



Wheelrights

the Swansea Bay cycle campaign group



Newsletter No. 61 Autumn 2022

www.wheelrights.org.uk

A useful precedent

The picture is looking down Mayals Road. The blue surfacing makes it clear that cyclists have priority across this junction. This sets a useful precedent which hopefully can be repeated as other roads in Swansea are adapted for active travel.

A key point is that it is on the uphill side of a long hill. Being on the left side is important as slow moving cyclists using it do not hold up traffic and it provides a safe off-road alternative for them.



There is a strong case on roads like this for off-road provision to be on the left uphill side. Downhill cyclists who use the road are not a problem as they travel at close to normal traffic speeds; and the carriageway is usually safer. Left side downhill shared paths on long hills can be hazardous due to cyclists going too fast down them. They endanger other users and there is a risk at driveway crossings and junctions which road use avoids. This is not a problem on uphill paths as cyclists go slowly up them. If they are wide enough ($\geq 2.0\text{m}$) their use by the occasional downhill cyclist who lacks the confidence to cycle on the road should be acceptable. Views on this are needed. So let's have yours.

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Copy deadline

Copy for the next issue should be sent to me, David Naylor, by mid November. (Email: david@davidjnaylor.plus.com).

This issue

Once again there's variety: an article on how cycling for women can be a breeze; second instalment about the physics of cycling; the Cross Party Active Travel Group's verdict on the ActiveTravel Act; two articles on cycling to school; a bit about my Continental cycle tour; and a plea for support for BikeAbility.

And finally, I would love to include a letters section, but you are all 'shrinking violets'!

David Naylor

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Cycling is a Breeze

Back in 2011, British Cycling alongside Sport England, set up a programme to inspire ordinary women to discover or rediscover the joy of riding a bike. It is called the Breeze programme so named to capture the fun and freedom of cycling. Three times as many men than women, cycle regularly in the UK and the objective was to redress the balance.

Breeze, is a female only cycling programme aimed at helping women feel confident and comfortable on a ride. Led by women, known as trained Breeze Champions, they organise free local bike rides throughout the country which provide an environment in which ladies can gain confidence in their cycling abilities, whilst having a fun time.

There are approximately 1,200 Breeze Champions throughout the country and since inception the Breeze programme has got over 320,000 ladies on their bikes. What a wonderful achievement.



Having cycled for many years, I felt it was a good opportunity to share my love of cycling by becoming a Breeze Champion. I wanted other ladies to experience what cycling has given me. It's fun, it's improved my fitness, it's sociable, regularly meeting new people, plenty of coffee and cake stops, all while exploring the beautiful area in which we live.

Run by British Cycling, I attended a one day course in Cardiff where the emphasis is not only on how to ride safely in a group, but making rides sociable, welcoming and enjoyable as possible. New riders, in particular, are made to feel welcome as it can be a very daunting prospect joining a bike ride for the first time. Whilst a full description of the ride is published online beforehand, it can still be off putting as to whether it is a suitable ride, what will the other riders be like and will I be able to keep up?

Ride leaders try and post a variety of rides, from short flat rides to longer hillier rides. It's very rewarding to see ladies who start off cycling shorter rides and then progress to more challenging rides. Particularly so, as many of these ladies may never have ventured into the cycling world without the Breeze programme. Some have even progressed to more challenging riding such as sportives and long distant event rides.

One barrier to cycling is the busy roads. Fortunately, in Swansea and the surrounding area, we are well blessed with miles and miles of traffic free paths and there are also many quiet country lanes giving the opportunity to explore further afield. If a ride sometimes includes a short stretch on a busier road which many women would never have considered cycling on before, they feel a lot more comfortable cycling on it in the security of a group.

The Breeze programme has been a huge success and continues to go from strength to strength. Look up your nearest Breeze ride on Letsride.co.uk. It may change your life.

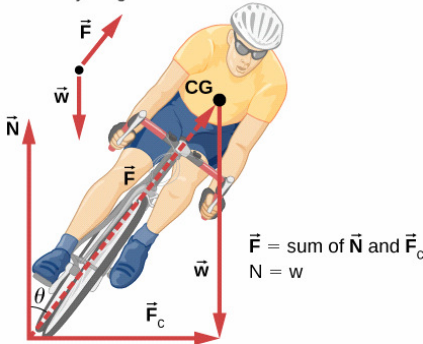
Dawn Aplin

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The Stability of Bicycles (part 2)

And the answer is: friction! (If you don't know what the question was, see my article in Newsletter No 60.) Yes, the cyclist exerts a force on the pedal which causes the wheel to turn but if there is no friction between the tyre and the road surface, the wheel will simply spin. If there is sufficient friction, in accordance with Newton's third law of motion, the road exerts an equal and opposite force on the tyre causing the bicycle to move forward.

