

Precognition by Bridgend Gannochy & Kinnoull Community Council in respect of Noise

In assessing the noise impact of the proposed Shore Road development on the community, the appellant has failed to consider the consequences of noise intensification over water.

Those of us who live on the east side of the River Tay are very aware that noise carries across the river with greater intensity than when crossing land. The result of this is that noises from the South Inch can sound louder when heard on the Dundee Road or Kinnoull (east side of the river) than when heard nearby on Tay Street.

This phenomenon is well documented in the literature and appears to be the result of two effects. The first is that noise crossing water is not absorbed in the same manner as when it crosses land. A second, more significant effect, is that the sound waves are refracted (bent) when crossing the colder layer of air above the water. This causes sounds which were not originally travelling towards a receptor on the east side to change direction and add to the base noise. This significantly intensifies the noise and causes sound sources near to the River Tay to appear significantly closer when they are heard on the opposite bank.

Residents on the east side of the river are unanimous in their views about noise intensification. On a still night it is possible to clearly hear (loud) conversations conducted close to the South Inch. During periods when a Funfair is operating on the South Inch the noise of music is exceedingly obtrusive on the east side of the river though people living closer to the Inch may be less aware of it.

In previous communications with the appellant, the effect of “noise amplification over water” was mutually agreed but the appellant felt that the community impact of this phenomenon would be negligible.

As the community has frequently found with the appellant, they have dismissed, “out of hand” any suggestions we have made to improve the information they use in taking their decisions. The phenomenon we have described is very amenable to measurement but no measurements have ever been made.

We believe that this effect, together with the use of “A” weightings in the noise measurement, cause the effect of low frequency noise, especially during the night, to be underestimated. “A” Noise weightings are corrected for the noise frequencies best heard by the human ear. In practice, it is very difficult to say when two tones at different frequencies sound equally loud. This is especially true of low frequencies where we sense the sound less as a tone and more as a feeling.

For this reason it would be beneficial for a sensitivity study to be undertaken where a “C” weighting is given to the noise so that the full night impact of the rumblings from the proposed machinery can be determined.

We are very concerned that whilst all parties are aware that “noise” may turn out to be the major day-to-day concern associated with this development, a less-than fastidious approach has been used by the appellant in providing the information to fully evaluate the community impact.