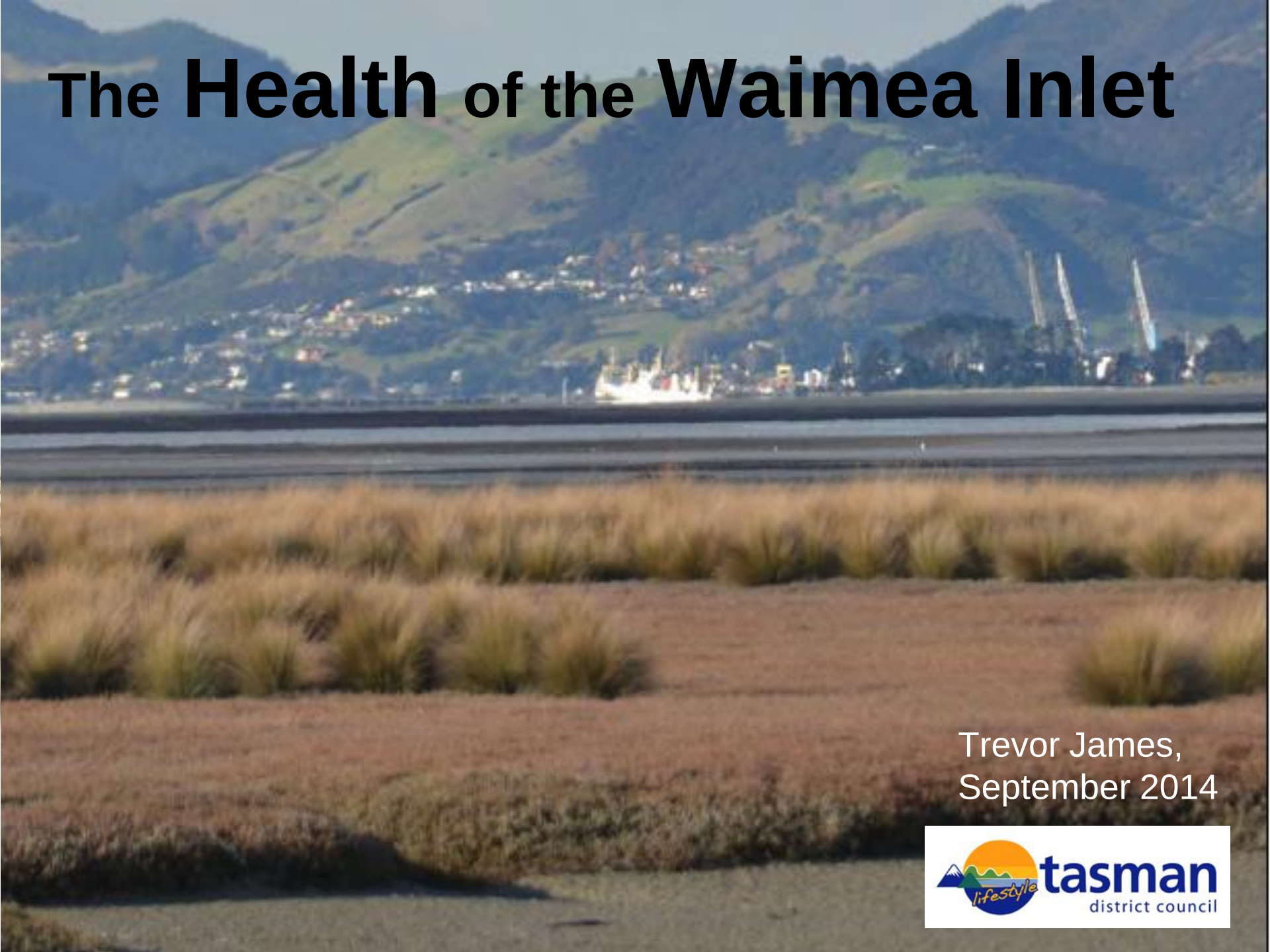
The Health of the Waimea Inlet



Trevor James,
September 2014

tasman lifestyle district council

