



APPENDIX

E

DESIGN TERRAIN

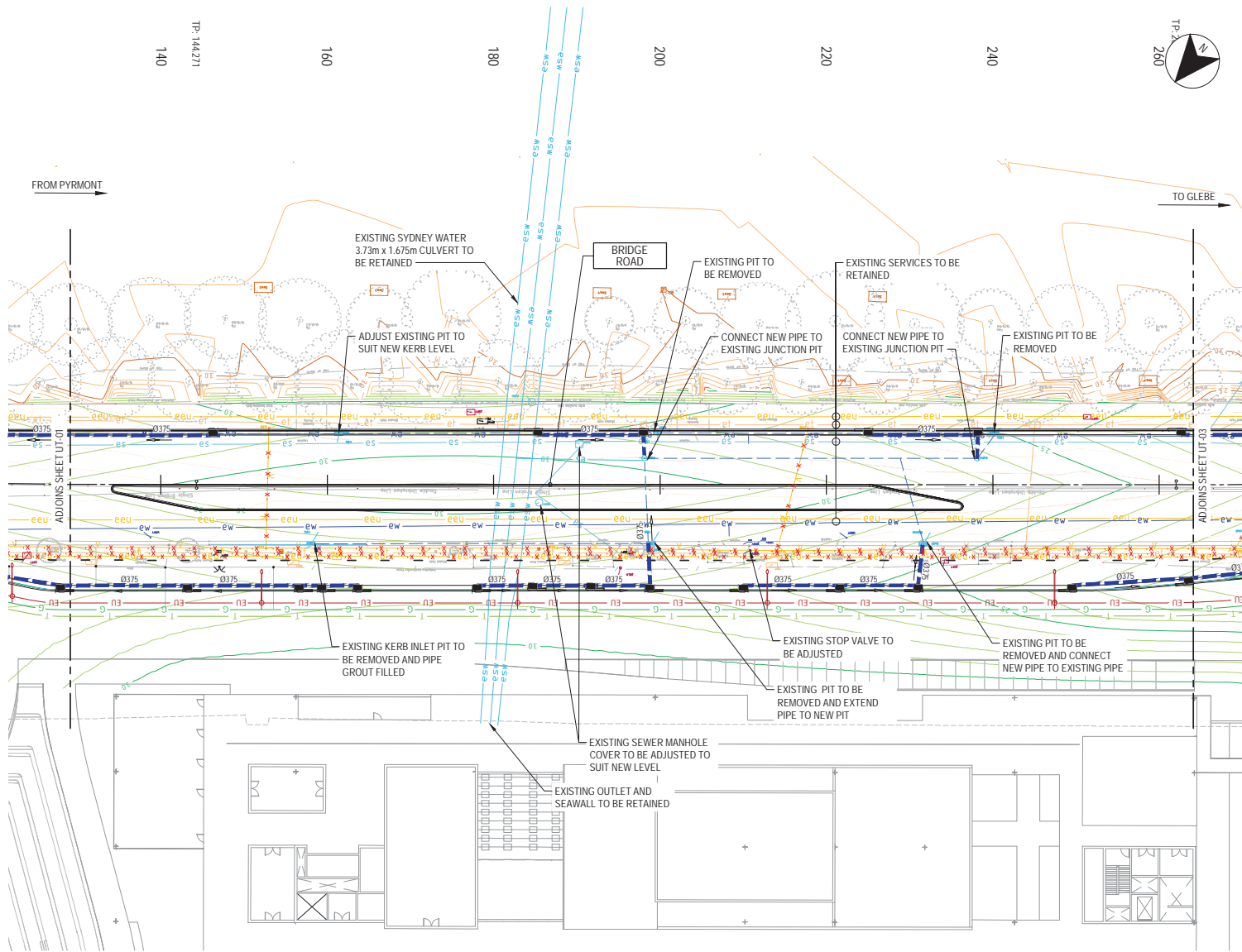


APPENDIX

F

DESIGN DRAINAGE NETWORK

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UTILITIES LEGEND

- EU NEW UNDERGROUND DISTRIBUTION (11kV)
- V NEW OVERHEAD POWER LINE
- TEL NEW TELSTRA COMMUNICATIONS TRENCH WITH PIT
- G NEW GAS MAIN
- PROPOSED NEW STORMWATER DRAINAGE PIT AND PIPE
- EXISTING SERVICE TO BE REMOVED
- ewc EXISTING WATER COURSE
- EXISTING STORMWATER PIPE (DBYD)
- 85.0 EXISTING SURFACE CONTOURS MAJOR
- 86.0 EXISTING SURFACE CONTOURS MINOR
- DESIGN SURFACE CONTOURS MAJOR
- DESIGN SURFACE CONTOURS MINOR
- NEW LIGHT POLE

NOTES

- ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND UTILITIES NOT SHOWN ON THE DRAWINGS, OR AT LOCATIONS OR ELEVATIONS DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS. THE EXACT LOCATION OF EACH UNDERGROUND UTILITY SHALL BE VERIFIED ON SITE PRIOR TO DOING ANY WORK THAT MAY DAMAGE SUCH UTILITY.
- FOR EXISTING SERVICES LEGEND REFER TO SHEET UT-1000.
- ASBESTOS CONDUITS HAVE BEEN IDENTIFIED. THE APPROPRIATE WMS PROCEDURES MUST BE USED WHERE ASBESTOS IS PRESENT.
- EXISTING OVERHEAD ELECTRICAL ASSETS ARE TO BE RELOCATED. REFER TO ENDEAVOUR ENERGY DESIGN (ARP3473, ARP3474 AND ARP3476) FOR DETAILS.
- EXISTING UNDERGROUND TELECOMMUNICATIONS ASSETS ARE TO BE RELOCATED. REFER TO TELSTRA DESIGN DRAWING FILE (S.J 185765/01) FOR DETAILS.

