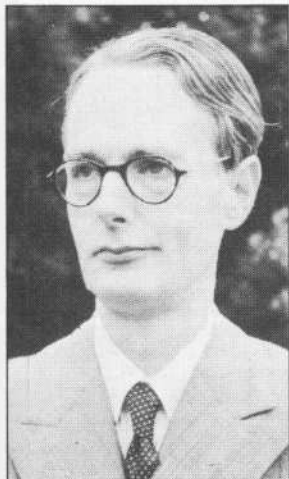


'The Elitist'

In the first of a new series re-uniting designers with their cars, Jonathan Wood talks to Peter Kirwan-Taylor who styled the sensational Lotus Elite which appeared just twenty-five years ago



Left, W.E.W. 'Teddy' Petter, responsible for the Westland Lysander, Whirlwind, Canberra bomber and Folland Gnat. It was he who introduced young Kirwan-Taylor to the world of aerodynamics. Above, Kirwan-Taylor at the wheel of the Lotus Mark 6 he completed in 1954 pictured racing at Goodwood. Colour page, the designer with his car. Photo: John Heseltine.

RETURN with me for a moment to the Earls Court Motor Show of 25 years ago. The British Motor Corporation was offering its A35 saloon while Ford boasted Mark II Consul and Zephyrs and Rootes provided yet another variation on its long running Hillman Minx theme. Rather faster was the AC Ace and Aceca coupe, Triumph TR3 and the Jaguar XK 150 fixed head. But what *The Autocar* regarded as 'the most significant single exhibit' did not feature amongst the big battalions at this 1957 event. Visitors who made their way to the Lotus Engineering Company's stand 119 went to see what the exhibition catalogue described as the 'Lotus Mark XIV two-seater coupé'. In other words the Lotus Elite.

For the Elite represented both a technological and styling *tour de force*. Not only was it the world's first series production glass fibre monocoque but was undoubtedly the best looking car at the show and to my mind it is one of the most stylish coupés that the British motor industry has ever produced. Amazingly, the Elite's shape was not the work of a professional stylist but a 27-year-old chartered accountant, Peter Kirwan-Taylor. Recently *T&C* re-united him with Miles Wilkins magnificent 1962 example and then he talked with me about his life long involvement with motor cars, the strengths and weaknesses of the Elite concept and those hectic months that preceded that momentous 1957 show.

Peter Kirwan-Taylor's interest in cars really began when he returned to England in 1942 after a two year evacuation in North America. He was 12 at the time and his step father, Charles Loraine Hill, a Bristol ship builder and engineer, was a director of Lagonda Motors. At this time Lagonda was associated with Petter Oil Engines, Westland Aircraft and Folland Aircraft and we must briefly examine the background of this connection because it is of relevance to our story.

Lagonda, which had been making cars since 1906, after years of 'muddling through', finally succumbed in 1935 when its creditors appointed a receiver. It was rescued by a consortium headed by London lawyer Alan Paul Good who paid £67,500 for the concern. This fresh injection of capital produced the LG6 model and the fabled V12 of 1937. Alan Good was also chairman of Folland Aircraft based at Hamble, near Southampton of which Charles Hill was also a director and in mid-1938 the latter joined the board of

Lagonda Motors. Good was also a director of Westland Aircraft, formed in 1935 and originally a subsidiary of Petters Ltd., who manufactured diesel engines. Westland's chairman was Sir Ernest Petter and his son, William Edward Wiloughby 'Teddy' was Westland's technical director. The younger Petter was responsible for the overall concept of the Westland Lysander army reconnaissance monoplane and twin engine Whirlwind fighter. In 1938 the great ship building company of John Brown acquired a controlling interest in Westland but Teddy Petter remained as technical director, a position he held until 1944.

It was at about this time that young Kirwan-Taylor began to accompany his stepfather on some of his many business visits. Appropriately Charles Hill ran a V12 Lagonda and Peter delighted in these trips for there were journeys to Staines to see how W O Bentley was progressing with the designs of the new Lagonda Bentley. Even at this early age, Peter Kirwan-Taylor began showing a keen interest in the projected model's styling and wasn't too impressed by the appearance of its coachwork. 'I began drawing designs that I thought were very much better but I was still at school and couldn't get anyone to listen to me!'

