Noise Impact Assessment For 2024/90065 - WF14 0DY

1.) Air-Source Heat Pump Make and Model:

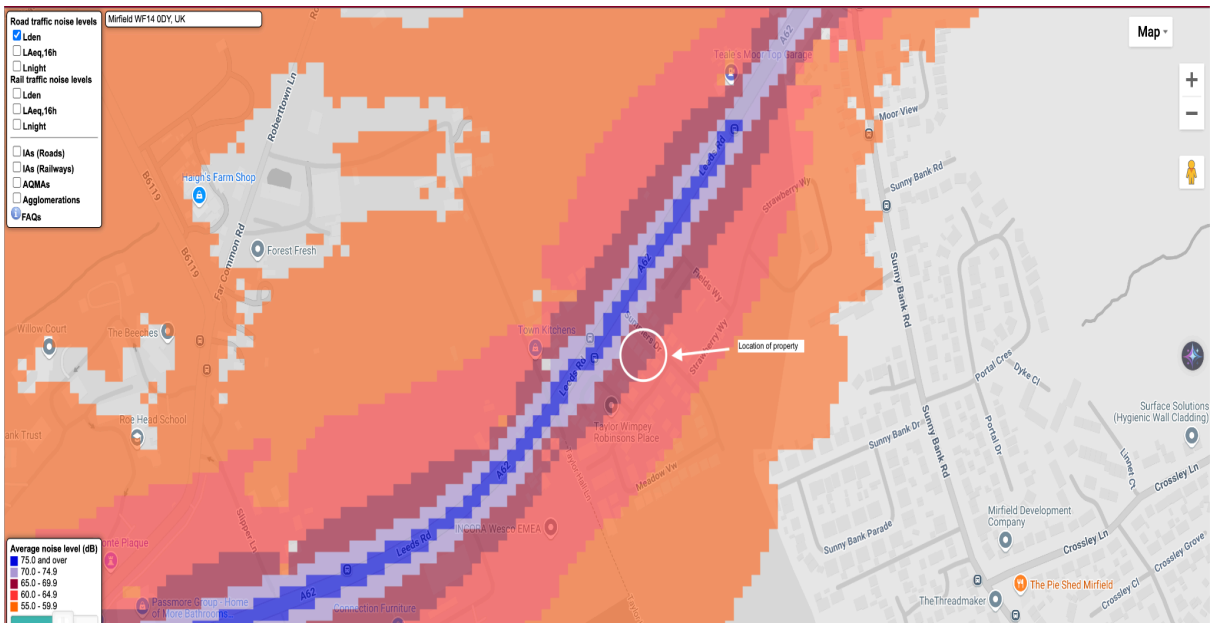
We will be installing a Daikin EDLA04E2V3. The sound power level of this unit is 58dB(A). This is its max noise output and will only be when it is in sub zero temperatures, running its disinfection cycle, or its defrost cycles. Which would be approximately less than 10% of the time during its operation.