Broad-scale Mapping

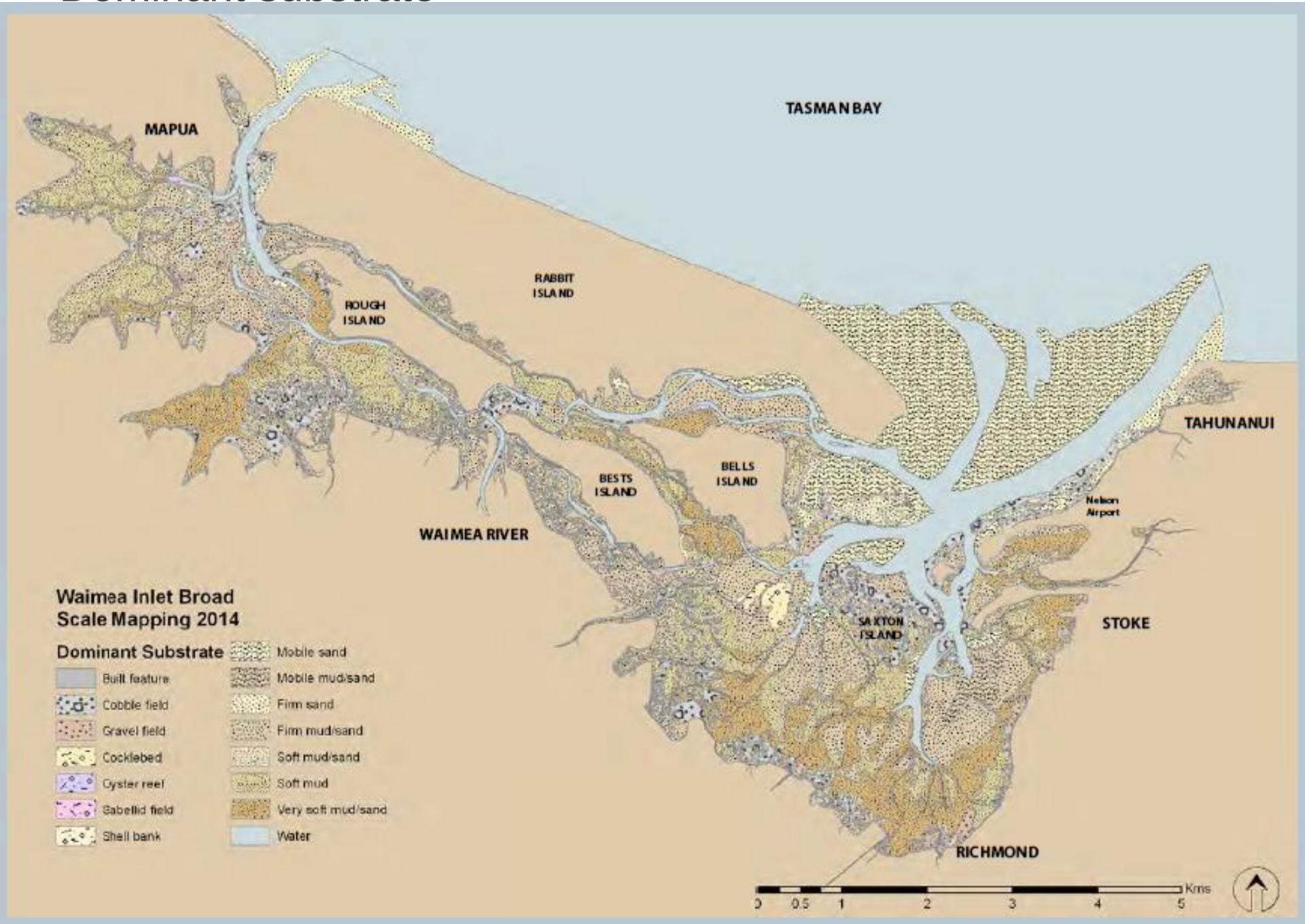
RISK INDICATOR RATINGS (indicate risk of adverse ecological impacts)

