

Project Baseline Wellington Kelp Survey Report for Kelp Survey 28 May 2024

Kau Bay Kelp Observation – D19 (28 May 2024)

Reference: KB D19

Date: **28 May 2024**

Time: 2.30-3.20am

Route: From Kau Bay into Mahanga Bay

Surface snorkel observation

Snorkeler: Nicole Miller

Method: GPS tracking with Garmin etrex 22x in waterproof housing.

Visibility: 2m Kau Bay Side – 1m Mahanga Bay side

Surface Temp: 13.0 °C (Sony TG-6 camera sensor);

Tide: No wind, a bit of the southerly swell pushing into the harbour (low tide 2.38am, 0.7, Linz)

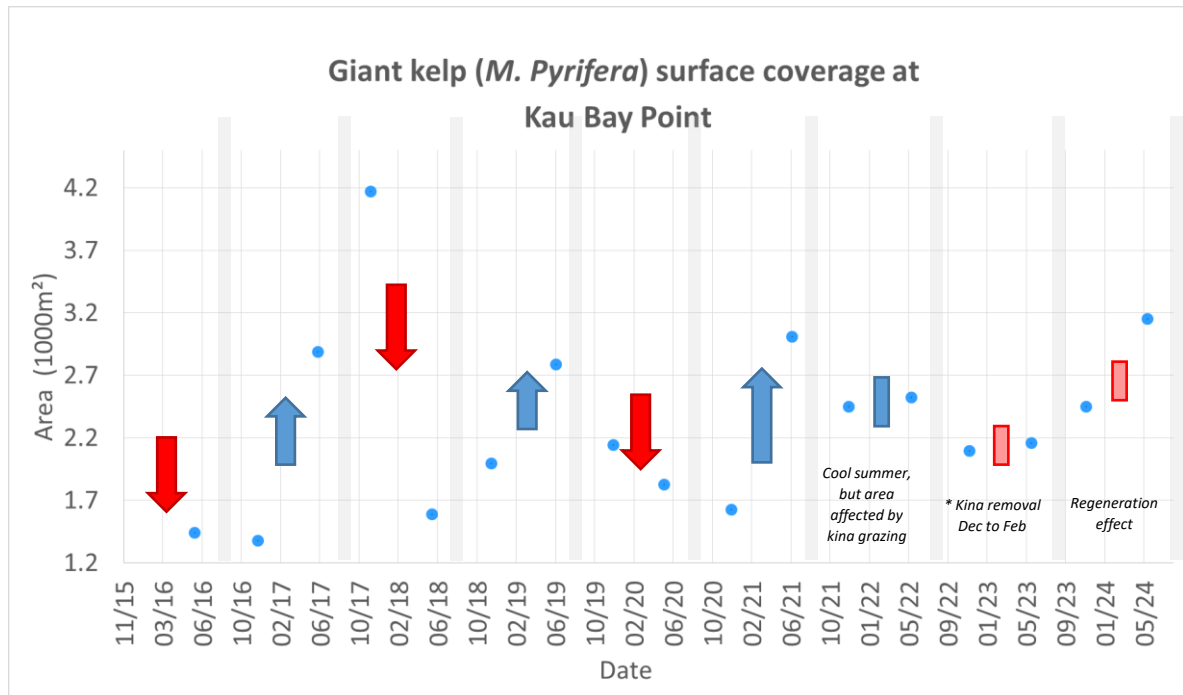
Kelp Bed Size: **area covered 3,150m²**



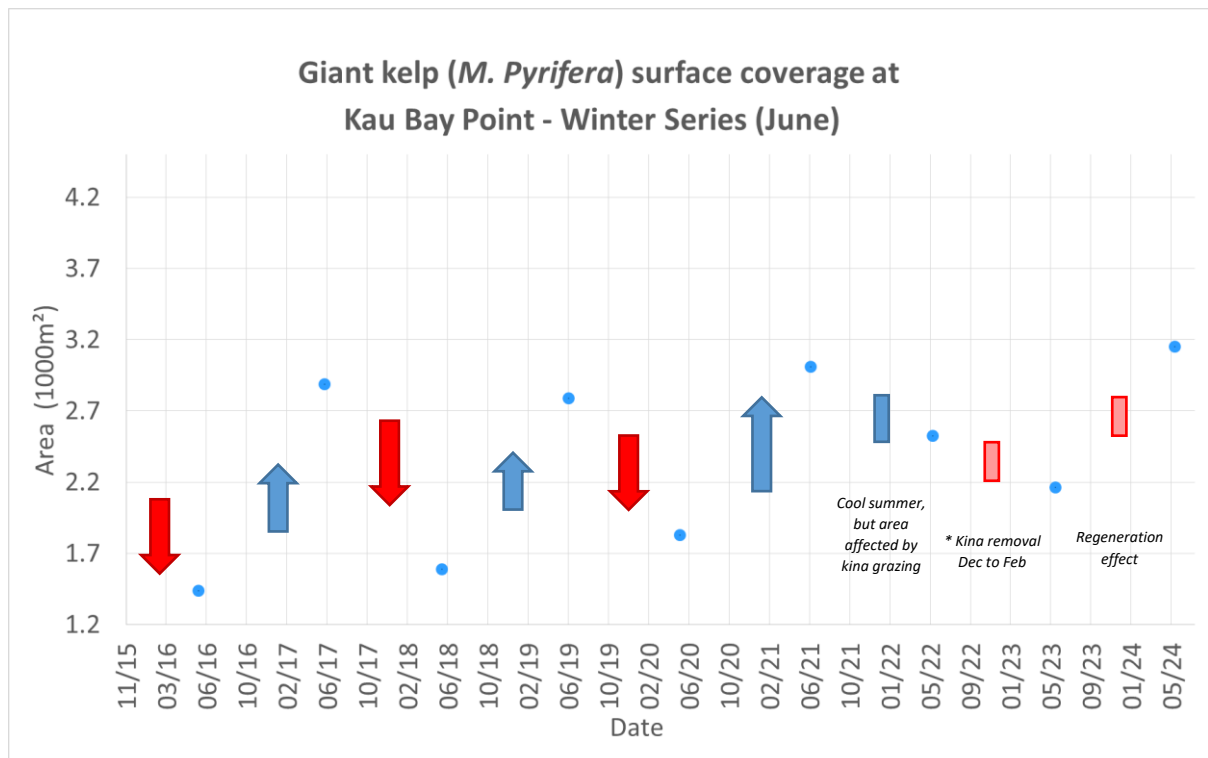
June 2023 (white, 2,161m²) & **May 2024 (red, 3,150m²)**, Marker 2 and GPS tracked transect 3 May 2024.



