

# Window that silences your noisy neighbours

PUGH



*'I'm worried about your parents. They should have been here hours ago'*

By **Colin Fernandez**  
Science Correspondent

A WINDOW that can reduce noise pollution by 50 per cent even when open has been unveiled by scientists.

The prototype is likely to benefit anyone living under a flight path, by a busy road or near railway lines.

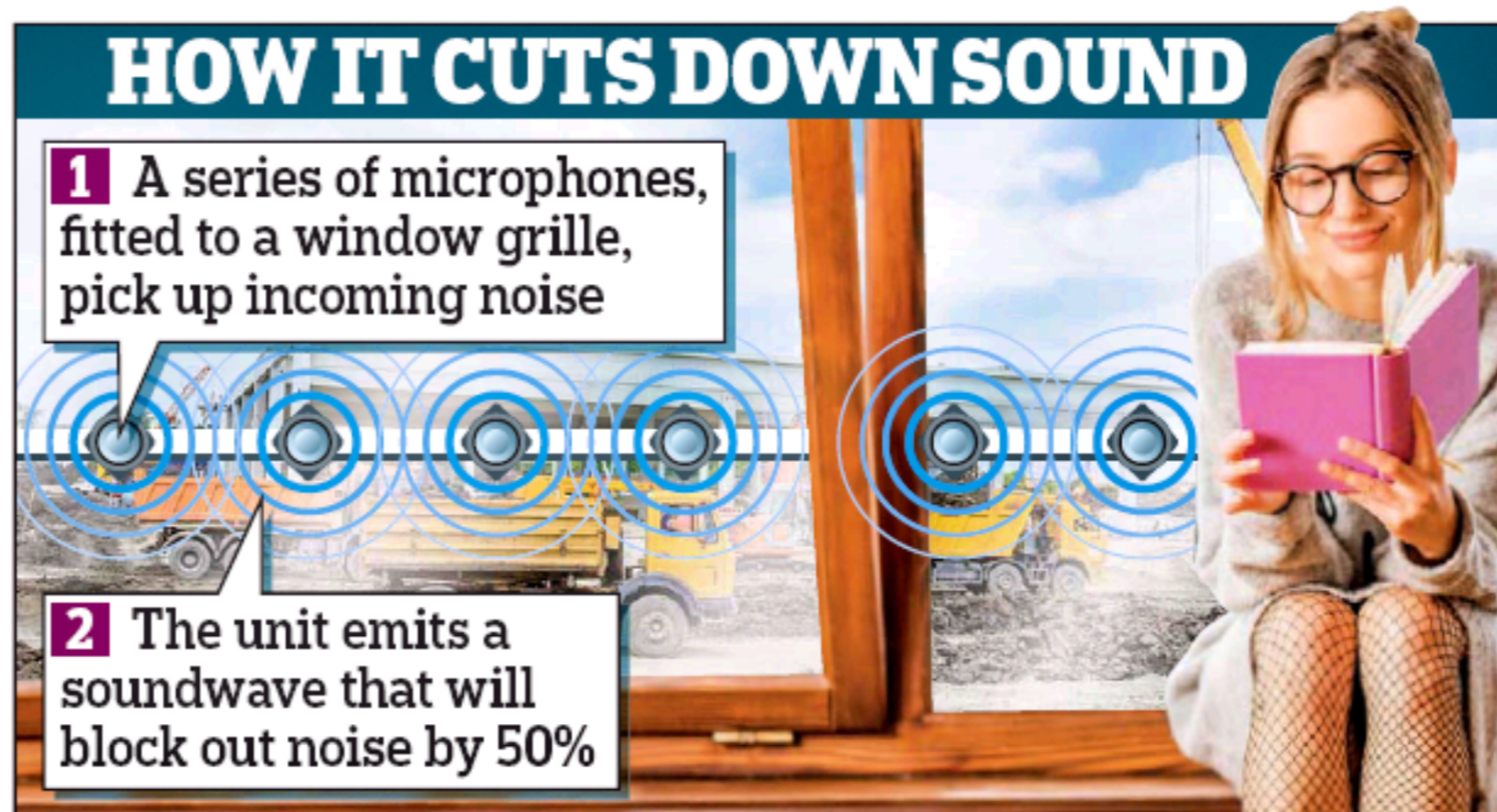
And it would be perfect for people whose neighbours mow their lawns at an unearthly hour on Sundays or let their children play noisy games.

Researchers at the University of Southampton and Nanyang Technological University in Singapore said the gadget works on the same principle as 'noise-cancelling' headphones, but is adapted to work in a larger area. Designed

## HOW IT CUTS DOWN SOUND

**1** A series of microphones, fitted to a window grille, pick up incoming noise

**2** The unit emits a soundwave that will block out noise by 50%



to be mounted on window grilles, the gadget uses 'active noise control' technology.

The researchers say that windows can be left open for fresh air

without disturbance from external noise pollution, reducing the need for air-conditioning.

Several units are placed together on the grille, each equipped with

a microphone which can detect noise before it reaches the window – and generate a soundwave that is out of phase with an incoming wave – cancelling the noise.

Professor Gan Woon Seng, of NTU, said: 'Our innovation not only computes the right amount and type of "anti-noise" to emit, but also does it faster than the detected noise can reach inside the building.'

The research team conducted tests using a soundproof chamber housing a mock room at the university's laboratories. Recorded sounds from construction sites, jet engines and trains were used as noise sources.

The team now aims to improve the units' noise-cancellation efficiency, making them smaller and more cost-effective to produce.