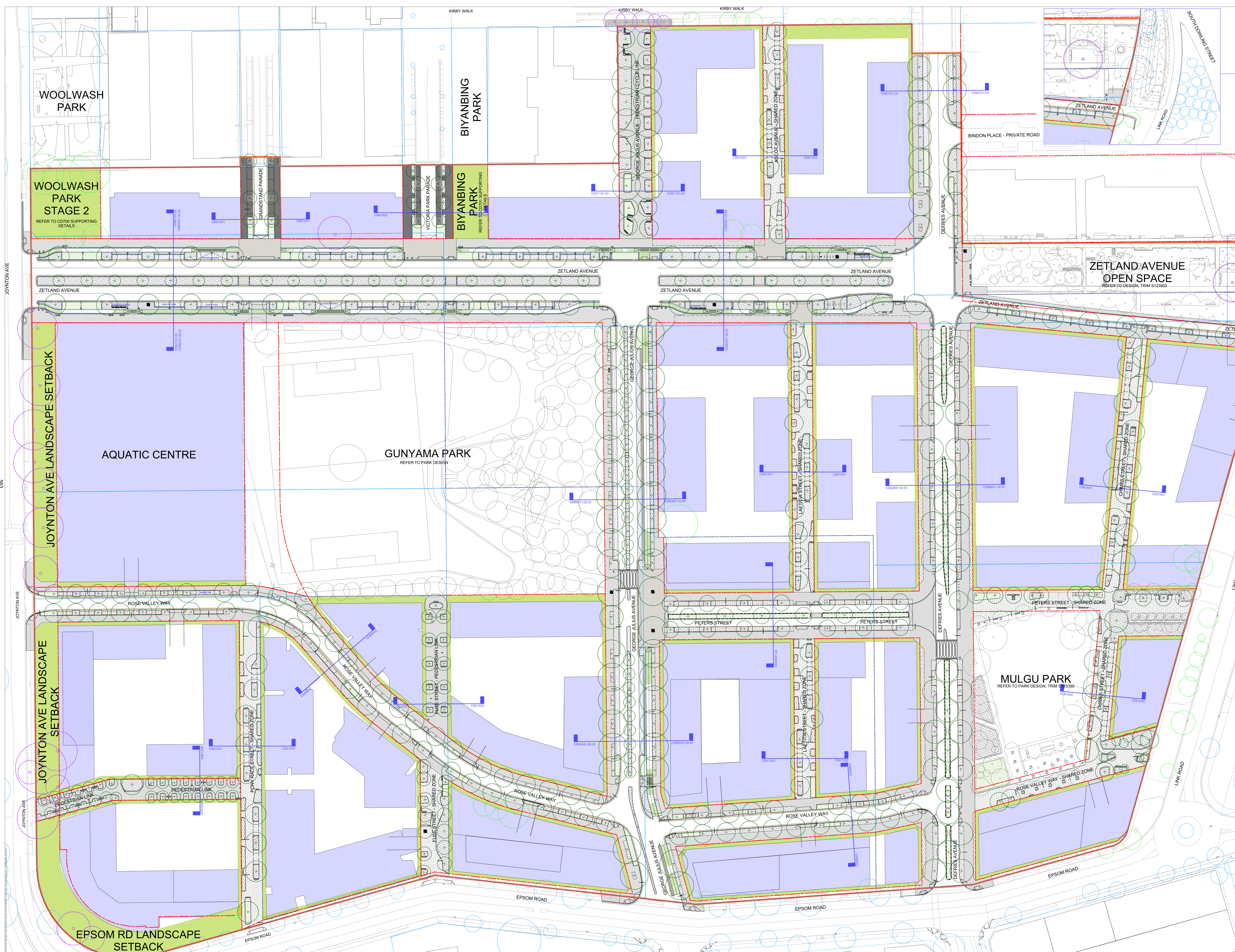
Project
Epsom Park Precinct
 Public Domain Concept Design

Designer
City of Sydney
 CITY DESIGN

Drawing Name
COVER SHEET & DRAWING LIST

Scale NTS @ A1 Drawing Designed: AC, JV Checked: AC, JV Issue C

Sheet No.
CD000

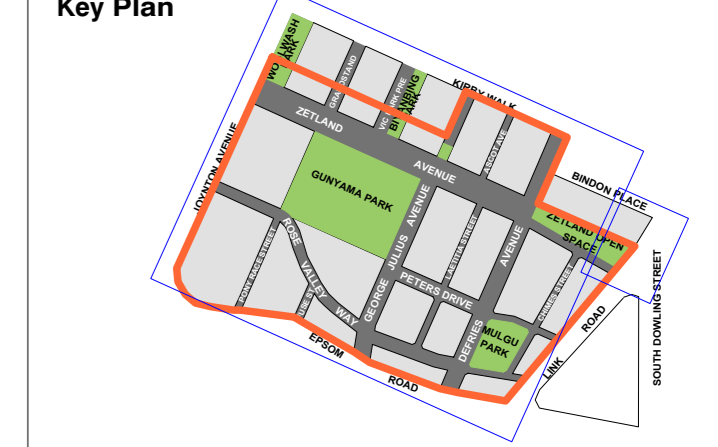


Drawing Status
CONCEPT DESIGN
NOT FOR CONSTRUCTION

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Revisions

No.	Date	Description
A	02/04/2015	50% Issue
B	07/07/2015	90% Issue
C	14/06/2015	95% Issue
D	23/10/2015	100% Issue



- LEGEND**
- GENERAL**
- PUBLIC DOMAIN SCOPE OF WORKS
 - EXISTING PROPERTY BOUNDARY
 - EXISTING SURVEY
 - PROPOSED LOT BOUNDARY
 - DCP LANDSCAPE SETBACK
 - DCP BUILDING FOOTPRINT
- SOFTWORKS - PLANTING**
- EXISTING TREE TO BE RETAINED - GREEN
 - Subject to Council Confirmation & Approval
 - ARBORIST APPROVED FOR RETENTION - PURPLE
 - EXISTING TREE OUT OF SCOPE OF WORKS - BLUE
 - PROPOSED PARK TREES - GREY
 - Refer to relevant park design
 - PROPOSED TREE 1000 LITER (T 2400) OR 4000 LITER (T 4000) ON LOCAL STREETS
 - TP1 - TREE PIT BLISTER (Broken Kerb - Zetland Ave & Rose Valley Way)
 - TP2 - TREE PIT IN ROAD PLANTER (Wheel Stop - Zetland Ave & Peter Street)
 - TP3 - TREE PIT IN PAVING (Tree Grate & Guard)
 - TP4 - TREE PIT IN DECO GRANITE (Grand Stand Parade & Victoria Park Parade)
 - TP4 - TREE IN MASS PLANTING (Passive mitigation system connected to stormwater)
 - TP5 - TREE IN SWALE / RAIN GARDEN (Passive mitigation system connected to stormwater)
 - MP1 - MASS PLANTING (With Small Edge, Drainage system connected to stormwater as per Code Streets Guide)
 - MP2 - SWALE / RAIN GARDEN PLANTING (Drainage system connected to stormwater as per Code Streets Guide - Technical Guide)

- HARDWORKS - PAVING**
- PV1 - CONCRETE UNIT PAVING (Zetland Avenue, Defries Avenue, George Julius Avenue, Peter Street, Rose Valley Way, Epsom Road, Link Road)
 - PV2 - STANDARD GREEN INSITU CONCRETE (Rose Valley Way, Defries Avenue, Peter Street)
 - PV3 - SHARED ZONE PAVING (Zetland Avenue, Peter Street, Rose Valley Way, Epsom Road, Link Road)
 - PV4 - Car Parking Bays High Order (Epsom Road Silver - Zetland Ave & George Julius Ave)
 - PV5 - Car Parking Bays Low Order (Epsom Road Silver - Zetland Ave & George Julius Ave)
 - PV6 - SHARED ENVIRONMENT (Epsom Road Silver - Zetland Ave & George Julius Ave)
 - PV7 - ASPHALT FOOTPATH (Epsom Road Silver - Zetland Ave & George Julius Ave)

- HARDWORKS - KERBS**
- KB1 - BLUE STONE KERB
 - KB1 - BLUE STONE FLUSH KERB
 - KB2 - CONCRETE KERB
 - KB3 - FLUSH CONCRETE KERB
 - KB4 - BROKEN KERB (300mm)
 - KB5 - DOLPHIN KERB (300mm)
 - G1 - CONCRETE GUTTER
 - W1 - CONCRETE WALL

- CYCLEWAY**
- UNIDIRECTIONAL CYCLEWAY
 - BIDIRECTIONAL CYCLEWAY
 - SPEED BUMP & CROSSING
 - COS SHARED PATH LOCATION

- FURNITURE & FIXTURES**
- TZANNES VILLAGE SUITE BENCH
 - TZANNES VILLAGE SUITE BIN
 - TZANNES VILLAGE SUITE BOLLARD
 - TZANNES VILLAGE SUITE BUBBLER
 - STANDARD PARKS BIKE RAIL
 - CITY OF SYDNEY SMART POLE
 - CITY STANDARD LIGHTPOLE (6-8000 LUMENS)
 - TZANNES VILLAGE SUITE LIGHTPOLE
 - BUS STOP & SHELTER
 - TZANNES VILLAGE SUITE GRATEGUARD
 - TRAFFIC SIGN NEEDED



Project
Epsom Park Precinct
 Public Domain Concept Design

Designer
City of Sydney
 CITY DESIGN

Drawing Name
 General Arrangement Plan

Sheet No.
CD001

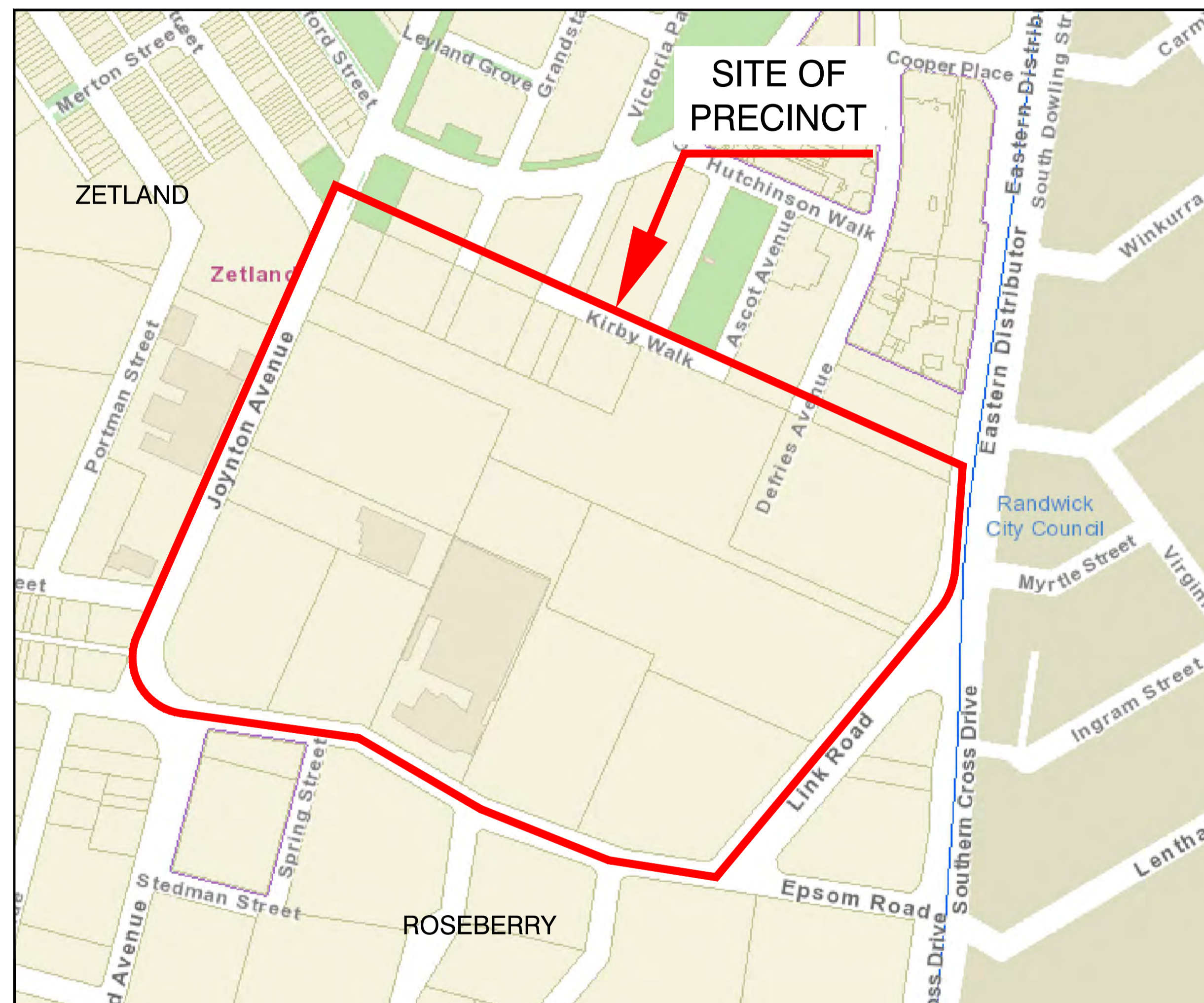
Scale
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Drawing
 Designed: AC, JV
 Checked: AC, JV

Issue
 D

GREEN SQUARE EPSOM PARK PRECINCT PROPOSED ROAD & DRAINAGE LAYOUT

CONCEPT DESIGN



LOCALITY PLAN
N.T.S.

