

Takapau Wastewater Project Update

24th March 2021



**#the BIG.
Waste Water Story**



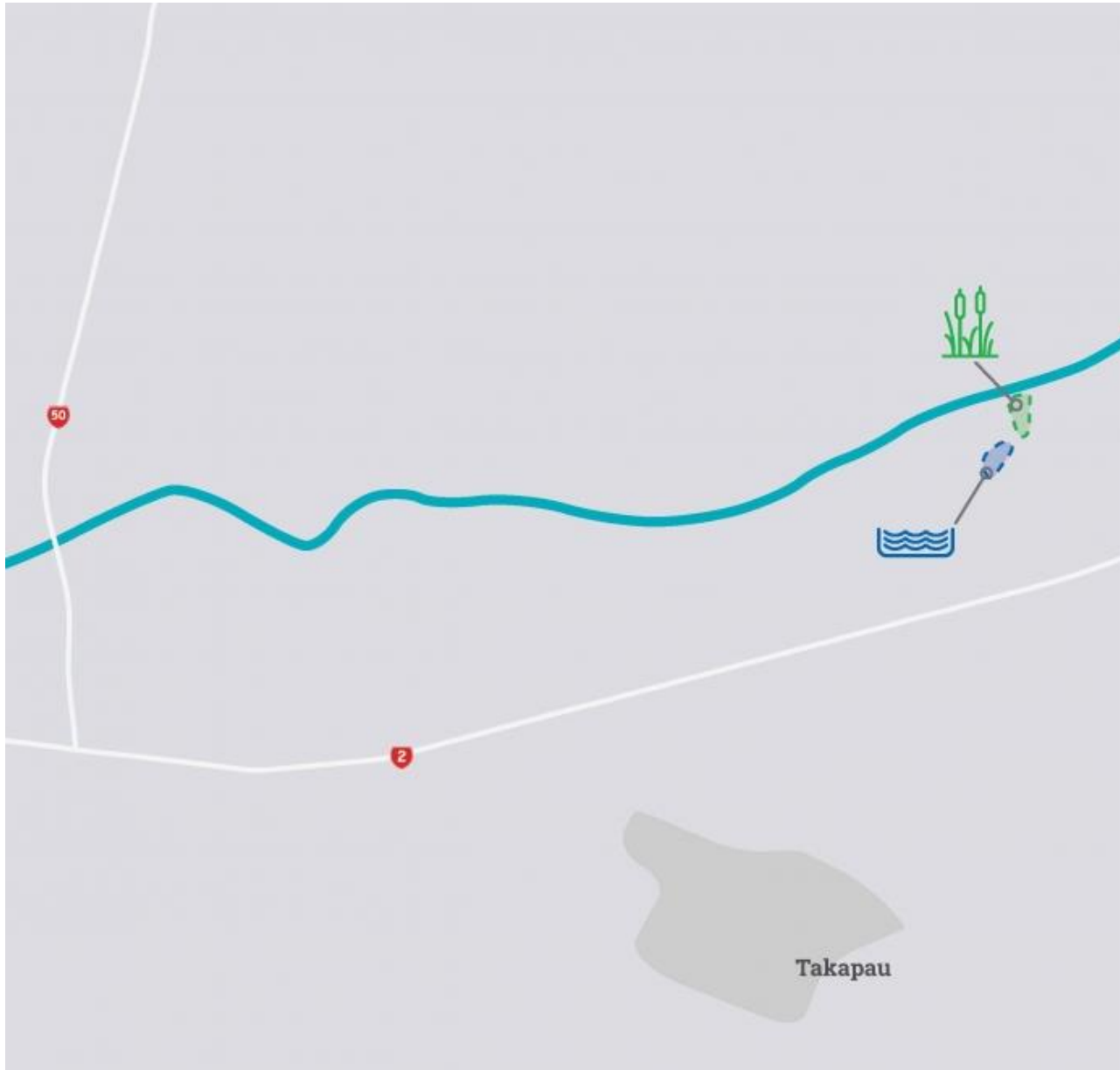
System Summary

	Consent number	Granted	Last date for lodgment*	Consent expires	Discharge into
Takapau	DP180115W & DP180124A	Extended in 2018	30 April 2021	30 October 2021	Wetland into Makaretu River



