

From: Samantha Miller [<mailto:SMiller@jbaurban.com.au>]
Sent: Monday, 13 March 2017 11:44 AM
To: Natasha Harras <Natasha.Harras@planning.nsw.gov.au>
Subject: FW: 1 Denison St - TfNSW Submission and further information

Hi Natasha,

Further to our discussion, please find below correspondence from TfNSW in relation to the proposed conditions put forward in the submission on MOD 6.

The project team has now completed the further geotechnical advice specified in the TfNSW submission (attached for your records). The below correspondence from TfNSW confirms this information closes out the requirement for further detailed numerical modelling (items h-j in TfNSW submission).

If you have any queries, please do not hesitate to give me a call.

Kind regards,

Samantha Miller

Senior Planner | JBA

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From: Patrick Shephard [<mailto:Patrick.Shephard@enstruct.com.au>]

Sent: Monday, 27 February 2017 11:41 AM

To: Samantha Miller <SMiller@jbaurban.com.au>; stephens@touchstonepartners.com.au; Ian Wakefield <ianw@touchstonepartners.com.au>

Cc: Tracy Hoven <tracyh@touchstonepartners.com.au>; Tim Boulton <Tim.Boulton@enstruct.com.au>; svaughan@winten.com.au; Chris Ryan <cryan@winten.com.au>

Subject: FW: 1 Denison St - Metro Meeting Notes and Drawing Request

From: Bourke, Peter [<mailto:Peter.Bourke@transport.nsw.gov.au>]
Sent: Friday, 24 February 2017 1:08 PM
To: Patrick Shephard <Patrick.Shephard@enstruct.com.au>
Cc: Pan, Jiping <JPan@pb.com.au>; McWilliam, Samantha <SMcWilliam@pb.com.au>
Subject: FW: 1 Denison St - Metro Meeting Notes and Drawing Request

Hello Patrick;

Sydney Metro has reviewed the responses from Douglas Partners and advises from the design point of view, the preliminary assessment from Douglas Partners is acceptable, and the risk to the Victoria Cross Metro Station construction is minor to negligible.

Therefore, it is considered that detailed numerical modelling is not required.

However, as the proposed development and Metro Station construction might have some overlap periods, it is recommended that during the Metro station/shaft construction stage, liaison and communications between both parties be established to ensure no negative impacts on both sides.

If you have any questions, please contact me.

Regards,

Peter Bourke

Peter Bourke
Senior Manager Corridor Protection
Sydney Metro | Metro Product & Integration
Transport for NSW

T 02 8265 6015 | M 0408 448 734
South Building, Ground Floor,
22 Giffnock Avenue Macquarie Park NSW 2113



From: Josef Major [<mailto:Josef.Major@douglaspartners.com.au>]
Sent: Tuesday, 21 February 2017 4:23 PM
To: Tim Boulton <Tim.Boulton@enstruct.com.au>; Peter.Bourke@transport.nsw.gov.au; Pan, Jiping <JPan@pb.com.au>; McWilliam, Samantha <SMcWilliam@pb.com.au>
Cc: Stephen Sanlorenzo <stephens@touchstonepartners.com.au>; Ian Wakefield <ianw@touchstonepartners.com.au>; Patrick Shephard <Patrick.Shephard@enstruct.com.au>
Subject: RE: 1 Denison St - Metro Meeting Notes and Drawing Request

Peter and Jiping

Please see below our responses to the requested clarifications.

Regards

Josef Major | Senior Engineering Geologist
Douglas Partners Pty Ltd | ABN 75 053 980 117 |
www.douglaspartners.com.au
96 Hermitage Road West Ryde NSW 2114 | PO Box 472 West Ryde NSW 1685
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From: "Bourke, Peter" <Peter.Bourke@transport.nsw.gov.au>
Date: 17 February 2017 at 11:48:13 am GMT+8
To: Patrick Shephard <Patrick.Shephard@enstruct.com.au>
Cc: "Pan, Jiping" <JPan@pb.com.au>, "McWilliam, Samantha" <SMcWilliam@pb.com.au>
Subject: FW: 1 Denison St - Metro Meeting Notes and Drawing Request

Hi Patrick;

See below advice from our technical advisor Jiping Pan;

The following key information has been obtained from the response and geotechnical desktop study provided:

- The response and geotechnical desktop study describes the ground conditions for the development site – mainly medium to high strength sandstone and no joint swarms, dykes regional faults are identified;
- The response presents a preliminary assessment of potential interaction between the development (including bulk excavation and building construction) and Metro shaft excavation;
- The response has addressed potential geotechnical related impacts including transfer of stresses, rock pillar stability and horizontal movement induced by stress relief due to bulk excavation;
- It is understood that temporary ground anchors will be installed to stable the shotcrete shoring; and
- The response indicates that there is “No additional movement in the rock mass, induced by the basement excavation, are expected to occur during the excavation of the station box.”

The following is needed for clarification:

- No information is provided in relation to the anticipated length of temporary ground anchors to be installed, especially on the western side of the development site. Please provide this information. **Where required, 2400 mm rock bolts will be used to stabilise potential rock slabs formed at the intersection of the western basement face and north-north-east oriented joints. Since currently no foundations for structures are located above this face, it is not likely that longer bolts would be required.**
- Experience of lateral movement within Sydney due to bulk excavation was discussed, which is in the range of 0.5 mm to 1 mm per metre depth of excavation (occasionally up to 2 mm), but the expected horizontal movement for this specific site, is not mentioned. **We compared the length and depth of the proposed basement excavation to similar deep excavations in both North Sydney and Sydney CBD, where a similar stress regime is in place. Consideration was also given that**

one level of basement in medium strength rock has already been excavated at the site. The expected horizontal movement due to stress relief is estimated to be in the order of 15-25 mm range at the rock face and about half of that on the western side of Denison Street, at the boundary of the proposed Station Box. All horizontal movements are expected occur shortly after the completion of the basement excavation.

Regards,

Peter

Peter Bourke
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From: Patrick Shephard [<mailto:Patrick.Shephard@enstruct.com.au>]
Sent: Tuesday, 14 February 2017 10:42 AM
To: Bourke, Peter
Cc: Tim Boulton; stephens@touchstonepartners.com.au
Subject: RE: 1 Denison St - Metro Meeting Notes and Drawing Request

Hi Peter

Please find attached the following for your review:

- Geotechnical letter in response to TfNSW conditions
- Desktop geotechnical report for the 1 Denison Site

Could you please review and advise if this satisfies the conditions stated in the TfNSW letter.

Happy to run through any of this on the phone if further clarification is required.

Regards

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Senior Engineer

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