

CUNNINGHAM RECREATION



# AMERICAN DREAM REBORN

*The most authentic recreation we have ever driven? Briggs S Cunningham II's powerful, extraordinary, exciting Le Mans car from six decades back*

WORDS Tony Dron // PHOTOGRAPHY Lyndon McNeil







**Right**  
 Tony Dron takes to Goodwood during shakedown testing of the Cunningham C-4R recreation. Weeks later, it raced there for the first time.

**Y**OU DON'T HAVE to be an American citizen to receive a Congressional Gold Medal, and perhaps that's just what Ben Shuckburgh deserves for this incredible effort. The thoroughly English Mr Shuckburgh has created a copy of Briggs S Cunningham's American C-4R Le Mans car from 60 years ago and it's so utterly faithful to the original, right down to every last tiny part, that I can honestly say I have never seen anything like it. In its day, its modified Chrysler Firepower V8 made it the most powerful car to run at Le Mans and, at around 150mph, Cunningham cars of various types were then surely the fastest things on the Mulsanne Straight.

This project seems preposterously ambitious but Ben has won through with honour. His objective, after acquiring an original Cunningham chassis, was to build a car that was so true to the original specification that Cunningham himself would be unable to tell it from his own C-4R that he drove at Le Mans in 1953. Briggs, who died aged 96 in 2003, cannot pass comment, but, after driving Ben's C-4R at Goodwood, I am quite sure that it could not be more authentic.

Super-wealthy sportsmen/industrialists of the Briggs Swift Cunningham II mould will always be a rare breed. He skippered the victorious American boat in the 1958 America's Cup race and he invented a successful gadget, the Cunningham eye, for Bermuda-rigged sailing boats. Before that he had set himself the target of achieving the first Le Mans 24 Hours victory by an all-American crew in an all-American car.

He didn't quite make it. In 1967 Dan Gurney and AJ Foyt won in a Shelby American Ford MkIV, and that took a gigantic chunk of Henry Ford II's corporate wealth. Briggs Cunningham's earlier effort was personally funded by the man himself. The Cunningham assault on Le Mans is considered a valiant failure now but it was different then, when Cunningham was seen correctly as a serious threat to European supremacy at Le Mans. He finished fourth overall in 1952, and the Cunningham team's results included third overall in both 1953 and 1954.

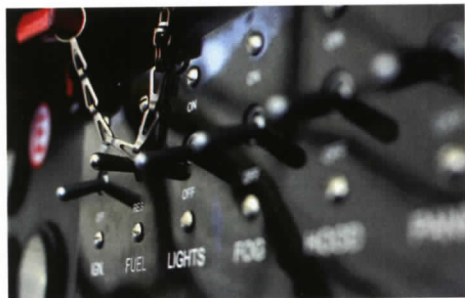
What on Earth inspired Ben to take this unlikely step? First, being a proper British chap, he has a liking for gallant losers; as a schoolboy, he saw Briggs Cunningham as a hero, a gentleman who played the game in the right spirit. Also, as a small boy, Ben caught the classic car bug in a big way from his step-uncle, the MP and wonderfully politically incorrect diarist Alan Clark.

Ben remembers many visits to Clark's home, Saltwood Castle, and usually it involved cars. 'We'd arrive and he would say he was just going to start one of them up,' recalls Ben, 'and I would be given a trip in something like his C-type.'

Ben is a great watcher of [bringatrailer.com](http://bringatrailer.com), which he describes as 'very dangerous because there's always something tempting there'. That's →







Above and far right Correct (and unusual) aircraft-style dashboard switchgear was painstakingly sourced in Israel; an original Cunningham team car leaving the garage at Le Mans in 1954.



where he spotted an early-1950s Cunningham chassis disguised under a home-made special body. Oddly enough, it was for sale in England, not far from his home in Sussex. He was on his way, with a trailer, with no time lost.

On a trip to Florida, for therapy when recovering from a serious throat operation, Ben took a short trip to the Collier Museum, which houses an original C-4R along with all the surviving Cunningham archive. Miles Collier and the museum's curator, Scott George, welcomed him in, provided encouragement and offered him copies of all the original Cunningham C-4R blueprints and technical drawings. There was no stopping Ben after that visit to the States, and since then he has been given equally enthusiastic support by the Simeone Automotive Museum in Philadelphia, owner of the other surviving original C-4R racer.

