

Press release: We bake a winner – could you?

Building roads may seem a million miles from baking, but a good quality motorway, or major A road – those managed by us – is made up of many, distinctive layers, all with expertly picked and mixed ingredients.

Our Director of Asset Development, Safety, Engineering and Standards Nicola Debnam said:

Our roads connect the country together and our network helps four million journeys to be made safely and reliably each day. We want the people who use them to be safe and a big part of that is ensuring we have a good quality road surface too. Some people may not be aware of the incredible engineering that has taken place beneath their wheels to make them happen. But just like a cake, it really is a refined recipe.

We hope our new way of illustrating our work will encourage people who may not normally consider a career in engineering to think again – a job with Highways England could satisfy your career appetite!

Our teams of expert chefs design each road, building a number of special layers starting with a sub-base and finishing with the smooth icing of the surface layer.

Road surface expert Lyle Andrew, Director of Development for the Institute of Asphalt Technology, added:

Just as expert bakers carefully select and prepare their ingredients to make the finest cakes, highway engineers specify and use high quality constituents to ensure that the materials used in the construction of our roads make the perfect blend of strength, durability and smooth surface. An accurate proportion of each ingredient is as vital to the engineer as it is to the star baker.

Using our well tested basic recipe (we don't take any whisks!), our chefs will change the ingredients for each road as needed.

Starting with a sub-base of crushed stones, like a cheesecake base giving the cake a strong foundation and preventing a 'soggy bottom', it's followed by a base of coarse stones like a rich fruit cake full of fruit and nuts. Next our chefs work on the binder layer, which is like a sponge full of fine ingredients (flour and sugar), similar to a Victoria sponge. Finally, as with any quality cake our surface layer, like the good quality smooth icing,

providing drivers with a smooth skid resistant surface while preventing surface water from seeping into the other layers. Each layer has a special purpose, whether providing support, drainage or load distribution.

Holding the winning cake design together is a layer of top quality sticky jam, otherwise known as the bond coat.

It works the other way too. In a Highways England-funded trial, Nottingham University has used every day sunflower oil, to help repair road surfaces. The University found that by placing capsules of the oil in asphalt, a material used for surfacing roads, they would 'heal' cracks in the road as they emerged by softening the asphalt around the crack.

So while you settle down to watch the Bake Off contestants battle it out , consider that if you love baking, you might love making a road.

Motorways and major A roads connect businesses, families and friends. Yet the country faces a shortage of the people that build them. That's why we're taking part in the [Year of Engineering](#) campaign, which aims to inspire young people to consider engineering as a rewarding career. The company is looking for a continuing pipeline of young engineers to deliver the multi-billion investment plans network, improving lives and making a positive difference to the world.

If this has inspired you to consider a career in engineering please visit our [careers website](#) for further details.

General enquiries

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

Media enquiries

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.