

BLINK...



PHOTOGRAPHS BY RICHARD NEWTON



...AND YOU'LL MISS IT

LOTUS ELISE

So fast, so
pure, so agile,
the new Lotus
featherweight is all
we were promised.
It's the 21st century
sports car, and it's here
now. By **PAUL HORRELL**

LOTUS ELISE

'Links between driver and car are almost synaptic. Input doesn't bring about response: input *is* response'



THE LOTUS PEOPLE HAVE BEEN putting themselves under pressure with this one. They set themselves a sports-car mission – low price, sky-high driving excitement – that has been attempted so often it's a cliché, but has tripped up just about every car maker to have tried it (not least Lotus itself in years past). So, for the Elise, they embarked on a simple but bold technical course that had to be right first time. And they've been doing it all during a period when the ownership and management of their company, unstable even in the good years, has descended towards industrial farce. Still, if the future of Lotus itself was looking blurred, the engineers in Hethel have always had a perfectly focused idea of how this particular Lotus was to turn out.

Now, after 48 hours on the road with the Elise, I've parked it out front of the factory and spent the necessary five minutes popping the roof back on. I'm walking around it one more time, fixing the shape in my mind's eye, nosing the hot smell, checking its fly-spattered front, already re-living shards of driving magic. The place is shut down for the night, but I can't help thinking about the people who've developed the Elise in these straitened circumstances. They must be feeling pretty

damn pleased with themselves.

Keep two things in mind when you think about the way this car behaves. One, it weighs 35 percent less than the MGF whose engine it shares. Two, it's a Lotus. It's not so much a car as an instrument for driving. The links between driver and car are so precise, so electric, so light, they're almost synaptic. Input doesn't bring about response: input *is* response. What's more, as accurately as the car reads what you've asked of it, so you can read its actions. There's a transparency and a feedback to the Elise's controls that even supercar drivers couldn't dream of. When a car is this light it has no need for a brake servo, no call for power steering, no place for sense-dulling bushes, no need for anything that interposes itself between you and the action. And what action it is! The acceleration, the zest, the eye-popping ability to change speed and direction, the sheer unbridled sense of motion, these are what make driving the Elise so special and intense.

IT'S NO SURPRISE TO FIND A CAR looking better on the road than it does at a motor show, and so the Elise does. But red isn't the colour of choice. Like yellow, it makes the Elise look toy-like, while BRG sends out all the wrong tweed-cap messages.

Silver's the paint to opt for: a nice 'technical' coat. Around these parts, we can't quite agree on certain styling elements, especially the lower-front aerodynamic ears and the tail spoiler. I reckon it's kooky that they're shaped like add-ons but look so obviously moulded in. Others reckon they're spot on. And if there are those who've claimed the styling isn't self-consciously progressive enough for such an advanced car, no-one can deny that Julian Thomson has sculpted an extremely beautiful form. It avoids hard-edged aggression, but the stance, the way the thing bulges and crouches over the widely spaced wheels, is full of coiled athleticism.

Ours might have been an early car but you couldn't fault the body quality. Two giant clamshell glassfibre-composite mouldings make up the whole front and rear, made smooth and glossy by the patent Lotus VARI (vacuum-assisted resin injection) process. Doors are plastics, too, as is the front cover through which the radiator breathes. The engine/boot cover is aluminium. The Italian owners insisted, in the early days, that Lotus look at ally for the whole body, but that notion was scuppered by press-tooling costs. Besides, Hethel's people simply couldn't get used to the idea of a metal-bodied Lotus.

You wouldn't expect a car of such purity to



Rare slide:
tight bend, foot
flat in second.
Usually, tail
stays put and
Elise just grips

be overdressed in jewellery, and it isn't. But the necessary body punctuation has been done with care. The lights were specially tooled in two colours: red for the rears and a big orange indicator that serves both ends of the car. Our Elise came with the optional driving lights, set into the matt-black grille for that tasty Le Mans look. An aluminium filler cap glints from the right-hand buttress, but the door handles give no visual signal. You simply press in a button, and grasp a tiny rubber pad just below it in the upper concave surface of the engine's air-intake duct. Works well assuming you've cut your thumbnails lately.

