

APPENDIX 3

Flood Risk Management Report prepared by
Molino Stewart

16 June 2018

Mr Matt McCoy
Australian Arms Unit Trust
15 Keiran Street
BONDI JUNCTION NSW 2022

Dear Matt,

Re: 351 High Street Penrith Planning Proposal – Flood Risk Management

Thank you for inviting me to review flood risks and their management associated with your planning proposal for 351 High Street and 18 Lawson St Penrith. This letter sets out my opinion of flood risks for the site and how they can be managed.

My opinion is based on information I have obtained from:

- Penrith City Council's letter of 18 January 2018
- Lyall and Associate's Flood Advice Report dated 29 April 2018
- Advisian's Draft Nepean River Flood Study dated 16 August 2017
- Two separate Nepean River flood modelling outputs I have access to for work I have done for Infrastructure NSW and Penrith Lakes Development Corporation
- Flood modelling of overland flows for Penrith CBD which I have access to for which I am doing for Penrith City Council

Council's Requirements

Council's letter states:

"While the site is neither affected by overland flow nor mainstream flooding for all storm events up to and including the 100 ARI storm, it is however affected by the Probable Maximum Flood."

It goes on to state

"Any proposed increase in development within the PMF extent of the Hawkesbury Nepean Valley must be considered in the context of local and regional flood risk and evacuation in a flood scenario."

In this regard, a flood evacuation strategy is to be prepared, The strategy must be able to demonstrate how the site can be designed to enable evacuation under any flood scenario, including the potential flooding of any underground car parks, flood evacuation routes and consideration of applicable regional and local flood emergency plans in consultation with the NSW State Emergency Service."

Nepean River Flooding

With regards to Nepean River flooding, the site is outside of the reach of the PMF. As stated in the Lyall and Associates Report:

"...the subject site is located on land which lies at or above RL 33.0 m AHD, which is a minimum of about 1.9 m above the peak PMF level of RL 31.13 m AHD."

A check of the digital terrain models we have access to confirm the elevation of the site as stated above.

The following figure is an extract from the map in the Lyall and Associates report showing the site in relation to their estimate of the PMF flood extent.



The next image is an extract from Map 007 A of the Draft Nepean River Flood Study showing the provisional hazard in the PMF. I have added the red ellipse to highlight the site location.



Both of the above maps show that the site is well above the reach of the Nepean River PMF. I have double checked this observation against the outputs of the WMAWater Rubicon model and the Water Technology TUFLOW model of the Nepean River PMF and they too show the site above the reach of the PMF.

Furthermore, access to the site from both Lawson St and High St is available during the Nepean River PMF.

Local Flooding

The Lyall and Associates report includes some modelling of local overland flows in the vicinity of the site. It assesses that the 1% AEP flows will mostly be conveyed within High St and Lawson St. This is consistent with the overland flow model which I have access to for

the work Molino Stewart is undertaking for Penrith City Council in the Penrith CBD. That same model also suggests that the site would not be directly adversely affected by overland flows caused by probable maximum precipitation although there would be hazardous flows in High St and Lawson St.

Flood Risk Management

In light of the above flood information and the minimal direct impacts of flooding on the site, it would not be necessary to evacuate the site during any flood event on the Nepean River. Therefore, there is no requirement for the site to have a flood evacuation plan for such an event nor does its integration with regional flood evacuation planning need to be considered.

With regards to overland flows, the available modelling suggests that while there will likely be significant flows in the surrounding streets during extreme rainfall events, entry of floodwaters onto the site is unlikely. If this is a concern, then appropriate development controls can be imposed upon the development to ensure that ground floor and basement car parks are not exposed to unacceptable flooding. These would be able to be satisfied through standard building designs.

During intense local storms, it will be much safer to stay within the building rather than evacuate into flooding streets. Given that such flooding is likely to occur with minimal warning, will intensify very quickly but be of less than a couple of hours duration I would advocate sheltering within the building as being a more appropriate flood response strategy for this location than evacuation.