Thus he had access to correct original cars and every possible scrap of technical information, covering everything. Guesswork would not be involved. The chassis he had acquired was a C3, one of 25 road cars that Cunningham made to satisfy the homologation requirements for international racing in the 1950s. The C3 chassis were constructed in Cunningham's factory at West Palm Beach, Florida, and unlike the race cars they were shipped to Vignale in Turin for





coachwork. They were then shipped back to the States to be sold at up to \$12,000 each – over £4000 at that time. In Britain, the price of a new Allard J2X was then £1100 before tax.

Some rotten metal had to be cut out of the old chassis and those remains were destroyed. The original front end was sound and the complete frame was rebuilt precisely as a C-4R component, four inches narrower in the track than a C3 and seven inches shorter in the wheelbase.

The Firepower 5.4-litre V8 engine that came with the Cunningham was the original, one of the Chrysler 'Hemis' that famously kicked off the 1950s horsepower wars of the American auto industry. Cunningham had his own engine-building department for race engine research and development. His Firepower engines produced well over 300bhp and Ben's V8, rebuilt for him in period style by Bob Fleming at Jim Stokes' company, gives 369bhp at 5600rpm and a massive torque figure of 418lb ft at 2800rpm. Ben resisted the temptation of modern tweaks for the Firepower, which are widely available to give much greater performance. His engine is correct for period, including four Solex twin-choke downdraught carburettors as used by Cunningham in 1953.

Cunningham realised that his first Le Mans cars, Cadillac-based in 1950 followed by the

Chrysler-based C-2R of 1951, had been far too heavy. Serious efforts were made to make the C-4R a lighter car. Previously, he had used a de Dion back axle but that was abandoned for the C-4R, presumably for lightness, in favour of a live axle located by an A-frame and four radius arms. Still, at 2410lb (1093kg) it was probably at least 10% heavier than its main opposition, Jaguar's C-type. Ben's car turned out spot-on for weight, and, with the necessary modern safety equipment such as rollover bar, belts and foam-filled tank, its precise weight is 2524lb (1145kg).

Cunninghams had a significant power advantage, making them slightly faster than everything else on the main straight, but it wasn't enough. A Cunningham C-4RK, the coupé version of this car, led at the end of the first lap in 1952, but it was overtaken by Ferraris early on and the C-4RK soon appeared to be slipstreaming Stirling Moss's ailing works Jaguar past the pits. As for speed on the Mulsanne Straight, the two C-4Rs in 1954 were clocked at 147.56mph and 148.05mph respectively. Casual claims of higher speeds for other cars should probably be disregarded, as the Cunninghams appear to have been quicker than anything else at that point.

Cunningham fans say that drum brakes put the cars at a disadvantage, insisting that if only they'd had discs, like the Jaguars, it might have been a →

**‘Cunninghams had a significant power advantage, making them faster than everything else on the straight’**



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different story. It's not a convincing argument. In the C-4R's first year, 1952, Mercedes-Benz 300SLs on drum brakes took control to finish first and second. The Germans tried an airbrake on one car in practice but it was not used in the race, when both Mercedes cars relied entirely on their drums for braking.

The problem for Cunningham wasn't his brakes, which were designed and made by his company and of excellent quality – the truth is surely that the best European chassis were vastly superior, with much stiffer frames, enabling them to corner faster than the American cars. Ben was not tempted to make his C-4R chassis stiffer than those of old. He wanted, and got, exactly what the Cunningham team had back in 1953.

In his 1952 C-4R, Cunningham had used a Chrysler three-speed gearbox, which proved marginal with the extra torque of a full-race Firepower engine. A Ford four-speed gearbox was used in 1953 and fortunately for Ben, the gearbox in the car he bought was of the correct type. It too was rebuilt. The live rear axle is a stock Chrysler part, modified with a 'HiTork' limited-slip differential and final drive ratio of 3.36:1, all as in period.