Climb in feet-first. The sill's so deep as to reach rib-height once you're settled in. That's great for strength and safety, and no bar to entry hood-off. When the roof's in place you're left with a shallow door aperture and, if you're unpractised, a bit of a pantomime. The doors are light, but there are big aluminium side-beams inside and they shut home solidly. Seats, Lotus-made items optionally leather-covered on this car, are as unpadded as you'd expect and disposed asymmetrically, the passenger's fixed, the sliding driver's aligned towards the car's centre-line and the pedal box. The driver's chair also gets pneumatic lumbar adjustment.



MGF 'box, but shift is lighter, more mechanical



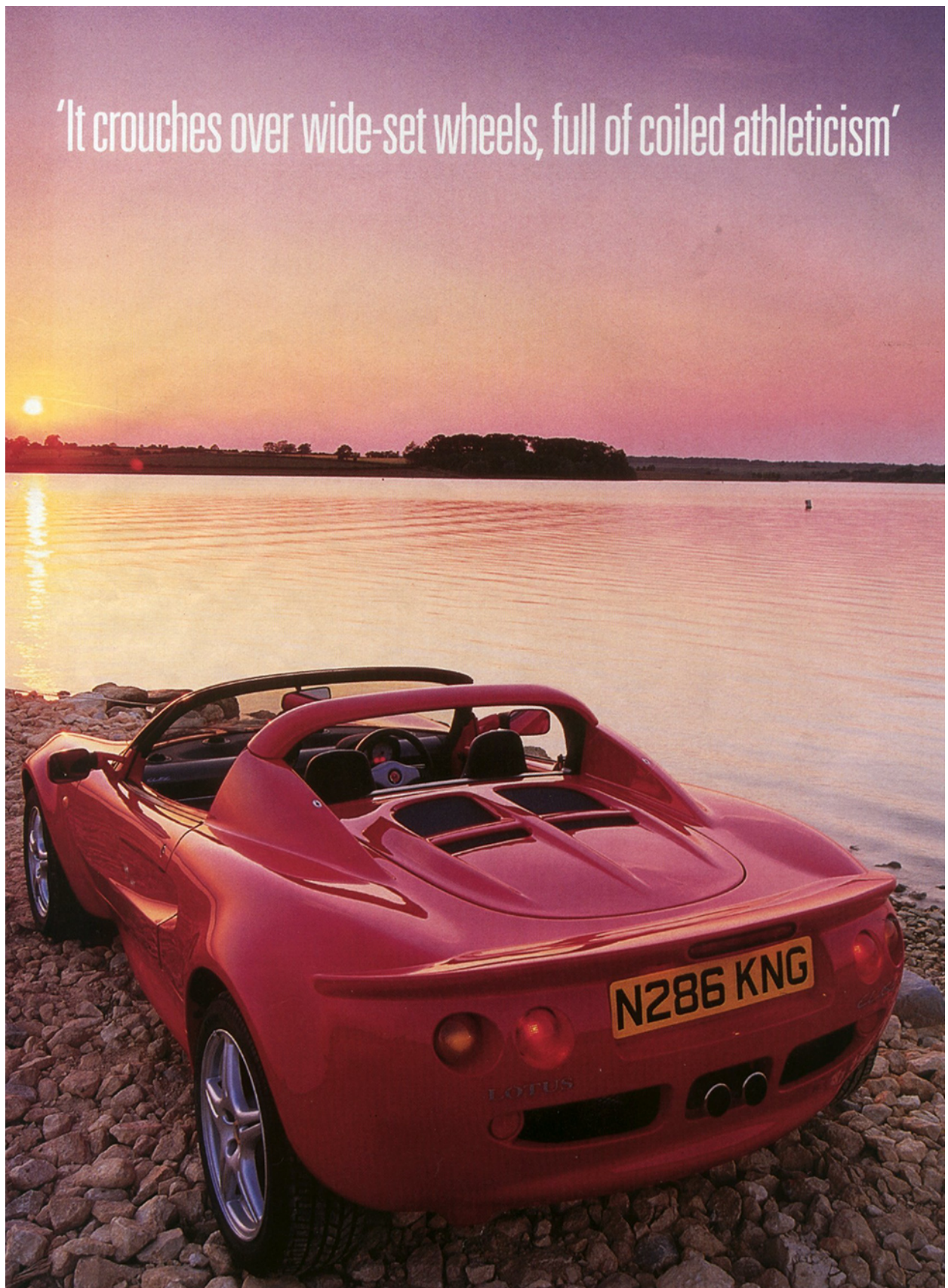
Motor is also MGF's, giving 118bhp; needs no VVC for electrifying pick-up in lower gears

