

From: [REDACTED] <[REDACTED]>
Sent: Friday, September 22, 2023 2:15 PM
To: Manira Sandhir <msandhir@cityofsanmateo.org>
Subject: DEIR Comments

Dear Manira,
Please find my comments on the DEIR below.
Thank you.
Lisa

Response to Draft EIR

The Noise Element in the DEIR does not address the harmful effects of low frequency noise or discuss the mitigation of such. Besides traffic as a source, HVAC heatpump units are a common source of low frequency noise pollution. San Mateo's Climate Action Plan (CAP) requires the installation of electric appliances or the conversion of gas appliances to electric appliances. Many heat pumps will be located inside and outside of residences and will not only affect inhabitants but neighboring properties. The potential noise problem from the humming of multiples air source heat pumps has prompted an official UK government review (2023) by the Department for Environment, Food, and Rural Affairs. Low Frequency Noise is recognized by the WHO as an environmental problem and states the following in their publication on Community Noise:

"It should be noted that low frequency noise, for example, from ventilation systems can disturb rest and sleep even at low sound levels"

"For noise with a large proportion of low frequency sounds a still lower guideline (than 30dBA) is recommended"

"When prominent low frequency components are present, noise measures based on A-weighting are inappropriate"

"Since A-weighting underestimates the sound pressure level of noise with low frequency components, a better assessment of health effects would be to use C-weighting"

"It should be noted that a large proportion of low frequency components in a noise may increase considerably the adverse effects on health"

"The evidence on low frequency noise is sufficiently strong to warrant immediate concern"

Europe, ahead of us in terms of heat pump use, is dealing with the noise complaints associated with them:

German Environment Agency guideline information March 2017

Complaints about low-frequency humming noises have become more frequent in recent years – especially in residential areas. The quiet, constant hum of air source heat pumps, air-conditioning systems or district heating stations in otherwise quiet neighbourhoods is often considered disturbing, even if the noise levels comply with statutory limit values. A guide by the German Environment Agency (UBA) advises all the parties of construction projects to consider the noise emissions of such large facilities in the early planning phase of a project. Once systems which hum are in operation, there are virtually no technical means to eliminating low-frequency noise.

The EIR states that the San Mateo Noise Ordinance will protect people from health impacts however this ordinance is nearly 20 years old and does not even address interior noise in single family homes generated outside the property. It falls short in many other areas especially when compared to other newly adopted ordinances of surrounding Cities and the latest medical studies. The ordinance specifically states the regulations apply to a "reasonable person of normal sensitivities" which excludes those with misophonia or hypercusis, both considered a disability by the ADA. The potential liability of this bias should be reason enough for San Mateo to update their noise ordinance.

The current ordinance does not account for low frequency/tonal noise or the cumulative impacts from multiple heat pumps. If the EIR contemplates the noise ordinance as a mitigation measure to protect the

health of the community it should consider that the current noise ordinance needs to be updated to address the impacts of the 2040 General Plan.

The EIR states that the “noise in the community has often been cited as a health problem, not in terms of physiological damage” however several studies have shown that community noise is associated with cardiovascular problems. The Internal Journal of Preventive Medicine 2022 article (Foroughharmajda, Asadya, Pereirab, Fuentec), Is enough Attention Paid to the health effects of low-frequency noise in today’s society? It is cited that exposure to lower frequency airborne pressure wave can cause cellular and tissue damage along with widespread vascular involvement.