

Wow! The Moorebank Intermodal AND the SIMTA Moorebank Intermodal. Two developments which I trust will be looked at as a collective, because this is how the operation of this facility will affect the environment.

If this development progresses, it will negatively impact residents and environment alike – as much as it is monitored and effects mitigated – this is a fact. The only question remains – how negatively will it impact?

Response to section 11 - traffic

Now forgive me but the EIS document is not downloading on my computer but I have a question which may be covered in the proponents' submission. I will mention my concern briefly then move on;

a) how can consistency of traffic flow be assured when, for one example, there exists traffic control signals at the intersection of Anzac Parade and Moorebank Avenue which operate independent of the facility? Whatever the figure of incoming vehicles – 8/minute or 13/minute or even 4/minute – consistency of flow, timeliness, and unhindered site entry would not be forthcoming now, let alone when construction and operation are in full swing.

b) what is the queueing theory?

c) what contingency is there regarding hazards, an incident, or breakdown affecting Moorebank Avenue access to site?

Response to section 12 – noise

a) Breaches of required guidelines will occur, and there needs to be suitable, tangible and timely responses to prevent further non-conformances/breaches. With that in mind, what is the operational Noise Management and Monitoring Plan? What mitigation strategies are proposed for a) noise (and light) emission, b) control of the transmission of noise (and light) in accordance with the recommended conditions of approval and what noise attenuated structures are engineered, and c) controlling noise at the receiver? This has been discussed for the site, but what of traffic to and from the site – that outside the confines of the development or inbound traffic?

b) Temperature inversions can bend sound waves over mitigation bund walls. Is two nights a week a reasonable estimation for these phenomena, mostly during colder months? The number of exceedances would certainly seem unacceptable, and that is not even considering being down wind of a noise source. Will mitigation measures be proximal to source AND proximal to receiver? From the table 51 (page reference 12-48) the mitigated modelling demonstrates that 90% of the noise sensors were within the required criteria under neutral conditions. In adverse conditions, this reduces to 65%. Is this acceptable? One cannot control the weather... So most definitely there is real potential for nuisance noise from the proposal under what is termed 'adverse weather conditions' of which in the Liverpool basin there are frequent, seasonal and varietal.

c) All quoted figures are an indication of where the noise is projected to go and how intense the emissions are. It in no way reflects accurately the population density at monitoring sites or the number of residents it potentially affects.

d) Casula residents are assaulted by all rail line options at all times of the day under normal operating conditions (without mitigation) even before the full build, so they will have years of necessary mitigation required under normal meteorological conditions to keep within legislative guidelines. (table 12-16, 12-17 page reference 12-19, 12-20). Is this a reality? The conclusion of “During operation (modelled impacts with mitigated scenario)” (reference 12-54) tended to indicate that with the northern rail option under normal meteorological conditions that there will be no issue with exceedances. I am confused...

e) I am concerned of the truth of section 12.3.9 that road traffic noise (page 12-37) associated with the development will not increase existing road traffic noise by more than 2dB(A). The M5 and Moorebank Avenue deserve a mention which they get, and Anzac Parade? Forgive me but I thought that Anzac Parade was not to be utilised by intermodal traffic. Please excuse my ignorance.

f) Engines tend to make noise when under stress/load, and the stopping and starting of vehicles that visit the site will affect residents, particularly when this is a 24 hour a day operation. Just think of Port Botany and the news coverage it received earlier this year with flawed EPA data which suggested that the noise did not reach “sleep disturbance criteria” (Refer SMH article Aug 17, 2014). Noise complaints were reputedly made from kilometres away. This is unacceptable when the closer neighbours are within 300m of the access to the site. Has data been included for the omnipresent acceleration/deceleration of attending queueing heavy vehicles that have not entered the facility grounds?

g) Most importantly, let us not forget that the accuracy of the theoretical calculations that are made by an EIS should contain an error margin, which accounts for meteorological conditions encompassing wind speed, direction, temperature, humidity and vertical temperature gradient of $\pm 5\text{dB(A)}$ (Tonin, 1997)^a. Whether a methodology was used other than that of the author of this paper, a margin of error/confidence interval/accuracy and precision guidelines are good practice. No error margin has been indicated by the documentation. With such borderline results in some areas of noise compliance, it would seem important that these are included in the document. Where are they?

