

## NEW LAW TO TACKLE ELECTRIC CARS' SILENT MENACE TO PEDESTRIANS

They are green, clean and make very little noise. It is this latter quality, initially seen by many as a good thing, that has become an acute concern for safety campaigners, who fear that the rising number of electric vehicles constitutes a silent menace.

When they travel at under 20kph (12 mph) the vehicles can barely be heard, especially by cyclists or pedestrians listening to music through headphones. "The greatest risks associated with electric vehicles are when they are travelling at low speeds, such as in urban areas with lower limits, as the noise from tyres and the road surface, and aerodynamic noise, are minimal at those speeds," said Kevin Clinton, from the Royal Society for the Prevention of Accidents.

But the days of silence are numbered. From July next year, all new electric and hybrid models seeking approval in Europe will have to emit a noise when travelling at low speeds. Existing vehicles are expected gradually to be retrofitted with devices.

The law has been welcomed by campaigners. James White, at the Guide Dogs for the Blind Association, is worried about the risk the cars pose to people with sight loss. He said that for people who struggle to see them, the vehicles should indicate their presence in other ways.

Research shows electric cars are about **40% more likely** to hit a pedestrian than a conventional vehicle. One study suggests that 93% of blind and partially sighted people have had problems with them. "It is a really important issue," said White. "Guide dogs are all about giving people confidence and independence and a near miss or an incident with a vehicle of this type could really set people back a long way."

In Japan there was a national outcry when a guide dog and its owner were killed by a reversing electric vehicle whose driver had used a pause control to deactivate its sound emitter. The new standards, which in Europe will be introduced via an EU directive, will require activation by default when the vehicle is on.

About 140,000 electric vehicles are now registered in Britain compared with just 3,500 in 2013. By 2030 **the National Grid predicts there could be as many** as 9 million electric vehicles on Britain's roads.

Chris Hanson-Abbott, whose firm Brigade Electronics is a distributor of vehicle safety products, is an adviser to the UN working group on quiet road transport vehicles that came up with the industry standards now being introduced across the world as electric cars become mainstream. "The object is to have warnings which are audible but which are not the least bit environmentally disturbing," said Hanson-Abbott, who introduced the reversing alarm to the UK in 1976.

Battles have raged over what sort of sound the vehicles should emit and when they should emit it, Hanson-Abbott said. The agreed standard is a mix of tonal sounds and white noise that will cut out once the vehicle gets to about 20kph and the sound of the tyres becomes sufficiently audible. "White sound is very pleasant. It's the sound of

falling water,” Hanson-Abbott said. “It has two unique characteristics. One is that it’s very pleasant on the ear and the second is that the source direction of that sound is instantly recognisable. The moment you hear white sound you can point directly at where it’s coming from. This is an incredibly valuable quality.”

In contrast, “tonal” sound emitted by diesel or petrol cars can bounce off hard surfaces, making it difficult to judge its source. “It’s a huge improvement on the noise emitted by petrol or diesel vehicles because its sound source is directional,” Hanson-Abbott said. “That’s a massive safety factor.”

Politicians promoting electric cars as the future of urban transportation have welcomed the move to make the vehicles noisier.

“It’s something manufacturers are already looking into and we understand from previous tests that the main risk is lower-speed driving – such as reversing when manoeuvring around a car park – when the car is most quiet,” said Sally Longford, who is in charge of neighbourhood services and local transport at Nottingham city council. It wants to support the use of [8,000 more electric vehicles](#) in the city by 2020.

“We are fully supportive of calls for manufacturers to look at how this can be addressed to ensure the increasing number of electric vehicles on our roads doesn’t create an unnecessary risk to pedestrians and other road users,” she added.