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4 September 2019

Third Age Villages Pty Ltd C/o Catalyst Project Consulting Attn: Tim Mackiewicz 110 King Street NEWCASTLE NSW 2300

Dear Tim,

RE Flood Impact Statement for Proposed Seniors Living Development at 40 King Street, Adamstown

Northrop Consulting Engineers have been engaged by Third Age Village Pty Ltd to undertake a Flood Impact Assessment for a Site Combability Certificate (SCC) Application for Seniors Housing at 40 King Street, Adamstown (Merewether Golf Course).

This assessment has been based on data provided by Council as part of a Flood Certificate on the 18th March 2019.

The following provides an outline of the existing site, proposed development, and a summary of the information contained within the flood certificate in support of this statement.

Locality Description

The subject site is located in the upper extents of the Throsby Creek and Dark Creek catchments in Adamstown, NSW. It is contained within Lot 4 DP1223244, herein defined as "the site". The proposed development is located within the site, which is bounded by City Road to the south, Brunker Road to the west, bushland reserve to the southwest, and generally bound by residential housing on all sides of the course.

Elevations on the site range from 15m AHD to 50m AHD. The majority of the site has grades in the order of five to seven percent with topography generally falling between northwest to northeast, towards Brunker Road to the west, and Lockyer St to the north. The site consists of an operational Golf Course, with regularly maintained grass lawns and landscaped areas, in addition to intermittent bushland areas. The perimeter is bound by residential housing, with the exception of medium density bushland to the southwest. A clubhouse and other recreational facilities are located at the King St entrance to the site.

Development Proposal

The proposed development consists of two multi-level residential buildings and associated amenities. It is noted that in future, a DA or multiple DA's will be submitted to construct and operate the Seniors Housing. Furthermore, a future DA would also be lodged to reconstruct the Golf Club House currently onsite. However, the current assessment primarily relates to the SCC Seniors Housing component of the site. Vehicle parking facilities are proposed on the ground and lower levels. The proposed layout is presented in **Figure 1** below. The proposed development is to be accessed from the existing entry to the Golf Course off King St, with the existing levels at the location of the proposed development 22-31m AHD.

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Prepared	RC	04/09/2019
Reviewed	ВС	04/09/2019
Admin	НВ	04/09/2019



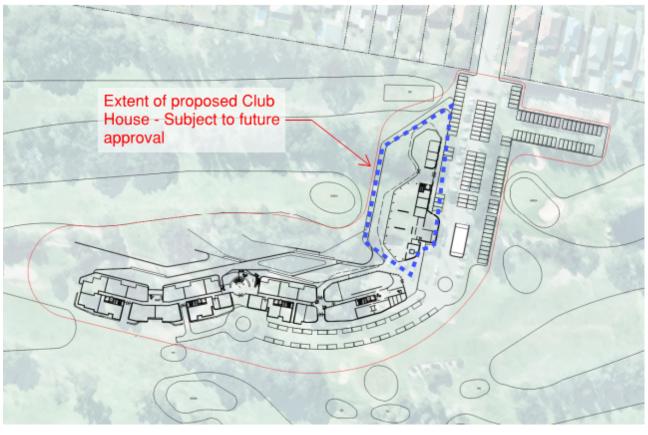


Figure 1 - Proposed development footprint

Flood Impact Assessment

The assessment was undertaken through a desktop review of the following documents supplied by Newcastle City Council:

- Flood Information Certificate FL2019/00044;
- PMF Levels map (40 King St, Adamstown); and
- Survey data of the site provided by the client.

Preliminary Flood Levels and Relationship to Site Levels

Preliminary flood levels noted in the flood certificate are presented below in **Figure 2**. The map indicates that PMF levels affect a minor portion of the site to the north, however the proposed development extent within the site will not be located within a flood affected zone. In addition to the proposed development footprint, **Figure 2** also shows the extent of the area being considered as part of the SCC Application.



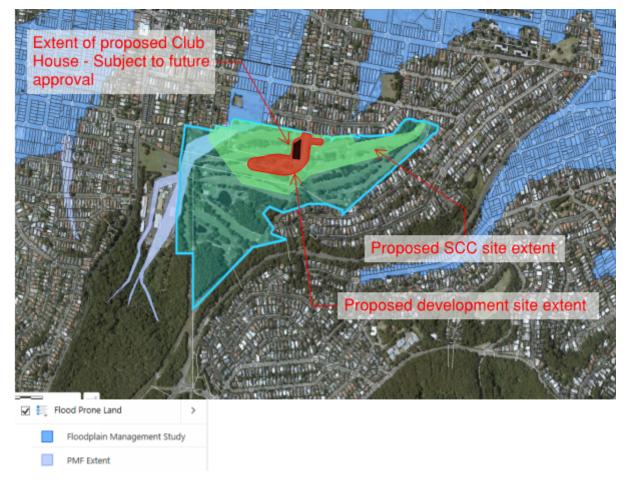


Figure 2 - PMF extent (provided by Newcastle City Council)

The Council DCP states that floor levels of all occupiable rooms within buildings are not set lower than the flood planning level (FPL), being the level of the 1% Annual Exceedance Probability flood, plus 500mm freeboard.

Figure 3 below shows the PMF Levels Map of 40 King St, Adamstown (provided by Council). The map shows that the nearest flood affected portion of the site is expected to experience PMF levels of up to 15m AHD.





Figure 3 - Flood PMF extent

We note that whilst a portion of the SCC extent is affected by PMF flood levels, the only works proposed for the north-western area relate only to connection to the external stormwater network. No habitable areas are proposed for this area.

Based on the survey data supplied, the approximate level at which the proposed development site is to be located is in the order of 22-31m AHD, which is within the range of 7-16m higher than the PMF level, significantly exceeding the DCP required level. Based on these findings, we conclude that the proposed development will not be in a flood affected zone and therefore not affected by flooding.

Conclusion

A flood impact assessment has been undertaken for the development located at 40 King St, Adamstown. The PMF storm event data provided by Council has been considered for the existing scenario, as well as survey data of the site to determine the flood risk and effects to the proposed development. After review of the supplied data, it was concluded that the proposed development is not at risk during a major flooding event.

Should you have any queries regarding this correspondence, please feel free to contact the undersigned on (02) 4943 1777.

Prepared by:

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Limitation Statement

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