

Innovation Award

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AcSoft
Noise, Vibration & Air Quality



AECOM Metrolinx, Ontario

This is a new light transit rail system that will be built to help connect remote areas to the centre of Ontario, Canada, significantly reducing journey times and opening more opportunities for the communities served by the new link. With key planning stages developed during the Covid pandemic, this project saw particular challenges in reaching communities to fully engage ahead of approvals being granted. With physical restrictions in place, the stakeholder engagement programme needed to think outside the box to deliver content in a remote, accessible and ultimately meaningful way. A web-based auralisation tool was developed to help support the process, with the following key features:

- Critical element contributing to the estimated 100,000 community interactions, which were all delivered remotely
- Hosted on a web-based platform which significantly broadened the auralisation's reach
- Powerful tool to reassure the affected communities about the planned measures to minimise noise impact
- International collaboration between Digital Architects, VR specialists, web-platform designers and acousticians.
- Major project which will be a fundamental driver in the regeneration of previously overlooked communities on the periphery of a major city.

The judges viewed the simulation for this and were impressed by it. Whilst the techniques have been used before this is an excellent example which can benefit other future projects particularly those involving linear infrastructure. The use of engagement tools to convey complex ideas to those effected is a positive development and a good way of improving community involvement and liaison. Undertaking this during a period of restricted physical engagement added to the challenge but also shows what can be done with collaboration with other professionals to support demonstration of acoustics to the wider public. It is an innovative project deserving of this year's Award.

PDA Manchester Airport Multi-Storey Car Park – Security Mesh Noise Mitigation

This project involved the development of a mitigation strategy to address intense wind induced tonal whistling emanating from a huge amount of security mesh at the recently completed Multi-Storey Car Park (MSCP) at Manchester Airport, currently the largest MSCP in Western Europe. The tonal noise generated was causing issues

at receivers up to 1km away. As the winner of the Infrastructure Award, full details appear [here](#)

The judges were impressed by the creative approach and the use of wind tunnel testing for a project where this would not normally be a feature. Designing their own test rigs helped keep the costs down and the overall

outcome secured a significant saving for the client compared to the original proposal. This project is an excellent example of acoustics in practice accompanied by use of laboratory testing to support the acousticians' solution. It is an innovative project deserving of this year's Award.