

Attachment A14-3

Flood Assessment and Stormwater Management Report

Appendix B - Sydney Water OSD Requirements

Subject: FW: [External] RE: OSD requirement for development site

From: Stormwater <Stormwater@sydneywater.com.au>
Sent: Friday, 13 May 2022 9:22 AM
To: Amir Zalnezhad <amir.zalnezhad@ttw.com.au>
Cc: Eirian Crabbe <Eirian.Crabbe@ttw.com.au>
Subject: RE: [External] RE: OSD requirement for development site

[External Email]: Do not click links or open attachments unless you recognize the sender and know the content is safe.

Amir,

The On Site Detention requirements for the site at 118-130 Epsom Road, Zetland, are as follows:

Cat 1

- Total Site Area 2620.05 Square meters
- On Site Detention 23 cubic meters
- Permissible Site Discharge 91 L/s

Cat 2

- Total Site Area 1396.1 Square meters
- On Site Detention 13 cubic meters
- Permissible Site Discharge 48 L/s

Cat 3

- Total Site Area 4078.86 Square meters
- On Site Detention 102 cubic meters
- Permissible Site Discharge 108 L/s

Cat 4

- Total Site Area 1981.25 Square meters
- On Site Detention 18 cubic meters
- Permissible Site Discharge 69 L/s

Cat 5

- Total Site Area 4812.22 Square meters
- On Site Detention 42 cubic meters
- Permissible Site Discharge 167 L/s

Cat 6

- Total Site Area 2738.15 Square meters
- On Site Detention 24 cubic meters
- Permissible Site Discharge 95 L/s

Cat 7

- Total Site Area 5134.23 Square meters
- On Site Detention 45 cubic meters
- Permissible Site Discharge 179 L/s

Cat 8

- Total Site Area 5201.06 Square meters
- On Site Detention 46 cubic meters
- Permissible Site Discharge 181 L/s

Cat 9

- Total Site Area 5915.07 Square meters
- On Site Detention 52 cubic meters
- Permissible Site Discharge 206 L/s

Cat 10

- Total Site Area 573.45 Square meters
- On Site Detention 6 cubic meters
- Permissible Site Discharge 20 L/s

The approval for the On Site Detention would only be given as part of the Section 73 application for this development. The On Site Detention is to be designed according to the above values and submitted to Sydney Water for approval with the Section 73 application. The following details are to be included in your submission for On Site Detention approval:

- Location of the On Site Detention in relation to the development
- Location of the On Site Detention in relation to overall stormwater network of the property
- Plan and Elevation of the On Site Detention tank with all dimensions
- Orifice plate calculation