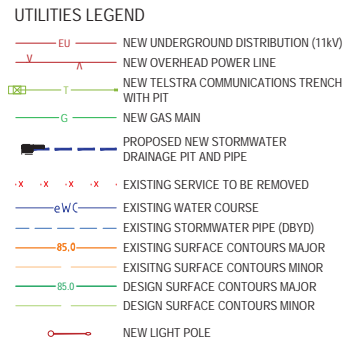
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DRAWING FILE LOCATION / NAME P:\Sydney\Projects\3896\1 Sydney Fish Market\04 Working\01 Drafting\CH\Drawings\CH-UT1-B20 UT-0302.dwg			DESIGN LOT CODE WVR No. APPROVAL 8.500		DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING Scales on A3 size drawing 0 5 10 15 20 PLAN 1:500		DRAWINGS / DESIGN PREPARED BY M M Matt MacDonald Level 10, 383 Kent Street Sydney, NSW 2000 Australia PO Box 01678, CHB Sydney NSW 1230, Australia T +61 (0)2 9096 6880 W www.mattmac.com		PLOT DATE / TIME 12/10/2018 10:43:04 AM		PLOT BY JED64037		CLIENT UrbanGrowth NSW Development Corporation		ULTIMO - CITY OF SYDNEY MR 00000 - BRIDGE ROAD SYDNEY FISH MARKET BRIDGE ROAD UPGRADE FROM WATTLE STREET TO WENTWORTH PARK ROAD DRAINAGE AND PUBLIC UTILITIES PLAN SHEET 2 OF 3		RMS REGISTRATION No. DS2018/XXXXXX		ISSUE STATUS CONCEPT DESIGN		SHEET No. UT-0302		PART 01		ISSUE 0		A3	
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APPENDIX

G

SWC NETWORK
(OUTLET STRUCTURES)

G1 Introduction

This section provides details of the hydraulic modelling of the stormwater outlets that discharge to Blackwattle Bay within the new Sydney Fish Markets (nSFM) site. There are a number of stormwater culvert outlets which discharge within the nSFM site and these have been grouped into three (3) locations:

1. Stormwater Culvert 1 (Eastern / Wattle Street);
2. Stormwater Culvert 2 (Central); and
3. Stormwater Culvert 3 (Western / Wentworth Park Road).

In the Proposed Scenario model these culverts were modified where necessary to represent the proposed design.

G2 Outlet Structures in Proposed Scenario

G2.1 Stormwater Culvert 1 (Eastern / Wattle Street)

Modifications to Stormwater Culvert 1 include an extension of the culverts by approximately 5 m to accommodate the proposed realignment of the eastern revetment (refer to Mott Macdonald drawings MMD-385951-C-SK-CD-4000 and 4001). While this modification also introduces an additional pit, this does not have any measurable impact on the capacity of the existing culverts. Also, the proposed nSFM building and basement do not form any obstruction to discharge from these culverts (refer to Mott Macdonald drawing MMD-285951-C-SK-CD-2601).

G2.2 Stormwater Culvert 2 (Central)

The proposed nSFM building and basement are located in front of the existing Stormwater Culvert 2 outlet (refer to Mott Macdonald drawing MMD-285951-C-SK-CD-2602). To ensure there is no impact on the capacity of the existing culvert system, a large pit and connection to Blackwattle Bay beneath the basement has been incorporated into the design.

In the TUFLOW hydraulic model, the outlet has been modelled in two parts. Location A (refer **Figure G-1** and **Figure G-2**) has been modelled as a pit (20.4m W x 5.4m L). The opening under the building at Location B was modelled as a 20m W x 1m H dummy culvert. It was assumed that a height of 1 m provides reasonable access for sediment removal so 0% blockage was assumed for this dummy culvert. **Figure G-3** shows the outlet structure setup in the TUFLOW hydraulic model. Please note this figure only shows the trunk system (pipes/culverts greater than 1 m).

The 1% AEP peak flows in the upstream pipes/culverts were compared in the Existing and Proposed Conditions. **Figure G-4** shows the 1% AEP peak flows upstream of the Stormwater Culvert 2 outlet structure in the existing and proposed conditions. This shows that the change in the 1% AEP peak flow in the upstream pipes is expected to be negligible (less than 1.5% change).

G2.3 Stormwater Culvert 3 (Western / Wentworth Park Road)

No modifications are proposed to the outlet of Stormwater Culvert 3. While the proposed nSFM building and basement are in close proximity to this outlet (refer to Mott Macdonald drawing MMD-285951-C-SK-CD-2603), the offset is approximately 13 m and this is considered sufficient to ensure there are no hydraulic impacts.

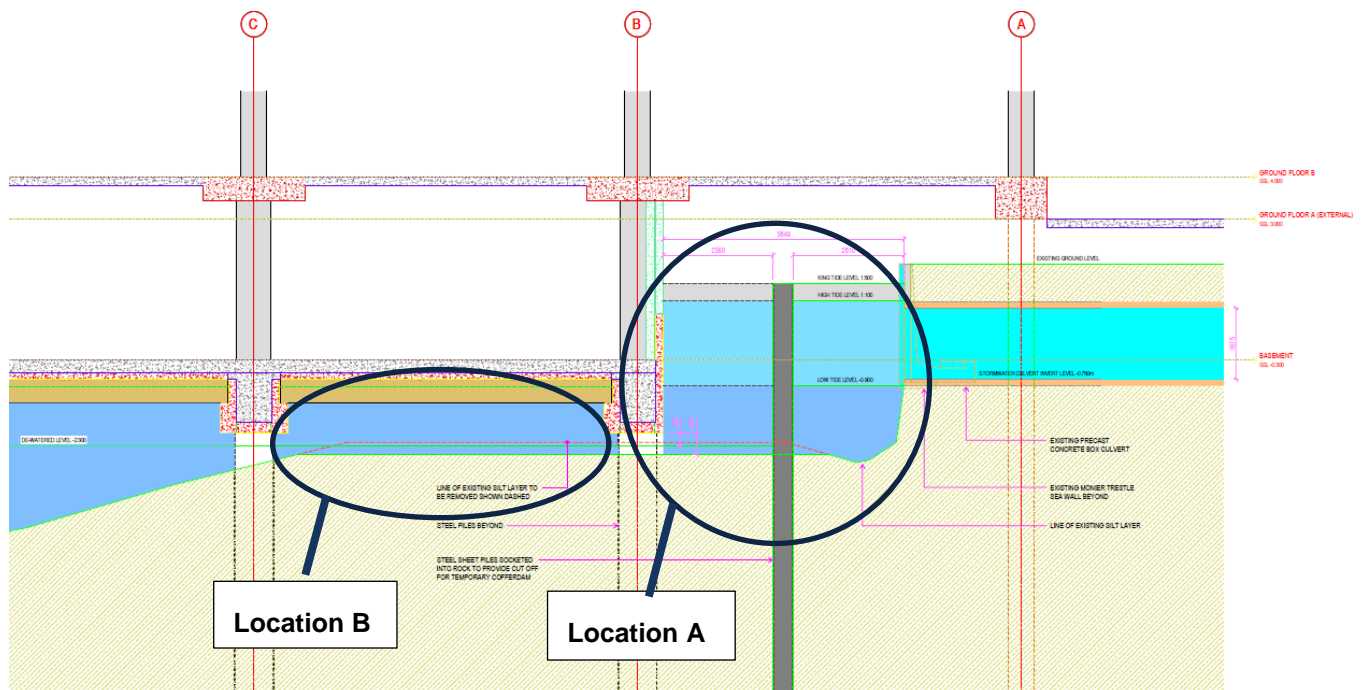


Figure G-1 Cross Section for Stormwater Culvert 2 (Central)

