

# The Rotorua Air Quality Journey

Rotorua Lakes Council – Infrastructure & Environment Committee

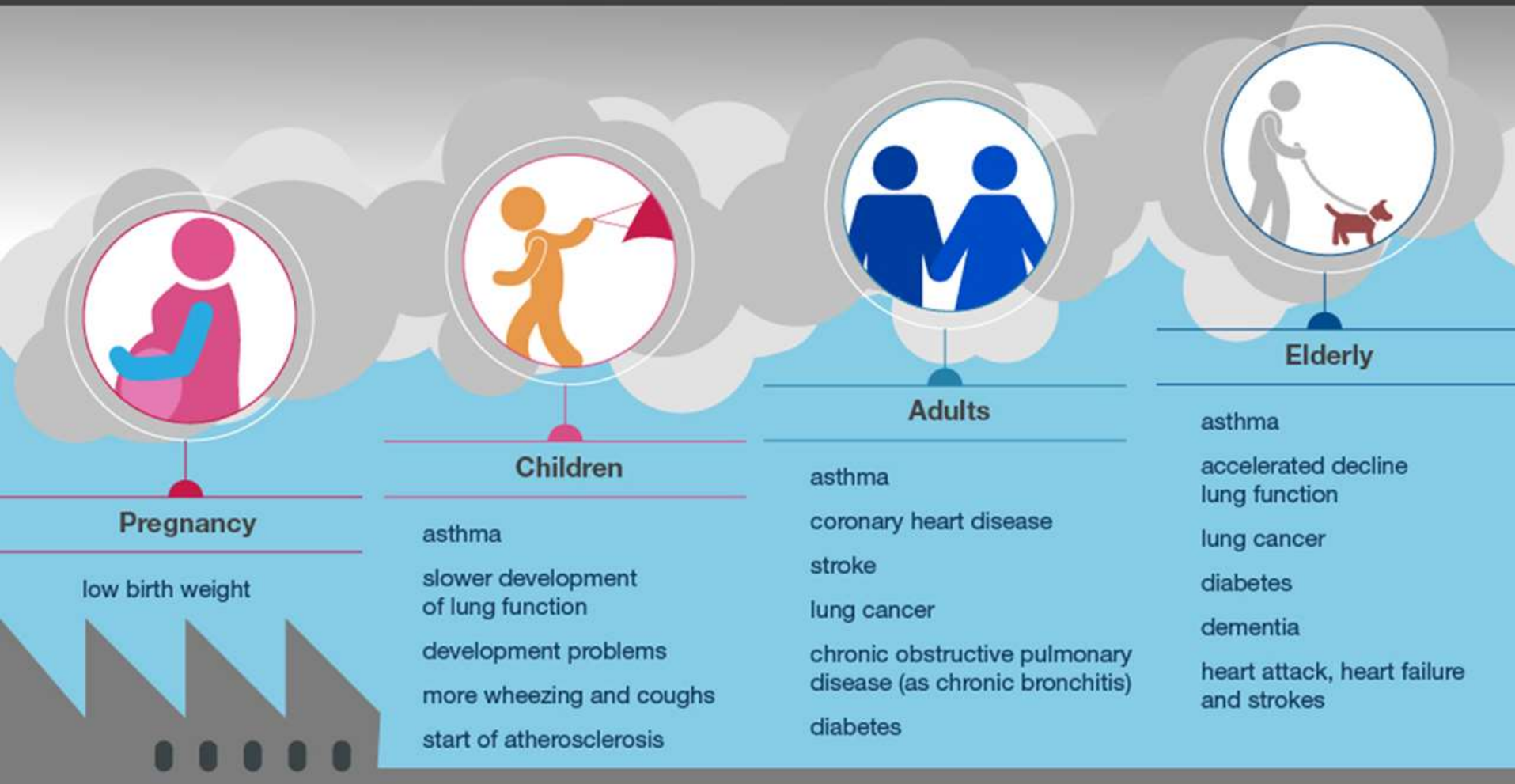
6 September 2023





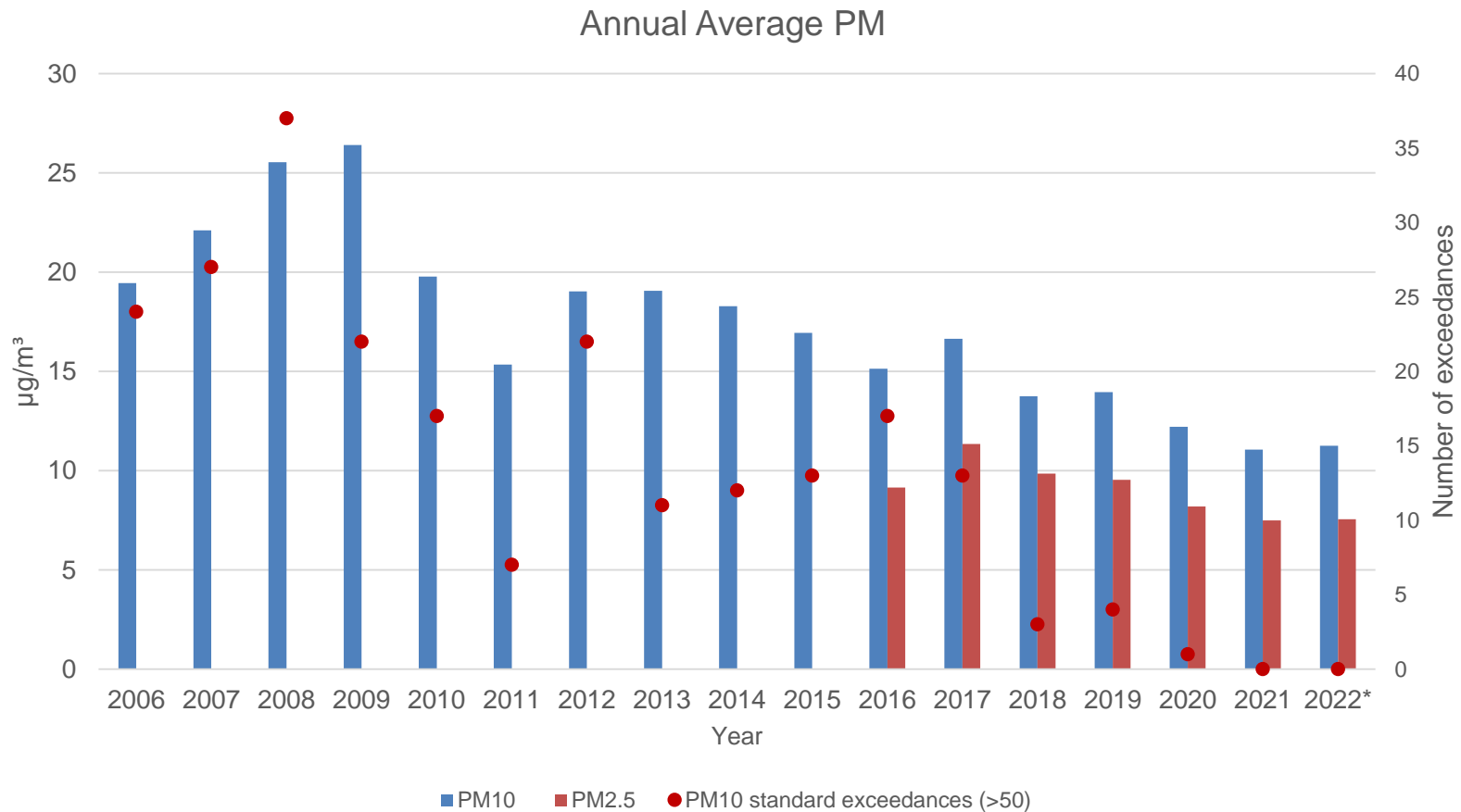


# Air pollution affects people throughout their lifetime



Source: Public Health England, <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