Enjoy the look of the cabin, a place where design meets engineering meets styling and they fuse. It's as pared-down example of techno-chic as you'll find this side of a race car. Ahead is a dash of roll-section extrusion, its upper half black-finished to stave off screen reflections. A black plastic sandwich filling separates upper and lower halves of the dash, into which are set basic air controls and the switch for a fan that's as noisy as the afterburner of a Phantom, and all but as effective. Alongside those controls, you can optionally have a radio slot. Peugeot 106 push-switches for lighting don't look a bit out of place, nor Cavalier stalks.

The dial-pod is made by Stack, supplier to this nation's race-car industry. It's a gorgeous piece, humming with the electronic precision of lab galvanometers. Switch on the ignition and both the fine orange needles pause, turn backward a few degrees in perfect unison, then return *exactly* to zero. Fuel and temperature are arrayed digitally along with the odo and trip. It's a fairly scant set of instruments, but then only a relentless pessimist would say a lightly-stressed K-series needs its other vital functions constantly monitored.

The hood and the lightweight part-carbon-fibre frame that supports it stow neatly behind the seats. That leaves empty the decent

'It crouches over wide-set wheels, full of coiled athleticism'



LOTUS ELISE



rear boot. Several small trays and pockets are dotted about, and there's even a fag lighter, but its ashtray is the Queen's Highway, evidently. More practical stuff: the hood takes a few minutes to erect but it's perfectly weatherproof, mating cleanly to proper wind-up windows. The fabric cuts an elegant stressed curve between the two rear fixing points: this is architecture, not some rainy-day lash-up. A removable glass fits below the roll-hoop, but there's nowhere to store it in the car so you might as well leave it in place. The open feel is barely compromised by its presence.

The little steering wheel, a Lotus-custom Nardi item, is fairly high-set. It might be small, but it asks for amazingly little effort, even at rest. Before we've turned a wheel, the Elise is swanking about its lightness.

The 1.8 K-series chatters to life with the usual rattle of a 16-valve alloy engine, but sounds closer, more immediate, an order less muted than in any saloon. The clutch is remarkably light and smooth, first gear also a finger-light snick. Low-speed running exposes no driveline crabbiness: in an 800-unit-a-year uncompromised sports car, you'd expect some. But then Lotus simply takes MGF powertrains straight off the Rover line: engine, gearbox and final drive are unmodified. Rover engineers came along when Lotus did its cooling tests at Nardo, brought Lotus to Gaydon for sump-surge work, signed off the whole powertrain package. Rover warrants it, too. In fact, you tend to get less low-speed shunt in the Elise than in the MGF, because the Lotus controls are so precise.

Precision informs every move the Elise makes. The throttle pedal travels a big distance, but there's a little extra to be had from every last millimetre. The K is a good torquer, and with just the 690kg to push against, it'll pile on the revs from just about any starting point. Beyond 3000rpm it rolls up its sleeves and goes to work, the thrust taking a rising rate with crank speed, barely tailing away even when closing on the 7000rpm cut-out.

