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To: Oakajee Port and Rail From: Daniel Lloyd

Attention: Cathee Miller Date: 2 July 2010

Email: CMiller@opandr.com Pages: 3

Our Ref: 9091364-04

Re: Port Construction Noise

Cathee

Provided below is our assessment of the noise associated with the construction of the Oakajee terrestrial port, in particular the piling that may be required for the rail car dumper foundations. It should be noted that the piling is scheduled to occur for approximately 4 months and will only occur during the daytime period of 7.00am to 7.00pm Monday to Saturday.

For this assessment, we have assumed that impact piling occurs at the car dumper location; together with the operation of seven dozers, eight graders and two front-end loaders. The equipment has been distributed between the construction of the stockpiling area and the railway as it enters the terrestrial port area.

Typical sound power levels for this equipment, calculated from measured noise levels, are shown below in *Table 1*.

Table 1 Sound Power Levels Used in the Noise Modelling

| Plant Item | Sound Power Level |
|-------------------|-------------------|
| Impact Piling | 136 dB(A) |
| Dozer | 117 dB(A) |
| Grader | 113 dB(A) |
| Front -end Loader | 109 dB(A) |

The results are presented below in *Table 2*, and as noise level contours in *Figure 1*.

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Table 2 Predicted Noise Levels from Construction of the Terrestrial Port

| Address | Predicted Noise Level L _{A10} dB | Comment |
|-------------------------------------|----------------------------------------------|--------------------------------|
| 2499 North West Coastal Hwy Oakajee | 50.2 | Owned by the WA Land Authority |
| 122 Olsen Rd Howatharra | 38.3 | Owned by the WA Land Authority |
| lot 2 | 37.1 | Owned by the WA Land Authority |
| 2017 North West Coastal Hwy Oakajee | 36 | Owned by the WA Land Authority |
| 291 Carey Rd White Peak | 34.4 | Owned by the WA Land Authority |
| 4 Rewell Rd White Peak | 33.5 | Owned by the WA Land Authority |
| lot 1 | 31.3 | Owned by the WA Land Authority |
| lot 328 | 31 | Owned by the WA Land Authority |
| lot 9782 | 29.5 | Owned by the WA Land Authority |
| 2097 North West Coastal Hwy Oakajee | 29 | Owned by the WA Land Authority |
| lot 2594 | 27.6 | Owned by the WA Land Authority |
| lot 3324 | 26.9 | Owned by, Brett Edward Gannon |
| 3325 White Peak Rd White Peak | 23.3 | Owned by the WA Land Authority |
| lot 2815 | 23 | Owned by the WA Land Authority |
| 1789 North West Coastal Hwy Oakajee | 22.9 | Owned by the WA Land Authority |
| 12 Lacey Rd White Peak | 21.3 | Owned by the WA Land Authority |
| 14 Lacey Rd white Peak | 20.7 | Owned by the WA Land Authority |

The results show that during the construction phase of this project, the only noise sensitive premises predicted to receive a noise level exceeding the night-time assigned level under the Environmental Protection (Noise) Regulations 1997, are contained within the Oakajee Industrial Buffer and therefore owned by the WA Land Authority. In addition, the predicted noise levels are dependent on the location of the plant and these predictions assume the worst-case scenario of plant located at the eastern extremities of the port area.

The results also show that even assuming a 24-hour construction operation, the assigned levels would not be exceeded at any privately owned residential premises.

