

Our Ref: OSK6521-0011-B

Your Ref: ROL/2024/116

10 November 2025

City of Gold Coast
PO Box 5042
GCMC QLD 9729

Dear Sir/Madam,

RE: FURTHER INFORMATION REQUEST ROL/2024/116 – 176 BAILEYS MOUNTAIN ROAD, UPPER COOMERA, QLD 4209

We refer to the City of Gold Coast's Further Information Request (FIR) issued on 21 August 2025 regarding the Development Application lodged by Norfolk Estates Pty Ltd ATF The Solander Investments Unit Trust C/- Saunders Havill Group. On behalf of our client, please find below our responses to the Civil Engineering items.

ENVIRONMENTAL AND BUSHFIRE ASSESSMENT

8. Stormwater Outlet – Lot 904 bio-retention and detention basin

The proposed stormwater basin within Lot 904 has a 64m long low flow outlet pipe that discharges directly into the Yaun Creek channel at elevation 29m. The potential future replacement of the low flow pipe would result in the removal of a significant area of rehabilitated riparian vegetation.

In accordance with Performance outcome PO5 of the Environmental significance overlay code, the applicant is requested to redesign the bio/detention basin to significantly reduce the length of the low flow outlet pipe.

Response:

The stormwater basin outlet has been amended to shorten the length of stormwater pipe to approximately 25m from the basin outlet pit to a new vegetated swale. The swale will then discharge to Yuan Creek where levels permit. The reduction in pipe length will allow for future replacement of the pipe if required while minimising disturbance to the rehabilitated riparian vegetation. Please refer to the amended Conceptual Stormwater Management Plan (Ref: OSK6521-P003-F) prepared by OSKA Engineers included with this response for further details.

10. Vertical hanging sewer – Yuan Creek conservation corridor

The applicant is proposing to install a vertical hanging sewer across the Yaun Creek conservation area and channel for a length of over 46m in the northeast part of the site.

To comply with Performance outcome PO5 of the Environmental significance overlay code the applicant is requested to identify a suitable route for the sewer line that does not require a vertical hanging sewer pipe across the Yaun Creek conservation corridor and channel.

Response:

The proposed sewer outlet location has been amended to remove the vertical hanging sewer crossing of Yaun Creek. As agreed with CoGC during a meeting held on 22nd September 2025, a sewer connection is now proposed to be made to the future sewer within Lot 58 on SP191940 which itself is proposed under application COM/2024/317. If the sewer within Lot 58 is not constructed at the time of connection the sewer main will be continued through Lot 58 and connected to the existing sewer main within Baileys Mountain Road. Please refer to the amended Preliminary Services Layout Plan – Sheet 1 of 2 (Ref: OSK6521-P040-D) prepared by OSKA Engineers included with this response for further details.

SUBDIVISION ENGINEER**11. Proposed road upgrade for Courtney Drive**

The supporting material provided has identified that Courtney Drive can be classified as a Rural Residential Access Road classification with a pavement width of 6.25m. This is not consistent with the zoning of the site (Emerging community) or the geometry conditioned for nearby applications.

The applicant is requested to submit an amended cross section for upgrading Courtney Drive to have a 7.5m wide pavement (comprising of 2 x 3.75m wide moving lanes), kerb & channel (at the subdivision side) and (minimum) 1m sealed shoulder treatment (at the opposite side of the subdivision side).

In addition, the proposed cross section for Courtney Drive adjacent to the waterway shows proposed edge restraint (Type ER2) (subdivision side only) due to mitigate additional overland flow ponding along Courtney Drive. However, the other side will be required to install barrier kerb & channel by others. The applicant is requested to clarify this outcome and proposed edge restraints. The applicant is requested to submit longitudinal section for Courtney Drive at the full frontage of the site and safety limit check of depth and velocity in accordance with Queensland Urban Drainage Manual (QUDM) requirements.

Response:

The traffic engineering response to the Council Information Request prepared by Colliers International Engineering and Design (Ref: 24BRT0559) and dated 3rd July 2025 details the proposed widening of Courtney Drive pavement and installation of kerb and channel on the development side. It also demonstrates how future developments on the opposite side of Courtney Drive can provide similar works to provide the full 7.5m carriageway width requested by Council.

