David,

In regards to respond the stormwater RFI from Nicholas

In summary we consider stormwater runoff could be conveyed by swale (and/or piped) down Melrose Road to a stormwater management area within the proposed site. The proposed stormwater design will adopt green infrastructure design (such as swale and infiltration pond) to provide adequate stormwater treatment and attenuation for road runoff generated from the proposed road reserved from the development. It is intended for the stormwater to be discharge to ground.

We have provided an indicative 'Typical' Cross Section for the Melrose Road showing how a swale option could work (see attached email), we think a swale on the Rugby Club side would probably work best, as this keeps the road formation closer to the location of the existing Road formation and makes access crossings to the properties on that side of the road easier.

As per previous email (dated 19/02/2024 – Also attached), the typical road section for Melrose Road is based on meeting compliance with NZS4404:2010, Fig. E17, Table 3.2 (Local Road - Industrial Area). A brief assessment of the longitudinal fall down Melrose Road (based on the existing LiDAR), shows the grade/fall of 0.26% (approximately 1:400) along Melrose Road from the culvert at Melrose Road to the proposed industrial development (up to the turning bend). The grade gets better to 0.5% (1:200) at the turning bend into the development.

The final design, including the sizing of the stormwater management area would be subject to further site assessment, topographical survey, design and modelling etc., however based on the available information we consider a solution can be achieved.

In terms to each individual lots within the development will have its own treatment and attenuation to be manage on-site. Council will assess the site stormwater management to approve or agree to discharge to ground.

Regards

 $\textbf{SELWYN CHANG /} \ Senior \ Civil \ Engineer \ \textit{I} \ BEng(Civil), \ CMEngNZ, \ CPEng$ 

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29718-Melrose Road Typical Cross S