Major Issue	Indicator	Baseline *estimated value		2014	Change from Baseline
Sediment	Soft mud (% cover)	1990	VERY HIGH	VERY HIGH	Increase in very soft mud
Eutrophi-cation	Macroalgal Growth (OMBT)	1990	LOW*	MODERATE	Increase in nuisance macroalgae
	Gross Eutrophic Conditions (ha)	1990	MODERATE	HIGH	Increase in gross eutrophic conditions
Habitat Modifica-tion	Seagrass Coefficient (SC)	1990	HIGH*	VERY HIGH	Decrease in seagrass
	Saltmarsh (% cover)	1946	LOW	MODERATE	Decrease in saltmarsh
	200m Vegetated Terrestrial Margin	1999	HIGH	HIGH	No significant change

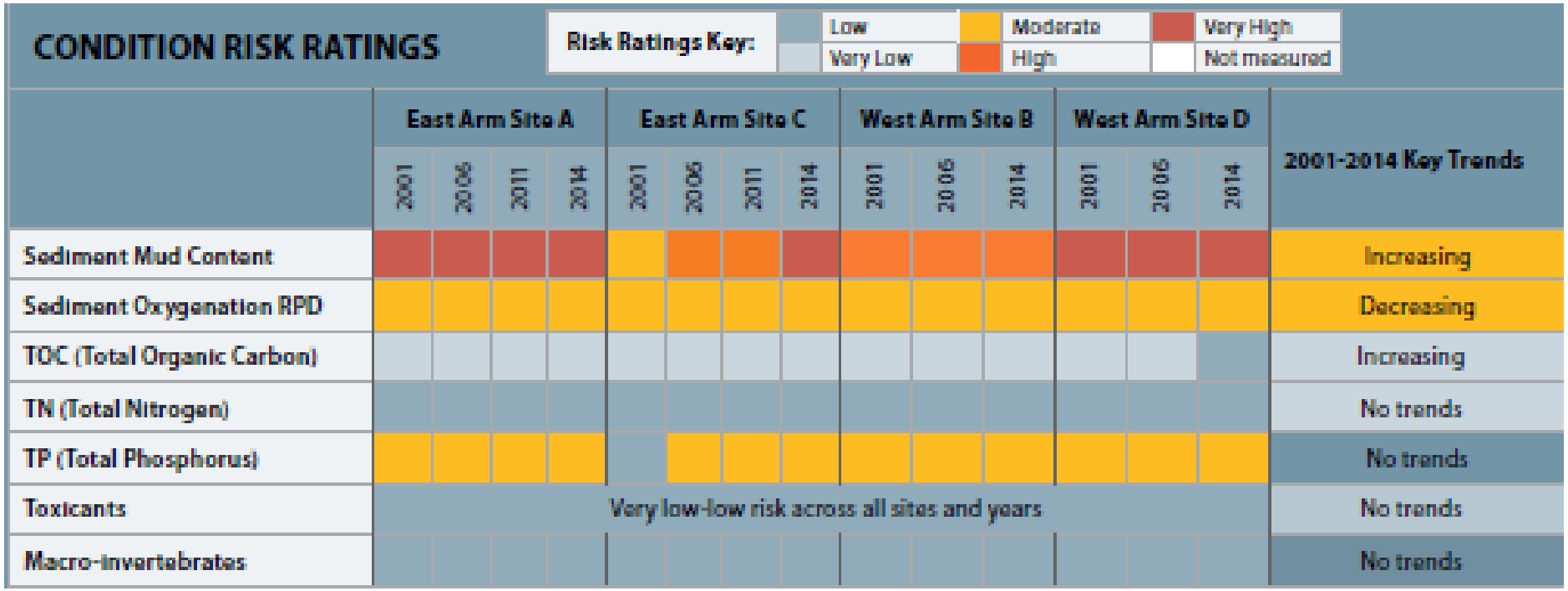
"A community is more sustainable when all the threads pull together as one."

tasman lifestyle district council

Dominant substrate



Fine Scale Monitoring Results



"A community is more sustainable when all the threads pull together as one."

