

- With the existing flooding characteristics established, an investigation was undertaken to identify what flooding and stormwater measures should be implemented across the site to mitigate flooding and stormwater impacts to accommodate any future residential development on the site. The following works have been recommended:

- For more details refer to the *35 Edna Street Lilyfield – Flood Impact Assessment and Concept Site Stormwater Drainage Plan*. We note these measures recommended are not required as part of a rezoning application and subdivision of the site and will only be required to be implemented once a future development outcome for the site is established through a separate application for development.

Council have provided new information detailing the flooding characteristics of the subject site (refer to Attachment B). The provided information included the following details:

- ## Flood Impact Assessment

The maximum levels provided by Council indicate that the 100 year ARI flood level will be maintained within the Edna, Piper and White Street road reserve. Based on a survey of the site (provided by Degotardi, Smith & Partners in May 2005) the top of the retaining wall structure along the western boundary fronting Edna Street is set above the 100 year ARI flood level.

As a result, it is unlikely that overland flows generated across the upstream catchment of the site, during a 100 year ARI storm event, will inundate the site under existing conditions. Provided that there are no significant changes to the topography of the site, it is envisaged that under proposed conditions, the proposed subdivision will not be affected by the 100 year flood level.

The site will be inundated by overland flows generated during a PMF storm event. Under pre-developed conditions, the site will be inundated by overland flows entering the site via the existing driveway access along Piper Street. During the PMF storm event, these overland flows would sheet towards the eastern boundary and occupy the eastern portion of the subject site.

Under proposed conditions, the proposed subdivision will be inundated by overland flows generated during a PMF storm event, with overland flows entering the same driveway access along Piper Street. The extent of the flooding will occupy a majority Lots 2 and 4 of the proposed subdivision, located along the eastern half of the site. It is envisaged that the extent of flooding and level or risk across Lots 2 and 4 can be appropriately managed with the implementation of the appropriate stormwater and flood management measures.

Water and Risk Management

In accordance with Section C.1. and C.4. of Council's DCP, all finished floor levels, building platforms, developed areas including car parking facilities are to be set at or above the Flood Planning Level. The subject site will not be inundated by flood waters during a 100 year ARI storm event. As a result, all finished floor and driveway access levels nominated in the Concept Site Stormwater Drainage Plan (Northrop 2009) will be set well above the Flood Planning Level and hence complies with Council's requirements.

Section C.8. of Council DCP stipulates that all car parking facilities including basement car parks are located above the Flood Planning Level or as high as practical within the constraints of compliances with AS/NZS 2890.1. No basement car parks have been proposed as part of the proposed subdivision and all driveway access levels will sit above the Flood Planning level. Hence the proposed subdivision will comply with the above requirements.

Section C.9. of Council's DCP specifies that flood mitigation works that modify the stormwater drainage system or flood behavior within the development site maybe permitted provided that the works do not have an adverse impact on any surrounding property. The proposed subdivision is unlikely to have an impact on the existing flooding characteristics of the catchment up to the 100 year ARI storm event. Stormwater and flood management measures will be conditioned as part of future development across the subdivision to mitigate impacts arising from flood during a PMF storm event. These measures will improve flooding and stormwater conditions across the catchment and have no adverse effect on the site and neighboring properties.

Conclusion

In 2009, Northrop was engaged by SWC to undertake a Flood Impact Assessment and prepare a Concept Stormwater Management Plan for the proposed subdivision of 35 Edna Street, Lilyfield (also known as Lot 1 DP343175). This letter has been prepared as an addendum to address new flooding information provided by Liechhardt City Council and respond to queries regarding flood risk management as per Sections C1.1, C1.4, C1.8 and C1.9 of Annexure A from Council's DCP.

Northrop are satisfied that, in light of the new flood information provided by Council, the proposed subdivision and the rezoning of the site to Residential will adequately address Council's stormwater and flood risk management requirements. We are of the opinion that the proposed site is suitable for future residential development provided that the appropriate stormwater and flood measures will be implemented across the site once a development outcome is established which will ensure no adverse effect on the site or neighboring properties.

We hope this letter satisfies your requirements. If you have any queries or wish to discuss any items in this addendum, please do not hesitate to contact the undersigned on 02 9241 4188.

Yours faithfully,


James Hoang
Civil Engineer

Reviewed By


Stephen Fryer
Principal Civil Engineer

ATTACHMENT A

ATTACHMENT B