Stantec

Technical Memo

To:	Economic Development Queensland	Date:	16 May 2024
Project:	Aura Precinct 18 First Development Application	File:	304701171-001

Reference: Response to Informal Information Request – Flood Impact

Stantec Australia has been commissioned by Stockland Development Pty Ltd to provide an engineering assessment of the proposed development application over a portion of the Aura Lakes Development, located within precinct 17-19 of the Caloundra South Priority Development Area (PDA).

This reporting has been produced to support the development of the initial stages of Precinct 18. While the analysis herein will support the overall development strategy, this engineering servicing report has been prepared to assess the impacts of the first development application within Precinct 18.

Economic Development Queensland has raised an informal information request regarding the impact of the proposed development works upon regional flooding. The intent of this technical memo is to provide an overview of the interaction of the proposed development works with regional flooding extents and provide guidelines on further investigation to be triggered at such time that development works are detailed within flood impacted site areas.

OVERALL SITE CONTEXT LAYOUT

The overlay of the overall site context plan with the currently approved regional flood levels is shown in Figure 1 below.

Regional flood levels are shown as per the following legend:

Red – 1% AEP, Yellow – 5% AEP, and Blue – 99% AEP

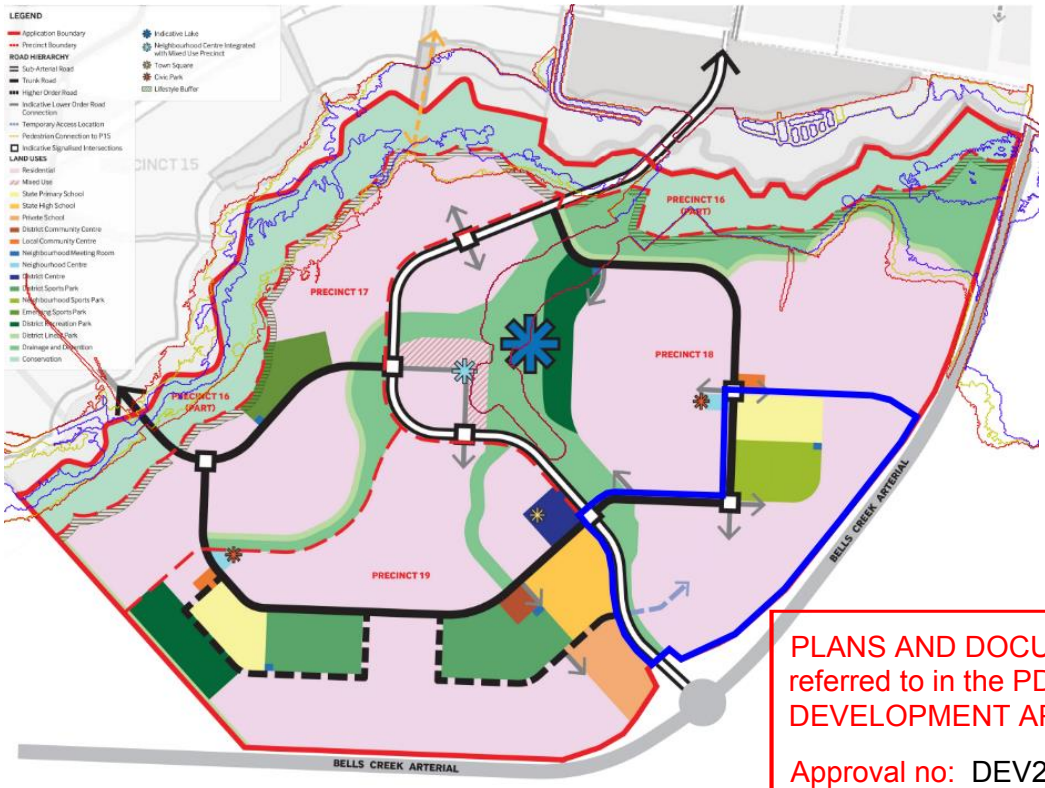

Figure 1 Site Context Plan Overlaid with Regional Flood Extents

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2023/1458

Date: 2 August 2024

Queensland Government

The site area associated with the development works within the first development application (outlined in blue), are confirmed to be outside of the footprint of the regional flooding events.

All other development works reflected in the context plan shall be designed in order to achieve no net impacts to regional flooding considerations in line with the existing strategy documents. At such time that detailed design development is progressed within stormwater conveyance areas, central lake and recreation park areas and site areas which are within the footprint of the regional flood events. A review and verification of flood impacts will be completed in order to ensure that no impact to flooding conditions is maintained.

It is noted that a detailed flood assessment will be undertaken in line with the second development application associated with the Precinct 17-19 area, at which time further detail regarding stormwater flow paths will be able to be provided.