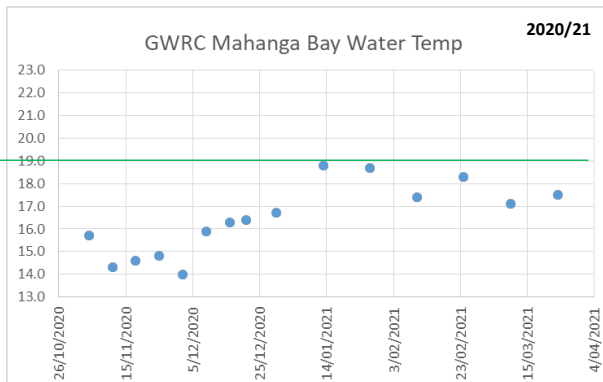
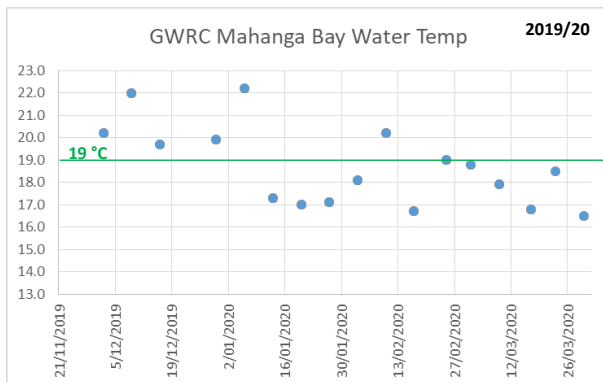
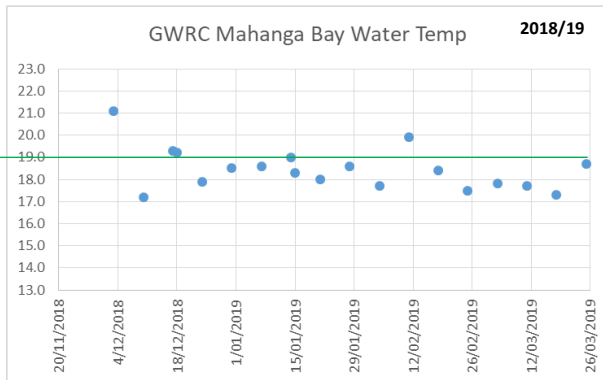
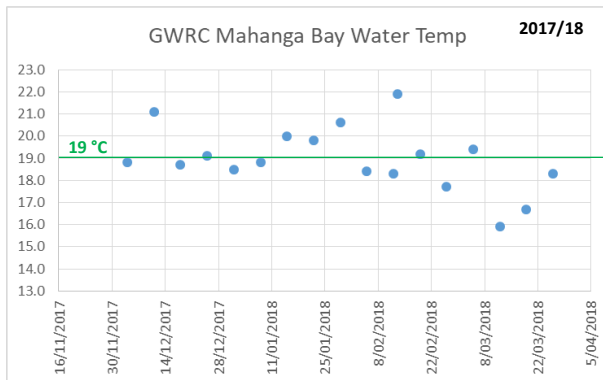
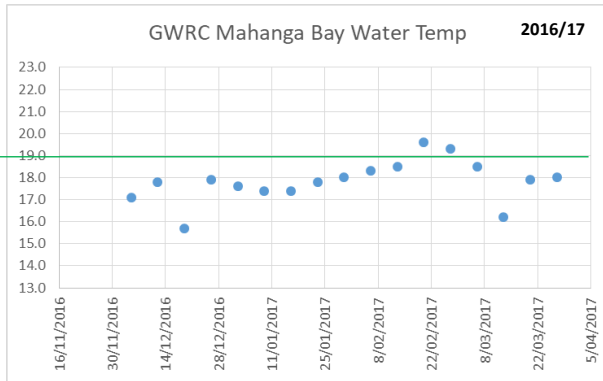
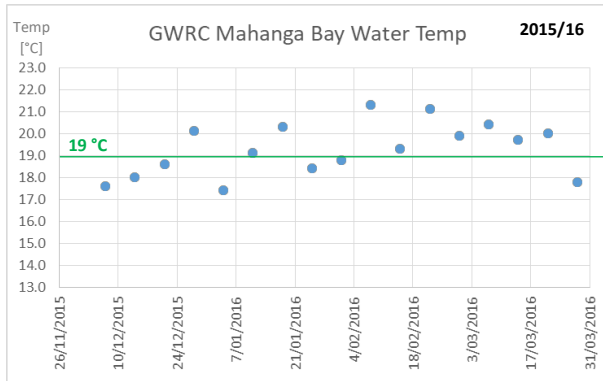
Nov 2023 (purple, 2,448m²) & **May 2024 (red, 3,150m²)**



*Kina removal event Dec 2022 to Feb 2023, regeneration visible close to existing kelp forest in May 2023, for regeneration progress as of May 2024 visit www.kinaowhanganuiatara.nz.

