

10 May 2023

RE: Amended Representation to Application No. SA 2022/046

TO: GENERAL MANAGER Glamorgan Spring Bay Council

I request that this amended representation replace my earlier representation forwarded on 8 May 2023. It includes two additional items regarding stormwater.

My Name is Graeme Ross Cumming, owner of 49 East Shelly Beach Road, Orford.

I have over 50 years of professional engineering experience in urban infrastructure including subdivisions and stormwater runoff management as a practising Civil and Environmental Engineer.

I am also a member of the Institution of Public Works Engineers Australia (Tas), The Australian Water Association (ret 2023), a Fellow of the Institution of Engineers Australia, and a Chartered Engineer listed on the National Engineers Professional Register in the Divisions of Civil & Environmental Engineering.

I oppose the above Rezoning and Development Application on the following concerns:

1. Stormwater runoff from 37% of the lots (33 of 90 lots) have no stormwater treatment and this will result in discharge of stormwater contaminants into Prosser Bay and impact on the local environment.

The exhibited documents include an Aldanmark engineering drawing Sheet C105 REV F dated 16/02/2023. This drawing shows that stormwater runoff from 57 of the 90 lots and all of the roads are connected to stormwater treatment devices that include a FILTERA BIORETENTION GARDEN, two OCEANSAVE OS0606 GPT (gross pollutant traps) and 16 OCEAN PROTECT PSORB STORMFILTERS. But it is noted that 37% of other lots (Lots 58 to 91) are **NOT** connected to any stormwater treatment device prior to discharge to the environment. The stormwater pipework (green lines) on Drawing C105 in the vicinity of Lots 71 & 72 clearly shows the stormwater lines from 33 lots totally by-passing the stormwater treatment devices.

2. There are no environmental engineering calculations provided to indicate the treatment performance of the three types of proprietary stormwater quality treatment systems shown on the engineering drawing. Non-performance will result in discharge of stormwater contaminants into Prosser Bay and impact on the local environment.

Devices are: PSORB STORMFILTERS, GPTs (Gross Pollutant Traps) and FILTERA BIORETENTION GARDEN. Calculations are required to verify that the environmental performance complies with the Tasmanian Stormwater Policy Guidance and Standards for Development, that the number of devices required are sufficient to treat all the lots and roads runoff and the annual maintenance cost can be determined. Do Council have the specialised expertise to undertake the performance assessment?

3. The ongoing annual cost to Council of maintaining the specialised equipment proposed for stormwater treatment is not included in the application documents.

Drawing Sheet C105 REV F dated 16/02/2023 shows a total of 16 OCEANPROTECT PSORB STORMFILTERS installed in the stormwater system. (They only treat 13 of the 90 lots plus Road 3. A FILTERA BIORETENTION GARDEN and a GPT treats 44 of the lots plus Road 1). If treatment is provided to another 33 lots currently shown un-connected to any treatment device (Lots 58 to 91), the number of STORMFILTERS will be significantly more than 16, possibly 30 STORMFILTERS. Manufacturer's technical data available at the OCEANPROTECT website states that these **STORMFILTERS require ongoing maintenance at 6 monthly intervals** and the filters require replacement of the filter material at ongoing intervals at between 1 to 3 years. This ongoing maintenance work needs to be undertaken by specialist engineering technicians. There is no information provided on the likely annual cost of this work which will be borne by Council. The ongoing cost would be many thousands of dollars per annum. This cost needs to be clarified.

4. Failure to undertake regular maintenance of the specialised equipment will result in discharge of stormwater contaminants into Prosser Bay and impact on the local environment.

5. Future residential development in the POS area should not be permitted.

In the Applicant's report (p17 5th para. & Fig 13) it is stated that the existing dam and watercourse are to be retained. But on Engineering Drawing C101 is noted that the "*existing dam is to be filled and compacted for future residential development*". This needs clarification. Any attempt to develop lots along the creek line would lead to flood prone properties and high-water table issues. If the dam is filled in it is a lost opportunity to enhance the POS and provide some natural, low cost, stormwater treatment features for environmental benefit and to assist in reduction of peak flows in the natural stream.

6. The Application does not satisfy the requirements of the Tasmanian Planning Scheme's Coastal Erosion Hazard Code C.10 as the subdivision requires the installation of twin 1200mm diameter culvert pipes that will discharge a highly erosive storm flow into a Coastal Erosion Hazard Zone.

