

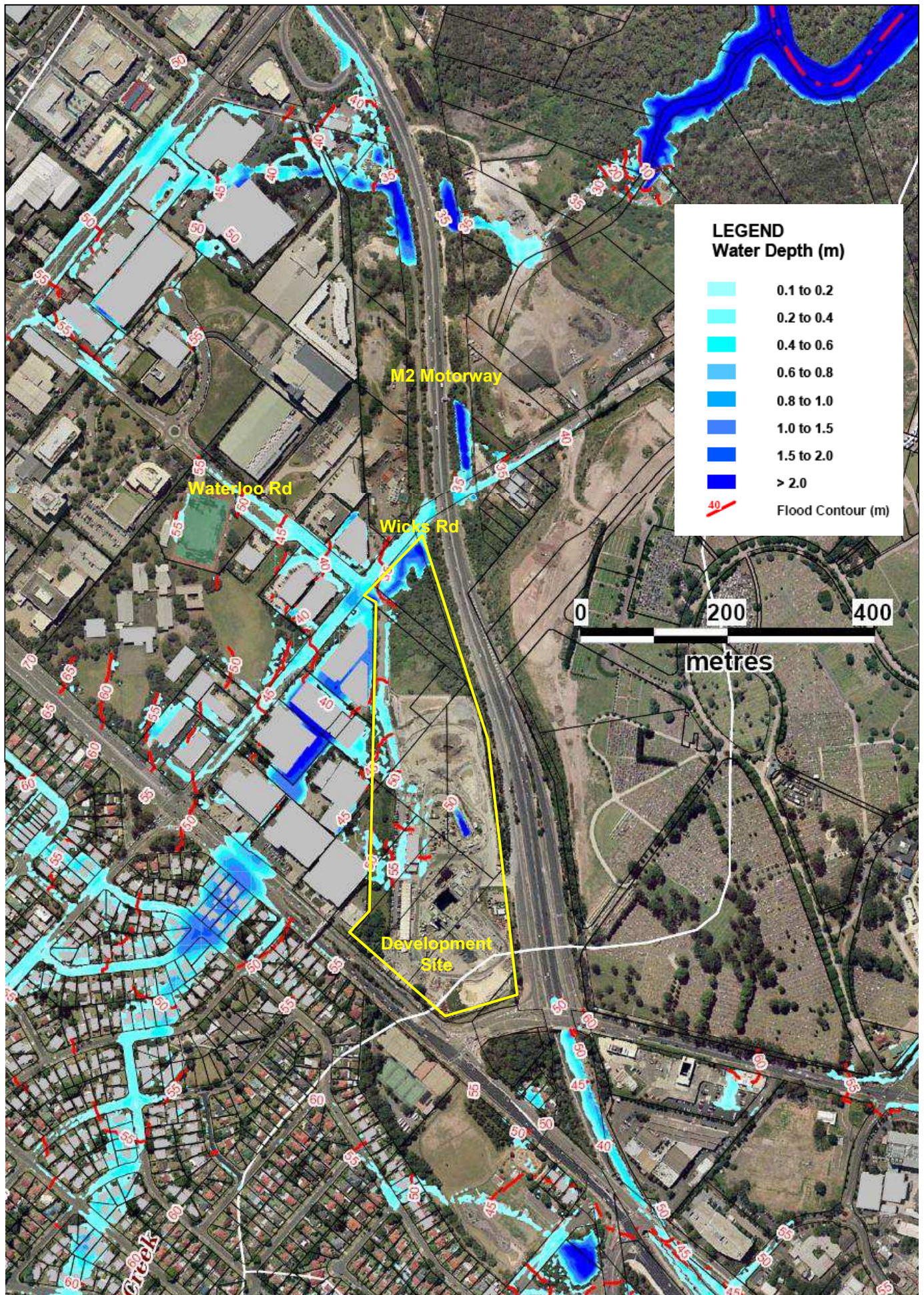


Figure 3 100 yr ARI Flood Depths (after Bewsher Consulting, 2010)

