

Memo

File No: 25 06 00

Date: 4 April 2024

To: Matamata-Piako District Council officers and Bill Wasley (Chairperson) - Hearing panel for Plan Change 54.

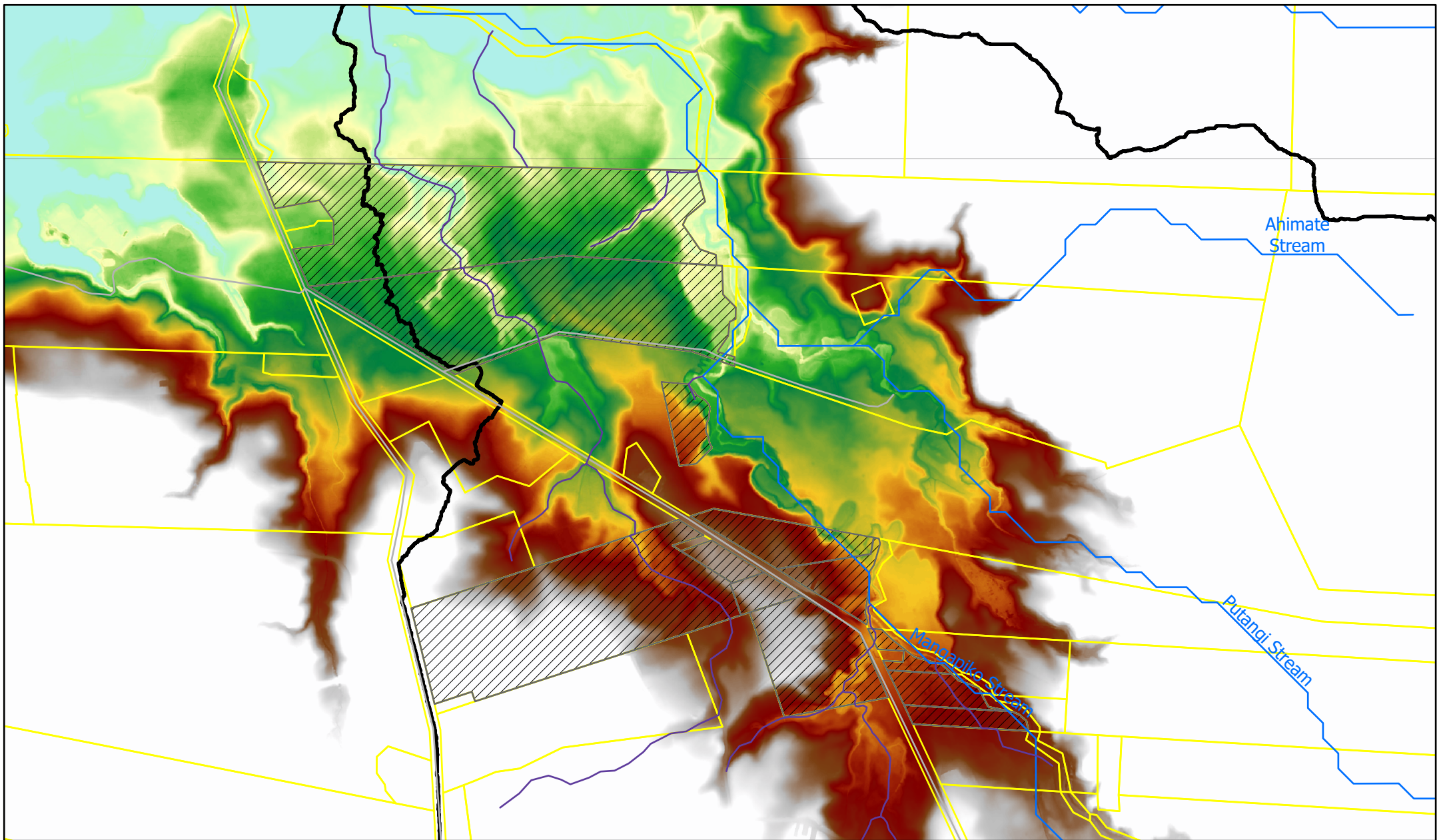
From: Joao Paulo Silva, Senior Policy Advisor - Policy Implementation and Steven Cornelius, Senior Engineer - Regional Resilience, Waikato Regional Council.

