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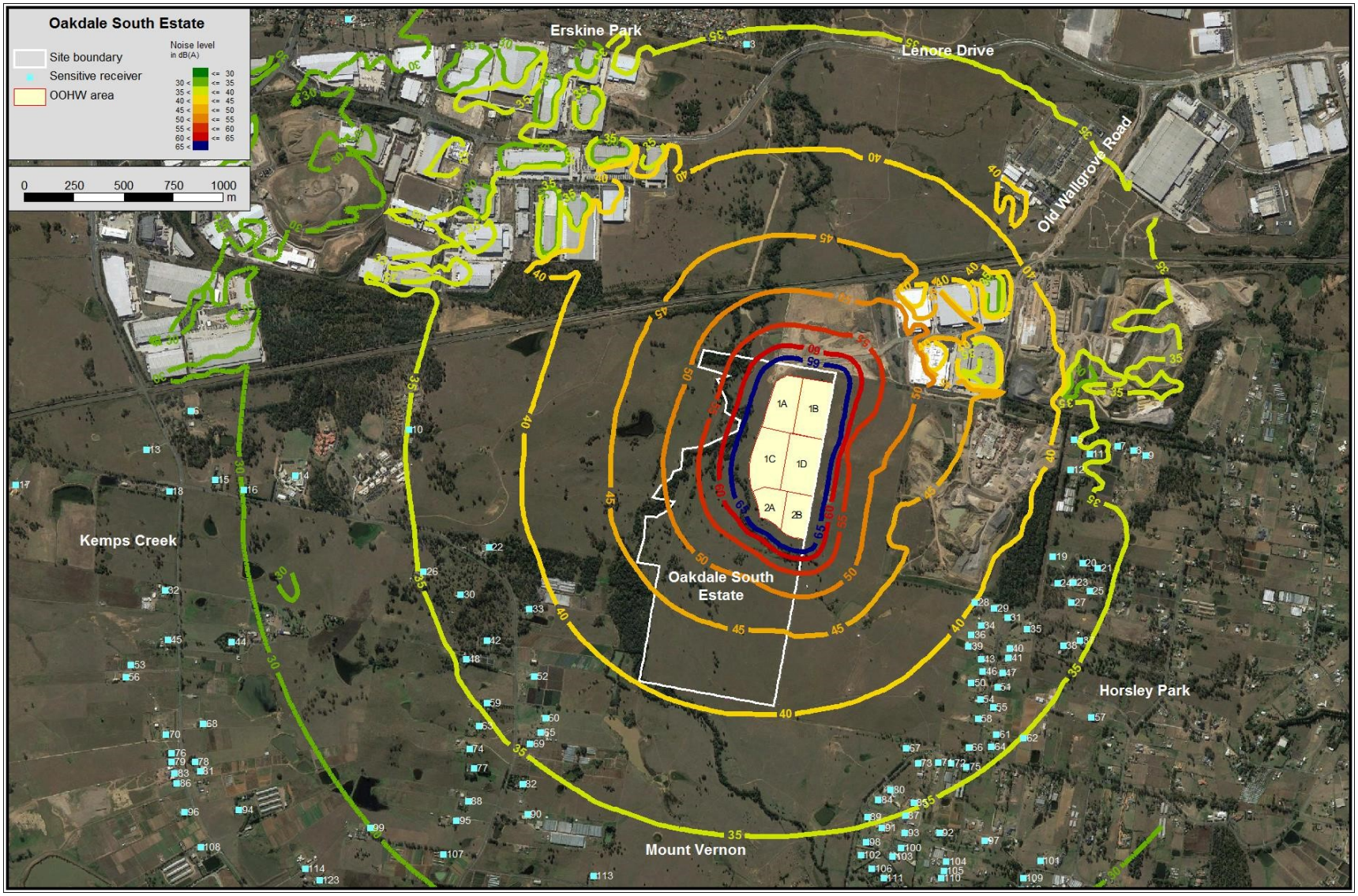

Figure 4-2 Predicted LAeq, 15 minute noise levels for deliveries and spoil handling

4.3.2 Sleep disturbance

The risk of sleep disturbance is based on the frequency and nature of high noise events in the night period, typically after 11 pm. As discussed in Section 3.5, an $L_{A1,\ 1\ minute}$ noise level greater than 15 dB above the RBL has been used a screening criterion to assess the potential for disturbance.

The $L_{A1,\ 1\ minute}$ noise level considers shorter-term, more impulsive noise sources such as impact noise. Based on the nature of the proposed night works, the level of noise measured as $L_{A1,\ 1\ minute}$ would be around 5 – 8 dB higher than the L_{Aeq} (average) noise emissions.

Since the $L_{A1,\ 1\ minute}$ screening criterion is 10 dB greater than the NML for L_{Aeq} noise emissions, the screening criterion is not expected to be exceeded with work in zones 1A – 1D and 2A. Where the D10 dozer is not in use in zone 2B, the screening criterion is not expected to be exceeded.

In addition, the $L_{A1,\ 1\ minute}$ awakening criterion of 65 dBA, is not predicted to be exceeded at any sensitive receiver location from work in any zone. Hence the risk of sleep disturbance is low.

4.4 Construction traffic noise

Spoil haulage vehicles (i.e. truck and dogs) are proposed to access and egress the site out of hours, generating heavy and light vehicle movements in addition to existing traffic volumes during this time.

The proposed haul route is illustrated in Figure 4-3 and demonstrates that additional traffic will pass through industrial land uses, a substantial distance from residential receivers.

Up to 300 spoil deliveries are expected each day, or 4 movements each hour (assuming even distribution). Over the night period, this equates to around 600 additional traffic movements.

Construction traffic on public roads is assessed under the NSW Road Noise Policy (RNP), which requires noise mitigation where new land use developments increase road traffic noise by more than 2 dB. An increase of greater than 2 dB requires an increase in existing traffic volumes of around 60%.

The main access/egress route to the development site is via Millner Avenue, Old Wallgrove Road and Wallgrove Road. No residential receivers are located adjacent to Millner Avenue. Existing volumes of traffic on the arterial roads of Old Wallgrove Road and Wallgrove Road are around 7500 vehicles per day on Old Wallgrove Road and 30000 vehicles per day on Wallgrove Road.

An increase in traffic noise due to spoil haulage of greater than 2 dB is not considered likely. As such, spoil haulage movements to and from the site on the adjacent public road network are considered unlikely to result in a significant adverse noise impact and therefore no mitigation is considered likely to be required.

4.5 Vibration

No plant or equipment will be in operation within the safe working distances outlined in Table 3-6.

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Construction noise and vibration impact statement