WESTFIELD HURTSVILLE – ROOFTOP DINING, ENTERTAINMENT & LEISURE PRECINT EXTENSION

CIVIL DA REPORT

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Revision C

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ISSUE AUTHORISATION

PROJECT: Westfield Hurstville – Entertainment and Leisure Precinct

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1 Introduction

enstruct have been engaged by Scentre Group to provide civil engineering consultancy and assess the impact of the proposed Entertainment and Leisure Precinct (ELP) works at Hurstville Westfield on the stormwater system, On-site Stormwater Detention (OSD) and Water Sensitive Urban Design (WSUD) measures of the site.

1.1 Site

The site is located at 3 Cross Street, Hurstville. The existing multistorey retail building with an open carpark roof is currently in use as a Scentre Westfield Shopping Mall. The site fronts Cross Street to the north, The Avenue on its east and is surrounded by a vehicular trafficable lane and retail shop buildings on south and west boundaries. The site is within the Georges River Council Local Government Area (LGA).

Figure 1: Site Location (Source: Six Maps 2020)

1.2 Proposed Works

The proposed works are to take place at the Westfield Shopping Mall in Hurstville. The development includes the construction of an Entertainment and Leisure Precinct (ELP) atop the existing rooftop (Figure 2). Further development of multistorey buildings for use as office space and a hotel are also proposed. All works are to take place on the existing building solid roof area and there are no new development proposals in the design to the road or footpath surrounding the building footprint.

Figure 2: ELP Masterplan

2 Stormwater

The existing stormwater system for the rooftop carpark discharges via 150mm downpipes to the building stormwater system. This ultimately discharges to the trunk drainage line in Cross Street.

2.1 Stormwater System

The stormwater drainage from the proposed developments will be connected to the existing 150mm downpipes. Further, stormwater drainage will be modified to suit the new development and re-connect into the existing stormwater system installed in 2015. This modification is to be designed to AS 3500:2018. Generally, roof eaves, gutters and downpipes will be designed for rainfall intensities up to the 5% AEP event as per the Georges River Council Draft Stormwater Management Policy.

Council have advised that any unclean water as a result of maintenance of the community garden needs to be appropriately disposed of such as not to result in water pollution. Any polluted waters will be disposed of to the sewer, to be included in the design.

2.2 On-Site Stormwater Detention

OSD requirements for the site are set out by Georges River Council in the Draft Stormwater Management Policy dated September 2019. The policy requires that developments must not increase the risk of flooding at any downstream properties, in all flood events up to and including the 1% Annual Exceedance Probability (AEP) storm event. The development of the site is proposed for the roof area of the existing building. No additional hardstand areas are proposed on the ground area of the site, therefore, no increase to total impervious area of the site. This satisfies the Stormwater Policy Section 4.4 Exemptions;

(d) A change of use without any modifications to the building footprint and impervious areas,

which indicates no additional OSD storage is required as the existing stormwater system will be sufficient to manage stormwater discharge post development.

2.3 Water Sensitive Urban Design

Georges River Council Draft Stormwater Management Policy also sets out stormwater quality requirements for the site to avoid contamination of the downstream system. Due to the nature of the works not increasing stormwater volume of the site, no additional stormwater quality improvement devices or WSUD measures are necessary. The existing stormwater treatment device in use at the site will be sufficient to manage post development stormwater volumes.

As noted in Section 2.1, any polluted water from the community garden will be collected and disposed of via the sewer.

Further to the above, the change in use of the roof from a carpark to an area consisting of pedestrian courtyards, roofs and green roofs is expected to have a net benefit on stormwater quality.

3 Sediment and Erosion Control

Sediment and erosion control measures are to be in place during construction to mitigate the risk of material entering stormwater systems or sediment tracking onto the road. The controls are to be in accordance with sediment and erosion requirements stated in Landcom's Managing Urban Stormwater: Soils and Construction (Blue Book) and Georges River Council guidelines. Measures such as sandbags and geofabric membranes at all existing pits on the rooftop carpark collecting stormwater runoff from disturbed areas and a sediment fence surrounding the building works area are to be provided.

Sediment and erosion control measures are to be implemented on site by the successful contractor. The contractor will be ultimately responsible for managing temporary stormwater and sediment and erosion control during construction and is required to take into account the site works staging and suitable arrangement of control measures at each phase of construction.

4 Conclusion

The proposed works to take place at Westfield Hurstville will not affect the overall impervious area of the site as there are to be no additions to overall hardstand area. As a results of this, and by adherence to the requirements set out by Georges River Council, no additional OSD or WSUD water treatment measures are required for the site. Stormwater discharge will be via the existing stormwater system on the site, which discharges to the Cross Street drainage system. Any polluted water from the community garden will be disposed of via the sewer.

During the construction works, protection of the existing pits and inlets are required to prevent any construction debris from entering the stormwater network.