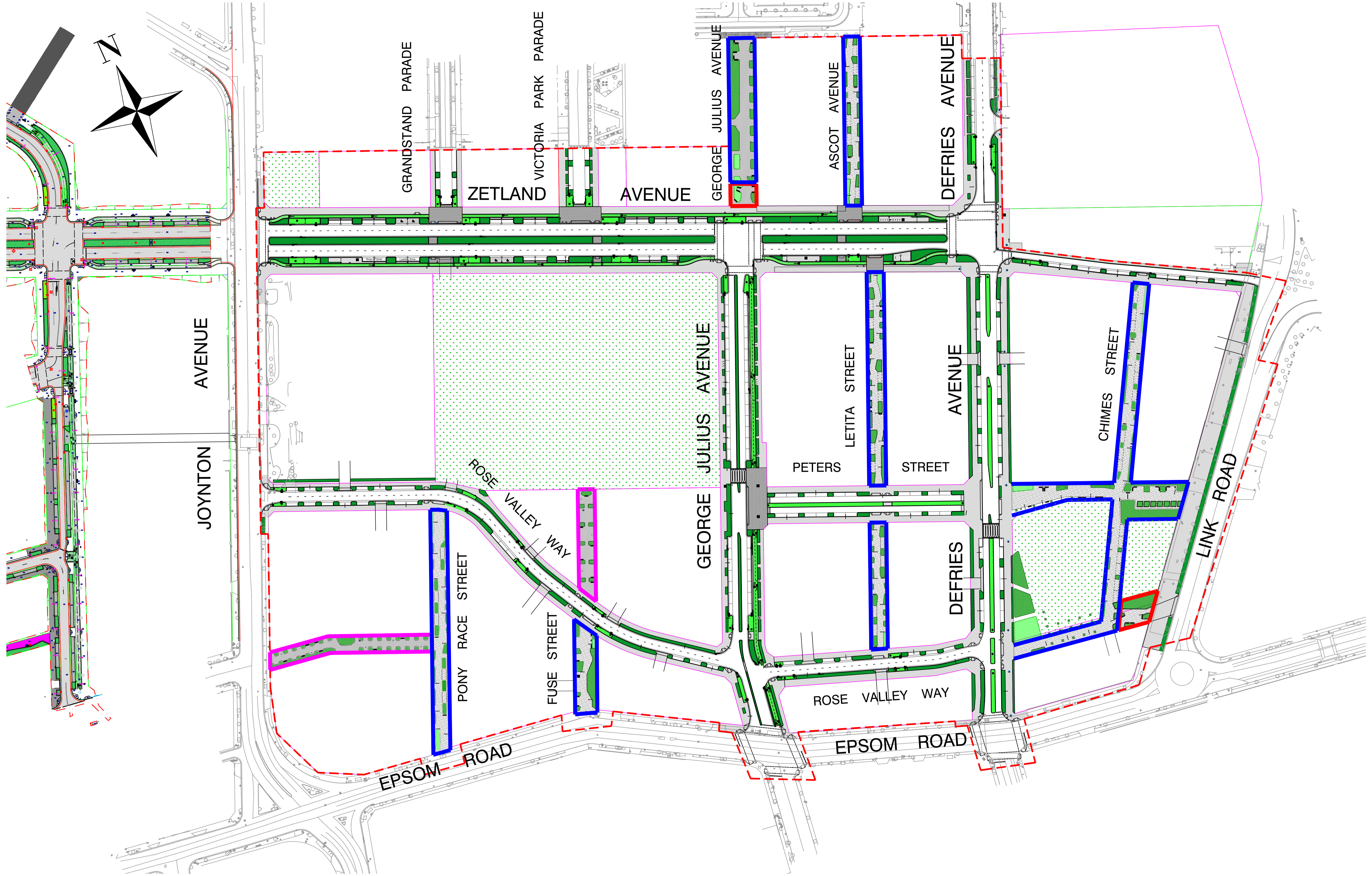


DRAWING LIST

DRAWING No.	TITLE	DESCRIPTION
000	COVER SHEET	
001	GENERAL ARRANGEMENT PLAN	ROADS, FINISHES
002	GENERAL ARRANGEMENT PLAN	TRAFFIC MANAGEMENT
003	GENERAL ARRANGEMENT PLAN	DESIGN CONTOURS & OVERLAND FLOW PATHS
004	GENERAL ARRANGEMENT PLAN	SWEPT PATHS
005	LOT LAYOUT	SURVEYORS DRAWING
006	LAND USE	SURVEYORS DRAWING
010	TYPICAL CROSS SECTIONS	SHEET 1 OF 4
011	TYPICAL CROSS SECTIONS	SHEET 2 OF 4
012	TYPICAL CROSS SECTIONS	SHEET 3 OF 4
013	TYPICAL CROSS SECTIONS	SHEET 4 OF 4
100	ROADS KEY PLAN	
101	ROAD PLAN	SHEET 1 OF 9
102	ROAD PLAN	SHEET 2 OF 9
103	ROAD PLAN	SHEET 3 OF 9
104	ROAD PLAN	SHEET 4 OF 9
105	ROAD PLAN	SHEET 5 OF 9
106	ROAD PLAN	SHEET 6 OF 9
107	ROAD PLAN	SHEET 7 OF 9
108	ROAD PLAN	SHEET 8 OF 9
109	ROAD PLAN	SHEET 9 OF 9
500	SERVICE UTILITIES KEY PLAN	
501	SERVICE UTILITIES PLAN	SHEET 1 OF 9
502	SERVICE UTILITIES PLAN	SHEET 2 OF 9
503	SERVICE UTILITIES PLAN	SHEET 3 OF 9
504	SERVICE UTILITIES PLAN	SHEET 4 OF 9
505	SERVICE UTILITIES PLAN	SHEET 5 OF 9
506	SERVICE UTILITIES PLAN	SHEET 6 OF 9
507	SERVICE UTILITIES PLAN	SHEET 7 OF 9
508	SERVICE UTILITIES PLAN	SHEET 8 OF 9
509	SERVICE UTILITIES PLAN	SHEET 9 OF 9
701	ROAD LONGSECTIONS	ZETLAND AVENUE (WEST) (Sheet 1 of 2)
702	ROAD LONGSECTIONS	ZETLAND AVENUE (WEST) (Sheet 2 of 2)
703	ROAD LONGSECTIONS	ZETLAND AVENUE (EAST)
704	ROAD LONGSECTIONS	GEORGE JULIUS AVENUE
705	ROAD LONGSECTIONS	DEFRIES AVENUE
706	ROAD LONGSECTIONS	ROSE VALLEY WAY (WEST)
707	ROAD LONGSECTIONS	ROSE VALLEY WAY (EAST)
708	ROAD LONGSECTIONS	PETERS STREET
709	ROAD LONGSECTIONS	PONY RACE STREET (SHARED)
710	ROAD LONGSECTIONS	FUSE STREET (SHARED)
711	ROAD LONGSECTIONS	LETITIA STREET (SHARED)
712	ROAD LONGSECTIONS	ROSE VALLEY WAY (SHARED)
713	ROAD LONGSECTIONS	PETERS STREET (SHARED)
714	ROAD LONGSECTIONS	CHIMES STREET (SHARED)
715	ROAD LONGSECTIONS	LINK ROAD
716	ROAD LONGSECTIONS	GRANDSTAND PARADE
717	ROAD LONGSECTIONS	VICTORIA PARK PARADE
718	ROAD LONGSECTIONS	GEORGE JULIUS AVENUE (SHARED)
719	ROAD LONGSECTIONS	ASCOT AVENUE (SHARED)
801	ROAD CROSS SECTIONS	ZETLAND AVENUE (WEST) (Sheet 1 of 5)
802	ROAD CROSS SECTIONS	ZETLAND AVENUE (WEST) (Sheet 2 of 5)
803	ROAD CROSS SECTIONS	ZETLAND AVENUE (WEST) (Sheet 3 of 5)
804	ROAD CROSS SECTIONS	ZETLAND AVENUE (WEST) (Sheet 4 of 5)
805	ROAD CROSS SECTIONS	ZETLAND AVENUE (WEST) (Sheet 5 of 5)
806	ROAD CROSS SECTIONS	ZETLAND AVENUE (EAST) (Sheet 1 of 1)
807	ROAD CROSS SECTIONS	DEFRIES AVENUE (Sheet 1 of 3)
808	ROAD CROSS SECTIONS	DEFRIES AVENUE (Sheet 2 of 3)
809	ROAD CROSS SECTIONS	DEFRIES AVENUE (Sheet 3 of 3)
810	ROAD CROSS SECTIONS	GEORGE JULIUS AVENUE (Sheet 1 of 3)
811	ROAD CROSS SECTIONS	GEORGE JULIUS AVENUE (Sheet 2 of 3)
812	ROAD CROSS SECTIONS	GEORGE JULIUS AVENUE (Sheet 3 of 3)
813	ROAD CROSS SECTIONS	PETERS STREET
814	ROAD CROSS SECTIONS	ROSE VALLEY WAY (WEST) (Sheet 1 of 2)
815	ROAD CROSS SECTIONS	ROSE VALLEY WAY (WEST) (Sheet 2 of 2)
816	ROAD CROSS SECTIONS	ROSE VALLEY WAY (EAST)
817	ROAD CROSS SECTIONS	LINK ROAD
818	ROAD CROSS SECTIONS	GRANDSTAND PARADE
819	ROAD CROSS SECTIONS	VICTORIA PARK PARADE
901 - 916	DRAINAGE LONGSECTIONS	

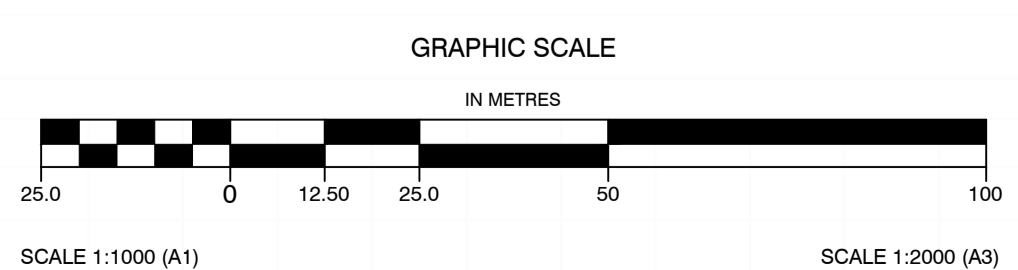
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21-09-2015	3	MS	100% DESIGN	PS	Designed: MS	Checked: PS	SCALE: NTS	PAPER: A1	Drawing No. E3-13/1164 - 000	Sheet No. 1 OF 1	
30-06-2015	2	MS	90% DESIGN	PS	Drawn: MS	Approved: PS					
23-12-2014	1	MS	80% DESIGN	PS							
Date	No.	By	Amendments	Chckd	Drawn: MS	Approved: PS					

