Submission
October 2017

Port Hedland Dust Management Taskforce Report

(Report Dated August 2016)

Department of Jobs, Tourism, Science and Innovation

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About CME

The Chamber of Minerals and Energy of Western Australia (CME) is the peak resources sector representative body in Western Australia. CME is funded by its member companies who are responsible for most of the State's mineral and energy production and are major employers of the resources sector workforce in the State.

In 2016-17, the value of Western Australia's mineral and petroleum industry was $105 billion. Iron ore is currently the State's most valuable commodity, and saw an increase in iron ore sales by almost 31 per cent on the previous financial year to value almost $64 billion. Petroleum products (including LNG, crude oil and condensate) followed at $19 billion, with gold third at $11 billion, both commodities saw an increase in sales of 5 per cent 7 per cent respectively from the previous financial year.

The resources sector is a major contributor to the state and the Australian economy. The estimated value of royalties the state received from the resources sector composed of $5.21 billion (Iron Ore - $3.6 billion) which accounts for around 19 per cent of the State Government's revenue.

Recommendations

CME welcomes the release of the Port Hedland Dust Management Taskforce Report (Taskforce Report) and the opportunity to provide a submission on the Report. This long awaited Report highlights the urgency for the State Government to drive resolution of potential land use conflicts at Port Hedland in the best interest of the State. The failure to date to resolve planning solutions is stifling economic development of Port Hedland and threatens the region's economic future.

CME recommends:

- Given the Port of Port Hedland's significance to the State and the urgent need for stakeholder certainty, the State Government should lead land use planning for Port Hedland with the support of the Town of Port Hedland.
- A Special Control Area westward of McGregor Street be immediately implemented as part of Town Planning Scheme No. 5. This must include measures to immediately cap and where possible reduce the number of permanent residents within dust-affected areas. The Western Australian Planning Commission (supported by the Department of Planning, Lands and Heritage) is best placed to take the lead on the Special Control Area given the agencies' pivotal role in these land use planning matters.
- Retaining the 24-hour PM_{10} interim guideline of 70µg/m^3 allowing 10 exceedances per year to accommodate natural events.
- Full (not partial) responsibility for the existing air quality monitoring network be transferred to the Department of Water and Environmental Regulation (DWER). The transfer of the existing air quality monitoring network to DWER can, and should, be done without the use of additional regulations.
- The Town of Port Hedland work with relevant stakeholders to progress dust mitigation and control measures for non-industry dust sources including the spoil bank area, unsealed roads, other open areas, greening options and improved municipal management services.
- A co-ordinated, risk-based approach to industry regulation should be implemented.
- A precinct-wide, risk and evidence based approach be adopted to managing noise in Port Hedland. This must be expanded beyond the immediate Port precinct to consider noise associated with major transport corridors and the implications of this noise on potential future land uses and development.

- CME supports the recommended continuation of the Taskforce.
- The Taskforce should produce an annual public report to ensure all stakeholders, including community members, are informed of implementation progress for endorsed recommendations.
- The State Government and all other relevant stakeholders must prioritise and expeditiously addressing the critical issues identified by

Context

The Port of Port Hedland

The Port of Port Hedland (the Port) has a long history. During the 1800s, the Port was predominantly used for agricultural purposes, pearling and limited minerals such as tin and gold. The lifting of the iron ore export embargo in the 1960s saw the Port transform into a globally significant asset for the seaborne iron ore trade.

In recent years, global iron ore demand growth (predominantly from China) has resulted in further expansion of the Port including the introduction of several new producers including Fortescue Metals Group, Atlas Iron and Roy Hill.

The Port is now the world's largest bulk export facility. It achieve a record annual throughput during 2016-2017 of 500.9Mt, an increase of 40.5Mt (9 per cent) from the previous year[1]. Of this throughput, iron ore was the majority (494.6Mt[2]) with an estimated value of $27B[3] contributing more than $2B[4] of royalties to the State. Approximately 5,000 full-time equivalents jobs are supported by the Port[5].

These figures clearly demonstrate the significance of the Port to the State's overall economic prosperity. Given the State significance of the Port, planning measures are urgently required to protect this vital asset and provide certainty to all stakeholder regarding future development for Port Hedland.

The Taskforce

In January 2009, the Environmental Protection Authority (EPA) released Environmental Protection Bulletin No. 2 Port Hedland Dust and Noise. The Bulletin recommended urgent attention be given to the dust and noise level in Port Hedland. In response, the Premier established the Port Hedland Dust Management Taskforce (Taskforce) chaired by the (then) Department of State Development, and tasked with providing co-ordinated advice and information to stakeholders regarding dust and noise.

