

WSP | Parsons Brinckerhoff Africa to restore Kyalami

Engineering consultancy WSP | Parsons Brinckerhoff Africa has been contracted to undertake the R100m restoration of the Kyalami Race Track near Johannesburg.



"The restorations will be focused on enhancing the attractiveness of the track, as well as improving both the driver and spectator value with a key focus on safety. We will be providing a complete engineering offering as required by OT Venture Investments," says Francois van Rensburg, divisional director of WSP for Development, Transportation and Infrastructure in Africa.

The scope of the project includes the refurbishment of the existing race track, which encompasses realignment for three corners of the track - improving track safety, access to the venue and helping to develop engineering solutions for a friendlier track-day experience.

"These track realignments - where, for example, we are also improving the 1.1km straight on the track - will not only make racing more exciting for the drivers, but will also comply with world-class standards," adds Van Rensburg.

Track safety

As part of the project, WSP needs to ensure that track safety around the run-off areas and the implementation of debris fencing for improved spectator safety receive approval by the governing body for international motorsport - the FIA - who have also shared recommendations for further improvements highlighting key aspects around safety.

Additionally, to further enhance the racing day experience for both drivers and spectators, WSP | Parsons Brinckerhoff Africa will increase the spacing of the bleachers and change the pit lane exit for drivers to leave the area at faster speeds - whilst still incorporating safety features at the highest standards.

"We used the latest in 3D design virtualisation technology to develop a game based on the scope of the refurbishments. This gave the client a unique opportunity to test drive the new track on a simulator before construction started," Van Rensburg says.

As a leader in race track design in the region, WSP was involved in developing the original track at Kyalami and since has also been involved in developing the race track at Zwartkops.

Range of expertise

"We have employed a range of our expertise on this project, including in the niche pavement and asphalt finishing, which is essential for a project of this nature. The race track finishing is significantly different from public roads to make it safer for drivers at high speeds," explains Van Rensburg.

Given the fact that Kyalami needs to remain closed during construction, to reduce the impact of possible loss of earnings, the consultancy also needs to ensure that the project is completed as quickly as is feasible.

"To help us get the best accuracy possible with our designs, we commissioned a complete laser scanning. This included using mobile, terrestrial, and aerial scans of the site resulting in the development of a comprehensive model of Kyalami. The scans and colour photographs were then loaded into a survey processor to filter and render the virtual 3D model needed to get client approval and commence the project," he says.

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