

“IT WOULD BE QUITE EASY TO CREATE A BIKE THAT CAN GO 10,000-20,000KM BETWEEN SERVICES BUT IT WOULD NOT BE VERY EFFICIENT OR FUN TO RIDE”

considering the longevity of our planet.”

Unlike the previous examples, Islabikes are usually made of aluminium. “All our frames are made from aluminium, and our forks are made of aluminium, chromoly or carbon fibre. The main reason for choosing aluminium is its light weight, although it’s also more resistant to corrosion than comparably priced steels. The weight increase of the bike would be significant if frames were made of steel, especially for children. We’ve avoided carbon in any volume (a few of our forks are made of it) in part because of the difficulties in recycling it, and there are still many improvements we can make to aluminium frames to make them lighter and improve the ride characteristics.”

Because Islabikes are designed for children, many components are non-standard. “We design many of our components from the ground up, so what might appear to be just another bicycle pedal on a child’s bike has in fact been the result of a year-long development process. To make the design decisions – dimensions, materials, features – we combine available data on body sizing with our own observations and expertise.

“All components not designed by us are chosen with performance and longevity in mind, not what is fashionable. For example, fewer gears often means reduced weight and longer life at similar price points. We also fit sealed loose ball bearing hubs where possible, as with regular servicing these will easily last the life of the bike.”

But even with bespoke design and choosing for longevity, parts do wear out. “Handlebar grips are among the first parts to wear, or chains. In the case of chains, they’ve usually not worn out,



Many Islabikes last 15 years plus

they’ve just gone rusty because they are not being oiled.”

When I asked him about building a ‘forever bike’, Goodall stressed the importance of serviceability and the availability of spares. “Keeping weight down would still be a high priority... It would be quite easy to create a bike that can go 10,000-20,000km between services but it would not be very efficient or fun to ride!

“Adding additional rubber to tyres to get more miles out of them before they needed changing, for example, is possible but then the increased weight will create a bike that is slow to accelerate and climb hills on. Increasing chain width and sprocket thickness will extend the life of the drivetrain but increases weight and reduces the efficiency.

“It’s the same effect as how a car will go 10,000-20,000km between service but a lorry will do 80,000km. The lorry is

expensive, inefficient and not very fun to drive... but you can rack up a lot of miles without having it serviced!”

GOING FURTHER

So where does all this leave us? If we want bikes that are a joy to ride, that are light and that have variable gears, we have to accept the need for maintenance. But bikes can be made to be robust and long lasting if good-quality materials are used in the critical points such as the bottom bracket.

While manufacturers might not build ‘ordinary’ bikes as well as we would like, the higher demands that e-bikes make of transmission systems and brakes are already resulting in manufacturers being forced to equip these bikes with tougher components. Some of these parts can be used on a conventional bike when it’s time to replace gears and chains – those parts we expect to wear out – extending the time between services. ●