

UNIQUELY YOURS

DESPITE CARBON-FIBRE'S INCREASING AFFORDABILITY, SALES OF CUSTOM-BUILT STEEL AND TITANIUM FRAMES ARE FLOURISHING. **DAN JOYCE** QUIZZED BUILDERS AND BUYERS

● (In the photo) Robin Mather working on a titanium mountain bike frame. Photo: Seb Rogers





Left: Seb Rogers. Top right: Dan Joyce. Bottom right: Richard Hallett

BESPOKE BIKES ARE like bespoke suits: they fit better. That was always the argument. For men at the extreme ends of the height bell curve and all those women who are merely shorter than average, that may still be true. The bike industry best serves Mr Average. Yet the majority of us can get a perfectly good fit on an off-the-peg bike. So the resurgence of interest in bespoke bikes is surely being driven by something else.

Cycle's Technical Editor Richard Hallett, who won Best Touring Bike at Bepoked last year, reckons that it's partly a reaction to the ubiquity of one-trick-pony carbon-fibre road bikes. 'My own view is that people are being led up the garden path a bit by the industry,' he told me. 'I don't think that most cyclists are well served by a carbon fibre road bike with 700x25C tyres. It's the old fallacy: pros ride these bikes and they are the fastest people on the road. Therefore that's what I want because I want to go as fast as possible. It's pretty easy to sell a bike on the basis that it only weighs 6.5kg.

'In turn, that has influenced every other aspect of bicycle design. Modern road bikes are almost dangerous to ride in the rain. You only have to look at the pros crashing in the Tour de France on wet roads to see that the bikes' handling is not up to scratch. They fall off in circumstances where there's no way they should. I think it's down to the geometry

“Not everyone wants a mainstream bike. As good as they are, the big brands' bikes are very similar and there are thousands of them” – Jim Walker

of these bikes. They make the wheelbase as short as possible, because the easiest way to keep a bike light is to make it smaller. You end up with extremely responsive steering. And a short wheelbase guarantees that if you get a slide, you're going to fall off. What can you do?'

You can offer something different. And there isn't anything more different than a bike that's unique, that's bespoke. The best opportunity to see a wide range of such bikes and talk to their builders is Bepoked, the UK Handmade Bicycle Show (see sidebar on page 44). It was started in 2011 by framebuilder Phil Taylor and his wife Tessa, who wanted to see a domestic version of the North American Handmade Bike Show. Bepoked's visitor numbers have risen each year. In 2015, there were over 6,000.

The bespoke resurgence

The popularity of cycling in general has clearly had a knock-on effect on the bespoke market. 'Those that came into the sport a few years ago are now looking at upgrading,' said Bepoked's Phil Taylor. 'For many, the pinnacle is to own a bicycle made just for

them.' Cost doesn't seem to be a disincentive. 'If leisure time is limited,' Phil added, 'then the time spent cycling becomes even more valued and everything must be right.'

There are more British framebuilders now too, even though the days of the guy in the back of the bike shop with a brazing torch are largely gone. 'People are getting into framebuilding through tuition at places like The Bicycle Academy, Downland Cycles and Swallow,' said Phil. Bepoked even has a special category for Best New Framebuilder.

CTC member Caren Hartley (hartleycycles.com) is a new framebuilder, having transferred her skills in jewellery and decorative metalwork to the larger scale of handbuilt bikes. She won Best Utility Bicycle at Bepoked 2015 and recently built a Reynolds 953 gravel-road bike that's on display in London's Design Museum. Like Phil, she cited the greater number of bums on bikes for the bespoke resurgence. 'Some of those cyclists who have been riding for five or ten years are looking for something that's a bit special that they can't get off the peg,' she said. 'I think people are more concerned where things come from as well, and so



● (Left) Paul Burford of BTR Fabrications (btr-fabrications.com) welding a steel hardtail

● (Top) Richard Hallett at Bespoked 2015 with his award-winning 650B touring bike and (below) polishing steel dropouts in his workshop

there's a demand for bikes that have been made here.'

Most custom-built bikes are steel. It's a relatively easy material to work with and it has many fine qualities. There's also growth in bespoke bikes made from that other resilient metal, titanium. Titanium is a tough material to work and it's expensive. When something is being built for you, however, the big cost is labour; the material costs are less significant. A custom-built titanium frame will cost more than a bespoke steel one, other things being equal, but it's likely to be in the same ballpark.

