

# Tarmac leads with colour

**Tarmac Quarry Products' new coloured asphalts mean that the material could soon be first choice when aesthetics are important.**

Even with the best will in the world, asphalt and aesthetics can seldom have been said to go hand in hand — until now. Like the Ford Model T, asphalt is traditionally available in any colour you like, as long as it's black.

At a push, you could have some red. Now, thanks to the success of a development programme at Tarmac Quarry Products (TQP), you can have it any colour you like — as well as black.

Aesthetics are increasingly important in the surfacing market and TQP has a number of new products with improved appearance which also offer advantages on price, ease of

installation and low maintenance.

The latest addition to the Masters in Asphalt range of special products is Mastertint. TQP is launching the process, enabling the company to supply a range of surfacings in a variety of classic colours, but which can be used to design products and colour tones to meet any customer requirements.

Key to the process is a new, clear pigmentable binder developed with support from bitumen specialist Nynas. TQP Research & Development Manager Dr Howard Robinson explains: "The new binder is not bitumen based, but is a cocktail of components, developed using sophisticated testing equipment which only a specialist bitumen producer like Nynas would have in its laboratories. We were after a clear binder system which would be modelled on the empirical properties of road grade bitumens, with the same rheological properties as bitumen.



"The binder should perform in service at least as well as bitumen in surfacings designed for longer life. We found in early trials that the binder performed extremely well in high stone content mixtures and conventional macadams where resistance to rutting is mainly provided by the aggregate interlock."

However, in low stone content asphalts deformation resistance is dependent primarily on the binder stiffness, Robinson says. The binder had to be redesigned, particularly to withstand high road temperatures when asphalts are more susceptible to rutting.

"The development process concentrated on producing a binder which can perform well in both low and high stone content mixtures, so that we can offer colours throughout our product range."

Surprisingly little pigment has to be added to the mix to achieve the desired colours, since the binder is transparent. So far, TQP has provided classic red, green and natural gravel coloured surfacings, but the company stresses that virtually any colour can be produced to suit what customers want.

A range of natural colour surfacings is also available by enhancing the inherent colour of specially selected decorative aggregates with the clear binder alone.

Initial Mastertint trials were

*Coloured asphalts can be used in environmentally sensitive areas*





above: Laying Mastertint at TQP's headquarters  
left: Cycle routes can be clearly delineated using coloured asphalt  
far left: Masterprint targets the block paving market

carried out in Scotland as long ago as 1994. After a four year development period the Mastertint process technology was extended to other Tarmac plants in England and Wales during 1998.

Red Mastertint has been supplied to Glasgow's St Margaret's Drive in the West End, as well as a primary bus route within the city which has now been trafficked heavily for almost a year.

The most prestigious use so far, in resurfacing Glasgow's George Square, a major public area in front of the City Chambers, is a marketing breakthrough. TQP's Special Products Business Manager Phil Sabin says: "We see the market which is currently dominated by coloured concrete and block paving systems as a major target for Mastertint materials and we are encouraged by the high level of interest already being shown by local authorities across the UK.

"Many councils face large annual bills for compensation payments to people claiming to have tripped over uneven ground created when the blocks move, causing them injury," he says.

"Blocks also have a major maintenance element in their life cycle cost as councils grapple with the uneven ground problem and weeds also have to be suppressed. Products like ours however are virtually maintenance free and they do not produce anything like the same problem of uneven ground over which

people can stumble."

The market potential is huge, both in the UK and overseas. Stopping the march of block paving will be a major task, however, as Sabin realises.

"About one third of Holland is estimated to be under block paving — it is a popular material. Asphalt has made little attempt to defend its share of this part of the surfacing market for years," he says.

"In important public areas like George Square in Glasgow, which was recently a centrepiece of the City's European City of Culture celebrations, aesthetics are obviously important and this is where black asphalt often failed to compete. Now we can fight back with an entire range of colours and colour combinations."

Coloured asphalt also has installation advantages over other modular paving systems. It can be laid in a matter of hours using conventional equipment, and areas can be opened up again to the public quickly, compared to potentially weeks for installing block paving.

TQP's own headquarters at Ettingshall, near Wolverhampton, was the site of another trial, which also took advantage of several other aesthetic developments. Recent visitors could hardly have failed to notice that they entered the site on a green Mastertint surfaced road and drove into a red Mastertint visitors car park. The road in front of the main building

is surfaced in green coloured Mastertint rolled asphalt, which has been imprinted to simulate a block paved finish.

The process used to texture the coloured asphalt is nearing completion of its development stage and is to be launched under the Masterprint identity.

Sabin says: "Our initial market testing has already created considerable interest in the Masterprint process for town centre developments, footpaths and driveways.

"We can lay larger areas of Masterprint quicker than competing modular concrete or block paving systems and have the surface back in use as soon as the asphalt has cooled down, typically in two to three hours. It is a high performance material which means that for the first time there is a range of coloured asphalts that will give as good or better performance than conventional materials."

"We are also finding that the material resists damage caused by fuel spillage better than bitumen based materials. Housing developers, architects and town planners are very interested," Sabin says. "The Masterprint process opens up a whole new spectrum of potential markets and applications for TQP's existing special products range."

Products coloured by the Mastertint process can be obtained nationwide from TQP plants in England, Scotland and Wales.