



Port Hedland Dust Management

Annual air quality monitoring reports & Progress update

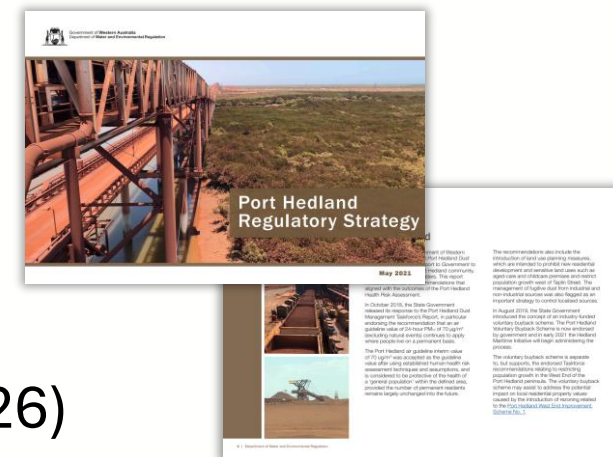
Ed Schuller

CIF 20 May 2026



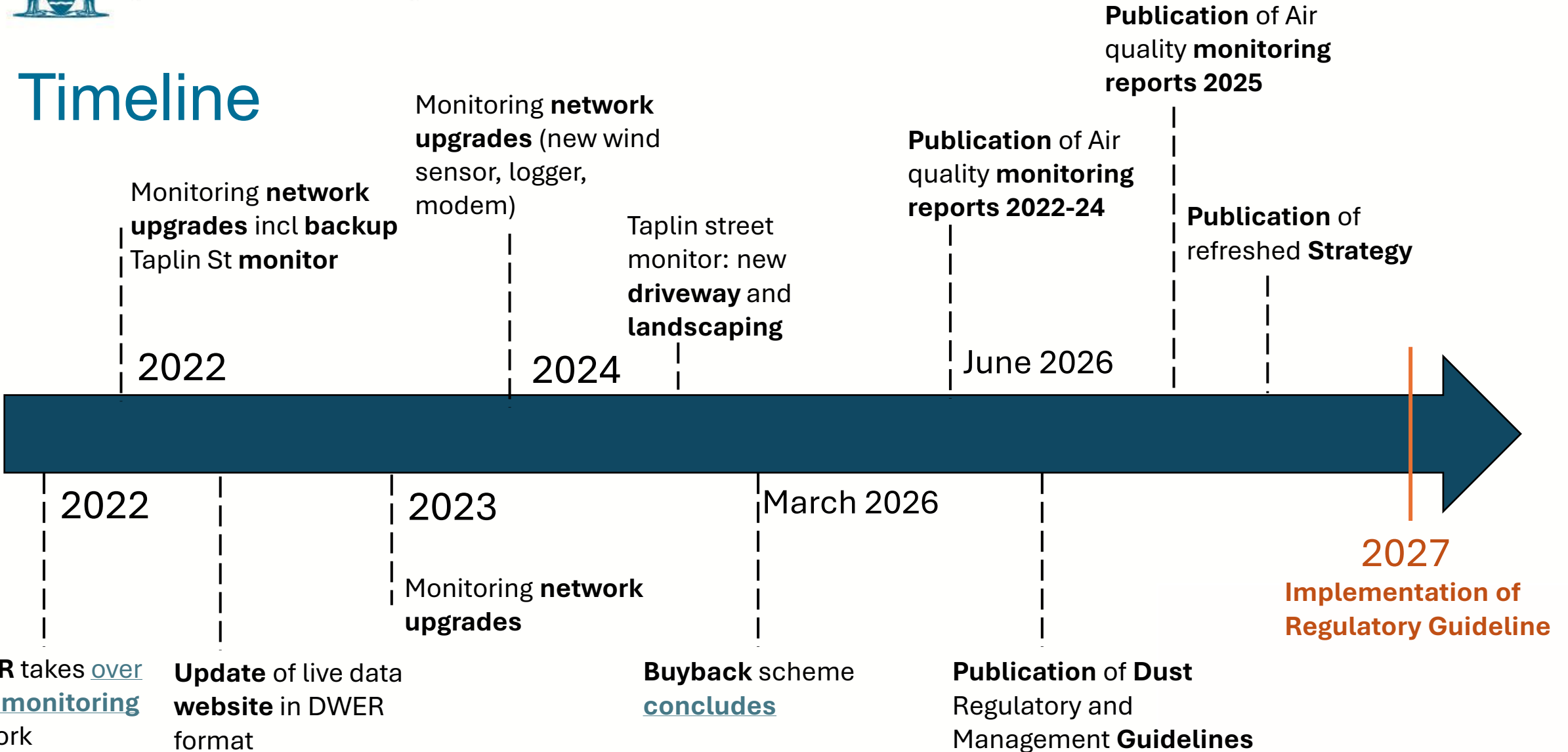
History/Milestones

- Port Hedland Taskforce report (2017)
- Government response to Taskforce report (2018)
- Port Hedland Voluntary Buyback Scheme (2019 - March 2026)
- Risk-based licence reviews (2018-2022)
- Transfer of the Ambient Monitoring Network (2021)
- Port Hedland Regulatory Strategy (DWER-2021)
- Port Hedland Dust Management & Regulatory Guidelines (2026)
- Annual Air Quality Monitoring Reports 2022-2024, 2025



