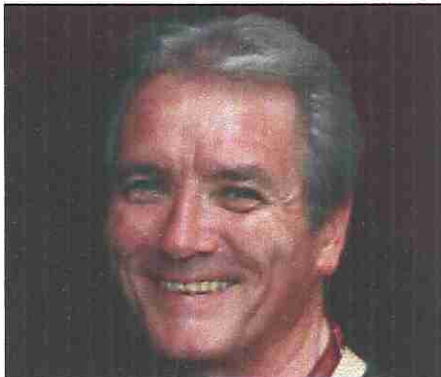


IN BOLTON WITH UNCLE BOBBY



Bolton is a smallish town in Greater Manchester, to the north of the big city itself. I confess that until recently I'd never been there, but whenever it comes to mind I think Chevron, Jim Crawford, Maurer, Paul Owens and Chris Murphy. They are its motor racing connections and heritage.

But after spending a wet day there in the inestimable company of Bob Fernley, late of Force India but the one-time entrant of Crawford in Ensign F1 and CART machinery, I've come to realise that a new, vitally important chapter is being written right now, by the University of Bolton and its associated National Centre of Motorsport Engineering, in UK automotive engineering.

Anyone walking past the NCME façade could be forgiven for doing a double take. Where else might you see an F1 Marussia, various Touring Cars, an

F1 McLaren M26 and our mate Chris Goodwin's delectable McLaren M6A CanAm beast?

I kept imagining grandparents walking past with a 10 year-old in tow, who might suddenly be inspired by the sight to realise the path he wants to take in life by becoming an engineer.

A quick tour of the seriously impressive facility revealed it to be both modern and extremely well equipped and students have a variety of engineering courses to choose from, some of which offer opportunities to become embedded in motor racing areas such as Touring Cars. Since Mark Busfield, Director of NCME at the University of Bolton, was formerly a team manager in the tintop realm, notably with Anthony Reid and our dear departed friend David Leslie in their Nissan days, I

guess that should not have come as a surprise.

My visit ended with an excellent lecture on F1 aerodynamics by the ever-exciting and excitable Willem Toet, a visiting professor who has an innate ability not just to inform in offbeat ways but also to educate and inspire.

That was the cherry on the cake, however, as the main purpose was to hook up with Bob to have fun while discussing his intriguing project with the Ensign 180B in which he successfully ran the woefully underrated Crawford in the British F1 series in 1982, and the Ensign IndyCar that Jim drove to fourth place on his debut at Long Beach in 1984.

The 180B has been the subject of a meticulous rebuild while the IndyCar is currently undergoing one, and Bob



has forged an interesting practical and scientific alliance with the University and NCME with the long-term plan for Johnny Herbert to race the car in a Masters event at Zolder on August 23rd.

“To gain the experience required to maintain and run the Ensign F1 car, the UOB graduate team will undertake a full rebuild of the Ensign Indy Car which has similar running gear,” Bob explains. “UOB has committed Wednesday afternoons and all day Fridays to the rebuild and graduate training programme. Throughout this process, Ken Winning, who built the 180B originally, will be able to assess the graduates’ capabilities and hopefully, put together a team of them capable of safely running the F1 car. The test programme will be undertaken in the summer between July 21st and 30th at the Anglesey Circuit.”

That’s the practical side, and a superb opportunity for academics to learn the real-life trackside of things too.

The scientific side is also proceeding apace, and takes the form of the first CFD study of non-skirted ground effect ever undertaken.

“Faro Engineering has committed to supporting the study and will deliver and install the digital scanning equipment before month end,” Bob continues. “The scanning of the 180B F1 ground effect chassis is expected to take up to three weeks following which it will take around another three weeks to complete the data prep which is being supported by 3D Systems. Evolution Measurement produces and develops measurement instruments that support aerodynamic mapping of anything that moves through air. Many F1 teams use its low mass ultra-compact instruments both for testing and racing, and it is also supporting us.

“Willem is overseeing this programme and once all the data prep is completed he will initiate the CFD stage of the study which should allow the UOB graduate scientific study team to understand and document the original Formula 1 ground effect concept developed by Lotus, some 40 years ago. Once the 180B F1 chassis CFD data is verified by Willem it is then the intention to fit pressure sensors etc to the Ensign and undertake correlation trials during the Anglesey test programme. Assuming the CFD/track data correlates, Willem

will then provide indicative data on the proposed 2021 Formula 1 ground effect concept which the graduates can then add to their CFD analysis programme with a view to comparing the original 1981 Formula 1 actual ground effect data to that of the proposed 2021 concept data.”

Both programmes were officially presented to graduates and UOB faculty members on February 20th.

For Bob it's a trip down memory lane in more ways than one, since he was born in nearby Stockport and ran Crawford in the 180B when it last raced in CanAm guise back in 1983. The car then spent most of the intervening years in storage boxes.

“The two guys who restored it are Ken Winning who worked with Mo Nunn at Ensign before becoming my crew chief throughout the Eighties, and Terry Gardner who also worked at Ensign but did not switch over to my team. Both of them were responsible for building the Ensign 180B in 1980 ready for the 1981 season with Eliseo Salazar at the wheel before I took it over at the end of the year to compete in the 1982 British F1 Championship with Jim driving. Jim won a number of races with the car in





CanAm guise and finished runner up to Jacques Villeneuve (brother of Gilles). Pete Thundercliffe is heading up the operational side for UOB and will work under Ken's direction."

Busfield is hugely enthusiastic about the project and the manner in which it will help students with such a broad range of hands-on activities in their goal to source jobs in motorsport. "It will showcase Bolton's engineering department and develop the skills of these young engineers. This is an incredibly exciting project to begin 2020. Giving our students a Formula 1 car represents a wonderful opportunity to demonstrate their skills in the real world. It is just one of the ways we are investing in engineering so that we can continue to attract the brightest students to Bolton."

The programme will be supported by strong social media activity aimed at attracting students of all ages, but most hopefully those who have yet to commit themselves to a specific course of secondary education.

For Bob, it's a way of giving something back while hopefully simultaneously creating something for the future in the form of the new breed of engineers



that the world will need as it seeks to reduce its carbon footprint in all areas. "I've built some strong ties with the university in recent years, and am delighted we can collaborate on this exciting project, which I believe to be the first of its kind giving students the chance to prepare and race an historic Formula 1 car. The practical programme will allow the youngsters to get their hands dirty and put theory into practice at the racetrack.

"I know from first-hand experience that this project will really enhance their CVs and make them very employable by leading motorsport teams.

"It also shows great vision by the University of Bolton to offer something unique as it prepares the next generation of motorsport engineers."

So what would you rather study in your CFD course? Airflow through cattle trucks, or airflow beneath a 200 mph F1 car?

The maths and methodology might be the same, but in terms of excitement and inspiration it's a no-brainer, right? ❖