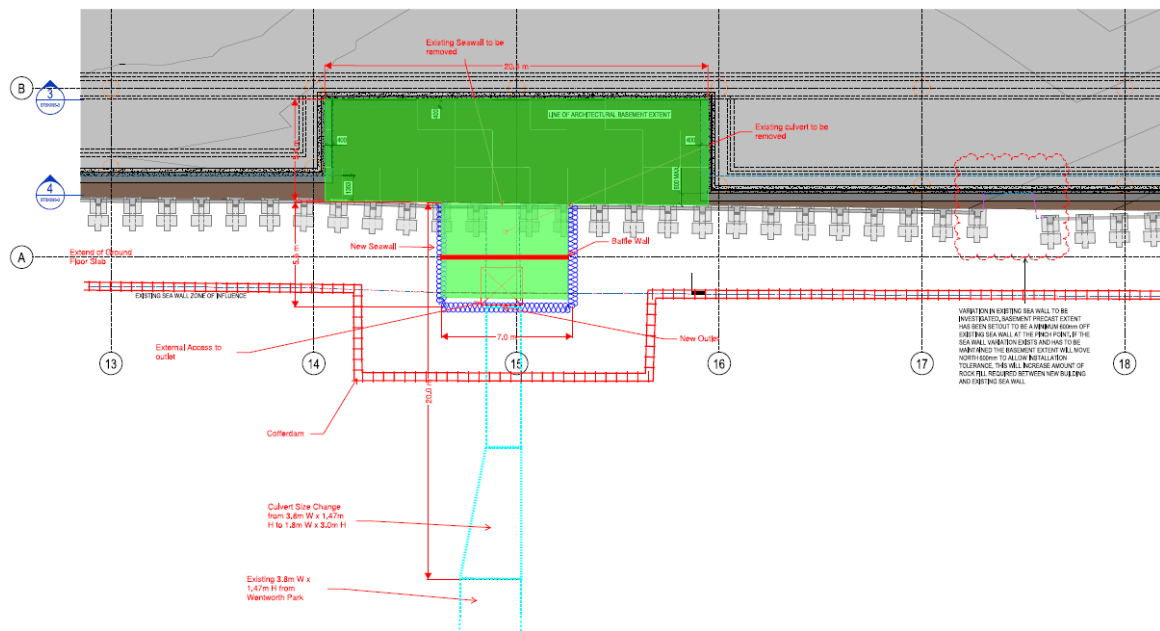


Figure G-2 Plan View for Stormwater Culvert 2 (Central)



