

KIMBERLEY MINERAL SANDS

Thunderbird Traffic Impact Assessment: Community Engagement Report

Executive Summary

17.07.2023



**Creating
Communities**

REPORT DETAILS

PLEASE NOTE: This is an Executive Summary report *containing only the Executive Summary* of the full Thunderbird Traffic Impact Assessment: Community Engagement Report delivered to KMS in July, 2023.

PREPARED FOR Kimberley Mineral Sands (KMS)

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DATE 17th July 2023

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1. EXECUTIVE SUMMARY

1.1 Executive Summary

The following section provides an overview of the stakeholder and community engagement process that sought feedback regarding the transportation of mineral sands from the Thunderbird mine to the Broome Port using road trains (also referred to trucks in this report) and the associated findings from this process.

Prior to undertaking the engagement process a literature review and demographic analysis were undertaken to provide important contextual information. These are included in Sections 6 - 7 of this report.

1.1.1 Impact Areas

The process focussed on three areas of impact for Broome community.

- Health, Liveability and Wellbeing impacts
- Road Safety impacts
- Economic impacts

1.1.2 Promotion of the Engagement

Extensive promotion was undertaken to encourage stakeholders, residents and community members in Broome to participate in the engagement process. This included:

- A newspaper advertisement (estimated reach per issue of 11,171),
- Distribution of flyers to residences along the Gubinge Road corridor (approximately 1,500 flyers distributed),
- Multiple social media posts on various pages targeting segments of the Broome community (4,556 post impressions),
- LinkedIn posts (1,340 post impressions),
- Email invitations to stakeholders containing information about the process (75 emails),
- Dedicated e-shot to community database (1699 recipients)
- Mention in May 2023 Community Newsletter (1703 recipients) and
- Physical posters (3 locations).

1.1.3 Engagement Activities

The following engagement activities were held:

- Interviews with key stakeholders (21 of 35 invited organisations took up the opportunity to engage),
- Community, resident, business and community organisation focus groups (11 were organised, but only four were held due to low levels of interest and registration, with a total of 42 attendees), and
- Key impacted resident survey (which focussed on those residing along the Gubinge Road Corridor, but was also open to everyone, 269 total responses received).



Despite the extensive promotion of the engagement activities including by key organisations, as well as a community group who oppose the increase road train movements, the level of responses overall was relatively low. Overall, only a small section of the Broome population took the opportunity to raise issues and to have their say regarding the proposed use of road trains to transport mineral sands to the Port of Broome.

1.1.4 Overall Comparison of Impact Areas

Of those stakeholders and community members that chose to engage in the process, road safety was the area that was identified as likely to have the greatest impact on the community. Road Safety issues were raised across all impact areas, even those not specifically focussed on this topic.

A significant amount of feedback was received about the need for various types of road users (i.e. vehicles, pedestrians, cyclists and e-scooter users) to access, cross or use the Gubinge Road and Port Drive heavy haulage route. This is due to Gubinge Road and Port Drive separating key coastal locations like Cable Beach, Gantheaume Point and Minyirr Reserve from other areas of the town like Old Broome, the town centre and airport. As such, any changes to these arterial routes that could impact safety is of understandable community concern.

The table below outlines the top ten key issues raised by stakeholders and community members in the anecdotal feedback across all engagement activities and impact areas.

The percentage figures next to the issues, impacts and concerns represent the proportion of comments relating to that theme. As such, it is clear that Noise Impacts was the top-rated issue of concern, accounting for 12% of all comments made throughout all engagement processes. Following Noise Impacts were two issues relating to Road Safety (Road Condition, Design and Features and Road Safety Concerns), followed by two Economic Impacts (Local Jobs and Business Impacts and Tourism Impacts).

The top ten issues accounted for 61% of all issues raised. The remaining 39% of issues were made up of 38 additional individual themes (see Section 3, Key Findings: Issues and Concerns).



TABLE 1: TOP TEN ISSUES OF CONCERN ACROSS ALL IMPACT AREAS AND ENGAGEMENT ACTIVITIES

ISSUE, IMPACT OR CONCERN	BREAKDOWN OF THE PROPORTION WITHIN ALL ISSUES RAISED
1. Noise Impacts	12%
2. Road Condition, Design and Features	9%
3. Road Safety Concerns	6%
4. Local Jobs and Business Impacts	6%
5. Tourism Impacts	5%
6. Pedestrian Impacts	5%
7. Visual Impacts of Mining	5%
8. Liveability and Lifestyle Impacts	5%
9. Dust and Fumes Impacts	4%
10. Housing Impacts	4%
11. Other rated Issues, Impacts and Concerns	39%