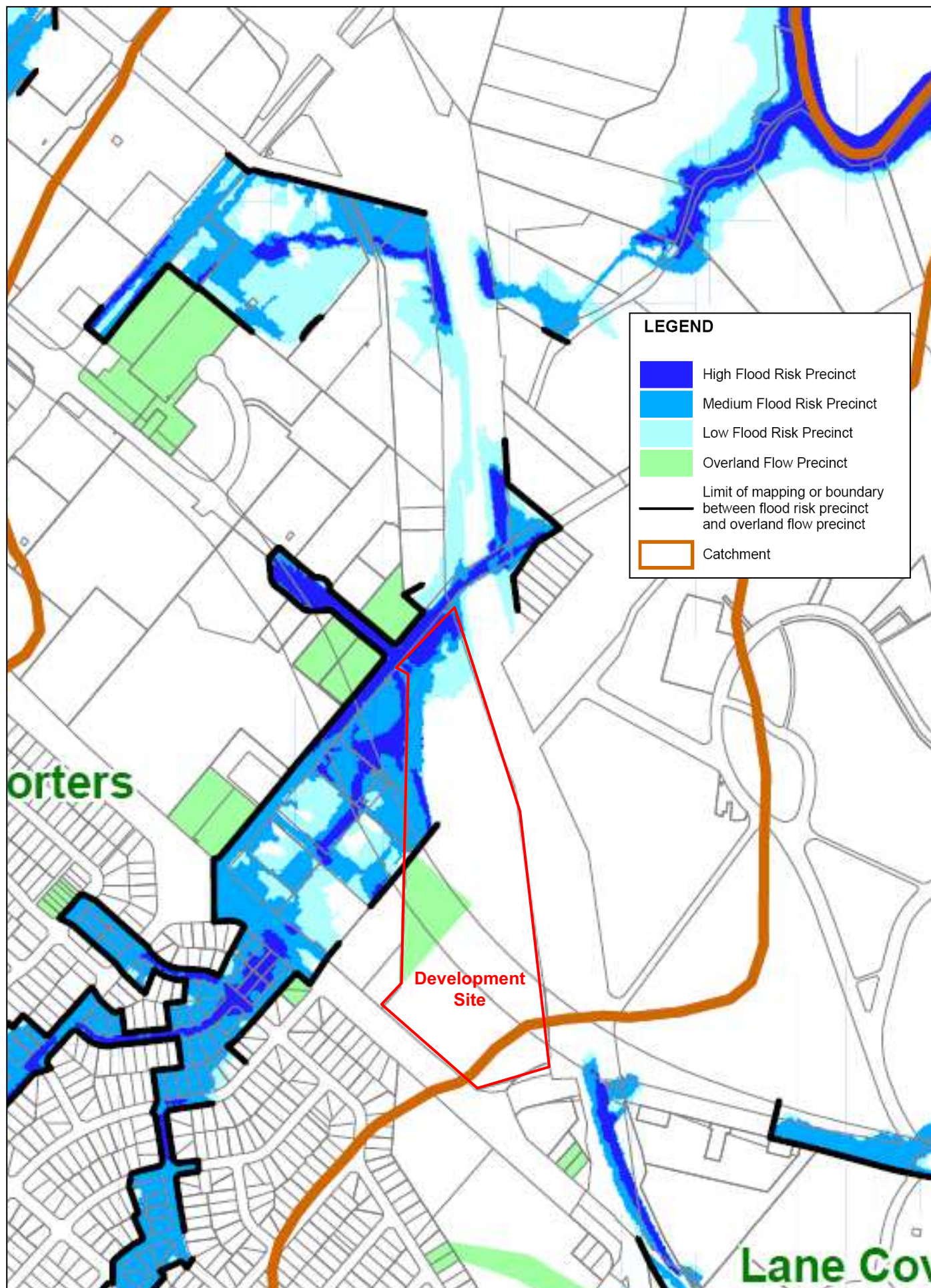


Figure 4 Flood Risk Precincts (after Bewsher Consulting, 2011)



