

# Raglan WWTP Discharge Consent Application Project

March 23 – Technical update

Whakataka te hau ki te uru,  
Whakataka te hau ki te tonga.  
Kia mākinakina ki uta,  
Kia mātaratara ki tai.  
E hī ake ana te atakura.  
He tio, he huka, he hauhū.  
Tīhei Mauri Ora!

Cease oh winds of the west  
and of the south  
Let the bracing breezes flow,  
over the land and the sea.  
Let the red-tipped dawn come  
with a sharpened edge, a touch of frost,  
a promise of a glorious day.  
Let there be Life!

Agenda		
Welcome/ Introductions/ Overview	Cllr & KM	5m
1) Treatment plant upgrade	Richard/Steve	10m
2) Inflow and Infiltration	Richard/Steve	10m
3)(a) Private Land Discharge Optioneering 3)(b) NZ examples- Rotorua Steve H		15m
4) Questions/Closing	Cllr & KM led	15m

# 1) Treatment plant upgrade

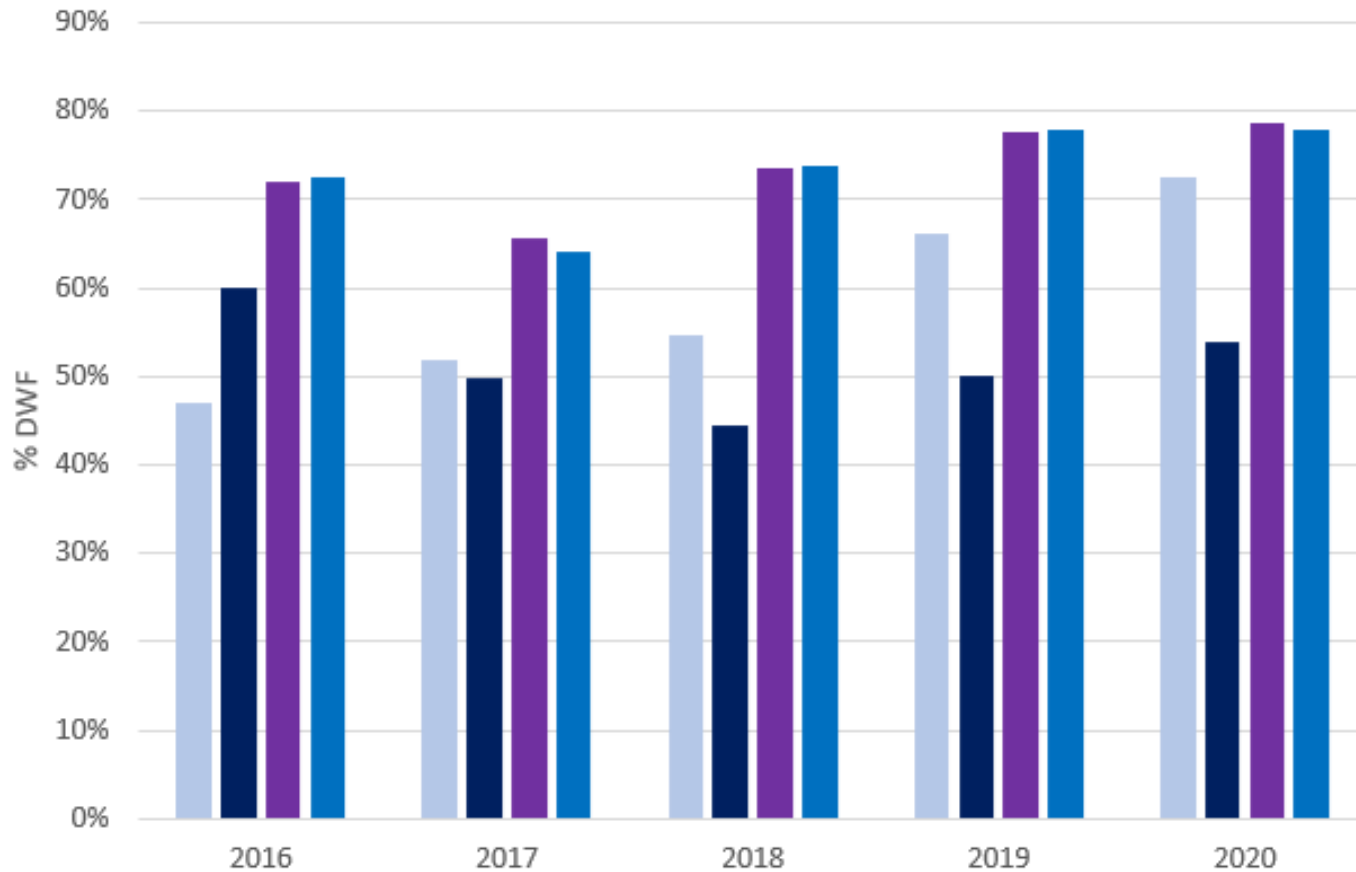
- *2022 Investigations and trial work: MBR established as superior sustainable solution*
- *Nov 22 – Water Governance Board endorsed recommendation to secure MBR as upgrade.*
- *Draft Asset Management Plan to DIA includes table data*