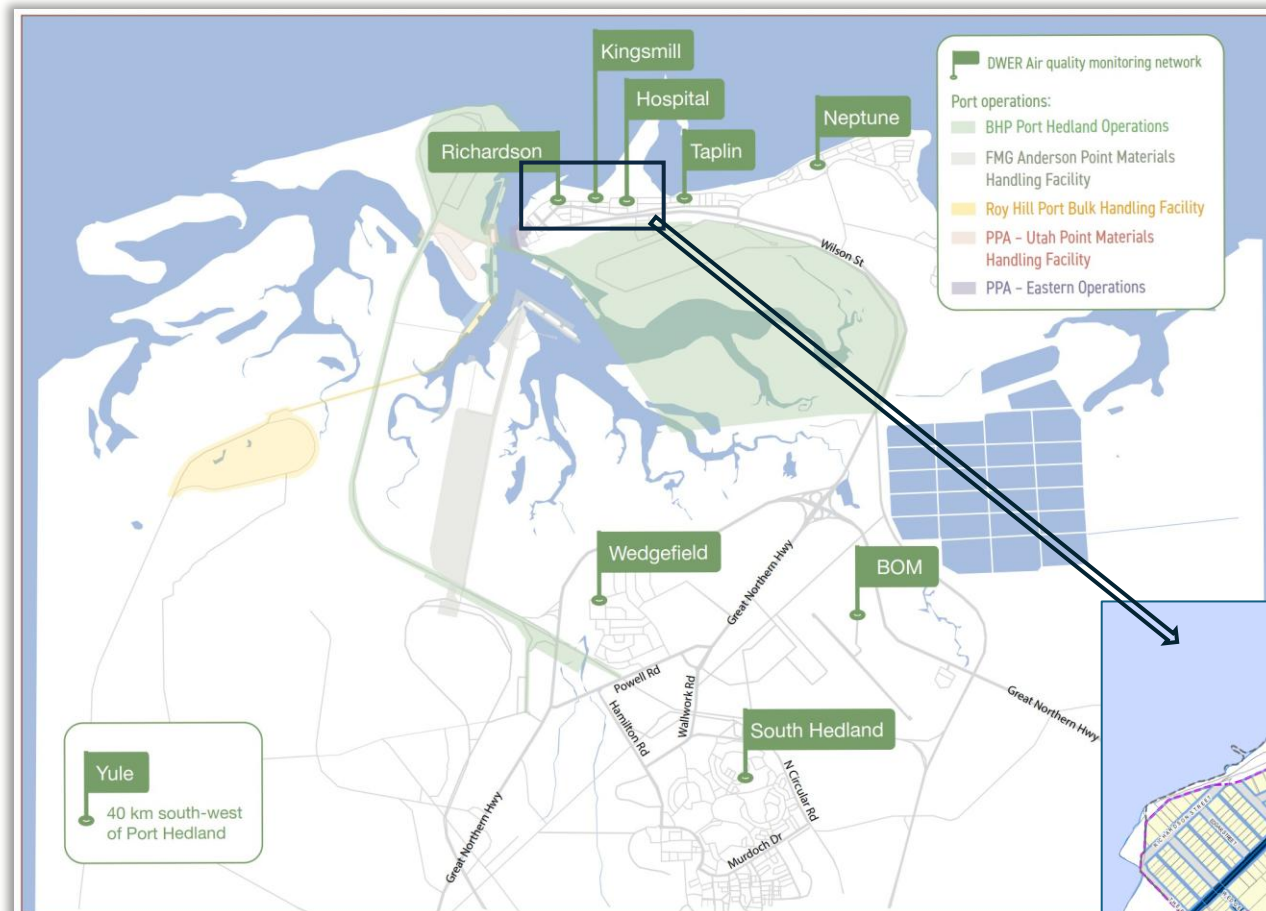


Timeline



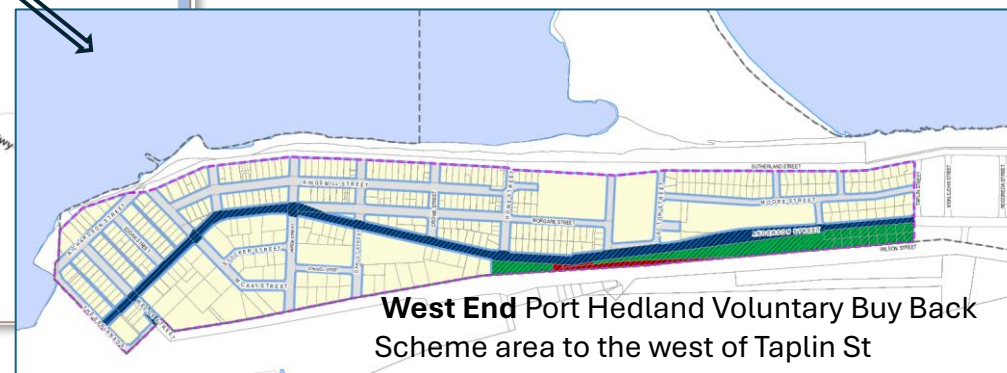


Ambient Air Quality Monitoring (DWER)



Key points

- **Taplin St** for reporting purposes/exceedances
- Port Hedland Air Guideline Value (AGV)
 $PM_{10} = 70 \mu\text{g}/\text{m}^3$ (Taplin)*
- DWER took over management of network Dec 2021





Data availability for PM₁₀

Monitoring Station	Data availability rates (% of days)														
	2022					2023					2024				
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual
Valid?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kingsmill	99.8	92.7	99.3	99.9	97.9	100	88.0	96.7	100	96.2	96.9	95.2	92.8	96.8	95.4
Richardson	99.6	99.7	96.8	99.7	99.0	100	94.5	96.7	100	97.8	98.9	94.1	98.4	93.2	96.2