Enigma, who made Neil Wheadon's bike (right), build frames in both steel and titanium here in the UK. Owner Jim Walker suggested that purchasers were specifically seeking a bike that stood out from the crowd. 'Not everyone wants to ride mainstream bikes. As good as they are, the bikes from the big brands are very similar and there are thousands of them around. A handmade bespoke bike offers an alternative that sets the rider apart.'

Carver Bikes in the United States, who built my 29+ mountain bike (p46), operate like some UK microbrands in that, as well as off-



● Neil after the Cape Argus Pick 'n' Pay Cycle Tour in S Africa



Left and below left: Neil Wheadon

SEPARABLE ENIGMA ETAPE

CTC Cycling Holidays tour leader Neil Wheadon wanted a titanium audax bike to take as airline luggage

Touring abroad is glorious – and so much better on your own bike. The problem is getting your bike onto the 'plane. Do you bag it, box it or wrap it? Will you be charged a three-figure sum to fly it? Will they take it at all?

Three years ago I began looking for a bike that I could fly with. The case needed to be within hold-luggage size requirements, but I wanted a bike with 700C wheels and eyelets to fit a rack and take mudguards. The combined weight of case and bike needed to be under 23kg. Simple, I thought, and bought a ticket to Bespoked. But none of the framebuilders I spoke to were making such a bike.

My background is with tandems, however; I knew that with S&S couplings and cable splitters, tandems could be broken into two pieces for transport. I already had an airline hard-case, bought secondhand from the United States, that I'd used to transport half a tandem to New Zealand. The hard-case weighed 9kg so I had 14kg to play with. Many airlines will carry only a single case, so any tools and locks would eat into my bike-weight allowance. I needed a light bike. Although Hewitt Cycles said they could get close to what I wanted with a steel bike, it was soon apparent that titanium was the way to go. I chose Enigma as fellow tour leader Greg Woodford had raved about them.

Even better, I had a local Enigma dealer. I strolled into Cadence in Bath



armed with the case and asked if they could fit an Enigma into it. Over the next eight months, we surmounted various hurdles. We started by sending the case to Enigma in Brighton and asking if they could get an Etape inside. They said yes. I requested a triple chainset instead of a double, then waited for the bike.

'It's beautiful,' said Will from Cadence when it returned. Gleaming silver, with titanium couplings, it looked glorious. We put the case next to it and set about trying to get it in. About three hours later, after lots of different configurations, we'd finally done it.

The bike is a joy to ride. It's light, flies up the hills, and has already been on five foreign tours, including Sri Lanka, Oregon and Mallorca. It will be my travel bike for many future CTC tours. I have reduced the assembly and disassembly time to under an hour. I pay no airline charges and can take the bus to the airport, so it'll pay for itself long term. I'm really pleased with it: it's a folding bike with no compromises. I have had a lot of people admire it and ask where I got it.

Price: £3268.49 (complete bike, including S&S couplings and gearing upgrade)
From: enigmabikes.co.uk



● Columbus XCr road frame with Hermes lugs by Demon Frameworks



● (Top) Carver's unfinished Antarctic expedition bike. Niche!
(Below) Longstaff's award-winning wheelchair-carrying tandem trike



Near left: Demon Frameworks. Far left: Davis Carver (top), Dan Joyce (bottom)

BESPOKED: THE SHOW

Bespoked 2016 takes place in Bristol from 15-17 April. The primary venue, where the framebuilders are, is Brunel's Old Station, which is right next door to Bristol Temple Meads railway station. (There's also a second venue for clothing and accessory suppliers 15 minutes' walk across the city at the Arncliffe.) Opening times are:

Friday 15 April: 14.00 – 19.00
Saturday 16 April: 9.30 – 18.00
Sunday 17 April: 10.00 – 16.30

Tickets on the door cost £15 per person for a day or £25 for a three-day ticket. CTC members can get day-tickets for two people for £20 instead of £30. Accompanied under-14s go free. For discounted online tickets, and for more information about the show and exhibitors, visit the website bespoked.cc



Left: bespoked.cc

“The bedrock of bespoke frames is the touring cyclist, those riders that spend the longest in the saddle and want a bike to fit perfectly” – Phil Taylor

» the-peg models, they offer bespoke titanium frames that are then made for you in China. Owner Davis Carver echoed Jim Walker: custom-bike purchasers want something different. He said: 'I think it's largely due to the huge variety of choice in componentry, wheels, and gearing. It has opened up possibilities that were not available even a few years ago. When I started my shop 40 years ago, there was only one game in town. Now the variety is mind boggling. I'm currently finishing up a South Pole expedition bike with twin fat-bike wheels front and rear...'