565



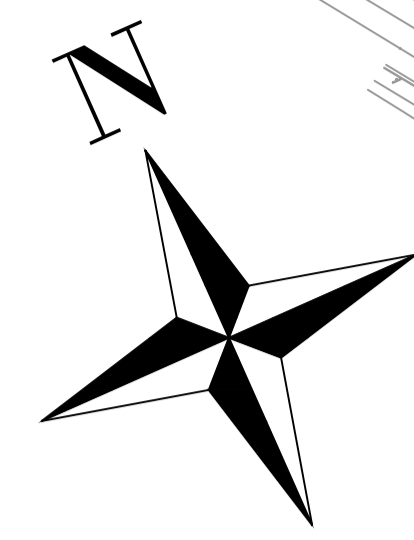
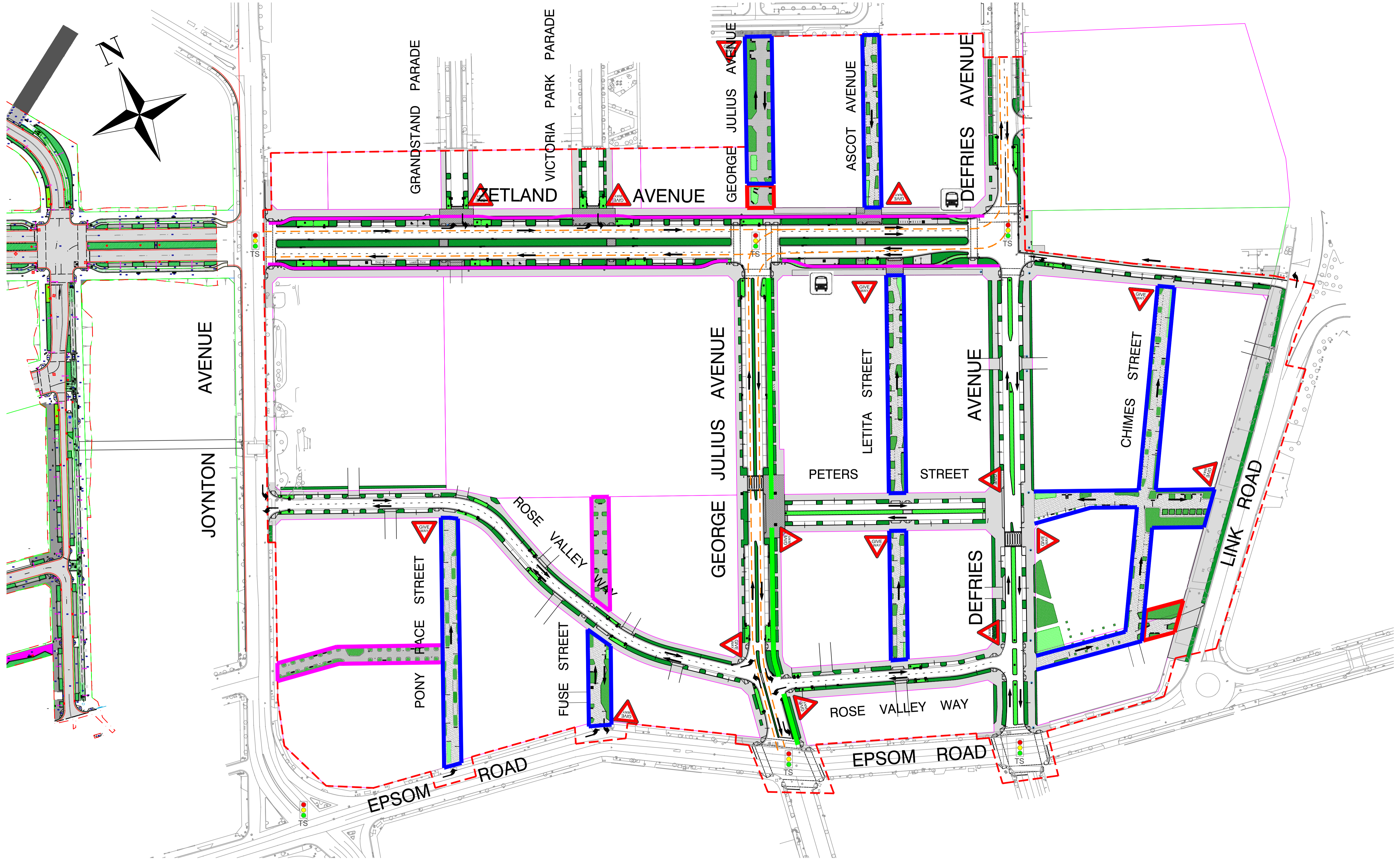
LEGEND

	PEDESTRIAN & CYCLIST ACCESS ONLY		SHARED ENVIRONMENT
	SHARED ZONE		PROPOSED GREEN SPACE
	PEDESTRIAN LINK		BIO SWALE/RAINGARDEN



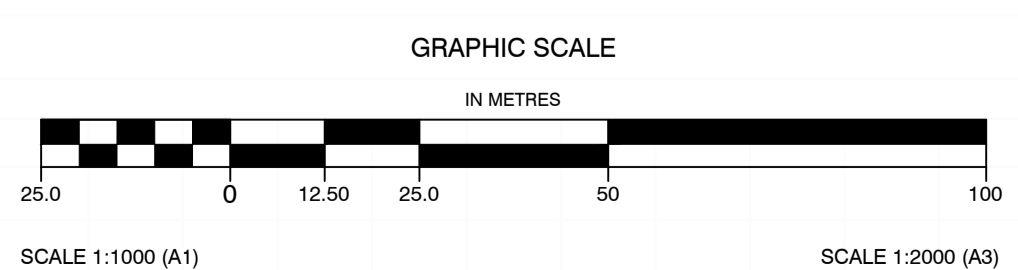
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3									SCALE: 1:1000	PAPER: A1
24-07-2015	2	MS	100% DESIGN	PS	Designed: MS	Checked: PS				
23-12-2014	1	MS	80% DESIGN	PS	Drawn: MS	Approved: PS				
Date	No.	By	Amendments	Chkd	Drawn:	Approved:				

995



LEGEND

	PEDESTRIAN & CYCLIST ACCESS ONLY		PEDESTRIAN CROSSING (RAISED THRESHOLD)		BUS / LIGHT RAIL ROUTE
	SHARED ZONE		BUS ZONE		DIRECTIONAL FLOW OF TRAFFIC
	PEDESTRIAN LINK		SIGNALIZED INTERSECTION		GIVE WAY SIGN
	BI DIRECTIONAL CYCLEWAY				
	CYCLEWAY				



5					
4					
21-09-2015	3	MS	100% DESIGN	PS	
30-06-2015	2	MS	90% DESIGN	PS	
23-12-2014	1	MS	80% DESIGN	PS	
Date	No.	By	Amendments	Chckd	

TRAFFIC MANAGEMENT PLAN					
EPSOM PARK PRECINCT INFRASTRUCTURE CONCEPT DESIGN					
Designed: MS	Checked: PS	SCALE: 1:1000	PAPER: A1		
Drawn: MS	Approved: PS				

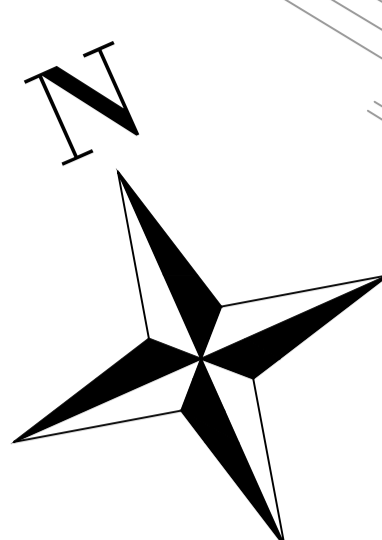
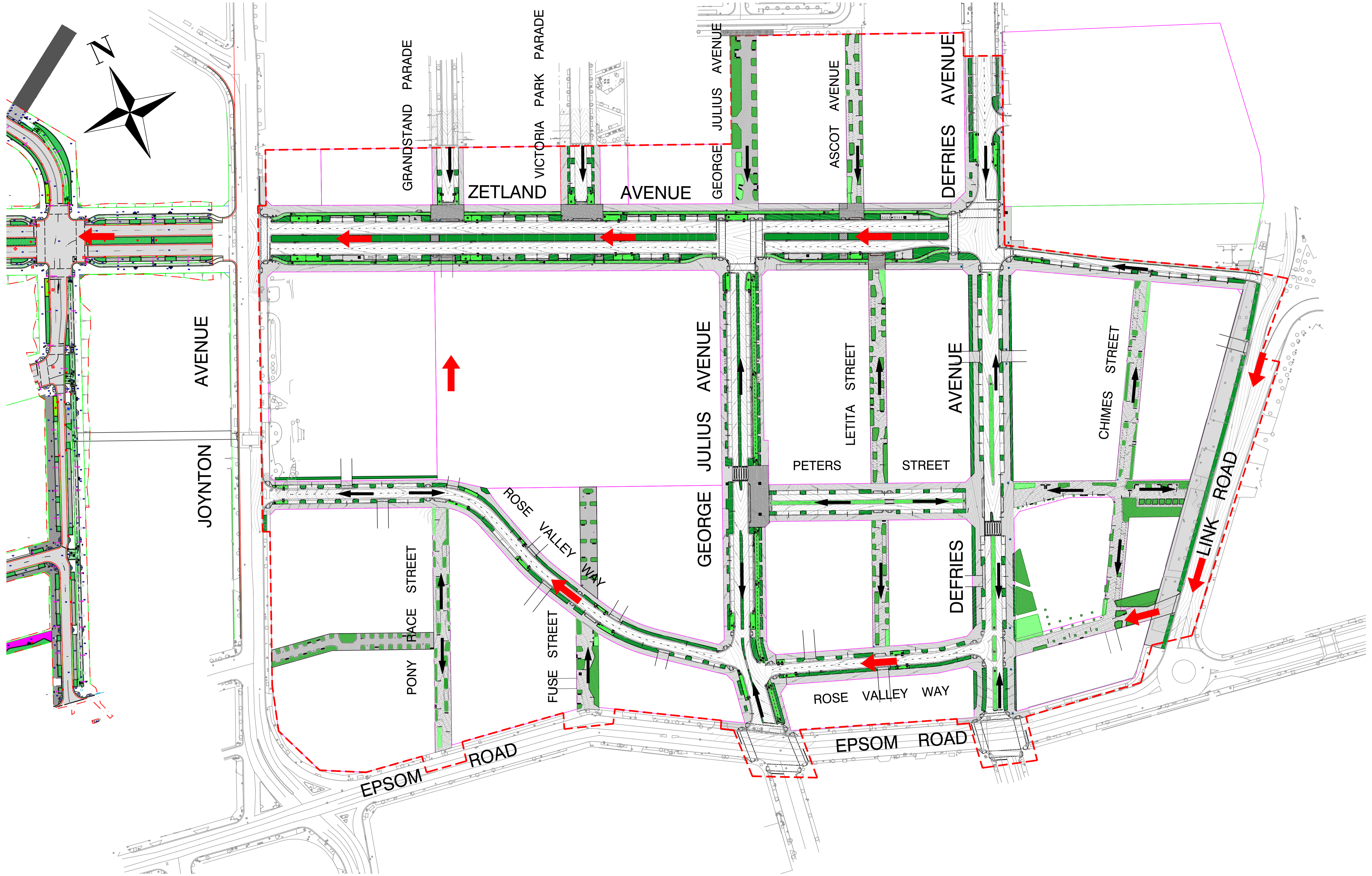
CITY OF SYDNEY

PRELIMINARY ONLY
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Drawing No. E3-13/1164 - 002

Issue 1

Sheet No. 1 OF 1

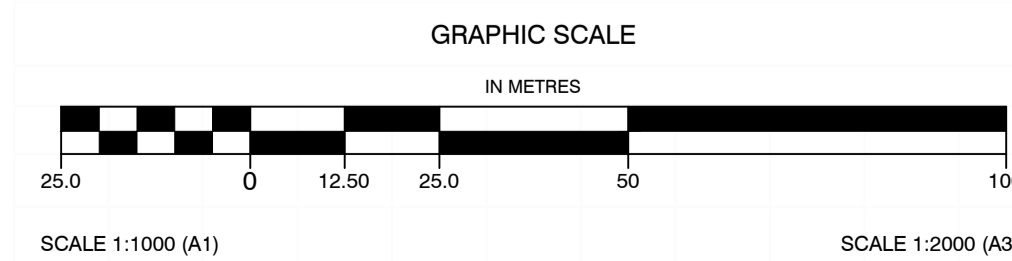


LEGEND

- DIRECTION OF OVERLAND FLOW
- MAJOR OVERLAND FLOWS

Notes:

1. Design contours are indicative only. Subject to final detailed design
2. Contour interval 0.05m

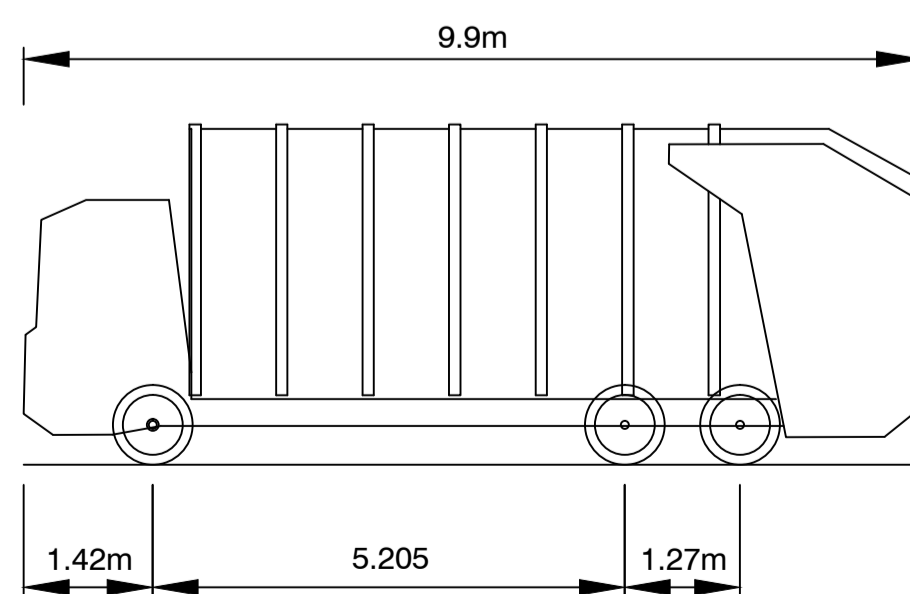


5					DESIGN CONTOURS AND OVERLAND FLOW					
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21-09-2015	3	MS	100% DESIGN	PS	Designed: MS	Checked: PS	SCALE: 1:1000	PAPER: A1	Issue 1	
30-06-2015	2	MS	90% DESIGN	PS	Drawn: MS	Approved: PS			Drawing No. E3-13/1164 - 003	
23-12-2014	1	MS	80% DESIGN	PS	Date	No.	By	Amendments	Chkd	Sheet No. 1 OF 1

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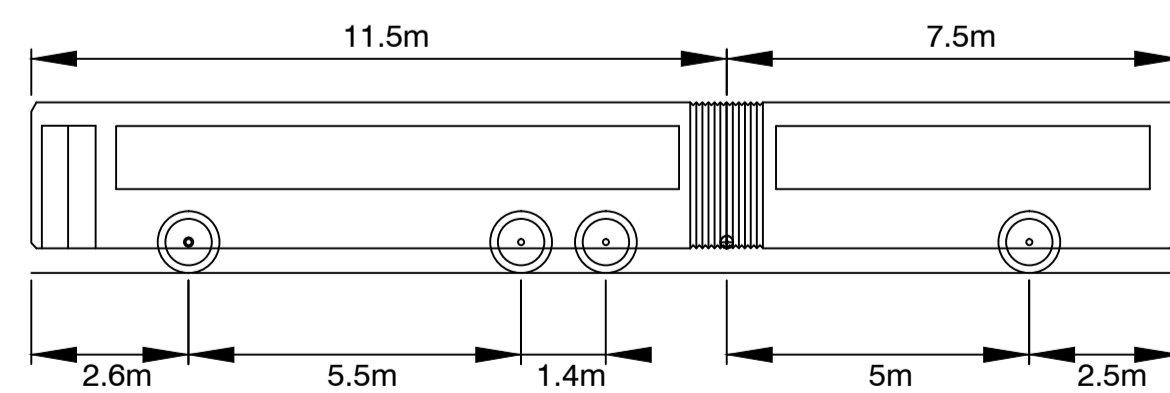


DESIGN VEHICLE - GENERAL

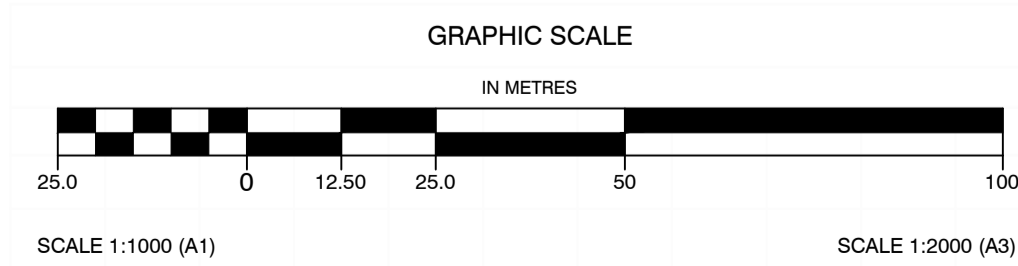


COS SERVICE VEHICLE (9.9m)
 Overall Length 9.900m
 Overall Width 2.500m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to Lock Time 6.00s
 Max Steering Angle (Virtual) 37.40°
 Turn Speed 5km/h

DESIGN VEHICLE - BUS ROUTES



ARTICULATED BUS (19.0m)
 Overall Length 19.000m
 Overall Width 2.500m
 Overall Body Height 2.823m
 Min Body Ground Clearance 0.410m
 Track Width 2.500m
 Lock to Lock Time 6.00s
 Curb to Curb Turning Radius 12.500m
 Turn Speed 5km/h



Date	No.	By	Amendments	Chkd	Drawn: MS	Approved: PS	SCALE: 1:1000	PAPER: A1	VEHICLE SWEEP PATHS	
21-09-2015	3	MS	100% DESIGN	PS					EPSOM PARK PRECINCT INFRASTRUCTURE CONCEPT DESIGN PRELIMINARY ONLY NOT TO BE USED FOR CONSTRUCTION Drawing No. E3-13/1164 - 004 Sheet No. 1 OF 1	
30-06-2015	2	MS	90% DESIGN	PS						
23-12-2014	1	MS	80% DESIGN	PS						



Issue 1

A1



Number	Bearing	Distance	Number	Bearing	Distance
15	306°53'45"	16.825	44	119°31'	2.285
21	69°26'30"	6.1	45	203°45'50"	1.165
24	114°17'10"	17	46	203°45'50"	1.71
25	218°58'	11.255	47	23°45'50"	1.865
26	220°05'45"	9.155	48	23°45'50"	2.345
27	113°45'45"	3	49	113°46'30"	2.995
28	90°19'20"	9.81	50	23°03'20"	0.71
29	330°38'25"	14.995	51	113°03'20"	5.795
30	114°17'10"	9	52	23°03'20"	4.47
32	114°17'10"	14.08	53	220°05'45"	3.735
33	98°46'40"	1.855	64	203°48'50"	0.9
34	202°57'10"	4.835	66	203°48'50"	0.82
35	332°09'10"	2.67	67	294°17'10"	0.9
36	203°48'	2.19	68	203°44'50"	0.43
37	23°43'10"	1.6	75	72°27'45"	13.28
38	203°43'10"	1.4	77	168°08'50"	13.54
42	113°47'20"	2.275	78	9°01'	6.86
43	23°44'50"	0.23	80	300°38'10"	2.675

Number	Chord Bearing	Chord Distance	Arc Length	Radius
1	330°44'35"	62.595	72.16	39.625
2	120°19'45"	10.29	10.315	45
3	348°06'40"	14.615	14.63	83.28
4	337°41'30"	19.305	19.335	100
5	320°09'	35.35	35.61	85
6	119°32'10"	6.025	6.035	30
7	144°15'55"	19.5	19.86	30
8	337°41'30"	22.205	22.24	115
9	317°36'05"	32.845	32.995	100
10	219°46'	1.505	1.505	152.4
11	338°21'20"	46.96	54.025	29.87

- (A) - PROPOSED WOOLWASH PARK EXTENSION
- (B) - PROPOSED EXTENSION OF GRANDSTAND PARADE
- (C) - PROPOSED EXTENSION OF VICTORIA PARK PARADE
- (D) - PROPOSED PUBLIC RESERVE - BIYANBING PARK
- (E) - PROPOSED RIGHT OF WAY 8 WIDE
- (X) - ENERGY AUSTRALIA EASEMENTS - INFORMATION DERIVED FROM ELECTRONIC PLANS. EASEMENT POSITIONS TO BE CONFIRMED
- (Z) - IT IS INTENDED THAT THE EASTERN STREET ALIGNMENT MATCHES THE EXISTING BOUNDARY IN THIS AREA (POSITION & DIMENSIONS SUBJECT TO FINAL SURVEY)

NOTES:

- * BOUNDARY DIMENSIONS AND LOT AREAS ARE PRELIMINARY ONLY AND ARE SUBJECT TO COUNCIL APPROVAL AND REGISTRATION OF A PLAN OR PLANS OF SUBDIVISION WITH LAND & PROPERTY INFORMATION (LPI).
- * PROPOSED BOUNDARY POSITIONS HAVE BEEN DETERMINED FROM SUPPLIED ELECTRONIC FILES, A COPY OF WHICH IS RETAINED WITHIN THIS OFFICE.
- * THIS PLAN IS INTENDED AS A FRAMEWORK FOR FUTURE BOUNDARY POSITIONS ONLY. THE POSITION OF EXISTING BOUNDARIES WITHIN THE PRECINCT WILL NEED TO BE DETERMINED BY SURVEY AS EACH PORTION IS DEVELOPED.
- * THE POSITION OF EXISTING EASEMENTS HAS BEEN COMPILED FROM DEPOSITED PLAN INFORMATION AND MAY NOT BE COMPLETE. IF THIS INFORMATION IS CRITICAL TO DESIGN, ADDITIONAL TITLE SEARCH WILL BE REQUIRED.
- * THE EXISTENCE OF UNDERGROUND SERVICES HAS NOT BEEN ESTABLISHED. IF THESE ARE CRITICAL TO DESIGN IT IS ESSENTIAL THE APPROPRIATE AUTHORITIES BE CONTACTED PRIOR TO DEVELOPMENT WORKS.
- * EXISTENCE OF SERVICES MUST BE VERIFIED BY CONTACTING DIAL BEFORE YOU DIG (DBYD) PH 1100.
- * CRITICAL SERVICES MUST BE EXPOSED AND LOCATED. (NOT ALL SERVICE PROVIDERS ARE MEMBERS OF DBYD)
- * AREAS ARE APPROXIMATE ONLY AND SUBJECT TO FINAL SURVEY.

www.dialbeforeyoudig.com.au

DETAILS
 Survey DU & ET
 Drawn DU
 Design DU
 Checked DU
 Plan Date 22/07/2013
 TRM Ref. S110508.055

**CITY INFRASTRUCTURE & TRAFFIC OPERATIONS
 TECHNICAL SERVICES DIVISION
 SURVEY SECTION
 CITY OF SYDNEY**

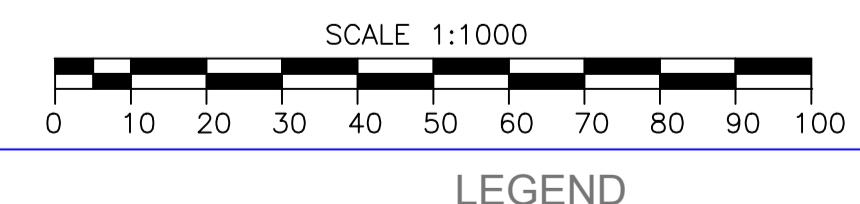
PROPOSED LOT LAYOUT OF "EPSOM PARK",
 EPSOM ROAD, ZETLAND
 BEING LOTS 1 & 2 IN DP850686, LOTS 2 & 7
 IN DP24134, LOTS 11 & 12 IN DP594967,
 LOTS 1 & 2 IN DP830870 AND LOT 5 IN DP235181

ORIGINS
 AUSTRALIAN HEIGHT DATUM
 NOT APPLICABLE
 COORDINATE DATUM
 MGA GRID NORTH
 PMS9536-PM59537

APPROVED
 PRINCIPAL SURVEYOR
S5-13/1064
SHEET 1 OF 2

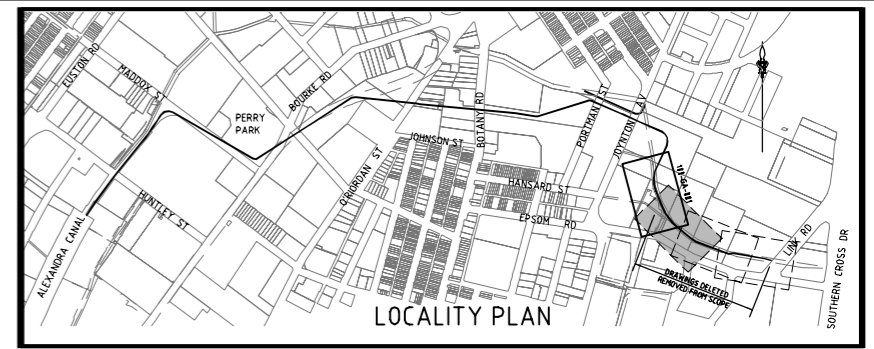
CITY OF SYDNEY

REV	AMENDMENTS	DATE
F	LOTS 17, 25, 26 & 27 MODIFIED TO REFLECT CHANGES IN LINCON PLAN DA 1 02 Site Plan [1][1].dwg.	20/02/15
E	ZETLAND AVENUE REDUCED TO 9m WIDTH EAST OF DEFRIES AVENUE. DEFRIES AVENUE WIDENED TO 23m.	09/07/14
D	PONY RACE ST REDUCED FROM 12m TO 9m WIDTH. ZETLAND AVENUE REDUCED TO 15m WIDTH EAST OF DEFRIES AVENUE. LOT 36 (OPEN SPACE) CREATED.	07/11/13
C	ASSOT W & LETITIA ST REDUCED FROM 12m TO 9m WIDTH. FUSE ST & PONY RACE ST REPOSITIONED. LOTS 34 & 35 ADDED TO REFLECT GREEN SETBACK AND JOYNTON AV HERITAGE FACADE.	31/10/13