Subject: **Memo - Technical Feedback - Plan Change 54 - Douglas Road**

1. Waikato Regional Council (WRC) did not raise any issues with respect to potential flooding risk at Douglas Road area in its submission on Proposed Plan Change 54 (PC54). Matamata-Piako District Council (MPDC) officers have requested comments from WRC on the extent of flood modelling and flood risk information available for the Douglas Road area, to assist with their recommendations in response to Submission S2.5 on PC54 by Rachel and Norm Salisbury. The purpose of this memo is to provide a written response to these information requests, so that MPDC officers can make an informed recommendation in response to Submission S2.5. Each of the questions from MPDC are addressed below.
2. In summary, it seems likely that a significant portion of each of the PC54 sites proposed to be rezoned will be elevated above the flood plain of the Mangapiko Stream. However, parts of the sites will most likely be susceptible to flooding from the Mangapiko Stream and from the various smaller tributaries and flow paths. Therefore, a flood study is required to determine the flood extent and flood levels. This analysis will be required to inform any proposals for development, including determining finished floor levels and ensuring that safe access to the sites can be maintained.
3. We provide the following attachments showing:
 - the PC54 properties proposed to be rezoned along Douglas Road,
 - the streams and rivers in the area,
 - Lidar Derived ground elevation model, and
 - catchment, delineated from Lidar, for the Mangapiko Stream to just downstream of Douglas Road.
4. The sites proposed to be rezoned in connection with PC54 in the Douglas Road area are adjacent to the Mangapiko Stream which is a tributary of the Waihou River. We do not have flood models covering the Mangapiko Stream and we are unable to provide flood levels for the area. We maintain a model of the Waihou River for the purposes of assessing our flood protection assets, however this model does not extend this far upstream.
5. WRC maintains a water level gauge on the Waihou River at Okauia, close to the Mangapiko Stream confluence. The location of this gauge is marked on the attached map "Lower Mangapiko.pdf". The LiDAR derived Digital Elevation Model (DEM) on this map shows elevations between 30 and 100 m RL NZVD2016 allowing the topography between the Douglas Road and the Waihou River to be visualised. Extreme value analysis of this gauge suggests a 1% AEP flood level of 32.75 m R.L

Tararu Datum, this is well below the lowest ground level at the sites which are at around 56 m R.L NZVD2016. Note that NZVD2016 datum is offset by several hundred mm from Tararu Datum. As such, these sites are unlikely to be affected by backwater from the Waihou River.

6. On the attached map “Mangapiko.pdf” the DEM is shown between 30 and 750 m RL NZVD allowing the topography of the contributing catchment area to be visualised. The delineated catchment has an area of approximately 1300 ha. The upper catchment is steep and subject to higher rainfall rates than the lower catchment due to orographic effects. We estimate the time of concentration for the catchment to be around 2 hours and that the 1 in 100-year flood flows will be around 130 to 150 m³/s. This suggests that the stream could rise quickly and that flood flows are unlikely to be contained within the channel.
7. The attached map “Douglas Road.pdf” shows the development sites with the DEM shown between 55 and 85 m RL NZVD2016 allowing the topography around the sites to be visualised. The Mangapiko Stream passes through or close to the PC54 proposed parcels. Smaller unnamed tributaries of the Mangapiko Stream and overland flow paths that pass through the PC54 parcels are also shown on this map. The tributaries and overland flow paths were identified through inspection of the DEM and have not been verified on site or through modelling.
8. Please note that the information in this memo is staff feedback provided without prejudice.
9. Should you have any queries regarding the content of this memo please contact Steven Cornelius – Senior Engineer, Regional Resilience on (07) 859 2722 or by email Steven.Cornelius@waikatoregion.govt.nz or Joao Paulo Silva – Senior Policy Advisor, Policy Implementation on (07) 849 7179 or by email Joapaulo.Silva@waikatoregion.govt.nz.