# HAPINZ 3.0 health effects model - estimates for the Rotorua airshed



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	2009	2022
Population Rotorua airshed	52,000	59,000
Yearly average PM <sub>10</sub> (µg/m <sup>3</sup> )	26.4	11.3
<b>Estimated health effects of PM<sub>2.5</sub> generated by domestic fires</b>		
Premature Mortality adults 30+ yrs (per annum)	40	19
Years of life lost	596	246
Restricted activity days (per annum)	53,000	20,000
<b>Total social cost per annum of domestic fires</b>	<b>\$190.9 million</b>	<b>\$78.7 million</b>



## Aug 2023

- 890 properties
- 395 – Solid Fuel Burners (SFB)
- 391 – Heat pump/Panel heaters/ducted heating
- 1 – Pellet Burner

## Aug 2021

- 737 properties
- 388 – Solid Fuel Burners (SFB)
- 277 – Heat Pumps
- 3 – Pellet burners
- 1 – Open fires

**2023 – 44% of our homes have Solid Fuel Burners compared to 52% in 2021**

**2023 – 43% of our homes have Heat Pumps (and/or ducted heating and/or panel heating) compared to 37% in 2021**



**2008**

Incentivise a shift from high polluting devices (coal, open fires)

- ✓ Awareness raising
- ✓ Enable, educate & encourage compliance

**CARROT**

Assistance given to meet regulatory measures (loans, grants)

**STICK**

2010 Bylaw  
2020 PC13

**2020 ONWARDS**

Restrict choice to cleanest heating devices

- ✓ No non-compliant burner use
- ✓ Fines for non-compliance
- ✓ Active enforcement