Best Regards

Planning and Technical

City Growth and Development
Business Development

Level 13, 1 Smith Street
Parramatta NSW 2150



We're working on something big

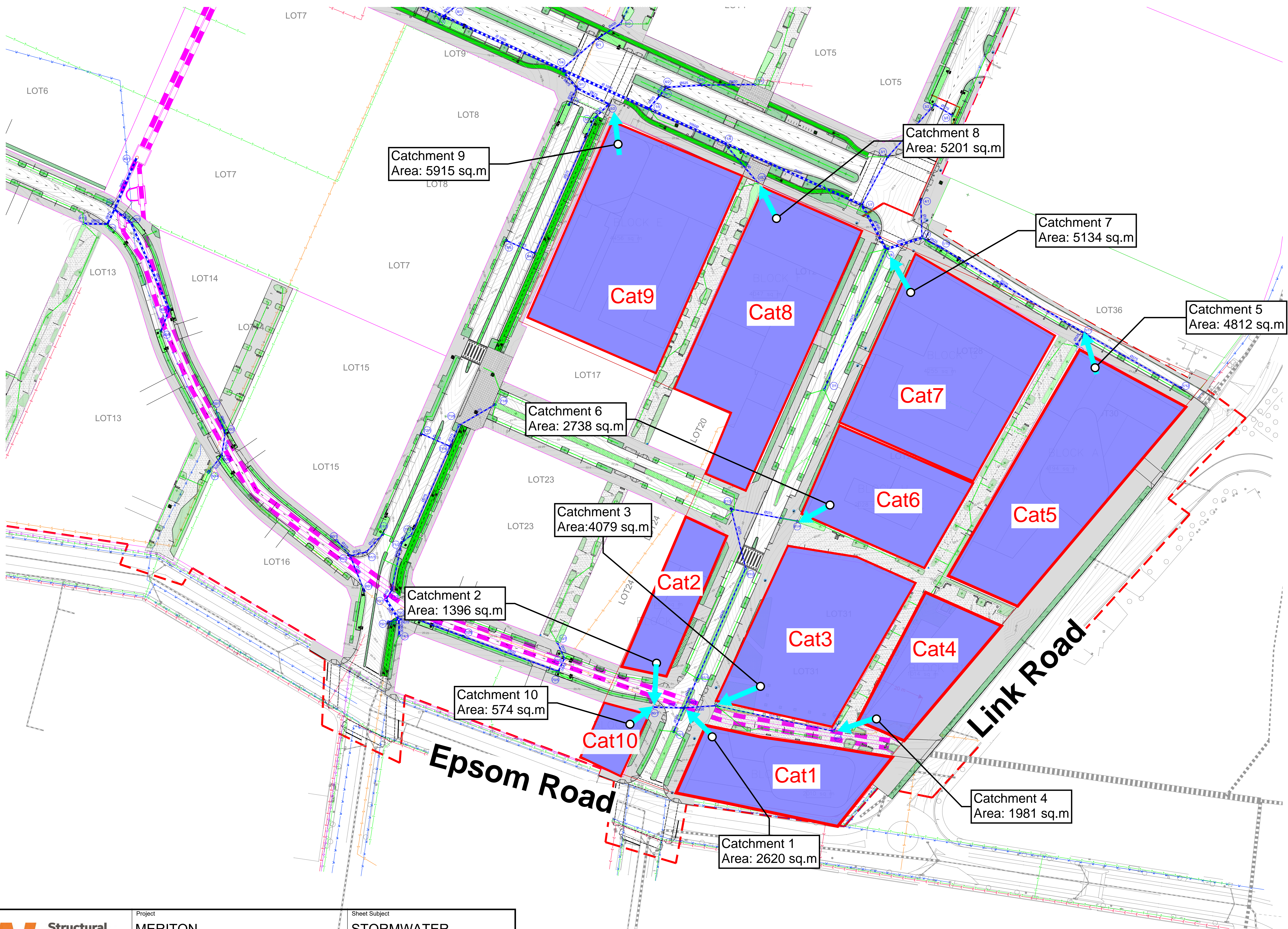
Every drop brings us one step closer to transforming our customers' online experience with Sydney Water

