

# Ambient air quality monitoring for the Ports of Auckland

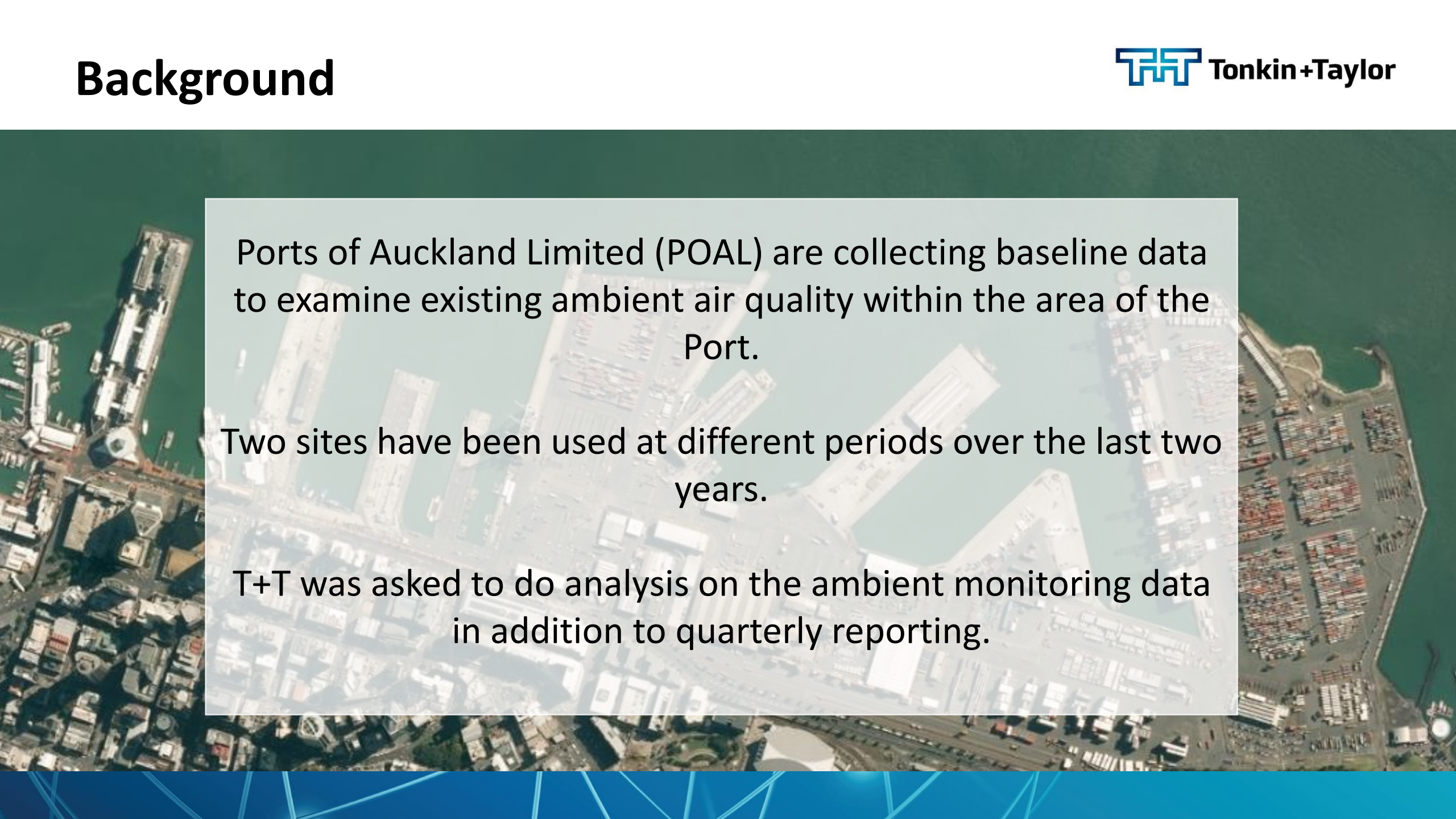
11 February 2020

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# Background



Ports of Auckland Limited (POAL) are collecting baseline data to examine existing ambient air quality within the area of the Port.