The Tasmanian Planning Scheme's Coastal Erosion Hazard Code (C.10, Performance Criteria P1.2) require that works "do not cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure". The proposed upgrade of the stormwater servicing the subdivision discharges into a Coastal Erosion Hazard Area classified as "High Erosion" on East Shelly Beach (Coastal Erosion Hazard Bands 20161201 on The List). Despite the proposed development relying on works in a Coastal Erosion Hazard area to accommodate unretained stormwater flow, there are no such references to this part of the Tasmanian Planning Scheme in the application. Furthermore, a "Coastal Erosion Hazard Report" (C.10, "Performance Criteria") is not provided in the development application.

7. The stormwater design does not comply with GSBC Draft Permit Condition (32.c) with respect to limiting net discharge stormwater flows to pre-development levels.

The Flood Inundation Report dated 22 Dec 2022 undertaken by Flussig Engineers determined (page 11) for the total creek catchment of 243 ha that for the east watercourse the "*post development model does increase the accumulative net discharge inside the existing watercourse*". The increase is from 12.61m³/s to 15.48m³/s (an increase of 22.8% that equates to an extra **2.87 tonnes of water per second for a total flow of 15.48 tonnes of water per second**). This was modelled for the 1% (1 in 100 year flood) AEP (Annual Exceedance Probability). It would be expected that analysis for more frequent flood events such as the 5% AEP (1 in 20 year flood) and also for the smaller 10.3ha catchment of the actual proposed subdivision would also indicate similar or larger increases in flow.

The Tasmanian Stormwater Policy Guidance and Standards for Development sets requirements for restricting stormwater discharge from developments to a rate that is comparable to the existing capacity of the public drainage system.

The GSBC Draft Condition 33 reads:

"Alternatively, the developer may, at the discretion of Council's General Manager, make a financial contribution to Glamorgan Spring Bay Council for the provision of stormwater treatment downstream of the proposed subdivision". It is intended by the Policy Guidance that this can only be invoked in accordance with the Policy Guidance and Standards **if it is possible to provide the required treatment or flow reduction down-stream of the site**. In this case there is only a short section of creek in the Coastal Inundation Hazard Zone between the subdivision and East Shelly Beach and that is confined within a narrow strip of land between two properties and includes a walkway and a sewer pumpstation that is going to be modified to include an extra 40m³ of sewer detention storage. It is highly improbable that any stormwater treatment works can be achieved there. The method by which this will be achieved should not be left to be controlled by a future permit condition (as proposed in the Application document P29 3rd dot point and P48 Assessment Table) but should be clarified prior to a Permit being issued.

Therefore, the application does not demonstrate how it will comply with the Tasmanian Stormwater Policy Guidance and Standards for Development.

8. The Application (p3 Table of Contents) refers to several engineering drawings including Drawing number C501 REV C. But that drawing was not included in the documents provided.

9. Council Application checklist requires a site plan showing contours indicating levels to AHD. No levels are shown on the site plan contours.

10. The site road layout lacks imagination and is based on maximising the number of lots. This results in 4 lots (Lots 42,43, 51,52) isolated and hemmed in without proper road frontage and will likely be surrounded by drab timber fences on all 4 sides. This is not in keeping with the existing developed area at East Shelly Beach. The opportunity exists to enhance the POS to create a more open and liveable layout by reducing the number of lots.

11. The Tasmanian Stormwater Policy Guidance and Standards for Development (Section 2.6 on p58 of that document) requires that a Development Application for a residential development greater than 2,500m² (this development Area is over 10ha or 100,000m²) must be accompanied by a Stormwater Management Report to enable Council to adequately assess the Development Application. No Stormwater Management Report was included in the Exhibited Documents. Therefore, Council officers are not able to adequately assess the Development Application.

12. The exhibited documents include an Aldanmark engineering drawing Sheet C105 REV F dated 16/02/2023. This drawing shows a 1m max high retaining wall to be constructed to the rear of Lot 77. This is to the rear of properties #31 & #33 East Shelly Beach Road. This wall will require an agricultural drain to its rear at the level of the properties on the lower side (East Shelly Beach Road) and will need to have an outlet drainage path through #31 or #33 East Shelly Beach Road. Are these property owners aware of this and has a legal easement been secured?

All issues I have outlined above are of serious concern to me, my wife and the local community and on this basis the proposed Rezoning and Development Application should be rejected by Council.



Sincerely,
Ross Cumming
49 East Shelly Beach Road, Orford