Custom-bike customers

'I don't think there's one specific type of person who orders a frame,' said Richard Hallett. 'But it's probably not the typical MAMIL sportive rider.' Customers, he added, either wanted something specific – '650B touring, custom old-school geometry, my bi-laminate bottom bracket, polished stainless steel bits' – or they wanted a general-purpose road bike and not a carbon-fibre racer.

'I think people are thinking: maybe there's a bit more to cycling? A "gravel bike" is like an old-school drop-handlebar roadster, something with an all-round capability rather than tightly focused.'

Davis Carver painted a similar picture of purchasers. 'Really, all types of rider, except

perhaps full-on road racers,' he said. 'Carbon frames still rule that roost. The majority of riders that we build for are looking for versatility and durability. For most of them, this will be their tenth or twentieth bike. Sometimes it's a size or geometry issue. We've built frames for everyone from a 4ft 7in cyclocross racer to a 7ft 1in touring cyclist. That said, the majority of our custom frames are driven by a combination of features that are not available from stock frames: belt drive, internally-geared hubs, elevated chainstay, no seat tube, custom braze-ons... You name it, we have seen it'

All kinds of bikes are on display at Bespoked each year. With racers typically opting for carbon and utility cyclists choosing something cheaper, Phil Taylor said that another type of cyclist was the bread-and-butter of custom builders – one largely overlooked by the wider cycling industry. 'I think the bedrock of bespoke frames is, and always will be, the touring cyclist,' he said. 'Those riders that spend the longest in the saddle and want a bike made to fit them perfectly and to meet the demands of the riding that they will do. Steel, the bespoke builder's material of choice, lends itself perfectly to this type of bike – and to the now-popular adventure/gravel bikes – being resilient, comfortable and strong.'

For Jim Walker of Enigma, customers were

Near right: Cillie Hammick. Far right: Josie Dew



● Caren Hartley is one of an increasing number of new builders. She won Best Utility Bike at Bespoked in 2015

choosing sportier bikes but not racers as such. 'Our typical customer is not necessarily a competitive rider but usually someone who covers a fair few miles a year and rides sportive/endurance events,' he said. 'Putting aside the obvious benefit of something made to fit you perfectly, a bespoke bike is something very personal. It's this that makes it different from anything that you can buy off-the-peg.'

Caren Hartley picked up this same theme. 'My customers tend to be cyclists in their 30s and 40s who have had a couple of bikes and are looking for something a bit different,' she said. 'Fit is an issue; I've built bikes for a number of women who are on the short side who have had trouble getting a bike that fits off the peg. There's also the aesthetic appeal.'

What bikes?

If you've got an idea for a bike that's practical and economical to make, someone somewhere will build it for you. Four of my five interviewees nevertheless confirmed what I'd seen at Bespoked: that road and touring bikes, in their various guises, dominate the custom-built market.

'It's the sportive/endurance machine, just as it's always been for us,' said Jim Walker of their best-selling bespoke bikes. 'The huge move towards disc brake machines has been quite astonishing, although our sales of bikes with traditional calliper brakes are still holding up very well.'

For Richard Hallett (halletthandbuiltcycles.com), '650B is proving popular, but I have done all-steel 700C road bikes, audax and a couple of retro-styled machines.' It was the

● It's been all over the world, but it's now Josie's workhorse bike



SMALL ROBERTS ROUGHSTUFF

CTC Vice President Josie Dew (5ft 2in 'and a quarter!') describes her much-travelled and now converted tourer

I never planned to get a Roberts touring bike. It happened by lucky accident. It was 1988 and I had just spent all my teenage years cycling as much and as far as I could. I had ridden tens of thousands of miles around Europe and North Africa, first on a Raleigh Misty 5-speed and then a Campione Italian road bike. Both bikes had been way too big for me, though I didn't know it at the time.

