

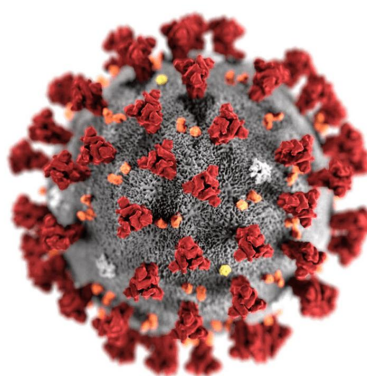
Miscellaneous

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The Church of England and Covid19

July 25, 2020



I have been much exercised in recent days over the latest [Church of England guidelines for living with Covid19](#), and in particular the [wearing of masks by congregation and ministers](#), even during services of Holy Communion. My basic irritation lies in the fact that this goes beyond government guidelines for a range of venues that are comparable to churches – restaurants, bars, museum etc.. On the positive side it has been the source of some amusement in our household when considering how the new mask wearing advice matches with the requirements to sanitize or wash hands before and after removing masks, and the prescriptive way of removing masks without touching them or the face. In the context of receiving Holy Communion this probably required 3 or 4 hands per person. As far as I am aware most Anglicans have two at the most. Personally I am disappointed that no reference is made to removing with dignity a face mask elastic from an ear already occupied by glasses and a hearing aid.

But there are other, deeper issues. The first of these concerns the appreciation of risk. In my current context, in Lichfield in Staffordshire, the number of Covid19 positive cases in the last week given by [Middle Super Output Area \(MSOA\) in England](#) is less than 3, and as 2 by [Coronavirus \(Covid-19\) in the UK](#). If we take a figure of 5 to allow for asymptomatic cases, and given a population of 100,000 for Lichfield district, this gives a probability of any one person having the virus of 5×10^{-5} . Now let us suppose that the chance of meeting any one person in Lichfield on any one day during normal activities is (say) 1 in a 100 (which is probably a bit on the high side), this gives the probability of meeting someone with the virus of 5×10^{-7} . Now suppose that one of those 5 infected folk attend a church service, if any one congregation member spends at least 15 minutes in the presence of each of the others, even without social distancing the risk of being infected is thus around 5×10^{-5} . With 2m social distancing and recommended sanitization / washing hands etc. this figure falls by a factor of 100 to 5×10^{-7} again. To give this some context, around 100 people are killed or seriously injured in the UK on

any one day. Given a population of 70 million, this gives a daily probability of being killed or seriously injured in a road accident of 1.4×10^{-6} . Now whilst these approximations are very crude, it seems that, in the current context in Lichfield, including church services, the probability of catching Covid19 on any one day is probably no worse than the probability of being killed or seriously injured in a road accident.

Now I am not arguing for any relaxation of current procedures imposed by the government. These have necessarily to be rather broad brush and simple to understand. Also, whilst many areas of the country are in a similar position to Lichfield, there are places with much higher rates of infection, so the current procedures are in my view sensible and should be followed. But for the church to go beyond these procedures seems wholly unnecessary. To be consistent in terms of an appreciation of the risk, the church should be advising all its members to give up driving completely. I don't see that happening any time soon.

Within the risk analysis community there is a basic assumption in the UK that we should aim at risks that are ALARP – as low as reasonably possible, where “reasonably” is understood to be such that the basic function of the procedure that is being analysed can be achieved. In some large organisations (and I am thinking here specifically of Network Rail with whom I have had numerous arguments) the approach by individuals within the organization to setting risk levels is better described as CMOA (Covering my own ____). I will let the reader complete the phrase. I fear I see the same approach in those involved in setting the Church of England guidelines, with no indication that the true nature of the risk in many parts of the country is appreciated. In the recent communications, the recommendations have gone beyond “reasonable” and threaten to undermine the purpose and integrity of the activity – in this case the giving and receiving of Holy Communion.

This brings me to some further considerations on the nature of the Communion service itself. Before making these arguments, it must be emphasized that I am no theologian, as I guess is only too apparent from what I have written already. So when I enter into discussions of eucharistic theology, it is very much as a non-expert.

As things stand, only the presiding minister takes both bread and wine, with the laity restricted to the bread. The rationale for this is that sharing a cup of wine might be a source of infection risk, which I can appreciate, although I do not find at all satisfactory that laity should be denied the cup. A way around this would be to put the wine into individual cups, as do many other churches. The Church of England has set its face against this, on the basis that sharing should be of “one bread and one cup”. This has been severely criticized by, for example, [Andrew Goddard](#). The only comment I would make, based on some perceptive observations by my wife, is that, in Anglican circles we most certainly do not have “one bread” in a physical sense – with the people's wafers coming from one production batch and the priest's wafers from another (and any gluten free wafers from a third). I would contend that the oneness of the bread and cup comes from their consecration within a eucharistic community, rather than in

any physical sense. Communion in both kinds could be offered, with no additional risk, by the simple use of individual cups, if such an approach were to be taken.