All fires on MFE list

$\leq 0.60\text{g/kg}$  emission limit

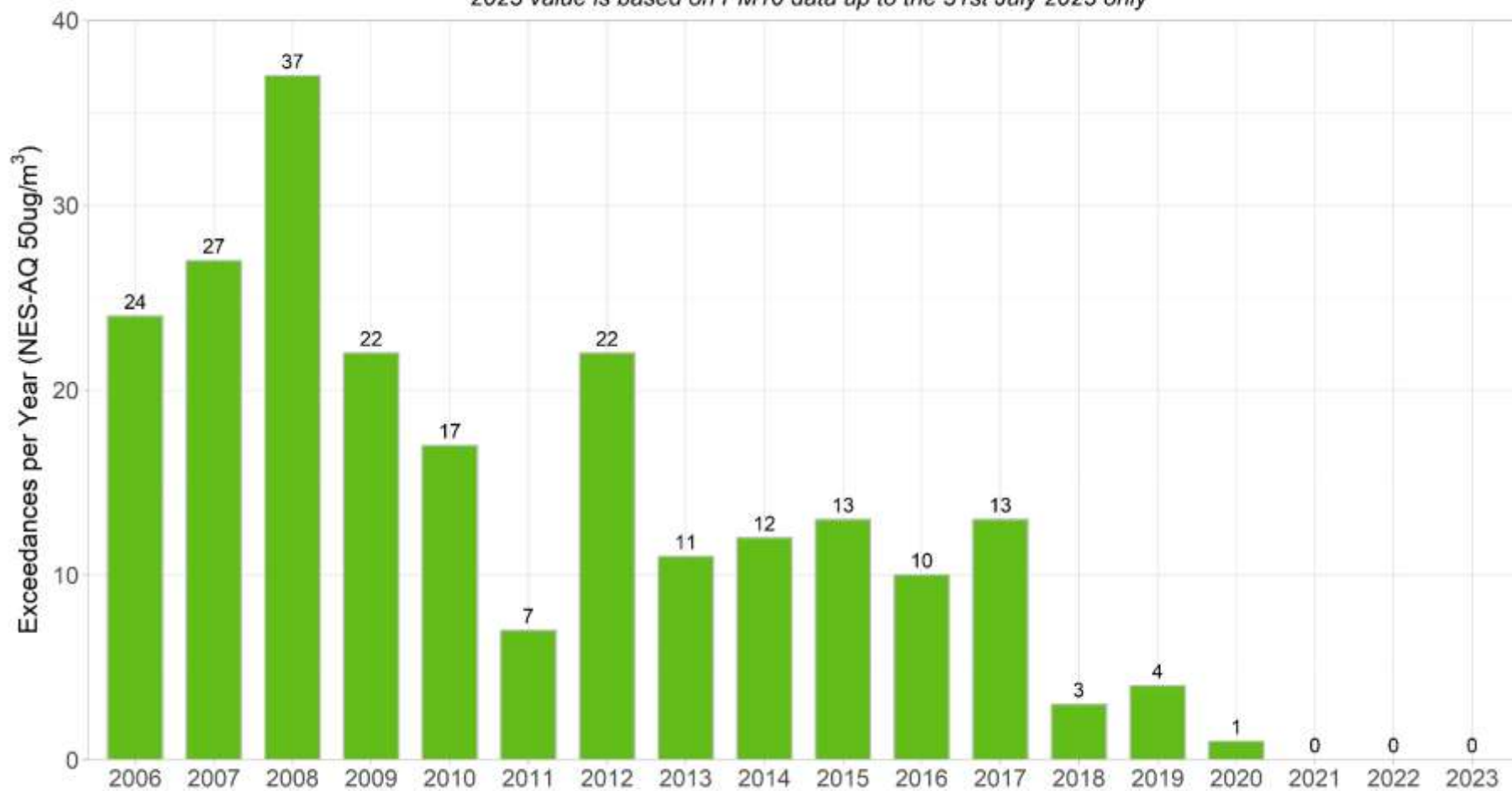
Stricter SFB restrictions

**Soft voluntary approach**

**Firm regulatory