



Track review featured in Santa Pod's 'THE MAIN EVENT' official programme



THE NEW CONCRETE TRACK

The importance of a good racing surface at a venue like Santa Pod cannot be overstated, after all the quarter mile track is the reason we exist as a raceway.

The many varied events and shows we run – from the hugely popular Bug Jam and its festival vibe to the enthusiast events like Fast Show, Jap Show and Retro Show, to name but a few – or our flagship events – the FIA European Championship races and the family favourites such as Festival Of Power, Flame & Thunder and Dragstalgia – all have one thing in common: the racetrack is the centre of the action.

With the construction of the Texas Motorplex in 1986, the gold standard of racing surfaces was set. The very first pass on a new concrete track by a Top Fuel car in NHRA competition set a new national record. Soon after the Motorplex was built concrete racing surfaces were being laid across America and asphalt had had its day. Santa Pod remained asphalt with a new asphalt track being laid in 1996, from then on the punishment of our busy Santa Pod schedule took its toll. In 2013 we decided again to lay an asphalt track in the full knowledge

that underlying problems with the foundations under the asphalt would reduce the longevity of the track and these problems would need to be addressed in the not too distant future.

The stature of Santa Pod as Europe's longest running, most successful and most famous drag racing facility meant that installing a concrete track was just a matter of time. At the end of the 2017 season that time had come. Consultations with NHRA track specialists began in August and design meetings with structural engineers in the UK followed soon after. A contractor was invited to bid on the project and plans were drawn up. The contractor in question was Knights Construction, specialists in concrete floors of the type one might find in massive distribution centres.

What stood out for us with Knights was their MD, Matt Jones. His enthusiasm and commitment, research and

eagerness to understand the requirements of such a specialist project meant that as a company we felt safe in his hands. The task that lay before us in November 2017 was an unusual one: we had to lay an internal industrial floor outside, in the winter. So with an exploratory trip by Matt Jones and myself to an NHRA event, a fuller picture came together, specifically on the surface finish to allow for the best pre-race prep to take place.

Work began in November. The project involved removing the entirety of the previous track, the WW2 runway underneath and the rough foundations underneath that. Knights recovered some 4000 tonnes of high quality foundation material from the old runway which was crushed and stockpiled ready to re-use. When the track was gone we tested the clay sub-base for compaction and received disappointing results, meaning that we had to remove more than 5000 tonnes of unsuitable clay material to reveal a firmer layer underneath. Further

compaction tests gave positive results and the process of building up the foundations began.

In all, 11,000 tonnes of stone and crushed concrete were installed to meet rigorous design parameters. All of this sits on a geogrid mesh and a network of drainage that keeps the construction free from water at the very bottom of the 750mm-deep foundations. Knights installed more than 1.5 kilometres of drainage channels that run down each side of the track and link together under the track itself. Nearly 1,000 sheets of steel mesh were laid on top of the foundations ready for the concrete itself to be poured. This stage was reached before Christmas but weather conditions were not good enough to pour concrete, so we had to wait. One of the major challenges of this entire project was of course the weather. Conditions for pouring concrete needed to be right; temperature and wind conditions had to be at agreed levels and we could have no rainfall.

As spectators will know, this is a tall ask on an average race weekend at the Pod, let alone in the depths of winter. So the waiting game began. Work continued on non-weather-critical elements of the project, such as increasing the height of the track walls and work on the spectator banking. With all the formation works completed successfully in January, we waited for a break in the weather.

In the middle of February we at last got our chance. The concrete we had chosen was a very high specification. With high cement content the fc50 mix went down in 88-metre sections, each bordered by an expansion joint with a construction dowel joint at the 44-metre point. The method used involved a state-of-the-art laser screed machine that levelled the material to pinpoint accuracy. The experienced concrete crew then worked the levelled material to get the desired finish. What you see before you today will, we hope, signify the start of

a new era for Santa Pod; one that will see us reclaim those European records that we have seen shuttle back and forth to Sweden's concrete track, Tierp Arena.

The playing field, so to speak, is now level and Europe's best cars and drivers have the opportunity to really show us what they can do. The improved performance levels that concrete can bring stem from the way it behaves as a material when subjected to the incredible forces involved in drag racing. As a material, asphalt has the tendency to absorb shockwaves and the plasticity within the bitumen base can eat up a tiny amount of power. Concrete simply does not behave in the same way. The hardness of the material means that power is not absorbed, it is reflected and this will give the racers who thunder down our famous ¼ mile a whole new set of challenges. It will be an interesting period, not that it's anything other than interesting at Santa Pod.



TEXT: Neale Saunders, Project Manager.