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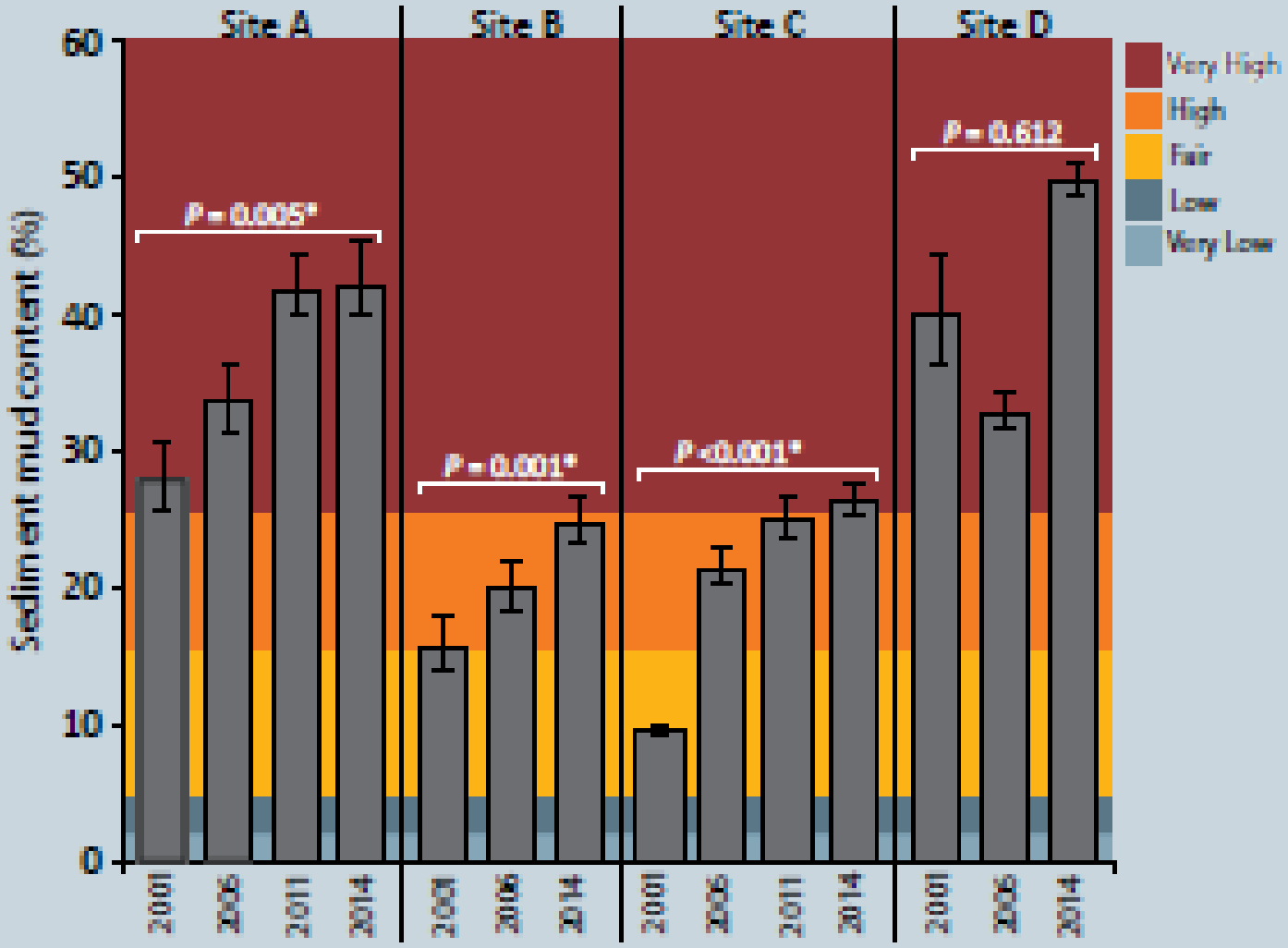

Figure 2. Mean sediment mud content (±SE, n=3), Waimea Inlet, 2001-2014.

* denotes a significant upward trend in mud content between 2001 and 2014.