Two sites have been used at different periods over the last two years.

T+T was asked to do analysis on the ambient monitoring data in addition to quarterly reporting.

# Locations

**Gladstone Park, Parnell**  
January 2018 – February 2019  
SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and NO<sub>2</sub>



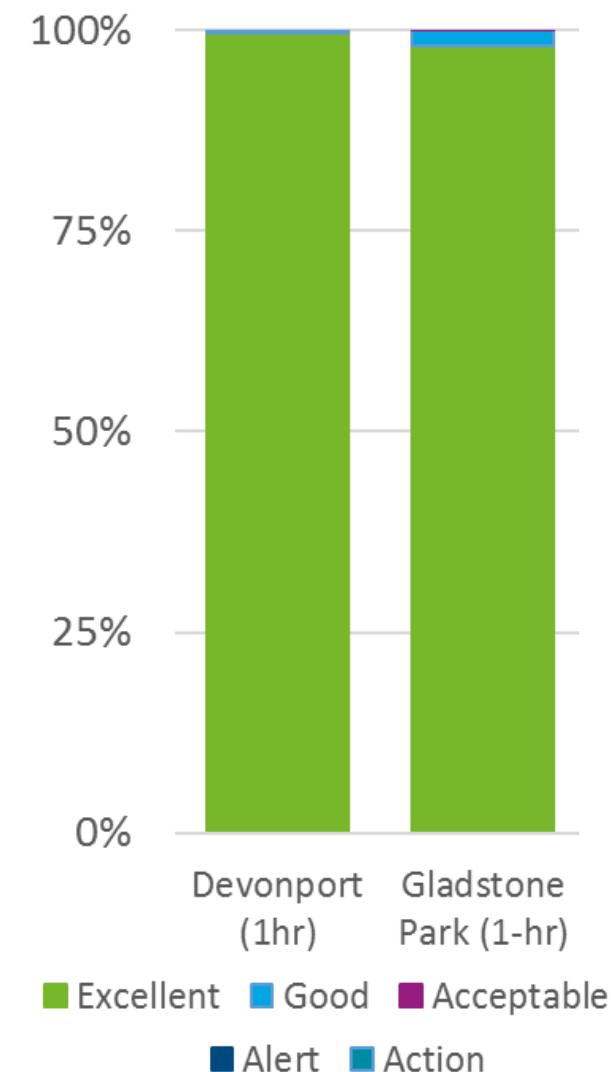
**Devonport**  
October 2018 – Present  
SO<sub>2</sub>

# Performance summary

Sulphur dioxide*		Guideline ( $\mu\text{g}/\text{m}^3$ )	Highest measured concentration ( $\mu\text{g}/\text{m}^3$ )	Percentage of criterion
Devonport	1-hour	350	79.7	23%
	24-hour	120	19.2	16%
Gladstone Park	1-hour	350	136.3	39%
	24-hour	120	33.7	28%