Response to section 17 – air quality

a) A concern is not regulating existing locomotives to noise and air quality criteria as there is the clause “where reasonable and feasible”, or “consider use of hybrid locomotives or cleaner fuels”, or “consider electric powered locomotives (page 17-35 and 17-36) – not exactly concrete. There are references in this section regarding reducing heavy vehicle emissions through BATEA (best available technology economically achievable) noted, but nothing committed – the phrase “would be investigated”. Not concrete either. The ideas are great – Euro V compliance, retrofitting older vehicles, hybrid utilisation, (a dabble in best management practice), and so on.

b) A question for the sewage treatment plant (reference 17-37) – where is the overflow to the structure in event of catastrophic failure? Surely this is detailed, and dare I mention that it will be the Georges River. There is no mention of detention times for this structure. Is it tertiary treating the waste water? Even with all of their infrastructure and budget Sydney Water was found negligent and fined by the EPA with a clean-up charge from a local council earlier this year for environmental discharge

c) I am concerned that without (or with limited) atmospheric dispersion, deposition of particles on site and in the near vicinity will affect the workers within the boundary of the facility, as they will be exposed to close to three times the NEPM advisory level at a conservative estimate, if not more.

I fear for the release by the operation of the terminal of toxic, carcinogenic, poisonous emissions. I see modellers addressing SO_x, NO_x, BTEX species, but what bothers me is this: from their research, I fear the 1) lack of tangible regulation of site inbound traffic (road and rail), 2) lack of appropriate scientific monitoring and analysis, and 3) procedures by the proponents to manage exceedances.

Two indices of interest are:

PM2.5

The annual average PM2.5 concentration recorded at the OEH Liverpool station between 2009 and 2013, incorporating natural particulate matter events (bushfires and dust storms), was 7.6 µg/m³. NEPM advisory reporting goal of 8 µg/m³. Reference: Moorebank Intermodal Terminal project EIS (page 19 of 43 Chapter 17).

Given the Liverpool region struggles with particulate matter and teeters on the verge of established unacceptable air quality, what of the 21 plus kilograms of PM2.5 that this terminal will environmentally emit into the atmosphere daily at full build? This is the projected emissions for 2030. It is anticipated by project completion that national air quality indicator exposure limits will tighten, and together with an increase of background concentrations in the region due to community or local contribution. On the other hand, technological advances in Euro emissions standards for trucks may be introduced and uptake may be legislated, but collectively in accordance with the findings of Parsons Brinckerhoff, the project will ubiquitously and consistently exceed air quality standards for this air quality indicator. (Graphical representation Figure 17.7, page 17-29 Chapter 17)

Polycyclic aromatic hydrocarbons

There are no current available monitoring data for PAHs in the Sydney area. These pollutants are anticipated to be present in trace concentrations within the local ambient environment.

Long-term studies of workers exposed to mixtures of PAHs and other workplace chemicals have shown an increased risk of skin, lung, bladder and gastrointestinal cancers. These studies have also reported asthma-like symptoms, lung function abnormalities, chronic bronchitis and decreased immune function. (Source: <http://www.health.sa.gov.au/pehs/PDF-files/ph-factsheet-PAHs-health.pdf>). This is well known science.

I am interested to learn that it is not recommended to continue PAH monitoring during the operation of the facility given the toxicity of the compounds and how little concentrations have large effects.

Intake of PAHs from contaminated soil may occur via ingestion, inhalation or dermal (skin) exposure to contaminated soil/dust, and from inhalation of PAH vapours. Tilling of dry soil can result in ingestion of small but measurable amounts of soil.

Where is the benzo(a)pyrene impact assessment criterion of 0.4 µg/m³ (reference 17-24 chapter 17) referenced from?

d) I am also concerned about table 17.7 “Derived short term concentrations for SO₂ and CO – all scenarios” on page 17-23. It is impractical to tout the short term exposure limit for CO as 100ppm. It is interesting to note that workplace exposure standards for CO is 30ppm over an eight hour shift. Is 100ppm a realistic NSW EPA limit for the purposes of this exercise, or is this for illustrative purposes, or is there some value in mentioning a 15 minute exposure standard? Certainly it is not practical, and a safety approach by using 30ppm would be wiser.

e) According to the recommended conditions of approval, what are the key performance indicators for emission control, where are the on and off site monitoring points, what is the frequency of compliance reporting, what are the poor air quality response mechanisms?

f) It seems strange that we are almost blindly placing this in a residential area when the world awakens to the truth about diesel emissions - France plans on banning all diesel vehicles by 2020, Europe and the UK are banning diesel cars because of consistent failures of European air quality indicators, the United States Government within the last couple of weeks will impose a strict 230 mile (368km) buffer zone along the entire US coast from large SO_x, NO_x species and particulate generating ships. Canada is expected to follow this move. The world is awakening regarding diesel. What is Australia doing?

