

ATTACHMENT 1

TCDC'S ROADING MANAGER'S COMMENTS VARIATION 3 HEARING

TRAFFIC and STORMWATER MANAGEMENT ASPECTS OF PROPOSED TCSP

On Wednesday 3 March, 2021, Ed Varley, Roading Manager for the Thames-Coromandel District Council provided comments on the following evidence received from Variation 3 Proponents:

P.Green (Surveying)

Structure Plan Version 11

Structure Plan diagrams A, B, C, D, E, F

J Burgess (Traffic)

Covering Memorandum

P Green – Survey Statement

- Survey statement of areas affected. In the absence of detailed plans of the proposals being provided by the applicant of the proposals I am unable to comment on the accuracy of the measurements provided in the statement.
- I am concerned that there is an increase of sealed area of 3350 m² (item 6 in the statement) and improvement in the seal of existing rights of way without any mention of the methods to be employed for storm water detention or the environmental treatment of discharge adjacent to the conservation areas identified by the applicant in the document Structure Plan Version 11 and Structure Plan A.
- The survey statement makes no mention of the increased area of seal for the improvement of the right of way between Hot Water Beach Road and Top Ten Campground.

J Burgess – Traffic Statement

- The statement has not provided any traffic impact assessment or calculations that include traffic flows on the existing public road at the junction with Hot Water Beach, generated by the adjacent development sites noted in the statement or from the traffic generated by the Top Ten Holiday park to support the assumptions made of the suitability of the junction or the access network. Without this information I am unable to comment on the accuracy of the assessment or on the assumptions made in the conclusions.
- Given the use of the access road between Hot water Beach and the Top Ten campground by holiday makers, the absence of any commentary on the use of the roads and junction by pedestrians or cyclists causes me concern.
- I am unaware of the discussions with the Council referred to in item 20 or any agreements reached.
- I am concerned that the proposed modification to the district plan will introduce limitations on the layout of the junction with Hot Water Beach that will set a precedent for future improvements, and that the resource consent process is being used to dictate the outcome of engineering solutions.

Structure Plan version 11

- The structure plan statement makes no provision for the treatment of storm water runoff from the road network into the adjacent environmental areas.
- Rule 1a of the structure plan states that there will be a maximum of 25 lots. This conflicts with the statement by J Burgess (item 13).
- Rule 2 of the structure plan states that there will be one dwelling per lot. This conflicts with the assertion in the traffic statement provide by Burgess that the road network would be suitable for increased development.
- Rule 3 appears to allow for additional residential development within lots, conflicting with rules 1 and 2, but matching some of the assumptions on growth in the traffic statement

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Structure Plan A

- Proposed development area served by the junction in Diagram B has the potential for considerably more properties that are currently proposed. This is acknowledged in the statement by J Burgess (item 13). No information is provided on how this would be managed. I am concerned that subsequent redevelopment of the individual plots will lead to an increase in traffic volumes along sub-standard width roads with no pedestrian facilities leading to future issues that the Council will be asked to resolve.

Structure Plan Diagram B

- The entry vehicle swept path shows the vehicles wheels leaving the sealed shoulder for a short section.
- The vehicle turn is reliant on the driver having adequate forward visibility towards Hot Water Beach and sufficient time for the turn to be made. No details have been provided of the forward visibility at the junction.
- No details have been provided for semi-articulated vehicles that may reasonably be anticipated to deliver to the site during the construction phase.
- No details shown of pedestrian and cycle routes in an urban area

I have considerable concerns about the safety of this junction in its current form serving the vehicle and pedestrian access to the existing holiday camp, the current adjacent developments and the community at Hot Water Beach. This junction is a historic alignment that has been gradually added to over time by adjacent developments without a detailed review of its impact on the local community or the safety of users. To my knowledge no previous development has undertaken a stage 1 or 2 predevelopment road safety audit to identify issues. In order to address those concerns, the Council has commissioned an independent study of the junction to determine if there are road safety issues and its compliance to current geometrical layout standards. As noted by J Burgess in his statement, this work is ongoing and will determine if improvements are required to enable the junction to function safely. Any additional development that uses this junction for access will contribute to the number of conflicting vehicle movements at this location and reduce the safety of the junction as a result.

