

Claire Dunne, Oral Hearing Metrolink Project, 27th February 2024, The Court Dalcassian Downs Glasnevin

In response to my query in relation to groundborne noise and vibration you conceded that the groundborne noise while the TBM is passing below the apartment will be 49 dB, above that the threshold level of 45 dB. This will have a significant impact on the health and well-being of residents. You mentioned that TII will undertake advanced consultation and stakeholder engagement to prepare people for the passage of the TBM. What exactly does TII propose to do to minimise the impact on residents during this time? In terms of relocation how will you be able to guarantee relocation within the same area with the current rental crisis?

In terms of dust generation you mentioned there is a potential for significant dust generation at Glasnevin. Will the Tunnelling and excavation generate a significant amount of dust and will this affect people with chronic respiratory conditions such as asthma? Can you guarantee that all of your mitigation measures will work in terms of reducing dust on the site?

Will the ground tunnelling and excavation affect air quality. You mentioned in response to me that there are vulnerable patients in hospital who will have HEPA (High Efficiency Particular Air) filters in place to mitigate air quality impacts and therefore in addition to the mitigation measures outlined in relation to air quality it is not anticipated that there will be any impact on human health as a result of construction activity. However what about vulnerable people with underlying conditions such as asthma or other respiratory illnesses who are living in Dalcassian downs and do not have access to HEPA filters in their home. If a HEPA filter is seen as a mitigating measure it therefore begs the question what are people to do without a HEPA filter.

In relation to Airborne Noise and Vibration from the construction of the nearby Glasnevin station, your response mentioned that the predicted impact in relation to Airborne Noise and Vibration to be significant to very significant during each of the work phases. You also mentioned that "on balance there is no reason to predict significant adverse effects on human health from a psychological perspective". If this goes ahead, this is a significant project ongoing for many years. There are vulnerable residents living in the court including but not limited to elderly people ~~with chronic medical conditions~~ and babies. There are people with psychological vulnerabilities who have already been affected by the threat of the Metrolink project. In relation to Airborne Noise and Vibration I would like to bring your attention to relevant studies in relation to road traffic noise. Studies have linked road traffic noise to increased hypertension risk, myocardial infarction and stroke mortality.ⁱ There is accumulating evidence that transport noise is related to an increased risk of depression, hypertension, stroke, cardiovascular disease and mortality.^{iii iv v vi vii viii} A recent meta-analyses found an association between transportation noise and anxiety.^{ix} In relation to the effect of construction noises on human health a recent study was published looking at physiological measures of human health. The results revealed significant effects of the construction noise types on heart rate parameters including heart rate (HR), high frequency (HF), and standard deviation of the normal beat intervals (SDNN). In addition, the results showed that exposure duration significantly affects physiological responses, including Respiratory Rate and SDNN. In the study it states "Construction noise as unpleasant auditory stimuli can cause psychological effects such as stress for the receivers and these psychological effects can dramatically impact the ANS (Autonomic Nervous System)"^x

ⁱ <https://doi.org/10.1371/journal.pone.0039283>.

ⁱⁱ <https://doi.org/10.1016/j.envres.2015.02.023>.

ⁱⁱⁱ <https://doi.org/10.1097/EDE.0b013e3181f4e634>.

^{iv} <https://doi.org/10.1093/eurheartj/ehq466>.

^v <https://doi.org/10.1097/HJH.0b013e328352ac54>.

^{vi} <https://doi.org/10.1186/1476-069X-12-89>.

^{vii} <https://doi.org/10.4103/1463-1741.127847>.

viii <https://doi.org/10.1016/j.envres.2016.10.017>.

ix <https://doi.org/10.1016/j.envres.2020.110118>

x <https://doi.org/10.1016/j.scs.2023.104470>

I would argue that the airborne noise and vibration will have a significant effect on the human health of the occupants of the court. It will lead to a significant loss to the quality of life of inhabitants. How do you propose to compensate people for this loss in their quality of life and in relation to potential health impacts? How do you propose to protect the most vulnerable people in relation to their health?

My final question is are there any articles or studies or any of the references in your chapter on human health that would show the Metrolink project in an unfavourable light that have been omitted or not highlighted in the report?