The same reasoning can be applied to what might be termed "virtual communion", the practice of allowing the consecration of bread and wine in people's homes via a priest's consecration over an internet platform. Again, the Church of England has set its face against this, based on a rather narrow concept of what is required for consecration – the physical proximity of a priest. There is a danger here of at least underestimating the role of an omnipresent God rather than the priest in the consecration. Whilst I would be reluctant to engage in such practices for a completely random audience, it seems for me that if a congregation who have formed the bonds of fellowship between them over the years, come together virtually around their tablets and laptops, then the consecration of the bread and wine would take place within the body of Christ, the gathered Eucharistic community. I can see no objection to this. But then, I am not a theologian. All I can say is that it would certainly eliminate the risk of Covid19 infection.

Journeys by rail and coach

September 28, 2020



[Stagecoach 500 at Dumfries Station](#)

I recently travelled from my home in Lichfield to Gatehouse of Fleet in Galloway. The journey involved three trains (Lichfield to Crewe, Crewe to Carlisle, and Carlisle to Dumfries) and one bus journey (Stagecoach 500 from Dumfries to Gatehouse). The journey in both directions was, apart from some minor late running, pretty much without incident, and all the connections were made comfortably. The trains were comfortable and, as required for the moment, suitably socially distanced. The bus legs were similarly comfortable, with rather plush coaches and helpful drivers. That being said, the journey reinforced thoughts I often have when making journeys of this sort, that the weak links are the interchange between train and bus, and also the physical infrastructure of the bus pick up and set down points. I will consider each of these in turn with regard to my recent journey, but the same or similar points could be made for other journeys of this type.

The problem of train / bus interchange begins well before the journey itself, when journeys are being planned and fares considered. Finding the bus timetable is easy enough, even with current Covid related restrictions, but nonetheless required searching different web sites for the information, and making some sort of assessment of suitable connection times. No information at all was available on the fares, and I had to enquire of the bus driver on the outward leg as to whether returns were available or not. They were, at a very reasonable price, but it would have been good to know beforehand. On the journey itself, having alighted at the quite delightful Dumfries station, we found the rather flimsy bus shelters outside the station, effectively in the middle of a pedestrian thoroughfare. The weather, for both the outward and

return journeys, was fine so this mattered little. No information at all was provided on how the bus was running, when it was due etc. But it came on time and all was well.

All the above could so easily be improved – by integrating train and bus timetables and fares; by extending a canopy from the station to serve as a bus waiting area and incorporating the bus area more completely into the station complex, so that toilets, the café etc. are more easily accessible to bus passengers; and developing the passenger information system so that details of both trains and buses were included.

At Gatehouse the facilities are rudimentary – simple bus shelters on the pavement with little by way of information, either on timetables or real time. The latter was not helped by recent Covid related service changes however. Once again this could so easily have been remedied – there is space available for a dedicated bus pick up / drop off point, ideally with more substantial passenger facilities that could act as a transport focus for the town; and the technology is available for real time bus running information to be made available.

Obviously the situation with regard to train / bus interchange and to local bus waiting facilities will be unique to any situation, but it does seem to me that there are two basic areas of improvement as follows.

- Information – the integration of time, price and ticket information and purchase for at least a selection of important bus / coach routes with the train booking systems; and real time passenger information at interchanges and bus stops.
- Infrastructure – at interchange points, the full physical integration of bus waiting facilities into the train station facilities; and the provision of more substantial local bus facilities that are ideally not part of a pedestrian throughfare.

But the question that then arises is who should be responsible for such facilities – it is clear that at the moment these fall into gaps between the train infrastructure and service operators; the bus operators; local authorities and community groups. Much has been said recently of the need for a “guiding mind” to oversee the rail network. I would suggest that this guiding mind, should it ever achieve consciousness, should have a wider role in the overall transport network, and particular in the field of modal interchange. The post-Covid recovery of the public transport network would benefit greatly from this.