And then there were trips to Westland at Yeovil. It was there that he had the opportunity of meeting the young technical director Teddy Petter. 'He was a most charming and charismatic individual. He gave me lots of books on aerodynamics full of complicated things like Reynolds Numbers. I'm not very good at mathematics but I tried to understand all this.' It should be added that after leaving Westland, Petter travelled north to Preston to become English Electric's chief designer where he was responsible for the world famous Canberra bomber and later set down the first design study for the Lightning fighter. After leaving English Electric in 1950 Petter went to Folland to produce the two-seater Gnat trainer. With such influences in his formative years, it is not surprising that Peter Kirwan-Taylor as a school boy became fascinated by cars and aerodynamics. He had gone to Winchester College in 1943 where he studied science and, perhaps inevitably, he took a course in mechanical drawing.

After leaving school in 1948 Kirwan-Taylor

joined the Green Jackets training battalion and the following year was commissioned into the Rifle Brigade. It was while he was serving in Germany that he acquired a half share in a 1923 3-Litre Bentley: 'One day some friends turned up with this old Bentley and said they would sell it for £100. I didn't have £100 so a friend and I put up £50 each'. But it wasn't long before the Bentley began making expensive noises. 'I was in a motor battalion and I persuaded some of the mechanics to help me sort it out in one of the company workshops. Unfortunately our colonel was showing a general around at the time. By all accounts the general said something to the effect about it being helpful for officers having mechanics on hand to work on their cars. The colonel responded that such things were impossible, flung open the workshop door, only to find the Bentley with mechanics swarming all over it!' On completing his time with the Rifle Brigade Peter Kirwan-Taylor subsequently spent six years in the 21st Special Air Service Regiment (Artists) TA first as a trooper then a lieutenant.

It was soon after his experience with the Bentley that Peter bought a 'very peculiar' Healey saloon. 'It was rather like an Elliot. In those days I thought the Elliot was an absolutely beautiful car. Mine had a sort of airstream back but I never did discover who designed it'. One of the problems he experienced with the Healey was that the headlamps were so low that they 'made flat roads look like a series of mountains'.



The Swallow Doretti with a coupe body that Kirwan-Taylor completed in 1955. It was a vehicle for his thoughts on what a closed body should look like and pre-empted the Elite.

His main recreation at this time was skiing. He was a member of the British team in 1949-53, its captain in 1951 and, two years later, British slalom champion. Although he had been exposed to industrial influences in his formative years, Peter Kirwan-Taylor decided to become a chartered accountant although the apparent diversity between the two professions is at not as great as might be first imagined: 'There were two family influences, my step father who was an engineer and my father, who was a financier and worked in a London merchant bank. Eventually I ended up in a bank and I have always liked to create things that are actual rather than on paper. But the disciplines and thought processes are identical. That's why Colin [Chapman] is just as good at talking about price/earnings ratios as he is talking about cars.'

After military service, Peter Kirwan-Taylor went up to Trinity College, Cambridge where he read economics and on leaving in 1951 he was articled to Peat Marwick and Mitchell, the prestigious London accountants. It was during 1953 when he was grappling with a three evenings a week accountancy correspondence course that he decided he had 'to do something'. He had read about a small company, Lotus Engineering, based at Tottenham Lane, Hornsey and decided that if he bought one of the new Mark 6 kits he could put it together and go motor racing. 'So I went to see them. I thought the set-up was incredible. It was a tiny place but there seemed to be thousands of people beetling about'. The second

The Elitist

time he went there Peter met Colin Chapman. It was to be the start of a life long friendship. 'He was salesman, designer and in charge of the shop and he had a job at British Aluminium during the day. He was the same bundle of creative energy that he is today'.

