

S183106-MDL-01-1 Response to IPC on substation location

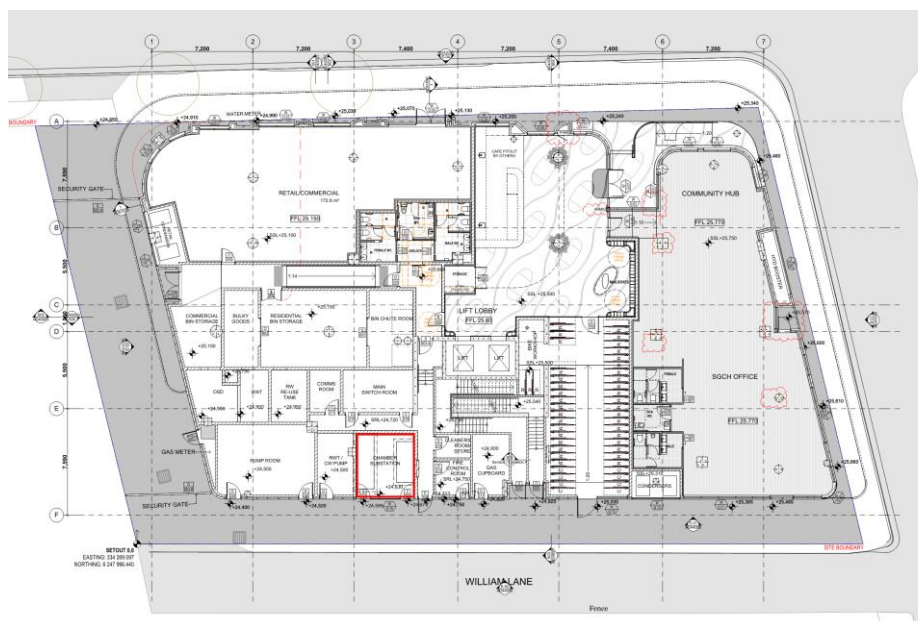
12 June 2019

Kim Gray
Nicholas Boey
Level 5, 38 Humphreys Lane
Hurstville NSW 2220

Dear Kim,

Re: 11 Gibbons Street, Redfern
Response to IPC on substation location

This letter is in response to a query from the Independent Planning Commission (IPC) on the location of the substation in relation to designated flood levels.



Location of substation shown in red (extracted from DKO drawing AD20000 revision 06)

The substation has been located in the location shown on DKO drawing AD20000 revision 06 (the current revision as of 12/06/19) based on the following constraints:

1. Ausgrid have a strong preference for substations to be located away from fire egress paths. Fire egress on *both* sides of the substation entry is not permitted.
2. The substation floor needs to sit at or above the 1% AEP flood level (i.e. the 1 in 100 year flood level) at the location of the substation (noting that Ausgrid do not require additional freeboard over and above the flood level, and that the flood level varies around the site perimeter).



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3. A maximum grade of 2.5% perpendicular to the footpath from the existing kerb level as per City of Sydney standards.
4. Ausgrid standards only permit a 240mm maximum step from the exterior into the substation chamber.

While the original DA documentation achieved a level significantly above the maximum 1% AEP flood level for the site for the substation, it was located between the two fire egress paths and would not have achieved certification from Ausgrid. Locating the substation in the current location satisfied item 1 above, as the passage directly to the north is not a fire egress pathway, and the two main fire egress pathways from the tower are around 7 metres away from the substation.

To satisfy item 2, further detailed flood levels were sought from the flood modelling engineers WMA Water, who confirmed that the peak flood level along William Lane is RL 24.82. Refer to attached email correspondence and report from WMA water in Appendix A. The substation was then set at RL 24.83 to allow 10mm tolerance to this flood level.

To satisfy item 3, the maximum level achievable directly outside the substation with a 2.5% grade across the footpath was found to be 24.584. This resulted in a 246mm step between the substation and the footpath.

To satisfy item 4, dispensation was sought from Ausgrid. This was provided by Ausgrid as an email correspondence, attached in Appendix B.

The current location for the substation satisfies the above four points – we believe it to be the optimal *compliant* solution for the location of the substation.