CONTOUR INTERVAL N/A

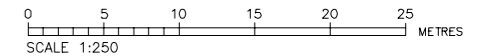
SYDNEY WATER APPROVAL GIVEN FOR PLAN DRAWINGS TO BE PLOTTED IN COLOUR TO DISTINGUISH BETWEEN EXISTING, FUTURE DEVELOPMENTS AND DRYING GREEN ALLIANCE STORMWATER DRAINAGE DESIGN



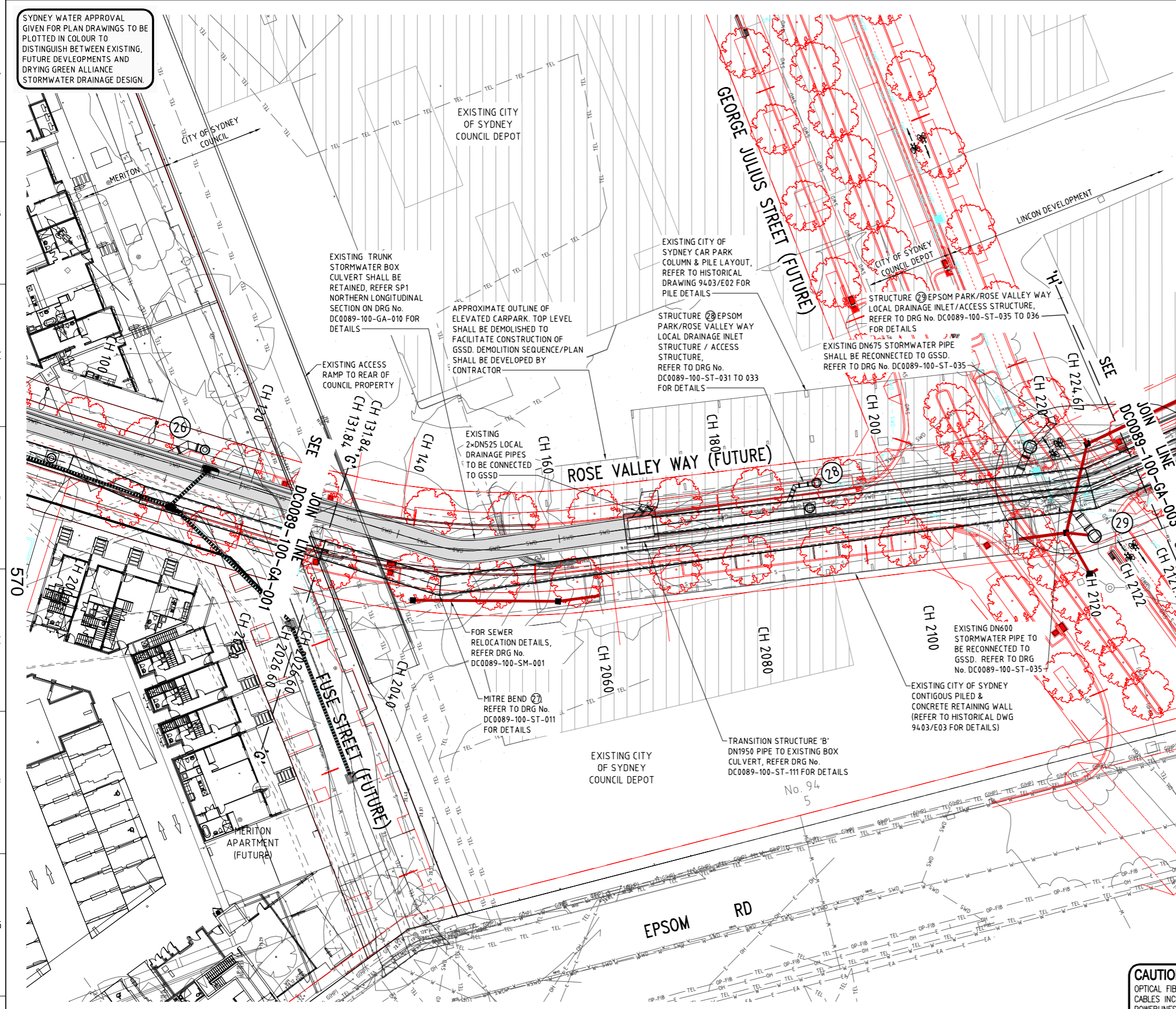
WARNING: Services shown are indicative only. **Currency and accuracy are not to be presumed.** A current services search, including Dial Before You Dig services plans, and site checking all existing services will be necessary prior to commencing any work. Appropriate procedures, precautions and care to be taken when in close proximity to any service.

- LEGEND:**
- W — EXISTING WATER
 - S — EXISTING SEWER
 - TEL-OP-FIB — EXISTING OPTIC FIBRE CABLES
 - TEL-OP-FIB-IMI — EXISTING MULTIPLE OPTIC FIBRE CABLES
 - E-OH — EXISTING OVERHEAD ELECTRICITY CABLES
 - E-OH-IMI — EXISTING MULTIPLE OVERHEAD ELECTRICITY CABLES
 - E-UG — EXISTING UNDERGROUND ELECTRICITY CABLES
 - E-UG-IMI — EXISTING MULTIPLE UNDERGROUND ELECTRICITY CABLES
 - GHP1 — EXISTING HIGH PRESSURE GAS PIPE
 - GMP1 — EXISTING MEDIUM PRESSURE GAS PIPE
 - SWD — EXISTING STORMWATER PIPES
 - TEL — EXISTING TELSTRA CABLES
 - TEL-IMI — EXISTING MULTIPLE TELSTRA CABLES
 - E-RMS — EXISTING ROAD AND MARITIME SERVICES
 - — EXISTING RAIL TUNNEL CORRIDOR
 - — EXISTING BUILDING
 - — EXISTING EASEMENT
 - — EXISTING BOUNDARY
 - — FUTURE DEVELOPMENT
 - TEL — FUTURE TELSTRA CABLES (BY OTHERS)
 - TEL-OP-FIB — FUTURE OPTIC FIBRE CABLES (BY OTHERS)
 - G — FUTURE GAS PIPE (BY OTHERS)
 - E-EA — FUTURE ELECTRICAL CABLES (BY OTHERS)
 - SWD — FUTURE STORMWATER PIPE (BY OTHERS)
 - W — FUTURE WATER (BY OTHERS)
 - RW — FUTURE RECYCLED WATER (BY OTHERS)
 - S — FUTURE SEWER (BY OTHERS)
 - — OD914 WATERMAIN
 - ① — GSSD STRUCTURE / NODE NUMBER

- NOTES:**
- SURVEY, DESIGN AND PROPOSED STORMWATER PLANS ARE IN MGA ZONE 56 GRID SYSTEM.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNO. ALL LEVELS AND CHAINAGES ARE EXPRESSED IN METERS - AHD. DRAWINGS NOT TO BE SCALED.
 - FOR LONGITUDINAL SECTIONS, REFER DRG No. DC0089-000-GA-005 TO 010.
 - ALL STRUCTURES SHOWN INDICATIVELY ON PLANS. REFER TO STRUCTURAL DETAILS OF PROPOSED PIPES CONNECTIONS.
 - PIPE STUBS TO BE FITTED WITH REMOVABLE END CAPS. MARKER POST SHALL BE INSTALLED TO CLEARLY IDENTIFY THE LOCATION OF PIPE STUB ENDS.
 - PIPE RADIUS TO BE ACHIEVED THROUGH DEFLECTION AT RUBBER RING PIPE JOINTS, IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



CONSTRUCTION ISSUE



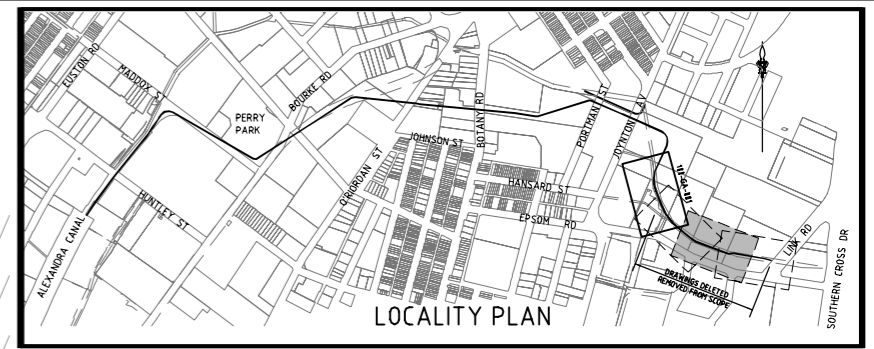
PLAN 1:250

CAUTION: OPTICAL FIBRE AND ELECTRICITY CABLES INCLUDING OVERHEAD POWERLINES IN THE VICINITY, CONTACT THE RELEVANT SERVICE AUTHORITIES FOR THEIR REQUIREMENTS.

		DESIGNED C.SALEM 13/09/17 DRYING GREEN ALLIANCE				COPYRIGHT THIS DESIGN IS NOT TO BE COPIED OR AMENDED WITHOUT WRITTEN PERMISSION FROM SYDNEY WATER 	ACCEPTED T.FLEMING 13/09/17 ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE	GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 LAYOUT PLAN - CH.2026.60 TO 2121.70	DRAWING No. DC0089-100 GA-002
		DRAWN L.KO 13/09/17 DRYING GREEN ALLIANCE	B DRAWING DELETED - REMOVED FROM SCOPE	LK 13/09/17	ACCEPTED P.SHIELDS 13/09/17 CIB PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER		ISSUE B		SHEET No. 2 OF 4
		VERIFIED D.KENT 13/09/17 DRYING GREEN ALLIANCE	A ISSUED FOR CONSTRUCTION	LK 01/24/16			ACCEPTED M.RILEY 13/09/17 SWE PROJECT MANAGER SYDNEY WATER PROJECT OWNER	PROJ No. 20028450	DRAWING STATUS: DRAWING DELETED
		APPROVED I.CHASE 13/09/17 DRYING GREEN ALLIANCE	3 90% DETAILED DESIGN REVIEW FOR SP1	LK 19/02/16					
			2 60% RE-ISSUE FOR DETAILED DESIGN REVIEW FOR SP1	LK 08/12/15					
			1 60% DETAILED DESIGN REVIEW FOR SP1	LK 23/10/15					
			LETTER	APP'D	DATE				

SYDNEY WATER APPROVAL GIVEN FOR PLAN DRAWINGS TO BE PLOTTED IN COLOUR TO DISTINGUISH BETWEEN EXISTING, FUTURE DEVELOPMENTS AND DRYING GREEN ALLIANCE STORMWATER DRAINAGE DESIGN.

CAUTION:
OPTICAL FIBRE AND ELECTRICITY CABLES INCLUDING OVERHEAD POWERLINES IN THE VICINITY, CONTACT THE RELEVANT SERVICE AUTHORITIES FOR THEIR REQUIREMENTS.

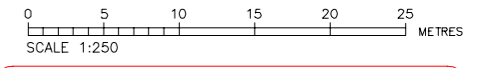


WARNING: Services shown are indicative only. **Currency and accuracy are not to be presumed.** A current services search, including Dial Before You Dig services plans, and site checking all existing services will be necessary prior to commencing any work. Appropriate procedures, precautions and care to be taken when in close proximity to any service.

