

Saunders Havill Group
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Ref: GB001- 30156352-01

RE: CIVIL ENGINEERING RESPONSE FOR INFORMATION REQUEST FOR COM/77/2023

PROPERTY ADDRESSES:

**62-84 & 86-108 TALINGA DRIVE, PARK RIDGE QLD 4125
LOT 3 ON RP131003 & LOT 4 ON RP131003**

**RESPONSE TO REQUEST FOR FURTHER INFORMATION
ITEMS 1.4 – 1.5, 2.1 – 2.5, 3.1, 3.8, 4.1 – 4.5 & 6.1 – 6.5**

Please see below the response to the information request issued by Council dated 6 November 2023 for the abovementioned items.

Attachments

In support of the application, we enclose the following:

- Attachment 1 Engineering Services Report
- Attachment 2 Stormwater Management Plan
 - Including associated modelling files

Response to Information Request

Council's request for information is displayed in **grey text** and the applicant's response in **black text**.

1. PLANNING ASSESSMENT

1.5. Provide details of the proposed treatment of retaining walls and their presentation to adjoining properties and streetscape.

Advice note

The use of textured colour concrete block/sleepers for the proposed retaining walls will improve the visual presentation to the adjoining properties and streetscape.

Response: Refer to Appendix B of the Engineering Service Report for concept engineering drawings CV-0101 & CV-0102 which nominate the retaining walls to be textured and coloured as per Landscape Architect details.

2. STORMWATER

Stormwater Quality

2.1. Confirm that the rainfall runoff parameters and pollutant export parameters used in the MUSIC model are consistent with the values outlined in the MUSIC Modelling Guidelines.

Response: Meteorological data for input into MUSIC was obtained from Logan City Council (West) Greenbank Station 40659. Six-minute time step rainfall data was obtained for the climate period from 01/01/1980 to 31/12/1989 as per MUSIC Modelling Guidelines (November 2018). Refer to Section 6.3 of Site Based Stormwater Management Plan (SBSMP) GA0002-30156352-AAR.

2.2. Amend the Stormwater Management Plan and the MUSIC model to use the recommended impervious fractions outlined in the MUSIC Modelling Guidelines.

Response: The SBSMP, GA0002-30156352-AAR assumed 80% impervious for road areas, 100% impervious for roof area and 50% impervious for lot ground area. This is consistent with MUSIC Modelling Guidelines (November 2018) in Table 3.6 Typical Impervious Fraction for Split Catchment Land Use for Residential 80+ dwellings/ha. Stormwater management areas and park areas have been assumed to be 20% impervious based on Table 3.7 Typical Impervious Fraction for Lumped Catchment Land Use we assumed these areas to be public open space.

2.3. Amend the Stormwater Management Plan and the MUSIC model to use the recommended area breakdown percentages of each catchment.

Response: The stormwater area breakdown percentages have been measured off Saunders Havill's proposed layout plan. The breakdown percentages were based on the information provided in the response above.

2.4. Provide a copy of the MUSIC model used to assess the effectiveness of the proposed treatment train (email: Development@logan.qld.gov.au).

Advice note

The Stormwater Management Plan indicates that two catchment areas of 3.04ha 3.023ha have been modelled and the required areas of the bio-retention basins to meet the stormwater quality design objective are 350m² and 120m² respectively. However, it should be noted that each bioretention basin is required to meet the stormwater quality design objectives.

Response: Refer to the attached MUSIC model and Site Based Stormwater Management Plan. The new layout plan only required one bio-retention basin; the results show this basin meets the stormwater quality design objective, refer to the amended SBSMP, GA0002-30156352-AAR.

2.5. Use Equation 4 of the Bioretention Technical Design Guidelines to determine the minimum forebay area.

Advice note

As per the Bioretention Technical Design Guidelines,

- *The minimum sediment forebay volume should be determined using Equation 3,*
- *Then, the minimum forebay area should be determined using Equation 4,*
- *Then, the depth for forebays should be determined using Equation 5.*

A R value of 0.7 may be more acceptable than 0.8, where the use of 0.8 results in a very large forebay for minimal extra benefit.