Yours faithfully,



Nicholas Boey

Structural Engineer | Associate

BE (Civil) BDesArch MIEAust CPEng NER

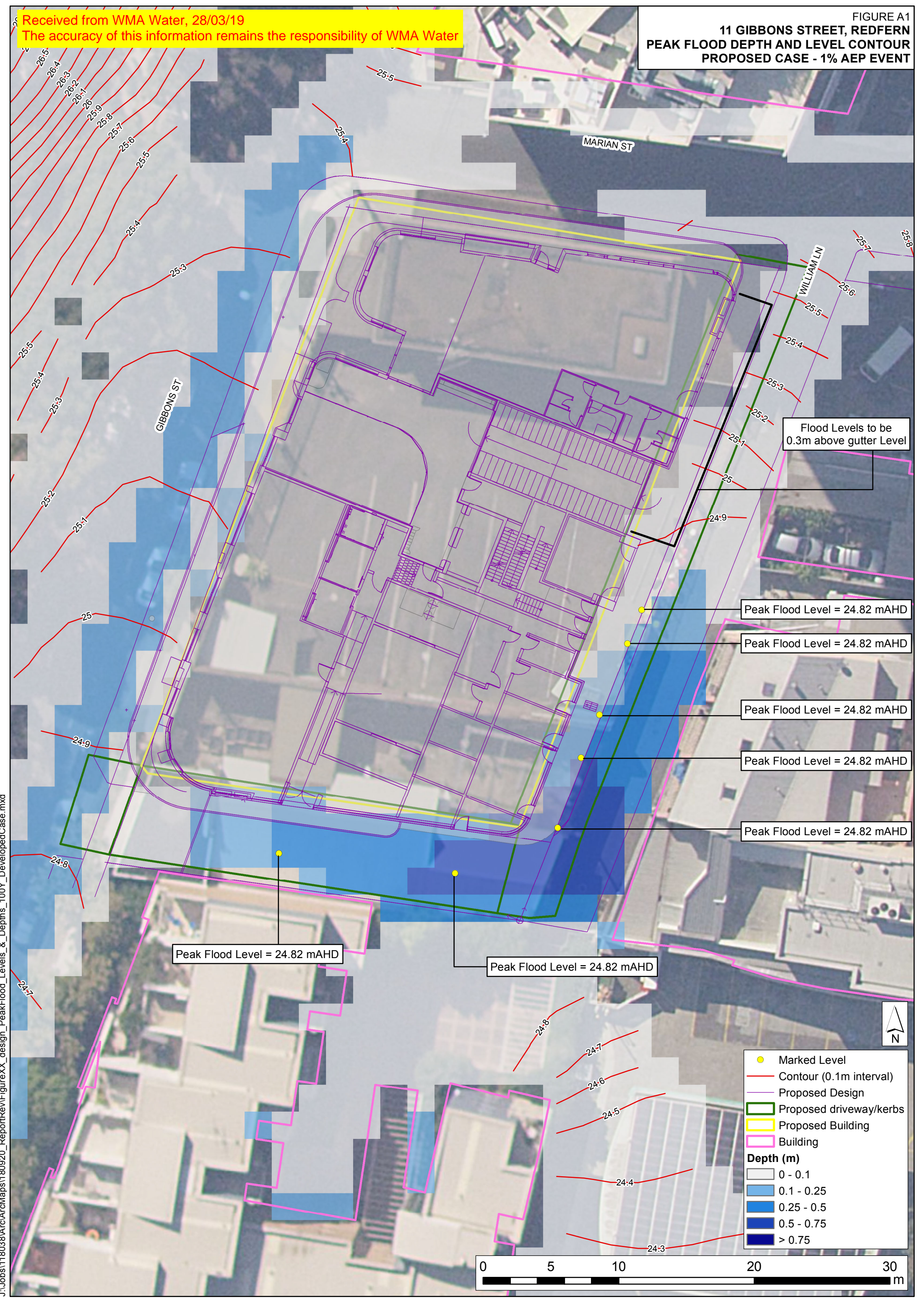
On behalf of Northrop Consulting Engineers Pty Ltd

Appendix A

Confirmation from WMA water for 1% AEP flood levels on William Lane

Received from WMA Water, 28/03/19
The accuracy of this information remains the responsibility of WMA Water

