Memo

To: Cheryl Low, Environmental Manager, Matakanui Gold Ltd
From: Jens Rekker,
CC: Shay MacDonald, Senior Consent Planner, Otago Regional Council
Date: 11 March 2026
Subject: Instituting an Alluvium – Weathered Rock Depth Drillhole Fence at SC-01 Monitoring Site

1 Introduction

At the 25 February 2026 workshop between Matakanui Gold and Otago Regional Council, the question of installing a fence of drill holes across the gap between schist bluffs at the SC-01 surface water monitoring site was discussed. In essence, the drilling would penetrate unconsolidated alluvium and potentially also consolidated weathered schist, which are the two potential materials for allowing subsurface flow of groundwater through the gap and onwards to the lower Shepherds Creek catchment. Groundwater flow through the gap would bypass the SC-01 monitoring site, and a compliance point. The SC-01 monitoring includes continuous flow measurement in high flow and low flow flumes and sampling of surface water. Both sets of monitoring parameters would be bypassed and potentially be unaccounted should there be appreciable underflow through the gap. See Figure 1 for location of proposed profile from southwest to northeast.

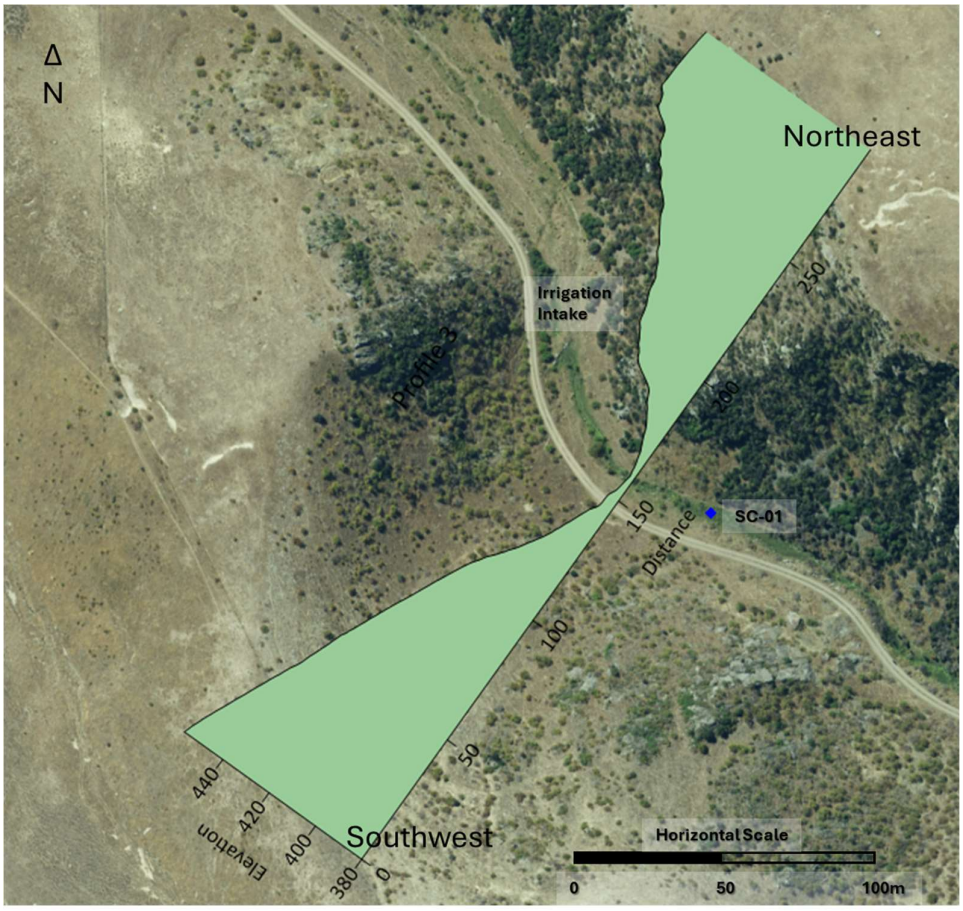

Figure 1: Topographic profile across axis of Shepherds Creek gorge at SC-01 (satellite image and DEM profile)

Figure 2 illustrates the profile line as a topographic cross-section of the land surface taken from the merged DEM surface for the area. The base of the gorge (or gully) lies at an elevation of 382.0 metres AMSL. The access track lies at an elevation of 384.1 metres AMSL. The gorge sides suggest a talus slop on both flanks below schist outcrop bluffs at the steepest part of the slope.

