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RE: Pumping Station Noise Levels, Toddington Lane,
Wick

Dear Mr Guest,

Further to our recent telephone conversation regarding noise level measurements taken of the pumping station that has been installed at your residential scheme in Littlehampton, I conclude the following:

The background noise levels were measured at the pumping station without it in use. The pumping station was then switched on manually and the noise levels were measured again. There was no audible difference in the noise levels at source. The measured noise levels did rise but this was due to an increase in the background noise levels and not the pump.

The measurements were taken directly at source with the steel covers for the pump and running water section open (it is clear that these will be closed during operation) and the noise from the station and pumps were not audible to the engineer or operator (Mark Gray- PMC). They were stood directly above the open covers when the pump was in operation and it was not audible.

This is obviously very hard to measure on an analyser and the best method was witnessing the noise in person.

The background noise levels were 54dBA, which is relatively quiet for a residential scheme and for the pump noise not to be audible above this would indicate acceptable levels within the vicinity of any proposed residential scheme.

The entire pumping station is located under ground and covered by dense steel covers. The compound is also completely enclosed by a close-boarded timber fence. All of these elements, combined with the distance between the residential facades and the station should also be taken into account as noise reduces naturally over distance and will be screened by barriers and fences.

There are acoustic feature corrections that could be applied to noise, such as intermittency but if the noise is not audible then a correction can't be applied.

It may be prudent to take some baseline noise levels at any future residential schemes to establish if they are exposed to very quiet background noise levels, and if so then further mitigation may be required. But based on the witnessed levels noise events such as vehicular traffic, car horns and people shouting would be more noticeable than the noise associated with the pumping station.

The noise associated with the pumping station is deemed a point source and will decrease by -6dB for every doubling of distance. For example:

<i>Distance from source</i>	<i>Noise Level – dBA</i>
1m	45
2m	39
4m	33
8m	27
16m	21

The above values are examples of noise decay over distance and not a value associated with the pumping station. However, it is apparent that these will be higher than the noise associated with the station with all covers closed due to the inaudibility of the pump along side very low background noise levels. For clarification, the noise emissions produced by the pumping station were not audible 0.5m from ground level with the steel covers open. It is clear that this type of station will not have an adverse impact on residential dwellings in a similar noise climate to the one that was measured.

Please do not hesitate to contact me should you require any baseline noise levels taken at any future sites, or direct measurements of any other pumps. All of the factors listed within this letter will contribute to the final rating level of any noise source and must be taken into account and context.



Pumping station (covers closed)



Cover removed over pumps during noise level monitoring



Airtight & Noisecheck Ltd