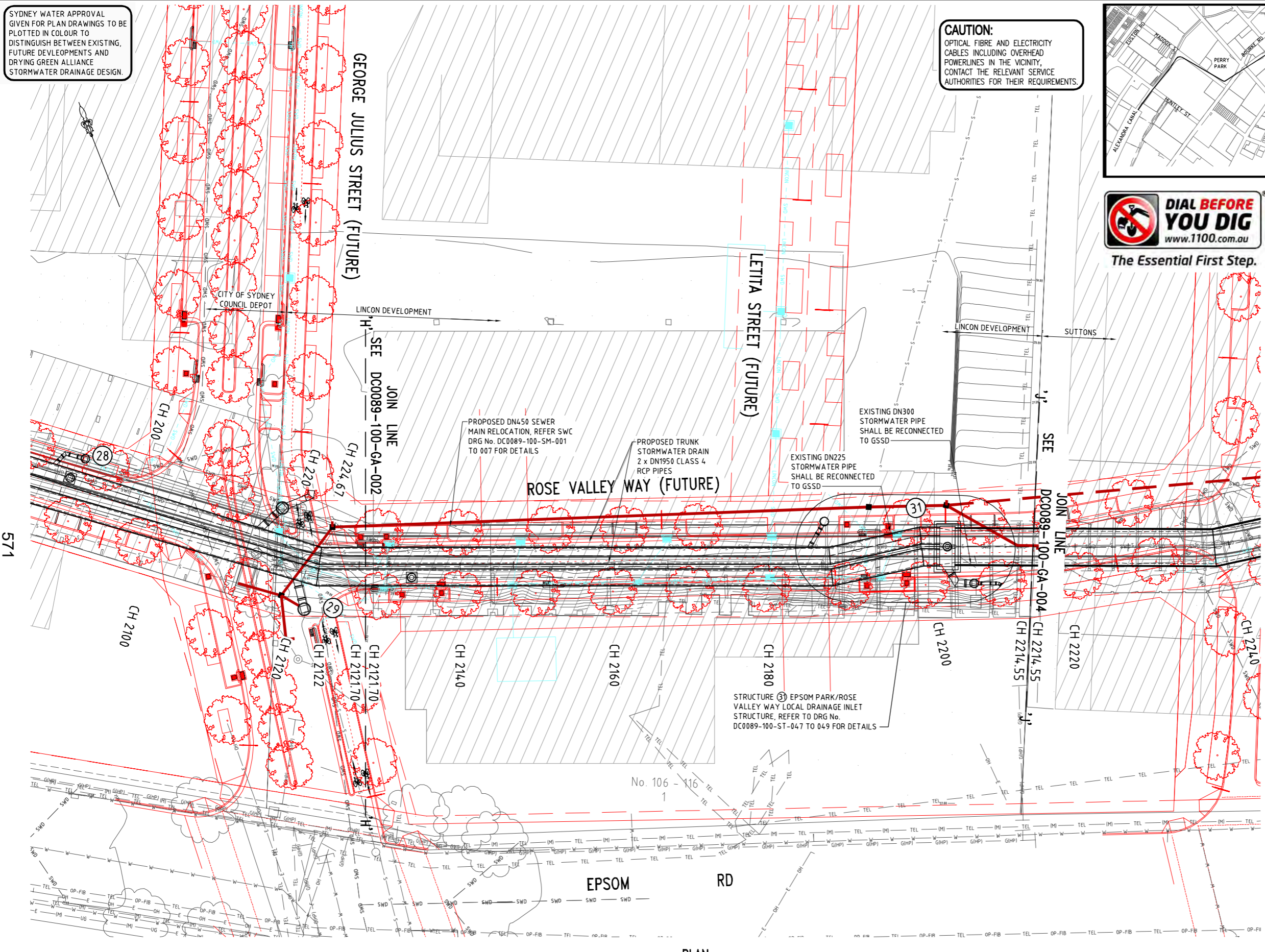
- LEGEND:**
- W — EXISTING WATER
 - S — EXISTING SEWER
 - TEL — OP — FIB — EXISTING OPTIC FIBRE CABLES
 - TEL — OP — FIB — (MI) — EXISTING MULTIPLE OPTIC FIBRE CABLES
 - E — OH — EXISTING OVERHEAD ELECTRICITY CABLES
 - E — OH — (MI) — EXISTING MULTIPLE OVERHEAD ELECTRICITY CABLES
 - E — UG — EXISTING UNDERGROUND ELECTRICITY CABLES
 - E — UG — (MI) — EXISTING MULTIPLE UNDERGROUND ELECTRICITY CABLES
 - GHP1 — EXISTING HIGH PRESSURE GAS PIPE
 - GHP2 — EXISTING MEDIUM PRESSURE GAS PIPE
 - SWD — EXISTING STORMWATER PIPES
 - TEL — TEL — EXISTING TELSTRA CABLES
 - TEL — (MI) — EXISTING MULTIPLE TELSTRA CABLES
 - E — RMS — EXISTING ROAD AND MARITIME SERVICES
 - EXISTING RAIL TUNNEL CORRIDOR
 - EXISTING BUILDING
 - EXISTING EASEMENT
 - EXISTING BOUNDARY

- FUTURE DEVELOPMENT
 - TEL — FUTURE TELSTRA CABLES (BY OTHERS)
 - TEL — OP — FIB — FUTURE OPTIC FIBRE CABLES (BY OTHERS)
 - G — FUTURE GAS PIPE (BY OTHERS)
 - E — EA — FUTURE ELECTRICAL CABLES (BY OTHERS)
 - SWD — FUTURE STORMWATER PIPE (BY OTHERS)
 - W — FUTURE WATER (BY OTHERS)
 - RW — FUTURE RECYCLED WATER (BY OTHERS)
 - S — FUTURE SEWER (BY OTHERS)
- OD914 WATERMAIN
- ① GSSD STRUCTURE / NODE NUMBER

- NOTES:**
1. SURVEY, DESIGN AND PROPOSED STORMWATER PLANS ARE IN MGA ZONE 56 GRID SYSTEM.
 2. ALL DIMENSIONS ARE IN MILLIMETERS UNO. ALL LEVELS AND CHAINAGES ARE EXPRESSED IN METERS - AHD.
 3. DRAWINGS NOT TO BE SCALED.
 4. FOR LONGITUDINAL SECTIONS, REFER DRG No. DC0089-000-GA-005 TO 010.
 5. ALL STRUCTURES SHOWN INDICATIVELY ON PLANS. REFER TO STRUCTURAL DETAILS OF PROPOSED FUTURE CONNECTIONS.
 6. PIPE STUBS SHALL BE FITTED WITH REMOVABLE END CAPS. MARKER POST SHALL BE INSTALLED TO CLEARLY IDENTIFY THE LOCATION OF PIPE STUB ENDS.

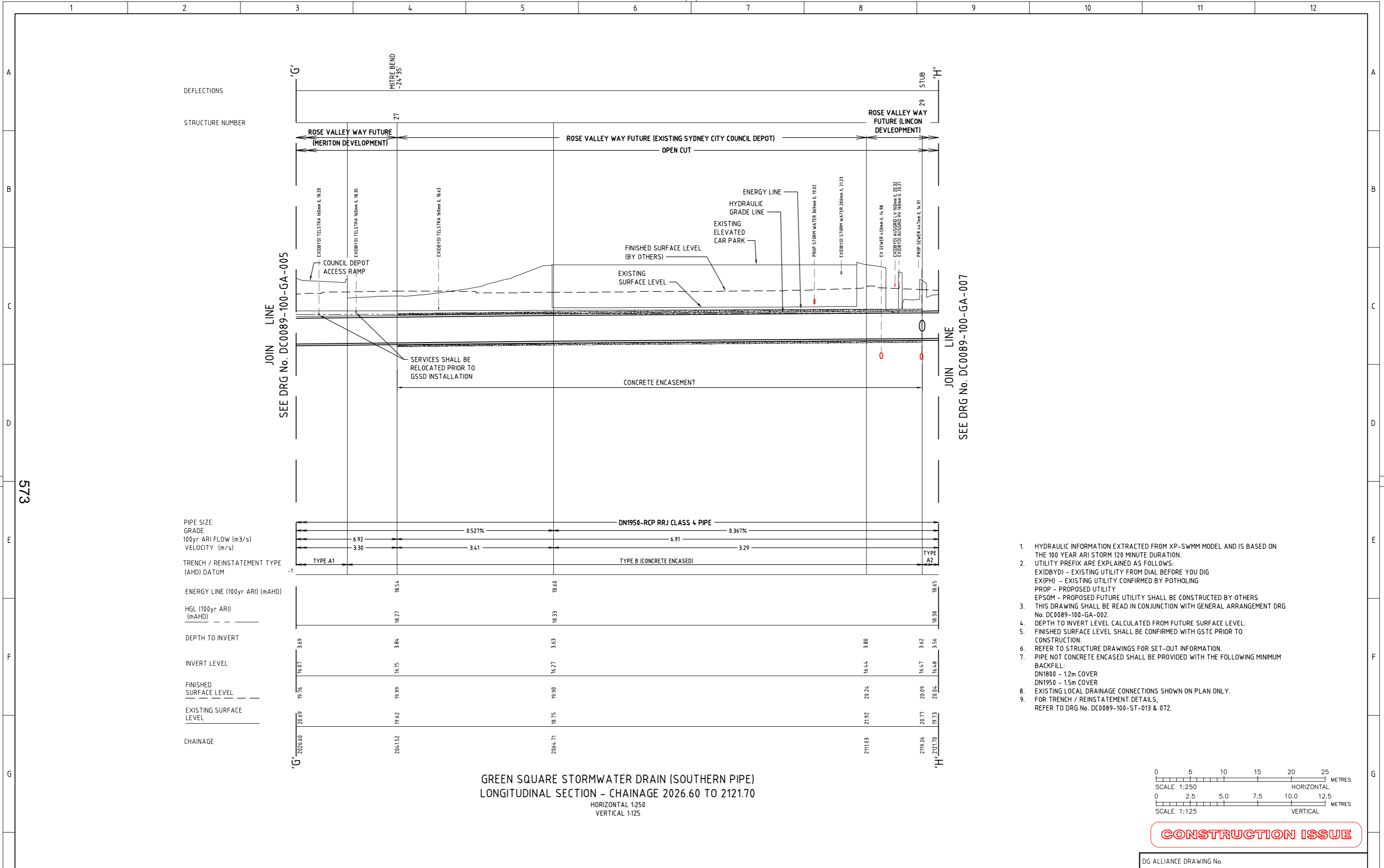


CONSTRUCTION ISSUE



PLAN 1:250

		DESIGNED C. SALEM 13/09/17 DRYING GREEN ALLIANCE				COPYRIGHT THIS DESIGN IS NOT TO BE COPIED OR AMENDED WITHOUT WRITTEN PERMISSION FROM SYDNEY WATER 	ACCEPTED T. FLEMING 13/09/17 ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE	GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 LAYOUT PLAN - CH.2121.70 TO 2214.55	DRAWING No. DC0089-100 GA-003
		DRAWN L.K.O. 13/09/17 DRYING GREEN ALLIANCE	B	DRAWING DELETED - REMOVED FROM SCOPE	LK		13/09/17		ACCEPTED P. SHIELDS 13/09/17 CDS PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER
		VERIFIED D. KENT 13/09/17 DRYING GREEN ALLIANCE	3	90% DETAILED DESIGN REVIEW FOR SP1	LK	01/24/16		PROJ No. 20028450	DRAWING STATUS: DRAWING DELETED
		APPROVED I. CHASE 13/09/17 DRYING GREEN ALLIANCE	1	60% DETAILED DESIGN REVIEW FOR SP1	LK	08/12/15		DRAWING No. 20028450	DRAWING STATUS: DRAWING DELETED
			LETTER	DETAILS OF AMENDMENT	APP'D	DATE			