A longitudinal section of Courtney Drive is included with this response, please refer to Preliminary Roadworks Longitudinal Sections Sheet 5 of 5 (Ref: OSK6521-P030-A) Prepared by OSKA Engineers. Depth velocity checks of stormwater flow will be undertaken during detailed design of the stormwater network within Courtney Drive and submitted to Council as part of a future Operational Works Application.

12. Typical section – Road 2

The layout of Road 2 has been amended as a result of the changed application. The provided cross sections show proposed 4.5m wide standard southern verge, proposed 6m wide pavement (comprising 3.75m wide pavement (subdivision side) and 2.25m wide pavement (adjoining Lot 182 on RP156422)) and proposed 4.5m wide temporary batter northern verge on 16.5m wide road.

Officers do not support proposed 2.25m wide moving lane and proposed temporary batter. Proposed 2.25m moving lane shall be widened to a 3.75m width and it should have (minimum) 1m flat verge between edge of the requested 3.75m wide pavement and proposed temporary table drain for vehicle safety and protection of pavement structure. If (minimum) 1m

flat verge is not available between edge of the requested 3.75 m wide pavement and proposed table drainage system, then it can be a high risk of failure for pavement structure from lateral movement. The applicant is requested to submit amended cross section for Road 2 accordingly.

Response:

The proposed cross section of Road 2 has been amended as requested. Please refer to the Preliminary Roadworks Typical Cross Sections (Ref: OSK6521-P029-D) prepared by OSKA Engineers included with this response for full details.

13. Typical Section for Road 5 (Short Stub Road)

The applicant is required to submit amended Cross section for proposed Road 5 showing 2-way crossfalls and barrier kerb & channel (B1) on both sides in accordance with IPWEA Standard Drawing (RS-080).

Response:

The Road 5 typical section has been amended as requested. Please refer to the Preliminary Roadworks Typical Cross Sections (Ref: OSK6521-P029-D) prepared by OSKA Engineers included with this response for full details.

LANDSCAPE AND OPEN SPACE

16. Retaining Works – private lot

The latest drawings include a retaining works plan within the submitted Statement of Landscape Intent (SLI). However, officers note a discrepancy between this plan and the latest preliminary earthworks drawings regarding the design and location of retaining walls within the site. In addition to these discrepancies, the current design includes retaining walls up to 3 metres high within private lots directly fronting the road verge. These are considered to negatively impact the visual amenity of the future public road interface. To adequately address Performance outcomes PO4 and PO9 of the General development provisions code, the applicant is requested to submit amended drawings reflecting the following details relating to the retaining works within future private lots.

- a. *Any proposed retaining wall directly fronting a current or future public road reserve is requested to be setback a minimum 600mm from the new front boundary and allow for screening shrub planting to be incorporated between the face of the retaining wall and the boundary. (Officers note retaining walls are currently nominated along the future front boundary for proposed lots 101, 112, 126, 201-205, 214, 230, 313, 405, 414, 415, 505, 512, 513, 615, 620, 624, 633, 641 & 645).*

Response:

As discussed with Council officers during the meeting held on 22nd September 2025, retaining walls abutting future public road reserves up to 1.6m height will consist of a single tier and will not require the 600mm setback. Walls up to 2m height will consist of a single tier and will be setback 600mm. Retaining walls over 2m in height will consist of two tiers and be setback 600mm. Please refer to Preliminary Bulk Earthworks Plan Sheet 1 of 2 (Ref: OSK6521-P010-D) prepared by OSKA Engineers for typical wall details.

- b. *Retaining works within private land abutting a public road reserve are requested to be coloured (charcoal) concrete sleepers and made of textured materials (e.g. split-face) or reflect an alternative high-quality retaining wall design.*

Response:

Councils request is noted, please refer to Landscape Architects drawings for details of proposed wall finishes.

- c. *Where retaining walls fronting a public road reserve are nominated within two tiers, cross-sections of the interface are requested to be included with amended drawings.*

Response:

Please refer to Preliminary Bulk Earthworks Plan Sheet 1 of 2 (Ref: OSK6521-P010-D) prepared by OSKA Engineers for typical wall details.