Hospital	99.9	96.9	99.9	99.7	99.1	97.8	86.8	96.7	98.9	95.1	99.8	98.4	99.9	99.6	99.4
Neptune	94.5	95.3	98.4	99.9	97.1	100	86.8	98.9	100	96.4	80.1	82.7	92.1	99.8	88.7
Taplin	99.6	99.9	97.0	99.8	99.1	100	92.3	96.7	100	97.3	95.6	99.8	96.7	99.7	97.9
Wedgfield	96.9	92.0	99.5	92.9	95.3	100	92.3	90.2	97.8	95.1	90.9	89.6	90.9	95.6	91.7
BOM	99.7	98.1	99.2	99.1	99.0	100	89.0	95.7	100	96.2	99.5	98.6	99.8	99.1	99.3
South Hedland	99.5	98.9	97.1	99.5	98.7	100	78.0	92.4	98.9	92.3	94.7	86.8	85.8	95.6	90.7
Yule River	98.8	99.5	97.6	97.6	98.4	100	83.5	92.4	100	94.0	98.1	95.8	95.5	94.9	96.1

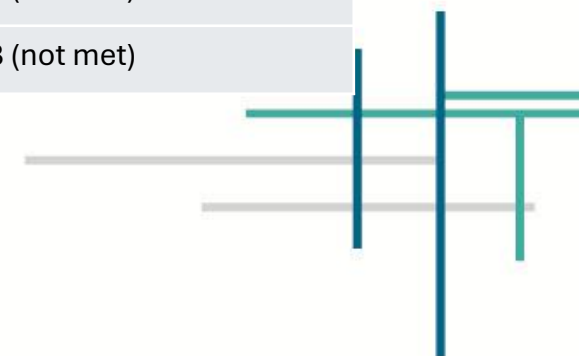
The AAQ NEPM *Technical Paper No. 5 – Data Collection and Handling* prescribes **75%** (annual and per Q) **as adequate data availability**, ensuring data quality. 2022-24 data is well above this requirements.