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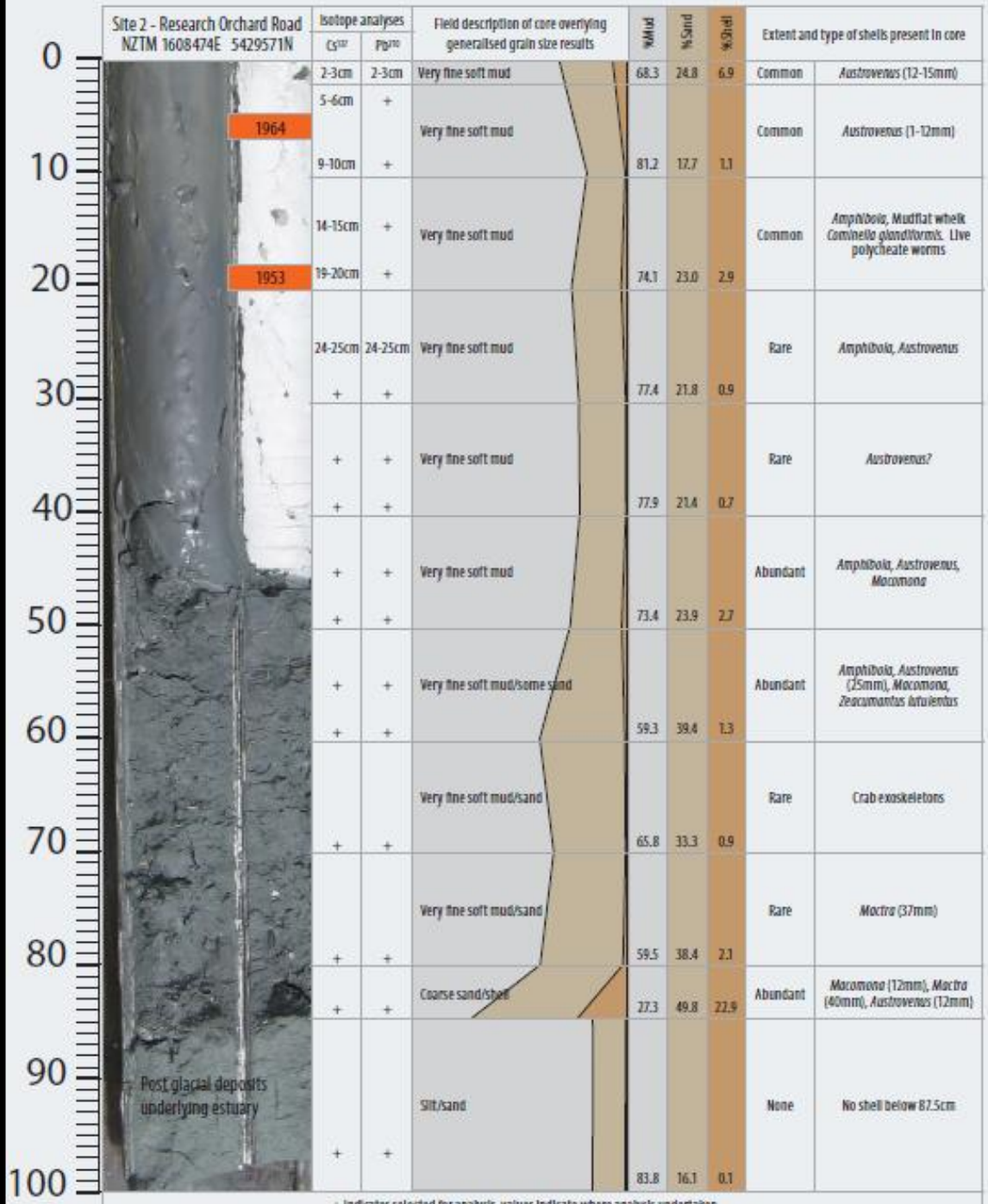
Sediment cores

Sediment Plates



Key Questions:

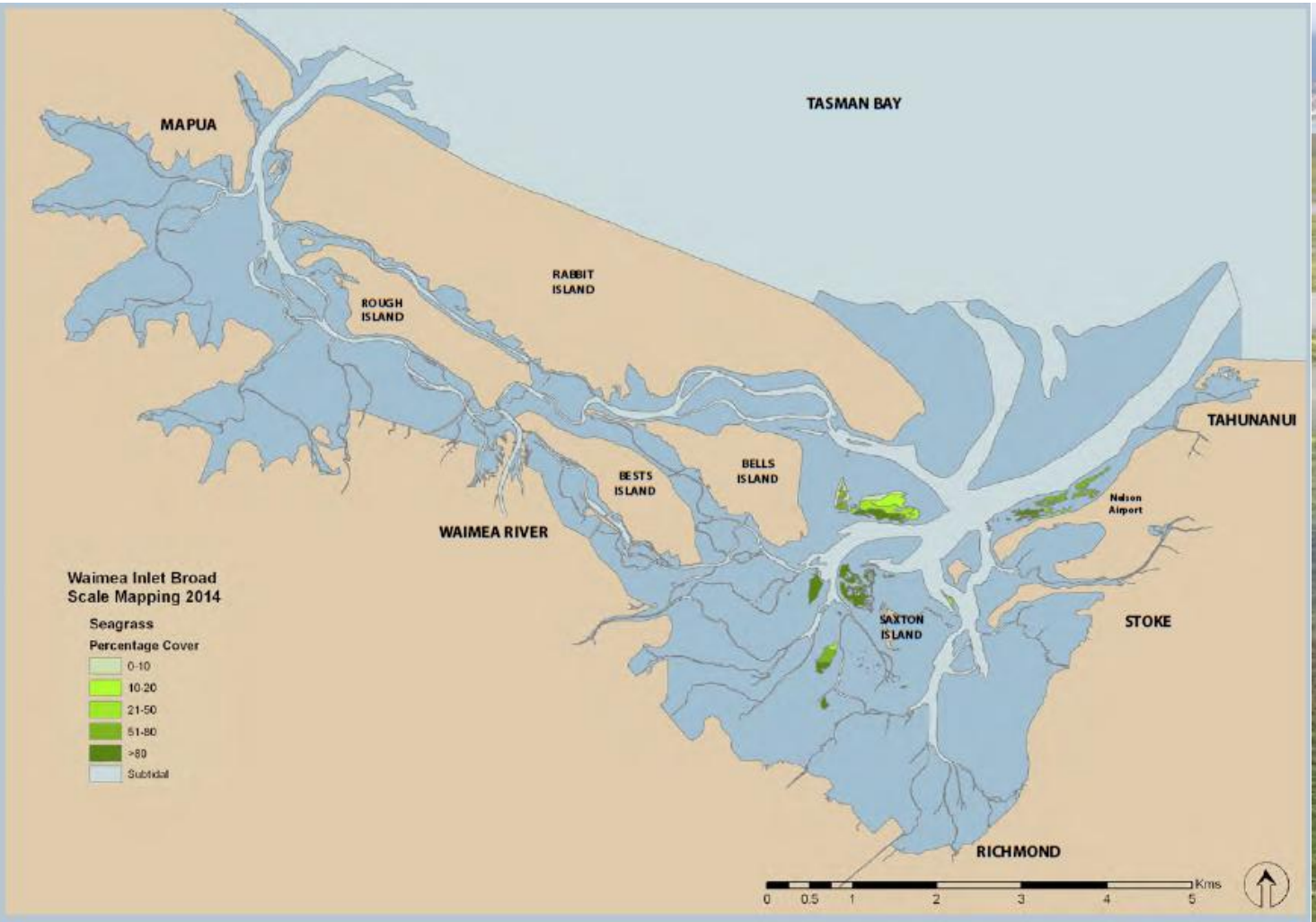
- **Why then is the estuary becoming more excessively muddy?**
- **Will the mud gradually dissipate or will it always be muddy?**

