

OUR REF: 5941- EXTSEW2

YOUR REF: COM/2022/61

10 October 2023

City Development
Gold Coast City Council
PO Box 5042
GOLD COAST MAIL CENTRE QLD 9729

Attention: Mr. Nathan Seiler

Dear Nathan,

**RE: RESPONSE TO INFORMATION REQUEST FOR COM/2022/61
MAJOR CIVIL WORKS AND TREE WORKS TO FACILITATE THE EXTERNAL
TRUNK GRAVITY SEWER MAIN FOR VANTAGE YATALA INDUSTRIAL
DEVELOPMENT (STAGE 2)**

**Property: Lot 501 on SP295994, 60 Stapylton Jacobs Well Road, Stapylton, QLD 4207
Lot 334 on SP193431, 84 Christensen Road, Stapylton, QLD 4207
Lot 37 on SP222486, Christensen Road, Stapylton, QLD 4207
Lot 6 on SP274108, Christensen Road South, Stapylton, QLD 4207**

We act on behalf of the Applicant, FPI Queensland Pty Ltd, and provide the following response to Council's Information Request dated 27 April 2022. Given the nature of the response, the Applicant considers this to be a full response to the information request.

GENERAL – TRUNK SEWER CONCEPT

1. Trunk Gravity Sewer Alignment – Water and Waste support the alignment concept for the proposed trunk gravity sewer main on the provided drawings (ie. typically on the Northern side of Sandy Creek, as opposed to within Christensen Road South road reserve), however the following actions are required by the Applicant in order to progress further with the proposed alignment:

a. The proposed trunk gravity sewer main alignment must include the crossing of Sandy Creek into Lot 4 RP839725 as per advice provided by Mark Hunting on 3rd June 2021.

b. Submit a Minor Change application for overarching approval COM/2020/262 (ROL component) to include all lots within the application through which the proposed trunk gravity sewer is proposed to traverse (including Sandy Creek crossing as mentioned above), including amended drawings showing proposed easements within each lot for this sewer.

As part of this Minor Change submission, investigate the possibility of simplifying the current alignment (shown on drawings "Sewer Layout Plan Sheet 2 of 5", 5941 ENG SNA2 601, Revision A, dated 20/11/2021 and "Sewer Layout Plan Sheet 1 of 5", 5941 ENG SNA2 600, Revision A, dated 20/11/2021, both prepared by Gassman Development Perspectives) from structure 6/S1 to 1/S1 through Lot 37 SP222486 and Christensen Road South road reserve to:

- i) Minimise the number of changes of direction and structures*
- ii) Reduce the overall length of new sewer main*
- iii) Reduce the length of new sewer main crossing under the future road pavement for Christensen Road South.*

c. Amended DA Form 1 for application COM/2022/61 to include all lots within the application through which the proposed trunk gravity sewer is proposed to traverse (including Sandy Creek crossing as mentioned above).

GDP Response:

In response to Item 1 the sewer design plans included in this submission have been amended to include the crossing of Sandy Creek into Lot 4 RP839725. An amended DA Form 1 is also attached to this submission to be inclusive of Lot 4. A minor change to the overarching ROL component is not warranted as easements required over Lot 4 can be arranged through the stamp approved OPW drawings for the infrastructure as they have been in earlier stages of the development.

SEWER – DETAILED DESIGN

The following items relate to the provided detail design drawings, however are subject to the outcome of the Trunk Gravity Sewer Alignment items listed above.

2. Undertake service location/potholing to confirm the location and invert level of the existing DN300 gravity sewer line at the proposed connection point of structure 1/S3. This investigation should also confirm if a structure currently exists at the end of this sewer line.

GDP Response:

In response to Item the location was confirmed by survey but no exiting manhole for connection was located.

3. Amend drawings to include nominated sewer line 2 upstream of structure 13/1 and trenchless crossing of Sandy Creek (as noted in items listed above), ensuring the detailed design aligns with overarching approval(s) and generally complies with SEQ Code and Standards.

