

From Land's End to John o'Groats and Beyond

Note: For reference, the route I took is at <http://www.johnchivers.com/lejogskaw/#route>.

In early 2017, a flippant comment made to fellow electric vehicle owners and advocates, James Coates and his girlfriend, Kate, ended up with me deciding to ride from Land's End to John o'Groats on my Zero DSR electric motorbike. Thanks to my Shetland-based elder brother's goading about 'quitting at John o'Groats', I extended the ride to take in Orkney and then to take the overnight ferry to Shetland and ride to the very top of the UK, to Skaw beach.

James had asked if he could accompany me and, thanks to the generosity of my Zero dealership, Streetbike in Halesowen, he had been offered the use of their demo bike for the duration, along with a couple of external chargers (effectively large power packs), which would reduce our charging time by around two thirds.

We decided to fundraise on the back of it: for me, the choice was obvious, given the number of CWAM members involved, I opted for Warwickshire and Solihull Blood Bikes. James, for his part, opted for Tommy's: a pregnancy research charity.

In the event, due to an initial false alarm on the birth of James and Kate's daughter, and having postponed the trip once, I did, as originally planned, undertake it on my own in August 2017, but honouring the charity split, as planned.

I planned the trip based loosely on the Wikipedia entry of a short route, using the main locations as rough guides and found it to be a route that appeared to be quite a pleasant one to ride for the main part.

On the basis of an approximate mainland stretch of 850 miles, and with a bike range of around 100 miles, I looked along the route, trying to find possible places to charge every 85 miles or so, allowing me to break the journey up into ten 85 miles stints: some slightly longer and some slightly shorter.

The bike normally charges using its built-in 1.3 kW charger, plugged into a standard domestic socket and takes around 9 hours. For this trip, with the additional two external chargers I'd borrowed, charging time from empty would be reduced to around 3 hours.

So, to charge on the trip, I just needed to stop at places with two domestic sockets. Alternatively, I'd managed to rig up a lead system which would allow me to charge from a car fast charger (as distinct from a 'rapid' charger). Neither method would be faster than the other, as the limit is the charging capacity of the bike, but the two options allowed me to select from places which had either a dedicated EV charge point or just a couple of sockets. For my overnight stops, I needed just one socket, as there was no hurry to charge.

I arranged all the stops along the route before departing, opting for a combination of locations I'd found through EV charge point maps (B&Bs) and pubs en route, so I knew I

always had somewhere comfortable I could stop. The last thing I wanted was to be stood in a car park for three hours while the bike charged!

Despite becoming a recent father, James had very kindly offered to drive me and the bike down to Land's End in a hire van and then to drive up to collect me from Aberdeen at the end of my trip.

So, on Thursday, 17th August, we headed down to Land's End, to a B&B I'd booked under a mile from Land's End. Once James had headed back home and I'd chatted a while with the B&B owners, I headed down to the Land's End visitor centre, having been advised that if I wanted an official start point photo, it would be better to get it then, as the people manning the sign wouldn't be there in the morning.

I duly turned up and had the photo done with the following day's date, then headed for a small ride up to Sennen Cove and something to eat, before heading back to the B&B.

I was up early the following morning to begin the journey proper and got back to the official start point, which was completely quiet at that time, save a woman taking photos out to sea, who pre-empted my request to take a photo to mark the start of my journey. Her husband had just set off to do the trip on cycle: a fact which made my quest feel easy in comparison!

I was off by 07:45, but pulled over just before some very menacing skies in Penzance to don my waterproofs, just in time for the skies to open up. The first part of the journey from Land's End to Okehampton was on the A30 for the main part, although I did depart from it occasionally to take a more direct line, but ultimately, I didn't want to depart from a direct route just to avoid busier roads.

The key to riding an electric bike (or indeed driving an electric car) over longer distances is power management. Of course, we all know that riding or driving fast in an internal combustion engine (ICE) vehicle consumes more petrol, but let's be realistic: the average rider/driver (outside us CWAMmers, of course!) doesn't give a stuff, simply stopping to fill up when they need to. Whereas power sockets are universally available, at this stage in electric motorbike development, if you're going to be stopped for three hours to fully charge, you want to be in some comfort.