Further demonstrating the emphasis on road safety impacts that came across in community feedback, four of the top five ranked impacts in the resident survey related to road safety. These were:

1. Interactions / potential collisions with non-vehicle road users (i.e. pedestrians, cyclists)
2. Interactions / potential collisions between road trains and other vehicles (i.e. cars and trucks)
3. Vehicles overtaking road trains
4. Road train speeds

A significant amount of feedback was received about the need for various types of road users (i.e. vehicles, pedestrians, cyclists and e-scooter users) to access, cross or use the Gubinge Road and Port Drive heavy haulage route. This is due to Gubinge Road and Port Drive separating key coastal locations like Cable Beach, Gantheaume Point and Minyirr Reserve from other areas of the town like Old Broome, the town centre and airport. As such, any changes to these arterial routes that could impact safety is of understandable community concern.

Particular concern was raised regarding the safety of children and families as pedestrians accessing and crossing Gubinge Road with an increased number of road trains.

However, this same feedback varied across stakeholders in the interviews and focus groups, particularly with regards to current / existing road safety concerns. In fact, many believed that there are already significant road safety concerns on Gubinge Road and Port Drive stemming from the current use of trucks and road trains (e.g. cattle road trains) that will be exacerbated by an increase in truck movements.

However, the feedback from representatives of key agencies that deal with road accidents on Gubinge Road and Port Drive (WA Police and St John Ambulance Service)



indicated that these roads are of little road safety concern with the majority of their work focused on other areas within the town.

Road accident data that is publicly available from Main Roads WA supports this feedback. According to this data there has been a total of 42 traffic accidents on the route over the past five years. The rate of accidents over this five-year period (of all descriptions) equates to approximately one incident per 35 days; or one every five weeks.

Of these incidents, only two (2) across this five year period involved any type of truck. All others involved other vehicle types (i.e. cars, cyclists, etc.). One truck incident was a minor accident and the other accident involved the need for medical attention (this incident occurred near a truck stop between Broome Road near Waterbank by the Broome Road Train Assembly Area – not in a residential area).

In relation to health, liveability and wellbeing impacts, the issue of noise was rated as the largest potential impact by far. This was particularly the case for residents that reside within close proximity to Gubinge Road. Secondary to this were issues associated with air quality from dust, fumes and smells.

There was mixed feedback in relation to economic impacts. Many stakeholders and community members identified a variety of economic benefits including additional local employment opportunities and benefits for local and regional businesses. However, others raised concerns about impacts on tourism from increased road train movements through the town.

Housing was also an issue with varying feedback, ranging from those who are concerned that housing values will drop for residences close to Gubinge Road through to those who had concerns that housing values would rise and availability would be restricted as a result of increased demand (particularly from the commitment from KMS to employ locally rather than have a fly-in fly-out workforce).

1.1.5 Impact Area 1 Health, Liveability and Wellbeing

The top issues identified in this area were noise and air quality.

When asked to rate the level of anticipated impact in the resident survey, four of the five potential health, liveability and wellbeing impacts were identified as 'high' or 'very high' impact by more than 50% of respondents.

Key issues such as noise, air quality, vibrations, smells and light spill from the road trains were identified by residents that live closer to Gubinge Road in the resident survey feedback as having greater health, liveability and wellbeing impacts, than those who lived outside the Gubinge Road corridor.

Noise was the most commonly raised issue across all engagement activities. Specific issues related to engine noise; vehicle braking and tyre noise. Additionally, the road surface of Gubinge Road was identified by some stakeholders as a contributing factor to existing noise production.

It was noted by several stakeholders and community members that there is already noticeable noise emanating from other activities in the town, particularly from the airport and from existing traffic on the Gubinge Road.



Concerns were raised by various stakeholders and community members that an increase in large truck movement could exacerbate the existing noise problems, particularly at night when conditions are still.

Air quality/smell impacts from dust, fumes or smells were also rated as having a high impact in the resident survey. The emission of diesel fumes from the trucks as well as dust impacts were raised across all engagement activities, though it was noted by some of those who are aware of the use of sealed rotainers, that this would be a key dust mitigation measure.

Vibrations was an issue raised by some in open discussion and was rated much higher in the resident survey by those who reside close to Gubinge Road than those who lived outside of the area.

Light spill was rarely raised in interviews and focus groups and rated much lower as an impact in the survey than other issues. This is likely as a result of there being native bushland buffers along Gubinge Road to screen light spill.

Interestingly **Road Safety** was a commonly raised issue in the Health, Liveability and wellbeing area of the survey, despite there being a separate area in the survey for feedback on road safety issues.