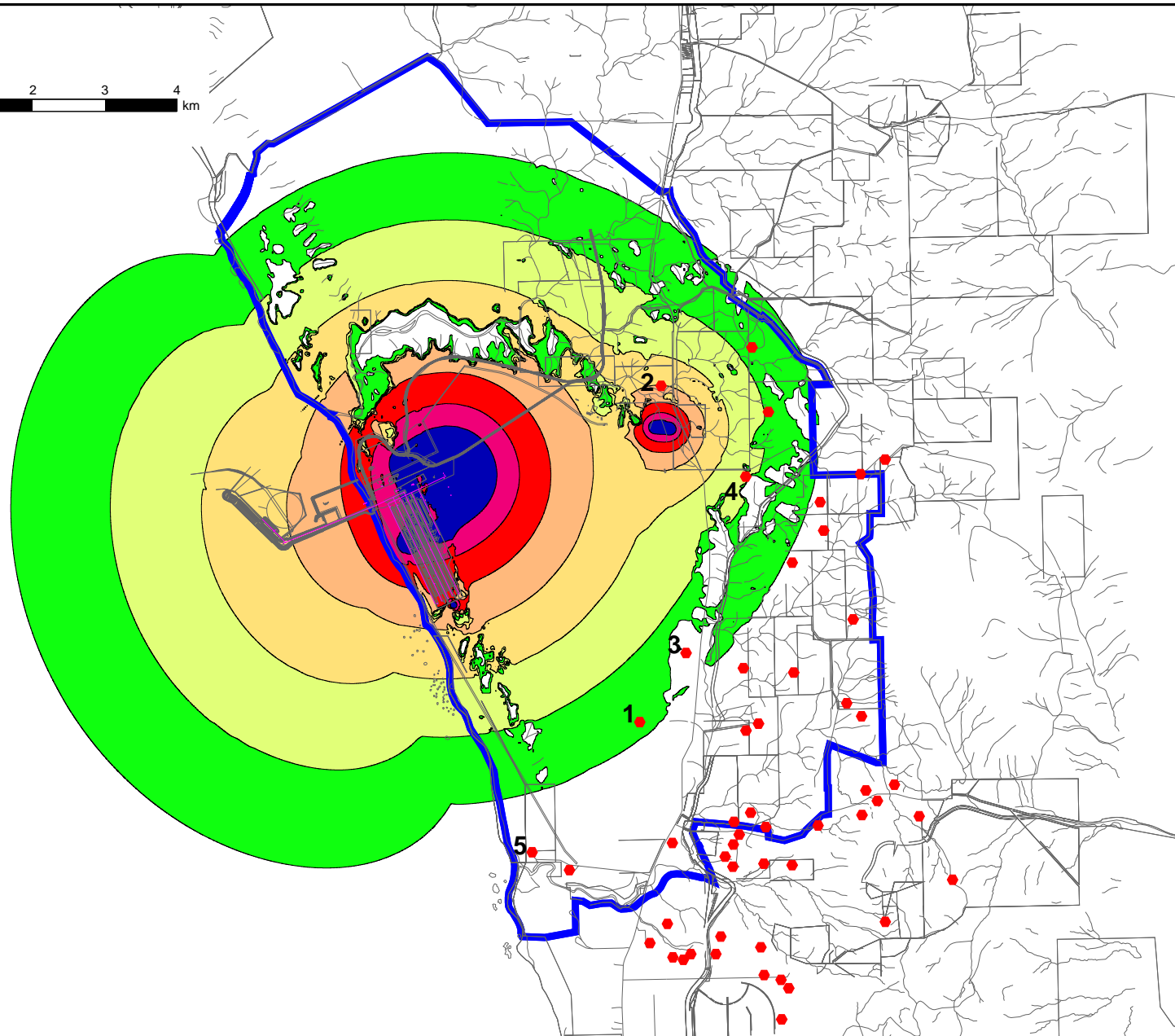
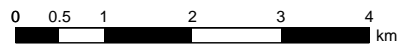
Regards,



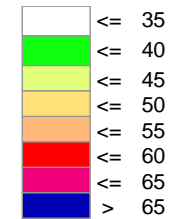
Daniel Lloyd

Figure 1

Scale



Noise level
 L_{A10} dB



Signs and symbols

- Oakajee Industrial Area
- Point source
- Line source
- Point receiver



Oakajee Deepwater Port and Terrestrial Iron Ore Facility
Predicted Noise Levels During the Construction Phase of the Terrestrial Port

L_{A10} Noise Level Contours - Wind from All Directions



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