Average flow
200 cu m3
per day



Status Quo



Takapau Existing

-  Treatment: Existing pond
-  Discharge: To Makaretu River

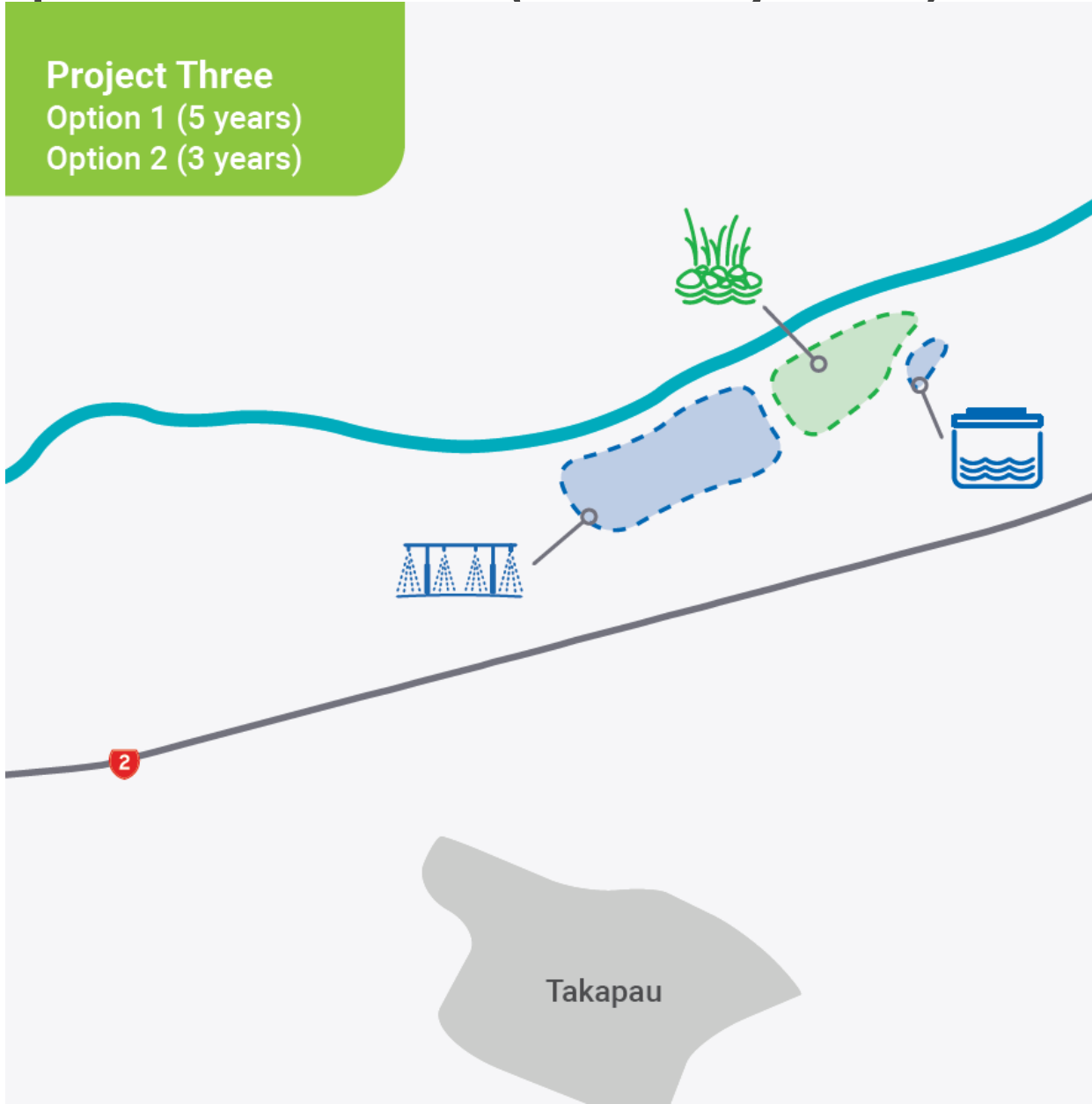
Key Information

-  Existing wetland
-  Existing pond
-  River
-  State Highway




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Waste Water Story

Option 1 and 2 (5 or 3 years)





