

HEARING SUMMARY – CAMILLA NEEDHAM – AIR QUALITY

1. My role in the Project has been to assess potential air quality effects arising both from the construction and operation of the Project. I am currently employed as a contractor to Beca and am no longer a shareholder of the company.

My key conclusions/findings are:

2. The construction of roads and motor vehicles travelling on roads can emit air emissions which may negatively impact air quality. I have assessed the potential health effects of vehicles travelling on the EWL by comparing model predictions against the relevant health-based air quality standards.
3. Overall, I expect the potential air quality effects from the operation of the Project to be positive. There will be beneficial air quality effects for the suburbs of Onehunga and Ōtāhuhu, due to reduced traffic congestion and fewer heavy vehicles using local roads in these areas. The operation of the Project will not change the existing air quality for the Onehunga Mall Cul-de-Sac residents, which is predominantly impacted by SH20 traffic. Those people living close to SH1 will experience a small increase in ambient concentrations of vehicle contaminants.
4. Construction related air quality effects (such as dust) can be appropriately mitigated through the framework of conditions proposed. A Construction Air Quality Management Plan (CAQMP) and Contaminated Land Management Plan (CLMP) are required to be prepared under the proposed conditions and submitted to the Auckland Council for approval before construction starts. These conditions will ensure measures are adopted to minimise the effects of discharges of dust and other discharges to air from the construction of the Project.

The following are outstanding matters or areas of disagreement:

5. I understand there are a handful of air quality issues that remain outstanding between the experts. These predominantly relate to construction related matters at the Mercury and Stratex sites.

Mercury Energy

Construction dust effects on the Mercury site

6. Dr Graham is concerned about the impact of construction dust on high voltage electrical equipment and solar panels at the Southdown site. He has requested site specific dust management conditions, including monitoring and compensation for fortnightly cleaning of solar panels. The potential effect of dust on the Southdown site is already specifically provided for in the utilities management plan conditions. I disagree with the additional conditions proposed by Dr Graham, however I do support the following amendments which have been incorporated into the conditions:

- Condition AQ1 has been amended to set the overall performance standard as being at the construction site boundary, regardless of neighbouring land use. This means that the contractor will have to carefully manage dust at source during construction.
- Condition AQ2 has been amended so that the CAQMP must include contingency measures for an event such as dust controls failing and causing an adverse effect. This means that any off-site effects are adequately addressed eg compensation for cleaning.

Management of asbestos contaminated soil on adjacent site

7. Dr Graham is concerned about workers on the Mercury site, and requested that asbestos management be referenced in the general construction management plan conditions. I consider this is unnecessary as asbestos management is specifically addressed in the contaminated land management plan (CLMP) conditions and any additional references would simply add duplication.

Ambient air quality monitoring proposed by Mercury

8. Dr Graham considers that the project could have a significant adverse effect on Mercury's ability to renew its air discharge consent. Dr Graham proposes a condition requiring pre and post project ambient air quality monitoring. The issue here is that gas fired power stations and vehicles are both emitters of NOx. For comparison purposes, Southdown was the largest single point source of NOx in Auckland, (4600 kg /day) and the EWL at the Southdown site will be a tiny fraction of that (8 kg/day) which is 0.2%. Nevertheless there is a concern the road will use up some of this "pollution headspace" in the existing environment which could make consent renewal more challenging.
9. In my opinion, the project will have little impact on background air quality in this location, and I don't agree there would be an adverse effect that would necessitate a monitoring condition on the proposed designation. I acknowledge nevertheless that the data would be useful to Mercury for its own information/operations. In my primary evidence I refer to my agreement in 2016 with Dr Graham about this monitoring and my understanding that it was part of a separate property agreement between the two parties.

Stratex

Construction dust effects on the Stratex site

10. Dr Brady considers that "standard dust management plans" such as the proposed CAQMP will be insufficient to protect the Stratex site from adverse dust effects. I agree that the contractors will require extra vigilance when operating close to an existing manufacturing site, and early and regular communication with Stratex will be important. The conditions require that the Transport Agency coordinate both community liaison groups and business forums including the businesses on Sylvia

Park Road, one of the purposes of these groups being to respond to construction related concerns and issues prior to construction. I therefore consider the conditions provide for an appropriate process for dialogue between the Transport Agency and Stratex.

Reverse sensitivity effects of the shared path next to the Stratex site

11. Dr Brady is concerned that the elevated shared path proposed next to the Stratex site will expose pedestrians and cyclists to solvent odours which could trigger complaints, enforcement action and constrain its current operations . I disagree that the shared path will cause reverse sensitivity effects to the extent that it would constrain the future operation of the Stratex site. Odour impacts on the shared path users would be short duration, infrequent as people are only present for a few minutes at most and as they occur in a heavy industrial location, the amenity expectations are also reduced.