



### Surveying for noise

Unwanted sound, or noise, can be one of the biggest impacts a new road can have. So, if we're going to take steps to limit noise levels we need to know what they're like at the moment.

### How the survey works

A combination of surveys and modelling is used to determine the likely noise impact that a scheme will have. We will take background noise measurements at selected sites, using special equipment called sound level meters. These recordings are used to create noise models, which are then used to show people how sound will change.

Noise models allow us to predict future noise levels and are used to assess the likely impact of the new road. We can assess how different road surface types change the noise and can also design mitigation measures, such as barriers or embankments.

### What will happen on site?

Noise surveys are non-invasive and we are able to carry our equipment a short distance on foot as long as there is vehicle access nearby. Our first job is to visit potential locations and assess whether the sites are suitable for sound level meters. If they are suitable, we will liaise with landowners to arrange a suitable time to carry out the monitoring work.

We don't always need to have a person onsite to complete a noise survey but ensuring we have the right type of day is crucial. We need to ensure a dry, windless day when no other site surveying work is taking place. We need to capture the normal sounds in the area. To complete a noise survey we need a number of specific pieces of kit, for instance sound recording equipment which is mounted on stands and tripods. Collecting a sound recording at a single location will typically take between 15 minutes and up to several days to complete.

For short-term measurements, up to several hours, our noise engineers remain on site nearby to take notes of the features and events the microphones pick up.

For longer measurements, over several days, the equipment is left on site and our engineers make observations when setting up and collecting the equipment. Often we use a combination of short and long-term measurements to get an accurate picture of the noise level along the length of the scheme.

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