Raglan WWTP Upgrades	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Funding allocated (\$M)											
Required for Raglan WWTP Upgrade		0.2	6.2	12.23							18.63
Allocation for conveyance and disposal						0.5	3	17	3.87		24.37
Balance available (+/-)											43.00

- *STATUS (22/23) Basis of Design Development:*
- *a critical reference document throughout the project's lifecycle;*
- *Assures that upgrade is designed, constructed, and will be operatable in accordance best practice, while meeting applicable regulatory and industry standards.*
- *Key deliverable: permeate quality, flow (staging), storage capability*

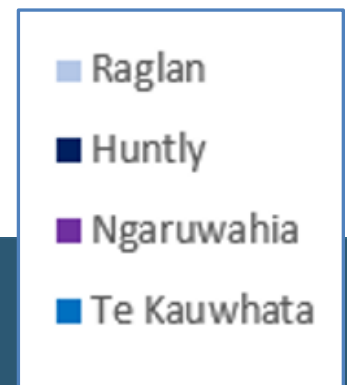
## 2) Inflow and Infiltration

Annual %DWF by Year

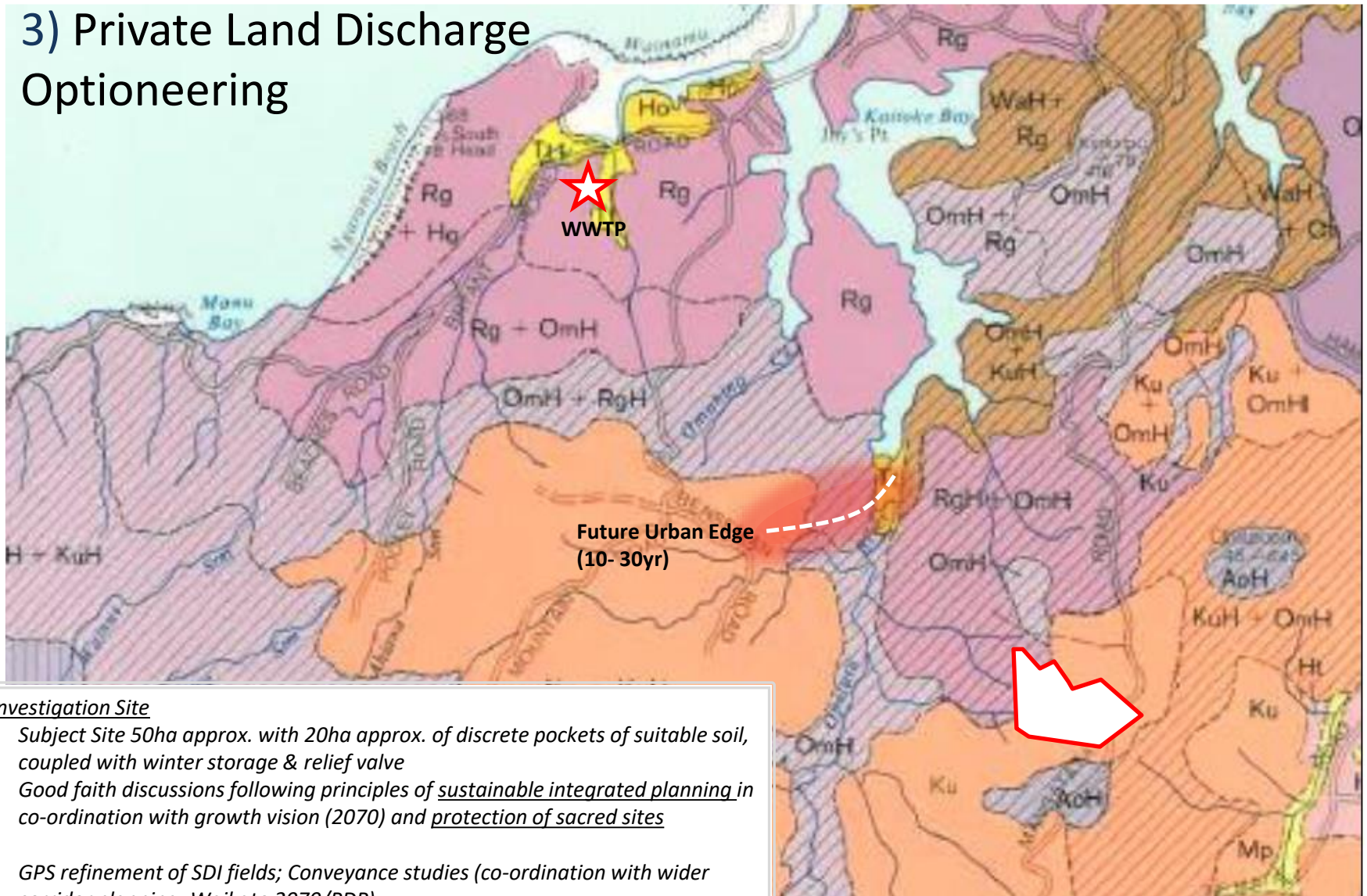


### Notes

- Trends
- District Snapshot
- Strategy status



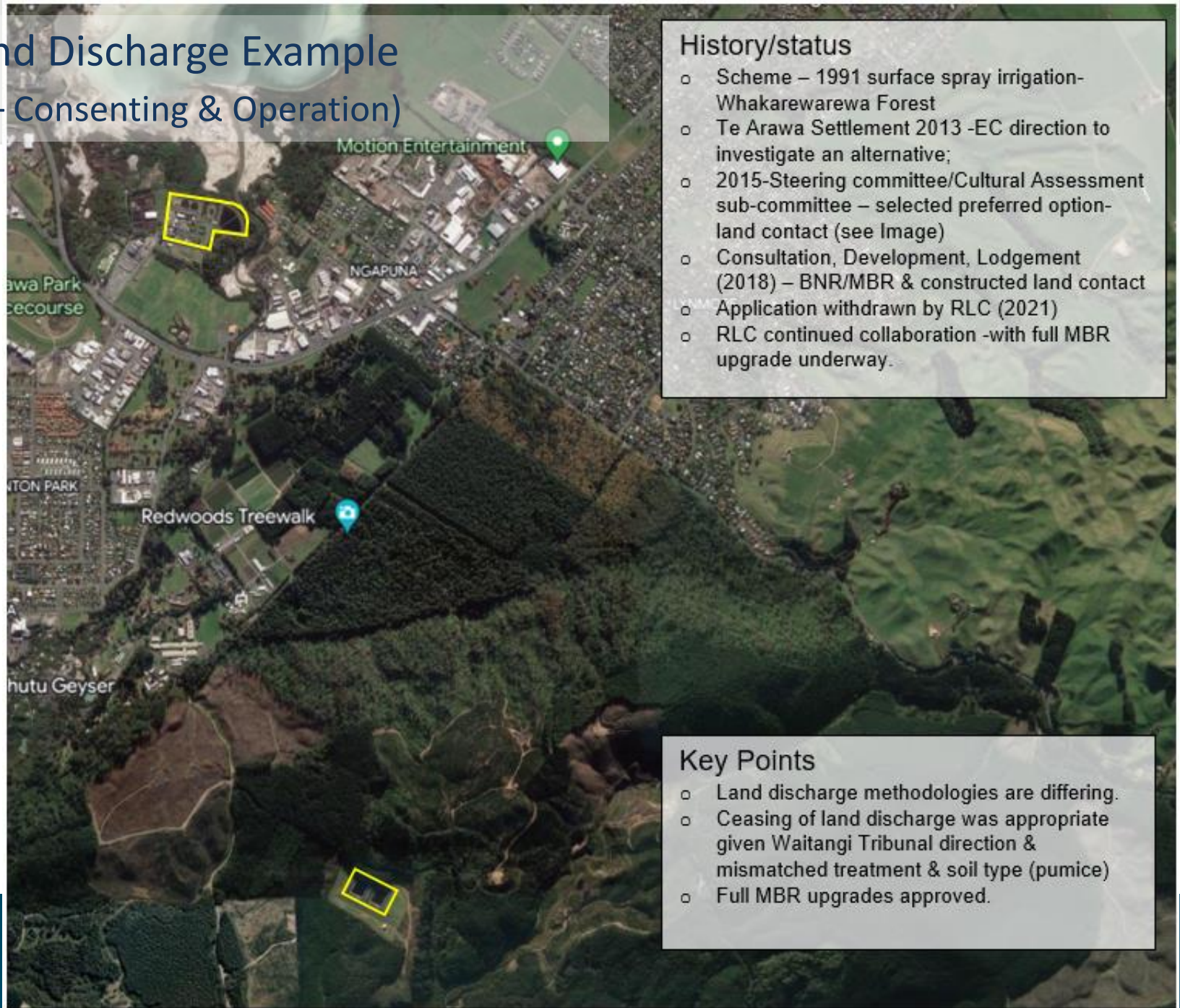
### 3) Private Land Discharge Optioneering



#### Investigation Site

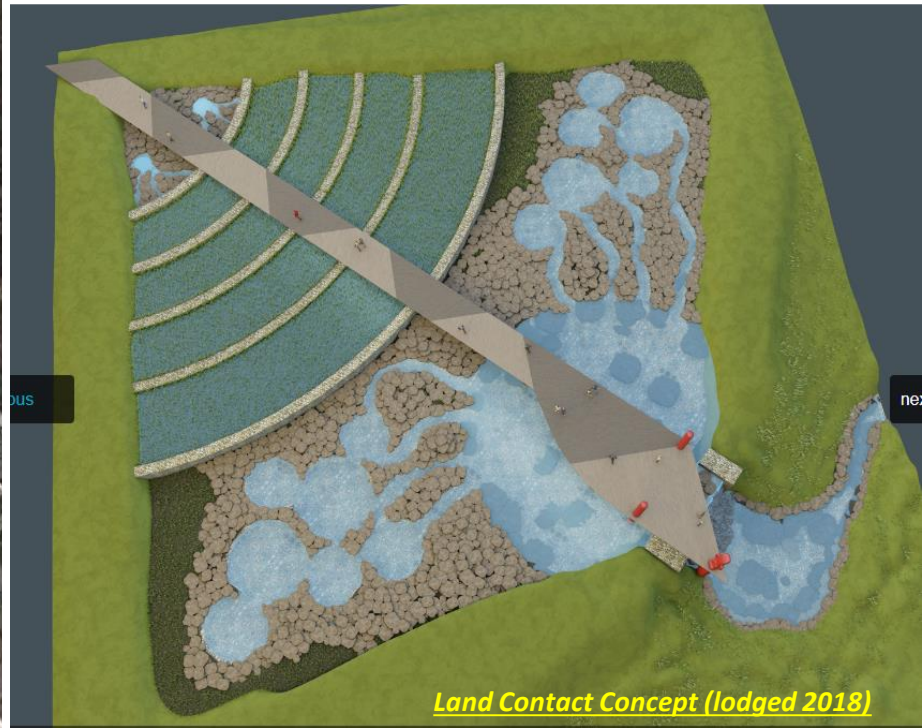
- Subject Site 50ha approx. with 20ha approx. of discrete pockets of suitable soil, coupled with winter storage & relief valve
- Good faith discussions following principles of sustainable integrated planning in co-ordination with growth vision (2070) and protection of sacred sites
- GPS refinement of SDI fields; Conveyance studies (co-ordination with wider corridor planning- Waikato 2070/PDP)
- MOU/ BPO recommendation with Governance Direction leading to:
  - Irrigation trial – drip emitter rig and soil moisture probes;
  - WetUp/HYDRUS 2D modelling