Mangapiko Stream Catchment at Douglas Road

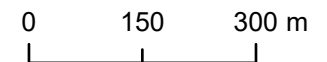
- River
- tributaries and overland flow paths
- Road
- Catchment Extent
- Property Boundaries

PC54 Property Boundaries

LiDAR Derived Elevation
m RL NZVD2026

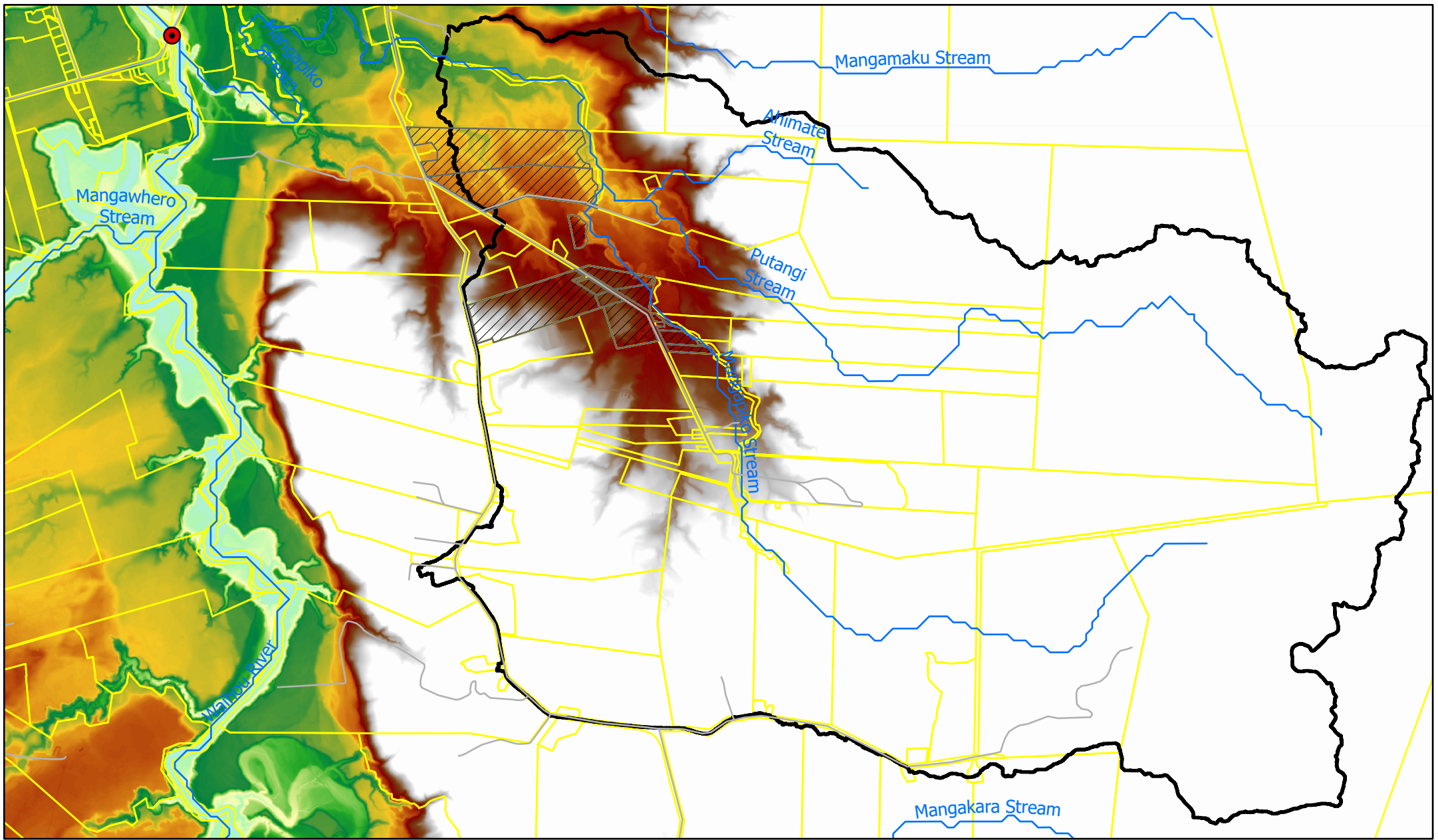
85

55



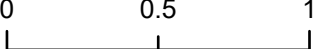

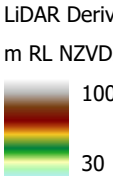






