

ALAN WILSON

One of the world's premier designers of motorsports venues offers a behind-the-scenes look at some of his most celebrated creations, including a unique perspective on past and current projects, operational challenges, lessons learned, and much more.



Photo courtesy of Utah Motorsports Campus

From humble beginnings as an 18-year-old rally competitor in his native South Africa in 1964, Alan Wilson has risen to become one of the world's most accomplished motorsports venue designers. His experience in the field is both extensive and varied, as he has both designed and served in a management capacity at some of the most significant racing facilities the sport has to offer.

His presence, both directly and as a center of influence, has been especially notable since moving to the United States in 1983. Wilson's work has shaped a number of domestic and international venues, and he played a key role in the design and development of many current facilities such as Barber Motorsports Park in Alabama and Miller Motorsports Park (now Utah Motorsports Campus, or UMC), among others.

Wilson's recent development focus has been in China, which is emerging as one of the most promising motorsports markets on Earth. As he prepared for yet another trans-Pacific flight to oversee several venues under construction in China, Wilson set aside some time for a conversation with PRI.

PRI: As you look back at the tracks you have designed, do you have favorites?

Wilson: I've been asked that question many times. The answer is, not really. I'm very proud of Barber (Motorsports Park), which was built for very specific reasons and with very specific limitations. In other words, I wasn't allowed to go more than 2.3 miles, and it was specifically built with motorcycles in mind. But I tried to make it so that it would work for smaller cars; I didn't have Indy cars in mind at the time because they weren't on the horizon. But it works. It's not the easiest track, but it makes for good racing. I'm proud of that. And, of course, George Barber has done a magnificent job of turning it into a park.

I'm also very happy with UMC, because more than any other track in the world you can do so many things at the same time. I think this coming weekend (in May) is typical, as they have eight significant activities happening there at the same time, all focused around the central management group that enables everything to be run at low operating costs. There is no other track in the world that I've ever seen that is able to achieve that.

So, I don't know...some of my go-kart tracks people have really liked. I'm not dissatisfied with any track, although on any one of the tracks I could, if I look at it now, make some changes to improve it.

PRI: What are the parameters you consider when you first begin the process for a new racing venue?

Wilson: The first thing is to meet with the property developer and try to understand what his goal is. If, for example, he wants to build a NASCAR track that you can also run Formula 1 and IndyCar on, basically I tell him goodbye, because I know the three are incompatible. So I try to learn that up front. But I enjoy getting to know him and getting from him what his scope for the project is. Is it going to be a viable business, or is it a, "I've got the money to

By Dave Argabright



One of Alan Wilson's most recent projects is Geely's Ningbo International Speedway, located in China and set to open this month. Wilson began working on the FIA 2-rated permanent road course back in 2014 (above), and construction was well underway in June 2017 (below). Its first international race—the FIA World Touring Car Championship—is scheduled for October 13–15.



do it so profit doesn't matter." Both are practical, it's just that they have different rationale.

Once I know what he wants to achieve, I look at the land to see if it can host his goals. And some of that is purely logical...environmental issues, easements across the property, electrical easements, things like that. Is it too far from anywhere to connect without having to build miles of paved roads? Can you properly use this land for this function? Are electricity and sewers immediately available? Practical considerations.

Then I look at it from a political point of view. Do I think this can receive permits? If there is a church or a school next door, the answer is no. If there are houses right next to it, the answer is, pretty unlikely. So I look at all the reasons you couldn't build a track on that property before I get involved in what you can do with it.

PRI: When you undertake a new project, are you usually going solo? Or do you have a team of people who are involved?

Wilson: I operate solo, always have. That doesn't mean I don't have people I can call upon, of course. But I'm not like some of the others who have 350 engineers at their disposal and insist on doing everything—including painting a simple white line—themselves, with people they bring in from Europe. I don't operate that way.

I operate with local people, local engineers, local contractors, local construction managers. It's a lot cheaper for my client. It's more painful for me sometimes because I have to teach people from the beginning, people with no knowledge of anything to

do with racing. I'm constantly having to take them to school and teach them. But the advantage to the customer is that the customer is going to be there for years, long after I'm gone. And if he's got local people who know where the water pipes are located, who know how the facility was built, who know how to do new asphalt, it's going to be much easier in the future than having to reach out to someone in Germany to get information and answers to his questions.

PRI: Obviously, no two venues are exactly the same. However, do you find similarities among various tracks? What I'm getting at, Alan, is do you borrow things that you've learned and done at other tracks successfully? Do you try to replicate some of those elements in a new track?

Wilson: The answer is yes, and subconsciously, yes. I counted out the other day how many tracks I've visited over the years, and the total was 201. This

is all around the world. And I guess I've learned something from every one of those tracks. In many cases what I've learned is how not to do things.

Have I copied anyone? In Europe, I was very impressed with the Turkish track. Their turn 8. This was a combination of three or four apexes, which the drivers seemed to really like. It was really fast and they all raved about it. I had already done something similar, but much slower, here at UMC. The corner I called, "three devils." Where the speed is 70 mph, but it's very technical, and to this day I don't know of anyone who has claimed to have actually got it right. If you make the slightest mistake you're 1.5 seconds off your lap time. So it's a challenging corner. There have been few accidents—I'm not aware of any. But you do get a few spins.

