Taylor Thomson Whitting

Structural
Civil
Traffic
Facade

31 January 2019 161718

URBIS
Level 23 Darling Park Tower,
201 Sussex Street.
Sydney, NSW 2000
Attention: Clare Brown

The Star - MOD 13 (MP08_0098 MOD13)

Response to City of Sydney comments to the Response to Submissions

This letter provides a response to the City of Sydney (CoS) flooding comments raised in review of the Response to Submission (RTS) in respect of MP08_0098 MOD13, 17th January 2019 ref R/2016/1/D. The CoS flooding comments are replicated below (in grey italic) for reference with responses provided to each comment.

Flooding

The RTS proposes the inclusion of flood gates at the Edward Street and Pyrmont Street driveway entrances.

Agreed. Flood gates are proposed on Edward Street and Pyrmont Street as detailed in the TTW Flood Impact Assessment, January 2018, and further details provided in the Flood Impact Assessment Addendum, November 2018.

Similar to the above comments regarding Stormwater, a copy of the "TTW Flood Impact Assessment (January 2018)", including all the assumption and parameters/limitation of this report, is not available for review. On this basis, the City is unable to properly review and provide any comments on the proposed stormwater works to address the local flooding and overland flow issues.

The original TTW Flood Impact Assessment, January 2018, was included as appendix DD of the Environmental Impact Assessment, which was submitted for approval on 13.08.2018 and is available on the NSW Planning and Environment website.

The flood impact assessment and addendum confirm the proposed development has no detrimental impact on flooding. The proposed flood mitigation works reduce the 1% AEP flood depth, reduces the flood risk and flood hazard to the development, adjacent properties and the public, and are in accordance with CoS Interim Floodplain Management Policy.

Nevertheless, it is expected that the revised flood impact assessment addendum prepared by TTW dated 07.11.2018 should demonstrate that the proposed and existing FFL comply with Council's Interim Floodplain Management Policy, and include a plan showing the FFL, existing kerb and 1%AEP, and PMF.

Plans that show the extent of flooding, levels and depths are included below (refer to section 4.3 - pages 19 and 20 of the January 2018 Flood Impact Assessment and refer to page 5 of the November 2018 Flood Impact Assessment Addendum):