### 3) NZ Land Discharge Example (Rotorua – Consenting & Operation)



- #### History/status
- Scheme – 1991 surface spray irrigation-Whakarewarewa Forest
  - Te Arawa Settlement 2013 -EC direction to investigate an alternative;
  - 2015-Steering committee/Cultural Assessment sub-committee – selected preferred option-land contact (see Image)
  - Consultation, Development, Lodgement (2018) – BNR/MBR & constructed land contact
  - Application withdrawn by RLC (2021)
  - RLC continued collaboration -with full MBR upgrade underway.

- #### Key Points
- Land discharge methodologies are differing.
  - Ceasing of land discharge was appropriate given Waitangi Tribunal direction & mismatched treatment & soil type (pumice)
  - Full MBR upgrades approved.



**Pre-upgrade Status**

- 1. Biological Nutrient Removal (BNR)**
- 2. Membrane Bioreactor (MBR)**
- 3. Storage**

## Raglan wastewater discharge consent

What we're doing about it

Option development

Treatment and discharge options

Status of the application as at June 2021

How can I get involved?

*Status of the application as at March 2023*

<https://www.waikatodistrict.govt.nz/raglan-wastewater-discharge-consent>

### Note: Subsurface Drip Irrigation

This note provides detail on subsurface drip irrigation (SDI) methodology. SDI is a land discharge option under investigation as part of the Waikato District Council (WDC) Raglan Wastewater Treatment Plant Upgrade and Consenting Project. At the time of writing, a prime site of investigation for the project is located in the vicinity of Maungatawhiri Road (see Image 1 below).

This note seeks to clarify how SDI could be a feasible discharge solution if suitable Raglan soil is secured for the project. It focuses on how such a discharge option avoids any effect on neighbouring bores, where Image 2 demonstrates setbacks of such bores from the investigation site property boundaries.

*Prepared by Subject Matter Experts (Peter Gearing & Freeman Cook) MARCH23*

### 23/2 -Raglan WWTP consenting overview. S HOWARD

Present status - Private land discharge focus

Methodology, treatment, and examples

- After a robust multi-property investigative exercise, a discussion is advancing with the possibility of securing ideal land as the primary site of land discharge for a 35-year duration. Theoretical securement of a Mangatawhiri Road fronting property has the potential to provide for an annual land discharge solution (with a relief valve), given that soils may theoretically take winter flow when balanced with onsite storage at the Raglan Treatment Plant. This is enabled by the properties deep loamy soils, which can be found at discrete locations of flatter areas making up approximately 20ha.
- The method of theoretical discharge would be by subsurface drip irrigation (SDI) where the images below present Pauanui examples of SDI fields. These are installed 15-25cm beneath the ground and are located within the town's central public park, a portion of the road median strip, and the town airfield. The golf course can receive treated wastewater for surface irrigation in Summer if it wishes.

*Prepared by Stephen Howard (consenting scenarios) FEB23*

## 4) Questions & Closing