17. Retaining Works – public land

The latest subdivision configuration results in extensive retaining works abutting future Council land or within future Council land. This includes significant retaining works nominated along the interface of future public road reserve and the future conservation lot (proposed Lot 906). SC6.12 City Plan policy – Land development guidelines does not support retaining works within the public road verge and retaining works are not supported within the future conservation lot as the assets are considered to reflect an unreasonable financial/resource burden on Council relating to the future management of the asset. This is considered to reflect a non-compliance with Performance outcome PO8 of the Works for infrastructure code. Accordingly, the applicant is requested to submit amended drawings reflecting the following:

- a. All proposed retaining walls (and associated footings) are requested to be wholly located outside the future conservation lot (proposed Lot 906) and located within private land.*

Response:

Retaining walls proposed adjacent to the future conservation lot will be wholly located outside of the conservation lot as requested.

- b. Any retaining walls within the public road reserve are requested to be removed and the design is requested to be amended to incorporate batters in accordance with SC6.12 City Plan policy – Land development guidelines.*

Response:

The retaining wall proposed within the Road 1 Road reserve and adjacent to the future park lot 905 will be constructed within the park lot as agreed with Council officers during a meeting held on 22nd September 2025. A minor modification to the park lot boundary has been made to ensure that the retaining wall does not extend into the future conservation lot. The other small section of retaining wall proposed within the Road 1 road reserve opposite lots 404 and 405 has been removed and replaced with a 1:3 maximum slope batter.

The retaining wall within Road 6 adjacent to lot 615 has been removed and replaced with a 1:3 maximum slope batter.

Unfortunately, it is not possible to remove the retaining walls within Roads 6 and 10 opposite lots 620-624 and 641-642 due to topography and flooding constraints. As shown on Section G on Preliminary Bulk Earthworks Site Sections – Sheet 4 of 5 (Ref: OSK6521-P018-D) replacing the proposed wall with a batter will extend into the waterway corridor constricting flow. Due to the proximity to the site boundary any constriction of flow at this location will result in flooding impacts to the neighbouring property, being Lot 187 on RP173728. It is for the same reason that the retaining wall proposed within the Road 9 road reserve has also not been removed. OSKA Engineers acknowledge that it is Councils preference for retaining walls to be located outside of road reserves however there are examples throughout the city where they have been accepted. We therefore request Council accept the walls proposed subject to appropriate conditions (wall type, design life etc.) that we are happy to negotiate.

- c. Any retaining walls within the nominated drainage reserve lots are requested to be removed and be replaced with batters. Any batters within future drainage reserve lots are requested to be no steeper than 1(V):3(H) to allow for tree and shrub planting as per SC6.13 City Plan policy – Landscape work.*

Response:

Due to topography and flooding constraints the retaining wall proposed within Lot 903 has not been removed as requested. OSKA Engineers request Council accept this wall subject to appropriate conditions.

- d. *Any retaining walls within private lots adjoining the future conservation lot (Lot 906) are requested to be set back a minimum of 200mm from the conservation boundary, in accordance with SC6.12 City Plan policy – Land development guidelines.*

Response:

Retaining walls will be set back a minimum 200mm as requested.

- e. *Amended preliminary earthworks plans and updated cross-sections are requested to reflect the revised retaining wall locations, setbacks, and design treatments.*

Response:

Please refer to amended Preliminary Bulk Earthworks Plan Sheets 1 and 2 (Ref: OSK6521-P010-D & OSK6521-P011-D) and Preliminary Bulk Earthworks Site Sections Sheets 1 to 5 (Ref: OSK6521-P015-D, OSK6521-P016-D, OSK6521-P017-D, OSK6521-P018-D & OSK6521-P019-D) prepared by OSKA Engineers and included with this response.

19. Infrastructure within conservation lot

The submitted plans nominate infrastructure traversing the future conservation lot (proposed Lot 906) including a vertical hanging sewer pipe and extensive culverts to discharge water directly into Yaun Creek. In accordance with SC6.12 City Plan policy – Land development guidelines the applicant is requested to:

- a. *Remove all infrastructure proposed within the conservation lot, except where essential for connection to a legal point of discharge.*

Response:

Non-essential Infrastructure within the conservation lot has been removed. Please refer to amended civil engineering drawings prepared by OSKA Engineers for details.