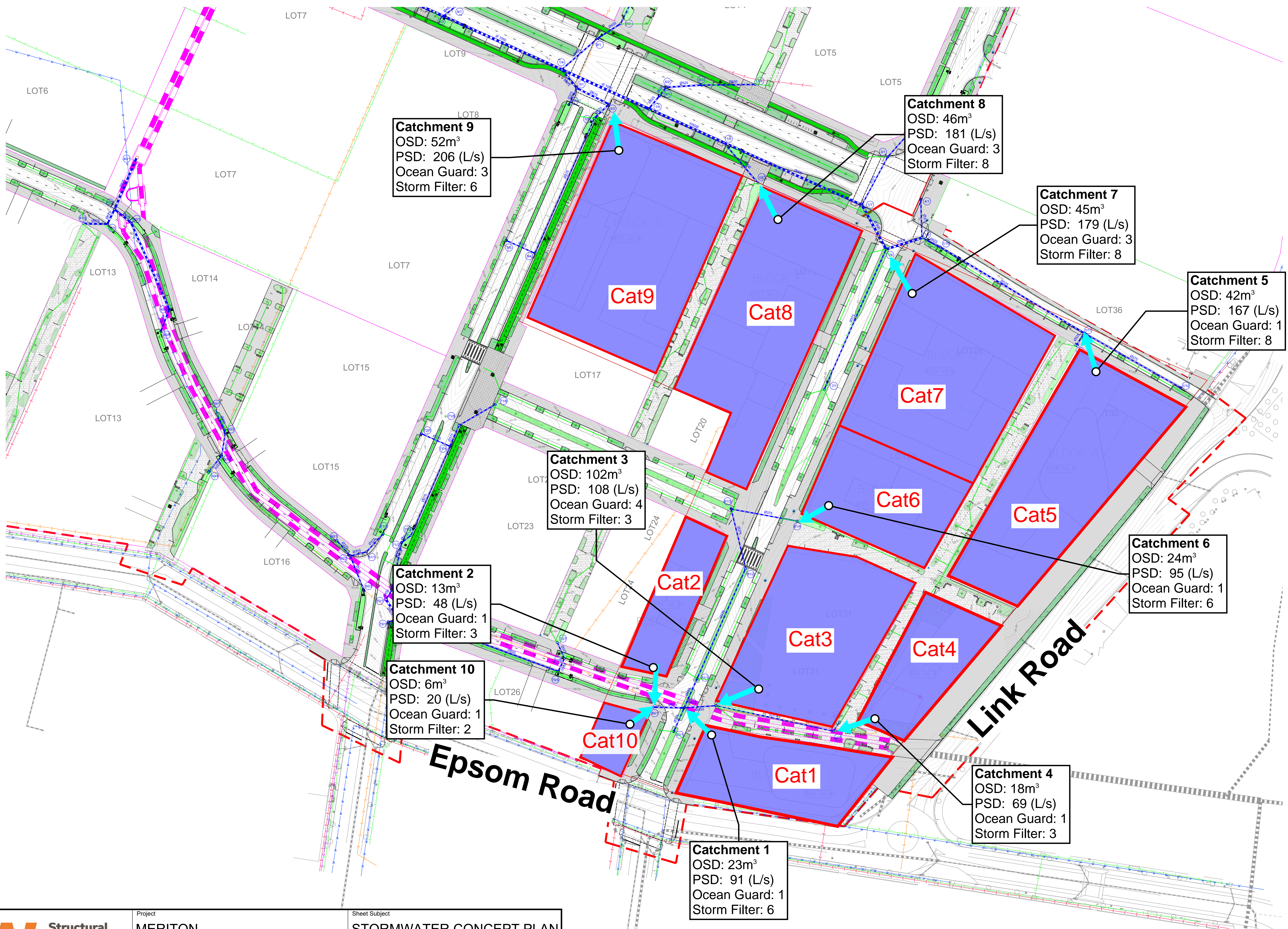


Sydney Water respectfully acknowledges the traditional custodians of the land and waters on which we work, live and learn. We pay respect to Elders past and present.

[Read more](#) about our commitment to reconciliation.