Figure 5 Adopted Roughness Zones – Benchmark Conditions



Figure 6 100 yr ARI Flood Velocity Vectors – Benchmark Conditions



Figure 7 Areas unsafe for Emergency vehicles in a 100 yr ARI Flood (in Red) – Benchmark Conditions



Figure 8 100 yr ARI Peak Flows in Downstream Drainage System – Benchmark Conditions

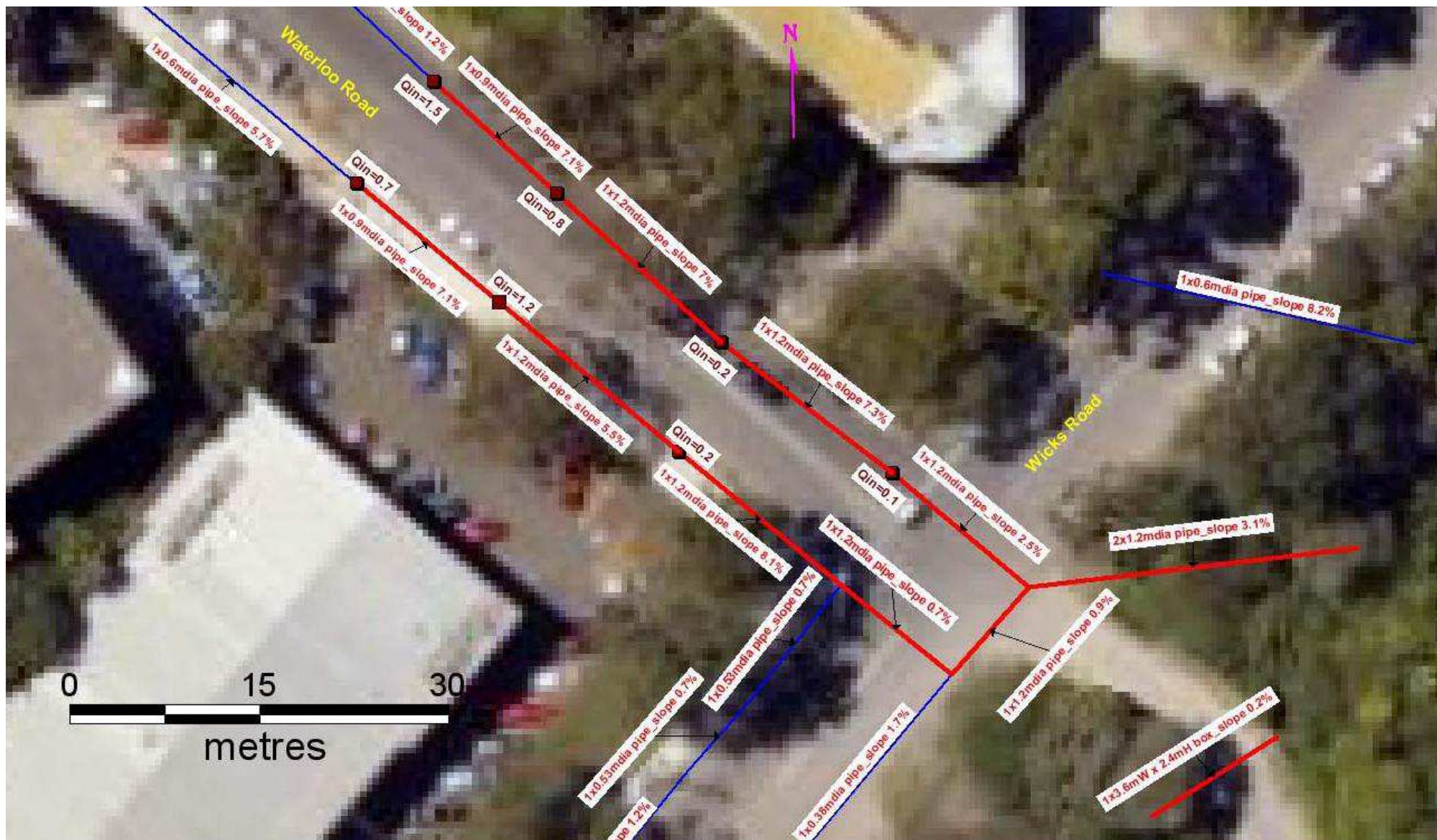


Figure 9 Concept Drainage Augmentation



Figure 10 Areas unsafe for Emergency vehicles in a 100 yr ARI Flood (in Red) – Future Conditions