Project Three
Option 1 (5 years)
Option 2 (3 years)



Takapau

-  **Treatment:**
Existing pond with minor improvements
-  **Discharge:**
High rate dispersal
-  **Discharge:**
Low rate land treatment

Key Information



-  High rate dispersal
-  Low rate land treatment
-  River
-  State Highway

Option 3 (Do Minimum)





Project Three Option 3 (Do Minimum)



Takapau

-  Treatment:
Existing pond with minor improvements
-  Discharge:
Low rate land (year round)

Key Information

-  Low rate land treatment
-  Upgraded pond
-  River
-  State Highway

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Waste Water Story



The Staging

BPO (Option 1) Summary			
Stage	Asset	Date range	Budget
1	Build Pipeline to Land Irrigation site	2020-2022	1.3m
	Build phase 1 Land Irrigation site for dry weather flows		
	Minor Treatment Plant Improvements		
2022 Milestone	Irrigate to land in the dry low flow river months by 2022		
2	Build wet weather storage	2024-2025	\$1.7m
	Increase land irrigation size – Phase 2		
2025 Milestone	Irrigate all flows to land by 2025		

Key Stages

The proposed change to the discharge system is to progressively reduce the discharge to the existing “wetland”, eventually discharging all but exceptional flows to farmland at a rate which provides irrigation benefit, some fertilisation and avoids excessive drainage. The key stages of the works are proposed as:

- Minor treatment upgrades to pond system;
- Re-engineering or replacement of the wetland discharge to ensure sufficient retention time and ground contact is achieved for renovation of the discharge before it enters the Makaretu River;
- Establishment of around 30 ha of irrigation on the property described in LEI, 2020 site investigation report. This may occur progressively with a minimum area of 5 ha, increasing to at least 20 ha to a maximum of 30 ha;
- Construction of storage for treated wastewater to enable wastewater to be stored during wet soil conditions instead of being discharged to the wetland (or high rate land passage system). The amount of storage available may increase over time from a minimum of 2,000 m₃ up to 35,000 m₃.