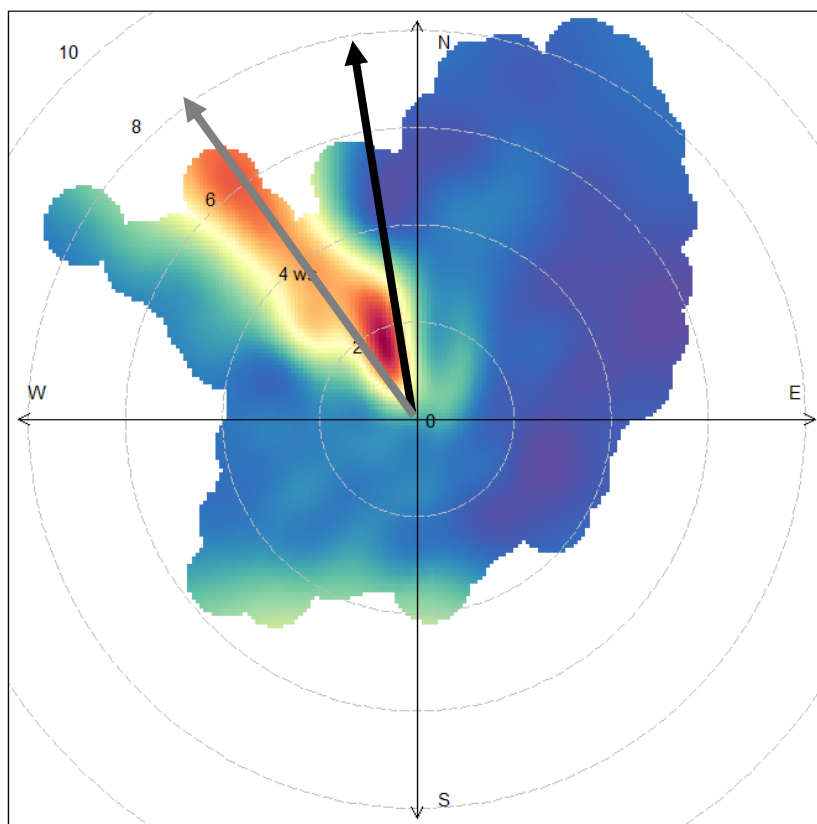
**No exceedances of the 1 or 24-hour SO<sub>2</sub> guidelines.**  
**10 exceedances of 24-hour SO<sub>2</sub> guideline (20  $\mu\text{g}/\text{m}^3$ ).**

\*Data not published

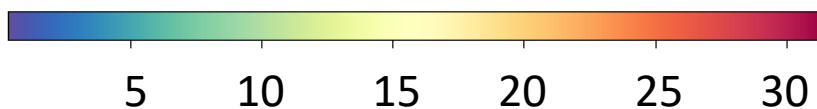


# Mean 1-hour average SO<sub>2</sub> concentrations\*

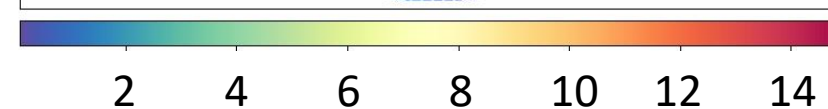
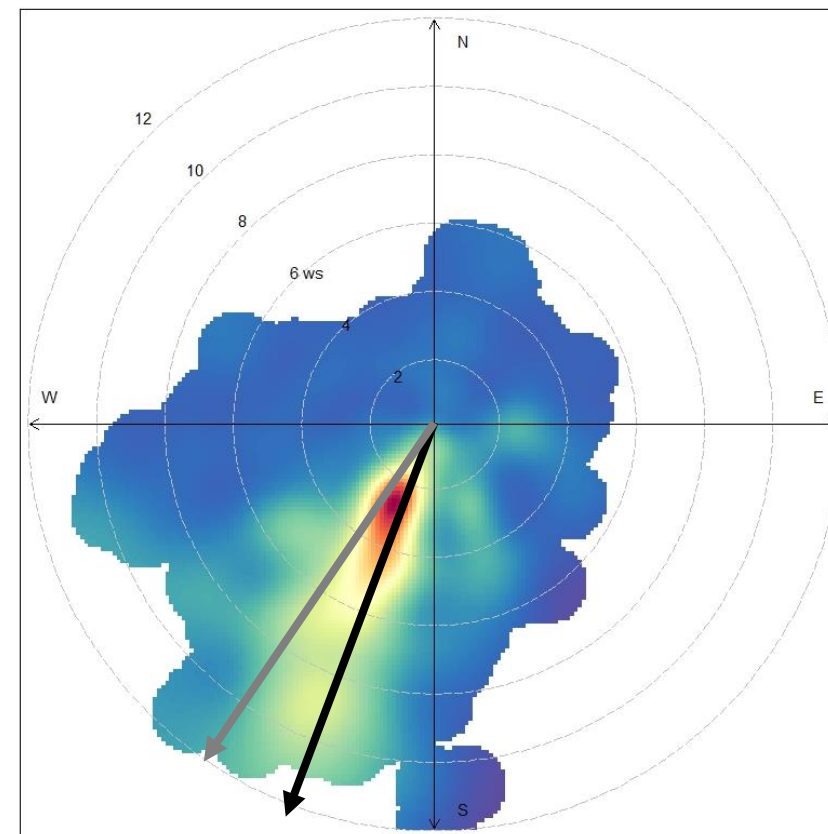
**Gladstone Park**