The new aluminium body, by Roach Manufacturing of Hampshire, is nothing short of perfect. Outstanding dimensional accuracy was obtained by digital scanning of the original car in the Collier Museum. A specialist company in the US used several cameras to produce an exact 3D image, which was translated into a full-size body buck by the UK company, 3D Engineers. As an exact copy of the C-4R in 1953 form, it has the correct open scoop on the bonnet, indicating Solex carburetors. Later C-4Rs, with Webers, had a large bulge instead of the scoop.

Ben's attention to detail in identifying every little part and going out and finding it has been astonishing. That's hard enough with any classic car, but the task with a C-4R was beyond belief. Part of it involved searching aircraft breakers' yards all over the world. That big oil cooler, sticking out of the bonnet, is exactly what Cunningham used – Ben found his among dismantled aircraft parts in California. The unusual aircraft switches on the dashboard, also correct, he traced to a similar yard in Israel.

The steering box is a Gemmer, as used in American trucks. Those rear sidelights are as fitted to a 1950 Plymouth and the rear numberplate illuminator is an Oldsmobile part. The correct headlights, plus a big box of invaluable small parts, came from Cunningham's son, Briggs S Cunningham III. Ben found correct original parts for everything except the front sidelights, which should be as fitted to a 1951 Mercury. All he could find were some reproduction parts, which he's using until the proper thing turns up. The easiest part was the handbrake lever – Cunningham used a British Standard-Triumph part for that.

The main dashboard instruments were hardest of all, being of the Stewart Warner 'Wings' type, very rare now and eagerly chased after by US hot-rodders. Even the right 24-hour clock was found after Ben realised that it was a part used in World War Two B17 bombers.

An aircraft-type multi-point wiring loom connector, for quick removal of the body, was

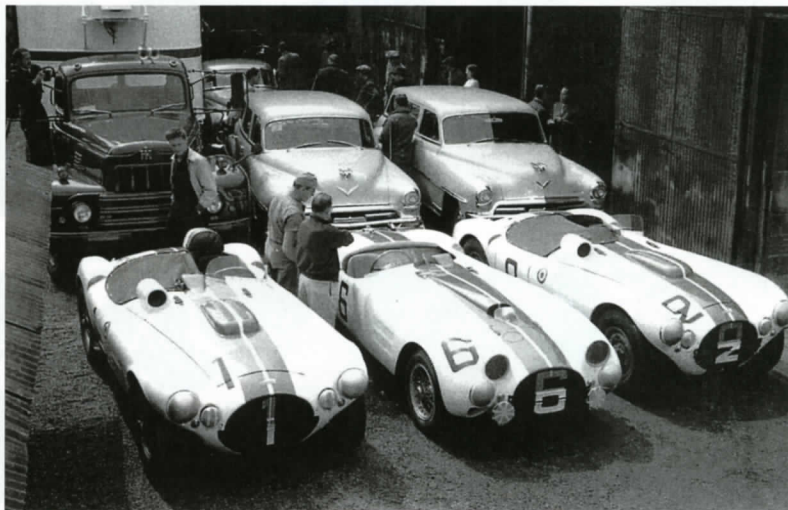






#### Below

Briggs Cunningham in his C-4R at Mulsanne Corner in 1954; the team about to set off from its garage for Le Mans – car no.6 is the Ferrari 375MM bodied by Cunningham, flanked by the pair of C-4Rs.



another headache but even that was found. But some missing parts, such as the wood and aluminium steering wheel and the large fuel cap, were originally made only for the C-4R. Ben had to have these made from scratch, copying the Collier car's parts precisely.

Where necessary, Miles Collier and Scott George provided the vital assistance to make such jobs possible, allowing moulds of brake backing plates to be taken and even lending the original moulds for a set of the unique magnesium road wheels, 5in front and 5.5in rear, to be cast in Kent by Creasey Castings. Throughout all of this, Jim Stokes acted as a mentor to Ben, and the car was built by his company with Mike Mark as the lead engineer controlling everything.

