

Date of Inspection:	Time:	Zone / Area:	Weather:	Person Contacted During Visit:
29.06.20	19:30		Overcast	Shawn McLean

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### General Observations

The Fill 3 site is proposed to be drained and filled in due course, after the granting of consents and when Fill 2 is completed.

The site contained a farm pond with the overflow discharging via a small drainage channel towards and across the northern boundary.

In the past few weeks the drainage channel has been excavated through the site and parallel to the northern boundary in an easterly direction.

While the purpose of the excavation was to drain the farm pond, at the time of the site visit the drainage channel had been temporarily blocked will fill at the eastern end. The fill had been stabilised with hay mulch.

At the time of the visit the channel held standing water to a depth of approximately 1m, with excess runoff spilling at a low rate across the northern boundary further east than it previously did.

The cut faces of the channel were exposed organic soil and fill. The stockpiled and windrowed excavated material was partly revegetated and partly exposed.

The channel gradient appeared to be low. It held standing water at the time of the visit, and it appeared likely that once the outlet was opened up again flow velocities would be low under most conditions.

The topography, vegetative cover and soils exposed suggest that if freely flowing, there would be seepage of near-surface groundwater into the channel. The zone of influence is unknown. There are no water users or buildings upgradient of the channel.

The following photos show key elements of the site and indicate works that are detailed in the Recommendations below.



Figure 1: Fill 3 gully.





Figure 2: Main channel from pond. Seed and mulch stockpiles. Install rock check dams and hydroseed batters.



Figure 3: Channel along northern boundary – ponded water spilling across boundary at lower-right of picture. Remove bale and install a series of rock check dams to link to the rock lined channel (see below).



Figure 4: Outlet to east presently blocked with fill and mulched. Install rock lined channel to ensure runoff discharges to a stabilised outfall.





Figure 5: Various exposed stockpiles. Seed and mulch.

#### **Recommendations**

1. Install a series of rock check dams along the drain channels at nominal 15m spacing. The purpose of the check dams is to ensure flow velocities remain slow but allow water to pass through the dams to keep the water level low.
2. Open up and rock line the eastern end of the channel and line it down to the existing permanent vegetation to ensure that discharges from the channel do not cause scouring.
3. Seed and mulch all exposed areas (except the channel sides).
4. Hydroseed channel sides.