DWER follows a program of instrumentation upgrades and replacement to ensure validity and reliability of monitors.



West End monitoring stations PM₁₀

	2022	2023	2024
PM₁₀ AGV 70 µg/m³			
	Total Exceedances AGV (days)	Total Exceedances AGV (days)	Total Exceedances AGV (days)
Richardson	12	72	35
Kingsmill	21	69	52
Hospital	14	65	51
PM₁₀ NEPM annual guideline 25 µg/m³			
	Annual average AAQ NEPM	Annual average AAQ NEPM	Annual average AAQ NEPM
Richardson	42.3 (not met)	54.0 (not met)	47 (not met)
Kingsmill	40.2 (not met)	52.0 (not met)	48 (not met)
Hospital	38.6 (not met)	51.3 (not met)	48 (not met)





West End monitoring stations NEPM pollutants

	2022	2023	2024
PM_{2.5} NEPM annual guideline 8 µg/m³, daily guideline 25 µg/m³			
	Total Exceedances (days) of AAQ NEPM	Total Exceedances (days) of AAQ NEPM	Total Exceedances (days) of AAQ NEPM
Richardson	0 (met)	17 (not met)	10 (not met)
Hospital	0 (met)	15 (not met)	14 (not met)
	Annual average	Annual average	Annual average
Richardson	8.1 (not met)	11.9 (not met)	11 (not met)
Hospital	7.7 (met)	10.7 (not met)	10 (not met)
NO₂ NEPM annual guideline 15 ppb, hourly guideline 80 ppb			
	Annual average (ppb)	Annual average (ppb)	Annual average (ppb)
Richardson	N/A	9 (met)	8 (met)
	Max 1 hr average (ppb)	Max 1 hr average (ppb)	Max 1 hr average (ppb)
Richardson	N/A	67 (met)	41 (met)
SO₂ NEPM daily guideline 20 ppb, hourly guideline 100 ppb			
	Max daily average (ppb)	Max daily average (ppb)	Max daily average (ppb)
Richardson	2.9 (met)	4.1 (met)	4 (met)
	Max 1 hr average (ppb)	Max 1 hr average (ppb)	Max 1 hr average (ppb)
Richardson	8.1 (met)	12.2 (met)	11 (met)





Exceedances - Methodology

DWER	PHIC
<p>Exceptional (Natural) event Bushfire, reduction burning, continental windblown dust</p>	<p>Natural/regional</p>
<p>Other event Available data does not support attribution to industry or exceptional</p>	<p>Local (industry) Local (industry and non-industry) Natural/regional and local (industry) Natural/regional and local (industry and non-industry) Local (industry) and Natural/regional</p>
<p>Regulatory (Industry) event Majority from industry</p>	<p>Exceedances >50% industry contribution equivalent to DWER 'regulatory/industry' event</p>