Ben's driving ambition was to race his car, which he had hoped to be doing in 2011, but it was no surprise to everyone else that the car was not ready. Ben and his team have done well to get race-prepared for the 2012 Goodwood Revival, the first time a C-4R has been raced for decades, and it seems most unlikely now that the original cars will ever race again.

In Ben's first race, he and co-driver Ludovic Lindsay were lying fifth after 85 minutes. In the last five minutes, low on fuel, they lost two laps and six places. Still, it was a minor triumph to have got it going so well.

As I have followed his progress with interest from the start, Ben invited me to one of his final pre-race test sessions at Goodwood. His first experience of driving it at Donington had been somewhat sobering as the steering was all over the place. Detailed work on the many links and a more secure mounting for the box itself had made the car vastly better, reported Ben as I got into the large, antique American cockpit. It feels like a huge space, with generous pedals and that very large steering wheel, angled like something from an old Yankee truck. It would be a comfortable place to spend 24 hours, on and off.

This car might be heavy by 1953 racing standards but, at 1145kg – or just 22.5cwt in good old imperial terms – it's lighter than most modern high-performance cars. Believe me, with that much torque and no less than 369bhp under your foot, the Cunningham really goes like hell

in a straight line. That curve at Goodwood's Fordwater kink, it occurred to me first time through, is never going to be on without a good lift, maybe even a little braking.

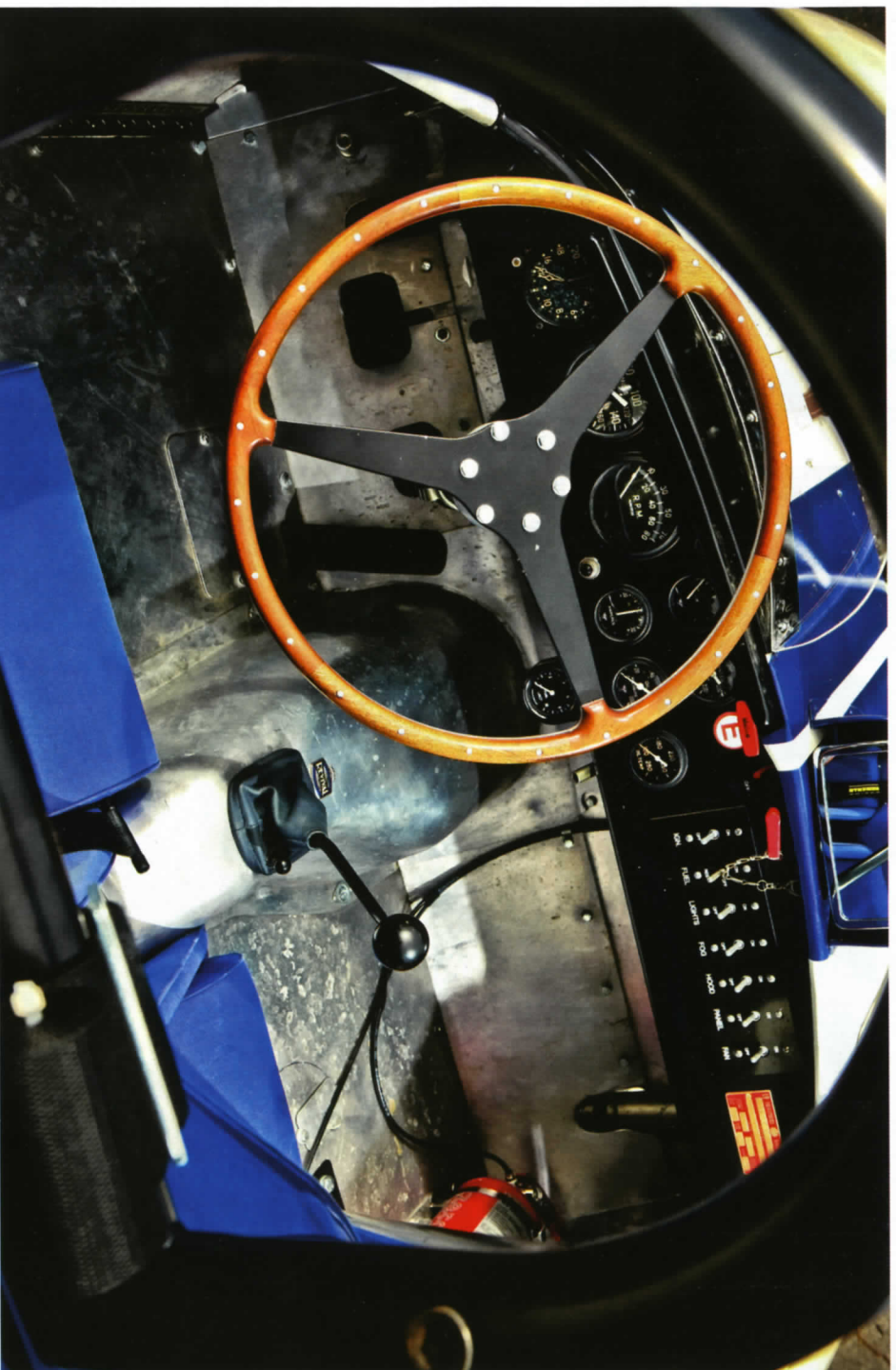
Ben is never, ever going to be bored when driving his exciting creation. It feels as if there's a small amount of lift from the body at speed but it's no problem. That curiously aggressive styling at the front was designed mainly to get plenty of air to the front brakes and to the radiator, partly to look good and partly to conform to primitive, fashionable thinking about good air penetration. 'Downforce' had not entered the language.