The Turkish track was similar but much faster, so I laid that out in NOLA, at New Orleans. And everybody loved it, because

it's really challenging.

But that's the only one that I can think of where I've consciously looked at another track and said, "Yeah, I like that idea."

PRI: At the same time, I suspect each venue presents some challenges and elements that make it unique. Has that been the case?

Wilson: Yes, absolutely. I work deliberately to make it unique.

PRI: As you gained experience in facility construction and operations, how much did that shape your ideas going forward?

Wilson: Here's a good example of that. I used to run the operations at Brands Hatch, and at that time it was the No. 1 Grand Prix track in the world. It was fabulous. However, behind the scenes, running the operation was an absolute nightmare, because the track had evolved over 35 years and had never been formally designed. When we had big events, we never had enough water to run the



As the designer of Barber Motorsports Park (seen here), Alan Wilson told us he was pleased with his work on the 2.3-mile purpose-built track in Alabama. "It's not the easiest track, but it makes for good racing. I'm proud of that," Wilson said.

toilets. We couldn't find the bloody water lines! There were no drawings. So every weekend we had to bring in water trucks and park them by every toilet to make the toilets work. Nothing to do with the racing, just logistics.

So I learned then, and applied to every track I've designed, pay attention to the infrastructure. Infrastructure is very, very expensive, and most people totally ignore it. They want to do a track that has this left corner or that right corner or another

corkscrew or something-or-other, and they don't understand that it's a lot cheaper and more efficient to operate if all the infrastructure runs in a straight line down the center of the paddock, and everything can connect up to it. That decides where I put the toilets, where I put the paddock, the waste and sewer system, the power and electric systems, everything.

And all of that saves a ton of money not only in building it, but also in operating it. Because you can find problems immediately. So before you put down a single corner, you have to establish some basics. The paddock, for example, has to be on the flattest piece of ground you've got. It's a lot less expensive to put it on ground that's already flat, versus carving it out of a mountain.

PRI: How much has the landscape changed in recent years in terms of track construction? Have environmental and legal regulations changed?

Wilson: The most difficult change has been in drainage requirements. Essentially, drainage was not an issue when we did our original tracks. You would keep water off the track, obviously, but you could just flow the water away from your property into existing drains, rivers, without problems.

But the laws changed several years ago, specifying that you had to contain all the water that is generated on the site. No more water can leave the site on a rainy day than leaves the site on an ordinary day. Unless it's under control. I have no objection to the concept. But, for example, when we did the Thermal Club (in California)—which is in the desert, where it seldom rains—there is more drainage there than any track I've ever done, anywhere in the world. Because they plan it for the 100-year flood, and the local people insist that they will not allow a barrier or a guardrail at any part of the track to be underwater.

PRI: Your work has led you to track projects around the world. How much difference do you see in various countries in terms of regulations, culture, etc.? Are there parts of the world where people have been more receptive to a project involving a track?

Wilson: It has been a challenge at times. For example, China, where I really like the people and I like what I'm doing there, the bureaucracy is intense. They require that every single thing is approved by the government, down to the color of the paint you use. So you can't just go in and say, "Make this change." Everything must be approved, which makes things difficult.

PRI: What is the leading indicator that a track has been well designed? Are there traits you pick up on that give you a read on that particular venue?

Wilson: The first thing, it's got to make for good racing. A track must be able to make money, and you make money by

attracting spectators who want to come to the track, and by having participants who want to come and compete at the track. Even when it's not a spectator event; for example, if you have a ride-and-drive program, they're not going to come to a track that causes a great many crashes. Or if it's too boring because it's too easy, that's the other extreme. So you design a track to increase participation by the track users as much as for the spectators.

The spectators want to see action. I've always said, if every race had a Mario Andretti, racing would take off and be the biggest thing in America. Because with Mario you could always guarantee that he was going to do something exciting, something that would make the spectators stand up and shout. But if you have a race where nobody overtakes, it's follow the leader—why would the spectators come and watch that?

So you have to build action into the

track. And action is created in three ways: the first is overtaking; the second is the skill that is required; and the third is—and I don't want to be nasty here—is accidents. People aren't looking for crashes, but if a car spins because the guy got it wrong, people enjoy seeing a driver challenged in that way. If the track challenges the drivers, the spectators will like that. My philosophy is that people shouldn't come to the track just to see accidents. Incidents are fine; accidents are not.

PRI: The element of safety is a major consideration today in terms of how a track is designed, built and operated. How much has that changed since the days of your earliest motorsports experience?

Wilson: It's been a huge change. When I started it was the end of the Jackie Stewart era, when the guardrails were one row, maybe sometimes two. And they were right on the edge of the track, because those cars were so fragile that the real

danger was the cars cartwheeling off the course and having multiple impacts with the ground. As cars grew stronger, it made more sense to move the barriers further back. Specifically for motorbikes, because if a rider falls and hits something, he's going to get hurt. So the primary thing was increasing the safety zones.