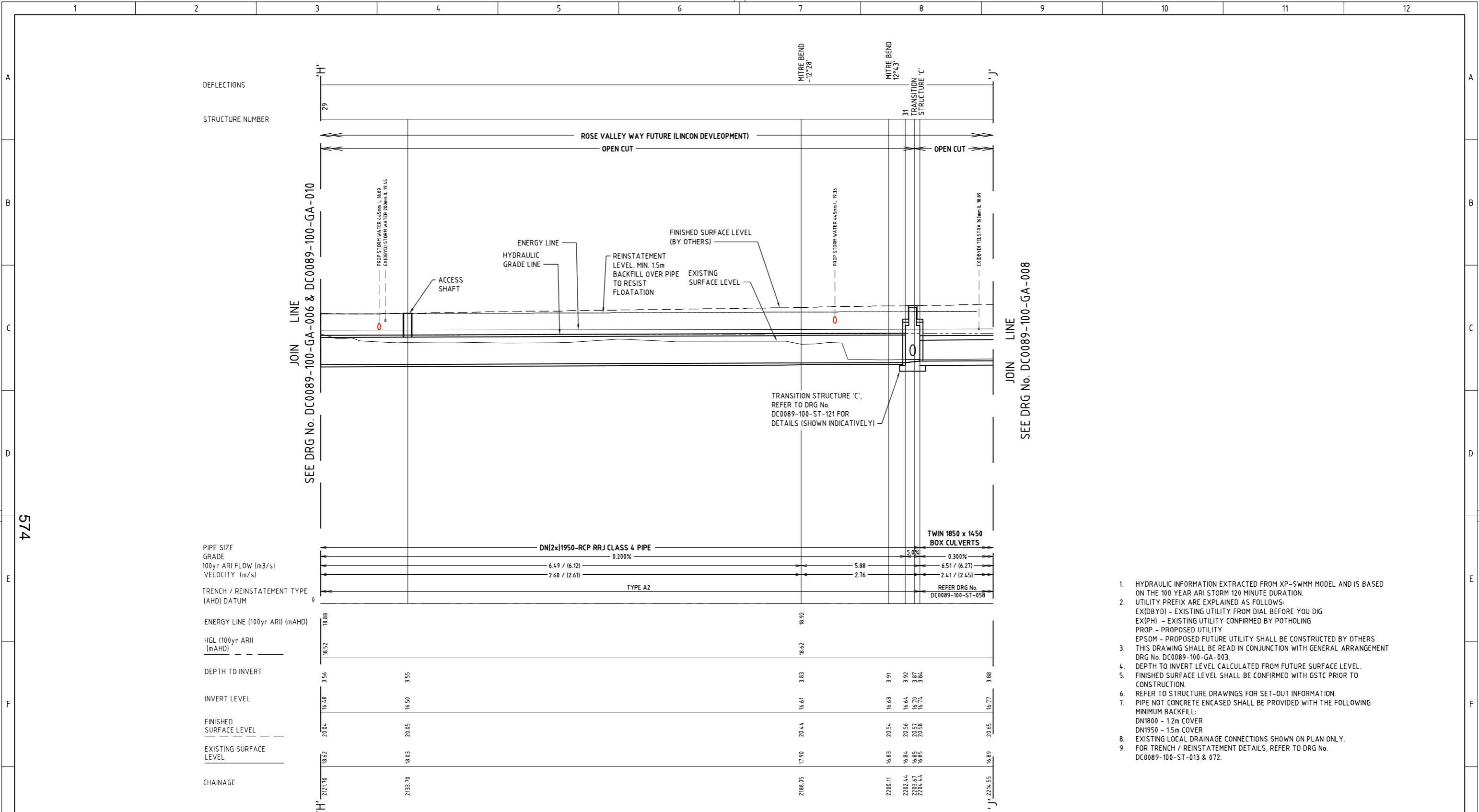


1. HYDRAULIC INFORMATION EXTRACTED FROM XP-SWMM MODEL AND IS BASED ON THE 100 YEAR ARI STORM 120 MINUTE DURATION.
2. UTILITY PREFIX ARE EXPLAINED AS FOLLOWS:
 EXIDBYD) - EXISTING UTILITY FROM DIAL BEFORE YOU DIG
 EX(IPH) - EXISTING UTILITY CONFIRMED BY POTHOLING
 PROP - PROPOSED UTILITY
 EPSOM - PROPOSED FUTURE UTILITY SHALL BE CONSTRUCTED BY OTHERS
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRG No. DC0089-100-GA-002.
4. DEPTH TO INVERT LEVEL CALCULATED FROM FUTURE SURFACE LEVEL.
5. FINISHED SURFACE LEVEL SHALL BE CONFIRMED WITH GSTC PRIOR TO CONSTRUCTION.
6. REFER TO STRUCTURE DRAWINGS FOR SET-OUT INFORMATION.
7. PIPE NOT CONCRETE ENCASED SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM BACKFILL:
 DN1800 - 1.2m COVER
 DN1950 - 1.5m COVER
8. EXISTING LOCAL DRAINAGE CONNECTIONS SHOWN ON PLAN ONLY.
9. FOR TRENCH / REINSTATEMENT DETAILS, REFER TO DRG No. DC0089-100-ST-013 & 072.

GREEN SQUARE STORMWATER DRAIN (SOUTHERN PIPE)
 LONGITUDINAL SECTION - CHAINAGE 2026.60 TO 2121.70
 HORIZONTAL 1:250
 VERTICAL 1:125

CONSTRUCTION ISSUE

				DESIGNED: C.SALEM 13/09/17 DRYING GREEN ALLIANCE DRAWN: LKO 13/09/17 DRYING GREEN ALLIANCE VERIFIED: D.KENT 13/09/17 DRYING GREEN ALLIANCE APPROVED: I.CHASE 13/09/17 DRYING GREEN ALLIANCE		B DRAWING DELETED - REMOVED FROM SCOPE A ISSUED FOR CONSTRUCTION 2 90% DETAILED DESIGN REVIEW FOR SP1 1 60% DETAILED DESIGN REVIEW FOR SP1		LK 13/09/17 LK 01/04/16 LK 19/02/16 LK 08/12/15		COPYRIGHT THIS DESIGN IS NOT TO BE COPIED OR AMENDED WITHOUT WRITTEN PERMISSION FROM SYDNEY WATER 		ACCEPTED: T.FLEMING 13/09/17 ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE ACCEPTED: P.SHIELDS 13/09/17 CSJ PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER ACCEPTED: M.RILEY 13/09/17 SWC PROJECT MANAGER SYDNEY WATER PROJECT OWNER		GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 SOUTHERN LS - CH.2026.60 TO 2121.70		DRAWING No. DC0089-100 GA-006 ISSUE SHEET No. B 2 OF 4	
PROJ No. 20028450		DRAWING STATUS: DRAWING DELETED		A1		10		11		12		13		14			



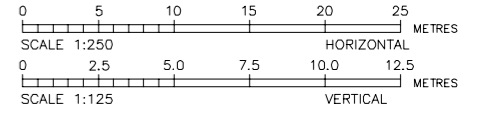
574

PIPE SIZE	DN(2x)1950-RCP RRJ CLASS 4 PIPE		TWIN 1850 x 1450 BOX CULVERTS	
GRADE	0.200%		5.00%	
100yr ARI FLOW (m ³ /s)	6.49 / (6.12)		5.88	
VELOCITY (m/s)	2.60 / (2.61)		2.76	
TRENCH / REINSTATEMENT TYPE (AHD) DATUM	TYPE A2		REFER DRG No. DC0089-100-ST-058	
ENERGY LINE (100yr ARI) (mAHD)	18.88		18.92	
HGL (100yr ARI) (mAHD)	18.52		18.62	
DEPTH TO INVERT	3.56	3.55	3.83	3.91
INVERT LEVEL	16.48	16.50	16.61	16.63
FINISHED SURFACE LEVEL	20.04	20.05	20.44	20.54
EXISTING SURFACE LEVEL	18.62	18.03	17.90	16.83
CHAINAGE	2127.70	2133.70	2188.05	2200.11
			2202.44	2203.67
			2203.67	2214.44
				2214.55

- HYDRAULIC INFORMATION EXTRACTED FROM XP-SWMM MODEL AND IS BASED ON THE 100 YEAR ARI STORM 120 MINUTE DURATION.
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EX(DBYD) - EXISTING UTILITY FROM DIAL BEFORE YOU DIG
EX(PH) - EXISTING UTILITY CONFIRMED BY POTHOLING
PROP - PROPOSED UTILITY
EPSOM - PROPOSED FUTURE UTILITY SHALL BE CONSTRUCTED BY OTHERS
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRG No. DC0089-100-GA-003.
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DN1950 - 1.5m COVER
- EXISTING LOCAL DRAINAGE CONNECTIONS SHOWN ON PLAN ONLY.
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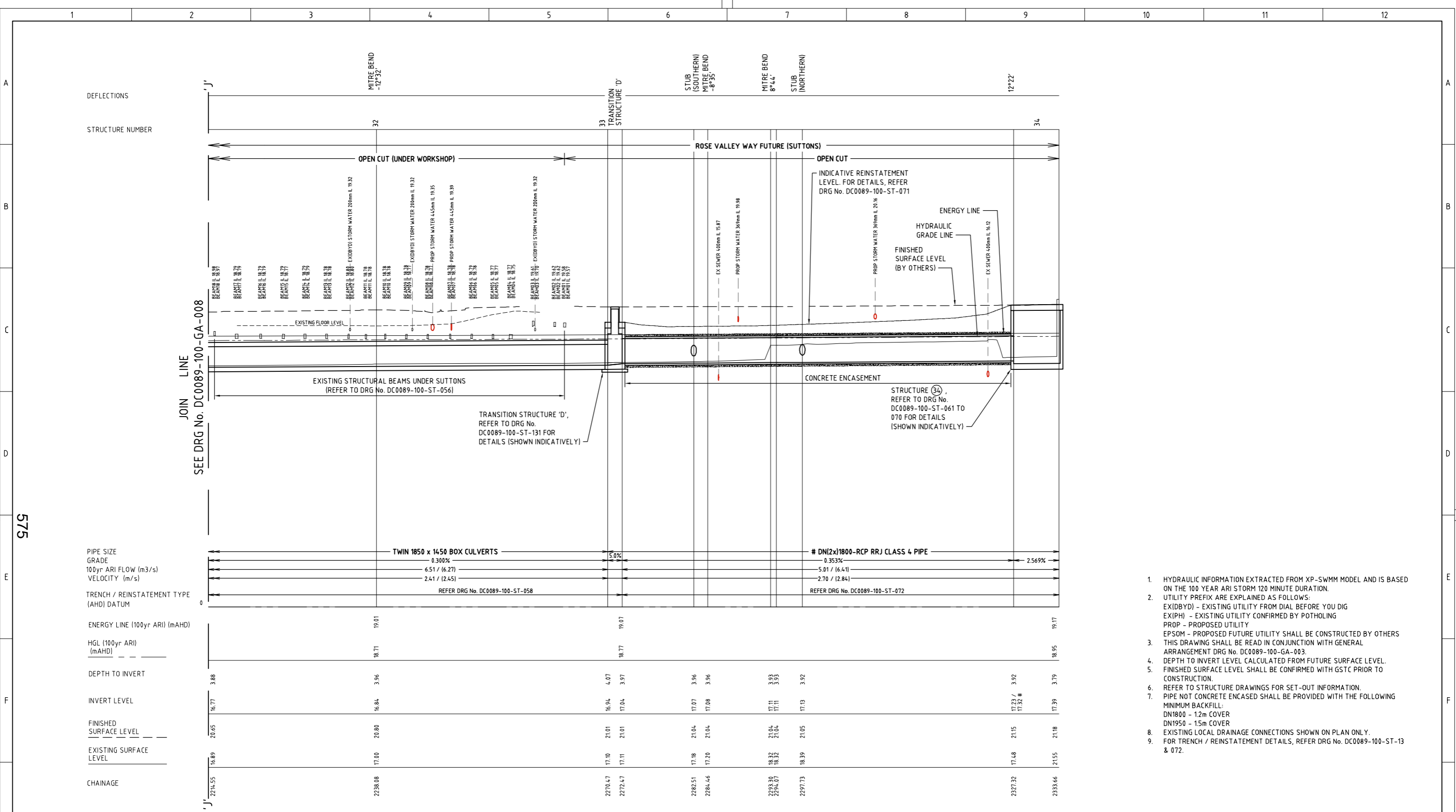
GREEN SQUARE STORMWATER DRAIN (BOTH PIPES)
LONGITUDINAL SECTION - CHAINAGE 2127.70 TO 2214.55
HORIZONTAL 1:250
VERTICAL 1:125

* SOUTHERN PIPELINE FLOW + VELOCITY (SHOWN IN BRACKETS)



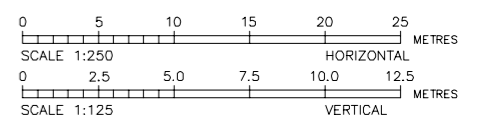
CONSTRUCTION ISSUE

		DESIGNED C.SALEM DRYING GREEN ALLIANCE 13/09/17					ACCEPTED T.FLEMING ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE 13/09/17	GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 LAYOUT LS - CH.2127.70 TO 2214.55	DRAWING No. DC0089-100
		DRAWN L.KO DRYING GREEN ALLIANCE 13/09/17							ACCEPTED P.SHIELDS CIB PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER 13/09/17
		VERIFIED D.KENT DRYING GREEN ALLIANCE 13/09/17	A	DRAWING DELETED - REMOVED FROM SCOPE	LK	13/09/17			ISSUE SHEET No.
		APPROVED I.CHASE DRYING GREEN ALLIANCE 13/09/17	2	90% DETAILED DESIGN REVIEW FOR SP1	LK	01/04/16			B
			1	60% DETAILED DESIGN REVIEW FOR SP1	LK	19/02/16			300 F 4
				LETTER	APP'D	DATE			