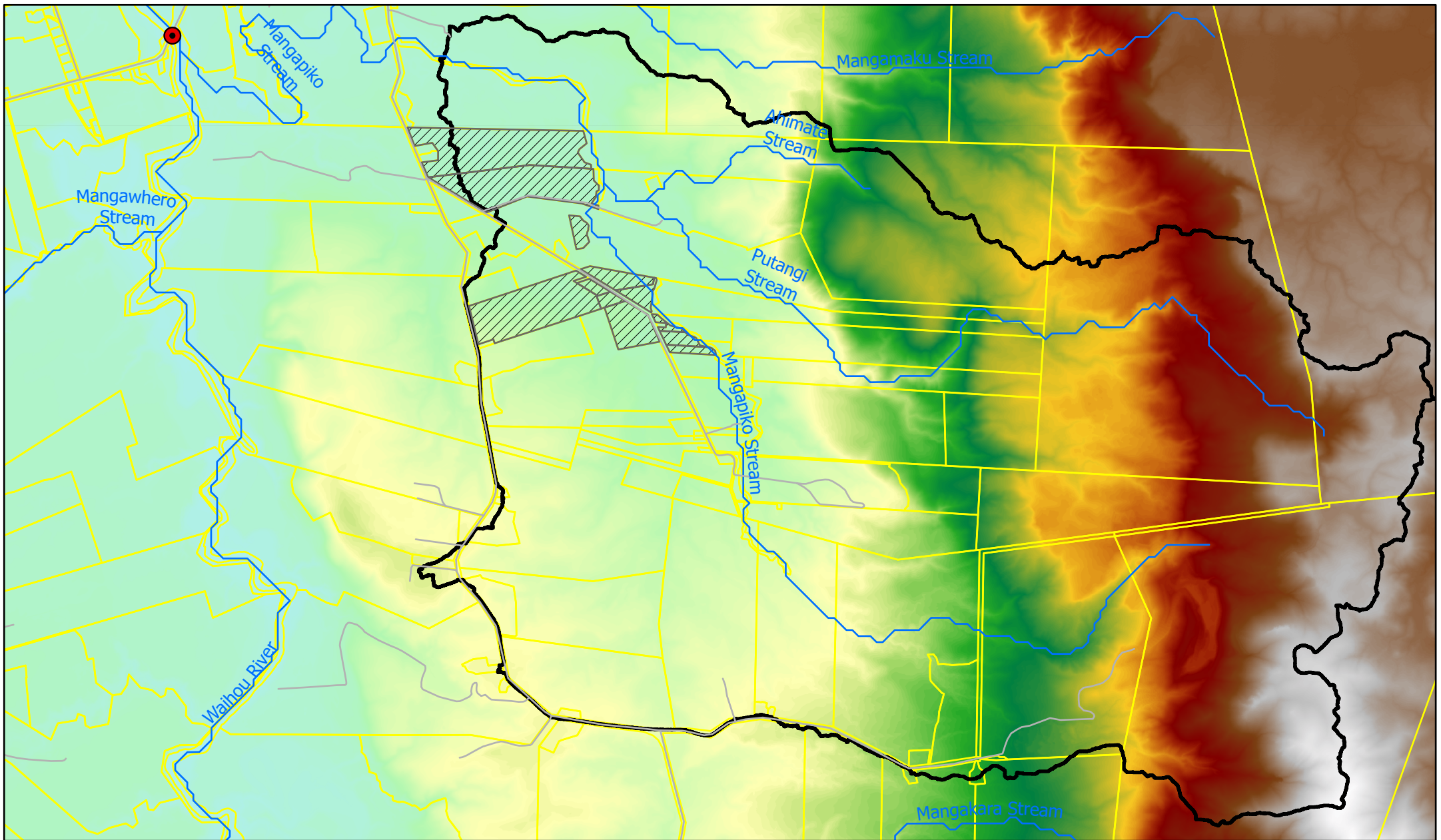
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Mangapiko Stream Catchment at Douglas Road

	Waihou River - Okauia Gauge Station		PC54 Property Boundaries	 0 0.5 1 km N
	River		LiDAR Derived Elevation m RL NZVD2026	
	Road			Scale: 1:25,000 at A4
	Catchment Extent			
	Property Boundaries			



Mangapiko Stream Catchment at Douglas Road

