

Attachment A – Tables, Figures and References

Tables

Table 1: General parameters of the proposed physical and biological trials

Prototyping	Description
Phase 1: Prototype Assessment Small scale <u>physical</u> testing (100–150m ³) WITHOUT FISH	Currently on-going and located at three, progressively more exposed mooring sites in Tasman Bay. An initial physical trial is also proposed to be located within the Wakatū site (see Figure 4 below), exact location within the farm is to be confirmed. Physical trials will last for up to 3 months.
Phase 2: Prototype Assessment Small scale <u>biological</u> testing (100–150 m ³) WITH FISH (Snapper and Salmon)	Proposed to be located within the Wakatū site, exact location within the farm is to be confirmed. There will be up to 6 trials (3 per species), with each being up to 6-8 weeks in duration.
Phase 3: Prototype Assessment Large scale <u>physical</u> testing (1,000–1,500m ³) WITHOUT FISH	Proposed to be located within the Wakatū site, exact location within the farm is to be confirmed. Physical trials will last for up to 3 months.
Phase 4: Demonstration Large scale <u>biological</u> testing (1,000–1,500 m ³) WITH FISH (Snapper and Salmon)	Proposed to be located within the Wakatū site, exact location within the farm is to be confirmed. There will be 2 trials (1 per fish species), with each being up to 6 months in duration.

Table 2: Comparison of the production levels in the proposed trials, at max. density of 15 kg/m³ requested for consent, with the smallest NZ salmon farm. Values in brackets are the likely values for actual trials.

	Physical volume (m ³)	Fish biomass (kg)	Food (kg/year)	Waste (kg/year)
Phase 2	100-150	Up to 1,950 (640)	Up to 4,000 (1,500)	Up to 800 (300)
Phase 4	1,000-1,200	Up to 15,000 (3,500)	Up to 40,000 (7,000)	Up to 8,000 (1,400)
Beyond Phase 4	Up to 1,500	Up to 22,500	Up to 60,000	Up to 12,000
Smallest NZ salmon farm	22,000	200,000	400,000	60,000

Table 3: New and secured, direct and indirect FTEs associated with PFR's current and planned Open Ocean Aquaculture research investment

FTE Direct (D) Indirect (I)	Category: New (N) Safeguarded (S)	Number	Details
D	N	6	New PFR positions recruited in last 24 months
D	N	42	New PFR positions identified in workforce plan
D	S	60	Current FTE within Seafood Technologies portfolio
Total direct		108	
I	S	451	Total indirect jobs supported by 108 science jobs: 153 supplier and 298 induced jobs ¹ .
I	S	60	Total indirect jobs supported from c\$6M of capital investment ¹
Total indirect		511	
Total FTE (D+I)		619	