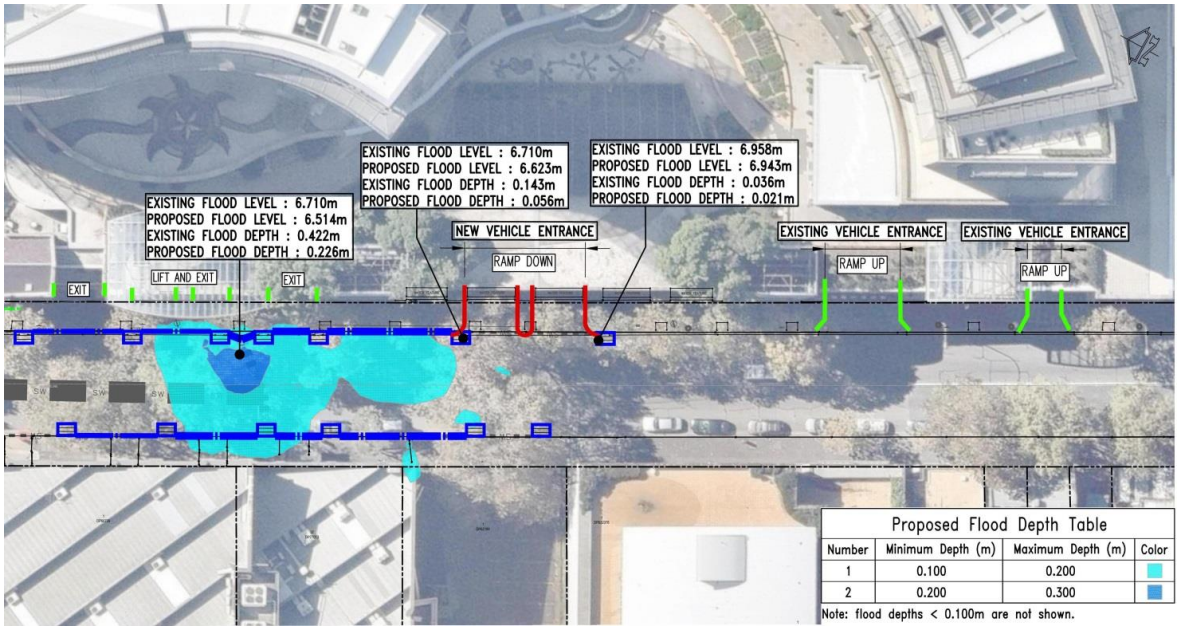


Figure 16. Proposed 100 Year ARI Flood Depth on Pyrmont Street (flood depth<100mm not shown).

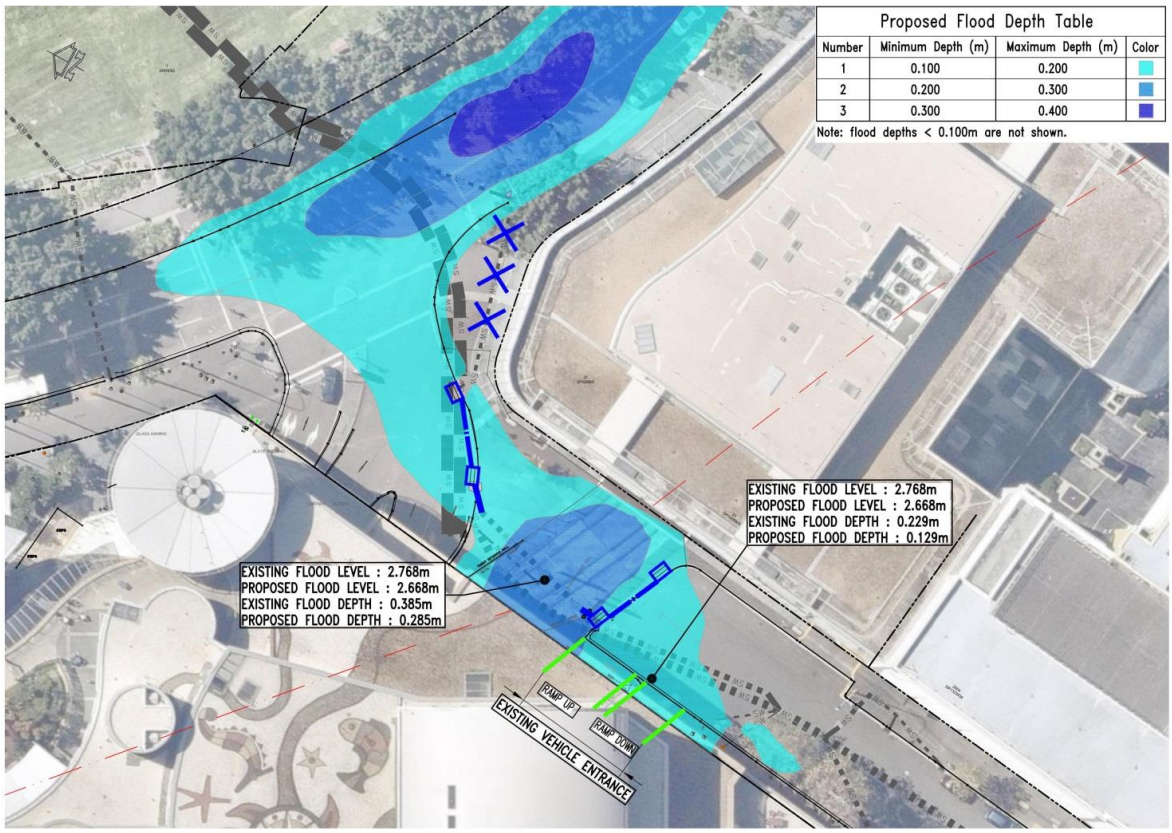


Figure 17. Proposed 100 Year ARI Flood Depth on Edward Street (flood depth<100mm not shown)