Leisure travel by rail after the pandemic

October 1, 2020

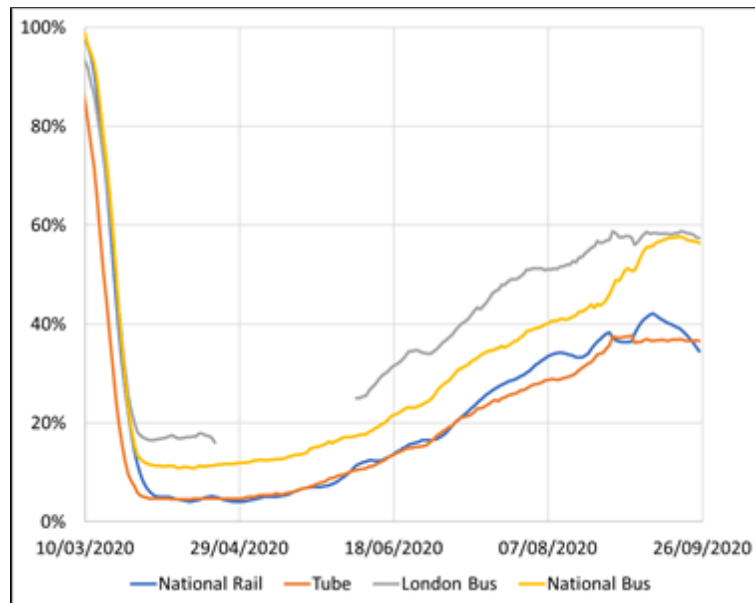


Figure 1 Public transport use in the UK

It is becoming clear that the effect of the Covid-19 pandemic on public transport in the UK is very significant, and is resulting in a major reduction in rail and bus use that looks as if it will persist at least in the short and medium term and also possibly into the long term future. Figure 1, compiled from [DfT statistics](#), shows the seven-day average use of rail and bus over the course of the pandemic, up to 29/9/2020. It can be seen that rail and tube use seems to be plateauing at around 40% of the pre-pandemic values, and bus use at around 60%. The same trend can be seen in other cities around Europe – see figure 2 from the [Financial Times](#), which shows general public transport use. London does however seem to have a greater reduction than other capital cities.

The trends shown on figures 1 and 2 do however mask considerable geographical and service type variations. There is evidence that the use of public transport in larger cities has fallen more sharply than in smaller conurbations, and also that travel patterns are changing. Network Rail Chairman Peter Hendy made the following comment at a [recent online conference](#)

“It is clear that people’s methodology of working has changed. Many jobs can’t be done from home, but there are lots of people who can work from home and have learned something they didn’t know before and are learning to live in a different way. Leisure travel has returned quicker than work travel. One of the scenarios that we might want to have in our heads is that we might be going back to a situation like the 1950s, when maximum traffic on the railway was on peak summer Saturdays and not in what we now regard as normal peak hours.”

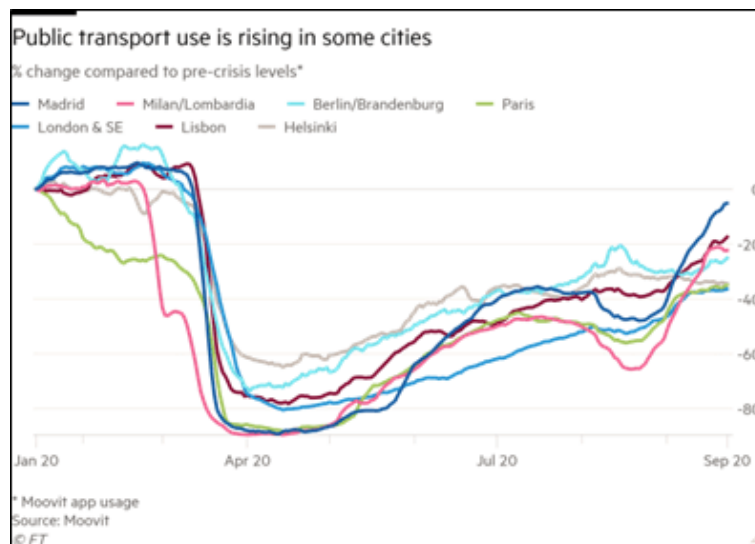


Figure 2 Public transport use in major European cities

My personal experience would tend to confirm this – I, and others in my family, have recently travelled on quite heavily loaded services with passengers heading for leisure destinations in the north of England. This trend is also clear in the data from the excellent [Centre for Cities](#) website for Birmingham and Bournemouth, shown in figures 3 and 4 below. These show a variety of metrics that indicate how these places are recovering. It is clear that activity in Birmingham, a major commuter hub, remains well below pre-pandemic values, whilst activity in Bournemouth, at least in part a leisure resort, has in general increased.

In this post I want to consider briefly how the rail network might take into account this leisure market. In pre-nationalisation days and the early days of BR, this market was catered for by excursion traffic from the major centres of population to a range of coastal resorts. In retrospect this involved a very inefficient use of rolling stock, with the carriages that were used for these excursions often having no other use other than at summer weekends. It also required extensive siding space at the resorts themselves, as the trains often waited there for a significant time before returning. After the demise of such traffic, the strategy (if one can use that word) seems to have been to provide an essentially local service on the routes to resorts, with connections to the main line, and to simply accept overcrowding on high days and holidays. By its very nature such a strategy was self-limiting in terms of passenger numbers – the experience of trying to crowd onto a two-coach multiple unit with a family and luggage is not one that is willingly repeated if there is another way to travel.

