



Port
Hedland
Industries
Council

Community Industry Forum

11 November 2020

Agenda

1. Welcome to Country
2. Introductions and apologies - all members of the PHIC CIF
3. Confirmation of Minutes – 12 August 2020
4. Governance
5. Introducing our guests
6. Topics for discussion
 - 2019/20 Port Hedland Ambient Air Quality Monitoring Annual Report
 - PHIC Update
 - LiDAR Monitoring
 - Frequently Asked Questions
 - An overview of the Port Hedland Voluntary Buy Back Scheme
Karlene Bylund, Managing Director, Hedland Maritime Initiative
 - Discussion on future agenda items
7. Other items
8. Action items and responsibilities
9. Questions on Notice

Introductions

PHIC acts collaboratively for the benefit of industry and the Port Hedland Community to ensure the long-term sustainable growth of the Port and the community.

PHIC Members

BHP



Guests

Karlene Bylund, Managing Director Hedland Maritime Initiative



Topic 1: Annual Report - background

2019/20 AAQM Network Annual Report

Key discussion points

- Port Hedland air quality monitoring network history
- What is reported on?
- How is data collected?
- Why is Taplin Street the reference point?



Annual Report overview

- 8th annual report
- 1 July – 30 June 2020 (7 monitors)
- 1 Jan – 30 June 2020 (Taplin Street)
- Reports on air quality guideline for PM10 of 70 $\mu\text{g}/\text{m}^3$ averaged over 24 hours and NEPM Air Quality Standards for PM10, PM2.5 and NO2
- Prepared by Katestone
- Independent audits undertaken by GHD to reassure readings at Taplin Street
- AR released to JTSI for comment followed by the report being presented to Minister Dawson and DWER



Annual Report Findings

- 3 exceedances air quality guideline for PM10 of $70 \mu\text{g}/\text{m}^3$ averaged over 24 hours at Taplin Street:
 - 9 & 10 January (134.8 and 89.5, both attributed to Cyclone Blake)
 - 18 May 2020 (80.3)



Topic 2: LiDAR

PHIC is always looking to improve was to monitor air quality across Port Hedland. One technology that PHIC has investigated is LiDAR.

Discussion:

1. What is LiDAR used for and how does it work?
2. What did PHIC want LiDAR to measure?
3. How did PHIC assess whether it is a useful tool for Port Hedland?
4. What LiDAR trials have been undertaken in Port Hedland?
 1. CRC Care (2011)
 2. PHIC LiDAR trial (2014-2016)
 3. DWER (2017)

LiDAR limitations

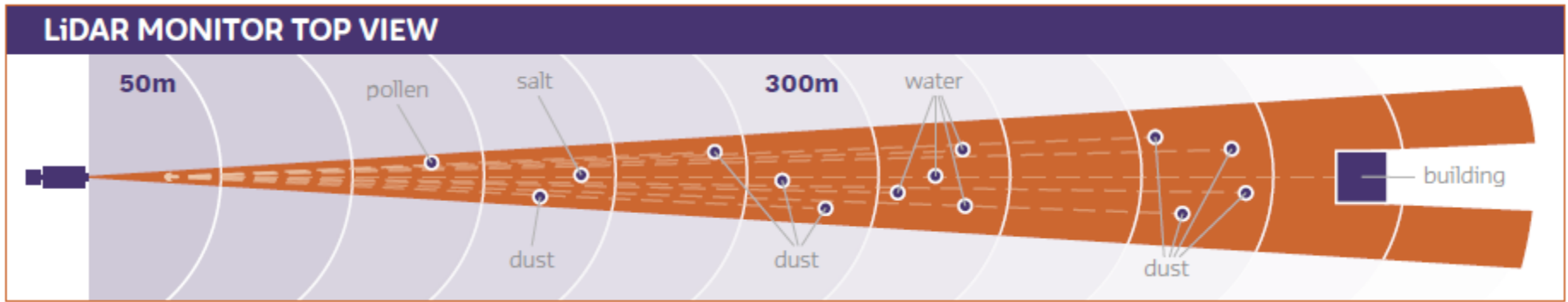


FIGURE 1 - LiDAR measures all particulate matter in the atmosphere including, dust, pollen, salt, water vapour and other suspended particles. The measurement doesn't differentiate between types of particulate matter, it provides relative concentration bands of matter. This can lead to data misinterpretation.

FIGURE 2 LiDAR only operates at the level it has been set. The return signal only monitors either elevated sources or plumes that have reached the scan height



LiDAR limitations and findings

PHIC supports DWER's position around LiDAR limitations and that LiDAR is not suitable for regulatory purposes (outlined in DWER factsheet).

1. There is no Australian Standard for the operation of LiDAR
2. LiDAR is not acceptable technology or methodology for point source monitoring
3. Pre-processing of LiDAR monitoring is required before usable imagery can be developed so it won't show real time monitoring scenarios
4. LiDAR can't be used to measure PM10 in isolation
5. The visual representation of LiDAR is only two-dimensional representation of three-dimensional movement in particles in the atmosphere
6. LiDAR cannot distinguish between dust, smoke, water, bushfires, buildings or trees. This means that "red" indicators may be interpreted as dust when it could be a range of other factors (buildings, water, trees etc)
7. The reliability of data is best at close proximity, not in general atmosphere (Port Hedland Airshed) and the instrument reduces reliability at distance
8. Calibrating LiDAR against AS technology such as BAMs to confirm correlations is technical challenging and potentially unreliable

LiDAR – more information

References:

<https://www.der.wa.gov.au/images/documents/our-work/community-updates/port-hedland/DWER DOH Fact Sheet - Port Hedland air quality.pdf>

<https://www.phic-hedland.com.au/index.php/2020/09/01/lidar-fact-sheet/>

<https://www.phic-hedland.com.au/wp-content/uploads/2020/09/PHIC LiDAR Report.pdf>

<https://www.phic-hedland.com.au/index.php/news-and-resources/fact-sheets/>

Questions



Topic 3: Port Hedland Voluntary Buy Back Scheme Update

Karlene Bylund
Managing Director
Hedland Maritime Initiative



Questions and other items





FUTURE AGENDA ITEMS

The **Community Industry Forum** is our opportunity to work with you and understand your aspirations as we move to create a sustainable future for Port Hedland.

Ongoing growth of the Port will generate jobs and enable economic diversity through new local business opportunities.

By implementing the right plan for Port Hedland, we can ensure a vibrant vision for the Port Hedland and a thriving community.

Future meeting schedule

Quarterly meeting dates for 2021

Wednesday 10 February

Wednesday 12 May

Wednesday 11 August

Wednesday 10 November





For more information visit our website:
phic-hedland.com.au

Our Members

BHP