Response: Refer to the updated SBSMP, GA0002-30156352-AAR, Section 6.3.2 for the proposed sediment forebay sizing based on the Bioretention Technical Design Guidelines Ver 1.1 (Oct 2014).

3. TRAFFIC

3.7. Provide concept roadwork plans and cross sections at 20 metre intervals for the design and construction of the Talinga Drive frontage to its ultimate Urban Collector Single Carriageway standard from the western site boundary to just east of the new access intersection.

Advice note

The concept roadwork plans are to include the new access intersection design.

Response: Please refer to the concept engineering drawings in Appendix B of the Engineering Service Report (ESR), GA0001-30156352-AAR, which provide earthworks long sections showing the future Talinga Road profile as well as cross sections at 20-metre intervals. The ultimate Talinga Drive Trunk Road upgrade information shown was based off CAD files of the centreline and chainages. The levels were based off the longitudinal section design PDF. Both of these files were provided by LCC to assist Arcadis in demonstrating the information. As seen in the sections, there is a nominal difference in level between the proposed design and the Ultimate Talinga Drive Trunk Road upgrade. A maximum of 0.44m is seen in chainage 740.00. Given the concept nature of the Talinga Drive future design will allow for the nominal level difference to be picked up.

3.8. Amend the concept earthwork plans to show the retaining wall levels to match the ultimate road levels provided in the preliminary planning layouts for Talinga Drive and Compal Road.

Response: Refer response to Item 3.7.

4. ENGINEERING

Waterway

4.1. Confirm that no works are proposed within the State mapped waterway or if works are proposed, confirm it complies with the accepted development requirements for waterway barrier works.

Response: Refer to the concept engineering drawings in Engineering Service Report (ESR), GA0001-30156352-AAR, which show that earthworks have a minor encroachment into the State Mapped Waterway; however, this encroachment is above the top of bank and outside of the 1% AEP flood mapping.

Stormwater Quantity

4.2. Amend the Stormwater Management Plan to use the 39% and 18% AEP storm events to correspond with the storm events within section 3.6 of Planning Scheme Policy 5 – Infrastructure.

Response: Refer to the updated SBSMP, GA0002-30156352-AAR, which shows 39% and 18% AEP storm events.

Further discussions were held with a Logan City Council Officer on 8/12/2023 around improving upon the stormwater outcomes for the site and investigating removing Basin B. A result of the discussion was that frequent flow objectives were required to be met. Section 5.6 of the aforementioned report demonstrates that 1EY flows are maintained to meet frequent flow objectives.

4.3. Demonstrate how a 3 metre wide embankment can be provided around proposed Basin A in accordance with section 3.6 of Planning Scheme Policy 5 – Infrastructure.

Response: Refer to amended concept engineering drawing SKE-CV-0491, which demonstrates a 3.0m wide access path around the base of the basin for maintenance. It is noted that once the future Compal & Talinga road upgrades occur, access from the road reserve will be possible as well.

4.4. Demonstrate how the weir for proposed Basin A will function in the ultimate scenario when Compal Road is fully constructed.

Response: Basin A weir has been changed to discharge through a Pit inlet and 1% AEP drainage pipe that will be located below future Compal Road. Discharge from the basin is not intended to flow into future Compal Road unless in an emergency scenario, such as a blocked pipe. As seen in Section A of SKE-CV-0492 of the concept engineering drawings, the nearest lot pad sits ~700mm above the top of the basin bund and future road level.

6. FLOOD ASSESSMENT

Temporary Local Planning Instrument – Flood

6.1. Either submit an amended proposed plan of development to include no earthworks below the 1% AEP;

or

Response: As seen in amended Concept Engineering drawings in the ESR and SBSMP earthworks for the development site are located outside and above of the 1% AEP flood level.