Conclusion

Given that the site is not directly affected by Nepean River flooding and only isolated for short durations by overland flows, it is my opinion that no flood evacuation strategies need to be developed for the site and that the minor flood risks from overland flows can be managed through standard development controls.

Yours faithfully

For Molino Stewart Pty Ltd



Steven Molino

Principal

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MOLINO STEWART TERMS OF ENGAGEMENT

The general terms and conditions set out below apply to all commissions undertaken by Molino Stewart Pty Ltd (hereafter Molino Stewart).

1.0 Role of Molino Stewart

- 1.1 Molino Stewart will act in all professional matters as a faithful advisor to their client. Molino Stewart will exercise all reasonable skill and care in the provision of its professional services.
- 1.2 If Molino Stewart becomes aware of any matter which will change or which has changed the scope of services to be provided or the anticipated time period for the provision of those services, Molino Stewart will notify the client of this within a reasonable time of the subject circumstances changing.
- 1.3 Molino Stewart will exercise normal reasonable care regarding the services provided by sub-consultants retained on behalf of a client, but the sub-consultant will remain ultimately responsible for the services it provides.

2.0 Role of the Client

- 2.1 A client shall make available to Molino Stewart, as soon as practical after a commission has been awarded, all information, documents, maps and other particulars relevant to the subject commission.
- 2.2 A client shall nominate a person or persons as their representatives and give written notice of the names of the person/s so appointed. A client will agree that the nominated persons has authority to act on its behalf for all purposes regarding a commission. Molino Stewart will not be obliged to accept or respond to instructions given by any person other than the nominated person/s.
- 2.3 A client shall cooperate with Molino Stewart in all reasonable ways regarding the conduct of a commission being undertaken on its behalf.

3.0 Scope of a Commission

- 3.1 The scope of a commission shall be defined by the task or matters given in Molino Stewart's proposal submitted in response to a client's brief. Such a proposal may be amended following consultation with a client, in which case the scope of a commission shall then be Molino Stewart's

proposal as modified by any amendments confirmed in writing to a client.

- 3.2 The number of reports, maps, photographs, displays, brochures and the standard of production of these shall be as specified in the client's brief and Molino Stewart's proposal. Where there is any inconsistency between the two documents regarding the materials to be provided as a part of a commission, then the description or itemisation of materials to be provided given in Molino Stewart's proposal will be deemed to be the scope of a commission.

4.0 Copyright

- 4.1 Molino Stewart shall retain ownership of the copyright to all reports, drawings, designs, displays and other work produced by Molino Stewart during the course of fulfilling a commission. The client shall have a licence to use such documents and materials for the purpose of the subject commission.
- 4.2 Molino Stewart may agree to assign copyright if this is required by a client or if such a requirement is implicit in a client's brief and such a request is agreed upon in a proposal submitted by Molino Stewart in response to the subject client's brief.

5.0 Payment for Services

- 5.1 In return for the provision of services specified in a proposal submitted by Molino Stewart, whether provided in stages or wholly, a client agrees to pay Molino Stewart the fees and expenses claimed in invoices submitted for the conduct of a commission, in accordance with that proposal, within 28 days.
- 5.2 A client agrees that if it fails to pay all monies claimed in an invoice within 28 days, that Molino Stewart will be entitled to additional payment on the monies outstanding due to payment of interest on the monies at the annual rate of 2% above the current maximum overdraft set by the Reserve Bank plus administrative and legal costs in processing and recovering unpaid accounts. Such interest shall be calculated from the due date for payment as specified in the subject invoice.
- 5.3 The fee rates quoted in any Molino Stewart proposal are based on salary levels prevailing at the date of the proposal and are subject to

variation in accordance with income variations applying generally in Australia and/or to particular classifications of staff after that date.

5.4 Molino Stewart will apply higher fee rates for work in courts, tribunals or commissions of inquiry. A 50% increase in our normal fee rates for professional staff will apply for time spent in court or at inquiries and for meetings with lawyers relating to a court hearing or an inquiry.