With this in mind, judicious riding of the bike, matching the power output in line with the approximate remaining range according to the bike's estimated range display, based on the last few minutes of riding, or 'guessometer' (a term now universally adopted by EV owners) does allow the rider to ride a greater distance.

In essence, ride at the bike's 100 mph limit and you'd probably get around 50 miles out of it. Ride at 20 mph, and you can do, and people have done, over 200 miles. So, riding a longer distance becomes an exercise in matching the guessometer readout with the distance remaining to the next charge and riding appropriately.

My first charge was at a rather grand, old house, Upcott House, a B&B outside Okehampton, whose owners had converted it using solar PV, heat exchangers, and battery storage from

an energy-muncher into a stunning example of energy efficiency. They were the first to install such a car charge point for EVs in Devon open for public use. So, I used that to charge the bike and spent the time there chatting with the owners and being shown around their eco tech.

The next leg of my journey took me cross country from Okehampton to Winscombe in the Mendips, across some very nice, sweeping roads for the main part, although there were some of Devon's 'blue' and 'brown' signed roads in the mix, with the associated single tracks, high hedges and farm deposits along the road surface, all adding into the riding fun.

The route took me through Crediton, Tiverton, and Taunton, picking up the A38 for much of the latter part of that stretch until I reached the Sidcot Arms, Winscombe: a Brewers Fayre pub, with 35% of battery capacity remaining.

I was back on the road, having had a bite to eat, at 19:50. From Winscombe, I headed along mixed road types and along the section of the M5 where it splits into two different levels for a couple of junctions, then left, navigating the industrial estates to pick up the Severn Bridge into Wales. By this time, the sky was again oppressive, and roads were wet, but the biggest issue from my perspective was that I was being subjected to the tail end of Hurricane Brian, which made crossing the Severn Bridge quite an adventure.

The pathetic nature of the bike's headlight (you'd think they'd put decent LED lighting in an electric bike) was exposed fully along that ordinarily lovely stretch of road, the A466 which runs past Tintern Abbey. I turned left just after the Abbey and headed up a very small, wooded lane, made very atmospheric by the combination of the dark skies, weather and the trees.

Having passed through Monmouth, I headed back onto the A466, then the A49 up to the Leominster area, where I had booked an overnight B&B at a farm, at which I arrived at 22:30. The bike was literally stabled overnight there, plugged in to a standard socket (no nose bag though), and I got a good night's sleep.

Next morning (Saturday), I was up and off early again. I'm not generally one for a big breakfast, much to the relief of B&B owners, who don't have to get up at stupid o'clock to cater for me. I was happy with coffee and cereal and then on my way again just after 07:15.

After negotiating a few early morning single-track lanes, I was back on the A49, which I departed for a jaunt through one of my favourite haunts, Ludlow. Then, just before Shrewsbury, I met up with fellow CWAMmer, old friend, and veteran companion on trips to the European mainland, Chris Thompson, who greeted me with one of his characteristic quips.

"Morning, mate. Almost done!"

We rode on through the centre of Shrewsbury, near deserted at the time, then departed the A49 for a period to go through Wem, then Whitchurch, before crossing from Shropshire into Cheshire.

My first stop of the day was at the very nice and recently refurbished Partridge pub, at Lower Stretton, near Warrington. Chris had a proper breakfast and I had an early lunch/brunch of porridge, then, Chris having wished me luck and headed off, I remained in the pub until I was ready to start the second stint of the day at 13:25.

The second part of the day's ride gave great opportunities for riding practice in built-up areas, as I rode from Warrington through Wigan, Preston, and then finally onto the more pleasant open roads of Lancashire, taking in Lancaster and then Bolton le Sands above Morecambe Bay along the A6.

Joining the A6070 after Carnforth, I crossed into Cumbria and rode up through Burton in Kendal and Milnthorpe, then joined the A65 and headed up to my next stop in Kendal, where I'd arranged to stop at a pub, the Duke of Cumberland. Here, I charged from a couple of sockets from the beer cellar and charged myself with one of their meals.

At just before 19:30, I was off again. I knew the next stint was going to be challenging, as it was nominally a 102 mile run to my stop for the night across the Scottish border in Crawford and would involve a stretch on that long incline into Scotland that is the M6 and M74(M). Fortunately, I had taken that into consideration when planning, and despite the claimed 112.5 mile range on the guessometer when I left Kendal, I knew that this would be far from realistic.