The quality of the engine note varies little as you wind it up: just a metallic hum, made exciting if you're cracking along simply by being louder and higher in pitch, but not qualitatively different. It isn't one of the great aristocratic exhausts. The most interesting sound is a brief hiss from the inlets every time you fling open the throttle, as if the motor is panting in relief at being let off its leash.

A lengthy wand of a gearlever invokes thoughts of a heavy gearbox. Erase them. It's that way because Lotus sourced a complete Rover lever and linkage assembly, and didn't want to shorten or mess with it for fear of new resonances being excited. If you shove the lever hard and fast, as you must a Ferrari's, it'll feel vague and wobbly. Use fingerlight efforts, as with everything else on this delicate bantam, and be rewarded with a delightfully snicky mechanical feel, if not a lightning-fast change. Factor in feet-friendly pedal location, a precise clutch and crisp

blippy motor, and it's unlikely a keen player will leave the gearlever untouched for long.

In CAR's standard two-up testing procedure (and the weight of a passenger is a big deal in this car) we timed it at 6.5 seconds 0-60mph. You'll see Lotus claiming 5.9sec, but its tester travels alone. So, in the lower gears we're in the performance territory of an M3. But that doesn't tell the whole tale. Because it's geared so much shorter than the M-car, the Elise makes you much more the master of your speed. You're more likely to be in the right gear, and the next one will be closer. If you pull out to overtake, there's no initial feeling of a mighty engine waking up to overwhelm a heavy car; instead, the Elise snaps forward instantly, to the precise degree you've ordered. That makes it a great overtaking tool, always at the ready. It'll slot neatly back into lines of traffic, too, thanks to the marvellous precision of the brakes.

Ah yes, those brakes. Lotus is giving first road-car airing to a material otherwise confined to racers: the metal-matrix composite discs are aluminium alloy dosed with silicon carbide. To be sure of its ground, they're massively over-specified, big vented discs at each end of the car. They work brilliantly: without a servo, there's no softness, no artificial initial jump-in. Yet it isn't a heavy pedal, just an ideally progressive and vibrantly communicative one. And if you ask it to, it'll summon deceleration that's almost scary in its force.

We're travelling some urban by-passes now, a three-car convoy en route to Mallory Park (see page 86). Point-squirt up the dual carriageways, haul down for the next junction. Roof off, sun out, smile wide. And that's before the back-road bit. We take one of those old meandering highways rendered redundant by the new trunk roads, quiet enough to start learning the Elise.

Or at least, learning what it can do. Such linear controls – it's soon clear the steering is endowed with just the same qualities as the brakes and throttle – mean there's no adap-



Curvy nose houses oversized rad, no luggage

LOTUS ELISE

'Rapid transit is a secondary characteristic to stimulation'



tation phase. Any competent hand can guide it at a decent lick immediately; you'll never find yourself using too much lock for a corner, or misjudging your slow-up and having to correct halfway. It's all so natural – the only problem is when you climb back into an ordinary car and wonder why you're having to steer by guesswork.

Tour the roads around Hethel and you'll see why no Lotus was ever badly upset by bumpy, heaving tarmac. The Elise is true to type, able to carry a stable course whatever's going on below. The wheel writhes in your hands, and it's best just to let it. It can swing through quite an arc, and since the car keeps on going straight, I wondered at first whether applying that amount of lock was actually going to have any effect.

I needn't have fretted. When you do the steering, the Elise is responsive to the nth degree. Just roll your wrists and in it goes, less darty than a Seven but beautifully delicate. Into the bend, the steering weights up just a little and the straight-ahead writhing melts away, leaving you with Catseye-picking accuracy. By this point, the steering weight is relaying pure and consistent messages, but mostly all it's saying is, 'The front tyres are clinging right on, thank you, and you could be going faster.' Hurl the Elise into a really tight one and you might just find the Nardirum's little vibrations lightening up as the front tyres relent a little, the signal of a line-easing drift. In the dry, full-on oversteer is very hard to arrange under power: you'd need many more than 118 horses for that to