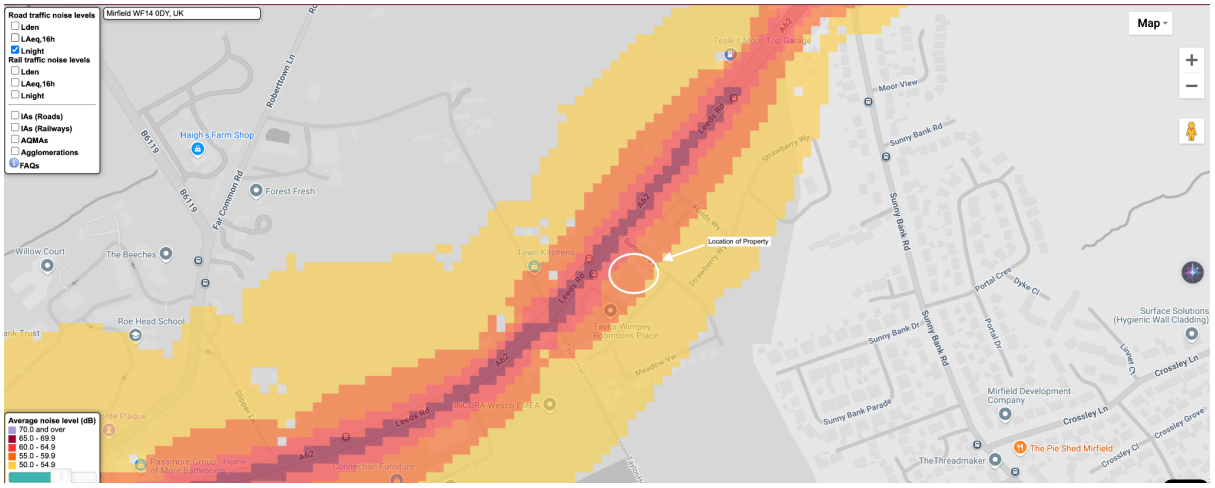
2.) Distance to the nearest noise receptors:
The distance to the nearest relevant noise receptor is 5.3m.

Surrounding area of the property

3.) Background noise:
The site is located in a residential area, near a busy road. Quality Viewer shows the background noise levels to be between 60-65dB during the day and between 50-55dB at night time

Noise attenuation calculation: With the EDLA04E2V3 max db output being 58dB(A) and the closest assessment point being 5.3m away with only 1 reflective surface, we can calculate that there will be a 19.3dB reduction in noise. This will result in the noise level 1m perpendicular to the closest habitable room to be 38.7dB, significantly below the measured 50-65dB background noise of the area.





4.) Quantitative assessment of other factors:
The heat pump will be located at the rear of the property in a central position between the two neighbouring properties. There are solid timber fences running the length of the boundary. There is a clear line of sight from closest assessment point to the heat pump

5.) Local and national policy:
Kirklees Local Plan And Strategy document section 12.3:

- *"These include the requirements for local authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the provisions and objectives of the Climate Change Act 2008, and co-operate to deliver strategic priorities which include climate change"*

Policy LP26: -
"d. any noise, odour, traffic or other impact of development is mitigated so as not to cause unacceptable detriment to local amenity"
"e. any significant adverse effects of the proposal are mitigated by wider environmental, social and economic benefits."

Relevant national planning policy framework includes -

Section 2 Point 8C - *an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy*
Section 14 Point

161 - *The planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.*

165 - *To help increase the use and supply of renewable and low carbon energy and heat, plans should:*

a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and life extension, while ensuring that adverse impacts are addressed appropriately (including cumulative landscape and visual impacts)
b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for colocating potential heat customers and suppliers.,

167 - *Local planning authorities should also give significant weight to the need to support energy efficiency and low carbon heating improvements to existing buildings, both domestic and non-domestic (including through installation of heat pumps and solar panels where these do not already benefit from permitted development rights). Where the proposals would affect conservation areas, listed buildings or other relevant designated heritage assets, local planning authorities should also apply the policies set out in chapter 16 of this Framework.*

168 - *When determining planning applications for all forms of renewable and low carbon energy developments and their associated infrastructure, local planning authorities should: a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future; b) recognise that small-scale and community-led projects provide a valuable contribution to cutting greenhouse gas emissions; c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site.*

6.) Conclusion:

The proposed ASHP is a EDLA04E2V3 with a sound power level of 58 dB(A). The nearest assessment point is 5.3 meters away. Our noise attenuation calculation estimates the noise level at the receptor to be 38.7dB. The ASHP will be located at the rear of the property, centered on the back of the house, with solid timber fences running the length of the boundary. The area is a residential area located next to a busy A road (A62) which has measured background noise levels from traffic alone to be between 50-65dB. Based on this information, it is considered that the ASHP

installation will not result in a significant adverse noise impact and meets both Kirklees local planning policy as well as the national planning policy framework.