CONSTRUCTION OF STORMWATER QUALITY MANAGEMENT DEVICES

In accordance with the requirements of over-arching site environmental approvals, stormwater quality management devices must be located outside of the following constraints:

- A minimum of 30m from existing Wallum Sedgefrog habitat;
- Outsize of nominated frog zones;
- Outside of 99% AEP flood immunity levels
- May be located within frog buffer zones provided the following criteria are met:
    - No more than 40% of the Frog Buffer can be used for stormwater management devices, including drainage channels. Stormwater management devices must be placed uniformly along the length of the Frog Buffer to ensure no restriction to the overall connectivity of Wallum Sedgefrog (WSF) habitat within the Frog Zone and Frog Buffer.
    - Where stormwater management is located within the Frog Buffer, an average minimum set back of 20m is required between all edges of each stormwater management measure and the Frog Zone Boundary. This set back distance does not apply to stormwater outlet drainage channels.
    - The stormwater management measures must be set back 30m from the created Frog Ponds within the Frog Zone and Frog Buffer. Drainage channels and swales from the stormwater management measures to the creek can be closer than 30m.
    - The final locations of the stormwater management devices will be determined during detailed design. The location will consider the proposed WSF breeding ponds, foraging habitat and overall habitat connectivity to ensure compliance with Key Performance Criteria 5, listed in Table 6.2a within the *Wallum Sedgefrog Management Plan* and Table 8.2a within the *Acid Frog Management Plan*.

During detailed design of the stormwater management devices and surrounding development sites the appropriate interaction of the devices, open space and proposed development land will be resolved.

In accordance with Stantec engineering sketch 304701171-100-CD-SK1300 and Figure 2 below, the proposed development site will be serviced by 2 proposed stormwater management devices.

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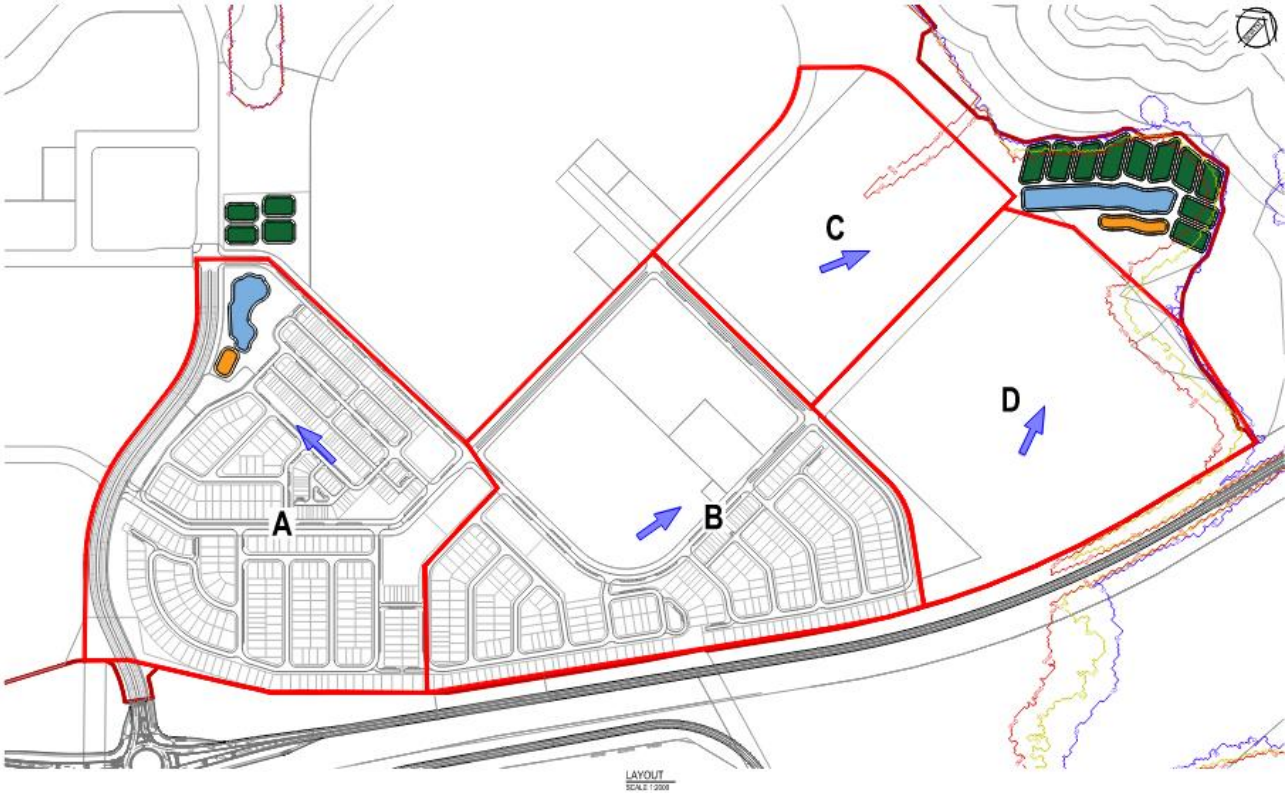

Figure 2 Site Context Plan Overlaid with Regional Flood Extents

Catchment A of the development will discharge to the northeast towards a treatment device located adjacent a local parkland space. This device does not interact with regional flooding extents.

Catchment B, as well as future development catchments C and D, will discharge towards the northern boundary of the site. The stormwater outflows will be treated by an end-of-line stormwater treatment device located generally as per Figure 2 below.

At such time that that detailed engineering design of the Catchment B-D stormwater treatment device is designed, a review of the regional flooding model shall be completed in order to ensure no impaction to regional flooding considerations.

Accordingly, regional flooding impacts should be investigated in detail at such time that proposed development works interact with flood extents.

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