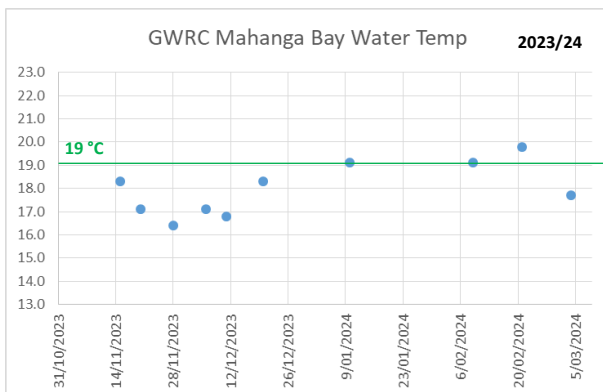
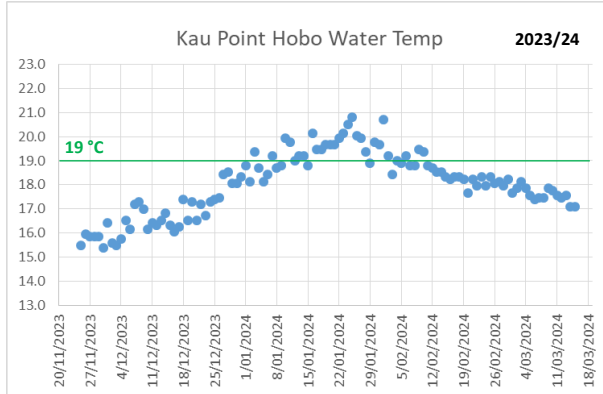
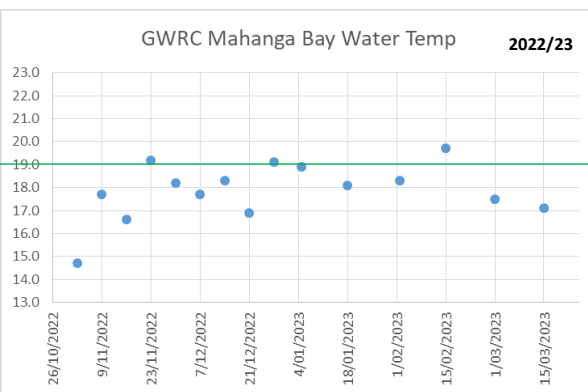
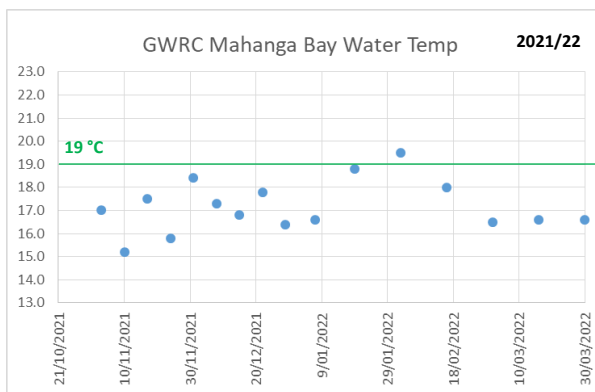
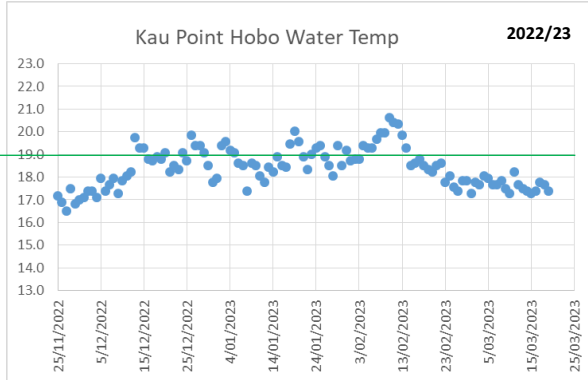
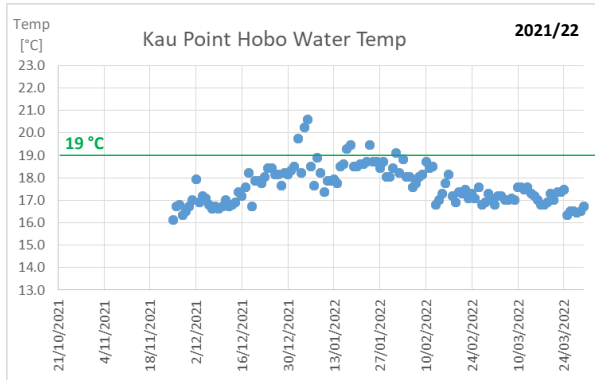


*Kina removal event Dec 2022 to Feb 2023, regeneration visible close to existing kelp forest in May 2023, for regeneration progress as of May 2024 visit www.kinaowhanganuiatara.nz.



