

**Submission  
No 198**

## **INQUIRY INTO IMPACT OF THE WESTCONNEX PROJECT**

**Name:** Mr Rasmus Torkel

**Date Received:** 29 August 2018

---

Dear Committee,

I am one of the members of the New M5 AQCCC. I represent the Arncliffe community but I have also taken an interest in St Peters and Kingsgrove.

The main task of the AQCCC so far has been to establish locations for the Air Quality Monitoring Stations. The approval conditions require eight monitoring stations, two for each ventilation outlet, one at the St Peters interchange and one somewhere within the general area of the New M5 but away from any particular stack and the St Peters interchange.

Finding good locations for the monitoring stations, especially the ones for the ventilation outlets is critical. If the monitoring stations are placed into low impact areas, then the New M5 could be a major contributor to air quality targets being exceeded without the monitoring stations picking this up.

Unfortunately, the project team treated the process as a box-ticking exercise and lacked the commitment to find good locations. We have had three meetings so far, September 19 and October 17 in 2017 and March 5, 2018. September 19 was just a general overview session. We were told on September 19 that we can also propose locations for the monitoring station. For the October 17 meeting, we were given the locations proposed by the project team. However, we received them only on October 16 and without any sort of indication of which would be best for measuring pollution. Only at the October 17 meeting did we (the community representatives) receive maps with pollutions contour lines. But from then we were only given seven more days to propose more locations (although the team did accept one of mine that I sent on October 29). At the meeting itself, some good locations were proposed by community representatives.

At the March 5 meetings, it turned out that ALL the locations that the project team chose to go ahead with are on RMS land. Not only that but no council had even been approached about possible locations on council land (which is where almost all of the proposed locations were which were not on RMS land, including a few that the RMS had initially suggested). This meant that some very good locations were rejected in favour of some quite unsatisfactory locations. Kingsgrove got the worst deal with no monitoring station up the hill on the northern side on the New M5 where both the modelling and common sense suggest the highest impact. St Peters is also getting monitoring stations well outside the worst affected areas. Arncliffe is not too bad, at least at ground level.

The problem with Arncliffe, however, is that Arncliffe has quite a lot of high-rise buildings. The New M5 approval conditions call for monitoring stations at ground level. This is a problem as the Arncliffe ventilation outlet is going to be 35 meters high while within 500 meters, there are high rise buildings up to 16 storeys which suggest a height of well over 40 meters. I understand that the polluted air is going to be pushed up the outlet at speed and will have some upwards momentum. But I expect that at the edges of the plume, some of the polluted air is going to shear off. Depending on where the wind is coming from, polluted air would probably be blown directly at the high-rise buildings. Below is a photo of a 16 storey building that I took from Rockwell Avenue, Arncliffe.



Another problem at the committee is representation. The New M5 approval conditions specify three community representatives (in addition to Council representatives) for each of Arncliffe, St Peters and Kingsgrove. Arncliffe had three community members (including myself) at least at one meeting. Kingsgrove had two attend which isn't too bad. I recall all five members for Arncliffe and Kingsgrove contributing to the discussion. But for St Peters there was never more than one and that one said very little. At the March 5 meeting, there was one community representative for Kingsgrove, myself for Arncliffe and none for St Peters. The minutes incorrectly state that there was St Peters community representation but I state here categorically that there wasn't. My educated guess as to why there was low attendance by community representatives on March 5 is that most representatives realised that the whole process was just a box-ticking exercise, once they saw the locations that the project team had settled on. Still, it's a problem that St Peters was completely unrepresented (there was also no representative from City of Sydney and Inner West Council) at the March 5 meeting and grossly underrepresented at the other ones. It is also somewhat ironic given how vocal quite a few of the residents in and around St Peters are and reflects poorly on the selection process.

Being a member of the AQCCC has caused me to take a greater interest in air pollution generally. We had been told that air quality monitoring had been undertaken prior to WestConnex construction but no suggestion was made that there was any sort of problem. However, at some point, I decided to check, so I gathered the PM data that were available (from separate monthly reports) and tabulated them. I am including here just one table, for West Botany Street. I also recorded the reasons for the exceedances. It turns out that the average for PM<sub>2.5</sub> for the 10 months that were available (for two months, the PM data were missing) is more than 11µg/m<sup>3</sup> meaning that the target for the yearly average (which is 8µg/m<sup>3</sup>) is clearly exceeded (it would be over 9µg/m<sup>3</sup> even if the other two months had zero pollution).

