

Nynas Bitumen

Asphalt surfacing a winner at Race of Champions

The task was a tough one: to build in five days on Wembley's turf a race track durable enough for F1 cars. Contractor FM Conway, asphalt supplier Tarmac and Nyguard HR binder rose to the challenge.

Nyguard HR is a hot mix binder engineered by bitumen specialist Nynas to provide high performance and durability, especially in demanding applications where fuel spillage may occur. It is a key component within Tarmac's Mastertrack thin surfacing asphalt which is proving its worth at motor racing venues up and down the country. And Mastertrack is the material FM Conway turned to when it won perhaps its most onerous contract to date, to turn the pitch at Wembley into a 'grand prix' circuit.

The Race of Champions was held on the temporary track at Wembley stadium last December in front of 40,000 motor racing fans. One of the event's clear winners was the track itself: despite the aggressive driving, the high speed cornering and braking and celebratory 'doughnuts' at the competition's end, the surfacing stood up beautifully. "There was tyre smoke everywhere," says FM Conway's Surfacing Director Nick Burman, "but not a stone was lifted out of place."

For the world class drivers taking part, such as Michael Schumacher, Jenson Button, Tom

Kristiansen and Petter Solberg, the Race of Champions is the ultimate test (see box). "The 2006 race was held in Paris at the Stade de France and a couple of us from FM Conway went across for it," Burman says.

"We were aware that 2007's race would be held in London – where we carry out highway maintenance for 10 boroughs – and wanted to see the track being built. The mission wasn't just a fact finding one: it was intended as a clear signal of our interest and commitment. We were keen, and ultimately very happy, to win the contract for building the London track."

FM Conway has close contact with Tarmac which proposed use of its Mastertrack mix slightly modified to suit the requirements of Race of Champions event organiser, IMP. "Mastertrack is a thin surfacing specifically designed to resist the very high shearing stresses imposed by racing cars, particularly at corners," says Tarmac's London Technical Manager Tim Smith. "It contains nominal 6mm size aggregate bound by Nynas's Nyguard HR polymer modified binder."

"Unusually, we were asked for a surfacing

which displayed a degree of slipperiness, presumably to ratchet up the action on the track, which slightly complicated the mix design. We opted for an aggregate of 55 PSV, a medium figure in terms of skid resistance, taking the view that – together with the 'newness' of the track – this would provide the required adhesion." Tarmac's Ettingshall Technical Centre optimised and confirmed the blend.

"Nyguard HR is tough stuff, of high modulus and tensile strength properties to suit really arduous applications."

Miles Williamson

Nynas had no technical qualms about its binder being used in the Race of Champions mix. "Nyguard HR is tough stuff, of high modulus and tensile strength properties to suit really arduous applications," says the company's Southern Region Sales Manager Miles Williamson. "It produces pavement layers of high stiffness with excellent rutting and shear resistance – just the right material to help keep highly stressed asphalts intact. And, of course, Nyguard HR provides at least five times greater resistance to degradation by fuel than conventional paving grade binders."

The 1km long Race of Champions circuit was built within the confines of Wembley in just five days, at the end of November. The layout incorporated straights and bends and a cross over bridge, looking from the upper reaches of the arena much like a Scalextric

Tarmac's Mastertrack asphalt bound by Nyguard HR polymer modified bitumen was laid at Wembley by FM Conway





Wembley stadium's famous turf made way for a much more durable surface to accommodate some of the world's top racing drivers in December

track. To the people on the ground, however, the full extent of the project was more than apparent, especially when the time scale was taken into account. First, Wembley's turf had to be covered in Eve Trackway aluminium plates to protect the surface and spread the load of what was to come on top.

Then came the bridge sections, weighing a total of 100t, to form the cross over, closely followed by concrete safety barriers which delineated the course of the track. Next came the placing of 25,000t of asphalt planings, to create the track's sub base; after which asphaltting began. The sub base, of DBM50, was laid 50mm thick (total weight 1300t); and the Mastertrack 25mm (500t). Afterwards came finishing touches including white lining.

"It all went very well," says Nick Burman. "Our client was much impressed, by the asphalt materials, by the speed of operations and the quality of the finish. The track performed excellently under load and stood up to all the stresses and strains – there was no need for any remedial work. It seems we've got the job to do again, for the next Race of Champions to be held in London. We're already planning for it....."

- FM Conway, the contractor responsible for the London Race of Champions race track, is owned by the father of Mike Conway, the 2006 British F3 champion. Following December's event, the Wembley pitch was made good in a separate £150,000 contract.



Mattias Ekström burns out his tyres after winning the Race of Champions

ON YOUR MARKS.....

The Race of Champions is described as a unique motor sport format that sees drivers from all categories of motor racing competing against each other in a stadium environment. The drivers use identical equipment, on the same track. All an individual driver has to differentiate him or her self from the rest is their own individual talent and determination to win. The event is highly competitive, with top drivers from F1 and other formulas, the endurance events such as Le Mans and the World Rally Championships.

The Race of Champions was inaugurated in the late 1980s, being co-founded by leading female rally driver Michèle Mouton. Last year's race was the first time the event has been hosted by London. Knock out heats determine 'class champions', who compete in a final 'shoot out' to arrive at the champion of champions. 2007's winner was German touring car champion Mattias Ekström.

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