

23 December 2022

Lionel Puang
Development Manager
Novus
Level 38, Gateway Tower, 1 Macquarie Place
Sydney NSW 2000

Dear Lionel,

Re: 39-43 Hassall Street Parramatta – FRA Executive Summary

This letter sets out a summary of the findings detailed in the Flood Risk Assessment prepared by Molino Stewart for the proposed build-to-rent development at 39-43 Hassall Street, Parramatta.

The proposed development complies with most of the provisions of the existing and draft Local Environmental Plans and Development Control Plans applicable to the site. Where it does not strictly comply, alternative solutions are provided to ensure that there is adequate protection of life and property from flood impacts. The design features where strict compliance is not achieved are:

- 1) Horizontal evacuation pathways are not provided. However, this is because vertical evacuation is recommended for the proposed development and therefore the FERP details vertical evacuation opportunities and the reasons that horizontal evacuation would not be appropriate.
- 2) The FERP does not contain evidence of consultation with NSW SES as NSW SES does not consult on FERPs prepared for developments.
- 3) The refuge facilities have not been designed for a 72 hour refuge stay, but a refuge stay of 6 hours, with a 24 hour back-up power supply also provided. Given that a riverine PMF would only isolate the site for a maximum of 6 hours, back-up services for 6 hours is sufficient to shelter site occupants during a flood.
- 4) A substantial riparian buffer zone has not been provided. However, as Clay Cliff Creek flows through a concrete lined canal south of the site and has no existing ecological values, a riparian buffer zone would not enable the creek bank to be rehabilitated and ecological damage to be repaired.
- 5) The open space created by the cantilevered element over the western open-air flow path has been designed as a driveway, rather than as an area for pedestrians. This is because there is no real scope to create a public pedestrian connection along the creek corridor, with the upstream site fully developed and the Harris Street bridge over Clay Cliff Creek downstream. It is also more appropriate for the purposes of public safety to restrict access to the southern setback along the creek and not to encourage pedestrian use of the western flow path.
- 6) The flood gates at the southern end of the driveway are a permanent design element obstructing the western flow path. However, they have been designed to restrict the flow of creek floodwaters northwards into Hassall Street to ensure that the proposed development does not worsen flood affectation on neighbouring properties. This obstruction to flow is a flood mitigation measure.

- 7) The driveway between the Hassall Street footpath and the basement entry may flood with a hydraulic hazard of H3 in the 1% AEP under less than ideal flow conditions. This area is also more than 0.2 m below the 1% AEP flood level. However, vehicles will be prevented from exiting the building during flooding and therefore vehicular access in this location will not be required.
- 8) Parts of the ground floor are more than 1.5 m above the finished ground level with enclosed space below. However, the area below the ground floor is to be used as enclosed basement levels, as permitted under Section 6.7.2 Control 3. The basement levels do not include any habitable uses, will be protected from the ingress of floodwaters up to the riverine PMF and will be evacuated in the event of a flood.
- 9) A vehicular evacuation route is not provided for the proposed development as local streets would flood in events as frequent as the 5% AEP event, making vehicular evacuation dangerous. Therefore, the preferred evacuation strategy for the proposed development is vertical pedestrian evacuation to a safe area of refuge above the PMF.

Yours faithfully

For Molino Stewart Pty Ltd



Steven Molino BSc BE MIEAust CPeng NPER 3 (civil, environmental) 1053737
Principal

<https://watertechnology.sharepoint.com/sites/Jobs1301-1400/Shared Documents/1360 39-41 Hassall Street Flood Advice/Reports/Final/1360 FRA Executive Summary Final.docx>