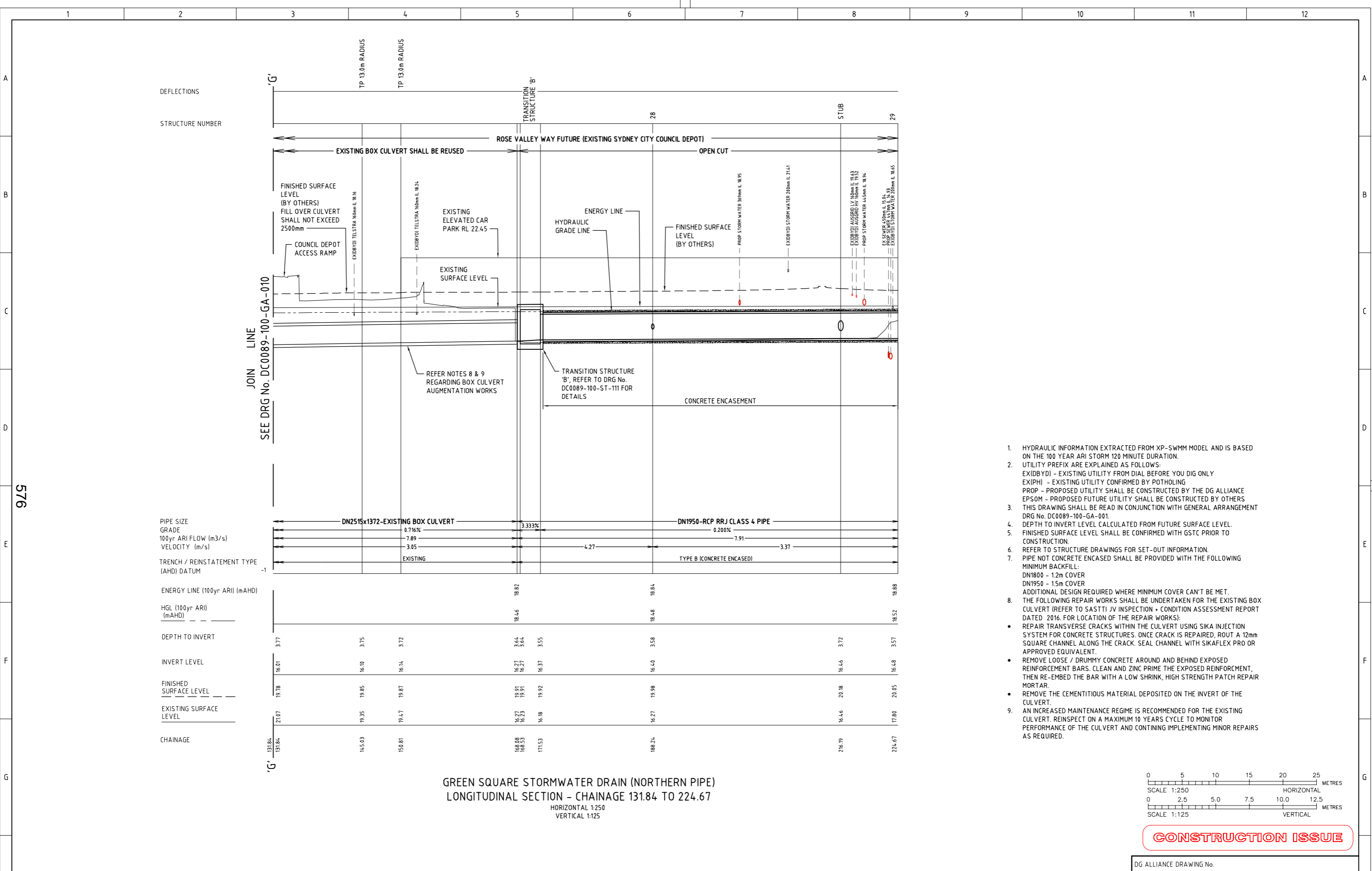
GREEN SQUARE STORMWATER DRAIN (BOTH PIPES)
 LONGITUDINAL SECTION - CHAINAGE 2214.55 TO 2333.66
 HORIZONTAL 1:250
 VERTICAL 1:125

- HYDRAULIC INFORMATION EXTRACTED FROM XP-SWMM MODEL AND IS BASED ON THE 100 YEAR ARI STORM 120 MINUTE DURATION.
- UTILITY PREFIX ARE EXPLAINED AS FOLLOWS:
 EX(DBYD) - EXISTING UTILITY FROM DIAL BEFORE YOU DIG
 EX(IPH) - EXISTING UTILITY CONFIRMED BY POTHOLING
 PROP - PROPOSED UTILITY
 EPSOM - PROPOSED FUTURE UTILITY SHALL BE CONSTRUCTED BY OTHERS
 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRG No. DC0089-100-GA-003.
- DEPTH TO INVERT LEVEL CALCULATED FROM FUTURE SURFACE LEVEL.
- FINISHED SURFACE LEVEL SHALL BE CONFIRMED WITH GSTC PRIOR TO CONSTRUCTION.
- REFER TO STRUCTURE DRAWINGS FOR SET-OUT INFORMATION.
- PIPE NOT CONCRETE ENCASED SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM BACKFILL:
 DN1800 - 12m COVER
 DN1950 - 15m COVER
- EXISTING LOCAL DRAINAGE CONNECTIONS SHOWN ON PLAN ONLY.
- FOR TRENCH / REINSTATEMENT DETAILS, REFER DRG No. DC0089-100-ST-13 & 072.



CONSTRUCTION ISSUE

				DESIGNED: C.SALEM 13/09/17 DRYING GREEN ALLIANCE		DRAWN: LKO 13/09/17 DRYING GREEN ALLIANCE		VERIFIED: D.KENT 13/09/17 DRYING GREEN ALLIANCE		APPROVED: I.CHASE 13/09/17 DRYING GREEN ALLIANCE		COPYRIGHT THIS DESIGN IS NOT TO BE COPIED OR AMENDED WITHOUT WRITTEN PERMISSION FROM SYDNEY WATER				ACCEPTED: T.FLEMING 13/09/17 ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE		ACCEPTED: P.SHIELDS 13/09/17 CSJ PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER		ACCEPTED: M.RILEY 13/09/17 SWC PROJECT MANAGER SYDNEY WATER PROJECT OWNER		GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 LAYOUT LS - CH.2214.55 TO 2333.66		DRAWING No. DC0089-100 GA-008		ISSUE SHEET No. B 4 OF 4	
001		1		2		3		4		5		6		7		8		9		10		11		12			

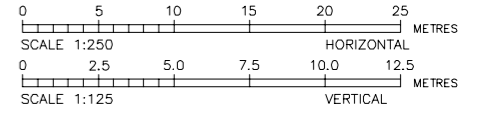


JOIN LINE
SEE DRG No. DC0089-100-GA-010

PIPE SIZE	DN2515x1372-EXISTING BOX CULVERT	DN1950-RCP RRJ CLASS 4 PIPE
GRADE	0.716%	3.333%
100yr ARI FLOW (m3/s)	7.89	0.200%
VELOCITY (m/s)	3.05	7.91
TRENCH / REINSTATEMENT TYPE (AHD) DATUM	EXISTING	TYPE B (CONCRETE ENCASED)
ENERGY LINE (100yr ARI) (mAHD)		
HGL (100yr ARI) (mAHD)		
DEPTH TO INVERT		
INVERT LEVEL		
FINISHED SURFACE LEVEL		
EXISTING SURFACE LEVEL		
CHAINAGE		

GREEN SQUARE STORMWATER DRAIN (NORTHERN PIPE)
LONGITUDINAL SECTION - CHAINAGE 131.84 TO 224.67
HORIZONTAL 1:250
VERTICAL 1:125

- HYDRAULIC INFORMATION EXTRACTED FROM XP-SWMM MODEL AND IS BASED ON THE 100 YEAR ARI STORM 120 MINUTE DURATION.
- UTILITY PREFIX ARE EXPLAINED AS FOLLOWS:
EX(DBYD) - EXISTING UTILITY FROM DIAL BEFORE YOU DIG ONLY
EX(PH) - EXISTING UTILITY CONFIRMED BY POTHOLES
PROP - PROPOSED UTILITY SHALL BE CONSTRUCTED BY THE DG ALLIANCE
EPSOM - PROPOSED FUTURE UTILITY SHALL BE CONSTRUCTED BY OTHERS
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRG No. DC0089-100-GA-001
- DEPTH TO INVERT LEVEL CALCULATED FROM FUTURE SURFACE LEVEL.
- FINISHED SURFACE LEVEL SHALL BE CONFIRMED WITH GSTC PRIOR TO CONSTRUCTION.
- REFER TO STRUCTURE DRAWINGS FOR SET-OUT INFORMATION.
- PIPE NOT CONCRETE ENCASED SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM BACKFILL:
DN1800 - 1.2m COVER
DN1950 - 1.5m COVER
ADDITIONAL DESIGN REQUIRED WHERE MINIMUM COVER CAN'T BE MET.
- THE FOLLOWING REPAIR WORKS SHALL BE UNDERTAKEN FOR THE EXISTING BOX CULVERT (REFER TO SASTTI JV INSPECTION + CONDITION ASSESSMENT REPORT DATED 2016 FOR LOCATION OF THE REPAIR WORKS):
 - REPAIR TRANSVERSE CRACKS WITHIN THE CULVERT USING SIKAJEKTION SYSTEM FOR CONCRETE STRUCTURES. ONCE CRACK IS REPAIRED, ROUT A 12mm SQUARE CHANNEL ALONG THE CRACK. SEAL CHANNEL WITH SIKAFLEX PRO OR APPROVED EQUIVALENT.
 - REMOVE LOOSE / DRUMMY CONCRETE AROUND AND BEHIND EXPOSED REINFORCEMENT BARS. CLEAN AND ZINC PRIME THE EXPOSED REINFORCEMENT, THEN RE-EMBED THE BAR WITH A LOW SHRINK, HIGH STRENGTH PATCH REPAIR MORTAR.
 - REMOVE THE CEMENTITIOUS MATERIAL DEPOSITED ON THE INVERT OF THE CULVERT.
- AN INCREASED MAINTENANCE REGIME IS RECOMMENDED FOR THE EXISTING CULVERT. REINSPECT ON A MAXIMUM 10 YEARS CYCLE TO MONITOR PERFORMANCE OF THE CULVERT AND CONTINING IMPLEMENTING MINOR REPAIRS AS REQUIRED.



CONSTRUCTION ISSUE

		DESIGNED C. SALEM 13/09/17 DRYING GREEN ALLIANCE	DRAWING DELETED - REMOVED FROM SCOPE ISSUED FOR CONSTRUCTION 90% DETAILED DESIGN REVIEW FOR SP1 60% DETAILED DESIGN REVIEW FOR SP1	LK 13/09/17 LK 01/04/16 LK 19/02/16 LK 08/12/15	COPYRIGTH THIS DESIGN IS NOT TO BE COPIED OR AMENDED WITHOUT WRITTEN PERMISSION FROM SYDNEY WATER		ACCEPTED T. FLEMING 13/09/17 ALLIANCE GENERAL MANAGER DRYING GREEN ALLIANCE	GREEN SQUARE STORMWATER PROJECT CITY OF SYDNEY DRAINAGE SHEAS CREEK AMPLIFICATION SWC89AMP SP1 NORTHERN LS - CH131.84 TO 224.67	DRAWING No. DC0089-100 GA-010
		DRAWN LKO 13/09/17 DRYING GREEN ALLIANCE					VERIFIED D. KENT 13/09/17 DRYING GREEN ALLIANCE APPROVED I. CHASE 13/09/17 DRYING GREEN ALLIANCE		ACCEPTED P. SHIELDS 13/09/17 CIS PROJECT MANAGER CITY OF SYDNEY PROJECT OWNER ACCEPTED M. RILEY 13/09/17 SWM PROJECT MANAGER SYDNEY WATER PROJECT OWNER
DWG ALLIANCE DRAWING No.		PROJ No. 20028450		DRAWING STATUS: DRAWING DELETED		A1		12	