

Leachate to Landfill Project

Opened 7 October 2021

Leachate Irrigation Cell

Overview

The leachate to landfill project has been years in the making, first initiated in 2011, and largely placed on hold until 2019. The project is important for the future of our wastewater plants, to eliminate the need to treat landfill leachate. While also aligning with our wider wastewater strategy and Waste free CHB aspirations.

Background

Leachate is contaminated water that is produced in a landfill when rain water flows through the waste and collects at the base of the landfill. At Farm Road landfill the leachate flows out of the landfill through a gravity pipe from the base of the landfill. In recent years the leachate has been tankered off site for treatment at the Waipukurau Wastewater Treatment plant.

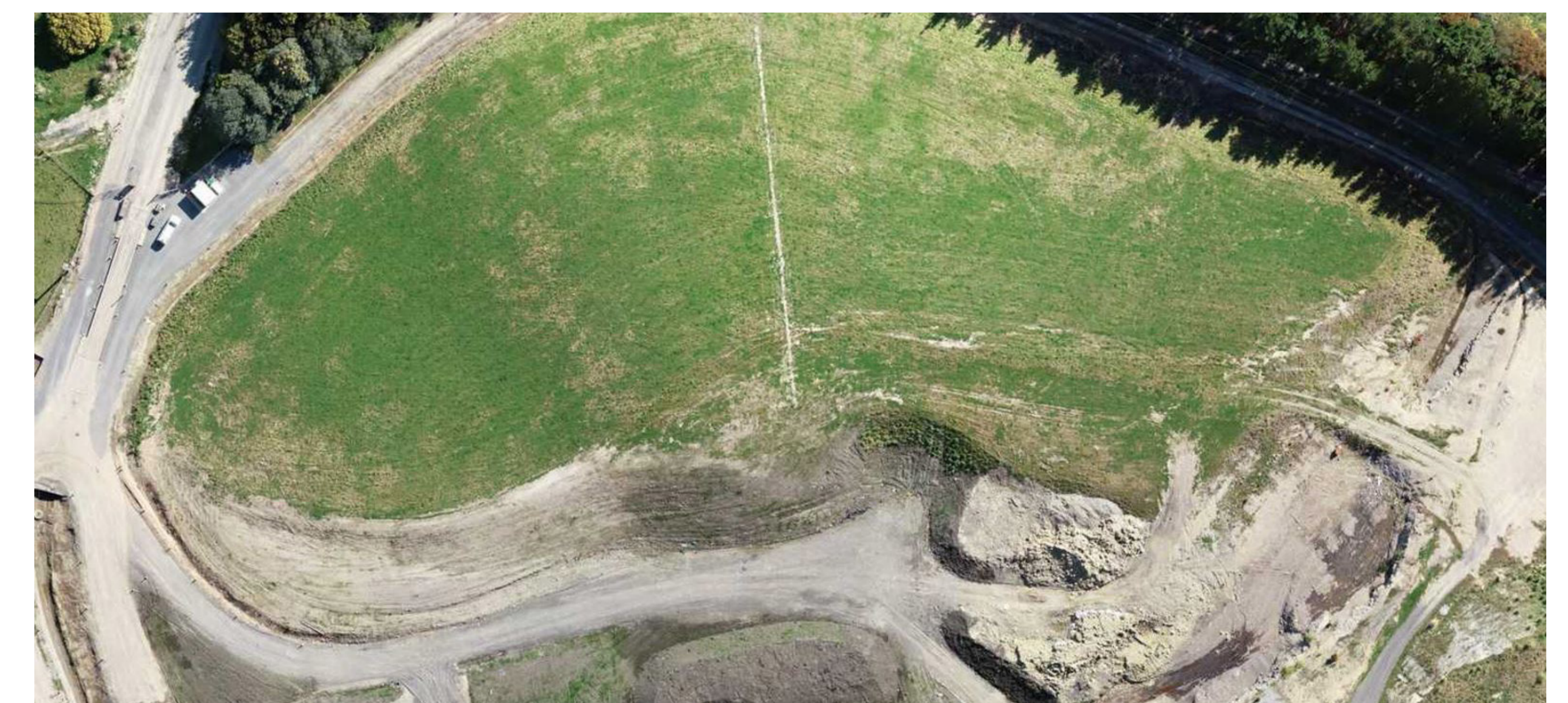
How it Works?

In 2019 a consent was obtained from HBRC to allow for the irrigation of leachate to completed areas of the landfill cap. The leachate will be

irrigated through k-line irrigation pods at low rates (up to 3 mm/d on average) to avoid any overland flow and to allow most of the irrigated water to be lost by evapotranspiration from the cap surface. Storage of leachate is provided for times when the leachate cannot be irrigated, for example overnight and during periods of wet weather. The leachate pond is lined with a HDPE geomembrane to prevent leakage of leachate. The system is designed to discharge up to 36m³ of leachate per day in its initial stages.

Irrigation is proposed to occur on capped and grassed sections of the landfill. Initially this will be on completed Phase 1 areas. The cell was phase 1 of the landfill and received waste up until 2015. As part of the project the area was increased in size from 0.9ha to 1.2ha, this was done through the use of dried biosolids from the wastewater pond in Waipawa.

We propose to irrigate 3mm / per day and then move the pod irrigators and allow a 7 day stand down period before we irrigate the same area again.



Leachate Irrigation Area

1.2ha
SIZE OF THE CLOSED
LANDFILL CELL TO IRRIGATE

93 tonnes
OF BIOSOLIDS USED

CONSTRUCTION STARTED SEP 2019
- PROJECT COMPLETED
Oct 2021

15
NUMBER OF
IRRIGATION PODS

240m
OF PRESSURIZED RISING MAIN LINE
INSTALLED TO CONVEY LEACHATE
TO IRRIGATION AREA FROM POND

55
SITE VISITS
UNDERTAKEN

AMOUNT OF TOPSOIL USED
15620m²