Figures

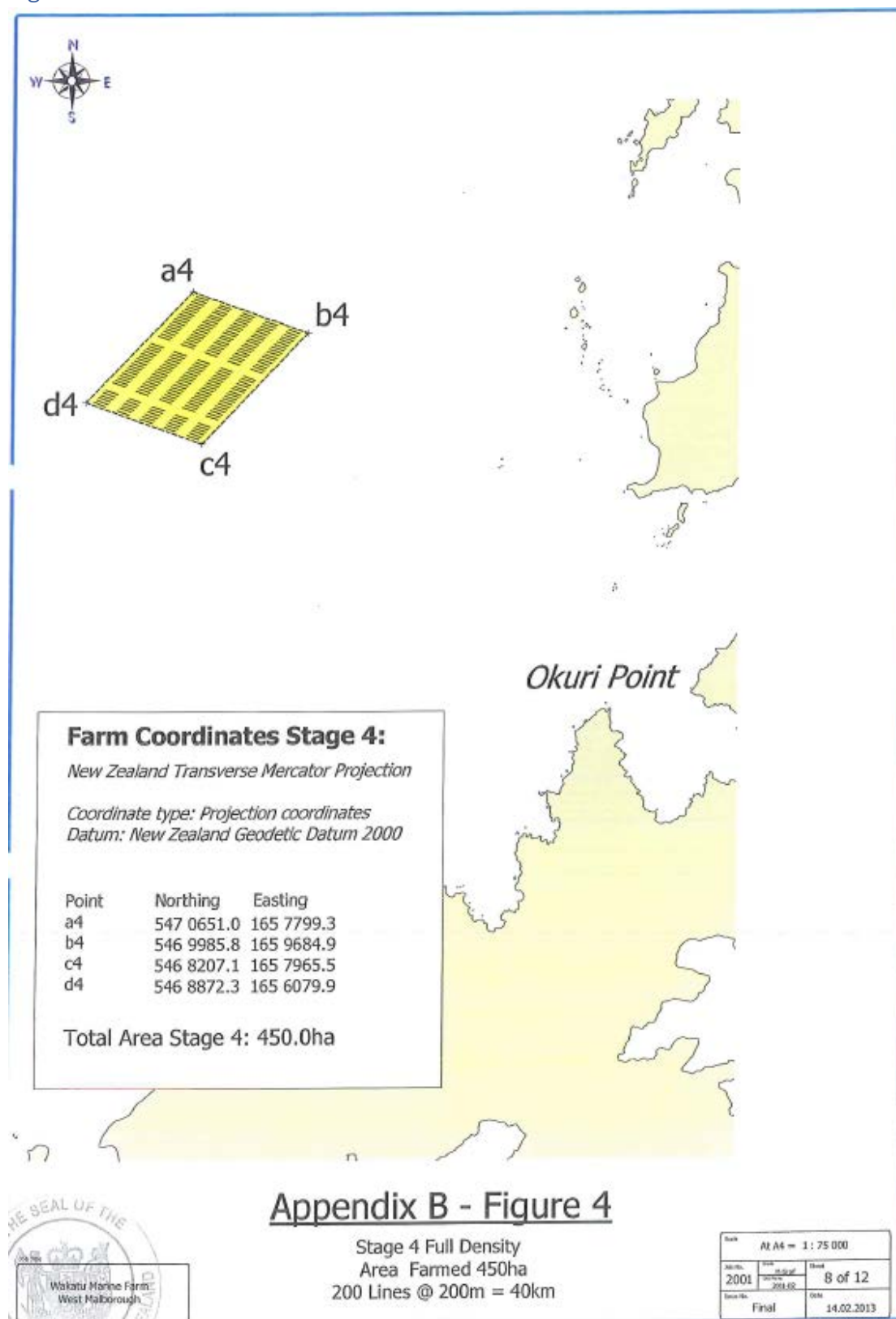


Figure 1: Location of existing marine farm site within which the proposed trials would take place. D'Urville Island is due east of the farm site.

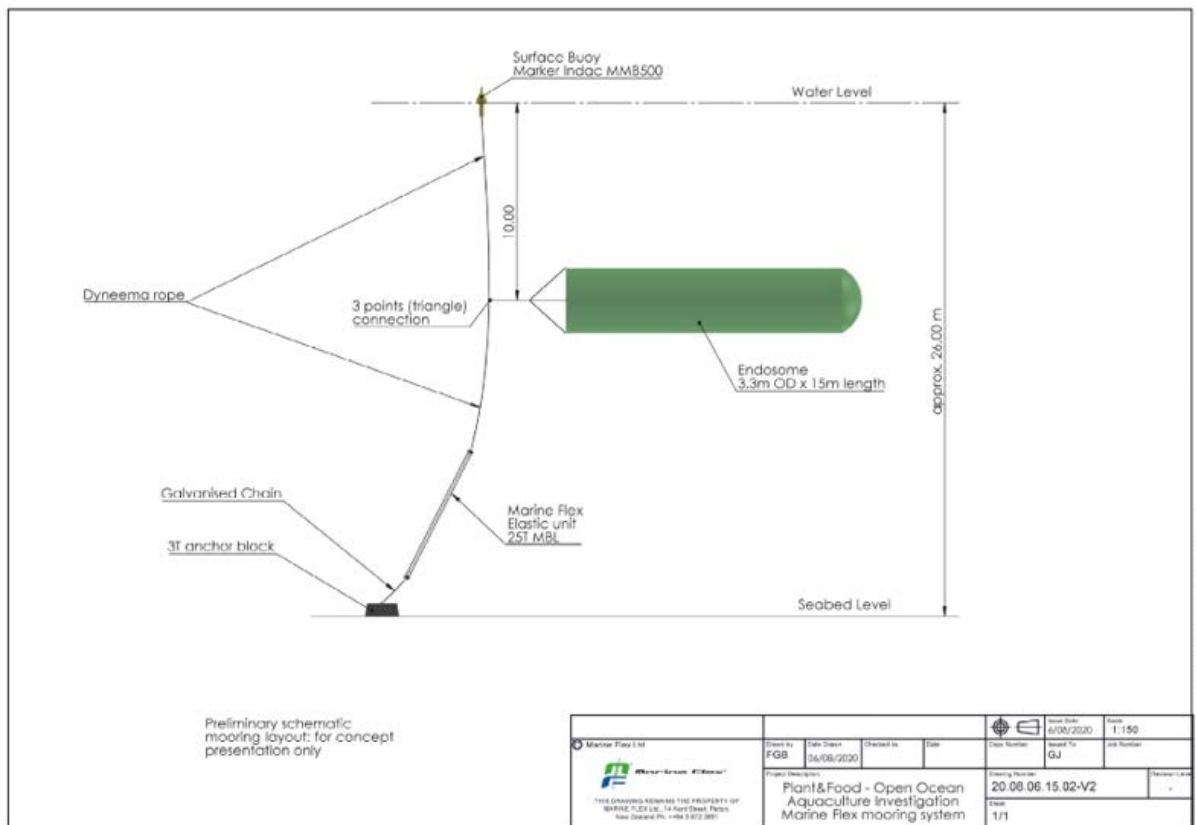


Figure 1. Fish enclosure and mooring configuration for Phase 1 (drawings for Phases 2-4 are yet to be prepared)
 Note: Phase 1 does not involve the feeding buoy that will be required for phases 2 and 4, or the multi-point mooring system.