approach**

## Edmund Rd Daily Mean PM<sub>10</sub> - Exceedances by Year\*

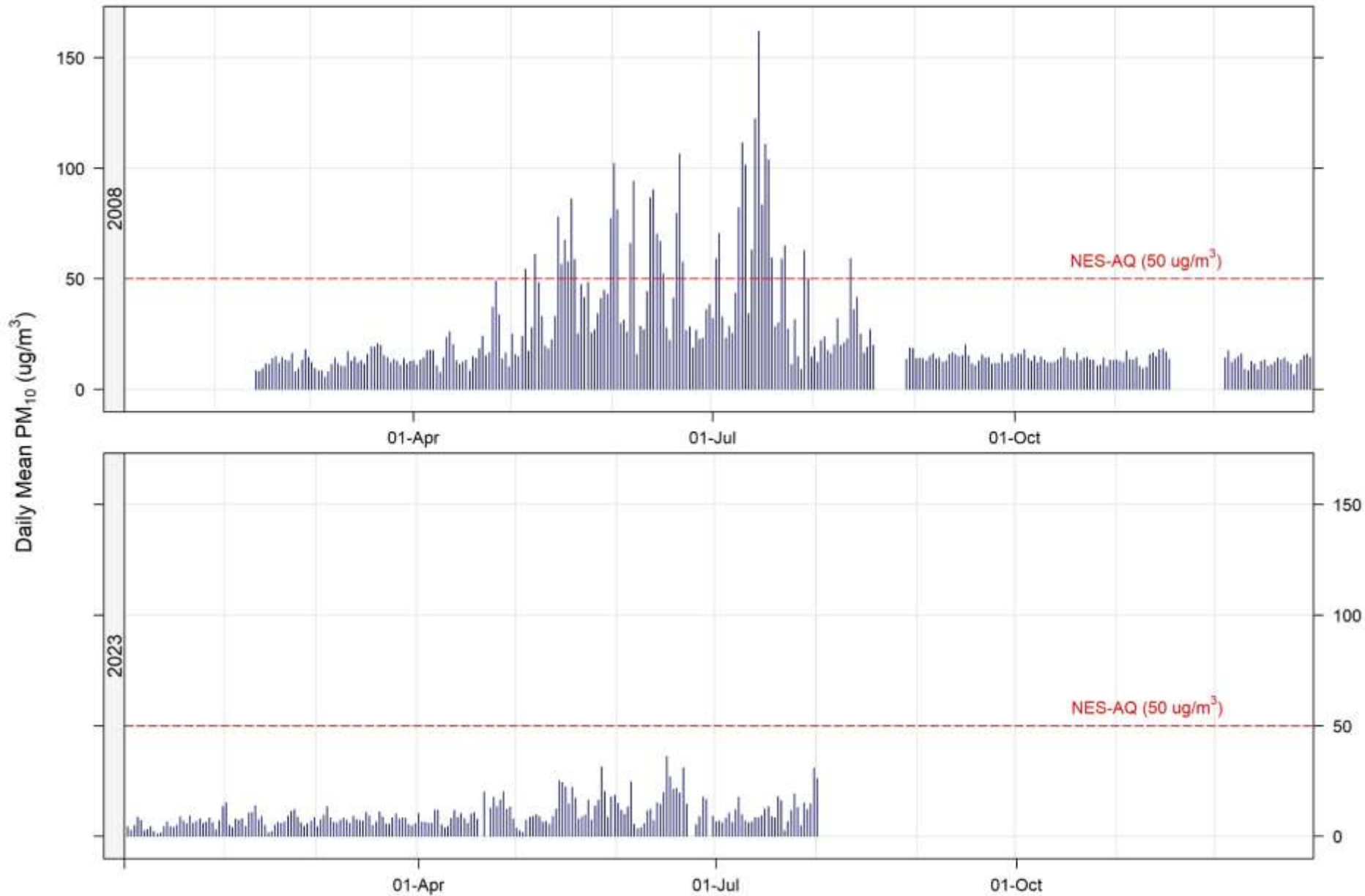
\*2023 value is based on PM10 data up to the 31st July 2023 only