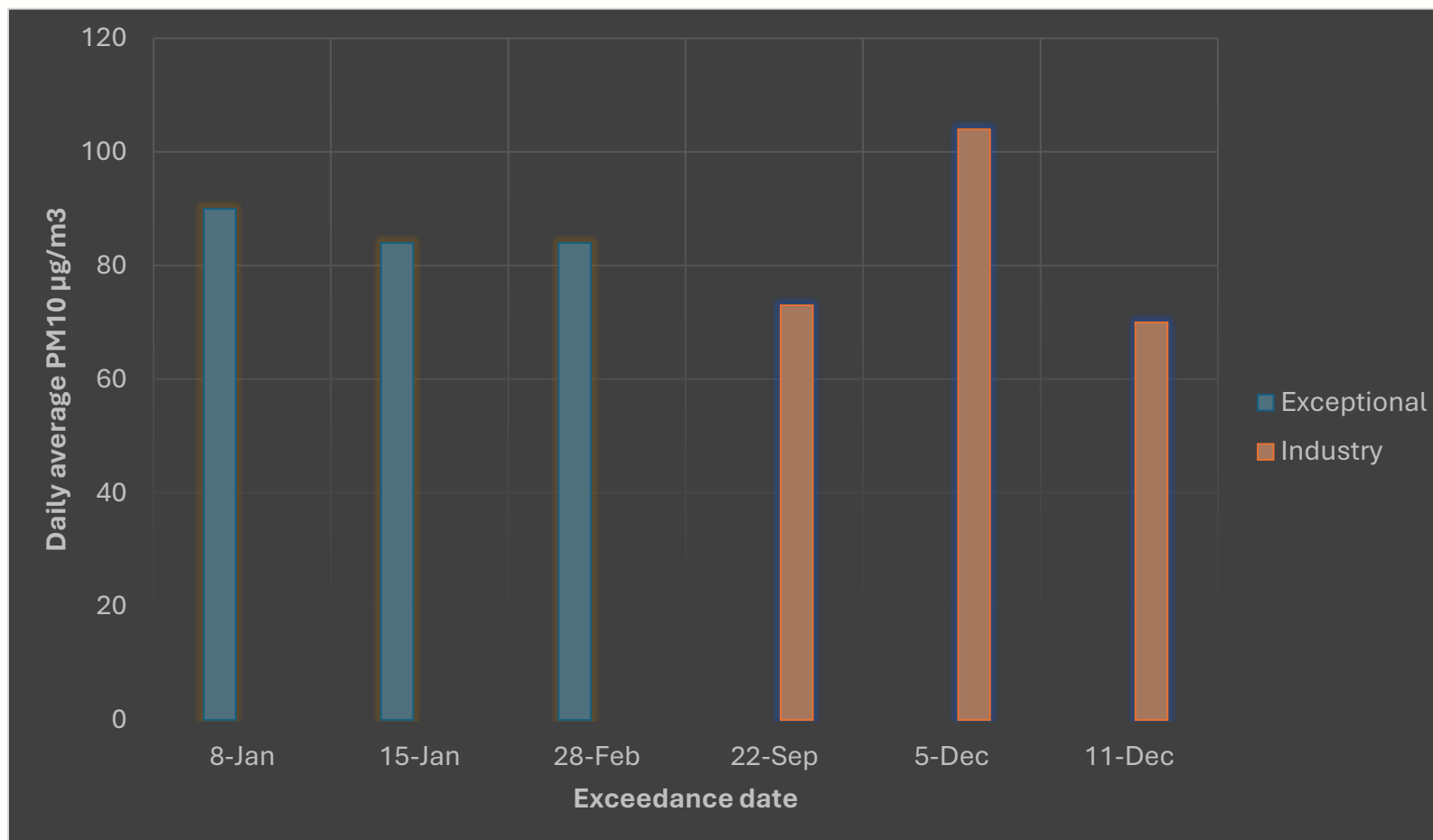
Historic AGV exceedances summary

	DWER Analysis	PHIC Analysis
2022 Industry Attributed [Combination/Other] (Total)	3 [0](6)	0 [3](6)
2023 Industry Attributed [Combination/Other] (Total)	13 [3](29)	5 [9](29)
2024 Industry Attributed [Combination/Other] (Total)	7 [10](31)	5 [4](31)