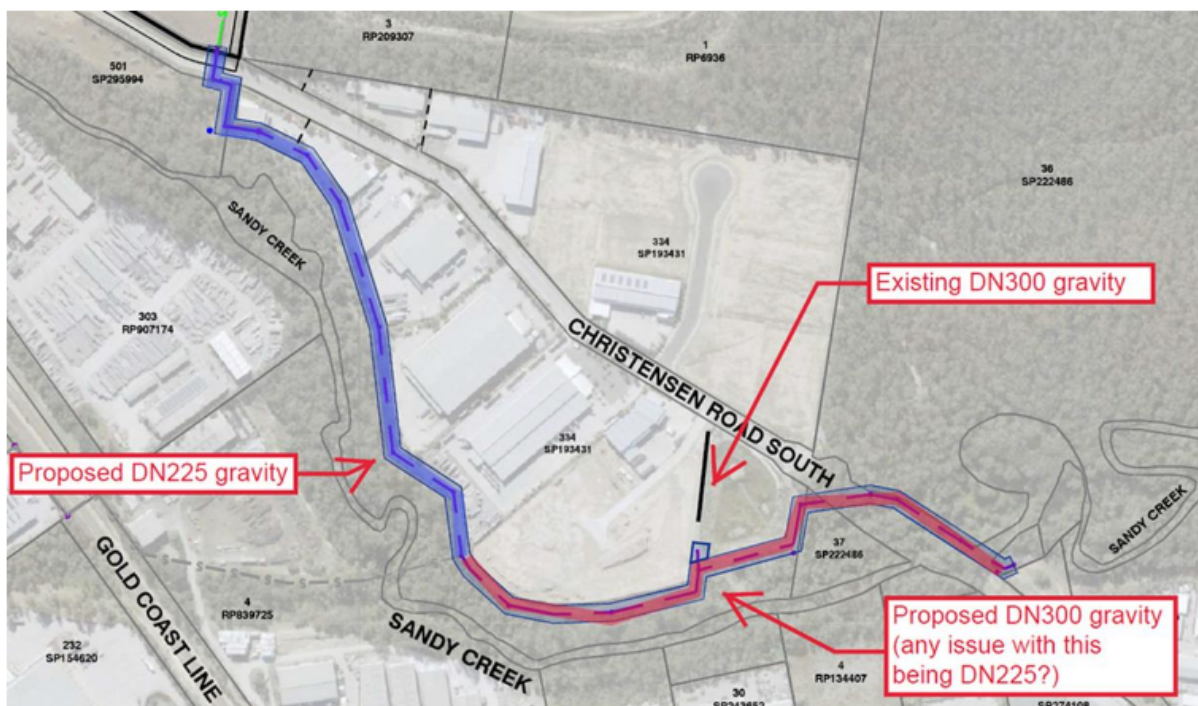
GDP Response:

In response to Item the updated design drawings attached to this response have been amended per Council's request.

4. Council note the currently proposed gravity sewer design diameter as being 225mm and (partly) 300mm, however this section of trunk gravity sewer is intended to be wholly 225mm diameter as per WSSIP 2019. To assist in review of the proposed design, Council request the Applicant to provide the following information:

a. Ultimate sewer flow and sewer loading from the Vantage Development to the proposed Stage 2 trunk gravity sewer,

b. Sewer flows used by the Applicant for the blue (225mm) and red (300mm) pipe sections shown on the plan below:



The following items (c) and (d) are based on the assumption and outcome that the provided information for items (a) and (b) above confirm there is no issue with reducing any section of existing 300mm gravity sewer main down to 225mm:

Amend drawings to reduce the diameter of all proposed DN300 gravity sewer sections down to DN225 as per WSSIP 2019. In doing so:

c. Amend all maintenance structures currently proposed as 1500mm diameter down to the smallest practical size (SEQ Code currently states for RIGGS: 1050mm or 1200mm diameter for nominal sewer size up to 225mm).

d. Amend all proposed enveloper pipes currently proposed as DN500 GRP down to the smallest practical size (SEQ Code currently states minimum DN425 encasing pipes for DN225 sewer pipes). Provide justification if enveloper pipes larger than DN425 are proposed.

Alternatively, justify why any sections of proposed gravity sewer main is required to be larger than DN225.

GDP Response:

In response to Item, the applicant has worked with GCWW on the design of this trunk section of gravity main and the size has been further increased to 375m diameter per GCWW's request.

5. Amend drawings and live works table for live connection detail at sewer maintenance hole "23/S1" to be consistent with approved drawings for OPW/2021/1255.

GDP Response:

In response to Item the updated design drawings attached to this response have been amended per Council's request.

6. A note exists on the layout drawings for "Shoring to be used where trench encroaches on boundary" (which would appear to be from sewer structure 21/S1 to 20/S1), which is approximately 43m in total, but may also be intended for other sections further downstream. To simplify construction and minimise cost, investigate and confirm if construction of these sections can be completed without the need for shoring.

GDP Response:

In response to Item the updated drawings attached to this response have been amended per Council's request to minimise shoring requirements and proximity to the existing retaining wall.

7. A note exists on the layout drawings for "Shoring to be used where trench is inside existing retaining wall zone of influence" (which would appear to be from sewer structure 7/S1 to 14/S1 and again from 15/S1 to 16/S1), which is approximately 495m in total. To simplify construction and minimise cost, investigate and confirm if construction of these sections can be completed without the need for shoring.

GDP Response:

In response to Item the updated drawings attached to this response have been amended per Council's request to minimise shoring requirements and proximity to the existing retaining wall.