Figure G-3 Stormwater Culvert 2 Outlet Structure Representation in TUFLOW Model

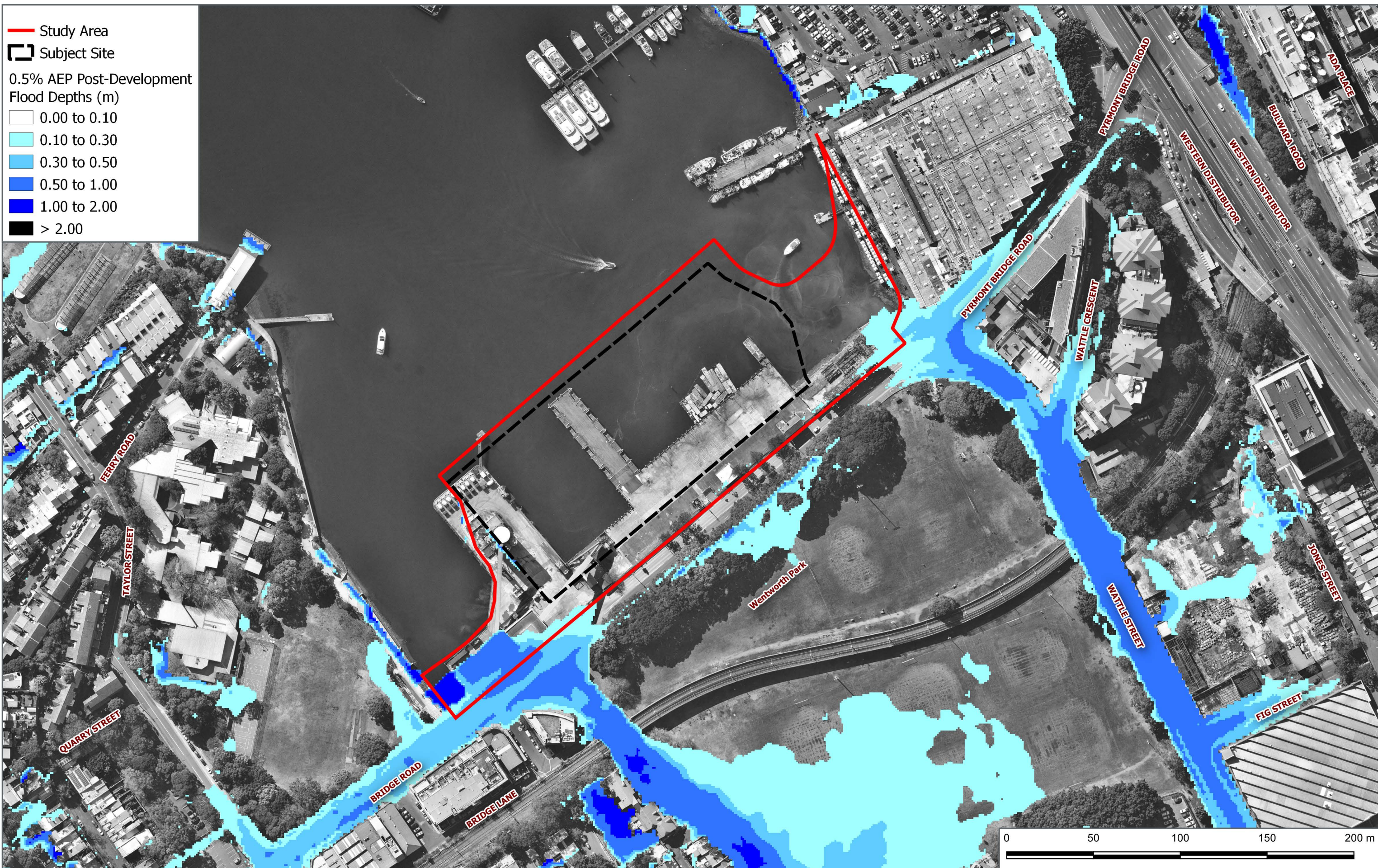


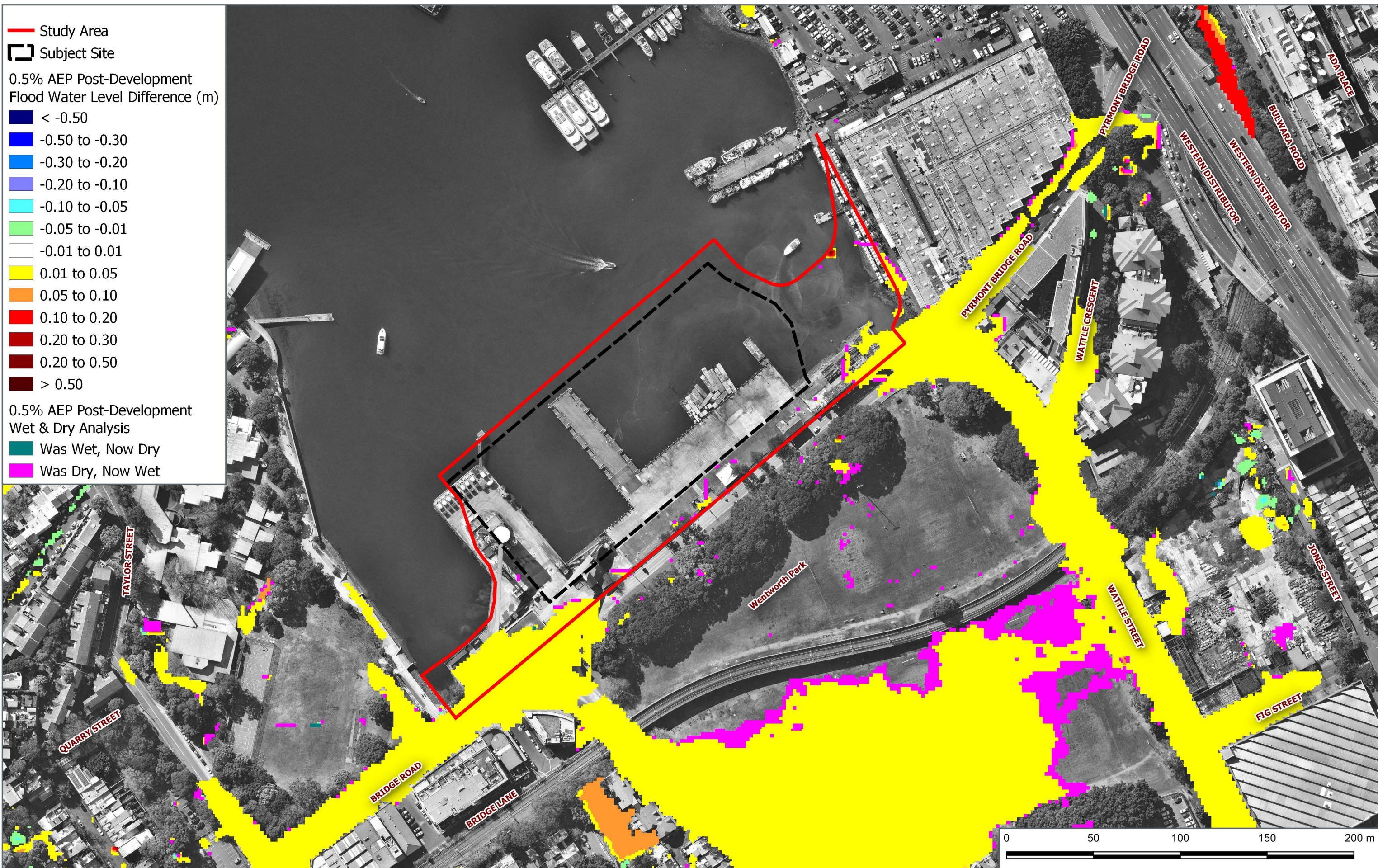
Figure G-4 Comparison of Flow Upstream of Stormwater Culvert 2 Outlet for Existing and Proposed Conditions

