

33-34 Alfred Place – Alternative Condenser Location Air Quality Statement

Manufacturer Summary Statement – *ASHPs themselves do not directly emit greenhouse gases or other pollutants during their operation, as they do not burn fossil fuels to generate heat.*

Air Quality Consultants Summary Statement – *The manufacturer should be able to provide the necessary information for the local authority for this NMA without inputs from others (as they are the ones who should be most knowledgeable about this technology). Furthermore, we are surprised that the local authority requires this level of information for the NMA application.*

Manufacturer's Full Response –

ASHPs themselves do not directly emit greenhouse gases or other pollutants during their operation, as they do not burn fossil fuels to generate heat. However, there are indirect emissions associated with ASHPs, primarily related to the electricity they consume. Here are the main points to consider:

Electricity Source:

The emissions associated with an ASHP depend on the source of the electricity used to power it. If the electricity comes from renewable sources (such as wind, solar, or hydro), the associated emissions are minimal. However, if the electricity is generated from fossil fuels (like coal, natural gas, or oil), the emissions can be significant.

Manufacturing and Installation:

The production, transportation, and installation of ASHPs involve emissions, mainly due to the materials used and the energy consumed in these processes.

Refrigerants:

ASHPs use refrigerants to transfer heat. Some refrigerants can be potent greenhouse gases if they leak into the atmosphere. Modern ASHPs use refrigerants with lower global warming potential (GWP), but the risk of emissions from refrigerant leaks still exists. Mitsubishi estimates that annually there is a 1% refrigerant leakage rate.

Overall, while ASHPs themselves do not emit pollutants during operation, their environmental impact is influenced by the electricity used to power them, the production and installation processes, and the type and handling of refrigerants.

Air Quality Consultants Full Response –

Response 1 - *I have had an ask around the team here and this isn't something that we can really assist with. This is namely because the type of dispersion modelling we do would not be suitable for this scenario given the low concentrations of the emissions of pollutants like VOCs that would need to be modelled.*

33-34 Alfred Place – Alternative Condenser Location Air Quality Statement

I would have thought this instead would be a task for the condenser manufacturer to provide information on the emissions of pollutants from the equipment and compare these with any relevant air quality objectives/standards (to hopefully demonstrate that emissions from the condensers would be much lower than any objectives/standards and therefore any impact would be negligible).

Response 2 - *Unfortunately, we are unable to endorse another company's work that we have had no input in, nor do we think it necessary – the manufacturer should be able to provide the necessary information for the local authority for this NMA without inputs from others (as they are the ones who should be most knowledgeable about this technology). Furthermore, we are surprised that the local authority requires this level of information for the NMA application.*