

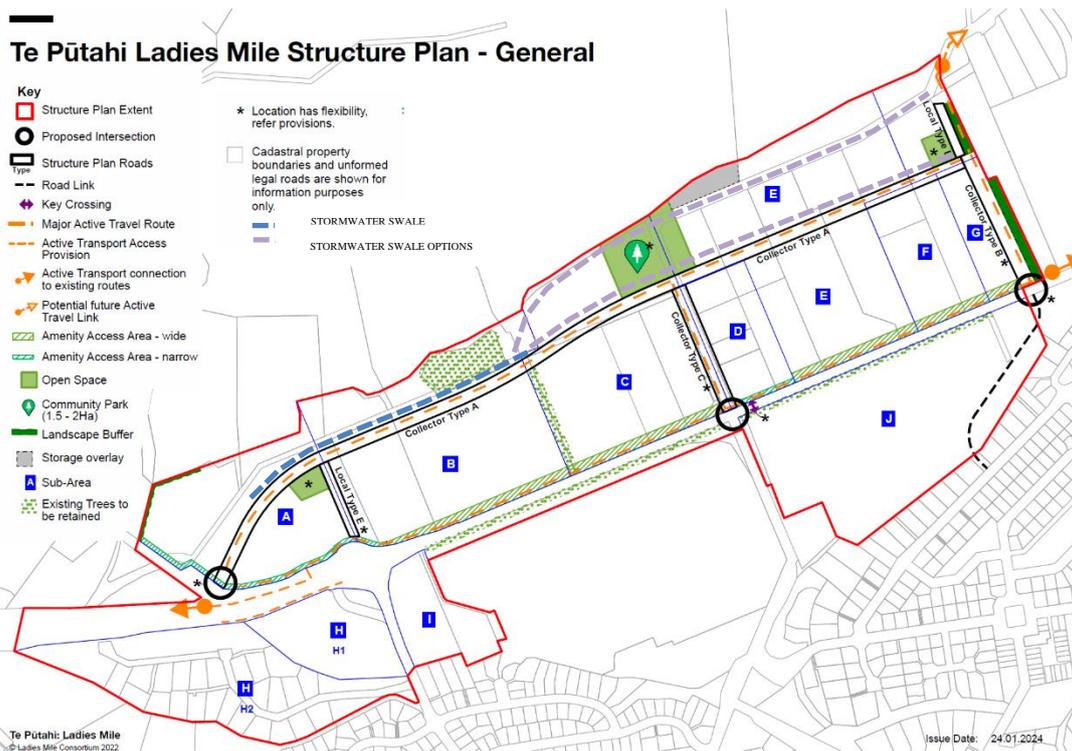
PROPOSED TE PŪTAHI LADIES MILE PLAN VARIATION

RESPONSE OF JOHN GARDINER ON BEHALF OF THE QUEENSTOWN LAKES DISTRICT COUNCIL

- 1 My full name is John Gardiner. I am a Civil Engineer at Candor3 Limited.
- 2 I have prepared the following documents with regards to the Te Pūtahi Ladies Mile Plan Variation (**TPLM Variation**) :
 - (a) Statement of evidence of John Gardiner dated 29 September 2023;
 - (b) Rebuttal evidence of John Gardiner dated 10 November 2023;
 - (c) Summary statement of John Gardiner dated 5 December 2023.

Response to matters raised during the Hearing

- 3 At the Hearing, the Hearing Panel asked the Council to consider whether the proposed stormwater swale should be shown on the Structure Plan.
- 4 I am of the opinion that a stormwater swale alongside Collector Road Type A / toe of Slope Hill should be shown on the Structure Plan as indicated in the diagram below.
- 5 For the western section, the toe of the slope and the Collector Road Type A are close to each other compared to eastern section. Accordingly in my opinion the swale should be located along Collector Road Type A. When you get further east, the collector road and the toe of the slope are up to 150m apart. Accordingly, there will be more flexibility as to where the swale is located (i.e. right on the toe of the slope, or along Collector Road Type A) (hence why this is shown as noted “options”). Whilst there is more flexibility in the eastern part of the TPLM Variation area, I consider the provisions will achieve the necessary integration between the different landowners.
- 6 The amended provisions already address Slope Hill stormwater separately from the remainder of the TPLM Variation area so I consider that amending the Structure Plan in this way will work with the existing provisions.



Stormwater Guidelines

- 7 In my evidence I proposed the use of stormwater guidelines to help facilitate integration between different landowners. At the Hearing, the Hearing Panel asked me to consider what components of those guidelines could be incorporated into the provisions. I provided input into the version of the provisions provided to the Panel on 8 December 2023 as a response to this.
- 8 I have again reviewed the modified information provisions contained within the updated TPLM Variation provisions compiled by Mr Brown and while strengthened considerably and able to stand alone without Stormwater Guidelines (noting I have made some final recommendations below) I believe that a Stormwater Guideline / Toolbox would be beneficial. Some information is better communicated using diagrams, checklists and a framework for robustly and consistently assessing applications across the TPLM Variation area where generic words capture the concepts but do not deliver detailed engineering guidance. The TPLM Variation as written has reference to the Engineering Code of Practice and a Stormwater Guideline might be introduced by way of an amendment to the Code of Practice. However, whether QLDC chooses to do so or not does not undermine the TPLM Variation which adequately captures the concept via the proposed provisions.
- 9 I have recommended that Mr Brown that he make the following minor amendments to provide additional clarify:

27.9.8.11

- (c) the appropriate management of stormwater through a integrated management system for the TPLM Zone land north of SH6, through water sensitive design and through the retention and treatment of stormwater, and integration with the stormwater network within the Zone, taking into account the Guiding Principles for stormwater management in the TPLM Zone and the QLDC Engineering Code of Practice;

Guiding Principles

...Overland flow

- (l) Land to the north of and adjacent to Collector Road A is used as swale to collect, treat and discharge runoff from Slope Hill to ground and allow for overland flow in the Te Pūtahi Ladies Mile Zone to be directed towards Lake Hayes in extreme rainfall events greater than 1% AEP;
- (m) Additional overland flows may be required.
- (n) That there are no overland flows across SH6 for 1% AEP events or less;
- (o) That there are no overland flows from attenuation systems or soak pits for 1% AEP events or less unless there is a defined and acceptable overland flow path.
- (p) Overland flow paths from Slope Hill are co-ordinated through the TPLM Variation Area.

John Gardiner
26 January 2024