Appendix C - Proposed Stormwater Concept





Catchment 9
 OSD: 52m³
 PSD: 206 (L/s)
 Ocean Guard: 3
 Storm Filter: 6

Catchment 8
 OSD: 46m³
 PSD: 181 (L/s)
 Ocean Guard: 3
 Storm Filter: 8

Catchment 7
 OSD: 45m³
 PSD: 179 (L/s)
 Ocean Guard: 3
 Storm Filter: 8

Catchment 5
 OSD: 42m³
 PSD: 167 (L/s)
 Ocean Guard: 1
 Storm Filter: 8

Catchment 3
 OSD: 102m³
 PSD: 108 (L/s)
 Ocean Guard: 4
 Storm Filter: 3

Catchment 6
 OSD: 24m³
 PSD: 95 (L/s)
 Ocean Guard: 1
 Storm Filter: 6

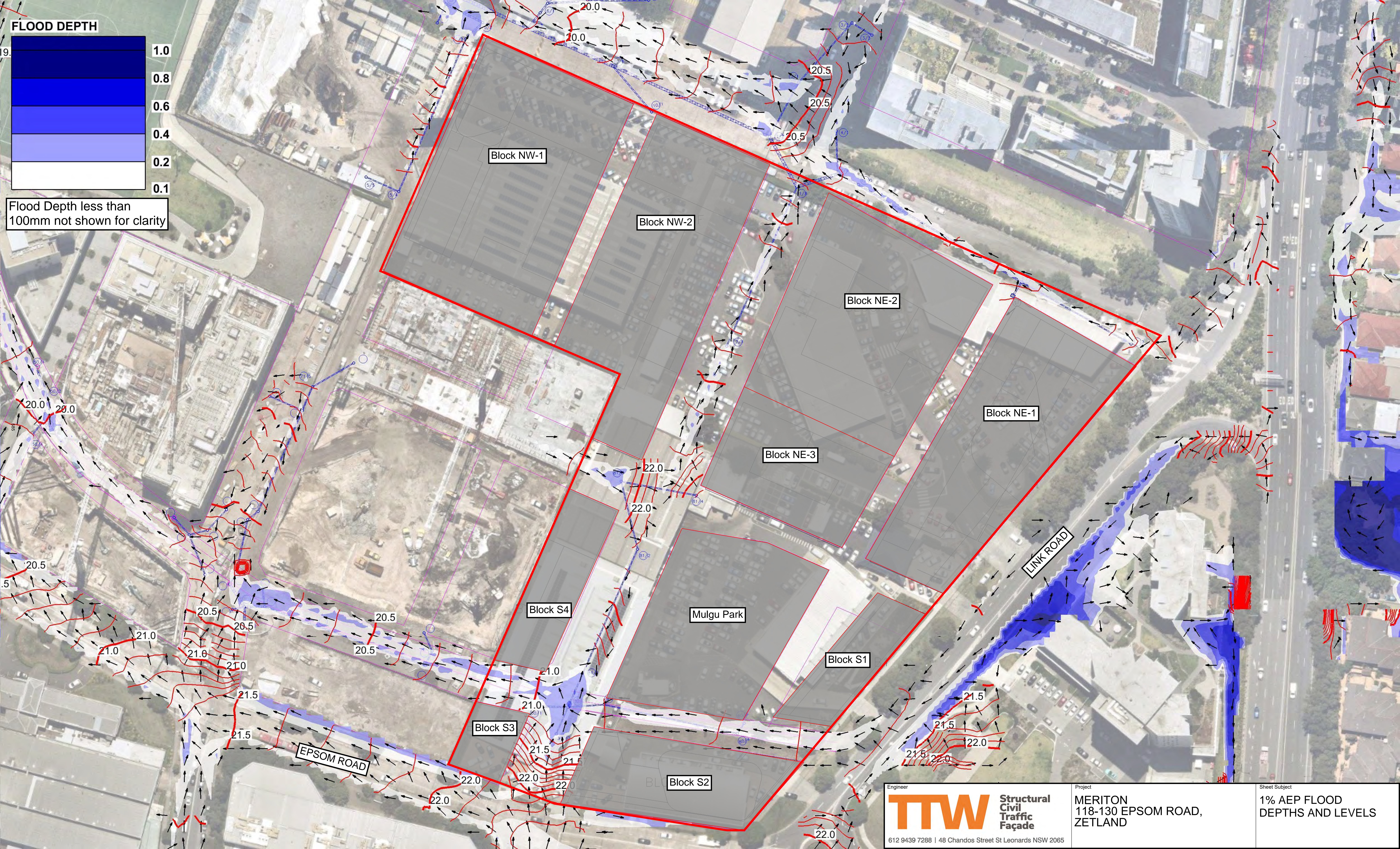
Catchment 2
 OSD: 13m³
 PSD: 48 (L/s)
 Ocean Guard: 1
 Storm Filter: 3