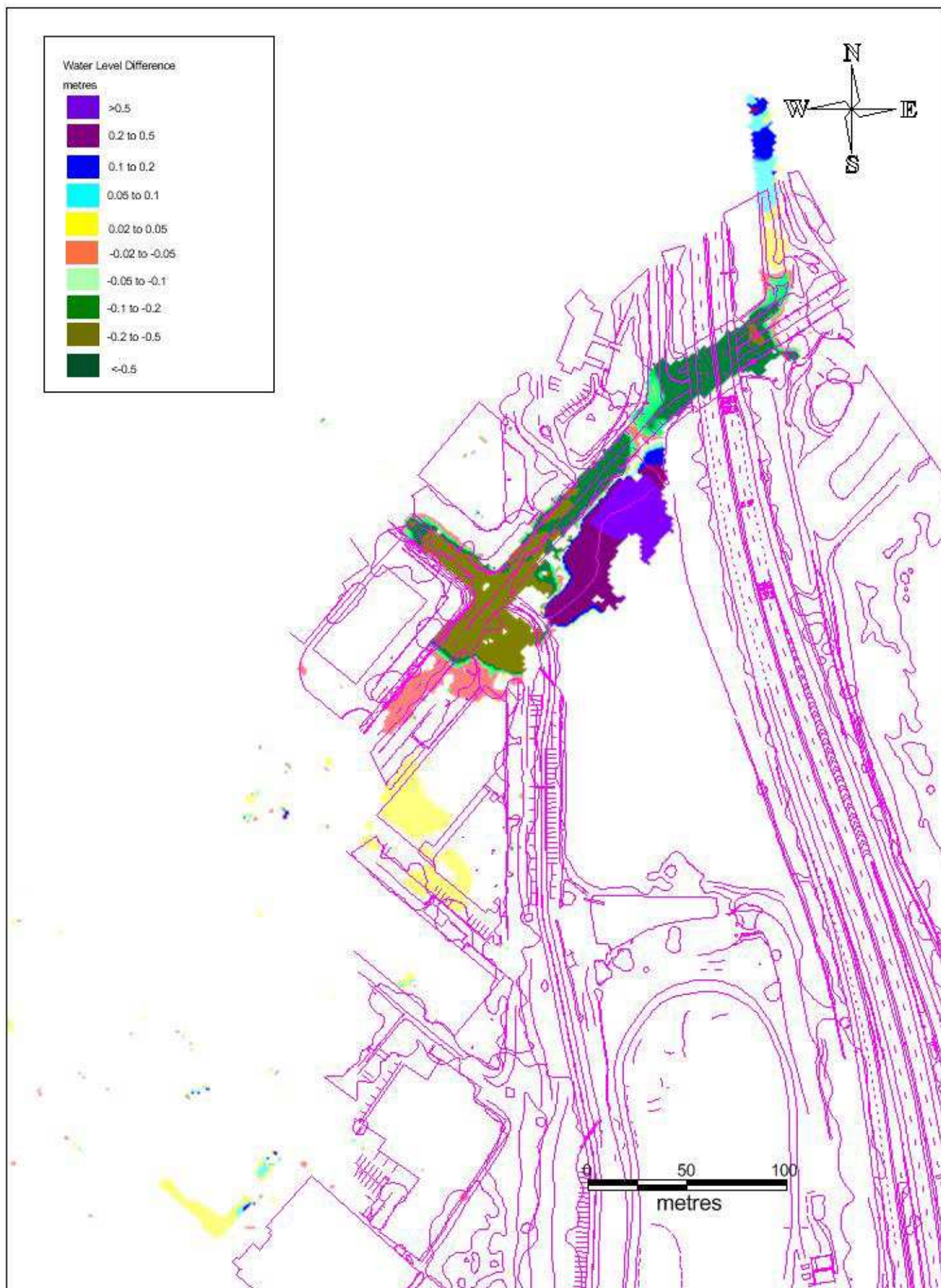


Figure 11 100 yr ARI Flood Level Differences – Concept Drainage Augmentation



Figure 12 Location of Inflows (Blue Triangles) in Council's Porters Creek TUFLOW Model