The huge, beautifully made Cunningham drum brakes feel pretty powerful though there was a bit of vibration, probably because they are still rather new and need more bedding in. Getting to know it, I was impressed at the times that Ben and his expert guest, Ludovic Lindsay, had been putting in that very morning. They were already within a couple of seconds of a very competitive lap time for early 1950s sports-racing cars, but I was not tempted to push that hard in such a tricky, unknown car straight away. →





Below  
Briggs Cunningham's C-4R at Le Mans in 1952, the first year the C-4Rs ran there. The aluminum wheel covers, designed to help brake cooling, were later dropped. Sharing this car with Bill Spear, Cunningham drove for 20 hours and they finished fourth overall.





The unusual feel in the steering was making me think. It changes direction very slightly all the time, settling into a new attitude at the slightest hint of cornering. You can compensate easily enough and after a couple of laps you get the hang of anticipating it, because it is consistent. It would be a quicker car if it didn't do that, however, and I'm quite sure the original wasn't like that.

It can be sorted. Ben agreed that the strange 'steering' behaviour is caused by the back, not the front. You can feel that the back axle has some unwanted lateral movement and I suspect it swivels a bit about the rearmost point of the A-frame mounting, all making the rear wheels steer in a variable way under load. Only a tiny amount of movement in these areas will result in a marked effect on steering performance and feel.

The many rubber bushes in the rear suspension, I suspect, are much too soft. The original drawings have been copied precisely but there was no specification given for the hardness of the bushes. Cunningham must have used a much harder material there, I reckon, and a bit of simple experimenting to control the axle's movements will certainly transform this car.

Ben will get that right but meanwhile his racing career with his mighty C-4R is finally beginning and he has some last-minute good news - 'Private White VC', a British family business manufacturing clothing in Britain, came up trumps by paying for his tyres at the Revival and they're talking about more help next season. Well done, Ben. You deserve it. →



### 1952/3 CUNNINGHAM C-4R LE MANS RACING CAR RECREATION

**ENGINE** 5424cc V8, OHV, four twin-choke downdraught Solex carburetors **POWER** 369bhp @ 5600rpm (see text)  
**TORQUE** 418lb ft @ 2800rpm **TRANSMISSION** Four-speed manual, synchromesh on second, third and top;  
rear-wheel drive **STEERING** Gemmer worm and roller **SUSPENSION** Front: double unequal wishbones,  
coil springs, Unix telescopic dampers, anti-roll bar. Rear: live axle, A-frame, four radius arms, coil springs,  
Unix telescopic dampers **BRAKES** Cunningham hydraulic 13in drums **WEIGHT** 1145kg (2524lb)  
**PERFORMANCE** Top speed 148mph (see text)