Other key issues raised in the engagement process via discussion or open comment in the survey include:

- **Visual Impacts of Mining** - A key concern from some stakeholders and community members was that the increased presence of road trains travelling through the town would change the perceived character of the town to be more like a mining town, than a tourist town.
- **Recreational Impacts** – The potential for reduced access to key coastal recreation areas such as Cable Beach and Minyirr Reserve was raised by some stakeholders and community members. It was noted that with large sections of the population residing and working on the other side of these roads that access to recreation areas could be impeded by regular truck movements.
- **Environmental Impacts** – Issues were raised in relation to environmental impacts that included potential impacts on wildlife in the conservation areas on the coastal side of the roads - both from road interactions and the impact on habitat from noise or dust. Other issues included potential impacts on local flora from dust and fumes.
- **Health Impacts** - Issues were raised mostly in the community survey about potential health impacts particularly from reduced air quality, as well as health impacts from not being able to recreate as readily as they might have (e.g., cycling) if key routes are too dangerous to use. Additionally mental health impacts were identified by some people including the potential of increased anxiety for people in dealing with road safety risks as well as the impacts on their lifestyle from experiencing regular large truck movements through the town.
- **Truck Movements** – There was consistent feedback about the impact of large trucks moving through the town 24 hours a day and that there needed to be a schedule or curfew of hours to limit health, liveability, and wellbeing impacts. (i.e. not during school hours, peak hours etc.)
- **Composition of Mineral Sands** - Some people raised concerns about the composition of mineral sands and if any exposure to these materials could have health impacts or provide potential biodiversity risks from the transference of



materials to the local environment. (Note: stakeholders were advised that the mineral sands would be transported in sealed rotainers and did not pose a radiation risk – which was raised as a common question in focus groups)

- **Community Event Impacts** - A few stakeholders raised the issue of potential impacts on key community events that rely on the use of Gubinge Road and the need to manage the scheduling of trucks in relation to these key events.

It is also important to note that with some of the interviews and survey respondents that people chose to specifically state that there would be **no issues** in relation to health, liveability and wellbeing from the road train movements. These views seemed to stem from an awareness of the existing use of the Gubinge Road and Port Drive heavy haulage route by trucks and road trains that didn't provide noticeable current impacts to these respondents.

1.1.6 Impact Area 2 Road Safety

Road safety was the area that was identified by stakeholders and community members as having greatest impact on the community. The greatest concern was in relation to the potential for increased accidents.

When asked to rate the level of anticipated impact in the resident survey, all of the potential impacts listed in road safety section of the resident survey were identified as 'high' or 'very high' impact by more than 50% of respondents.

The greatest potential impacts were seen to be in relation to:

- Interactions and potential collisions with other road users,
- Overtaking road trains, and
- Road train speeds.

Other key issues raised in the engagement process via discussion or open comment in the survey include:

- **Road Condition, Design and Features** – particularly Port Drive which many people believe is not of an appropriate standard to accommodate an increased road train usage.
- **Pedestrian Impacts** - whereby it is either challenging or unsafe to cross Gubinge Road or Port Drive. Particular focus was on school students in this regard.
- **Cyclist Impacts** – issues were raised regarding the lack of separation of cyclists from road users either due to a lack of wide enough road shoulders and the lack of dedicated cycle paths.
- **Managing Incidents or Spills** - Feedback mostly related to concerns about an increased likelihood of road accidents/incidents and the severity of accidents that could occur if it involved interactions with large trucks. However some others raised questions regarding how any major spill of the mineral sands would be tackled.
- **Tourist Traffic** – Concern was raised about the perceived risk with of tourists who may not be experienced in driving on regional roads and encountering large road trains.
- **Trucks Speed, Capabilities & Size** - Concerns were raised about the trucks and their speed, size and capabilities to handle the conditions of the roads, when carrying heavy loads and the risk this provides to other road users.



- **Highway Traffic and Lack of Overpassing Lanes** - A consistent area of concern across stakeholders (including police and St John Ambulance) was more in relation to the use of more road trains on the highway outside of Broome, where there aren't any passing lanes to enable other drivers to pass, particularly with the proposed road Performance Based Road Trains being speed limited to 90kmph on roads where others can travel from 100 – 110Kmph. It was viewed that this could lead to unsafe passing practices from those who become frustrated in being stuck behind the road trains.
- **Road Safety Data / Information and Consultation** - Issues were raised mostly by members of resident group that opposes more trucks on Gubinge Road, regarding veracity of the existing road traffic data and the recommended need for more research and consultation in relation to traffic impacts.
- **Traffic Increases** - Issues were raised about the impact of a general increase in traffic which will make it harder to merge; see a buildup of trucks at the Port and make movement around town more challenging.
- **Time of Truck Movements** - There was varying opinions about the best times for truck movements to occur though the most common times identified to avoid were sunrise and sunset; as well as high traffic times including peak school and work travel times.
- **Truck Driver Capabilities** -Some survey responses focused on the need for truck drivers to be capable, well trained and provided with specific training on how to handle local road conditions -in particular roundabouts in Broome in order to limit road safety risks.