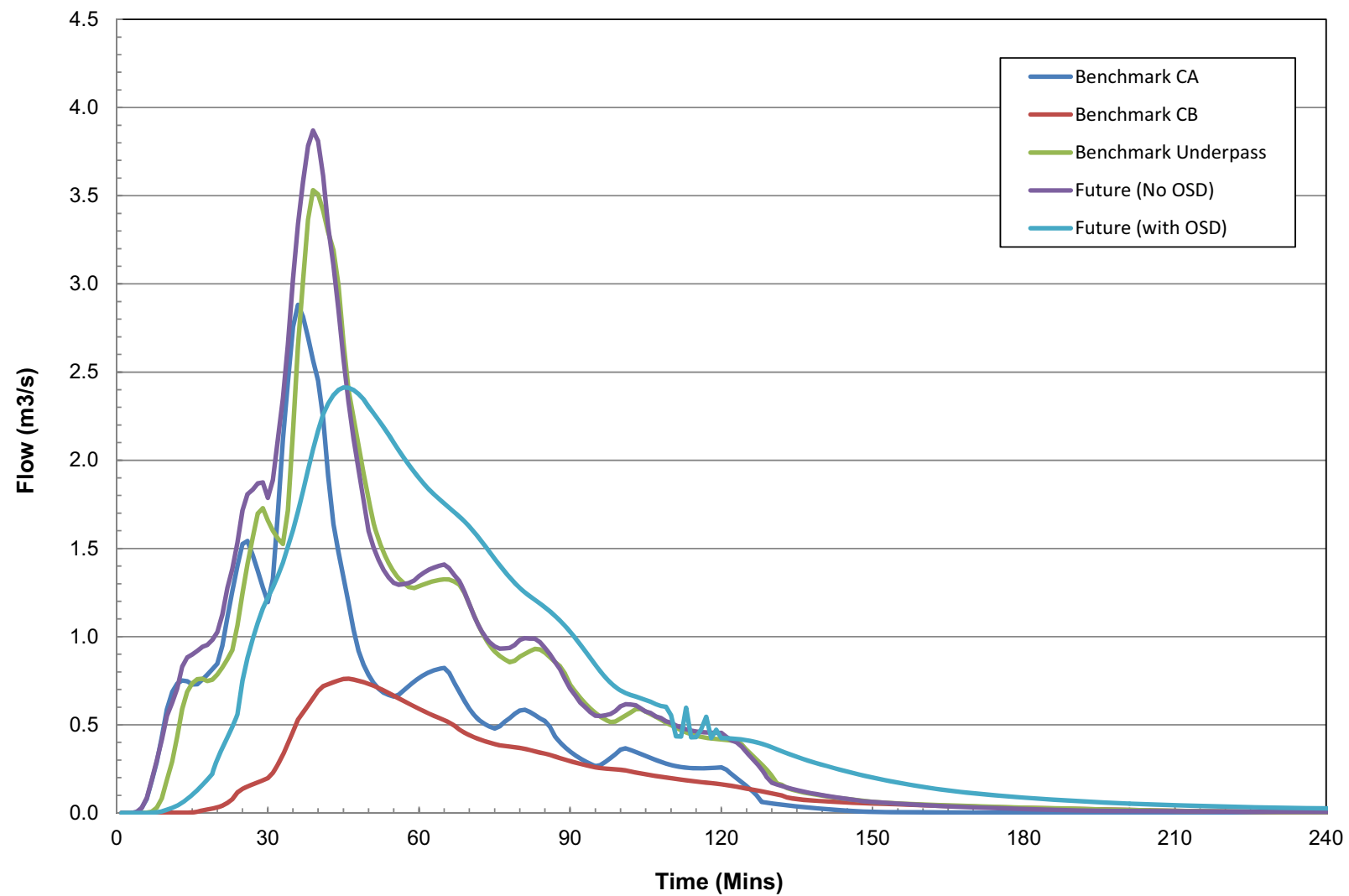


Figure 13 Estimated Local 100 yr ARI Hydrographs under Benchmark