When I wasn't touring, I was cycling around London with my bike trailer delivering food as part of my small cooking business. At the same time, I worked on and off as a bike courier. That's how I met Chris Shaw, who after years as a courier got a job as an apprentice framebuilder at Roberts Cycles in East Croydon. I would ride down regularly to see Chris at work at Roberts. This went on for some time until tragically Chris was killed on his bike while training in the Surrey countryside. A driver came hurtling around the corner on the wrong side of the road.

It was on my visits to Roberts that I became friendly with Chas, who had taken over the business from his father Charlie in 1979. I spent hours in the workshop watching Chas and the other framebuilders at work, intrigued how such beautifully built bikes with such fine brazing and beautiful lugs slowly metamorphosed from a few lengths of grey steel. One day Chas started measuring me – inner leg, arm length,



seated stretch etc, and before I knew it my first ever made-to-measure touring bike was built. He sprayed it in 'hot pink' (a colour recommended by Chris), and everything from the short stem to the 150mm cranks fitted perfectly. It made my other bikes feel like bucking see-saws.

A month after I cycled my Roberts Roughstuff away from Chas's workshop, I was riding it from Katmandu over the Himalayas into India and out into Rajasthan and the Great Thar desert. I went on to tour a few hundred thousand miles on it before Chas built me another Roughstuff in 2000. When my first daughter Molly was born in 2006, my hot-pink Roberts underwent a makeover: Chas changed the drops to flats, the derailleur gears to a Rohloff, and resprayed it dark moody blue. It became a child-carrier workhorse for all three of my children, and I have since cycled thousands of miles with them in the Hamax child seat or reclining in comfort in the Burley d'Lite trailer.

Price: n/a. From: robertscycles.com

Note: After 50 years of building bikes, Chas Roberts is taking a sabbatical from framebuilding. His brother Geoff is still active: geoffrobertsframes.co.uk



● Dan's Carver is designed for XC riding and off-road touring



Right: Simon Walker. Below right & opposite: Dan Joyce

DO-IT-ALL CARVER GNARVESTER

Cycle Editor Dan Joyce ordered a 29+ Carver Gnarvester with different geometry and frame fittings

I started thinking about a titanium 29+ frame after fitting Surly Rabbit Hole wheels and 3in Knard tyres to my 2015 Genesis Longitude frameset. I liked the Longitude already as a rigid mountain bike and as a fat-tyred, flat-bar tourer. With 29+ wheels, however, I was blown away by its off-road performance.

The Carver Gnarvester is a lighter alternative, being titanium rather than steel, and it's more overtly a mountain bike. It can run a suspension fork without upsetting the handling. It's designed for an internal dropper-seatpost. With its Paragon Machine Works dropouts, it switches easily between singlespeed and geared use, and needs only new bolt-on dropouts to fit a 12x142mm axle or a Rohloff Speedhub. It will even run a belt drive. Unusually for a titanium mountain bike frame, it has a 73mm threaded bottom bracket – which I wanted.

The stock model ticked most of the boxes except that the 70.5 degree head angle (HA) was somewhat steep and the 584mm effective top tube (ETT) of the 17in model was too short. I asked Davis Carver if he'd make me a 17.5in frame with a 68 degree HA and 610mm ETT. 'Sure thing,' he said. I also asked for rack eyelets and two sets of bottle mounts. (In retrospect, I wish I'd ask for eyelets for a down-tube mounted mudguard as well.) The premium for bespoke geometry and my frame fittings was \$224 – about £150. Ordering was straightforward. I



emailed details of what I wanted. Davis emailed back a CAD drawing. I asked for some amendments and got a second drawing that I signed off. Then I waited six weeks. There was £304.28 to pay in customs charges when it arrived.

I built up the frame with an On-One carbon fork that I had from a previous rigid mountain bike and parts from my Longitude. Over the autumn and winter, it's been my only off-road bike for everything from grassy cyclocross races to choppy trail centre singletrack and everything in between. I've just bought some lighter wheels, plus a 15x150mm-axle carbon fork with more (56mm total) offset to sharpen the handling and to make it possible to try a 29+ compatible fat-bike suspension fork.