Season	Date	Water Temp > 19.5 °C
2015/16	8/02/2016	21.3
2016/17	20/02/2017	19.6
2017/18	13/02/2018	21.9
2018/19	3/12/2018	21.1
	11/02/2019	19.9
2019/20	2/12/2019	20.2
	9/12/2019	22.0
	16/12/2019	19.7
	30/12/2019	19.9
	6/01/2020	22.2
	10/02/2020	20.2
2020/21	N/A*	

* no measurements > 19.0 °C



		> 19.5 °C			> 19.5 °C
		19.5			19.5
		19.1-19.4			19.1-19.4
Hobo Data - Nov 2022 to Mar 2023			Hobo Data - Nov 2023 to Mar 2024		
Hobo Data	Date	Max Daily Temp (d C)	Hobo Data	Date	Max Daily Temp (d C)
Dec 2023	13/12/2022	19.8	Jan 2024	3/01/2024	19.4
	14/12/2022	19.3		7/01/2024	19.2
	15/12/2022	19.3		10/01/2024	19.9
	20/12/2022	19.1		11/01/2024	19.8
	24/12/2022	19.1		13/01/2024	19.2
	26/12/2022	19.9		14/01/2024	19.2
	27/12/2022	19.4		16/01/2024	20.1
	28/12/2022	19.4		17/01/2024	19.5
	29/12/2022	19.1		18/01/2024	19.5
Jan 2023	2/01/2023	19.4		19/01/2024	19.7
	3/01/2023	19.6		20/01/2024	19.7
	4/01/2023	19.2		21/01/2024	19.7
	5/01/2023	19.1		22/01/2024	19.9
	18/01/2023	19.5		23/01/2024	20.1
	19/01/2023	20.0		24/01/2024	20.5
	20/01/2023	19.6		25/01/2024	20.8
	24/01/2023	19.3		26/01/2024	20.0
	25/01/2023	19.4		27/01/2024	19.9
	29/01/2023	19.4		28/01/2024	19.4
	31/01/2023	19.2		30/01/2024	19.8
Feb 2023	4/02/2023	19.4		31/01/2024	19.7
	5/02/2023	19.3	Feb 2024	1/02/2024	20.7
	6/02/2023	19.3		2/02/2024	19.2
	7/02/2023	19.7		4/02/2024	19.0
	8/02/2023	19.9		6/02/2024	19.2
	9/02/2023	19.9		9/02/2024	19.5
	10/02/2023	20.6		10/02/2024	19.4
	11/02/2023	20.4			
	12/02/2023	20.3			
	13/02/2023	19.9			
	14/02/2023	19.3			
		> 19.5 °C			> 19.5 °C
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	19/01/2023	20.0		19/01/2024	19.7
	20/01/2023	19.6		20/01/2024	19.7
Feb 2023	7/02/2023	19.7		21/01/2024	19.7
	8/02/2023	19.9		22/01/2024	19.9
	9/02/2023	19.9		23/01/2024	20.1
	10/02/2023	20.6		24/01/2024	20.5
	11/02/2023	20.4		25/01/2024	20.8
	12/02/2023	20.3		26/01/2024	20.0
	13/02/2023	19.9		27/01/2024	19.9
				30/01/2024	19.8
				31/01/2024	19.7
			Feb 2024	1/02/2024	20.7

Season	Date	Water Temp ≥ 19.5 °C
2021/22	2/01/2022	19.8
HOBO	4/01/2022	20.2
	5/01/2022	20.6
	18/01/2022	19.5
	24/01/2022	19.5

2024-May-28 Survey Photos