- b. *Where infrastructure is unavoidable, it is requested to be minimised in extent and designed to limit impacts on the conservation function of the lot.*

Response:

Council's request is noted and will be complied with where possible.

WATER AND WASTE

25. Water capacity assessment

The water network configuration near Lot 203 Bailey Mountain Road has been reconfigured. Please note that the newly constructed DI 200 mm main along Bailey Mountain Road now connects to the DI 300 mm main in Old Coach Road, as shown in the figure below (circled).

As such, the alignment of the WSSIP proposed 150 mm main (FPI_25067_PIPE_WSSIP19) along Bailey Mountain Road in the model does not match the actual field configuration. As a result, the proposed boundary valve (CP_41227PIPE_11100085373) in this assessment will not function as intended to form a looped water supply network through the development, linking the Courtney Drive and Bailey Mountain Road networks.

It is recommended that the model be updated in line with the GIS configuration shown in the figure below, and that the modelling be redone to determine the supply strategy for the seven development lots.

City officers will provide the applicant the shape files of the pipes, fittings, valves, and hydrants of the concerned area to facilitate the model update and subsequent analysis. Please note that the new main along Bailey Mountain Road is now a 200 mm main. The model is required to be updated to reflect this and maintain the same size all the way through Courtney Drive. An amended water capacity assessment is required based on the above.

Response:

This item was discussed at a meeting between Gold Coast Water and OSKA Engineers on 24th September 2025. Gold Coast Water advised that additional information relating to the Water Network Model would be provided to allow the model and report to be updated. Unfortunately, this information was only provided to OSKA Engineers on 3rd November 2025 which has delayed the updating of the model and report. The updated report will therefore be provided as a separate submission to this response.

26. Sewer reticulation plan & longitudinal section

Council acknowledges the Preliminary Services Plans (OSK6521-P040, P041 & P042) submitted with the application. However, upon review, the plans show a proposed DN150 PVC sewer main connecting to a manhole across Yaun Creek, with the sewer main crossing the waterway above ground. Please note that Council does not support sewer main crossing the creek. Council also has concerns regarding the constructability of the sewer main, as it would require disturbance of the waterway. Council advise the applicant to consider alternative options. Therefore:

- a. The applicant is requested to amend the preliminary services layout plan and longitudinal section to reflect an alternative option.*

Response:

As noted in the response to Item 10, the sewer connection location has been amended, please refer to item 10 for additional details. The Preliminary Services Layout Plan – Sheet 1 of 2 (Ref: OSK6521-P040-D) and the Preliminary Sewer Longitudinal Sections (Ref: OSK6521-P042-B), both prepared by OSKA Engineers, have been updated to show the new proposed sewer alignment and connection details and are included with this response.

28. Additional Information

The applicant is requested to provide justification as to why both water and sewer services are located within the same verge, and why sewer services have been duplicated along some sections of a verge within the same road.

Response:

Sewer and water reticulation mains have been proposed within the same verge generally where there are lots proposed to one side of the road only, for example where roads are adjacent to proposed conservation areas or parks. This will reduce the number of service crossings of the roads and is generally accepted engineering practice.

Duplicated sewer reticulation mains have been proposed within sections of Roads 3, 4 and 7 due to the steep topography of the site. If sewer reticulation mains were restricted to one side of the road within these areas, a sewer road crossing would be required for every single lot resulting in an excessive number of crossings and maintenance structures to provide connection to the reticulation main. We note a similar design philosophy has been approved for the neighbouring development approved under Operational Works application OPW/2023/1202 which contains similar steep topography.

OSKA Engineers confirm all sewer and water works will be designed and constructed in accordance with the SEQ Water Supply and Sewerage Design and Construction Code with minimum separation distances to be provided between sewer and water reticulation mains.

Should you have any queries, please do not hesitate to contact our office.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'T. Watt', with a stylized flourish at the end.

Thomas Watt | Senior Civil Engineer

RPEQ 16222

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