From Kendal, I climbed the A6 around the edge of the Lake District, through Shap and successive villages to Penrith, as the sun started to set. By 20:43, I had arrived in Carlisle, and, with 47% of battery and around 60 miles still to cover, put my contingency plan into operation with a 'mini stop' at one of the car chargers at the Asda in Carlisle.

Having plugged in, I was approached by someone interested in the bike, who spent the full hour I was there charging chatting with me about EVs and eco technology. It transpired he was a chef, but also a local dealer for an infrared heating panel company.

Leaving Carlisle at 21:47, it was time to get on the M6 and the rest of the trip was a true challenge of power management, faced with that incline into Scotland, strong winds, and of course the nature of motorway driving on unlit motorways. I confess that riding at low speeds of at times between 35 and 40 in that environment was not my idea of fun, and, if I were to change one aspect of my plan, it would be to have stayed longer at Carlisle to charge, so that I could have ridden that power-hungry stretch a bit faster.

Nevertheless, at 23:12, I made it to Holmlands B&B in Crawford to a fortunately sympathetic owner. We stowed the bike in the garage and plugged it in to charge, then I was off for a shower and to bed.

Sunday morning was a little more civilised a start time. Having divided the mainland stretch into ten stints, I had loaded the first six stints into the first two days, allowing me to cover the final four mainland legs over two days, with the consequence that I only needed to stop once on the two days' riding in Scotland and therefore had chance to relax and enjoy the ride a little more.

I was off at 09:24 with a poor 83 miles expected range and 83 miles to cover. This was a great illustration of how power management affects bike range and the previous evening's ride had certainly required a lot of power. I knew that the power demands would level off now that I was off the motorway, assuming the roads were kinder, but thought it a good idea to record a video clip to illustrate this.

From Crawford, I was back on some lovely country roads in the Scottish Lowlands: the A73 to Carstairs and then the A706 through Forth. Near Forth, I noted that I had 56 miles to go and 82.2 miles of range left, according to the guessometer, having travelled 27 miles and used an apparent mere 0.8 miles of range.

From Forth, I took the B8084/B8028 through California (no, really) and into Falkirk. The long descent gave the bike plenty of chance to generate energy through its regenerative braking, whereby the braking force of the motor is used to put energy back in the battery. This isn't perhaps as significant as some people appear to expect, but certainly in the case of our electric car, I've found from the logs that up to around 20-25% of our energy used has been generated through regenerative braking, and of course, this eases strain on the brakes.

Despite the recent press reports of the worse environmental impact of EVs through increased brake dust and tyre wear, supposedly based on the notion that EVs are generally heavier, any EV owner will tell you that brake wear is considerably less than in an ICE vehicle. Indeed, you're more likely to get brake squeal through lack of use!

Riding by the System, we know in any case with good forward observation, our braking is less significant than the average rider's tendency to ride quickly up to hazards. One thing that does need to be considered with regenerative braking is that only some EVs show brake lights when the vehicle is braking in this way, so use of the brake light does become an important aspect of giving information to following road users.

Just before Falkirk, I noted that I had travelled 40 miles and the guessometer now reckoned with a range of 84.7 miles, so more than I had started the day with in Crawford!

I rode on through those places loaded with history in the struggle between England and Scotland: from Falkirk, through Bannockburn and then across Stirling Bridge. Following the A9 around Dunblane, I turned off and headed into Crieff, which was hosting the Crieff Highland Games that day, then stopped just north of Crieff at Fendoch Guest House: another stop I had found through an EV charge points map.

The owners, Graham and Nan Waugh couldn't have been more hospitable and plied me with drinks and a bite to eat, refusing any money in the process. Then, at 15:00, I was on my way again.

Almost as soon as I left their house, the landscape changed in the transition from the Lowlands to the Highlands. The next leg of the journey was a road I would recommend to anyone riding in Scotland, who wants to get off the main roads. I took one of General Wade's military roads, built in part to provide employment but also to be able to move

forces speedily across country to any trouble spots, riding past Loch Freuchie, a climb to a magnificent view, followed by a descent to Loch Tay and Kenmore.