1.1.7 Impact Area 3 – Economic Impacts

Overall economic impacts rated lower than the other two areas. This was likely because there are a number of positive economic impacts that were identified by stakeholders and community members, rather than primarily negative impacts that were identified for the other two impact areas.

When asked to rate the level of anticipated impact in the resident survey, only two of five of the potential impacts listed in the economic section of the resident survey were identified by all groups as having a 'high' or 'very high' impact by more than 50% of respondents. These being:

- Property values of Gubinge Road corridor residences
- Tourism

Additionally, more than 50% of respondents that live near Gubinge Road rated impacts on their productivity (i.e. working from home or in a local business) as being high or very high impact. Less than 50% of those residing outside of the area rated this as a high impact.

Surprisingly **the rating of impacts on property values of Gubinge Road residences** were rated slightly higher by those living outside the Gubinge Road area than those living within it. Those who raised this issue outlined how they were concerned that noise, road safety and other issues could impact people's living experience near these roads, making these residences less desirable.

Tourism impacts were identified across all types of engagement. The movement of large trucks was seen by some community members and stakeholders as having the potential to **impact the character and appeal of Broome** as well as the associated visitor experience, which could reduce tourist numbers.



Feedback in relation to **jobs and business impacts** was largely positive due to the identified benefits the Thunderbird Mineral Sands Project would have on the Broome Economy. Specific benefits that were identified were mostly in relation to improved training, employment, and business opportunities for the Broome community, including benefits for Aboriginal organisations and community members. Other positive feedback was in relation to the project delivering an economic boost for 12 months of the year, whereas tourism is focused only for certain months parts of the year.

Other key issues raised in the engagement process via discussion or open comment in the survey include:

- **Housing Impacts** – The current lack of available housing for new residents was recognised as an existing issue in Broome, particularly if KMS is looking for staff to reside locally. This was seen by some as potentially increasing both house purchase prices and rental prices and limiting housing availability for key service workers. Conversely, there was several people, particularly those who reside in proximity to the Gubinge Road and Port Drive heavy haulage route, that were concerned that an increase in large truck movements will result in a loss of their property values.
- **Unclear Economic Benefit for Broome** - Some community members provided feedback that it was unclear what the economic impacts would be on Broome, as they are unsure if the potential for increased benefits from the mining activity would be less or greater than any potential impact on industries like tourism.
- **Design and Operation of Broome Port** - Feedback from some key stakeholders was that it was clear that the Broome Port services the region and is a key logistics hub, and as such it is understandable that mineral sands will be exported from a port designed to deliver this service. Other commentary related to how the port can best manage the truck movements and not inconvenience or impact other recreational port users.

1.1.8 Suggested Management Strategies

The following summarises the main management strategy themes for Road Safety suggested by stakeholders and community members on how to mitigate impacts of the road train movements.

- **Managing Truck Movements and Conditions**
 - Scheduling of Truck Movements to Avoid Key Impact Periods
 - Use of Different Truck Types
 - Implementing Speed Limits
 - Reducing Dust, Fumes and Noise
 - Truck Driver Capability
- **Improved Infrastructure for all Road Users**
 - Road Upgrades (Particularly Port Drive)
 - Dedicated Cycleway and Cycling Network Along Gubinge Road and Port Drive
 - Footpath Improvements & Safer Crossing Points
 - Provision of Overtaking Lanes
 - Road Widening and Management of Roundabouts
 - Cattle Fencing
 - Use of Noise Buffering



- Use of Traffic Lights
- **Port Use and Access**
 - Effective Management of Port Access for Recreation, Tourism and Cultural Uses
 - Provide a Separate Road Access to the Port to Separate Cars and Trucks
 - Use of a Different Port to Export Mineral Sands
- **Education and Signage**
 - Road Safety Education
 - Improved Road Signage
- **Studying and Monitoring of Impacts**
 - Air, Noise Quality and Health Monitoring
 - Road Use and Safety Data
 - Fauna and Flora Impact Monitoring
- **Community Engagement**
 - Promoting the Economic Benefits
 - Enhanced Communication
 - Social Investment
- **Other**
 - Limiting Industrialisation of Broome / Maintaining the Character of Broome
 - Addressing Housing Demand / Additional Housing
 - Improved Road Signage
 - Alternative Transport Routes and Options
 - Emergency Response
 - Recompense for Loss
 - Objections – Stopping Trucks and Ceasing the Project