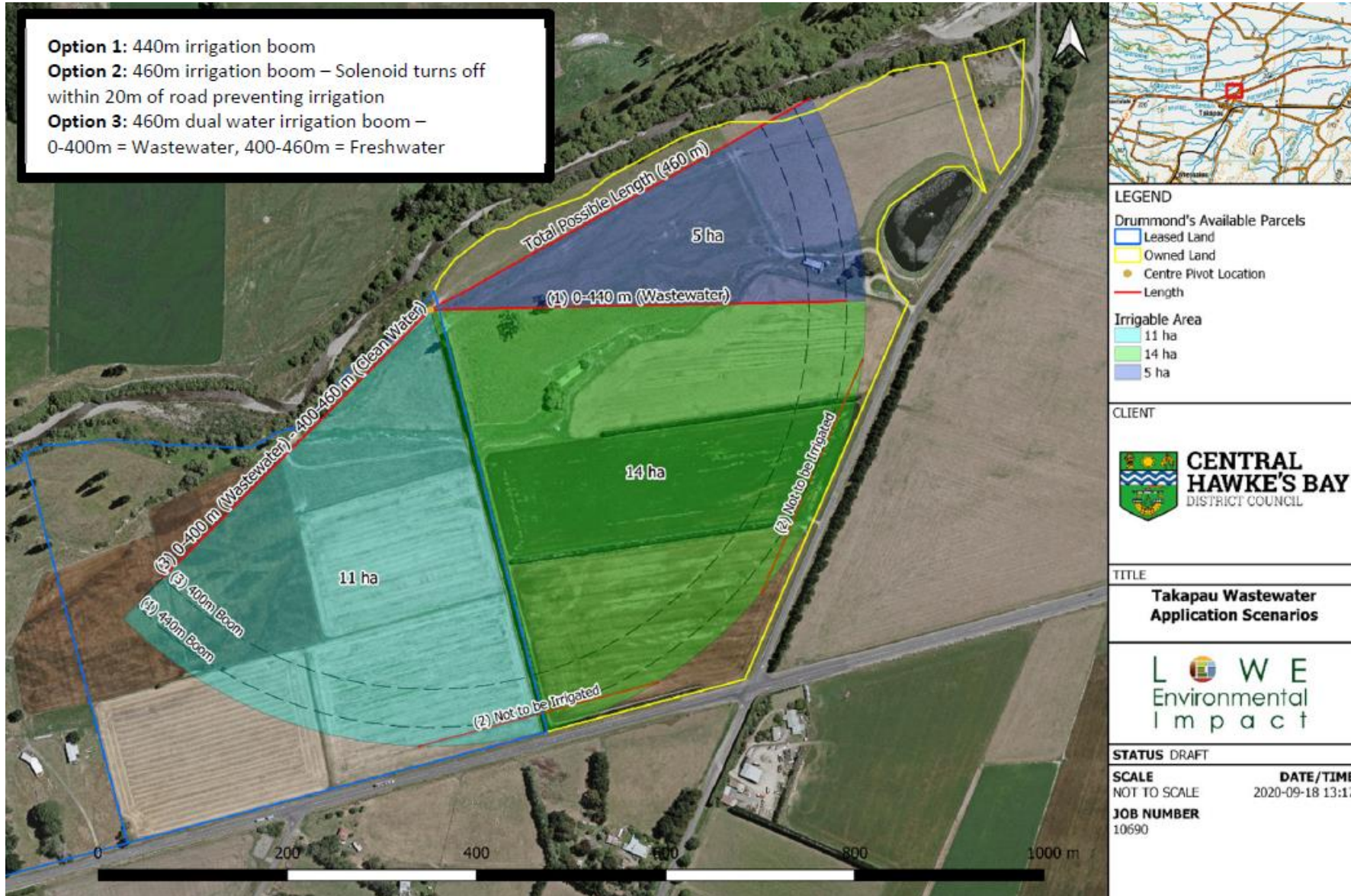
Discharge component		Stage			
		At commencement	Irrigation and initial storage	Additional storage	Additional storage to manage future flows
Average annual volume (m ³)		65,700	65,700	65,700	115,700
To Wetland (m ³)		65,700	45,700	5,700	Up to 5,000
To Land	Area (ha)	-	5	20	30
	Volume (m ³)	-	20,000		At least 110,000
Storage available (m ³)		-	2,000	17,000	35,000

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Waste Water Story



Irrigation layout

- Option 1:** 440m irrigation boom
- Option 2:** 460m irrigation boom – Solenoid turns off within 20m of road preventing irrigation
- Option 3:** 460m dual water irrigation boom – 0-400m = Wastewater, 400-460m = Freshwater



LEGEND

Drummond's Available Parcels

- Leased Land
- Owned Land
- Centre Pivot Location
- Length

Irrigable Area

- 11 ha
- 14 ha
- 5 ha

CLIENT



CENTRAL HAWKE'S BAY
DISTRICT COUNCIL

TITLE

Takapau Wastewater Application Scenarios



L W E
Environmental Impact

STATUS DRAFT

SCALE NOT TO SCALE DATE/TIME 2020-09-18 13:17

JOB NUMBER 10690

Next Steps....

- Lodge consent by end of April 2021
- Design and plan storage and irrigation
- Implement the treatment improvements and solution