Members included representatives from the Town of Port Hedland, the (then) Port Hedland Port Authority, Departments of Health, Planning, State Development and Environmental Regulation, the Environmental Protection Agency, and industry (the Port Hedland Industries Council, BHP and Fortescue Metals Group).

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[1] Pilbara Ports Authority, Media Release 7 July 2017 "PPA Delivers Record Annual Throughput" https://www.pilbaraports.com.au/Home/About-PPA/News-and-publications/Latest-news/PPA-delivers-record-annual-throughput

[2] Pilbara Ports Authority, Media Release 7 July 2017 "PPA Delivers Record Annual Throughput" https://www.pilbaraports.com.au/Home/About-PPA/News-and-publications/Latest-news/PPA-delivers-record-annual-throughput

[3] Estimate using publicly available revenue data for BHP, FMG, Atlas Iron, Mineral Resources and estimated revenue for Roy Hill using publicly stated shipped tonnes and average discounted iron ore prices. Value cross-checked with estimates using DMP and Pilbara Ports data. Estimates ranged between $27.1B and $29.0B. The lower estimate (based on company data) has been provided.

[4] Estimate based on data available in the 2016-2017 DMP Annual Report and shipped volume data for Port Hedland available from the Pilbara Ports Authority.

[5] An Economic Study of Port Hedland Port, ACIL Allens, October 2017, http://phic-hedland.com.au/wp-content/uploads/2017/10/port-hedland-port-economic-study-final-report-september-2017.pdf

Land Use Planning

The Western Australian Government has recognised the importance of sound planning for decades, including the need to separate industrial activities and sensitive land uses[6][7][8][9][10]. The current State Industrial Buffer Policy (WAPC, 1997) specifically acknowledges the importance of buffers for existing industrial areas as a means of protecting them from encroachment through the stated objective to:

> *"… protect industry, infrastructure and special uses from the encroachment of incompatible land uses" (WAPC, 1997).*

Sound land use planning minimises the likelihood of land use conflict between incompatible land uses by establishing industrial buffers and planning controls that facilitate compatible land use development within these buffers. This approach ensures optimal economic development of land assets whilst protecting sensitive receptors.

For older infrastructure assets (such as the Port), the necessary planning protections may not have been established in advance of the asset's construction. In some instances, the need for such protections may also only become evident once additional public health data or scientific information becomes available. Therefore, planning protections may be required retrospectively, once land use conflicts and development pressures have begun to emerge.

Although establishing such planning measures for existing industrial assets can be complicated, on-going deferral will only exacerbate issues including:

- Prolonged uncertainty for landholders. This uncertainty can delay investments for all stakeholders including residential owners / tenants, local government, local business owners as well as the industrial asset owner / users and their employees.
- On-going land use conflicts between sensitive receptors and industrial asset owners / users.
- Further intensification and / or encroachment of sensitive receptors due to the absence of planning controls restricting incompatible development. This increases the number of potentially negatively impacted stakeholders, as well as increasing the complexity and ultimate cost of resolving the planning issues.
- Increased workload for regulatory authorities. Although driven from a planning issue, day-to-day land use conflicts commonly manifest as environmental health issues requiring increased involvement of the environmental regulator rather than the planning regulator.
- Increased compliance costs for the asset owner/users may also emerge in instances where the environmental regulator has limited options to resolve the growing land use conflict that has result from poor planning and encroachment. At some point, increasing compliance costs become prohibitive for the asset owner/users and effectively cap asset use or force asset closure.

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[6] Environmental Protection Authority, June 2005, Guidance for the Assessment of Environmental Factors No. 3: Separation Distances between Industrial and Sensitive Land Uses.

[7] Environmental Protection Authority, September 2015, DRAFT Environmental Assessment Guideline for Separation distances between industrial and sensitive land uses.

[8] Western Australian Planning Commission, July 2009, State Planning Policy 4.1, State Industrial Buffer (Amended) (Draft).

[9] Western Australian Planning Commission, May 1997, Statement of Planning Policy 4.1 State Industrial Buffer Policy.

[10] Department of Environment Regulation, August 2015, Guidance Statement: Separation Distances (Draft).

The above negative consequences are becoming evident for the Port. Additionally, community expectations of amenity values in residential areas have also changed and public health knowledge has improved.

