



RICHARD SCRASE

Richard combines a love of cycling with a deep passion for the environment

BIKES ARE SOLD ON PRICE AND/OR PERFORMANCE. LONGEVITY? NOT SO MUCH. RICHARD SCRASE ASKS HOW, WHY AND WHEN WE SHOULD DESIGN FOR DURABILITY

Building a bicycle requires raw materials, sophisticated machinery, skilled labour and energy. A typical bike burns up between a quarter and a third of a ton of carbon as it's made. So it's a great shame, as well as a terrible waste, if the lovely, shiny new bike displayed for sale fails to give years of service. Lots of bikes end up breaking down sooner than they should, and many are abandoned altogether as a result.

Bike recycling projects such as Cycling UK's Big Bike Revival can get some of these bikes back into circulation. I experienced this during the Covid period. During lockdown, I was one of a dozen or so Cyclox volunteers in Oxford repairing donated bikes for key workers. Between us we put more than 450 bikes back on the road.

It could have been many more but for a few frequent faults that were too expensive for us to repair. One of the worst of these were worn bottom brackets. Punctures, corroded cables and worn-out chains were also pretty common but these were easy to fix. Even when worn bottom brackets could be repaired, the cost in time and resources usually exceeded our budget.

So how could bikes be designed to stand up better to usage, neglect and

weather? My colleagues at Cyclox and I had some ideas, but I decided to ask some experts – bike makers who are aiming to make bikes that last.

OXFORD BIKE WORKS

Richard Delacour of Oxford Bike Works (oxfordbikeworks.co.uk) sets out to make bikes that can be used – and have been used – to cycle around the world. I asked him about his choice of components and how he'd arrived at them.

"A lot of it is trial and error," he said, "learning from the feedback given by customers. Shimano is a dominant force in the gears and transmission market, and by and large, makes very reliable components. When I set up in business I took advice from seasoned cycle tourists who had tested components exhaustively.

"Nowadays, I have a reliable network of customers who let me know how they are getting on. I have a principle that if a component fails unexpectedly, I substitute it for something else straight away, so that I don't end up knowingly fitting a component that has recently failed to another bike.

"Steel frames are much more resistant to fatigue than aluminium and carbon, and should last 20-30 years if looked after. Steel also has a certain springiness and the ability to absorb shocks, whereas other frame materials are stiffer and so



Left: World Bicycle Relief