It didn't take Kirwan-Taylor long to order a Mark 6 Lotus (chassis number 34). 'I was very bad at putting it together and none of the bits fitted!' But perhaps the most relevant part of the entire exercise was when he decided to design the Mark 6's body himself. 'I persuaded Williams and Pritchard at Edmonton to build a body for me'. He provided them with drawings and a clay model of the shape he wanted. 'After they'd started I did change one thing though. I realised that the nose was too short so they cut it off and lengthened it'. As this was his first body design the approach this 23-year-old adopted is of great interest when viewed in the context of future events. 'This was rather before the time that fins had gained popularity and I wasn't sure of the logic of fins for a car like mine which wasn't going to be particularly rapid'. What he wanted was to produce something that wasn't going to be too expensive but was at the same time elegant: 'It had a high crease line and by mistake it was wedge shaped because the suspension at the back was higher than it was at the front'. While he was designing this body Peter came up against all the problems he would later experience with the Elite. 'They were things like scuttle height, how the doors opened and where to put the headlamps.' What of the influences that may have shaped his thinking? 'Well, when fitted with a wrap around screen and tonneau cover, it did look rather like a smaller version of a C-Type Jaguar.' Once Williams and Pritchard had completed the work, he then painted PGP 182 himself. Originally it was black with red about the front end. 'But I didn't think it looked very good'. So he stripped all the paint off, primed it and had it finished in British Racing Green.

Initially, he couldn't afford a windscreen and on seeing the car his stepfather offered to buy him one for Christmas. Unfortunately on returning from that sortie, he stopped at a red light and someone went into the back of him. So there was another time lag before he achieved his ambition of racing the car. 'I took it out for practice at Goodwood and on the third lap it died and I had to be towed back which was very humiliating'. It transpired that the distributor cap had broken. Then came his first race. 'I was gradually moving up the field and I was behind a couple of other Mark 6s and ahead of about four more.' Disaster nearly struck at the chicane. 'I did an unbelievable broadside and went sideways one way and then the other. Everyone was standing up thinking it was going to be the crash of the day and I thought: "It's going to take another six months to mend." But I managed to get through. I can't now remember where I came but I did reasonably well.'

Kirwan-Taylor's next car was rather more practical. 'By this time I was married with two children so the Lotus had to go'. He heard that the Walsall based Swallow Doretti company was going out of business and attended the closing down sale. As a result he purchased one of the last TR2 based Doretts off the line. 'I took the back off and turned it into a coupé. But, above all, it was a sort of prototype for my thinking of what a closed two seater ought to look like'.

He ran the Swallow Doretti for two or so years but soon after it was finished, he was talking to two friends, Peter Lumsden and Paul Fletcher. 'They were enthusiastic drivers and wanted to compete at Le Mans in 1956 in a Lotus Eleven. I said: "What you need is a coupé, something

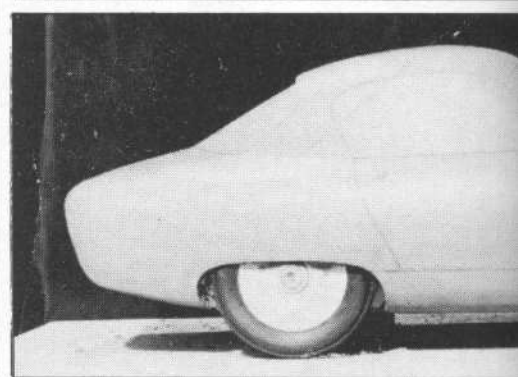
that's going to give you an advantage". So I went to see Colin and said, "I'd like to take the new Lotus Eleven and put a coupé body on it". He responded: "I've been thinking of building a closed car but I don't want to put it on an Eleven chassis for all sorts of weight distribution and other reasons. So why don't we start again from scratch'. This conversation, held late in 1955, marks the start of the Lotus Elite project.

'We wanted a minimum compromise from competition specifications so an owner could win the Monte Carlo Rally or Le Mans and use the car for going to the office!' So Kirwan-Taylor bought every motor magazine he could lay his hands on and, for a time, went to every motor show in Europe. He confesses to being particularly impressed by the Bertone BAT aerodynamic Alfa Romeo and the Pinin Farina Ferrari Superfast. There were also a few Swallow Doretti influences. 'The cab was tear drop shaped, vaguely like the Doretti at the back but different because that had very short fins.'