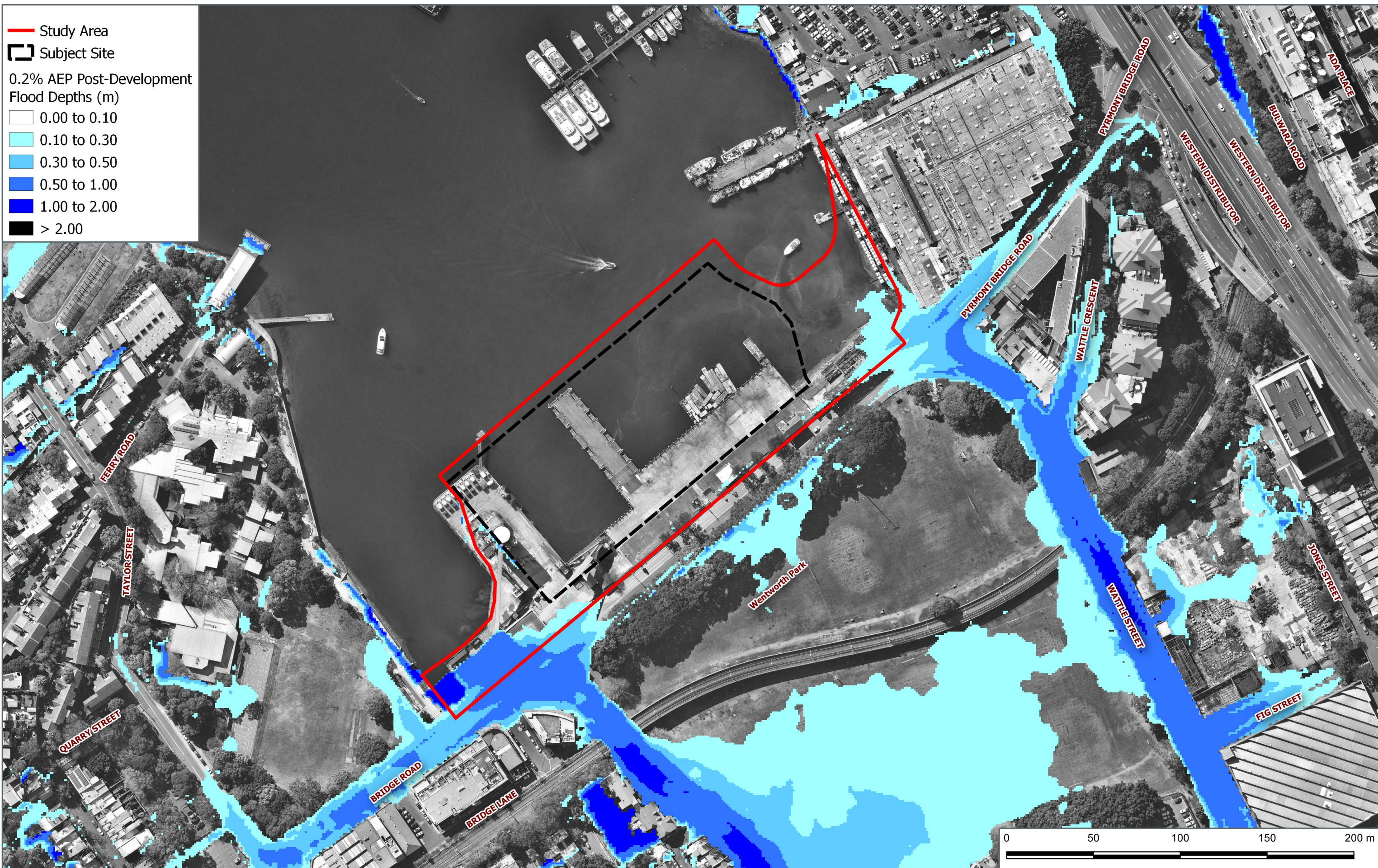
APPENDIX

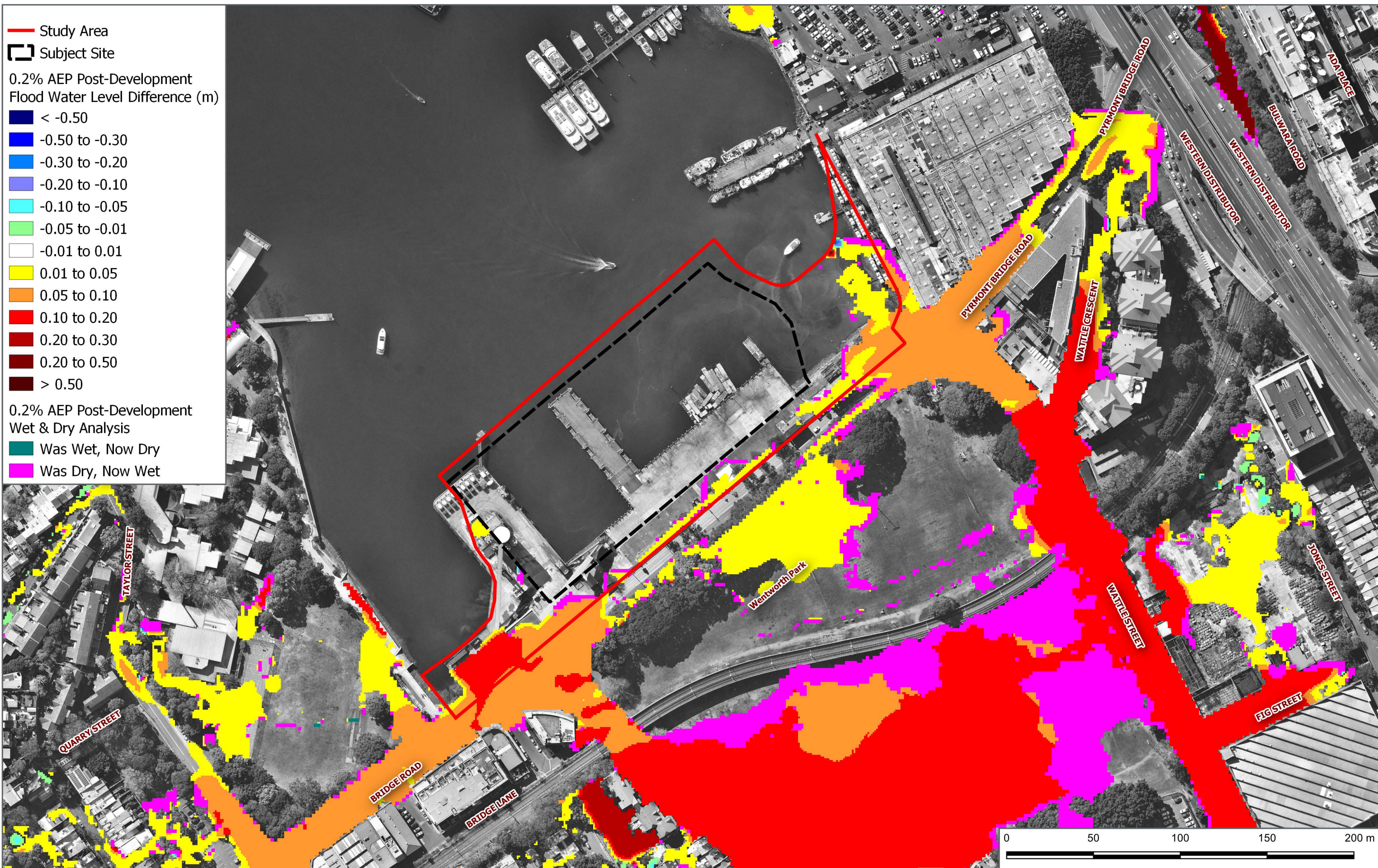