FIGURE A1
11 GIBBONS STREET, REDFERN
PEAK FLOOD DEPTH AND LEVEL CONTOUR
PROPOSED CASE - 1% AEP EVENT



J:\Jobs\118038\ArcMaps\180920_ReportRev\FigureXX_design_PeakFlood_Levels_&_Depths_100Y_DevelopedCase.mxd

Appendix B

Dispensation from Ausgrid for 246mm step from external level to substation level

From: Joe Borg <jborg@ausgrid.com.au>
Sent: Friday, March 29, 2019 10:36 AM
To: Jimmy Li
Cc: Cathy Lean
Subject: RE: 11 Gibbons Street - Revised levels

Hi Jimmy,

In reference to your request, Ausgrid is happy for the step up to be 246 to alleviate the need for another step, thank you.

Kind Regards,

Joe Borg | Engineering Officer
CPC – Network Service (Sydney East & CBD)



t +612 9663 9326, M +61409159175
Level 1, Building 4 130 Joynton Ave, NSW 2017
jborg@ausgrid.com.au

Please consider the environment before printing this email.

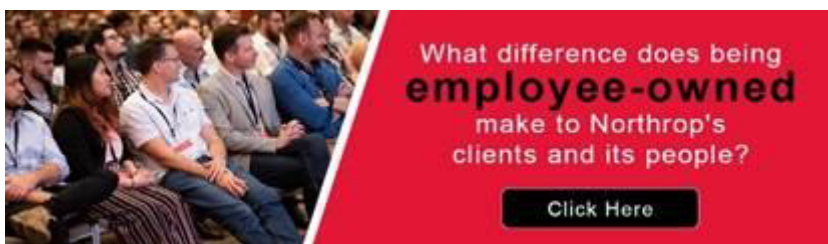
From: Jimmy Li <JLi@northrop.com.au>
Sent: Thursday, 28 March 2019 3:39 PM
To: Joe Borg <jborg@ausgrid.com.au>
Cc: Cathy Lean <CLean@northrop.com.au>
Subject: FW: 11 Gibbons Street - Revised levels

Hi Joe,

Could you please refer to the below email trail, and help Cathy with the issue, thank you very much in advance.

Jimmy Li
Senior Electrical Engineer | Level 3 Consultant

Northrop Consulting Engineers Pty Ltd
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www.northrop.com.au



From: Cathy Lean <CLean@northrop.com.au>
Sent: Thursday, March 28, 2019 3:35 PM
To: Jimmy Li <JLi@northrop.com.au>
Subject: Fwd: 11 Gibbons Street - Revised levels

Hi Jimmy

Please ask Ausgrid for dispensation for an additional 20mm step up to 260mm on the LV end. This is to ensure it is above the flood level.

The 20mm is an allowance for the footpath constructors who may be up to 20mm out. The actual design appears to work in design without a construction allowance. They don't want to complete everything and have the substation rejected if the footpath is too low.

Thanks

Cathy

Sent from my Samsung GALAXY S5

----- Original message -----

From: Nicholas Boey <NBoey@northrop.com.au>
Date: 28/03/2019 15:22 (GMT+10:00)
To: Jimmy Li <JLi@northrop.com.au>
Cc: Cathy Lean <CLean@northrop.com.au>
Subject: Fwd: 11 Gibbons Street - Revised levels

Hey Jimmy,

Cathy asked me to send this to you with the instruction that it needs to go to Joe Borg at Ausgrid urgently today.

Thanks!

Nick

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From: Nicholas Boey
Sent: Thursday, March 28, 2019 2:43:58 PM
To: Cathy Lean
Cc: Danny Liganaris
Subject: 11 Gibbons Street - Revised levels

Hi Cathy,

See attached as discussed with levels. To achieve 10mm tolerance to the flood levels we are looking for a maximum step of 246mm. If we achieve this the other corner will have a step of 234mm (or better).

Regards,

Nick

This e-mail may contain confidential or privileged information. If you have received it in error, please notify the sender immediately via return e-mail and then delete the original e-mail. If you are the intended recipient, please note the change of sender email address to @ausgrid.com.au. Ausgrid has collected your business contact details for dealing with you in your business capacity. More information about how we handle your personal information, including your right of access is contained at <http://www.ausgrid.com.au/>