Then we got to the stage where the safety zones by themselves weren't enough. Because you had this big, powerful car that might lose the brakes or have a throttle stick open, and you could have 10 miles of safety zone and they'd still hit the barrier. Therefore, the ability to reduce the impact then became more important than just the size of the safety zone. Hence, the development of the tire wall. And tire walls, in my mind, are still by far the best form of impact reduction. Now, I appreciate on ovals that the SAFER barrier is needed. It works for an Indy car at 200 mph, absolutely. But it's got to work

properly across the spectrum for all types of motorcars and motorcycles that race. You can't build a track for just one type of car, because other than places like Indy, the cars that race will be a total cross-section of everything that races.

So we've started with impact barriers and saved countless lives, then the industry had to find a way to slow down the speeds for cars that went off course. That's where gravel traps came in, and they were very effective. There are some negatives with gravel traps, but also some positives because they also work as drains, and they can be very effective in reducing water on the edge of the track. It's a key part of designing the gravel traps.

PRI: Temporary street courses have a mixed record of success in the US. How can a temporary street venue work?

Wilson: Oh, brother. I've built and run 17 of them! And to your first point, I only know of one that's been a financial success, and

that's Long Beach. All of the others have either failed or been heavily subsidized, or the owner accepts they will lose money. I'm not aware of any other street race, anywhere in the world, that makes money.

Long Beach, granted, lost money for the first eight years. And then the event overtook the racing. It makes money because it's an event more than a race. So they make money on that.

The sanctioning bodies have loved the street events because they always paid a big sanctioning fee, and they are in the center of town where they will get a lot of publicity. But it actually doesn't do a damned thing for racing in that area because the local tracks suffer in comparison, because they cannot put on the same level of event because they aren't located downtown.

PRI: Tell us about your work in China.

Wilson: For the past four or five years I've been working with the Chinese to

build tracks. I work for the Geely Holding Company, which owns Geely and Volvo, amongst other companies. Geely is the largest exclusively Chinese-owned automobile company, and in 2010 they bought Volvo from Ford.

Geely has decided to use racing to help sell their product. Racing in China is very immature, only about 15 years old since the first track was built in Zhuhai, and about 13 years since Shanghai was built. There are only six tracks in China, and only two meet current standards. For a country of 1.8 billion people, racing is just miniscule. So they started off by running single-seat championships, which were essentially Formula Ford 2000 cars. They ran that for 10 years; they own the cars and rent them out to drivers. It made no impact—it was very much entry level.

Then they decided they were going to get into the race track business, and invested in developing new race tracks.

I was brought in in 2012, and designed the track near Beijing that was going to be a Formula 1 spec when Shanghai was talking about dropping the Formula 1 race because they were losing so much money. But the Mitime company, the development company that is a subsidiary of Geely Holdings, decided to build a Formula 1 spec facility outside of Beijing. We got the land, we started construction, and we actually moved people into the administration office when the government said, "Uh-uh, give the land back. We're going to build an airport there."

So we lost four years with that.

Then we moved to a new site in Ningbo, which is three hours south of Shanghai. This is where Geely was going to build a factory, but the land wasn't large enough. They acquired a different parcel of land and the government said, "What do you want to do with the land already allocated to you?" Geely said they wanted to build a



Alan Wilson believes a top priority for any track is its capacity to produce good racing. It must be able to make money by attracting spectators, and spectators want to see action, he reasoned. Photo courtesy of Utah Motorsports Campus.

track on that land. That's the facility which will open in August, where I've been going back and forth to visit. It is a full FIA 2, FIM Superbike-level track. It's in the final stages of construction right now. I've been working on that since 2014.

There will be five tracks by 2020, and

another five tracks by 2025. I'm involved as the designer of all of those. They also own the Formula Ford rights for China, and are looking at introducing IndyCar in China, probably as a single event. They really will become the powerhouse of Chinese racing, because they will own the majority of facilities.

PRI: Do you have a favorite form of motorsports and a favorite venue?

Wilson: I'm a Formula 1 fan, 100 percent. I always have been. What's happening with Formula 1 right now is magnificent. It's going to rejuvenate the sport, completely. I am so much behind what they are doing. I think the Liberty group is going to make huge strides in improving the quality of Formula 1 racing. As a result, Formula 1 racing will double in size. And all the downsizing, the lack of spectators in Germany, for example, I think within the next three to four years will turn right around, and the crowds will go back up.

Because there is a different attitude, they are building the Grand Prix not for the insiders, but for the mass public. And that's what you've got to design a track for: the mass public.

PRI: A number of projects you were involved in were not able to grow to fruition; for example, the New York Formula 1 project in Flushing Meadows. Are there projects that you look back upon and think, "What if..."?

Wilson: I don't know that I've ever sat down and said that. When I think of the Flushing Meadows project now, and I look at that track, thank God I didn't build it. Because I've learned so much since then. At the time it was fully approved, fully inspected. But what I think from what I've learned since, it couldn't have worked as well as I could have made it work today. Because there were some limitations that were [imposed] on me that today I have learned how to work around.