Free-body diagram



What other forces act on the bicycle and the rider? There is gravity, always pointing down (towards the centre of the Earth) and the reaction from the ground pointing up. With the cyclist moving forward in a straight line these two forces cancel out and as long as the same level of effort is maintained, the cyclist will accelerate in accordance with Newton's second law ($F=ma$) until drag forces (mainly wind resistance) become equal to the driving force. From this point on, with zero net force acting on the cyclist, motion continues at constant speed in a straight line.

Going around corners makes bicycle dynamics much more interesting (and complex!). As you can see from the diagram, the centre of gravity (CG) of a cyclist making a turn is no longer above the base of the bicycle. This is where the so-called centrifugal force comes into play, 'so-called' because it is a 'fictitious' or 'pseudo' force; it simply does not exist. What does exist is a property of matter known as inertia: matter remains in the same state of motion unless acted on by a force (Newton's first law.) For an object to undergo circular motion a 'centripetal' force is needed to stop it flying off at a tangent (literally.) When you swing a rock tied to a rope, your hand provides this centripetal force which is transmitted to the rock through the rope. The cyclist, lacking a rope to hold him on a curved path, must lean over whereupon the sideways frictional force F_c provides the necessary centripetal force. The weight (W) and ground reaction (N) are equal and opposite, and the resultant force acting on the cyclist, F , passes through the ground contact point and CG.

There is a question, however, about how it is possible to initiate a 'lean' from a straight riding position. Apparently one of the first people to have addressed this question was Wilbur Wright who, together with his brother and co-inventor of the aeroplane, owned a bicycle shop. His intuitive insight into complex dynamical problems is apparent from the following quote: "I have asked dozens of bicycle riders how they turn to the left. I have never found a single person who stated all the facts correctly when first asked. They almost invariably said that to turn to the left, they turned the handlebar to the left and as a result made a turn to the left. But on further questioning them, some would agree that they first turned the handlebar a little to the right, and then as the machine inclined to the left they turned the handlebar to the left, and as a result made the circle inclining inwardly." This has been demonstrated to be true and much rigorous mathematical analysis has been carried out which is beyond the scope of this article.

However, no theory can capture the joy of riding a bike; especially a child's first unassisted ride, pedalling away with a mixture of apprehension, exhilaration and pride!

Review of the 2013 (Wales) Active Travel Act

by the Cross Party Active Travel Group.

This review is comprehensive, comprising a Forward by Hugh Irranca-Jones who chairs the CPATG, an Executive Summary, seven chapters and three short appendices, 58 pages in all. There is only space here to highlight key points.

The message from it is clear: the Active Travel Act is not being implemented; at least not adequately. A few LA's are doing what they should (especially Cardiff!); most are not. Much of the review consists of recommendations on how to put this right; 51 in all. While for the most part the Act is fit for purpose some changes are recommended.

The first chapter on 'Delivery' is the longest and covers the essence of what needs to be done. It notes that people are motivated by convenience not principle; that there is a disjunction between local and central government with delivery local and funding central; that delivery involves modal shift which requires space to be taken from cars. This requires political will and assistance from sources of expertise. Other key points in this chapter:

Mapping and training. Production of ATNMs (AT Network Maps) is resource heavy, so the review cycle should be increased from three to five years. The maps should show destinations and desire lines as well as routes. LAs should be required to complement them with plans to deliver safe routes to schools; explain how routes are integrated; etc. More training of the workforce is needed. Also active travel should feature in the training of planners and involve the transport, civil engineering and planning professions.

Funding. Capital funding for the whole of Wales has been increased from £12m in 2016 to £70m in 2022. This increase is commended. What is needed however is more revenue funding to cover maintenance, signing and cycle training. The bidding process needs to be streamlined with more time for implementation.

Modal shift. Recommendations are made to support alternatives to the car. These include the introduction of default 20 mph zones, a review of timing at crossings, what to do about pavement parking and charges for road use.

The remaining chapters are: 2: 'Governance'; 3: 'Behaviour Change'; 4: 'Equalities'; 5: 'Active Travel to School'; 6: 'Data and Monitoring'; 7: 'Legislative Change'. These chapters comprise various recommendations on how to implement active travel.

