New South Wales Government
Independent Planning Commission

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Firstly, I wish to submit that I am very much in favour of the Plasrefine proposal. If it is approved to progress, it will provide a glowing example of innovation which at least begins to address a pressing, worldwide environmental problem. I understand it will be a NSW 'State First' development and if successful, will be a real 'feather-in-the-cap' of the Southern Highlands Community and the Proponent. In addition, it will provide a very worthwhile addition to local employment, cultural and educational opportunities.

However, I am also aware that there is a very vocal community objection to the Plasrefine development. This needs to be recognised and addressed. Despite this, when I have spoken to many Southern Highlands residents on the topic, they do not oppose the need for such a facility at all. What they do oppose is the possibility that such a facility will contaminate the surrounding environment with Micro Plastic Particles (MPP's) to an extent that is unacceptable to the public.

MPP ingestion has only recently become an established phenomenon, with most studies to date not yet recognising any definite health impacts of that ingestion on human beings. Needless to say, it is early days yet. There are also many studies which estimate the current average human ingestion as approximately 5g per week. A generally agreed-upon number of particles that this represents is 50,000 - 100,000 MPP's.

Almost surprisingly, in studies to date, the highest concentration of MPP's is found to occur in daycare facilities, fairly closely followed by workplaces, schools and homes. That is, the highest concentrations of MPP's occur where human activity is also highest. The 'great outdoors' provides a reprieve in terms of airborne concentrations, in most instances. The quoted base level of MPP's outdoors is currently approximately 10 per cubic metre, whereas indoors that may rise to approximately 50 or as high as 80 per cubic metre.

Thus, it would seem to be crucial for Plasrefine to be able to assure the local residents that the level of MPP contamination of the local area would at best, not increase the MPP concentration to more than 10 per cubic metre or at worst, to not increase it to more than 80 per cubic metre. I note that the number of MPP's emitted (from the four stacks combined? Or from each stack?) is approximately 2500 per second. This would be the equivalent of 150,000 per minute. At the 45 cubic metres per minute quoted for exhaust stack flow in the EPIS, this equates to approx. 3300 particles per cubic metre.

I wish to suggest that an airborne MPP concentration survey be undertaken both at the proposed development site, and at the previously identified target locations in the vicinity, to establish the current level of MPP contamination. I also wish to suggest that the Proponent models the impact of the quoted MPP emissions on the surrounding locality, (most likely assuming that the existing PM10 and PM 2.5 levels are indicative of MPP concentration), in varying weather conditions.

Should the modelling estimate that the MPP emissions fall into a range which is significantly above the existing baseline levels (which it may also be appropriate to measure inside the target locations), I also wish to suggest that a proposal to remedy that situation to an acceptable level be made.

Once again, I wish to emphasise that there are a very large number of people who very much support the proposal in concept, just not the location. I am optimistic that if a satisfactory solution to the above questions can be found, then public opposition will fall substantially. I am already in the process of lobbying toward that eventuality.

Sincerely

TIM BAILEY