Response to section 29 - risk

a) I am mystified with the proponents continually stating that overall impact on M5 traffic would be positive (refer 29-7). What is their baseline? The assumption that they will have all freight and vehicle movements will be via the M5? I do not understand, because from a baseline modelling of future anticipated traffic, the volume of units travelling to Moorebank will in fact impact negatively on traffic, and that is without the effects of the intermodal traffic. And more nonsense such as “the project would reduce the vehicle kilometres travelled by trucks on Sydney roads” (refer 29-7). Given the majority of the freight is not locally utilised, does that not mean *more* kilometres? This not only impacts traffic congestion, but air quality, noise and quality of life to name a few.

b) The risk matrix for noise (ref 29-8) references the infrastructure but fails not mention all traffic to and from site which will potentially be a greater contributor to noise levels. This must be mentioned as it is part of the business of the freight hub, and has with it, inherent risk.

c) Ref 29-11 – in the impact/risk column is “adverse impact on local air quality during construction or operation”, one of the descriptions of potential risk listed starts “excluding the contribution of existing ambient air quality...” Does this mean:-

Equation 1

atmospheric indicators within EPA/NEPM = permissible development emissions + background emissions

or

Equation 2

atmospheric indicators within EPA/NEPM = permissible development emissions - background emissions

I believe that they are trying to argue the second equation.

The above being the case, why is it acceptable that the rest of Sydney has EPA/NEPM air and workers of the development and proximal residents have less than this assurance/standard of clean air? The residents are already suffering. The reality should be clean air for all – ubiquitously.

d) The human health risks and impacts evaluation in this section of the EIS calculated increased lifetime risks (from the impacts of PM2.5 and PM10) and an increase in the number of cases for a range of key health effects. This is nothing new. Continuing, it noted that the NEPC advisory goals are based on the protection of population health (reference 25-19) – well, thank goodness for that!

e) Contrarily, on page 29-14 the risk/impact “risk to human health” discusses that “exposure-effect particulate matter are not measureable or statistically significant, and that the health risks or impacts are low and acceptable.” Aside from contradicting the above paragraph, this scores a “major” consequence in the risk matrix. Flicking back a couple of pages to 29-4 the definitions of how the consequences of the risk matrix are scored, major risk rank is defined by:

“Impact likely to be medium- to long-term and potentially irreversible

Impact may be local or wider (most likely no greater than a regional spatial extent)

Impact likely to be of concern to key stakeholders”

Whereas critical is defined by:

“Impact likely to be long-term and irreversible

Impact may be local or wider (including up to a state-wide spatial extent)

Impact likely to be of a high level of concern amongst most stakeholders”

Is the insinuation from above that a major risk rank embodies potential reversibility of impacts? So, how does one reverse skin, lung, bladder and gastrointestinal cancers,

asthma-like symptoms, lung function abnormalities, chronic bronchitis and decreased immune function?

I dare say that there are **likely long term** irreversible impacts from this development. I dare say that the impact **will be local**, and I dare say that there is a **high level of concern** amongst most stakeholders. This changes the unmitigated risk ranking of the activity with a likelihood of almost certain to a “major”. Even if world class mitigation measures were in place, and if the likelihood changed to remote, the activity still obtains a score of “high” which means that it should not proceed without further controls. This is risk management.

f) The proposal is not built in a bubble, so whether the intent is to mitigate or not, whether it is to monitor or not, whether it is fraught with diligence or negligence, the activities that are proposed from this development will result in inevitable environmental discharge through multiple mediums. It is the nature of the development! Some chemicals known to be part of diesel emission do not need much airborne concentration to gain effect – they are extremely carcinogenic! A risk averse ethic is ultimately important.

g) What design features are planned to be instilled for air pollutant and noise emission control that are deemed best practice? There is a lot of talk about this and a few propositions put forward, but no firm accountable detail.

h) What is the assessment for retrofitting older locomotives and trucks in line with “reasonable mitigation and management measures? Once again, I note no definite details.

Conclusion

I know that collectively the modelling is trying to predict that the operation will sit comfortably within environmental guidelines, but it does not mean that:

- a) the development will not create extra and at times nuisance noise in my quiet neighbourhood,
- b) the proximal residents will not suffer a reduction in air quality,
- c) the modelled traffic impacts will not be negative,
- d) as part of the residual level of impact (section 8.2.1 of NSW Industrial Noise Policy) the dubious question over property value can only be positively affected, both directly and indirectly, and
- e) the quality of life that my neighbours and I have will not be reduced.
- f) the businesses in the near vicinity will not undergo a dynamic business shift to container handling/affiliated or freight businesses

The point f) above will negatively impact points a) to e) furthermore and negatively affect my community. I can see the need for a facility. I can see the employment benefits. I just cannot see the need for Moorebank being the target, nestled amongst the medium density population hub which is Casula, Glenfield North, Wattle Grove, and surrounds. There are many things right about the choice to use Moorebank as the intermodal site but proximity to residential areas the most unforgiveable. The decision seems terribly short sighted, and will affect a large number of people, all of which was avoidable if this development was in the right location. As it is approved in theory for Moorebank, it is a betrayal of the local community and electorate.

I fear that effective control measures will not be forthcoming and I, along with many residents, am going to be bullied into leaving our houses – our dreams. This is not just.

Reference a: Tonin, R; Australian Acoustics Journal, “Validation of Environmental Noise Model (ENM windows)” August 1997 Vol 25 number 2