The formation of a new National Delivery Plan (NDP) and an Active Travel Delivery Board (TDB) are recommended under Governance. The NDP would set delivery targets for LAs and Transport for Wales (TfL), and TDB coordinate implementation. TfL would play a key role, covering technical matters. Active travel would be embedded in planning procedures. Chapter 3 looks at 'soft' and 'hard' campaigning measures to promote and deliver active travel. It also covers what does not work, namely watering things down to please drivers. A specialist delivery unit should be set up within TfL to promote behaviour change. Measures to support active travel for various excluded groups: the disabled; the poor and those discriminated against due to ethnicity or age, are recommended in chapter 4. Cycle training and the removal of barriers (physical and other) are also recommended. Chapter 5 recommends the incorporation of active travel in the school curriculum. Then in the last two chapters, obtaining data on how people travel (Wales being the only UK country that fails to do this) and some changes to the Active Travel Act (Wales being the first UK country to legislate for active travel) are recommended .

David Naylor

Active Journeys in Swansea Schools

The Sustrans Cymru Active Journeys (AJ) programme, funded by the Welsh Government, works with schools across Wales to create a culture that makes it easier for children to walk, wheel, scoot or cycle (active travel).



Active travel isn't just important for the fight against climate change and reducing air pollution, it's also great for children's physical health and wellbeing. There is also evidence that it improves behaviour and attainment in class. "A 2012 study of 20,000 children in Denmark found that those who cycle or walk to school demonstrate a measurable increase in concentration that lasts for up to four hours"

A survey of pupils in our new AJ schools in Wales showed 73% of pupils wanted to travel actively, but only 44% were doing so. This rose this year to 78% and 54% respectively.

In 2021-22, 12 Swansea schools (previously eight) were engaged at different stages of the three year programme. They all work towards the [Active Travel School Award](#) accreditation, progressing from bronze to gold. The AJ programme launches with a whole school assembly, followed by a day of scooter skills to enthuse pupils. They learn three ways of stopping, scooter maintenance, pavement etiquette and crossing roads safely.

Dr Bike is an activity where pupils and staff bring in bikes to be safety checked. Pupils often assist by pumping up tyres, and oiling cables and chains. Where necessary, cables and brake blocks are replaced, adjustments made, and if something isn't repairable, the bike gets a prescription – hence the term Dr Bike.

Playground cycle skills sessions are delivered with a range of age groups to complement Council-delivered year 6 National Standards Cycle training, while bike maintenance and puncture repairs also feature.

All schools do a safer routes lesson (years 5 & 6) which ends in an audit of routes to school by the pupils, not only identifying barriers to active travel but also proposing solutions. A report on their findings is then forwarded to Swansea Council as evidence for future Active Travel Fund bids.

<https://bigwalkandwheel.org.uk/> is the link to the UK's largest active travel competition in which AJ schools take part. This year, Terrace Road Primary came first and Penyrheol Primary came fifth out of 628 UK schools. In all the 15 participating Swansea schools clocked up 19,499 active journeys over the two weeks.

We are currently looking to recruit new schools for the next academic year. Visit <https://www.sustrans.org.uk/sign-up-to-active-journeys-programme/> to see how schools can apply.

Roger Dutton

Sustrans Cymru Active Journeys Officer for South Central Wales

Bikes for Tycroes Primary

We have been extremely lucky at Tycroes Primary School this year! We had around 20 bikes delivered due to the help of our local Assembly member, Lee Waters. Lee is the Deputy Minister for Climate Change in the Senedd and obviously has a passion for carbon free travel.



He has been working closely with a volunteer scheme from Newport called *Free Bikes 4 Kids* run by Mike Jones. He asks people to donate used bikes across Wales and then he repairs any faults and gives them to children and communities in need. Lee mentioned to us on his visit that “Every child deserves the opportunity to learn to ride a bike and it’s wonderful that, thanks to the fantastic scheme operated by Mike and *Free Bikes 4 Kids*, the children have had these bikes completely free of charge”.

As a result of this amazing donation, we set up a *Wheelie Wednesday* club where children could ride the bikes around the playground to gain confidence and to have some fun with their friends. There were a range of bike sizes so lots of children from across the age groups could take part, of whom many don’t get an opportunity to ride a bike at home.

After a few weeks we offered parents the chance to take a bike home for any child in the school who didn’t have access to one at home. The parents were extremely grateful and we have a brilliant response. It has been great to see children cycling back and forth to school especially when they wouldn’t have otherwise had the chance.

As a school we are extremely grateful to Mr Waters for arranging for the bikes to be delivered via the *Free Bikes 4 Kids* scheme. We have had bike shelters in school for many years but they have often stood empty. Since this initiative we have seen a big increase in the number of pupils cycling to school and becoming more active as a result!