Structure Plan Diagram C & D

- I am assuming that these roads will not be offered to the Council for future maintenance given the construction thicknesses proposed and the lack of pavement design information.
- In the absence of geotechnical reports on the CBR of the underlying ground provided by the applicant I cannot comment on the suitability of the pavement design, but the assumption that the CBR will vary between two values in the design of the pavement gives me concern.
- On the access between Hot Water Beach Road and the Top Ten Holiday Camp there is an existing right of way formed. The submission makes no mention on how that will be dealt with or the need for modification or removal of the existing materials.
- No notes on levels in relation to existing features, or on the method of discharge for the under channel drain.

Structure Plan Diagram E & F

- Comments as Structure Plan Diagram C & D

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Roading Manager

Thames-Coromandel District Council

p: 07 868 0295

On 5 March the Te Miro, 2021 (Summary) Evidence and on 8 March the Te Miro, 2021 (Evidence Report) was made available to the Council Roading Manager.

His additional comments are as follows:

Te Miro, 2021 (Evidence):

In section 1.8 the statement refers to a report which has not been provided to me, so any review will be on the summary contained in the statement.

The conclusions to the report would appear to be a sensible solution to the issue of storm water runoff from roading assets, by using roadside swales to contain and then disperse any flows. I am however concerned about the "pass it forward" approach quoted. The creation of impermeable roading surfaces will create an increased issue with the time of concentration of flow downstream of the site leading to possible issues with the main road access to Hotwater Beach. In the absence of any modelling of this provided by the developer I cannot accept this proposal as it stands, and would expect some form of detention within the site to mitigate this additional issue.

No evidence has been provided on the sizes of the swales needed and their relation to current ground water levels, or of the ability of the underlying ground to accept water through percolation. Without this information there is a potential risk that the swales will suffer from an inability to discharge to groundwater or if there is a high tide affecting ground water levels. This will then lead to the swales becoming water transfer ditches leading to inundation of areas at low points along the roading network.

Te Miro, 2021 (Evidence report)

If you read the report the principles within the report of using swales to contain, slow and treat flow actually contradict the "pass it forward" approach.

If the principle is to "pass it forward" then flow velocity will be unchecked and the anticipated treatment of the water will not occur.

If the swales are used to treat water as described below in the reports executive summary then they must be in a slow speed environment to allow silt and heavy metals to settle out, and the "pass it forward" method will not work.

"The existing natural features at Taiwawe comprise a series of stream and gully networks (incised to about 10m to 20m depth) leading to a lowland wetland floodplain. These features will be enhanced with additional native planted areas to provide a higher level of infiltration, greater reduction in runoff velocities, extending the time of concentration (reducing peak flows), filtering sediments and other contaminants and recycling nutrients."

The item on water quality states

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"Roadside swales are well suited to this site and are recommended up to gradients of approximately 10 degrees, above which checks dams can be incorporated into the swale design to retain flows and reduce velocities."

Again this contradicts the "pass it forward" philosophy

3 -Site Location

"The Earthtech Geotechnical Assessment for Structure Plan (April 2019) notes that the site soils have limited capacity for on-site ground disposal of stormwater"

Based upon this no additional geotechnical investigation on percolation appear to have been done by the developer, and the assumption that swales or surface water discharges from housing will be able to infiltrate storm water must be questioned.

Finally, the report contains no details of flow calculations, discharge rates or times of concentration to validate the assumptions on either mitigation by swales or that the "pass it forward" philosophy will not cause issues either within site or in properties and assist downstream of the site.

Ed Varley

Roading Manager

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