and Future Conditions

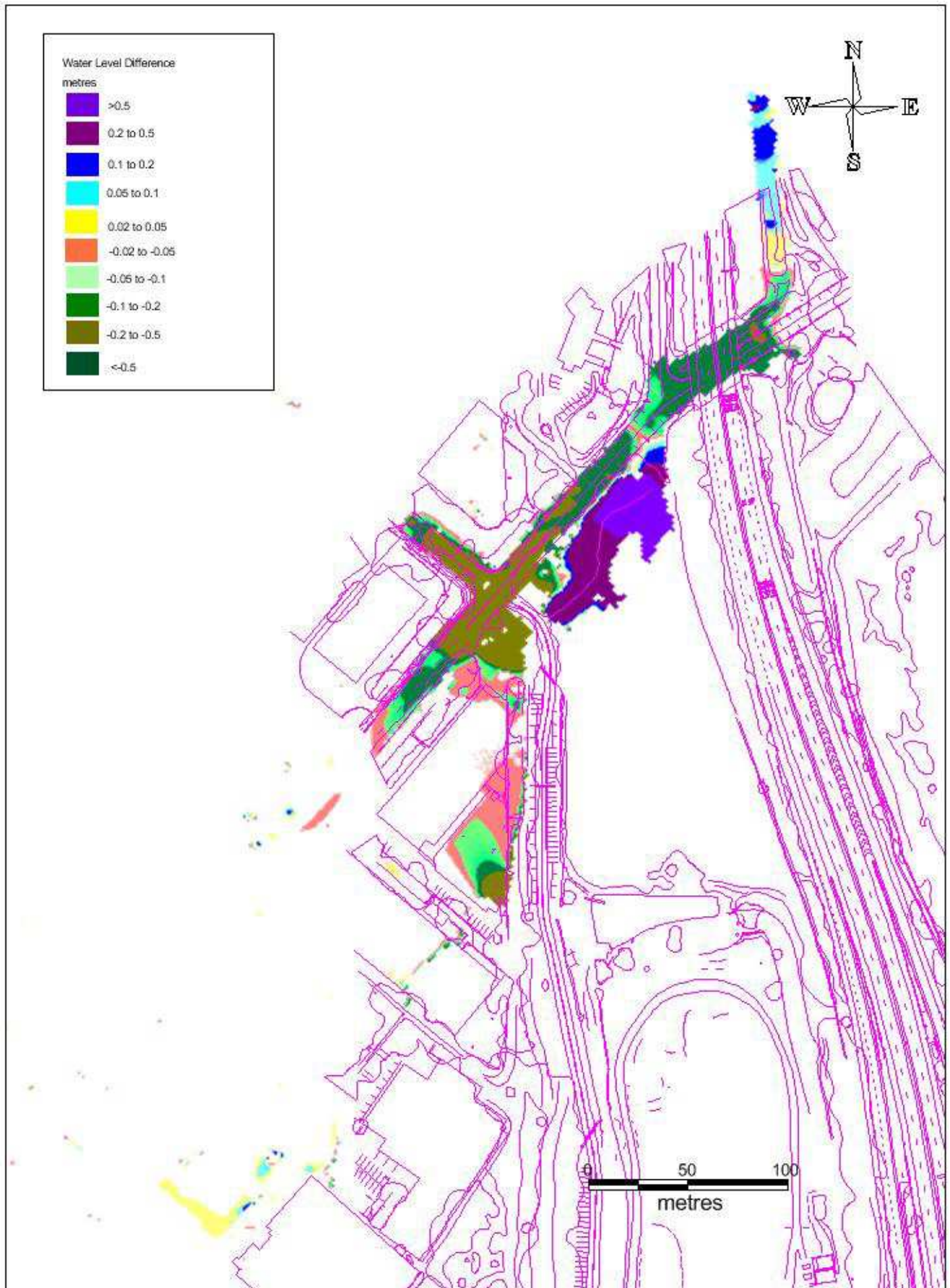
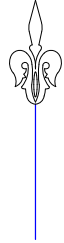