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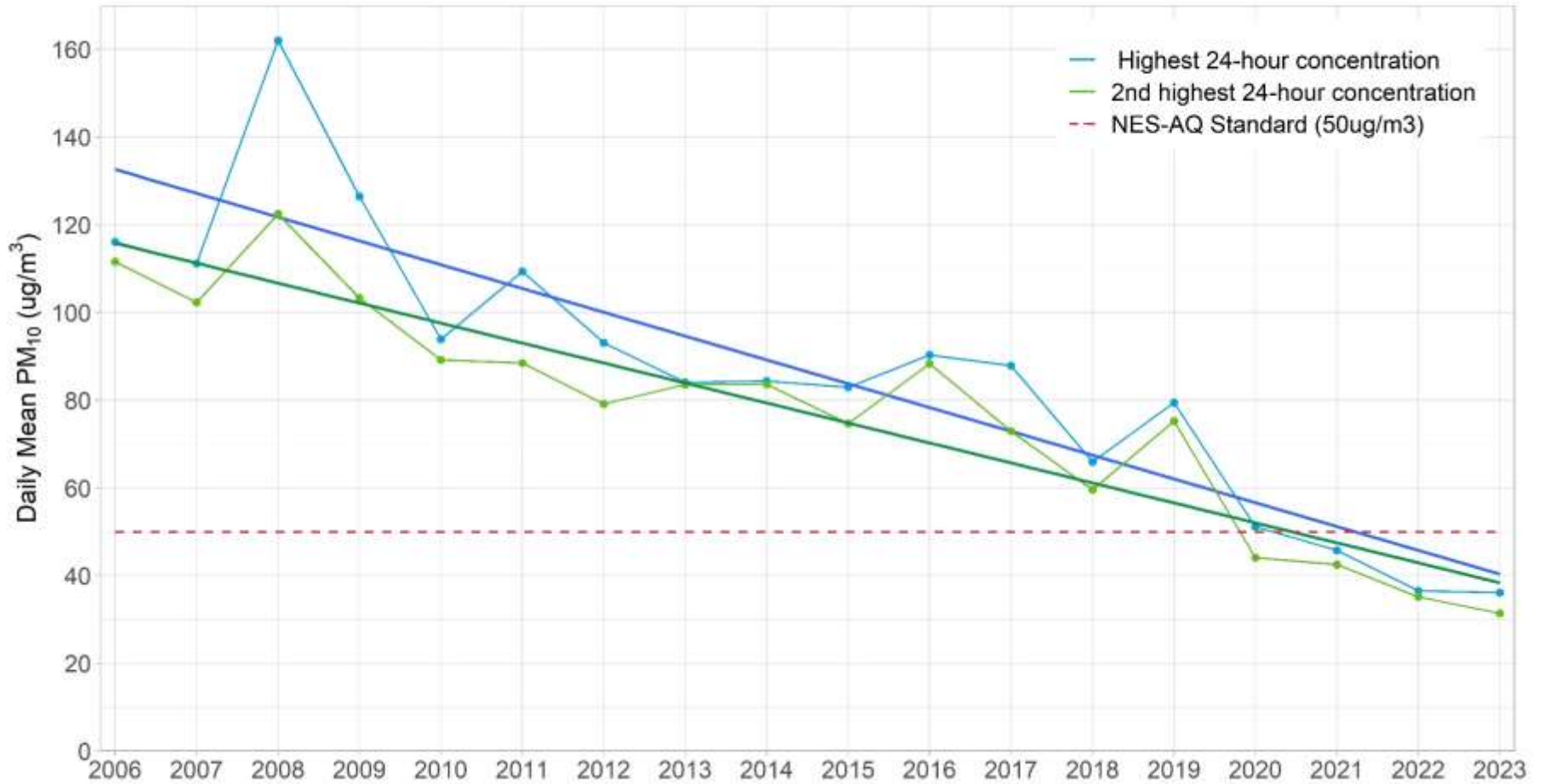