8. Administrative error – amend drawing 5941 ENG SNA2 611 Revision A which is titled "Sewerage Longitudinal Sections Sheet 1 of 8", as drawing 5941 ENG SNA2 610 Revision A which is also titled "Sewerage Longitudinal Sections Sheet 1 of 8".

GDP Response:

In response to Item the updated drawings attached to this response have been amended per Council's request.

9. Administrative error – Amend drawings to ensure consistency in structure labelling, eg. layout drawings label structures as 8/S1, 9/S1, etc, while longitudinal sections label structures as 8/1, 9/1, etc.

GDP Response:

In response to Item the updated drawings attached to this response have been amended per Council's request.

10. Amend drawings and live works table for structure 1/S3 to construct this new structure over the end of the existing main, which removes the need to "remove the crown of pipe" for the live connection.

GDP Response:

In response to Item the updated drawings attached to this response have been amended per Council's request.

11. Provide detailed design drawings to show the decommissioning of existing sewer pump station BE50 and any modifications required to the existing sewer network near BE50 in order for sewage from the existing Christensen Road South sewer mains to flow through the new sewer line S3.

GDP Response:

In response to Item the amend drawings attached to this response have been amended per Council's request.

12. Provide justification for the proposed alignments of the trunk sewer main (offset from property boundary) for the Northern side of Christensen Road South (from structure 4/S1 to 1/S1), currently shown as 5.56m and 4.52m from property boundary. Confirm the width of this verge and if these proposed alignments comply with CoGC standard corridor allocations for sewer.

GDP Response:

In response to Item the amend drawings attached to this response have been amended per Council's request to minimises shoring requirements and proximity to the existing retaining wall.

13. Provide RPEQ structural design for proposed structures greater than 6m in depth. In addition, consider renaming the structure type on the long section drawings, as "P2" is currently nominated on the long section drawings as a "full cast in-situ maintenance hole with cast in-situ base", however labelling as "P2" may cause confusion with a "P2" precast maintenance hole nominated in the SEQ Code and Standard Drawings (which is typically only approved for building over an existing sewer main).

GDP Response:

In response to Item all structures deeper than 6m are nominated as custom cast insitu subject to structural design. As per Vantage stage 2 it is intended for the awarded contractor

to provide the structural plans for Council's approval ahead of commencement of works which was suitably conditioned by Council.

14. Provide confirmation from the RPEQ that the proposed uPVC SN8 pipe material is suitable for proposed depths over 5m, or specialist design is required to be provided.

GDP Response:

In response to this Item it is confirmed product specification for the uPVC SN8 has been provided to GCWW as part of the ongoing trunk asset discussions. It is noted that the deeper sections of main where this request is triggered have been replaced with tunnel boring which are encased assets.

15. Confirm and include note on drawings for the proposed construction technique/method for crossing/installing the proposed trunk gravity sewer main underneath the existing twin DN600 stormwater pipes at approximate chainage 340.

GDP Response:

In response to Item the updated design drawings attached to this response avoid crossing these stormwater structures due to the alternate alignment agreed with GCWW.

16. Remove all notes on drawings referring PE pipes as this is not relevant for the proposed design.

GDP Response:

In response to Item the updated design drawings attached to this response have been amended per Council's request.

17. Provide justification for nominating the embedment type as "type 4" on the drawings (geotextile wrapped detail) or amend to a more typical standard embedment (eg. "type 3")

GDP Response:

In response to Item the updated design drawings attached to this response have been amended per Council's request to utilise Type 3.

18. Amend the sewer structure details sheets to align with changes to maintenance hole diameters as per items above and show all access covers over the downstream outlet as per SEQ Code requirements.

GDP Response:

In response to Item the updated design drawings attached to this response have been amended per Council's request.

WATER – DETAILED DESIGN

19. Undertake service location to confirm the location and level of the existing DN150 water main on the Southern side of Christensen Road South in the area of proposed sewer line 1 (eg. in vicinity of proposed sewer structures 21/S1 and 22/S1).

20. Amend drawing “Temporary Potable Water Main Details”, drawing number 5941 ENG SNA2 700, Revision A, dated 20/11/2021 to show:

- a. Proposed alignment offset from property boundary for new gravity sewer line between structures 21/S1 and 22/S1.
- b. How the nominated 600mm horizontal clearance between new gravity sewer line S1 and reinstated DN150 water main will be achieved
- c. How sewer structure 22/S1 can be constructed without impacting the reinstatement of the DN150 water main (drawing currently shows sewer structure 22/S1 and DN150 water main clashing). Confirm and show separation between outside edge of sewer structure 22/S1 and the DN150 water main.