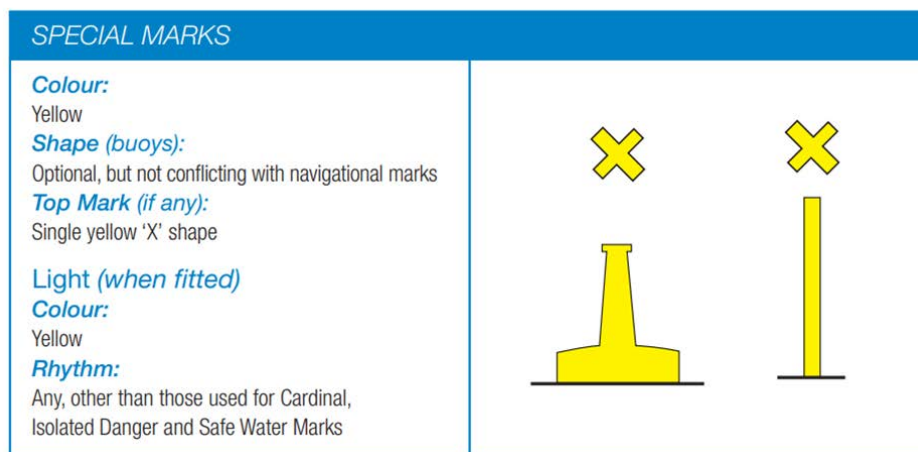


Figure 2: Special Mark diagrams courtesy of Maritime New Zealand's guide to NZ's System of Buoys and Beacons. ISBN 0-478-18815-3.



Figure 3: Examples of two large special marks appropriate for the permanent navigational marking of the mooring and associated structures. Note, radar reflectors have been added to the buoys, while lights have been removed for storage purposes

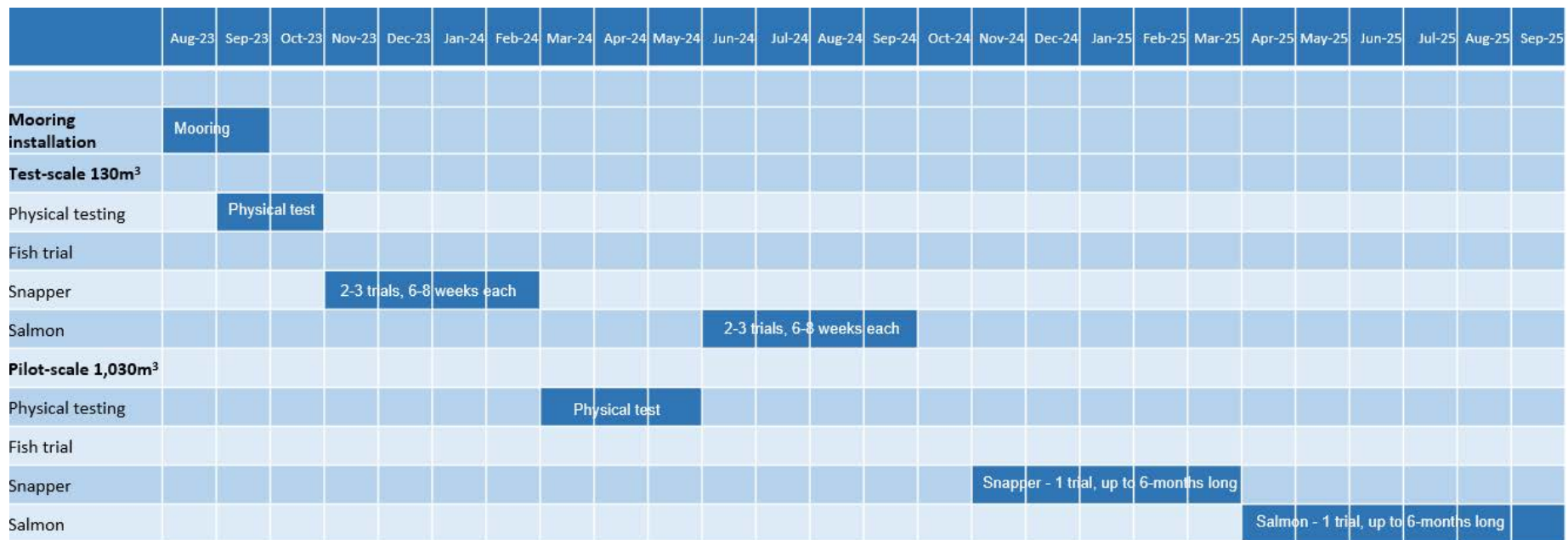


Figure 4: Gantt chart detailing start of activity at consented site, as well as research trials planned within the Re-imagining Aquaculture programme.

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