A table summarising the flood levels and flood planning levels for the 1% AEP and PMF are shown below (refer to section 1.4 - page 4 of the January 2018 Flood Impact Assessment):

Critical Flood Areas	100 Year ARI Flood Level	PMF Level
Low point in Pyrmont Street	Max of 6.51m / Top of Kerb	Max of 6.60m / Top of Kerb + 100mm
Low point in Edward Street	Max of 2.67m / Top of Kerb	Max of 2.89m / Top of Kerb + 100mm
Low point in Pirrama Road NW of Edward St	Max of 2.63m / Top of Kerb	Max of 2.70m / Top of Kerb + 100mm
Non-Critical Flood Areas	Top of Kerb	Top of Kerb + 100mm

Table 2. 100 Year ARI and PMF Flood Levels

Proposed Development Use	Flood Planning Level
Residential Habitable Floor Level	100 year ARI flood level +0.5m
Residential Non-Habitable Floor Level	100 year ARI flood level
Retail and Business Floor Level	100 year ARI flood level
Below Ground Parking*	100 year ARI flood level +0.5m
Critical Facilities Floor Level	100 year ARI flood level +0.5m
Access to and from critical facility within development site	100 year ARI flood level

Note* The below ground garage/car park level applies to all possible ingress points to the car park such as vehicle entrances and exits, ventilation ducts, windows, light wells, lift shaft openings, risers and stairwells.

Table 3. Flood Planning Levels

1% AEP flood depths around the site are less than 100mm (below top of kerb height) other than at the low point in Pyrmont Street and Edward Street. As the development use is Retail and Business, the Flood Planning Level is taken as the 1% AEP (100 year ARI) flood level. This Flood Planning Level is achieved as the building is above top of kerb level.

At the trapped low point in Pyrmont Street, the 1% AEP (100 year ARI) flood level is 6.51m AHD. The Ground Floor level is 8.50m AHD and achieves the Flood Planning Level requirement.
The new entrance to the basement car park on Pyrmont Street is above the top of kerb and 1% AEP flood level and will be protected up to Flood Planning level (1% AEP 0.5m) with the use of automatic self-closing flood gates.

No changes are proposed for the existing basement entrance on Edward Street however this existing entrance will be protected up the flood planning Level (1% AEP + 0.5m) with the use of automatic self-closing flood gates.

The flood modelling and reports completed demonstrate that the proposed flood mitigation and FFL's comply with CoS Interim Floodplain Management Policy.

In addition, the applicant's engineer should also confirm whether the proposed raised pedestrian crossing will block the flow of stormwater water along Jones Bay road and that no adverse impact will be caused to adjoining sites.
The existing pedestrian crossing is no longer proposed to be raised and will remain flush with the road as in the existing case. There will be no flood impact associated with this crossing.

In addition to the comments on flooding, CoS made comments on drainage which have been addressed by Umow Lai, ref S.EEG-0106, January 2019. TTW provide the following response with reference to the CoS comment regarding a plan that:

clearly identifies Sydney's Water infrastructure/pipes and Council's infrastructure/pipes.
A plan showing Sydney Water stormwater infrastructure, and Council's stormwater infrastructure is included in section 3.1 – Figure 6, page 10 of the January 2018 Flood Impact Assessment. This plan has been replicated and appended to this letter.

address local flooding and overland flow issues in and around the site.
Local flooding and overland flow around the site have been addressed in the January 2018 Flood Impact Assessment and November 2019 January 2018 Flood Impact Assessment Addendum.

