

Cr. Chris Cherry
PO Box 816
Murwillumbah NSW 2484
Via email: ccherry@tweed.nsw.gov.au

20 November 2019

Dear Chris

Re: Sewage Management - Lot B DP 419641 No. 5859 Tweed Valley Way, Mooball – [REDACTED]

For the purposes of providing up-to-date information on the above issue, I have been asked by [REDACTED] to provide a letter of information to the Councillors to assist in the decision making process in regard to the best way to resolve the sewage issue.

As a private consultant since 2004, I have personally inspected more than 2000 sites within the Tweed Shire and surrounding local government areas within the Northern Rivers and have prepared designs for new residential systems and upgrades that have all been approved by the relevant Councils. Prior to the private consultancy, I worked at Tweed Shire Council in the Environmental Health Unit for 7 years, also assessing sewage management for property owners and making recommendations for system installation or upgrades.

In October 2019, I was commissioned by [REDACTED] to assess the current sewage management for their existing 3-bedroom dwelling located on a small rural lot of 714m² in area.

A site inspection was carried out on 11th October 2019 by myself and another HMC staff member. The existing concrete septic tank was noted to be aged with a clay outlet pipe and not in compliance with current sizing standards (AS1547:2012). The existing sewage disposal trench is located off-site and positioned on the adjacent large property to the south.

In accordance to current reporting standards, a soil investigation was carried out and sustainability modelling performed to calculate how much land would be required to safely dispose of the sewage within the property boundary. The modelling used the soil permeability and loading rate, local rainfall data, and the expected regular long term wastewater load from the reasonable occupancy of 5 people in the 3 bedroom dwelling, if continued to be serviced by the existing town water supply connection.

The inspection recorded that the existing dwelling and structures occupies approximately 270m² of the site, with mature trees in the NE corner occupying another 75m² approximately. Allowing for required boundary and structure setbacks, the available area within the property boundary for sewage disposal was determined to be approximately 65m²

Assuming the septic tank was retained as effluent treatment, the minimum required sewage disposal area was calculated to be a minimum 95m² based on expected wastewater volume per day of 750L/day and a maximum loading rate of 8L/m²/day. Tweed Shire Council typically allows septic system upgrades on existing small developed lots to size the new trenches on hydraulic loading only. Nitrogen loading assessment shows a larger land area of 380m² should be provided on the site to prevent leaching off site. These larger areas are typically provided for new dwellings to minimise environmental impact.

The typical sewage disposal methods used in the Tweed Shire are shallow gravel beds maximum 2-3m wide, with minimum 2m spacing, in line with the conventional bed recommended by AS1547:2012. The available sewage disposal area on the property is limited to 10m in length, therefore 3 trenches would be required with spacing. A total area of 135m² would need to be used for installation of trenches and adequate spacing.

As depicted in Figure 1 attached, Tweed Shire Council have a low-pressure rising sewerage main in Tweed Valley Way, located ~40m directly downslope from the property boundary, crossing the large rural property. The connection to reticulated water supply already follows this path crossing the neighbouring property. Connection to the Council's sewerage main would require crossing the property, alongside the existing water supply connection. No easements exist on the neighbouring property for the existing town water supply connection benefiting the [REDACTED] property.

Conclusion:

Suitable effluent disposal area is limited to approximately 65m² on the site and this assumes prior clearing of the large mature trees. This is significantly less than the required 135m² area HMC recommends should be provided as a minimum for effluent disposal to minimise risk.

Based on the above information, it is my professional opinion that on-site sewage management to achieve protection of public health and the environment is not feasible within the property boundary.

I strongly recommend that the property be connected to the Council's reticulated sewerage scheme to enable the occupancy of the existing dwelling to remain legal and safe in the long term.

Should you require further information please contact me on the numbers provided.

Yours faithfully,



Helen Tunks
Director

[REDACTED]
[REDACTED]