Chassis: comes the revolution

THE ELISE'S MAIN CHASSIS FRAME weighs just 70kg. Three-quarters of a bag of cement. But light weight isn't the sole positive outcome of its unique construction. Hollow aluminium extrusions (the metal is squeezed like pasta tubes through a shaped nozzle, then cut to length) are joined by aircraft-style epoxy glue, with added riveting to prevent peeling in a crash. Tooling-up is cheap, needing only a set of nozzles. Bonding pieces together is far more accurate than welding, ensuring a consistent end-product. The very strong chassis is also 'scaleable': by slicing the extrusions longer, it can be expanded for a new Esprit, or sold to other car makers.

The main structure is delivered whole by Hydro Aluminium. To it are bolted a galvanised steel rear crossmember, steel roll-over hoop, tube-steel wishbones and extruded uprights – another Lotus patent.



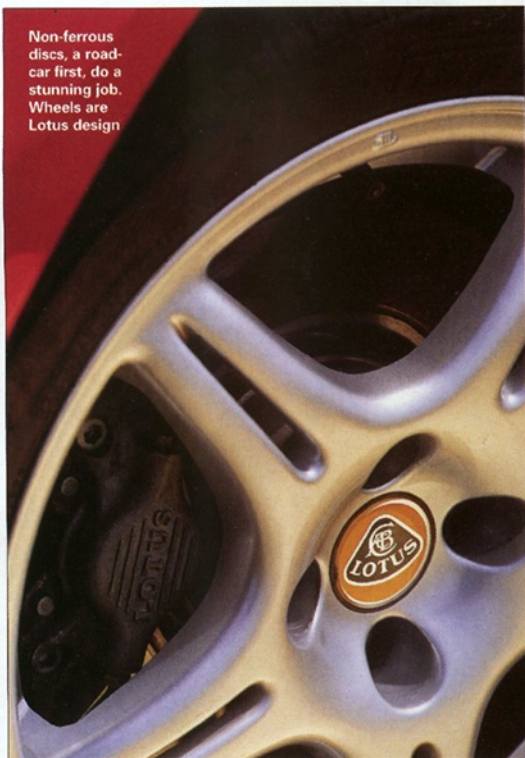
Elise chassis: Lotus aims to sell technology

be a regular happening. To get the Elise crossed up, wait for the extra power that Lotus doesn't deny is on the way. Or a wet day. Even then I wouldn't be sure of it: the P Zero is at home in the wet, and Lotus chassis people are pretty smart at finding grip.

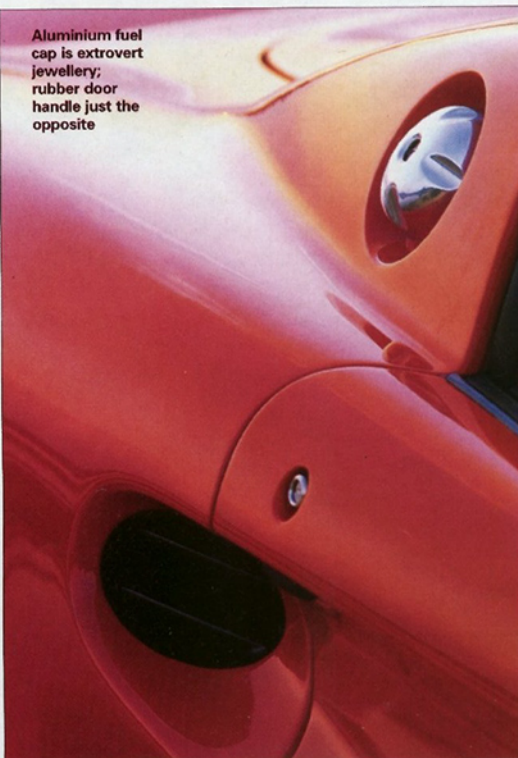
And all the while, the Elise barely rolls, never lurches or pitches. It's just so flickable and agile, so effortless, so fabulously economical in the efforts it asks of you. It's no video-game, though. The Elise's ability to perform extremely rapid transit is a secondary characteristic. The primary one is the stimulation it delivers. And it'll do most of that at surprisingly moderate speeds. After all, it runs out of steam just beyond 120mph, and the very rangey fifth gear means acceleration is gentle once you're into motorway speeds. The Elise puts up good journey times because it can overtake well and it seldom needs to be travelling slowly, rather than because it ever goes preposterously fast. It excels at bombarding you with the thrills of motion, for rewarding and coaxing you to drive properly more than flat-out.