Despite the Port's obvious status as critical State infrastructure and the issues noted above, the Port has not yet been afforded the necessary planning protection to ensure its long-term operability. **Given the Port of Port Hedland's significance to the State and the urgent need for stakeholder certainty, CME recommends the State Government lead land use planning for Port Hedland with the support of the Town of Port Hedland.**

The Taskforce Report recommended **a Special Control Area westward of McGregor Street be implemented as part of Town Planning Scheme No. 5.** CME supports this view, however, also recommends measures be implemented to **immediately cap and where possible reduce the number of permanent residents within dust-affected areas of Port Hedland.**

CME believes the Western Australian Planning Commission (supported by the Department of Planning, Lands and Heritage) is best placed to take the lead on the Special Control Area given the agencies' pivotal role in these land use planning matters.

Health Risk Assessment and the Interim Guideline

In 2007, the Lung Institute of Western Australia and the Institute of Occupational Medicine published the report *"Literature Review and Report on Potential Health Impacts of Exposure to Crustal Material in Port Hedland"*[11].

This report noted Australia's National Environmental Protection Measure (NEPM) for PM_{10} was intended for urban environments where particulate matter (dust) is fine and rich in combustion products such as those generated from vehicle engines. It further noted that the physiochemical nature of dust in Port Hedland differs from such urban environments, as the dust is predominantly larger sized, crustal dust (of natural/non-combustion origin). Consequently, the NEPM is not directly applicable to Port Hedland.

Based on relevant literature, this Report recommended a 24-hour coarse dust ($PM_{10-2.5}$) guideline of 70µg/m^3. This approach was adopted by the Taskforce in its 2010 *"Port Hedland Air Quality and Noise Management Plan"*[12] which recognised an interim 24-hour PM_{10} guideline of 70µg/m^3 with 10 exceedances per year to accommodate natural events.

In 2016, the Department of Health released the *"Port Hedland Air Quality Health Risk Assessment for Particulate Matter"* [13] (HRA). As noted in the Taskforce Report, the HRA concluded:

- There is sufficient evidence of potential impacts on human health from dust, specifically PM10, in the Toxikos Report to warrant dust management controls and strategic and land-use planning to reduce community exposure to dust.

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[11] "Literature Review and Report on Potential Health Impacts of Exposure to Crustal Material in Port Hedland" Lung Institute of Western Australia and the Institute of Occupational Medicine, commissioned by the Department of Health (April 2007) http://www.jtsi.wa.gov.au/docs/default-source/default-document-library/ph_dust_management_health_impacts_of_exposure_to_material_0407.pdf?sfvrsn=4

[12] "Port Hedland Air Quality and Noise Management Plan" Department of State Development (March 2010) http://www.jtsi.wa.gov.au/docs/default-source/default-document-library/ph_air_quality_noise_management_plan_0310.pdf?sfvrsn=8

[13] Port Hedland Air Quality Health Risk Assessment for Particulate Matter, published by Environmental Health Directorate, Government of Western Australia (January 2016) http://ww2.health.wa.gov.au/~/media/Files/Corporate/general%20documents/Environmental%20health/Port%20Hedland%20Health%20Assessment.ashx

- Most of the public health concerns about dust in Port Hedland arise from PM_{10} concentrations over 70 µg/m^3. Research suggests coarse particles (PM2.5-10) are associated with an increase in all-cause mortality and hospitalisation for respiratory conditions. The areas affected are close to the Port.
- The number of affected individuals is very low because the population is small. With a larger population, the impact on health would be more visible and would necessitate more immediate regulatory control.
- A legacy of the rapid growth of Port Hedland is the close proximity of residential areas to commercial operations at Nelson Point and the port. This means that fugitive dust from port and commercial operations at Nelson Point and Finucane Island disperses over residential areas under certain meteorological conditions, despite good dust management control.

In light of the above, CME supports the Taskforce Report Recommendation 1 **to retain the 24-hour PM_{10} interim guideline of 70µg/m^3 with 10 exceedances per year to accommodate natural events**[14].

Air Quality Monitoring

Port Hedland has a long established, independently operated, maintained and calibrated ambient air quality network. This monitoring network has been established and is maintained in accordance with relevant Australian Standards to ensure accuracy and comparability of data, including assessment of adherence (or otherwise) to the 24-hour PM_{10} Interim Guideline. The results of the monitoring are publicly available in real time via the Port Hedland Industries Council (PHIC) website http://www.phicmonitoring.com.au/.