Month	PM2.5 monthly average, $\mu\text{g}/\text{m}^3$ (yearly allowed average is 8)	PM2.5 highest 24 hours period, $\mu\text{g}/\text{m}^3$ (allowed is 25)	PM10 monthly average, $\mu\text{g}/\text{m}^3$ (yearly allowed average is 25)	PM10 highest 24 hours period, $\mu\text{g}/\text{m}^3$ (allowed is 50)
<a href="#">September, 2015</a>	10.8	14.7	20.2	34.4
<a href="#">October, 2015</a>	13.0	19.8	28.3	41.9
<a href="#">November, 2015</a>	10.2	19.0	22.4	46.0
<a href="#">December, 2015</a>	13.6	23.1	25.4	43.9
<a href="#">January, 2016</a>	7.9	26.3	20.7	32.5
<a href="#">February, 2016</a>	7.5	18.5	20.5	32.9
<a href="#">March, 2016</a>	8.6	15.7	15.9	27.5
<a href="#">April, 2016</a>	13.5	24.1	21.2	32.4
<a href="#">May, 2016</a>	16.1	39.3	25.8	54.1
<a href="#">June, 2016</a>	9.9	17.9	15.6	26.0

Daily Target Exceedances		
Reason in reports	Pollutant	Days
No reason given	PM2.5	2/1/2016
Hazard reduction burning	PM2.5	8/5/2016, 9/5/2016, 10/5/2016, 20/5/2016, 23/5/2016, 24/5/2015
	PM10	23/5/2016, 24/5/2015

Yearly targets were also exceeded at St Peters before WestConnex construction at two monitoring stations and probably also at Kingsgrove at one monitoring station. I have complete tables for all New M5 monitoring stations at [http://rasmustorkel.id.au/new\\_m5\\_aqccc/](http://rasmustorkel.id.au/new_m5_aqccc/), Existing Monitoring Results section.

In the case of Arncliffe, part of the traffic load is due to International Terminal at Sydney airport. The Terminal is not able to absorb the cars as quickly as they arrive, leading to traffic jams as can be seen in the photo below which I took at 8.35 am on Sunday, May 13. These traffic jams back up and delay traffic that is not even going to the airport. Of course, these traffic jams add to pollution. Contributing to the amount of traffic going to Sydney Airport is the distortion that results from the surcharge at the airport railway stations while there is no surcharge on motorists travelling to the airport.



I considered the possibility that air pollution will become less of a problem by the time WestConnex opens as car technology improves in the meantime. Then I decided to check. The OEH has annual data for PM2.5 going back 14 to 15 years for four Sydney locations. See table below. I got the data from <https://www.environment.nsw.gov.au/AQMS/search.htm>

	A	B	C	D	E
1	<b>PM2.5</b>	<b>Liverpool</b>	<b>Chullora</b>	<b>Earlwood</b>	<b>Richmond</b>
2	2003			7.8	6.6
3	2004	9.2	8.6	7.5	6.5
4	2005	8.4	7.6	7.1	5.8
5	2006	8.9	7.2	6.9	5.9
6	2007	7.2	6.4	5.9	
7	<b>2003-2007</b>	<b>8.425</b>	<b>7.45</b>	<b>7.04</b>	<b>6.2</b>
8	2008	6.5	5.9	5.5	7.3
9	2009	8.3	7.1		5.7
10	2010	6.3	5.7	5.7	4.2
11	2011	5.9	5.9	5.4	4.7
12	2012	8.5	6	5.6	5.3
13	<b>2008-2012</b>	<b>7.1</b>	<b>6.12</b>	<b>5.55</b>	<b>5.44</b>
14	2013	9.4	8.4	7.9	8.3
15	2014	8.6	9	7.8	6.7
16	2015	8.5	8	8.5	7.7
17	2016	8.7	8	8.1	7.9
18	2017	8.9	9.5	7.3	7
19	<b>2013-2017</b>	<b>8.82</b>	<b>8.58</b>	<b>7.92</b>	<b>7.52</b>

There is a lot of variation between years, so I grouped them into five year blocks and averaged the data. PM 2.5 did actually decrease from 2003-2007 to 2008-2012. But then it went up again for 2013-2017, higher even then it was in 2003-2007. The pattern is the same for all four locations. I hypothesise, and this

probably needs more research, that improvements to technology for cars with internal combustion engines have reached a stage of diminishing returns and are now overwhelmed by population growth.

While the situation is bad enough in Arncliffe, I fear for St Peters which will be turned into a giant traffic hub.

I have some policy suggestions which may mitigate the situation:

- Encourage the adoption of electric cars. One option with no impact on the NSW budget would be to ban the sale and registration of new luxury cars with internal combustion engines. That would generate some momentum for electric cars without causing hardship for motorists.
- Remove the surcharge at the airport railway stations. To avoid an impact on the NSW budget, there could instead be a surcharge on private motorists travelling to the airport.
- Consider tolls and/or congestion charges on regular roads in non-car-dependent suburbs such as Arncliffe and St Peters. I know that such measures are not politically possible in car-dependent outer suburbs.
- Consider some additional interchanges to reduce the amount of driving that people have to do between motorway interchanges and their journey endpoints, some of which would be in the opposite direction to their motorway travel.

I also point out here that in principle, I am not an opponent of new motorways, as they can, when properly built, reduce the environmental and social impact of a given amount of driving, as well as make driving easier for motorists. Of course, reducing the total impact of driving is a more difficult policy challenge.

It was my sincere hope that at the AQCCC we would pick some really good locations for the monitoring stations and that we would have reason to be optimistic about national air quality targets being met. So I have been somewhat disillusioned by my experience with the AQCCC but not to the point where I just give up.

Yours Faithfully,

Rasmus Torkel, 29/8/2018