SO<sub>2</sub> concentration  
( $\mu\text{g}/\text{m}^3$ )



**Devonport**



\*Data not published

# Summary

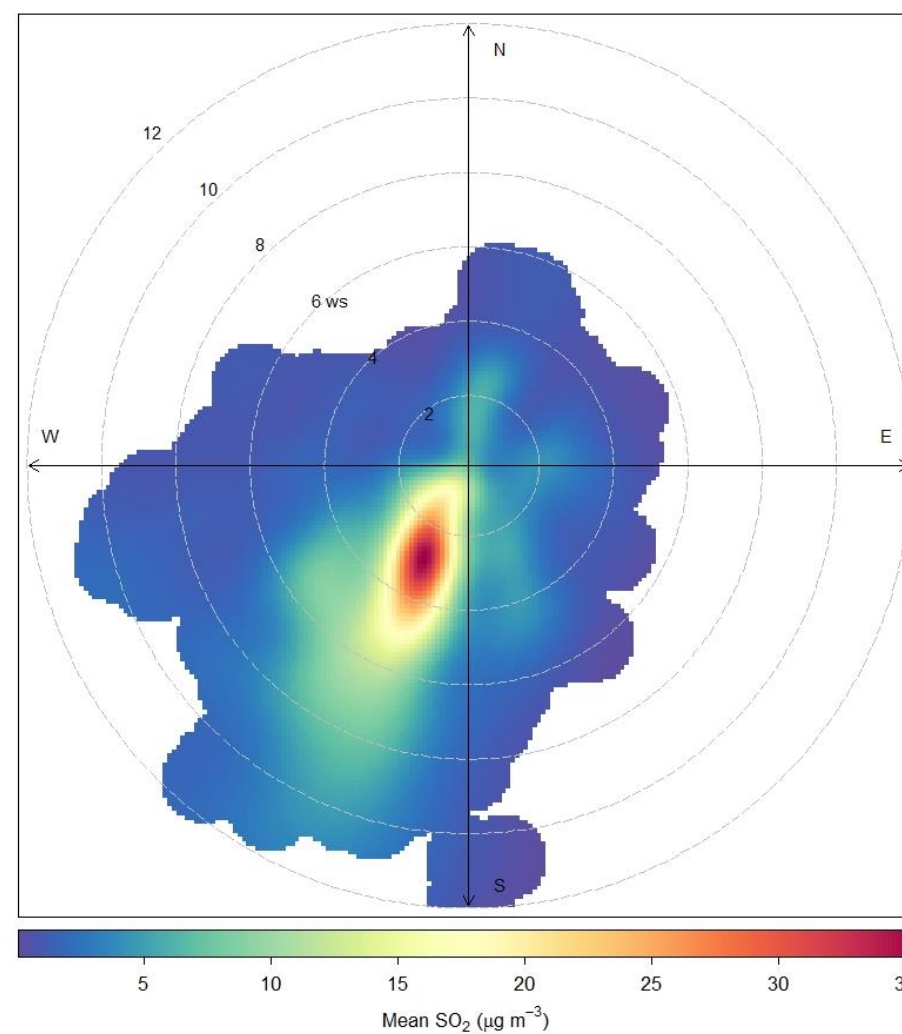
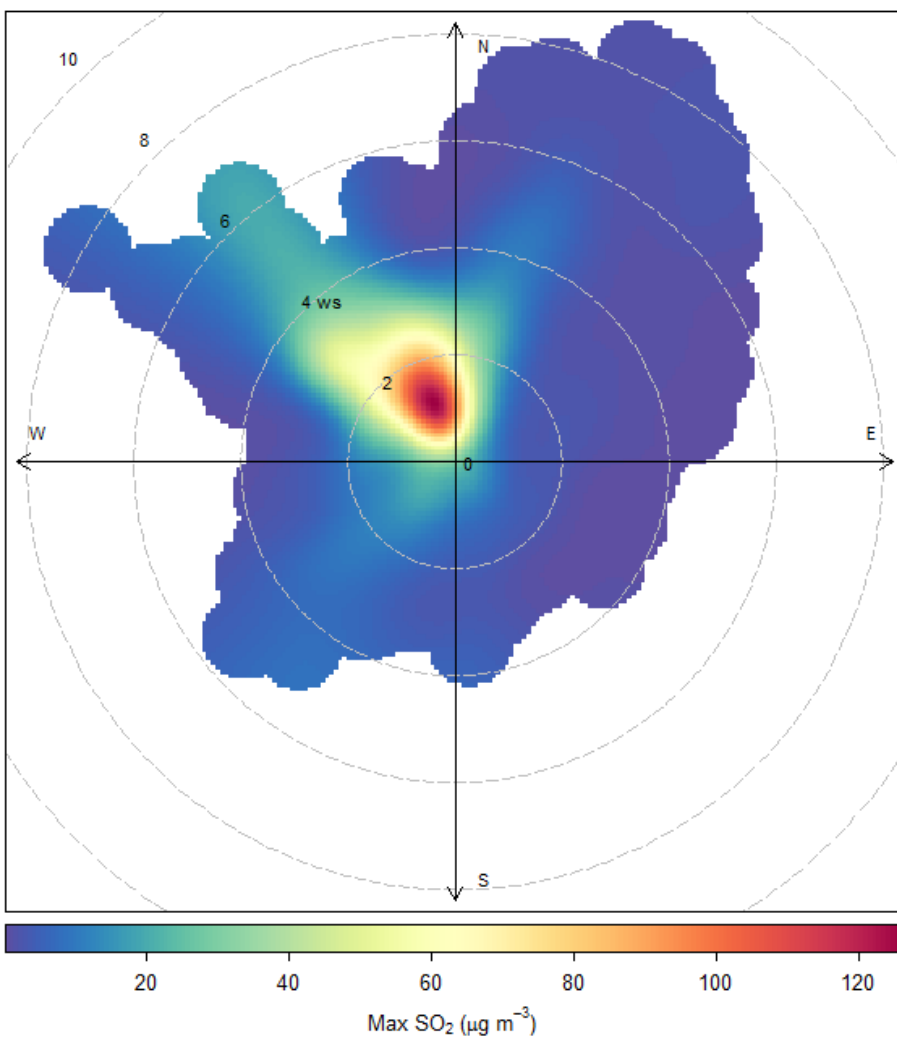
- Ambient monitoring of Port activities has been undertaken at various locations from January 2018 – present
- All monitoring undertaken prior to MARPOL Annex VI being implemented
- No exceedances of 1 or 24-hour average SO<sub>2</sub> criterion was measured (or NO<sub>2</sub> or PM<sub>10</sub> although not shown here)
- 10 exceedances of WHO 24-hour average SO<sub>2</sub> criterion at Gladstone Park
- Higher SO<sub>2</sub> concentrations were measured at Gladstone Park despite Devonport being placed within direction of Auckland's prevailing winds

The background is a blue gradient with a faint, stylized map of New Zealand. Overlaid on the map is a complex network of white lines that intersect to form a globe-like structure. The text is centered within a semi-transparent white rectangular box.

**Thank you.**

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# Maximum 1-hour average SO<sub>2</sub>



# Other pollutants – Gladstone Park