The Taskforce Report notes some community members negatively perceive the involvement of industry (through PHIC) in funding the air quality monitoring network. This is despite the network being maintained by independent specialist providers[15] in accordance with Australian Standards.

The monitoring network is essential for ongoing understanding and management of dust in the Port Hedland area and provision of data to the community is essential for transparency. **In order to avoid negative perceptions of the existing air quality monitoring network's independence, CME recommends full (not partial) responsibility be transferred to the Department of Water and Environmental Regulation (DWER). Critically, live data reporting and adherence to relevant Australian Standards must be maintained during and post any transition to ensure on-going transparency to the community. The transfer of the existing air quality monitoring network to DWER can, and should, be done without the use of additional regulations.**

Improving Control of Non-Industry Dust Sources

In order to improve ambient air quality for Port Hedland, it will be necessary to look at all key dust sources. To date, the focus has largely been exclusively on industrial dust sources.

As noted in the most recent annual air quality monitoring report[16], air quality in Port Hedland has improved over recent years despite the significant growth in iron ore export volumes. This

[14] This is to allow for naturally high dust events such as bushfires and extreme weather. It does allow anthropogenic sources (such as industry) to cause exceedance(s).

[15] Specialist providers, Ecotech, are currently contracted to operate, maintain and calibrate this network.

[16] Annual Report 2015/2016 Port Hedland Ambient Air Quality Monitoring Program (31 October 2016) http://phic-hedland.com.au/wp-content/uploads/2017/05/phic-2015-16-annual-monitoring-report_v1-0_final.pdf

demonstrates the success of industry's actions to better manage dust and reduce impacts on Port Hedland. There has however been limited progress for non-industry dust sources.

CME supports the recommendation for the Town of Port Hedland to work with relevant stakeholders to progress dust mitigation and control measures for non-industry dust sources. This includes the spoil bank area, unsealed roads, other open areas, greening options and improved municipal management services.

CME notes that implementation of the clear planning controls will provide much needed certainty for stakeholders and therefore increase their confidence to invest in dust control for these sources (refer to CME Land Use Planning recommendations above).

Industry Regulation

CME supports the implementation of a co-ordinated, risk-based approach to industry regulation under Part V of the Environmental Protection Act 1986 (Report Recommendation 3).

CME notes the amalgamation of the former Department of Environment Regulation and the Office of the Environmental Protection Authority in to the new Department of Water and Environmental Regulation should also allow for improved co-ordination between Part IV and Part V of the *Environmental Protection Act 1986*.

Noise

As noted in the Taskforce Report, noise emissions also have the potential to affect sensitive receptors such as residential areas. In order to assess cumulative noise impacts and focus on key sources and effective controls, **CME recommends a precinct-wide, risk and evidence based approach to managing noise in Port Hedland.**

CME strongly recommends noise assessment be expanded beyond the immediate Port precinct to consider noise associated with major transport corridors and the implications of this noise on potential future land uses and development.

CME notes that a draft updated version of *State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning*[17] has been published and is currently undergoing public consultation.

Governance and the Future of the Taskforce

A key driver for the original establishment of the Taskforce was to bring the multitude of key stakeholders together in a constructive forum to co-ordinate advice and information regarding Port Hedland dust and noise. The need for such co-ordination clearly remains and through successful completion of actions to date, the Taskforce has demonstrated its ability to function in such a capacity. Therefore, **CME supports the continuation of the Taskforce.**

In addition to the Taskforce reporting annually to the Minister, **CME recommends the Taskforce produce an annual public report to ensure all stakeholders, including community members, are informed of implementation progress for endorsed recommendations.**

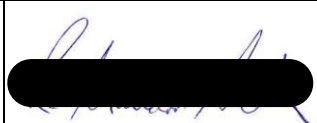
Conclusion

CME welcomes the release of the Taskforce Report and the opportunity to provide a submission on the Report. Given the State significance of the Port, CME looks forward to

[17] https://www.planning.wa.gov.au/publications/1182.aspx

working with Government to protect this vital asset and provide certainty to all stakeholder regarding future development for Port Hedland.

If you have any further queries regarding the above matters, please contact Kane Moyle, Manager – Natural Resources, on (08) 9220 8511 or k.moyle@cmewa.com.

Authorised by	Position	Date	Signed
Reg Howard-Smith	Chief Executive	5/10/2017	
Document reference	K:\Environment\Projects & Issues\Dust\170920-ENV-Port Hedland Taskforce Report Submission-v0.5.docx		