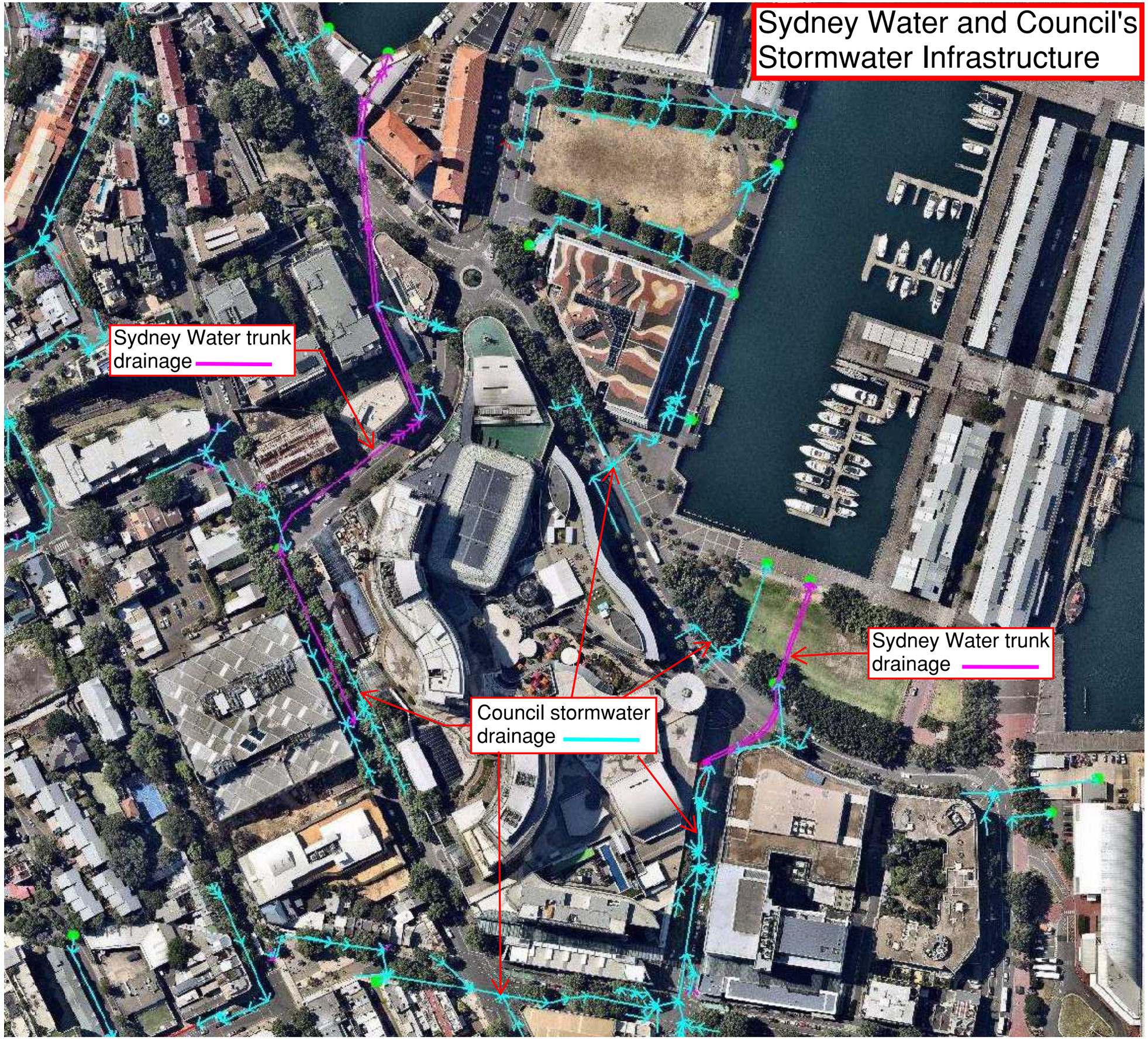
The flood impact assessment and addendum confirm the proposed development has no detrimental impact on flooding. The proposed flood mitigation works reduce the 1% AEP flood depth, reduces the flood risk and flood hazard to the development, adjacent properties and the public, and are in accordance with CoS Interim Floodplain Management Policy.

Prepared by:
TAYLOR THOMSON WHITTING (NSW) PTY LTD

EIRIAN CRABBE
Associate

P:\2016\1617\161718\Reports\TTW\Flood Study\Addendum\190131 Response to City of Sydney.docx

Appendix A – Sydney Water / Council's Stormwater Infrastructure


Sydney Water and Council's Stormwater Infrastructure
Sydney Water trunk drainage
Council stormwater drainage
Sydney Water trunk drainage