GDP Response:

In response to Item the updated design drawings attached to this response have been amended to remove any need to encroach on or alter the existing water main due to the lengthening of the tunnel boring under Christensen Road South. As such the water reticulation plans have been removed from the updated set provided to Council for approval in this response.

Environmental Assessment

1. Amended Vegetation Management Plan

The applicant is requested to prepare and submit an amended vegetation management plan to include the following details in accordance with S.C6.8 City plan policy-Environmental management plans:

- a. There are inconsistencies between the vegetation nominated for removal and retention on the Tree Survey Drawing and the corresponding label within the Significant Tree Table within the Vegetation Management Plan. The applicant is requested to amend the tree table and/or the Tree Survey Drawings to be consistent with each other regarding retention and removal;
- b. Identify particulars of national, state, local significant species and remnant vegetation, existing vegetation communities, including information about upper, mid and ground stratum.
- c. Identify particulars of protective measures for retained vegetation during works in accordance with Australian Standard AS4970-2009 Protection of trees on development sites with particular reference to the following:
 - i. List and specify vegetation protection measures including protective fencing, signage, exclusion zones and tree guards;
 - ii. As a minimum, protective fencing must reflect AS4970-2009 Protection of trees on development sites, unless another method providing a comparable level of protection is sufficiently justified within the VMP;
 - iii. List of prohibited activities within the tree protection zone (TPZ);
 - iv. Other tree protection measures such as branch and trunk protection;
 - v. Location of fauna friendly and/or exclusion fencing or other protection measures;
 - vi. Location and type of erosion and sediment control measures; and location of stockpiles, site office, parking and storage areas.

2. Amended Rehabilitation Management Plan

The applicant is requested to prepare and submit an amended rehabilitation management plan to include the following details in accordance with SC6.8 City plan policy-Environmental management plans:

a. Include a roles and responsibilities section within the rehabilitation management plan including:

- i. Identify the role and responsibilities of all persons that will be involved with the management of vegetation during construction*
- ii. Information on approved plans and conditions being available during the rehabilitation works on site and to all relevant personnel such as the project manager, site manager, construction leading hands, relevant contractors, machine operators and other site personal.*

3. Hollows and Logs

A site inspection identified a number of fallen trees/logs of a considerable size located within the proposed work area. These logs potentially provide habitat for native species. It is therefore it is requested that the logs are retained on site and carefully relocated into the areas of retained vegetation for their continued use. The applicant is requested update the rehabilitation management plan to reflect how these logs will be managed during the works in accordance with SC6.8 City Plan Policy- Environmental Management Plan section 5.3 Part B (c) which requires the re-use of vegetation by translocating hollows.

4. Arborist Report

The applicant is requested to prepare and submit an arborist report prepared by a qualified arborist with a minimum Australian Qualification Framework (AQF) Level 5 in Arboriculture for the vegetation proposed to be retained adjacent to the proposed works.

A site inspection on 13 April 2022 confirmed that numerous habitat trees were located between Tree 82 and Tree 196 within the vegetation management plan. This vegetation is mapped as regulated vegetation on the Environmental significance overlay maps.

These large trees and their TPZs were not recorded on the vegetation management plan.

As such, it is unknown if the works will impact upon this vegetation. In accordance with PO7 and PO12 of the environmental significance overlay code and PO1 of the Vegetation management code; an arborist report is requested to:

- i. Detail locations, species, tree protection zones, structural root zone of vegetation interfacing the proposed work areas and ensure that the remnant vegetation adjacent to the work will not be impacted.*

Note: Where damage to regulated vegetation is identified, it is requested the civil plans be amended in order to protect the vegetation.

5. Fauna Management Plan

The applicant is requested to prepare and submit a fauna management plan in accordance with S.C6.8 City plan policy-Environmental management plans.

GDP Response:

Please find attached to this response the amended reporting (VMP and RMP) reflective of the new sewer alignment and reduced clearing extent required due to the alternate construction methodology (tunnel boring in favour of open cut trenching) being utilised through design consultation with GCWW key area where concerns regarding hollows and logs and proximity to large existing trees have been addressed via a reduction in clearing scope.

We feel that the above information satisfactorily responds and addresses all the matters raised as part of the Information Request and we look forward to a timely and favourable determination of the application.

If you require any further information or have any queries, please contact the undersigned.

Yours faithfully,

GASSMAN DEVELOPMENT PERSPECTIVES

A handwritten signature in black ink, appearing to read 'Mitchell Gassman', written over a horizontal dotted line.

MITCHELL GASSMAN

CIVIL PROJECT ENGINEER

RPEQ 16939

Attachment 1 – Amended Engineering Drawings

Attachment 2 – Amended Vegetation management Plan

Attachment 3 – Amended Rehabilitation management Plan

Attachment 4 – Amended DA Form 1