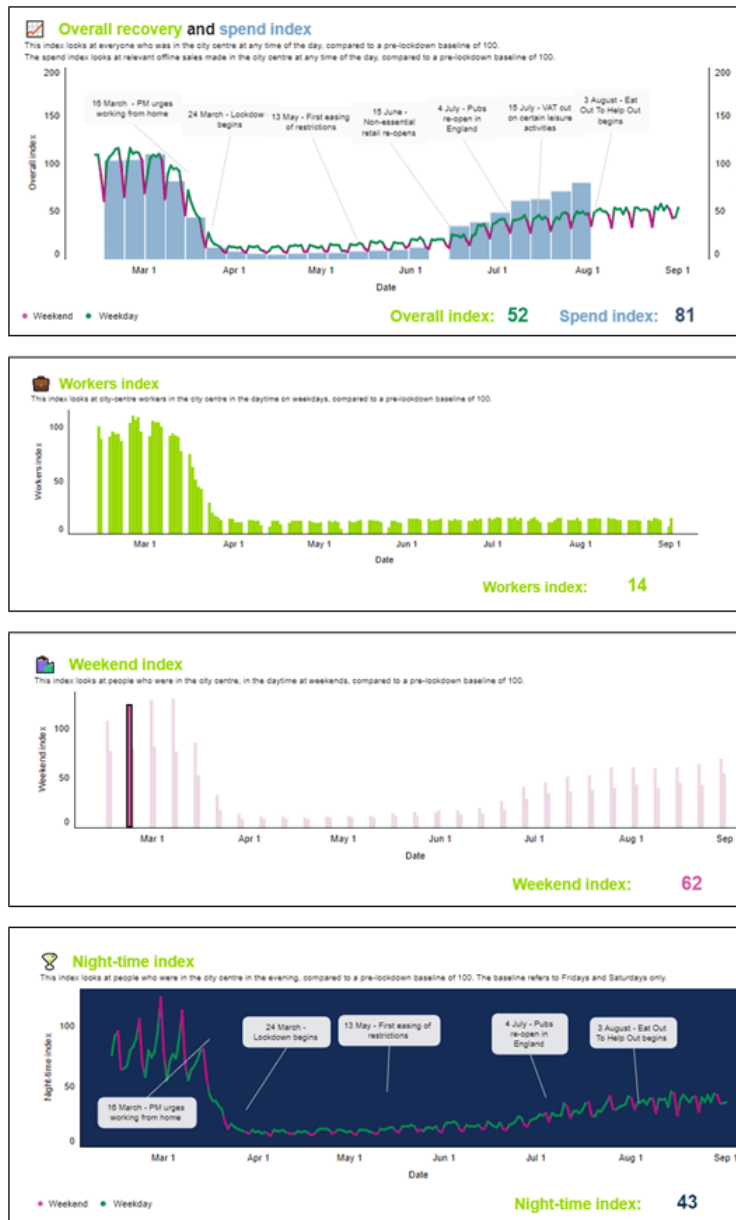


Figure 3 Centre for Cities data for Birmingham

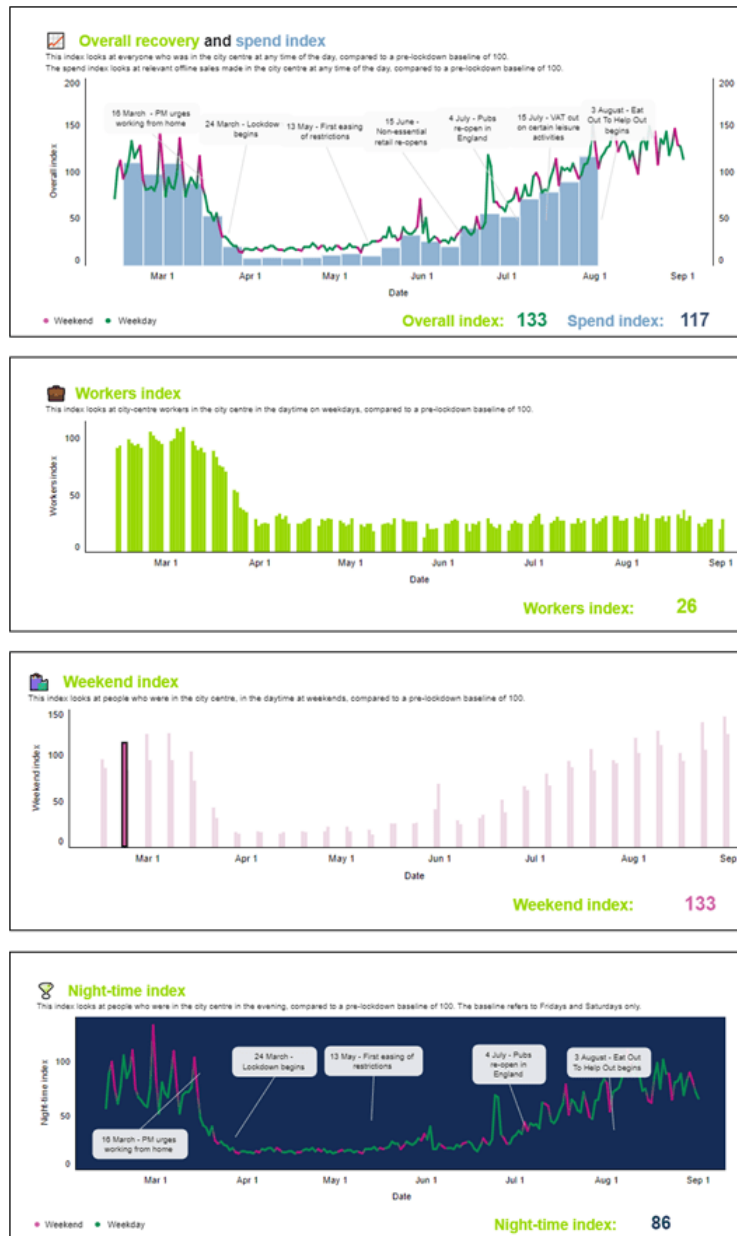


Figure 4 Centre for Cities data for Bournemouth

So is there a way in which such traffic can be catered for in a more passenger friendly way? I would suggest there is, but it requires significant changes to the structure of the industry to make it effective. Firstly, it seems to me that there are a number of basic passenger requirements.

- Passengers wish to go from their point of departure to their destination without changing trains – particularly those travelling with family and luggage.
- There should be significant space for luggage, so that aisles and vestibules are not blocked.
- There should be no overcrowding.

On a basic level these points suggest that excursion traffic and local traffic should be kept separate, with the former running directly from departure to destination. With regard to the first bullet point, considering the Birmingham / Bournemouth route as an example, trains should pick up at a small number of points in the West Midlands conurbation (say Wolverhampton, Sandwell and Dudley, Birmingham New Street and Coventry) and run non-stop to Poole and Bournemouth. The normal intermediate stops of Banbury, Oxford and Reading (amongst others), delightful as these places are, are simply of no interest to leisure travellers. The second point suggest that luggage facilities should be provided, perhaps in a separate coach with luggage tagged, loaded and unloaded by station staff. And the third point suggest that such trains should have compulsory reservations and those without reservations not allowed to board.

How could such an operation be achieved, making efficient use of rolling stock? I would suggest that there is already sufficient rolling stock available, particularly with the increasing use of relatively high speed, hybrid multiple units that are not restricted by the extent of electrification. However, a national approach needs to be taken, such that some rolling stock of this type is used for local, regional and commuter services for much of the year, is transferred to excursion traffic during the summer when the local and regional demand is lowest. This requires a national approach to stock utilisation that cuts across TOC / Operating Unit boundaries, and also a similar integrated approach to timetabling and service provision. One could thus envisage for such services route 9 or 10 coach hybrid multiple units, that would normally work on local and regional services, operating as excursion stock in the summer, both on weekdays and at weekends. Luggage facilities could be provided in one coach that has fold down seating, which is a perfectly viable concept. Passengers would deposit and collect their luggage at stations, which would require a suitable luggage tracking system and appropriate staffing. Reservations would need to be made before hand and systems put in place at stations for allowing only those with such reservations to access the platform as the train arrives.