Catchment 10
 OSD: 6m³
 PSD: 20 (L/s)
 Ocean Guard: 1
 Storm Filter: 2

Catchment 4
 OSD: 18m³
 PSD: 69 (L/s)
 Ocean Guard: 1
 Storm Filter: 3

Catchment 1
 OSD: 23m³
 PSD: 91 (L/s)
 Ocean Guard: 1
 Storm Filter: 6

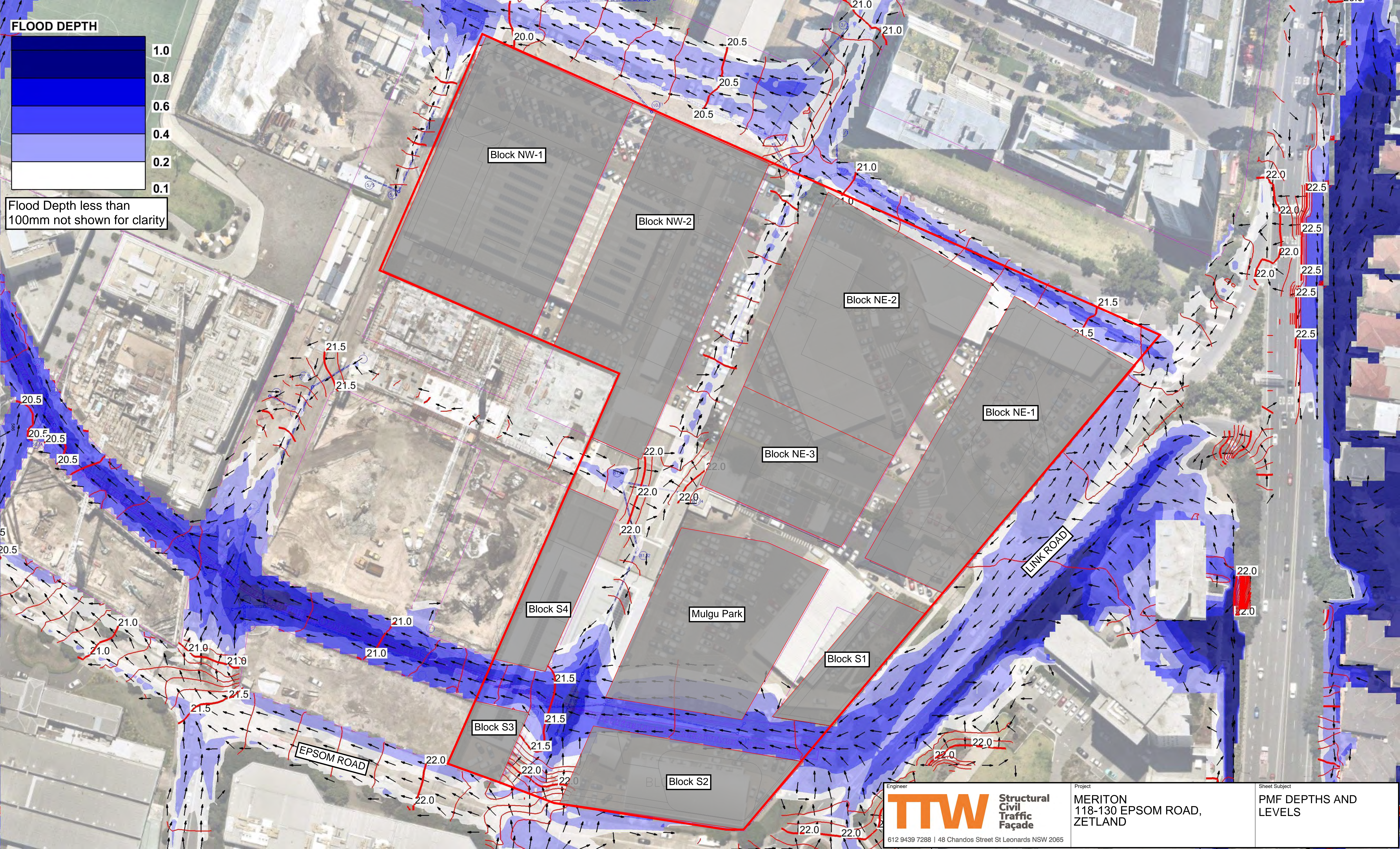
Appendix D - Flood Model Results



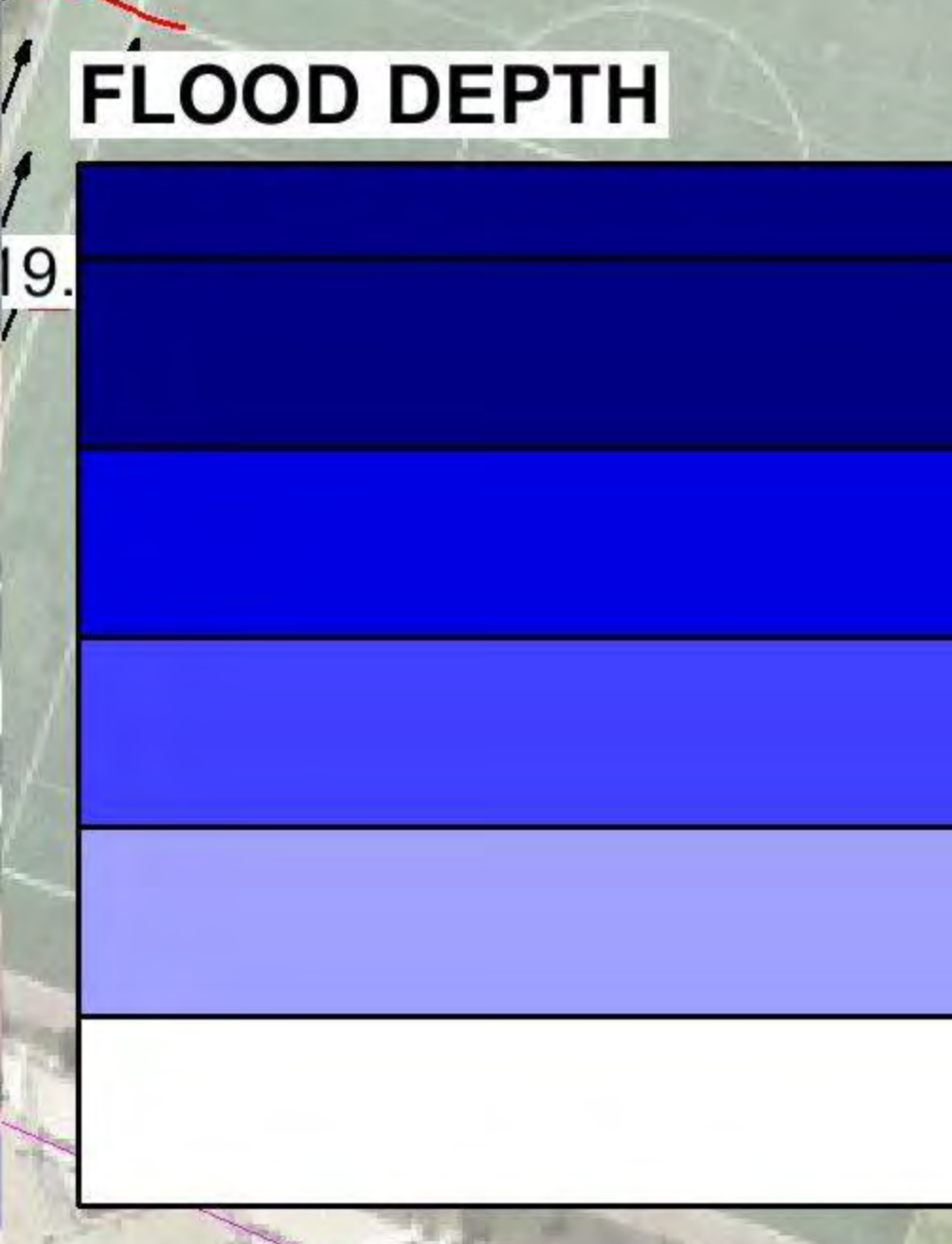
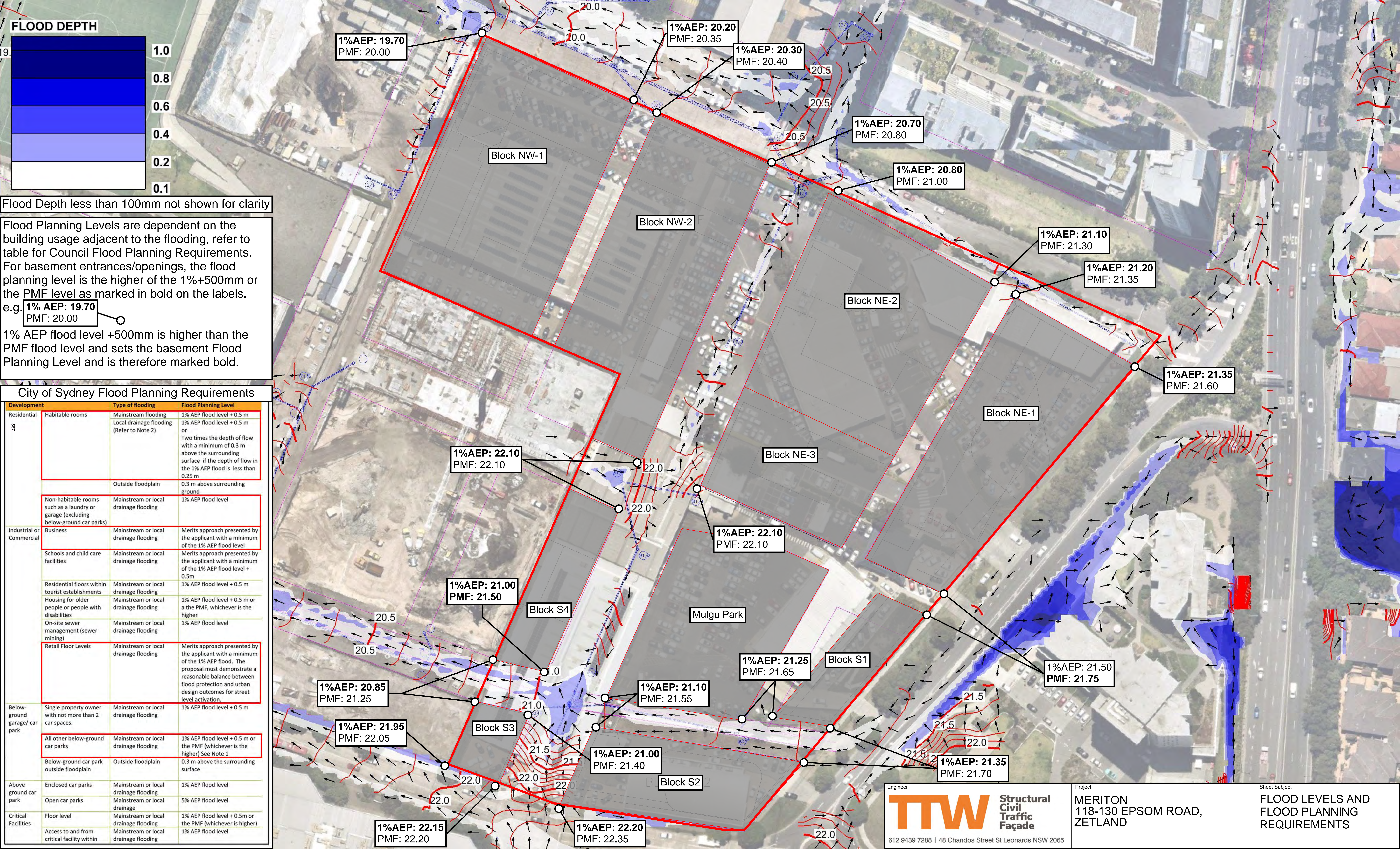
FLOOD DEPTH