5.5 Molino Stewart may terminate a commission previously awarded to it, if Molino Stewart desires to adopt such a course, because of a breach of any of the clauses contained in these conditions of engagement or if completion of the commission is not feasible due to changes of circumstances. If such a termination were to occur a client agrees to meet all reasonable expenses up to the date of the dispatch by Molino Stewart of the notice of termination.

6.0 Termination of Services

6.1 A client may terminate a commission previously awarded to Molino Stewart provided notice of such termination is given in writing and a client agrees to meet all expenses incurred up to the date of receipt of the subject notice by Molino Stewart.

7.0 Molino Stewart's Staff

7.1 It is a condition on which Molino Stewart undertakes to provide services that a client will not, without Molino Stewart's prior consent in writing, offer to employ any Molino Stewart employee who is engaged in the conduct of a commission for the subject client in the conduct of a commission for the subject client for a period of one year after the employee has completed his or her assignment to the subject commission.

8.0 Settlement of Disputes

8.1 In the event of a client and Molino Stewart being unable to resolve a dispute it shall be referred by both parties to a neutral mediator to attempt to secure a negotiated settlement. Should such a settlement not be forthcoming, the matter can then be taken up by legal representatives.

9.0 Limitation of Liability

9.1 Molino Stewart will act in all professional matters as a faithful advisor to their client whose interests shall be watched with skill and care. Molino Stewart shall only be liable to their client for the consequences of any negligent act, omission or statement on their part or on the part of their

employees and then only to the extent and subject to the limitations referred to Clauses 9.2.

9.2 The loss and damage for which Molino Stewart is so liable and the recompense to be made by Molino Stewart to a client for such liability stated in Clause 9.1, shall be limited to the limit of Molino Stewart's Professional Indemnity cover in respect of any single act, omission or statement, unless otherwise specified in Molino Stewart's proposal.

9.3 The liability of Molino Stewart shall cover only direct loss or damage in respect of works or other matters arising directly from within the scope of their commission, and then only to the maximum monetary limit provided by Clause 9.1. All references herein to loss or damage shall be deemed to exclude loss or damage sustained or sustainable by some third party and in respect of which, as between the client and the third party, the client is liable and responsible, whether by statute, contract, tort or otherwise.

9.4 The liability of Molino Stewart to a client shall expire twelve months from the issue of the last account of the project, unless in the meantime a client has made claim in writing upon Molino Stewart, specifying a negligent act, omission or statement said to have caused an alleged loss or damage sustained or sustainable.

9.5 Notwithstanding Clauses 9.1 to 9.4 Molino Stewart shall not be liable for any loss or damage sustained or sustainable by a client in relation to:

- (a) Errors occurring in plans, designs or specifications not designed or prepared by Molino Stewart.
- (b) Errors occurring in the course of construction work which are not the responsibility of Molino Stewart.
- (c) The use of any additional or similar works of drawings, documents or other information or advice without the approval of Molino Stewart.
- (d) Services provided by a sub-consultant of Molino Stewart.

9.6 A client shall indemnify Molino Stewart for all loss or damage sustained or sustainable by Molino Stewart as a result of any breach of contract or negligent act, omission or statement on the part of the client or on the part of his agents or employees.

ACCEPTANCE OF QUOTATION

I

[Full Name]

of

[Organisation Name]

agree to engage Molino Stewart in accordance with the attached fee proposal/quotation dated 16 June 2018 and Molino Stewart's Terms of Engagement. I will also be responsible for ensuring timely payment of invoices.

Signature: _____

Name: _____

Position: _____

Date: _____

Contact Details for Invoicing

Organisation Name: _____

ABN: _____

Contact Person: _____

Contact Phone Number: _____

Postal Address for Invoicing: _____

Email Address for Invoicing: _____

BSB: 062 223

Please make direct payments to:

Account No: 10179353

Please quote invoice number