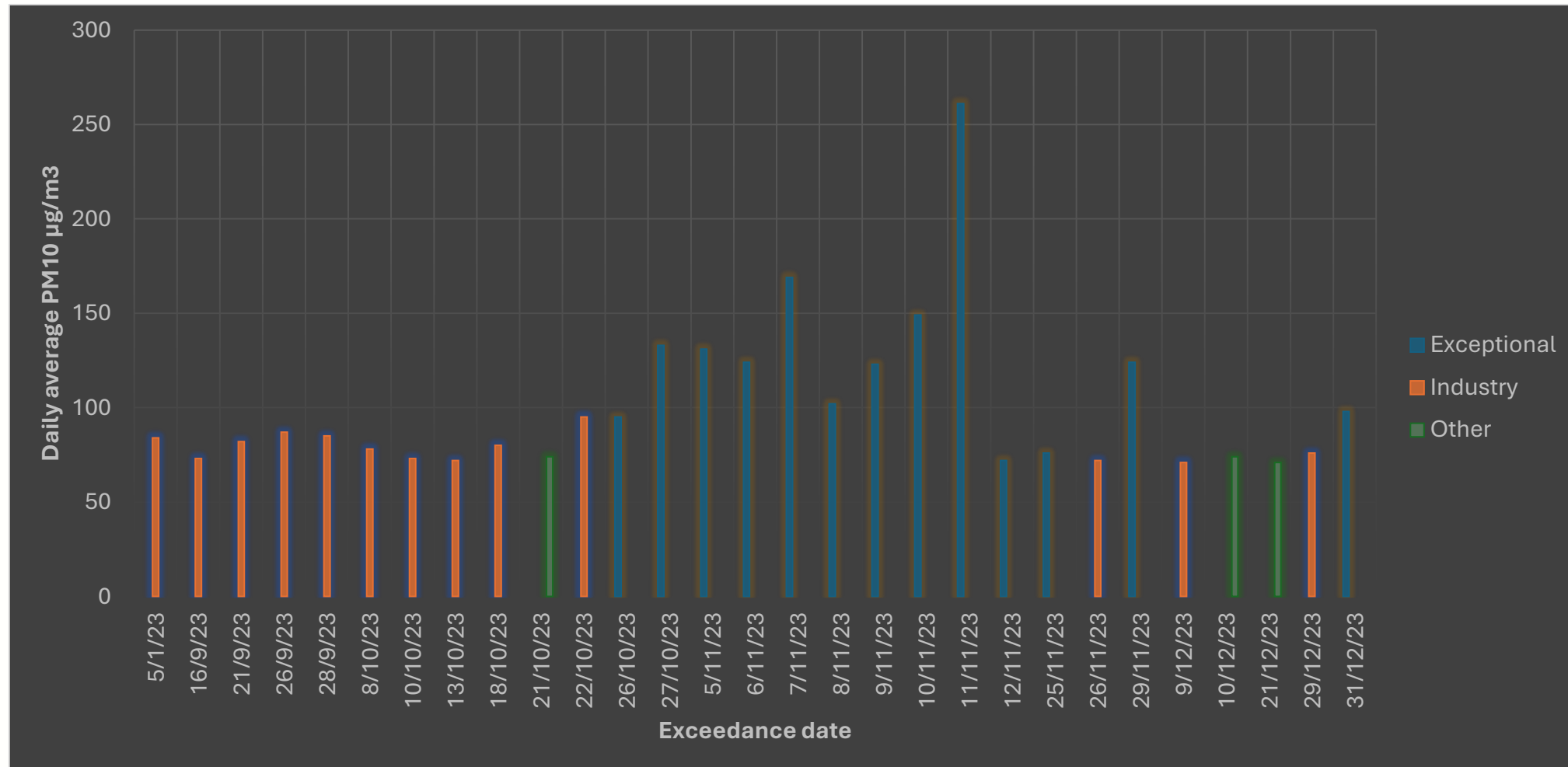


2022: AGV exceedances



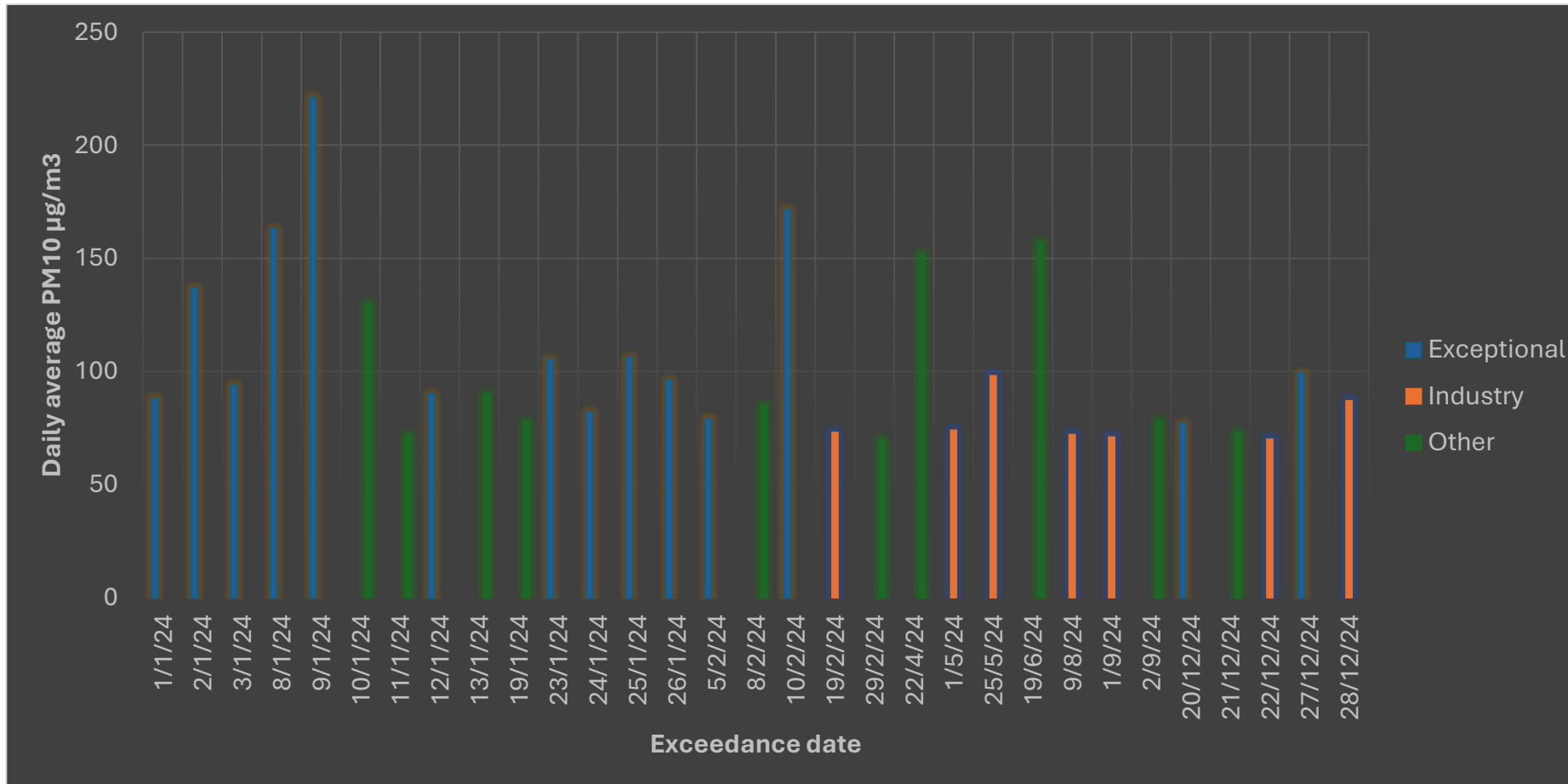


2023: AGV exceedances





2024: AGV exceedances





PM₁₀ – residential, light industrial and background

	2022	2023	2024
PM₁₀ NEPM annual guideline 25 µg/m³			
	Annual average	Annual average	Annual average
Taplin	34.0 (not met)	42.8 (not met)	40 (not met)
Neptune	23.7 (met)	26.6 (not met)	31 (not met)
South Hedland	21.2 (met)	27.5 (not met)	28 (not met)
Wedgefield	53.6 (not met)	64.0 (not met)	66 (not met)
BOM	29.0 (not met)	34.9 (not met)	29 (not met)
Yule	16.4 (met)	21.3 (met)	23 (met)



PM_{2.5} – residential and background

	2022		2023		2024	
PM_{2.5} NEPM daily guideline 25 µg/m³, annual guideline 8 µg/m³						
	Daily max	Annual average	Daily max	Annual average	Daily max	Annual average
Taplin	(met)	6.2 (met)	(not met)	8.2 (not met)	(Not met)	11 (not met)
South Hedland	N/A	N/A	(not met)	6.6 (met)	(Not met)	6 (met)
BOM	(met)	6.1 (met)	(not met)	9.1 (not met)	(Not met)	5 (met)
Yule	(met)	2.7 (met)	(not met)	4.9 (met)	(Not met)	4 (met)



NEPM pollutants – Taplin St

		2022	2023	2024
NO₂ NEPM annual guideline 15 ppb, hourly guideline 80 ppb				
Taplin St	1hr max	35.5 (met)	50.1 (met)	41 (met)
	Annual average	7.7 (met)	8.2 (met)	7 (met)
SO₂ NEPM daily guideline 20 ppb, hourly guideline 100 ppb				
Taplin St	1hr max	5.6 (met)	10.4 (met)	7 (met)
	Daily max	1.7 (met)	2.0 (met)	5 (met)