1.0
0.8
0.6
0.4
0.2
0.1

Flood Depth less than 100mm not shown for clarity



Flood Depth less than 100mm not shown for clarity



Flood Depth less than 100mm not shown for clarity

Flood Planning Levels are dependent on the building usage adjacent to the flooding, refer to table for Council Flood Planning Requirements. For basement entrances/openings, the flood planning level is the higher of the 1%+500mm or the PMF level as marked in bold on the labels. e.g. **1% AEP: 19.70**
PMF: 20.00

1% AEP flood level +500mm is higher than the PMF flood level and sets the basement Flood Planning Level and is therefore marked bold.

City of Sydney Flood Planning Requirements

Development	Type of flooding	Flood Planning Level
Residential	Habitable rooms	Mainstream flooding: 1% AEP flood level + 0.5 m Local drainage flooding (Refer to Note 2) Two times the depth of flow with a minimum of 0.3 m above the surrounding surface if the depth of flow in the 1% AEP flood is less than 0.25 m
	Outside floodplain	0.3 m above surrounding ground
Non-habitable rooms such as a laundry or garage (excluding below-ground car parks)	Mainstream or local drainage flooding	1% AEP flood level
	Business	Merits approach presented by the applicant with a minimum of the 1% AEP flood level
Industrial or Commercial	Schools and child care facilities	Merits approach presented by the applicant with a minimum of the 1% AEP flood level + 0.5m
	Residential floors within tourist establishments	1% AEP flood level + 0.5 m
Housing for older people or people with disabilities	Mainstream or local drainage flooding	1% AEP flood level + 0.5 m or a the PMF, whichever is the higher
	On-site sewer management (sewer mining)	1% AEP flood level
Retail Floor Levels	Mainstream or local drainage flooding	Merits approach presented by the applicant with a minimum of the 1% AEP flood. The proposal must demonstrate a reasonable balance between flood protection and urban design outcomes for street level activation.
Below-ground garage/ car park	Single property owner with not more than 2 car spaces.	1% AEP flood level + 0.5 m
	All other below-ground car parks	1% AEP flood level + 0.5 m or the PMF (whichever is the higher) See Note 1
Below-ground car park outside floodplain	Outside floodplain	0.3 m above the surrounding surface
Above ground car park	Enclosed car parks	1% AEP flood level
	Open car parks	5% AEP flood level
Critical Facilities	Floor level	1% AEP flood level + 0.5m or the PMF (whichever is higher)
	Access to and from critical facility within	1% AEP flood level