

# Glass fibres combine with colour for strong appeal

Colas' Fibredec product is proving its versatility and worth as a stress absorbing and aesthetic specialist surfacing, in a variety of uses.

Highway engineers first became aware of Colas' Fibredec process over 25 years ago when it was launched as an innovative, high tensile strength surfacing process. Since then, Fibredec has proven highly versatile, as a stress absorbing membrane interlay – a SAMI – and lately as an aesthetic and strong solution for a variety of uses.

These include central reserve for contractors (see below), towpaths and footpaths for local authorities and cycleways for Sustrans, the sustainable transport charity. Sites and specific uses vary, but in each case, Fibredec has provided a strong surface for durability or withstanding relatively high levels of stress; and produced an aesthetic finish.

The Fibredec process is unique; using bespoke plant to lay a combination of bitumen emulsion, glass fibres and aggregate in situ. The glass fibre reinforcement, which is critical for providing the high tensile strength, is

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laminated between two layers of polymer modified emulsion; the whole process being achieved in a single pass of the plant.

"Fibredec provides an excellent alternative to geogrids in use as a SAMI," says Colas'

Operations Manager Jim Doyle, "As the Fibredec process is applied in one pass, it gives a seamless finish and eliminates problems sometimes associated with overlapping geogrids. The speed of application is impressive and another great advantage of Fibredec is the capability it provides for meeting all specifications by varying the amount of glass fibre applied."

Fibredec's key characteristic of high tensile strength also allows a reduction in patching (and associated costs) prior to treating damaged or worn out pavements, says Doyle. And when the technique's strength is combined with a decorative aggregate finish, the result is a very cost effective, strong and aesthetically pleasing surface.

## FIBREDEC GETS TO GRIPS SEALING CENTRAL RESERVE

Central reserve along a new stretch of dual carriageway between Abergavenny and Gilwern in Wales was surfaced with Fibredec this year. Project client the Welsh Assembly Government wanted a surface that was hardwearing and aesthetically pleasing. Main contractor Nuttall chose Fibredec for its durability and because it would seal against weeds, reducing future maintenance. "This site tested the versatility of Fibredec," says Colas' Operations Manager Jim Doyle. "The safety barrier was already in place so we had to lay around the posts and along the strips between the barrier and the road." Colas' specially designed small plant was used to lay the strips while sections around each post were laid by hand. Altogether 12,000m<sup>2</sup> of central reserve was surfaced with two layers of Fibredec, laid directly over the sub base.



Colas' specially developed small plant was used to apply Fibredec along the central reserve strips



Colas has recently developed bespoke plant for laying Fibredec in tight and access restricted locations such as towpaths

Durham County Council's Countryside Group, for example, has used Fibredec for a number of years on its Railway Path network of cycle and footways, including the Benfieldside Cycleway near Consett.

"Around 20% of the 115km network is now surfaced with Fibredec and the sealed surfacing has proved very popular with users because it makes routes accessible at all times of year," says Durham County Council's Acting Corporate Director for Environment Roger Elphick. "Considerable effort is made to ensure the Fibredec has a properly constructed sub base. Care taken in preparation has created durable surfaces for use by maintenance vehicles with no hint of problems to date."

According to Jim Doyle, Fibredec can be laid straight onto Type 1 sub base for these pedestrian and lightly trafficked sites. Colas has also developed smaller equipment to lay Fibredec in tight and access restricted locations, including towpaths (above) and around obstacles. Such was the case recently on the A465 between Abergavenny and Gilwern in Wales (see box left), while Fibredec has also shown its merit when strengthening areas of pavement with added colour (see box right).

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## HISTORIC GARDENS GIVEN GOLDEN TREATMENT



Reconstruction with Fibredec has produced a strong and aesthetic entrance to Tatton Park

**T**atton Park has a strengthened and attractive entrance for vehicles after Cheshire County Council asked Colas to repair the park's structurally damaged and deeply rutted entrance road.

The new surface had to be durable enough to withstand the stress of large vehicles and numerous tour coaches. It also had to have a top quality finish for the main entrance to the mansion, gardens, farm and deer park that make up Tatton Park.

Colas first regulated and reprofiled the existing surface with an asphalt, ensuring that drainage was upgraded, before applying

Fibredec in a double layer. A total of 2000m<sup>2</sup> was covered using Fibredec and finished in a golden gravel for a decorative finish.

The work was carried out over five days in June this year. "The appearance and quality of the running surface of the main entrance to the park is now greatly improved, as is the integrity of the pavement and its drainage," says Colas' Fibredec Manager Arthur Thompson.

"We have surfaced the main entrance as phase one of works to the park and it is likely that in coming years the driveways and footpaths within the park will also be given the same treatment."