Also like a true Lotus, the Elise has a superb ride. Especially once speed builds, its contour is like a low-level fighter's: following the ground, hugging dips and troughs, but smoothing away the uncomfortable irregularities. We fanned out into the Fens, where long clear straights are so viscously undulating they set a limiting speed by bouncing a car onto its bumpstops. You won't find anything less perturbed than an Elise. And all the while, the chassis is *completely* rock-rigid.

Non-ferrous discs, a road-car first, do a stunning job. Wheels are Lotus design



Aluminium fuel cap is extrovert jewellery; rubber door handle just the opposite



No monocoque open car comes close. Few closed ones, come to that.

So where's the pay-off? Well, the Elise may be practical, but it isn't refined in any but the engineering sense. The engine's loud, and if it weren't you'd notice the tyre roar. All those hollow extrusions provide easy noise paths. Best to travel roof-off; there's less bluster than in most convertibles. Hood-up, the wind is quiet until 85mph or so, but then it starts whipping up a storm. Whenever you ride over gravel, you get a right rattling from the underside. (Mind you, in an old-school Lotus you'd be wondering if it were the rattle of some vital M13 Nyloc letting go.) Some people might want more refined – read numbed – controls, too, especially the steering. They'd want bushing in suspension and gear linkage to take out the tiresome tingles and constant metallic thrash. They'd want sound insulation, reclining seats, carpets, electric windows, and hang the weight. The Elise won't be tempting folk out of their BMW Z3s.

But then they won't get the cross-country summer drives I had in the Elise. They won't know the haiku minimalism of squeezing those brakes, *thinking* away the speed on the approach to a bend, of pouring so sharply into a perfectly carved turn, right onto the line and no messing. Of opening the throttle and blaring at such a rate up to 7000 revs, of pointing between rushing trees in inch-perfect control. Of building up a metronome rhythm through S-bend wriggles, each corner swinging into the next, no heave, no baggy lost motion, tight as a drum. Of arriving be-



High-tech Stack dials are accurate, inertia-free



All pedal stems are slices of same extrusion



Weatherproof hood uses carbonfibre battens

hind a truck-baulked queue and knowing you can use compact size and precise speed modulation to pick them off one by one as the road allows, and to be *allowed back in*, because, well, I don't quite know why, but it must be something to do with the way this car's looks warm the stoniest heart.

We averaged an easy 30mpg on this kind of thrash. The benefits of lightness again. This would be an easy car to own, too. The Rover support would see to that. And it is by a mile the best-finished, most glitch-free Lotus ever. Lotus, an automotive minnow, simply can't afford the tooling for a complicated luxury supercar. The Esprit is bound to struggle against Porsche and Ferrari. The Elise is different. It's Lotus using brains (of which it has plenty) rather than money (always in rather shorter supply). There can be few cars in series manufacture that have cost less to tool for than the Elise, and yet the result seems anything but cheap.

Welcome, then, to the 21st-century sports car. If you can bear a bit of hubbub, it's a perfectly practical device, yet there's barely a road-legal car on earth that can match its delicacy and precision. It's neither anti-socially fast, nor prohibitively expensive. It's clean, safe, properly finished. Sure, it's a minority car, built in numbers to make the MGF look like the Corolla, but its influence and technologies must surely percolate outward. In the meantime, let's close our eyes and wish for Lotus, the company, to ride out the uncertainties of the moment. If ever a car deserved an untroubled life, it's the Elise. 🚗