6.2. Demonstrate compliance with AO22/PO22 to PO24 of the Temporary Local Planning Instrument (TLPI) Flood, by submitting a Flood risk assessment report, prepared in accordance with Section 2.2.1 - Localised flood risk assessment report (FRA) of Planning Scheme Policy 10 - Flood. Reference is made to Table 3.2.1 - Tolerances for flood impact assessment for limitations on impact due to the development.

Response: Refer to the response for Item 6.1

6.3. The submitted FRA is also to include an assessment against PO25 of the TLPI.

Advice note

The proposed development involves filling below the 1% AEP and within high and moderate flood risk areas (refer to the TLPI for further information).

Response: Refer to the response for Item 6.1

7. WATER DEVELOPMENT SERVICES

Sewer

6.4. Engage with Logan Water to conduct a detailed sewerage planning study of the entire sewer catchment and obtain/submit the following:

- 6.4.1. Confirmed acceptance letter from Logan Council for the proposed sewer alignment;
- 6.4.2. The acceptance of clearing all vegetation; and
- 6.4.3. Detailed geometry details and proposed sewer main dimensions/sizes.

Advice note

Logan Water suggests that the proposed sewer alignment is not viable due to its path through Council land, the required vegetation clearing and the fact that it passes through the Koala protection area, which will trigger the need to obtain an Environmental Protection and Biodiversity Conservation (EPBC) approval.

Response: The developer and Arcadis engaged with Logan Water via a meeting on 05/02/2024. During the meeting, the site's sewer connection location was discussed and confirmed as being the extension of the Bayliss Trunk Gravity Network within Lot 1 SP210423 via Lot 28 RP94327 and Lot 1 RP144541 to the development site. Logan Water noted a detailed planning study is required to confirm the size, extent and alignment of this extension. A request for a scoping fee has been lodged with Logan Water to start the process of commencing the detailed planning study. The developer has also engaged with the owners of Lot 28 RP94327 and Lot 1 RP144541 to facilitate the extension of this sewer network. Arcadis requests that Logan Water condition the site's sewer connection point to be the Bayliss Trunk Sewer MH in Lot 1 SP210423 adjacent to Park Ridge Road unless nearer infrastructure becomes available. The condition should also note that sewer extent, alignment and size will be subject to the outcomes of the detailed planning study. This enables LCC to release development conditions whilst still protecting Logan Water's interests.

Water

6.5. Engage with Logan Water to conduct a detailed water planning study to ensure that the proposed internal water reticulation meets Council's Desired Standards of Service (DSOS) and does not disadvantage existing customers.

Advice note

For enquiries in relation to the water and wastewater items above please contact Water Development Services on 07 3412 4004. Alternatively, you may send an email enquiry to waterda@logan.qld.gov.au. In order to facilitate efficient customer service please quote the application number and address of the property concerned to the customer service officer or within the subject line of the email. Water Development Services will respond to your enquiry within 48 hours.

Response: Arcadis have engaged with Logan Water via phone and email correspondence regarding the development site's potable water connection. Logan Water advised the preferred and ultimate connection point is the trunk water infrastructure on Park Ridge Road. This will require a main to be extended via Lot 28 RP94327 and Lot 1 RP144541 to the development site. This main will also be subject to the aforementioned detailed planning study. A request for a scoping fee has been lodged with Logan Water to start the process of commencing the detailed planning study. The developer has

also engaged with the owners of Lot 28 RP94327 and Lot 1 RP144541 to facilitate this planned water supply.

An interim outcome is proposed via a connection of the DN100 main within Talinga Drive until the ultimate connection is made from the north.

If there are any queries in relation to this application, please do not hesitate to contact the undersigned.

Yours sincerely,

Arcadis Australia Pacific Pty Ltd

Ashley Shepherd

Civil Engineer

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