Then, I turned past Taymouth Castle and followed on through Tummel Bridge, passing by a couple of hydroelectric stations there and at Trinafour. Further along the road, I joined the A9 briefly, before I left to travel through an area I'd spent a nice childhood holiday, passing Dalwhinnie distillery and then the place we'd spent a few days in the summer of 1983, at Crubenmore.

The last stretch of the day took me from there through Newtonmore, Kingussie, and Aviemore: a very enjoyable stretch of faster B roads, which I rode without any consideration of power management, knowing I had plenty left.

Leaving Aviemore, I had a short distance to cover before I arrived in my destination for the night at Carrbridge. I'd booked a room in a hotel there at a very reasonable price and arrived at the far more decent time of 18:00 with 20% of the battery capacity remaining. At last, I had chance to enjoy an evening without heading straight to bed, and, despite the midges, I did.

Monday morning, I was up and breakfasting at 08:30, and, as Carrbridge hosts of the annual World Porridge Making championship, I felt obliged (and happy) to enjoy a proper Scottish porridge.

Having packed up, I was back on the road at 09:30 to the first blue skies of the trip. Initially, I rode the fur-lined A938, but inevitably, I was back on the A9 after a short time, which I would stay with until my one and only charge stop of the day.

I travelled from Carrbridge to Daviot, then descended to Inverness, with that wonderful view of the Moray Firth stretched out in front. Then, it was on to Duncanston, the Cromarty Bridge, then along the banks of the Cromarty Firth, past Alness and up to the Dornoch Firth.

On the Dornoch Bridge, I stopped for the view and chatted with a couple. It transpired that they were fellow Yorkshire folk who were riding the North Coast 500.

Having taken in the view and enjoyed the chat, I left them to their drinks and headed off again, riding some lovely road up to Loch Fleet and The Mount. Then, continuing to hug the coast, it was on to Golspie, Dunrobin Castle, and to my charge stop of the day in Brora, at the Sutherland Inn.

I was entertained by a couple of local regulars there, Donnie and Billy, who, contrary to the stereotype, refused to let me buy them a round to the point of almost taking offence at any such notion. Despite the owner couple's concern, a nice couple from South Africa, that I had been occupied by these two characters of all people, I had really enjoyed my stop there, happier by far to hear a little about local life and people than to sit on my own.

Just after 15:00, I was back on my way again, with a mere 63 miles to my final destination on the mainland part of my trip. The sky had clouded over a little, but it was still dry and there were patches of blue sky around.

The coastal road from Brora took me through Helmsdale, then through the notorious Berridale Braes: a 13% gradient on each side of a valley, with escape lanes and an area known as a bit of a danger spot. For anyone who has ridden hairpins, it's nothing particularly out of the ordinary, but nevertheless has a history and local reputation, due to its importance in linking Caithness to the rest of Scotland. If the road is closed here, it's a huge diversion for traffic.

Although my Honda CBF 1000 has ridden hundreds of hairpins, this was the first time I had ridden them on the Zero, and I was struck by the torque pulling out of one and how effortlessly the bike coped with the hill. It still stuns me that a seemingly thin belt could get the bike, me, and that luggage up that gradient so effortlessly!

Passing Newport and Dunbeath, the next sign of serious life was Wick, after which I turned right, with only 13 miles to go until John o'Groats and the sky having cleared again. Presently, the road dipped, and I saw the coast stretched out before me and Orkney in the distance.

At 17:02, I ceremoniously touched the John o'Groats signpost. Then, having completed the main leg of the challenge and signed the 'End-to-Ender' book, I headed to nearby Duncansby Head, which is actually further to the north east of John o'Groats, but don't tell anyone!

I had booked accommodation at the nearby Bencorragh House B&B, five miles west of John o'Groats, and arrived there at 18:11, then spent some time spoiling their cats and chatting with the owners and a couple of guests, before retiring to my room.

Tuesday morning, I was up early again to ride the A386 to Thurso and then from there to Scrabster, to catch the ferry to Stromness on Orkney.

I had arranged to meet with Jonathan Porterfield, originally from Leicestershire, but now based in Orkney. Jonathan is an independent specialist dealer in electric cars and has been solely responsible for convincing many Orcadians to switch over to EVs. I had come to know him through the online EV community and James and Kate.