I'm happy with the bike. It's simple, comfortable, and rolls outstandingly well on trails for a rigid bike. It's a little draggy on long, smooth climbs and it can struggle in the deepest mud due to the tyres 'floating' on top. But standard 29er wheels and tyres fit fine with enormous clearances and, since I use 165mm cranks, without nuisance pedal strikes. **Price:** £1443.66 (frame, dropouts, seat clamp, shipping & customs). **From:** carverbikes.com

650B bikes that he waxed lyrical about: 'I built one for a 71-year-old who had fallen off his Trek Madone on a sportive on a cattle grid. He'd become a bit scared of that bike, so I built him a 650 Sport with 32mm tyres. He likes the fatter tyres, which give him a feeling of security. Because he doesn't ride very fast – around 15mph – his average speed is 1km/h faster than it used to be on the Madone. It's what you would predict, given that the rolling resistance of the fatter tyres is lower. My theory is that you've got to be going over 20mph before narrow 700C tyres make any sense. If you're going slower than that, you're better off with a fatter tyre.'

Caren Hartley won her Bespoked award for a rugged cruiser-style bike with a backswept handlebar. Drop-bar bikes are what she mostly makes. 'Road bikes, primarily,' she said. 'There's been a demand for gravel bikes with wider tyres too, like the one I built for the Design Museum – bikes that are sort of contemporary tourers, for bikepacking and so on.'

Phil Taylor also identified this as a growth area. 'Adventure or gravel bikes are very popular,' he said. 'Bikes that can be used on and off road, with disc brakes and either mounts for a rack or bikepacking bags for overnight adventures. Custom builders have led the way in developing these bikes, which the mainstream brands have followed.'

Big manufacturers plan their bike ranges a year or so in advance, whereas the lead time for a bespoke bike is dependent only on the builder's order book. Custom builders can thus turn ideas into metal much faster. And they can do so with a product that has to sell to just one person. So there's room for creativity you don't often see in the mass market.

That's on abundant display in the 'custom' section of the Carver website. You want a full-suspension titanium fat bike with a Lefty fork? You got it. 'We build everything from fat bikes to disc road bikes, and every stop in between,' said Davis Carver. 'With the advent of disc brakes and different wheel sizes/widths, a lot of riders are realising that one bike and three wheelsets equals three bikes. Lately, there has been a lot of interest in Pinion gearbox-equipped bikes.'

Buying bespoke

If framebuilders aren't often in the back of bike shops these days, where are they? On the internet. I found one list of UK framebuilders on the website of Ceeway, who sell bicycle frame tubes and the like to builders – see bit.ly/ctc-framebuilding. The exhibitor list at Bespoked (bespoked.cc) is even more useful. It gives more details. It also tells you which builders' bikes you could inspect and ask questions about if you were to make the trip to the show in April.

Liaising with builders and doing research



is important because you don't see many reviews of handmade bikes. Magazines and websites review bikes that their readers are buying, or are likely to buy, and by definition that's usually the more popular brands. (Cynics might say that framebuilders don't have the advertising budgets of mainstream bike companies either...) With less information to go on, you need to see for yourself or to seek out word-of-mouth recommendations.

Often a framebuilder will develop a following for a certain kind of bike. 'Shand and Sven have excellent reputations for modern, Rohloff-equipped touring bikes,' said Phil Taylor. 'Likewise Saffron, Donhou and Feather for performance road bikes, and Swallow and Mather for mile-munching, versatile audax bikes.'

A framebuilder with a good reputation for the kind of bike you're interested in is a safe bet. There's less of a sense of buying a prototype. Having said that, framebuilders don't have a Henry Ford production line; they will work with you to build the bike you want. If you want something different from what they ordinarily do, ask and listen carefully to what they have to say.

Nowadays there's another option for ordering a bespoke frame: buying online, directly from China. You specify what you want. The company sends you a CAD-drawing to sign off. Weeks later, your frame arrives. Prices are keen, despite customs charges. Walty Titanium (waltytitanium.com) and XACD (xacd.com.cn) are two of the better-known companies offering bespoke titanium frames this way. To read about other cyclists' experiences of this process, visit spanner.org.uk.

● Aesthetics is a part of the appeal of bespoke bikes. Check out these fancy lugs from Phoenix Hotworks (phoenixhotworks.com).

OXFORD BIKE WORKS



Illustrated:
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