From: Maree Abood
To: Diana Mitchell

Cc: Paul Fuller; Maree Abood; Kiara Neasy
Subject: RE: Wallacia Crown Cemetery Development

Date: Friday, 12 April 2019 5:27:01 PM

Attachments: <u>image006.png</u>

image007.png image008.png image009.png

Dear Diana,

Please find below our response to the requested questions.

1. In light of the work that Infrastructure NSW has undertaken on flood risk and flood evacuation routes in the Mulgoa Valley in response to the recommendations of the Hawkesbury-Nepean Valley Flood Risk Management Strategy, please outline the constraints and opportunities that the proposal presents.

The primary objective of the Hawkesbury-Nepean Valley Flood Risk Management Strategy is to reduce the risk to life from floods in the Hawkesbury-Nepean Valley. Due to the large depths and spatial extent of Hawkesbury-Nepean River flooding in the Valley, the NSW SES has identified that self-evacuation by private vehicle along designated flood evacuation routes is the primary method of reducing flood risk to life. Wallacia has a significant flood risk from the Nepean River, and once Park Road is cut at Jerrys Creek by approximately 1 in 20 chance per year or 5% AEP flooding the only alternative evacuation route is along an unsealed road through private property (Hawkesbury-Nepean Flood Plan, 2015).

A future raising of the level of the Park Road crossing at Jerrys Creek could significantly improve the flood evacuation for Wallacia. The current Masterplan for the development has Entrance B of Park Road being converted from a maintenance staff only to a public entrance in the future. The proposed position of Entrance B could make it more difficult to build a higher crossing of Jerrys Creek, if required in the future. Therefore, it is recommended that consideration be given to relocating Entrance B further east along Park Road to be above the 1 in 100 chance per year or 1% AEP regional flood level. This approach would ensure flexibility for any future consideration.

- 2. Refer to the <u>Wallacia Golf Course Redevelopment Flood Assessment</u>, prepared by GRC Hydro Pty Ltd in October 2017. Please comment on the findings of the assessment, particularly in regard to the conclusions that:
 - a. the site's flood affectation is mild in the 1% AEP event and it 'is not substantially altered' by the proposed development,

The <u>Wallacia Golf Course Redevelopment – Flood Assessment</u> by GRC Hydro dated October 2017 is an assessment of the 1 in 100 chance per year flood or 1% AEP flooding from local (Jerrys Creek catchment only) for the current and proposed development at the site. This flood study appears adequate in terms of the impact of the development on the local flood risk. However, the study does not consider the regional Nepean River flood risk, which is higher than the local Jerrys Creek flood level. The regional 1% AEP flood level at the site is 44.6 metres AHD, which is higher than the local 1% AEP flood level of 36 (lower end of property) to 42 (higher end of property) metres AHD.

b. the proposed development 'integrates well' with the site's flood liability, and

The proposed development needs to consider both the regional Nepean River and local Jerrys Creek flood liability.

c. no impacts off-site occur due to the proposed development.

The off-site flood impacts of the proposed development would be limited, except for the current position for Entrance B could affect a future raising of the Park Road crossing of Jerrys Creek, if required.

3. Please confirm how the flood event that occurred in November 1961, June 1964 and March 1978 compare to a 1% AEP event.

From the <u>Infrastructure NSW Hawkesbury-Nepean Valley Regional Flood Study (FINAL DRAFT, January, 2019)</u> the following flood levels were recorded at Wallacia:

- November 1961 41.73m AHD at Blaxlands Crossing (Silverdale Road crossing of Nepean River)
- June 1964 44.41m AHD at Blaxlands Crossing
- March 1978 42.76m AHD at Blaxlands Crossing

The Final Draft Regional Flood Study modelled the 1 in 100 chance per year (1% AEP) event at Blaxlands Crossing at 44.6m AHD. It is noted that the equivalent flood level in the <u>Upper Nepean River Flood Study (DLWC, 1995)</u> was modelled at 45.8m AHD.

The largest flood on record for Wallacia is the February 1873 flood, which is estimated to have reached 47.53m AHD at Blaxlands Crossing.

Regards

Maree

Maree Abood Head of Hawkesbury-Nepean Valley Flood Risk Management Directorate

www.insw.com -

Level 15, Macquarie House, 167 Macquarie Street, Sydney NSW 2000



From: Diana Mitchell [mailto

Sent: Thursday, 11 April 2019 3:35 PM

To: Maree Abood

Subject: RE: Wallacia Crown Cemetery Development

Thanks Maree, much appreciated.

Best Regards,

Diana Mitchell | Principal Planning Officer

NSW Independent Planning Commission

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New South Wales Government

Independent Planning Commission





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From: Maree Abood

Sent: Thursday, 11 April 2019 3:29 PM

To: Diana Mitchell

Subject: RE: Wallacia Crown Cemetery Development

Just letting you we will get something to you very soon.

Maree

Maree Abood

Head of Hawkesbury-Nepean Valley Flood Risk Management Directorate





From: Diana Mitchell

Sent: Thursday, 4 April 2019 9:22 AM

To: Maree Abood

Subject: Wallacia Crown Cemetery Development

Good morning Maree,

Thank you for taking the time to meet with the Commission on Tuesday afternoon to discuss the

proposed Wallacia Crown Cemetery Development.

In follow-up to the discussion, the Commissioners have a number of questions they would like Infrasructure NSW to address, as outlined below.

If you could please review and advise when the Commission can expect a response to the questions below, it would be much appreciated.

- 1. In light of the work that Infrastructure NSW has undertaken on flood risk and flood evacuation routes in the Mulgoa Valley in response to the recommendations of the Hawkesbury-Nepean Valley Flood Risk Management Strategy, please outline the constraints and opportunities that the proposal presents.
- 2. Refer to the <u>Wallacia Gold Course Redevelopment Flood Assessment</u>, prepared by GRC Hydro Pty Ltd in October 2017. Please comment on the findings of the assessment, particularly in regard to the conclusions that:
 - a. the site's flood affectation is mild in the 1% AEP event and it 'is not substantially altered' by the proposed development,
 - b. the proposed development 'integrates well' with the site's flood liability, and
 - c. no impacts off-site occur due to the proposed development.
- 3. Please confirm how the flood event that occurred in November 1961, June 1964 and March 1978 compare to a 1% AEP event.

Thank you and feel free to give me a call if you would like to discuss.

Best Regards,

Diana Mitchell | Principal Planning Officer

NSW Independent Planning Commission

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