Having disembarked at Stromness at 10:15, I first visited some Orkney sites, it being my first visit there. I made a swift visit to Unstan chambered cairn, a 5000-year-old, Neolithic round chambered cairn which had been constructed as a communal burial place. From there, I visited what is supposedly the oldest henge in the British Isles, the Standing Stones of Stenness and then the ring of Brodgar, before I headed into Orkney's capital, Lerwick, to meet up with Jonathan.

He had largely organised some things for us to do that afternoon, the first of which was a trip to BBC Radio Orkney for an interview. We then went to a local garage, where some of Jonathan's mechanic friends had expressed an interest in seeing the bike, and then onto meet some of the people involved in one of Orkney's cutting-edge renewables projects, Surf'n'Turf, which is pioneering the use of clean sourced hydrogen for use initially for energy

storage in dock, with a longer-term view of using it on ships as a power source through hydrogen fuel cells.

Orkney produces more electricity through renewable sources than it can use, and there is no cable back to the mainland, allowing it to export to the grid that way, so they are using hydrogen as a means to store and transport this excess electricity. Naturally, further adoption of electric vehicles across Orkney would also help to use up some of this excess and zero carbon energy too.

From there, we headed up to one of these renewables projects, Hammars Hill wind farm, which provides an ongoing source of income for local investors and provides 20 GWh of electricity for Orkney over the course of a year.

Having stopped off back at Jonathan's house to charge the bike, making use of his own car's fast charge point, he invited me to a meeting in Kirkwall concerning an innovative project he was involved with.

After the meeting, we headed off for a meal, then, returning back to his house to collect my bike, I headed to the ferry terminal at Kirkwall to catch the overnight ferry to Lerwick in Shetland.

I awoke the following morning in time to see us pass the Bressay lighthouse on the approach to Lerwick. At 07:43, I disembarked and rode north on familiar roads.

This was my fourth visit to Shetland, my elder brother Paul and family having moved here in the mid noughties. We were even on the verge of moving there ourselves in 2008, but a combination of the financial crash and timing with schools prevented that.

I headed directly up to the top of Shetland's Mainland, near the Sullom Voe oil terminal, to Toft, from where the first of two ferry crossings took me from Shetland Mainland to Yell, Shetland's second biggest island, then across Yell to the ferry across to Unst, Shetland's third biggest island and the most northerly in the UK.

In beautiful weather, I approached Skaw beach, arriving there at 10:21. Reaching my ultimate destination, I was suddenly struck that this journey will be commonplace in future, and it will inevitably become easier as battery capacity increases, prices decrease, and the uptake of EVs continues to increase, and I was suddenly proud of this relatively recently realised technology, and felt fortunate that I had been the first to undertake this iconic trip.

Having reached my destination, I started back in the only direction I could go: south. I visited the nearby Pure Energy Centre on Unst, which has also been pioneering hydrogen research and did in fact have the first road-licensed hydrogen-powered car in the UK, in addition to installing and servicing a range of renewable technologies nationally and internationally. I enjoyed a chat with Ross Gazey there, while the bike recharged from the centre's own wind turbines.

Then, I headed back down to the Shetland Mainland and to my brother Paul and family's house around ten miles south of Lerwick, where I spent a nice evening in their company,

and the next day, which was less kind weather-wise, but nevertheless gave me the chance to talk to a local newspaper and to CWAM's own Andy Spencer's son, Matt, who conducted a Skype interview with me on behalf of ITN Channel 5 News.

Having met up with Paul during his lunch break and spent a bit of time in Lerwick, I headed next to BBC Radio Shetland for an interview and then to the Lerwick ferry terminal, where I boarded the overnight ferry back from Lerwick to Aberdeen.

The following morning, I rode from Aberdeen to Forfar to meet up with James at the McDonald's there. It seemed pointless that he drive all the way up to Aberdeen, when I could charge the bike up enough to meet him in Forfar. He then had the unenviable task of driving us back on a Bank Holiday Friday, which he nevertheless managed very well, avoiding the worst of the hold-ups on the M6.

We were back in Nuneaton, the bike unloaded from the van at 18:30.

You can read about the trip in further detail (yes, there's more!) and my thoughts on the trip at <http://www.johnchivers.com/lejogskaw/story>.

I am continuing to raise funds on the back of the trip until 26th February, 2018. See <https://mydonate.bt.com/fundraisers/leskaw>