The above is a suggestion for only one type of leisure traffic – the medium to long distance excursion market. There are many other types of leisure traffic that need to be catered for and a variety of methods need to be developed. The important point is that such traffic cuts across the neat geographic and organisational boundaries of the current system and require a national approach to stock utilisation, timetabling, station organisation etc. The current organisation of the network, with the multiple internal boundaries and barriers between regions and operating units, would simply not allow such services to be developed. Perhaps a nationwide “Leisure Travel” operating unit needs to be considered? Something for the still slumbering “Guiding mind” to think about?

A brief look at the incidence of Covid-19 in UK Universities

October 17, 2020

Alarm has been expressed by many commentators at the prevalence of Covid-19 in UK Universities and on the face of it, the figures do seem to be alarming. For example, the [UniCovid UK](#) website that attempts to track the spread of Covid in Universities indicates that, as at October 17th 2020, since the start of term there have been 1650 cases at the University of Manchester and 1522 at the University of Northumbria. This data comes from a variety of sources where it is reported in different ways and needs to be treated with caution, but nonetheless gives a broad indication of the current situation. However these raw figures do not give a real indication of the situation since they do not take into account the size of the institution or the length of time since the start of term, which differs from place to place. To look at this in a little more detail I have carried out the following simple analysis using the UniCovid UK data at October 17th 2020. I have taken the number of reported cases since the start of term at each institution and divided them by the factor (*total student population x days since the start of term / 14*). This gives a rough approximation of the proportion of students who might currently be expected to have Covid-19, making the assumption that the illness lasts for 14 days. I am very aware of the other implicit assumptions involved in this calculation (the assumption of constant infection rate, the neglect of the different demographic profiles of different universities, different rates of testing and so on), but at least it gives a crude normalization of the data. On this basis, the 30 Universities with the highest percentages of students currently with Covid-19 is shown in the table below.