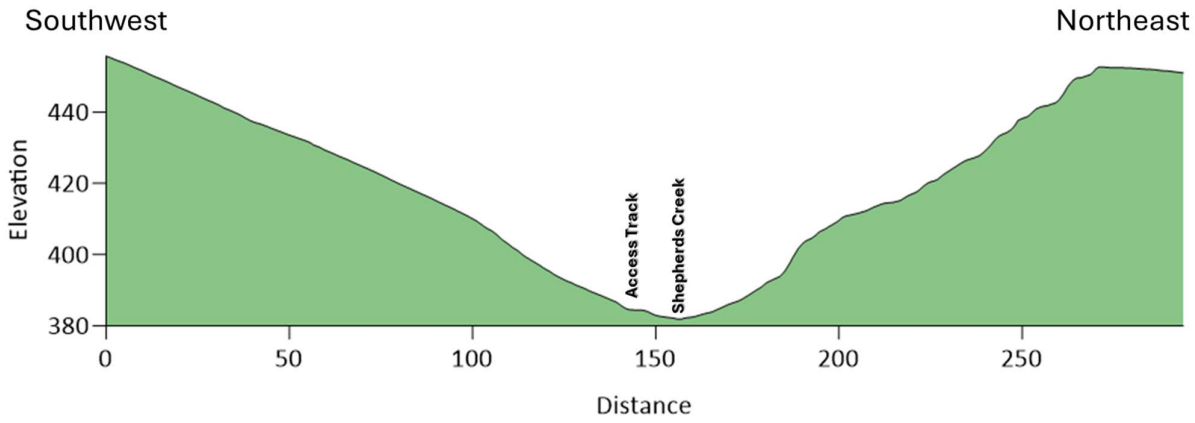

Figure 2: Two-dimensional profile of land surface across axis of Shepherds Creek gorge at SC-01

2 Proposed Fence of Drill Holes

Approximation of the likely disposition of alluvium and weathered schist is illustrated in Figure 3. The cross-section is based on upstream and downstream test pits of the valley floor, the closest of which lies 310 metres upstream.

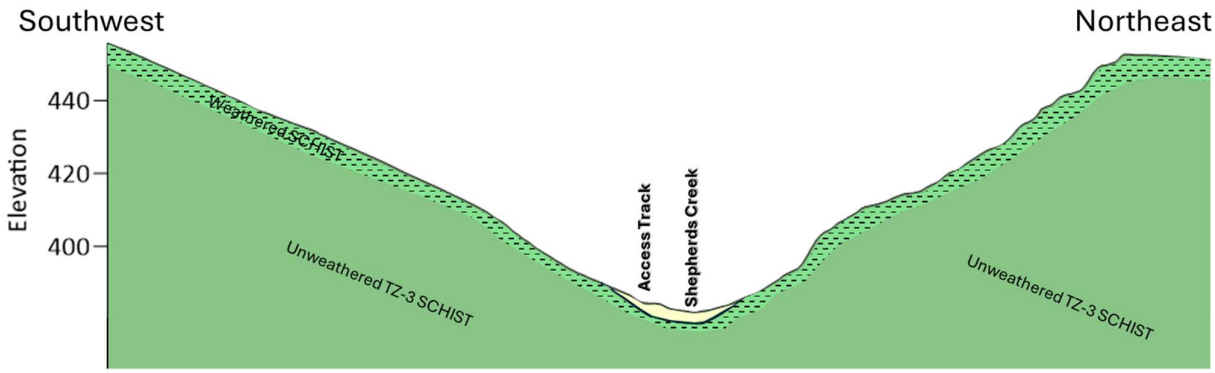

Figure 3: Approximate geological cross-section of Shepherds Creek gorge at SC-01

Figure 4 is a representative cross-section through the gorge floor and alluvium illustrating the probable placement of five drill holes to characterise the subsurface, including the potential for groundwater bypass of SC-01. A geotechnical drilling rig would be employed to characterise subsurface conditions as far as possible. Nested piezometers would be designed and placed on the basis of drilling investigations within alluvium and weathered schist for characterisation of the groundwater level profile and any vertical gradients.

The piezometers would also be available for the undertaking of slug tests and potentially a pumping test to characterise hydraulic conductivity. In the long-term the piezometers would be available for the taking of water samples to delineate the composition of any bypass flow. Ultimately, investigations to characterise subsurface seepage would have the ability to quantify any underflow rates and the mass load of defined potential contaminants.

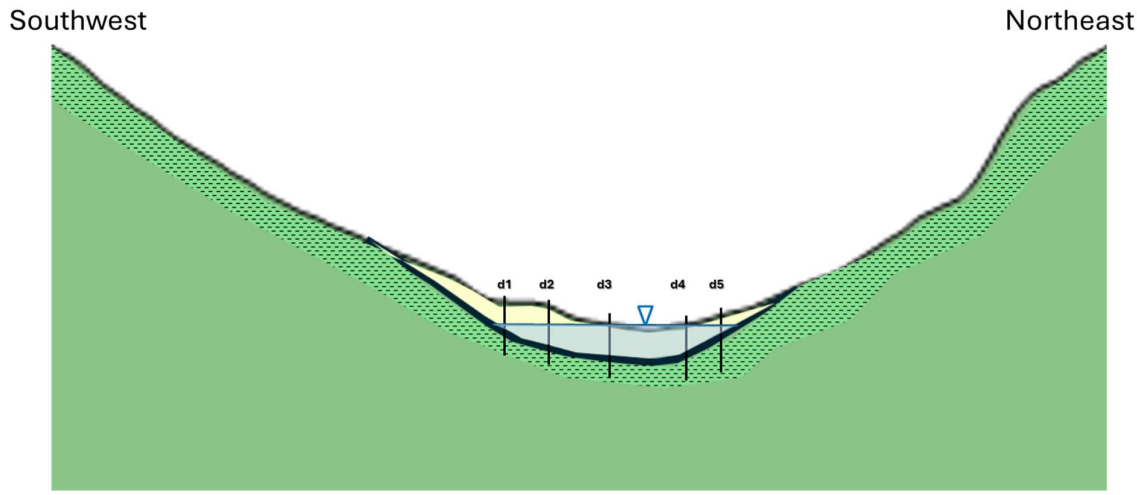

Figure 4: Representative cross-section through Shepherds Creek gorge showing drill holes d1 – d5

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