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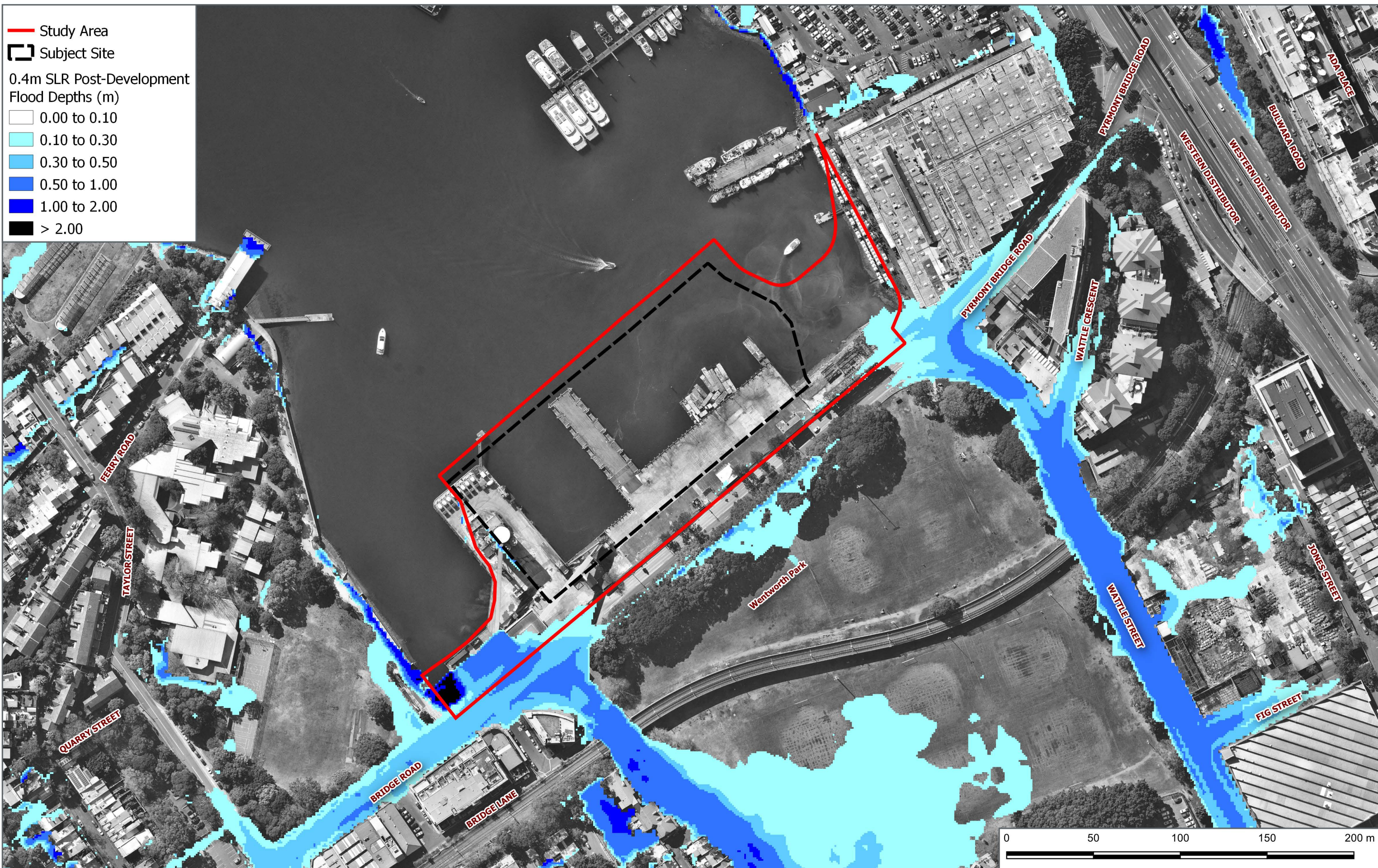
CLIMATE CHANGE FLOOD MAPS