	% infected		% infected
University of York	5.11	Hartpury University	0.77
Newcastle University	3.47	University of Birmingham	0.73
University of Durham	3.42	Manchester Metropolitan	0.64
University of Northumbria	2.88	University of Aberdeen	0.62
University of Nottingham	2.39	University of Salford	0.61
University of Manchester	1.91	University of Bath	0.59
Liverpool Institute	1.79	Oxford Brookes	0.59
University of Sheffield	1.47	University of Leicester	0.54
University of Bristol	1.37	Edge Hill University	0.54
Sheffield Hallam University	1.07	Cardiff University	0.53
University of Leeds	1.06	Keele University	0.52
University of Exeter	1.05	University of Warwick	0.44
Loughborough University	1.00	York St John University	0.43
University of Liverpool	0.92	University of Bradford	0.41
University of Lancaster	0.82	De Montfort University	0.37

Approximate % of students infected (October 17th 2020)

Now the UniCovid UK web site gives the prevalence of the virus amongst the student age population as between 0.24 and 0.52%. Most of the Universities in the above table lie above the upper bound value, but many not by a great amount (and here the assumptions in the analysis need to be kept in mind). Only twelve exceed a value of greater than 1% of the students having the virus. Whilst for some of these top twelve the situation is clearly very serious, with the proportion of those infected many times the expected levels, the numbers suggest that the issues are localized - and indeed mainly in areas where there are high rates of infection in the wider community.

Engineers, roads and ethical standards

December 30, 2020



Silvertown Tunnel Scheme

It is now established beyond all doubt that the unrestrained growth in road vehicle traffic is bringing many undesirable effects. Annually around 1750 pedestrians are killed by cars in the UK, and 25000 seriously injured. The poor air quality that results from gaseous and particulate emissions from roads and vehicles results in significant adverse effects on the health of those who live in urban areas, children in particular. High levels of traffic can be both unattractive and dangerous for other road users such as pedestrians and cyclists and can discourage these active modes of transport. Again, this can lead to adverse health effects, seen particularly in the increase in childhood obesity. Large areas of land are given over to sterile car parks that could be more profitably used for other activities. The effects on communities and urban environments is also significant and there is clear evidence that restricting car use can increase the vitality and liveability of such areas and lead to real social and health benefits for the poorest in society. To these should be added the fact that the road sector is the major cause of greenhouse gas emissions in the developed world, and that road vehicles use precious energy resources in an unsustainable way. All these effects are well known and proven to high levels of reliability, and fully appreciated by most Transportation Engineers and Planners.

And yet..... Major road improvements are still carried out and new roads built, which inevitably results in further induced growth in traffic, magnifying the issues set out above. Induced traffic growth is of course often conveniently ignored in scheme appraisal. New housing developments are built, with major areas given up to parking and no provision for public or active transport. Low Traffic Neighbourhoods are now a political issue within the culture wars narrative and are more often removed than implemented.

My community, that of professional engineers, see these things and in the main recognize the folly of them. We regret them but we shrug our shoulders and carry on. In the end, we say, we have to provide what clients want, and we design and build road scheme after road scheme, housing estate after housing estate, knowing all the time that these will only result in more health problems, more congestion, more accidents and deaths and a degraded environment. The time has come when I would suggest we, as engineers, need to look very seriously at ourselves and our actions.

I am a Fellow of a number of professional institutions. Of these the two most relevant to the issues addressed here are the Institution of Civil Engineers, and the Chartered Institution of Highways and Transportation. The [ICE Rules of Professional Conduct](#) include the following clauses

3. All members shall have full regard for the public interest, particularly in relation to matters of health and safety, and in relation to the well-being of future generations.

4. All members shall show due regard for the environment and for the sustainable management of natural resources.

The [CIHT Code of conduct](#) contains something similar.

