

Environmental Noise Award

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MEASUREMENT SYSTEMS

☆ **Winner:** Red Twin: De-Tuning of Whistling Brise Soleil

This project demonstrates how practical acoustic expertise, and responsive consultancy can solve complex and disruptive real-world problems with minimal disturbance and maximum value.

Following the renovation of a six-storey 1960s office block – including the addition of two penthouse floors – a persistent whistling noise began to occur around the building during moderate winds. The source was unclear, but the disturbance was enough to prompt complaints from residents and intervention from the council under the Environmental Protection Act.

The culprit was eventually identified as the building's new brise soleil – installed at roof level as both an architectural feature and a solar shading device. As wind passed over its structure, aeroacoustic resonances caused tonal noise emissions, impacting both occupants and the surrounding community.

Using a combination of on-site investigation, spectral analysis, and practical insight into flow-induced noise, Red Twin quickly pinpointed the source and recommended a range of mitigation options. The client was particularly focused on

avoiding intrusive remedial works, scaffolding, or displacement of tenants. De-tuning measures were implemented, modifying the geometry and interaction of components to disrupt the tonal resonance without compromising the architectural or solar control function.

The client noted that “Red Twin quickly identified the likely cause and proposed practical, cost-effective solutions that enabled us to implement a programme of informed works that successfully mitigated the noise.”

The judges commended the project for its clarity of purpose and strong delivery. They highlighted the value to the client – who avoided costly or invasive works – and the team's ability to provide a tailored and effective solution without requiring tenant relocations. They also acknowledged its relevance to urban developments where wind-induced noise from façades and shading elements is increasingly common.

Acoustic Awards 2025

These awards demonstrate the unique skills of UK based acoustic consultants in addressing challenges, championing innovation and originality and showcasing the significance of a profession which blends art and science to transformational effect.