As Chapman had daringly decreed that the Mark 14 (13 had been skipped in the design register) was to be a monocoque, Kirwan-Taylor had remarkably few mechanical constraints when he began laying out the new coupé's bodywork. Suspension was to be independent all around and inherited from the Lotus 12 Formula 2 car with wishbone and anti roll bar at the front and Chapman struts at the rear. The engine, which was canted at an angle was to be a new Coventry Climax FWE 1216cc unit. These mechanics were a great advantage. 'Very often the mechanical package is difficult to envelop. I'll give you an example. After I'd done the Elite I did a coupé body on a Fraser Nash BMW with twin tube chassis for Peter Lumsden to race at Le Mans. This had a V8 engine with triple carburettors which was a high unit so all the proportions were wrong before I started; the scuttle height and its relationship to the wheels and so on. With the Elite the mechanics were all in the right places. The engine was low and mounted at an angle so we could duct the radiator and have a flat under-tray'.

In the first instance there were a few minor variations that were stylistic aberrations. 'We had some small fins but there's no purpose in having fins with a car that has got a top so we very quickly eliminated them'. A crucial part of the Elite's design is that the roof looks an integral part of the body structure. 'This was because it has a high waistline and the enormous tumble home both ways'. But there were cost compromises to be made. 'For these reasons and because the windows were curved in plane we decided that they couldn't wind. This was at the time when the Mercedes 300SLs windows didn't open so we said, "Hell, why do we have to have them"'. Although the Elite's windows don't wind they are removable and the perspex can be stowed in pockets behind the front seats. 'It was this sort of compromise that made the car what it was. On the other hand they're the things that make it slightly impractical. Funnily enough if you open one of those quite big quarter lights a very small amount there's tremendously good ventilation, aided by good aerodynamics'.

The subject of aerodynamics brings us to Frank Costin's influence on the Elite. In 1954 when Peter was already a regular visitor at Tottenham Lane 'I saw SAR 5, the Mark 8 with its Costin-designed aerodynamic body and distinctive rear fins, in the back of the shop'. At this time Costin was an aerodynamicist with de Havilland and, by chance, Kirwan-Taylor was involved with the aircraft company in his everyday accountancy business. 'They used to test the Lotus at Hatfield and I was fascinated by Costin's approach, though he obviously knew much more about the subject than I did.' Costin later went on to be involved with the Lotus Marks 9 and 10 and his brief was to look at the Elite concept from a specialist



aerodynamic standpoint. 'He altered the radius between the bumper and the bonnet, decided exactly where the radiator inlet should go, and softened the brow above the quarter lights'. Costin also suggested the distinctive cut off Kamm rear end. Thus Kirwan-Taylor's basic knowledge of aerodynamics and Costin's specialist refinement produced a final outstanding drag coefficient of 0.29.

Most of the discussions relating to the Elite took place at Colin Chapman's house at Monken Hadley, near Barnet. 'We used to turn up at Colin's at about seven in the evening and the talking could go on until two in the morning'. The 'we' at this time meant not only Chapman, Kirwan-Taylor and Costin but also Ron Hickman, Peter Cambridge and John Frayling, who were members of Ford's styling department.

Each was later to leave Ford to join Lotus and contribute individual expertise to the project. Ron Hickman made a speciality of production engineering, which involved translating a paper design to the reality of a prototype. Interiors were Peter Cambridge's forte while New Zealander John Frayling's genius was working with modelling clay.

Ironically their main concern, when the drawings were completed, was that the design looked so simple. 'We weren't sure that it was exciting enough'. But this is the undoubted strength of the Elite concept. As it is devoid of the contemporary clutter of fins and excess chrome, the visual appeal lies in the competence of the styling which is the principal reason why the years have dealt so kindly with the Elite. If any automobile concept follows the great French architect Le Corbusier's tenet that 'form follows function' it is the Lotus Elite.

Then came the business of making a model. 'That was the difficult bit and where John Frayling made such an important contribution to the car,