Members of the Institution must give due weight to all relevant law, facts and best practice guidance, and the wider public interest. They must:

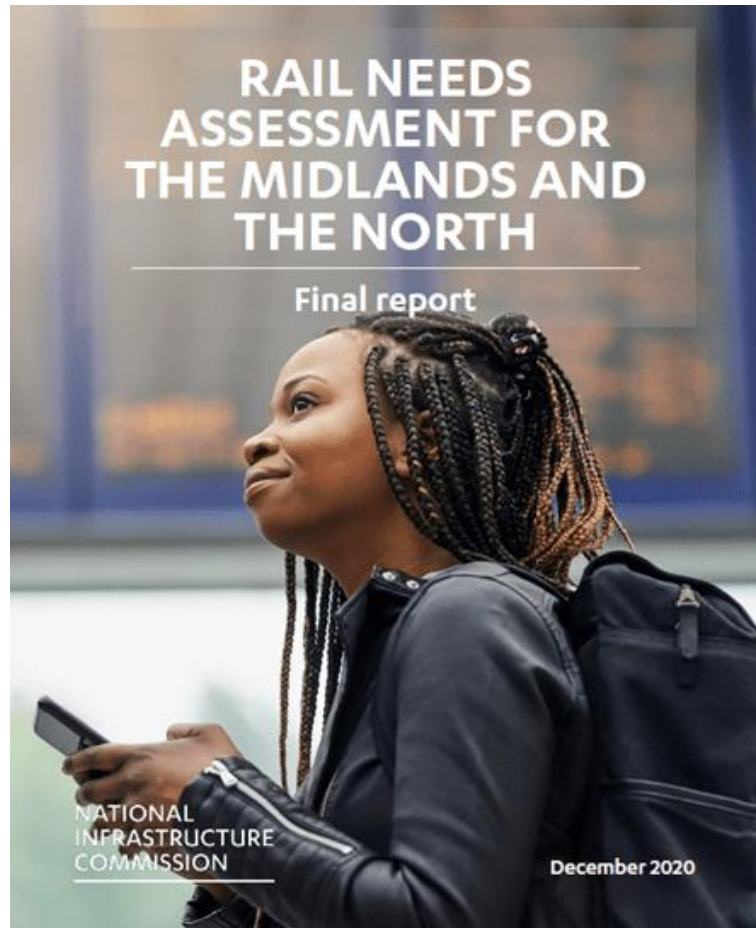
- *minimise and justify any adverse effect on society or on the natural environment for their own and succeeding generations;*
- *take due account of the limited availability of natural and human resources;*
- *hold paramount the health, welfare and safety of others;*

It seems to me that there is at least an arguable case that by knowingly being involved in road building developments which will lead to adverse effects for existing and future generations, and will consume limited natural resources in an uncontrolled way, professional engineers are in breach of their own institutional codes of conduct that bind them. Further this action could, in principle, lead to formal complaints made about the involvement of individuals. Indeed the CIHT code of conduct lays a duty of complaint on its Members and Fellows to “*report any violation of this Code by a member to CIHT*”.

Without the involvement of engineers very many fewer environmentally, medically and socially damaging schemes would get off the ground and none would be designed and built. I would suggest that we are approaching a point where individuals and firms, and indeed the entire profession will need to make a choice – to comply with our own ethical codes and take them seriously or to ignore them. It is not a question that will be able to be avoided much longer.

The NIC report on “Rail needs assessment for the Midlands and the North” – common sense or betrayal?

December 31, 2020



Preamble

The National Infrastructure Commission report of December 2020 “[Rail needs assessment for the Midlands and the North](#)” has caused something of a stir in the rail industry. The NIC was tasked to look at how the proposals for HS2 and the Northern Powerhouse Rail could best be integrated. It considered two ranges of options – one that prioritised regional links in the North and Midlands, and one that prioritised long distance links. All options integrated phase 1 and phase 2a of HS2 from London to Birmingham and Manchester, but only the long-distance option included the eastern arm of the original Y shaped network to the East Midlands and Leeds. On the basis of a wide range of indicators, including cost and deliverability, the report concluded that the prioritisation of regional links was to be preferred – cue loud denunciations, accusation of scrapping HS2 abandoning the Midlands and North and so on.

My first reaction was astonishment that the proposals should have come as a surprise to rail industry commentators – it has been evident to me at least for a few months that some post Covid financial realism was necessary to rein in all the potential major railway projects on the

table. Also the eminently sensible and rational [Greengauge 21 has recently made very similar proposals](#), urging that the eastern arm of HS2 be built in a number of phases and repurposed to provide links between regional centres. However, my initial reaction was to share the view of those in the industry, that the conclusions were to be regretted, although perhaps with a greater sense of fatalism than most that this was going to happen anyway.

But then I read the report. I found it to be well laid out, with a convincing set of underlying assumptions and methodology. I have to say I have a great deal of sympathy with its conclusions, which should lose me a few followers on Twitter if nothing else. The basic points that came across to me were that the construction of all the rail schemes currently under discussion is unaffordable, and that the number of passengers travelling between regional centres is significantly greater than those travelling between these centres and London. Post-covid this discrepancy is likely to grow. In this brief post, I want to set out what I see as the benefits of the prioritisation of regional links over long-distance links.