Figure 14 100 yr ARI Flood Level Differences – Future Conditions (without OSD)

MGA

PT 101
DP 1131776

A1

NOTES :

- * THIS DETAIL SURVEY IS NOT A 'SURVEY' AS DEFINED BY THE SURVEYING ACT 2002.
- * BEARINGS AND DISTANCES ARE BY TITLE AND ARE SUBJECT TO SURVEY INVESTIGATION
- * BEARINGS RELATE TO MGA NORTH DETERMINED BY SSM 26571 TO PM 48985
- * THE POSITION OF IMPROVEMENTS IN RELATION TO BOUNDARIES IS DIAGRAMMATIC ONLY
- * VISIBLE, ACCESSIBLE SERVICES ONLY HAVE BEEN LOCATED
- * NOT ALL SERVICES ARE SHOWN

- * THE EXISTENCE OF UNDERGROUND SERVICES HAS NOT BEEN ESTABLISHED. IF THESE ARE CRITICAL IT IS ESSENTIAL THE APPROPRIATE AUTHORITIES BE CONTACTED PRIOR TO DEVELOPMENT WORKS.
- * EXISTENCE OF SERVICES MUST BE VERIFIED BY CONTACTING DIAL BEFORE YOU DIG
- * THE POSITION OF IMPROVEMENTS IN RELATION TO BOUNDARIES IS DIAGRAMMATIC ONLY
- * THIS TITLE BLOCK IS AN INTEGRAL PART OF THIS DRAWING WHICH IS NOT TO BE REMOVED



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REV	AMENDMENTS	DATE
A	CREEK DETAIL ADDED	17.02.14

CLIENT: URBAN GROWTH

PLAN OF: INTERSECTION WATERLOO
ROAD & WICKS ROAD
NORTH RYDESHOWING: GENERAL DETAIL AND
SITE LEVELSPURPOSE: ENGINEERING DESIGN
COUNCIL SUBMISSION

SHEET 1 OF 3

SCALE 1:300

SURVEYOR :	AARON B
DATUM :	AUSTRALIAN HEIGHT DATUM
ORIGIN :	SSM 26571 RL35.647
JOB REF. :	B1505
COMPUTER REF. :	B1505
DRAWING No. :	B1505-WATERLOO
CHECKED :	
DATE OF SURVEY :	12 FEBRUARY 2014
REDUCTION RATIO :	1:300

MACQUARIE PARK

PO Box 4004
MACQUARIE CENTRE NSW 2113
SUITE 404, LEVEL 4
No13-15 LYON PARK ROAD,
MACQUARIE PARK NSW 2113

PHONE : 9888 3648
FAX : 9888 3875
email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
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LEGEND

- SP - SIGN POST
- HYD - HYDRANT
- L - STORMWATER LINTEL
- MH - MANHOLE
- PP - POWER POLE
- SMH - SEWER MANHOLE
- BB - BOTTOM BANK
- SV - STOP VALVE
- TEL - TELSTRA PIT
- VC - VEHICLE CROSSING
- TB - TOP BANK
- WM - WATER METER
- TW - TOP WALL
- 12/5/0.6D/18H - TREE SPREAD, DIAMETER, HEIGHT
- GAS - GAS VALVE
- COMMS - COMMUNICATIONS PIT
- ELEC - ELECTRICITY BOX
- PN - PIPE NETWORK PIT
- INV - INVERT
- PT - POWERTEL PIT