

Vibration Prediction & Control Award

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New housing development – Wiltshire

This project required a number of very difficult monitoring and design challenges to be overcome which involved a multi-consultancy approach in identifying that a planning condition with respect to internal re-radiated noise resulting from underground vibration could be discharged.

The starting point was to endeavour to break the impasse between the Local Planning Authority and the then noise consultants. Whilst, that consultancy had done more than enough monitoring and prediction work to discharge the contentious planning condition this was not accepted by the Council on the advice of their own noise consultant. ACCON were appointed to the project with the initial aim of providing a reradiated noise report suitable for the discharge of the noise condition which unfortunately had previously been compiled by the appellant and the LPA consultants at a Public Inquiry 5 years earlier. The planning condition was poorly constructed, did not meet the six tests of planning conditions and the legal team

had not sought to amend it within the required timescales.

The challenges along the way included designing an appropriate measurement methodology to obtain robust vibration source data from the operations of an underground mine. The methodology for determining internal noise levels within the proposed buildings eventually required FEA modelling of the design solution as the Council's noise consultant was not prepared to accept an empirical modelling approach. The Planning Inspector ultimately did not rule on the efficacy of the noise and vibration evidence provided by either party, although during the Inquiry the Council's noise expert accepted that if everything worked as predicted then the condition would be discharged.

The judges commented on the extensive collaboration involved in this project noting that the consultants were brought in to help with a stalled project. Satisfying all the parties was important and good practice

was employed, commensurate with the project requirements and presentation at a Public Inquiry.

This was a challenging and unusual project which involved finding a way of showing how residential properties could be constructed on a difficult site. This was a high-quality solution in terms of complex measurements, modelling and the final design. Alongside that is the requirement for negotiation with all the parties and evidence of collaboration and compromise to satisfy the high number of stakeholders involved.