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**Subject: 230 Martin Road Badgerys Creek – Civil Design Intent**

Our Ref: MAR-AAP-DA-00-LTR-CI-0001-CivilDesignIntent

Date: 23<sup>rd</sup> October 2023

Dear Pawan,

Arcadis have prepared a statement of design intent to summarise the civil engineering components of the proposed development in support of a Request for SEARS from the Department of Planning & Environment.

### **Background**

The proposed development involves an industrial subdivision over a 24.5hectare parcel of land at 230 Martin Road, Badgerys Creek. The site lies within the Badgerys Creek Precinct of the Western Sydney Aerotropolis (WSA).

The ultimate development includes two warehouses totalling approximately 38,000m<sup>2</sup> floor area, with attached office space plus associated loading hardstands, carparks, and landscaping areas.

The development footprint has been designed to only cover the western approx. 8ha of the site, since the remaining area is flood-prone from the adjacent South Creek at the eastern boundary.

### **Design Intent**

#### **1) Earthworks**

Bulk cut to fill earthworks will be undertaken across the development footprint in order to achieve suitably-flat pads for industrial development, allow for compliant vehicular access from Martin Road and provide the required flood immunity in accordance with the WSA Development Control Plan (DCP) 2022. Some import of clean fill material to the site may also be required, to be confirmed by detailed modelling.

The proposed surface grading of the site is intended to follow the existing site topography, falling from the southwest corner to the northeast corner. All filling will be undertaken in a controlled manner to Level 1 standard with required geotechnical engineering supervision.

Retaining walls are anticipated to be required along the southern, eastern, and northern boundaries of the site since existing ground levels vary at the interface with adjoining properties.

#### **2) Stormwater Drainage**

It is intended that a new stormwater drainage system will be designed to capture and convey runoff from all development areas to the legal point of discharge located in the northeast corner of the site. This will include an underground pit and pipe network to accommodate minor storm flows and overland flow paths for major events.

A stormwater treatment system incorporating water reuse, rainwater tanks, a gross pollutant trap (GPT) and a constructed wetland is proposed in order to meet the stormwater objectives of the DCP and ensure no

adverse impacts on the receiving waterways. Design will be in accordance with the Department of Planning & Environment's "Technical guidance for achieving Wianamatta-South Creek stormwater management targets".

During construction an appropriate Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) will be implemented to ensure the downstream environment is protected. These plans will be developed in accordance with *Managing Urban Stormwater – Soils & Construction Volume 1 ('Blue Book')* (Landcom, 2004) and Liverpool City Council's guidelines.

It is acknowledged that a future Sydney Water regional stormwater asset is planned on the site, further to the east of the proposed development footprint. It is not intended to design or construct this asset as part of the development, however due allowance will be made in the development's civil design where relevant to ensure the development does not impinge on the basin's future delivery.

### **3) Servicing**

Potable water is intended to be supplied to the development from a new connection to the municipal water network, subject to Sydney Water requirements.

Sewerage is intended to be provided via connection to downstream trunk sewerage infrastructure in the ultimate scenario but prior to these assets being available the development is likely to require an interim solution involving on-site holding tanks with a pump out regime. Consultation will be undertaken with Sydney Water to confirm their requirements.

Connections to other utility services such as electricity and telecommunications networks will also be provided to the development from infrastructure in Martin Road, subject to consultation with the relevant service authorities and local upgrades where necessary.

We trust that the summary above provides a suitable overview of the design intent in relation to the civil engineering components of the development. Should you require further information please contact the undersigned.

Kind regards,



**Simon Haycock**

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