Rotorua at Edmund Rd - Daily Mean PM<sub>10</sub> - 2008 and 2023



## Edmund Rd Daily Mean PM<sub>10</sub> - Highest Values by Year\*

\*2023 value is based on PM10 data up to the 31st July 2023 only



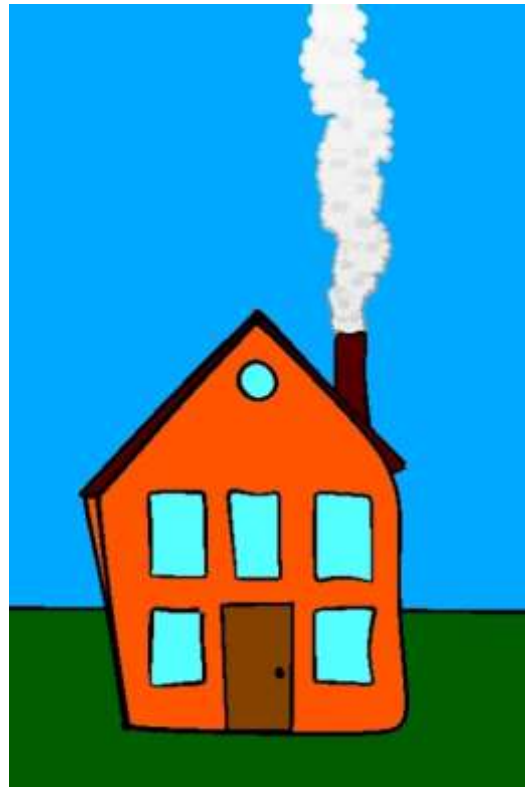
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# What's coming?



# NES-AQ proposed change

PM<sub>10</sub>



PM<sub>2.5</sub>

Wood smoke is  
approximately  
**90% PM<sub>2.5</sub>**



# Preparation for PM<sub>2.5</sub> NESAQ

- *New policy development*
- *New Action Plan to meet PM<sub>2.5</sub>*
- *New Rotorua emissions inventory for modelling of the airshed*
- *Continued inter-agency collaboration to keep the momentum going!*



Keep the momentum going!

# Questions?

Monitoring information can be found  
at <https://atlas.boprc.govt.nz/api/v1/edms/document/A4428391/content>  
for the two Rotorua sites.