– **What is the desired state of the estuary?**

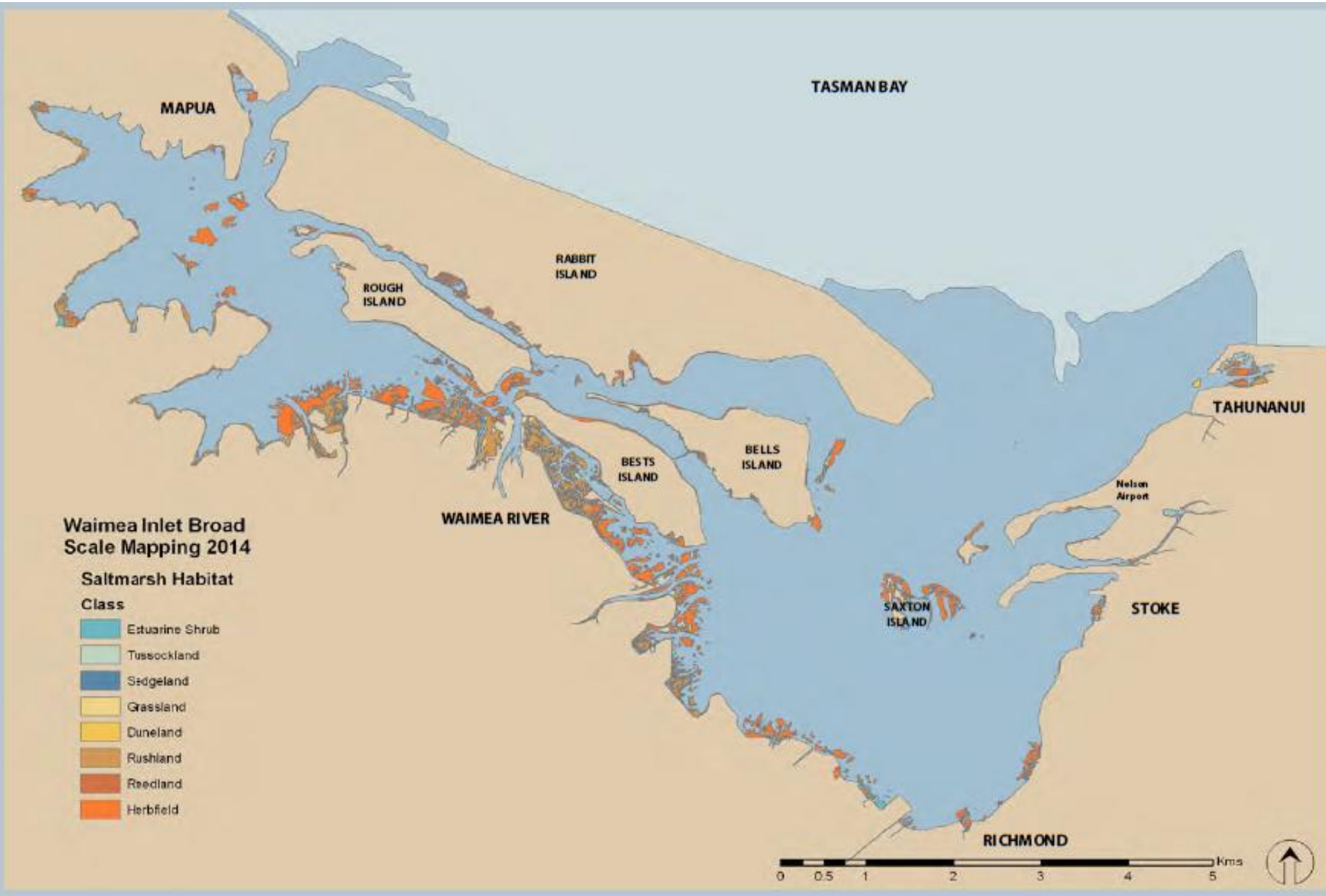
– **Can anything can be done about the legacy of historic fine sediment stores?**

Macro-Algal Cover

Seagrass


TASMAN BAY
MAPUA
RABBIT ISLAND
ROUGH ISLAND
TAHUNANUI
BESTS ISLAND
BELLS ISLAND
Nelson Airport
WAIMEA RIVER
Waimea Inlet Broad Scale Mapping 2014
Seagrass
Percentage Cover
0-10
10-20
21-50
51-80
>80
Subtidal
SAXTON ISLAND
STOKE
RICHMOND
0 0.5 1 2 3 4 5
Kms

Saltmarsh


TASMAN BAY
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Nelson Airport
WAIMEA RIVER
SAXTON ISLAND
STOKE
RICHMOND
Waimea Inlet Broad Scale Mapping 2014
Saltmarsh Habitat
Class
Estuarine Shrub
Tussockland
Sedgeland
Grassland
Duneland
Rushland
Reedland
Herbfield
0 0.5 1 2 3 4 5 Kms