Current status

- **Resourcing** has been **reprioritised** by DWER, since February 2026 to address the delays in the publication of the Annual air quality reports
- **Public access to air quality data** for Port Hedland has been available on the DWER website **since 2022**
- Publication of **Annual Reports 2022-2024** by 30 June 2026
- Additionally, a **Regulatory Guideline** setting out the regulatory approach to manage dust in Port Hedland will be published 2026
- Following the conclusion of the Port Hedland Voluntary Buyback Scheme, the Department prioritises the protection of residential areas **east of Taplin Street**
- The Department intends to work collaboratively with the Department of Health (DoH) to ensure residents within the West End are informed of the impacts of dust and have access to adequate information from DoH to minimise their exposure risk





Regulatory approach

- DWER acknowledges the past efforts to **manage** dust impacts on residents in the **West End**
- The **conclusion** of the **voluntary buy back scheme** in March 2026, provides a good foundation to manage dust impacts considering changes in the Port Hedland landscape and population
- Regulatory **focus on residents in East End**, considering past efforts to restrict residential use in the West End
- DWER committed to **continue informing** remaining residents in **West End** on air quality
- **Taplin Street** monitor remains key monitor to identify and record AGV exceedances



Timeline

- Annual air quality reports 2022-2024 published on website June 2026
- Annual air quality report 2025 published on website September 2026
- Dust management Guideline published by September 2026
- Regulatory Guideline published and implemented by January 2027





Key messages

- Public access to [Air quality data](#) for Port Hedland has been available via DWER website
- DWER committed to **continue informing** remaining residents in **West End** on air quality
- It is recommended for residents in the **West End** to refer to advice provided as [factsheet](#) by **DOH** (available on website).

Government of Western Australia Department of Health	
Port Hedland Air Quality Health Risk Assessment for Particulate Matter	
Environmental Health Directorate	
January 2016	
health.wa.gov.au	
11. References	38

Port Hedland air quality

A [health risk assessment \(external site\)](#) was completed in 2016 as part of a [whole of government response \(external site\)](#) to planning and management of land uses in and around the Port Hedland township and port.

There is some uncertainty as to the impacts from dust exposure and how and where the boundary of air quality standards is applied. There is also some ongoing conflict between minimising population growth due to dust impacts and developing a growing vibrant town on the peninsula. Still, Department of Health strongly supports all efforts to reduce dust levels to as low as reasonably achievable and separating residential areas from industry source emissions.

Are Port Hedland residents at risk of greater health effects from dust than the rest of the population?

The [risk to health from dust \(PM₁₀\)](#) increases with increasing concentration and proximity to sources – this is true regardless of where people live. As yet there is no definitive evidence that particulates, measured as PM₁₀, in Port Hedland are any more or less harmful than the types of particulates found in large urban centres. The [health risk assessment \(external site\)](#) demonstrated that increased levels of dust exposure can have an adverse impact on human health in Port Hedland over the long term. There is no immediate or acute health risk to the Port Hedland community – but there needs to be a focus on managing and minimising peoples' exposure to dust.

Areas of Port Hedland with increasing proximity to the port experience occasional high dust events (>70 µg/m³). It is therefore reasonable that people living in this environment would be at greater risk than people living in a less dusty areas of Port Hedland. Due to the increased risk for susceptible groups, facilities that cater for these groups (known as sensitive land-uses), such as child-care centres, aged-care residences, schools and health centres, are prohibited in the West End.

While the Port Hedland population remains small, the number of individuals theoretically affected is also small. In addition, relatively fewer sensitive individuals are likely to inhabit short-term accommodation in a high commercial land use area.

If the residential population is allowed to increase and broaden to include more sensitive or health compromised individuals, the number of affected people would increase.

Who is most at risk?

Persons susceptible to elevated dust levels include:

- older people (>65 years old)
- people with pre-existing cardiovascular or respiratory disease
- children and adults with pre-existing respiratory conditions (asthma, bronchitis, chronic obstructive pulmonary disease (COPD))
- children.

For most healthy individuals, effects from small increases in dust levels range from no observable effects to subtle, reversible and manageable effects. Effects become more pronounced as dust levels increase.





Recap and Questions?