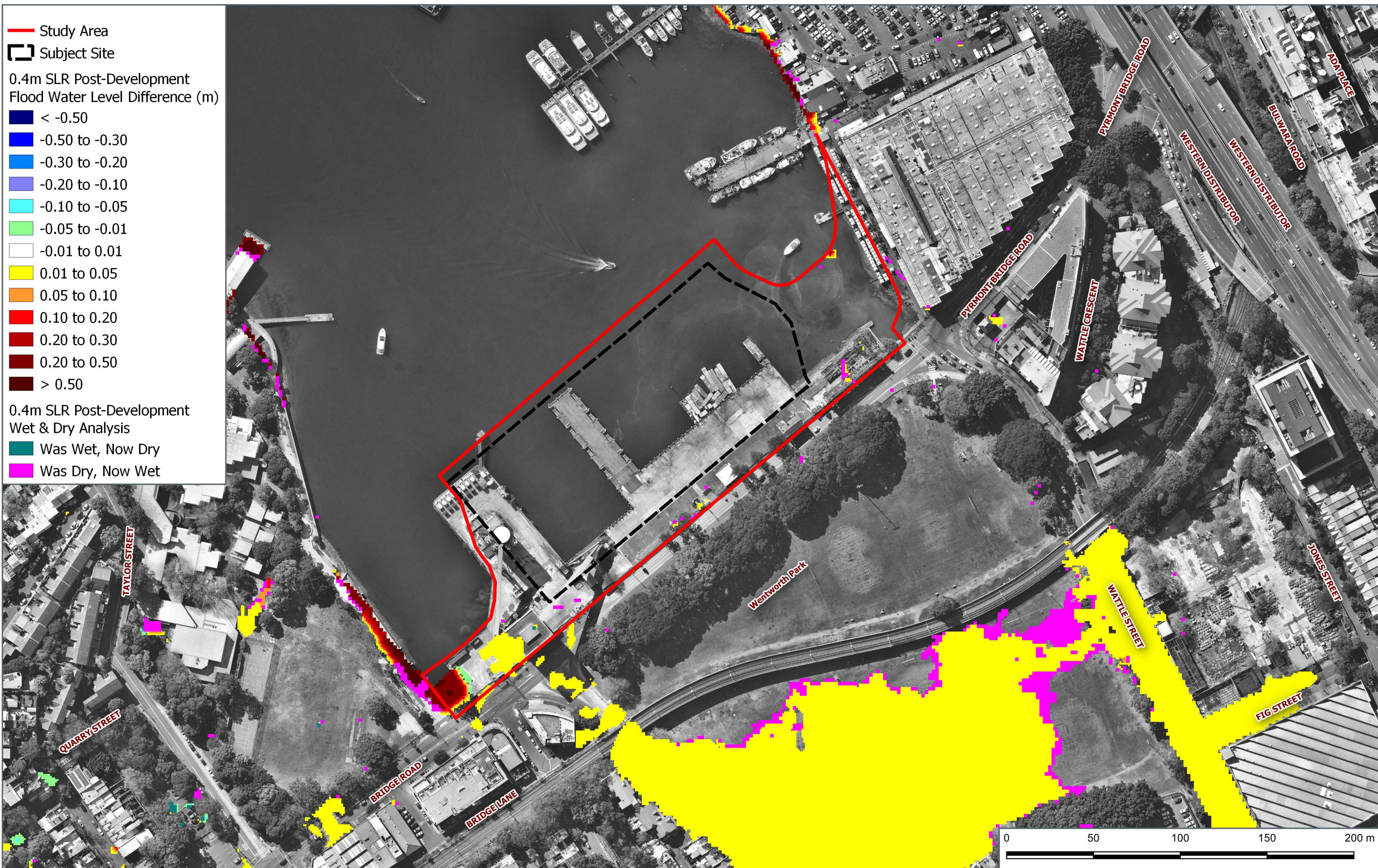


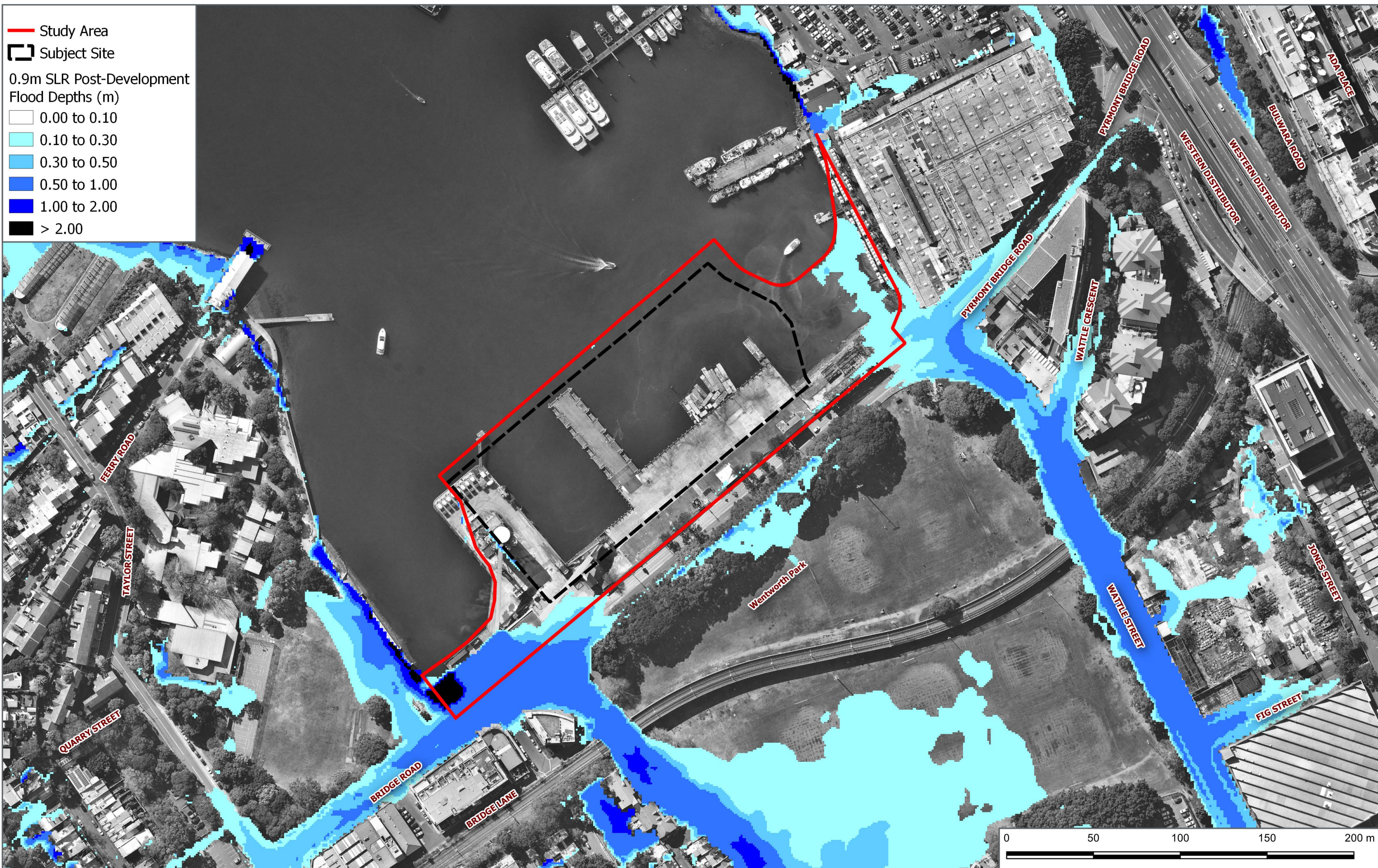


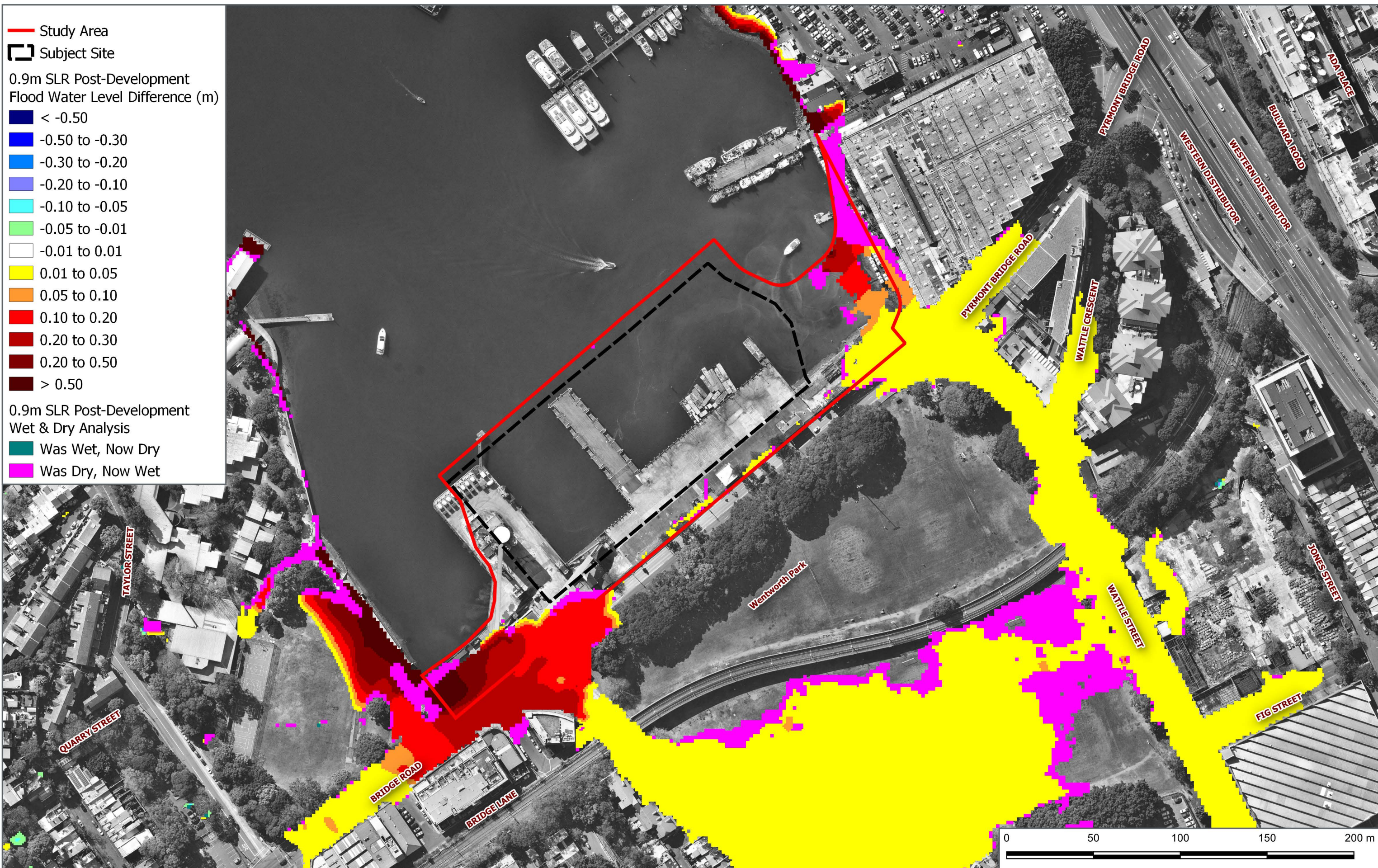










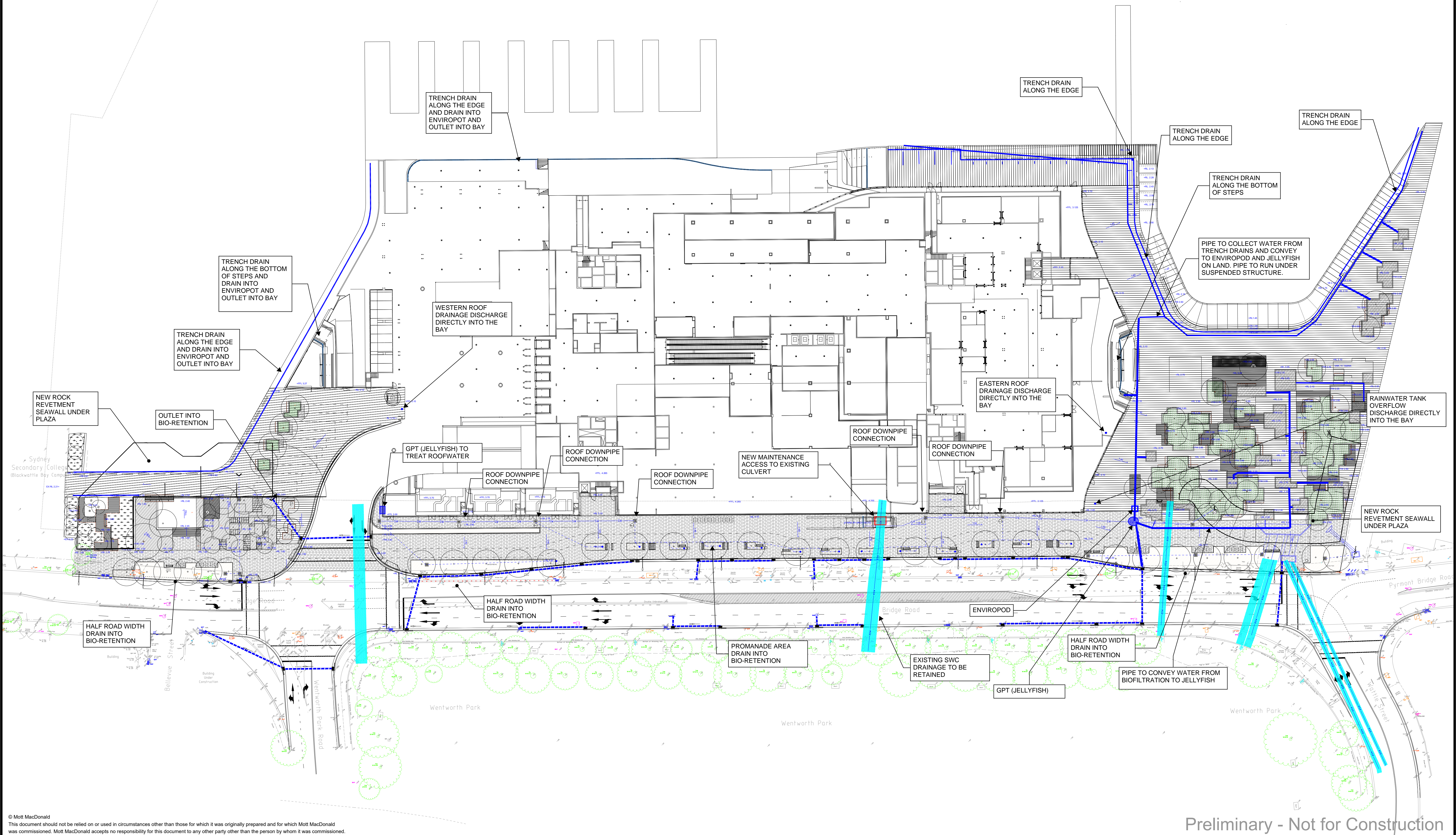


APPENDIX

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STORMWATER MANAGEMENT PLAN

NOTE: PIPE ALIGNMENT IN EASTERN PLAZA TO BE CONFIRMED IN NEXT PHASE



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Preliminary - Not for Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P4	27.09.19	SM	Issued for Information	BS	
P3	26.09.19	SM	Issued for Information	BS	
P2	20.09.19	BS	Issued for Information	BS	
P1	25.03.19	RBD	Issued for Information	BS	

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Title
SYDNEY FISH MARKET
STORMWATER MANAGEMENT
PLAN

Designed	R.Deep	Eng check	B.Soo
Drawn		Coordination	B.Soo
Dwg check		Approved	B.Soo
Scale at A1	Status	Rev	Security
1:250	PRE	P4	STD
Drawing Number MMD-385951-C-SK-CD-3000			