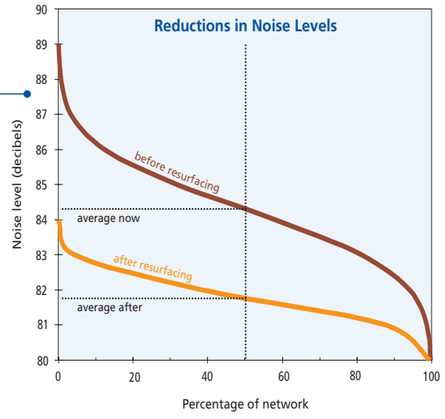
overall benefits *advanced technology*

QUIETER ROAD SURFACES

Better For Everyone

Overall Benefits

At present there is a wide variation in the levels of noise arising from traffic running over different types of surface. Replacing the noisier surfaces with the new quiet ones will make tyre noise more consistent and produce a significant reduction in average noise levels. The graph shows how the change in surfacing will eliminate the noisiest trunk roads and reduce the average noise level at the hard shoulder of a typical motorway by three decibels. This reduction is equivalent to halving the volume of traffic.



TRITON

(Tyre-Road Interaction, Testing Of Noise) analyses the noise generated by specific tyres on different road surfaces.

TRACS

(TRAffic-speed Condition Survey) scans the road surface to detect defects and irregularities that can generate noise while travelling at traffic speed.

Further Information can be obtained from the HA Information Line
*Telephone **08457 50 40 30***
or see our web page
http://www.highways.gov.uk

graphic services 000265

HIGHWAYS AGENCY

The Problem

The trunk road network, which includes most motorways, carries very heavy flows of traffic at high speeds. This has resulted in people living nearby complaining about the level of noise. The problem is largely due to the interaction between tyres and road surfaces. Both road surfaces and tyres are designed to provide good grip, especially on wet roads, but better grip tends to mean more noise. Although both road surfacing materials and tyres can be modified to reduce noise, we have to find the correct balance between improving the environment and ensuring safety.

Getting The Balance Right

We have some of the safest roads in the world. Our standards for the skidding resistance of surfaces make a significant contribution to road safety. But the necessary surface roughness affected the amount of noise generated by tyres. The government recognised the benefits of improved road surfacing technology in "A New Deal for Trunk Roads in England" (published in July 1998). We now have a range of road surfaces that significantly reduce tyre noise but still provide good grip in wet weather.

These quieter surfaces are being used as a matter of course on new and improved trunk roads and when existing trunk roads need to be resurfaced. As a result, about 55% of the national road network should have a quieter surface within ten years. Under our new Ten Year Plan, we will in addition be resurfacing some particularly noisy surfaces before the end of their normal life. We will be specifically targeting concrete roads among these, which make up about 5% of the national road network.

Benefits of Quieter Road Surfaces

Both drivers and residents have welcomed the reduction in noise levels wherever the Highways Agency has used this new technology.

Good for residents**:**

- Noise levels are reduced noticeably and, if the old surface was particularly noisy, the difference can be dramatic.
- Quieter road surfaces reduce the need for noise barriers, which may not fit well into the landscape.

Good for motorists and vehicles**:**

- Less tyre noise – less tiring for drivers
- Smoother ride – less vibration, less wear and tear, lower fuel consumption
- Quick to put in place – less traffic disruption
- Long lasting – less frequent roadworks.

Further Improvements

The Highways Agency is making use of advanced technology to help industry reduce tyre noise safely and examples of some new survey equipment appear overleaf.