If you would like to see more of Mike Jones’ work, you can follow him on Twitter: [@PuffaJones](https://twitter.com/PuffaJones).



Matthew Stonham
Deputy Head, Tycroes Primary

A Continental cycle tour

It had been my habit before the Pandemic to go on an annual cycle tour on the Continent. I typically took an overnight ferry from Harwich or Hull to Holland and then bike and train to Germany. My last trip was in 2019, plans for the following two years being frustrated by the Pandemic. But this year it went ahead and in June I joined the tour company *Mercurio* (See our website's 'Links' page.) for a week's tour in the *Romantische Strasse* area of N. Bavaria. Getting there and back added another week.

Five days of cycling, ferry and train got me from Swansea to Dinkelsbühl in South Germany where I joined the tour. In this period I enjoyed some lovely cycling but had problems with the trains. They were crowded and I missed connections due to delays; my journey from Cologne to Bavaria took ten hours instead of five. And on my way home I missed my overnight ferry due to a train-line power failure and got stuck in Holland for two days.

Cycle touring in northern Europe is great: there are cycle routes everywhere, some are paths alongside but separate from busy roads, others are on quiet rural roads where you encounter the occasional car or tractor. Unlike in Britain motor scooters use the cycle paths. I was equipped with maps which show cycle routes as red or green lines. Finding them was often difficult as they are not thus coloured on the ground! Part of the fun of touring – at least when alone – is asking locals the way. The main routes, which mostly follow rivers, are usually well signed; finding the others can be a challenge.



On my way to join the group at Dinkelsbühl I followed a lovely route along the Wöhrnitz River. It was hot – over 30°C – but then I came across this fountain.

Thirst quenched and me cooled with cap (yes, my white cycling cap) filled with water and donned. Then a little later I came across this “Ice coffee” sign (left). Blissfully refreshed, I completed my ride to Dinkelsbühl where I met up with the group that evening.



There were six other guests, the leader Andre (who owns *Mercurio* and leads all the tours) and Sönne, a young man who drove the van and prepared the picnics we enjoyed on all but one day. Unusually on a tour like this the other six all came from the same area, in Yorkshire, and knew each other. I was treated as one of them and shared their kitty for extras not included in the tour price. A consequence of which was that it was a rather boozy holiday: with 30°C afternoon temperatures a *grosses Bier* was needed and then the local wines had to be sampled!

We spent two nights in Rothenburg (pictured). On the other days we passed through several such historic towns and villages. The day's ride was usually about 30 miles.

Will this be my last tour in Germany? I hope not!

David Naylor

BikeAbility needs funds

BikeAbility (Wales) has been badly hit by a fall off in numbers during the Pandemic. They now have new staff and need funds to cover their costs and develop their services. To achieve this they have launched a crowd funding campaign, the link to which is:

<https://www.crowdfunder.co.uk/p/james-myles-thomas-side-by-side-with-bikeability>.

(You will need to copy and paste this into your browser.)

BikeAbility provide training and specialist bikes and trikes for the disabled. They need funds both to pay their staff and pay for their specialist equipment which they hope to extend to include e-bikes and e-trikes.

What's new

Gower Access Path (GAP)

Work is due to start on this on 3 October. At last! The path will be on the south side of the B4436 across Clyne Common and will extend the shared use path (SUP) at the top of Mayals Road to the Glebe, which leads to Bishopston Comprehensive. The 3.0m wide SUP will be separated from the road by a 1.5m wide berm on which it is expected flowers will be planted. A new type of surfacing, claimed to be better for horse riders, is to be used. It is similar to tarmac but contains rubber from chopped up waste tyres.

Pontarddulais

A SUP has been constructed on the NW side of the B4296 between the Pentre Bridge and the A48 in Pontarddulais. South of this the continuation of the Lliw Valley path from Station Road (near Grovesend) to the Pentre Bridge is (at the time of writing) nearly complete.

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Forthcoming events

(This information and more is provided on the 'Events' page of www.wheelrights.org.uk .)

Wheelrights public meeting.

7.00pm on 12 October, in the Environment Centre, John Grimshaw CBE, *Wheelrights* Patron and founder of Sustrans will give a talk. Title to be decided.

Wheelrights Routes Group meetings.

These are usually at 10.00am monthly and alternate between the Environment Centre and Ripples Café. The next is scheduled for 10 September.

Cappuccino Rides.

Details on the Events page. These will continue into the autumn until we decide it's getting too wet and cold.

Wheelrights AGM

Date to be decided. Check Events page.