

## Estimates of water, sewage, dirty coal pollution (called “greenhouse gases”) by Michael Mobbs, March 07

I have reviewed the development concept for the project and I understand that the Minister has approved a concept plan for an additional 3,000 residents, some 2300 car parking spaces, and 4,800 workers that will live or work at the development once completed. Based on my review of that approval I make the following calculations:

Approved concept	Sustainable concept – not approved or considered
<ul style="list-style-type: none"> <li>Residents: 12,000 to 24,000 tonnes per annum</li> </ul> <p>The annual operation of the site may generate in the range 4 to 8 tonnes of climate change pollution (sometimes called ‘greenhouse gases’) a year for each of the 3,000 residents (having regard to the EnergyAustralia study referred to below), or between 12,000 and 24,000 tonnes a year for the life of the project (assumed to be over 30 years),</p>	<p>&lt; 1000 tonnes per annum</p> <p>A resident in a sustainable unit uses at least 50% coal-fired electricity or &lt; 1 tonne per person a year – assuming 2000 residents.</p>
<ul style="list-style-type: none"> <li>Workers: 24,000 to 48,400 tonnes per annum</li> </ul> <p>The annual operation of the site may generate in the range 5 to 10 tonnes a year for each of the 4,800 workers, or a total of between 24,000 and 48,400 tonnes per year and this pollution does not include all the climate change pollution caused by each person outside the site (see Note 1)</p>	<p>&lt; 2,400 – 4,800 tonnes</p> <p>A worker in a sustainable office uses less energy and causes &lt; .5 – 1 tonnes greenhouse pollution a year – assuming 4,800 workers of whom 1,000 live at the site</p>
<ul style="list-style-type: none"> <li>Car park: about 9.890 to 12,040 tonnes per annum</li> </ul> <p>The total annual climate change pollution for the 2300 space car park is about 4.3 to 5.2 tonnes per car or about 9.890 to 12,040 tonnes per annum (depending on use, etc)</p>	<p>Nil car parking except for car share facilities for 20 cars: about &lt; 1000 tonnes per annum</p>
<ul style="list-style-type: none"> <li>Total Climate change pollution per annum:</li> </ul> <p>The total annual climate change pollution for the project when fully operational will range between 45,890 and 84,440 tonnes per year</p>	<p>Total climate change pollution between 4,400 and 6,800 tonnes per annum</p>
<ul style="list-style-type: none"> <li>Construction climate change pollution: 40,000 to 60,000 tonnes per annum</li> </ul> <p>The construction of the buildings approved by the concept plan may generate in the range of 40,000 to 60,000 tonnes of climate change pollution each year during construction and I estimate that the construction period may range over a ten to fourteen year period</p>	<p>Assuming existing buildings are retained and reused, and the units and offices are factory built, the construction period would be less than a year with most fabrication off site and more efficient use of transport, materials, little waste; an estimate of approximately &gt; 2,000 tonnes per annum</p>
<ul style="list-style-type: none"> <li>Sydney City climate change pollution:</li> </ul> <p>The total greenhouse pollution for the City of Sydney in 2005 was 4.5 million tonnes from 4,343,921 MWh, an increase of .5 million tonnes from the previous year and this annual upward trend appears to be typical.</p>	

<p>The approved concept plan may generate climate change pollution that is between one twelfth and one eighth of the total annual increase in greenhouse pollution for all of the City of Sydney.</p> <p>The 'total' greenhouse figures exclude the total greenhouse pollution impacts of residents and workers outside the site. The total does not include the climate change impacts people create due to air travel, food and other consumables, and wastes generated; see Note 2.</p>	
<ul style="list-style-type: none"> <li>• Water imported: 1.2 billion litres</li> </ul> <p>The residents will import an estimated 1.2 billion litres of water from catchments over a hundred kilometres from the site (110 litres each)</p>	<p>No mains or dam water will be imported to the site as rainwater will be harvested and used</p>
<ul style="list-style-type: none"> <li>• Sewage discharged: 1.2 billion litres</li> </ul> <p>The project will discharge an estimated 1.2 billion litres of sewage to the ocean and add to the current discharge of untreated sewage to Blackwattle Bay; presently over 30 million litres of raw sewage discharges to Blackwattle Bay each year during storm events and the balance discharges to the ocean. [Both calculations for water and sewage assume rainwater will be used to flush toilets and gardening; whilst this is unclear from the plans and documents and approval it appears to be a possible concept in the minds of the proponent and the Minister.]</p>	<p>No sewage will discharge from the site as it will be reused to flush toilets, wash clothes and for gardening</p>