The proposals

The proposals are summarised in figure 1 below from the NIC report. The report firstly sets out a baseline set of improvements that are already underway or committed to – the western leg of HS2, main line speed upgrades (ECML, MML, Manchester-Sheffield); TransPennine upgrade and Midlands Railhub upgrades. Two sets of proposals are provided for each prioritisation – one at the baseline cost plus 25% and one at the baseline cost + 50%. In the main I will consider the baseline + 50% options. The long-distance prioritisation is based on the Y shaped HS2 network, together with a partly new line between Leeds and Manchester, with upgrades to the ECML to serve the north east and Scotland and further upgrades of track in the Midlands and Lancashire. The regional prioritisation assume the western leg of HS2 to Birmingham and Manchester will be completed, but with the eastern leg replaced by high-speed lines from Birmingham to the East Midlands and from Leeds to Liverpool, with major upgrades to the lines from the new East Midlands line to Nottingham, Derby, Sheffield and Leeds; from Sheffield to Manchester; and from Leeds to the North East. Oddly for the regional prioritisation, the baseline + 25% case also sees a major ECML upgrade from Leeds to London, whereas this does not figure in the baseline + 50% option.

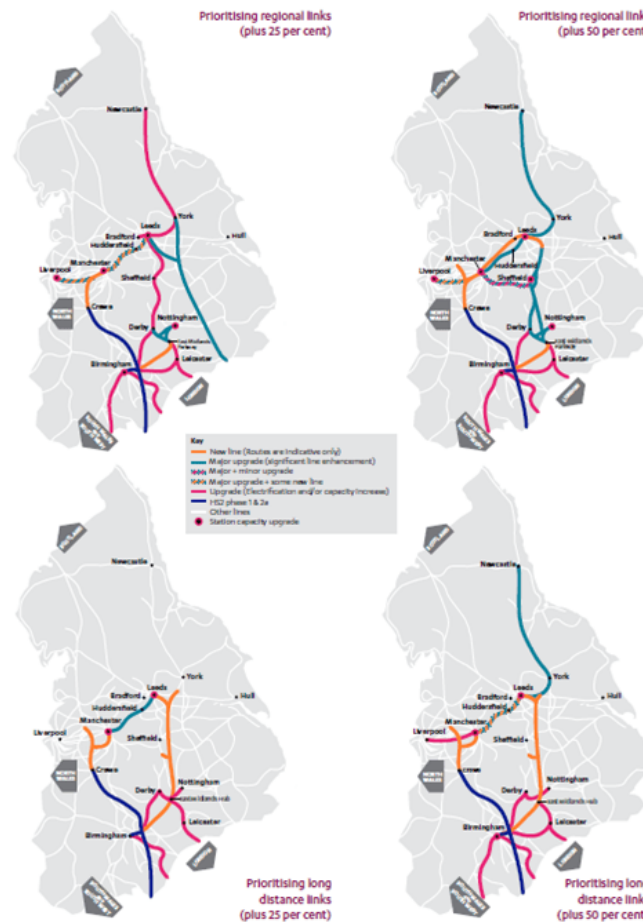


Figure 1

The overall benefits from the proposals are set out in table 1 below for the +50% options – taken directly from the NIC report. It can be seen that prioritising regional links delivers the greatest benefit. Journey time and service level details are given in table 2.

	Economic growth and competitiveness		Sustainability and quality of life	
	Improvements to connectivity from faster journeys	Improvements to productivity in city centres	Benefits from connecting people to city services	Environmental impact (combined partial valuation of loss of natural capital and monetised lifecycle carbon impacts)
Regional links	11 to 19%	£41 to £71bn	£16 to £38 bn	–£1 to –£0.8 bn
Long distance links	11 to 12%	£38 to £58 bn	£13 to £31 bn	–£1 to –£0.7 bn

Table 1 – Analysis of baseline +50% scenarios

	Trains per hour			Journey time (mins)		
	Current	Regional links + 50%	Long distance links + 50%	Current	Regional links + 50%	Long distance links + 50%
Birmingham - Manchester	2	4	4	90	40	40
Birmingham - Leeds	1	3	3	120	60	49
Leeds - Manchester	5	10	8	50	26	31
Birmingham - Nottingham	2	4	5 to 6	72	27	53
Manchester - Liverpool	4	8	4	36	26	36
Leeds - Newcastle	3	5	5	88	62	62
Derby - Sheffield	5	5	3	35	32	35
Bradford - Leeds	Up to 8	Up to 14	Up to 8	19	13	19
Leeds - Sheffield	3	7	3	42	24	42
Sheffield - Manchester	2	4	3	55	41	55
Sheffield - London	2	3	3	132	93	87
Birmingham - London	8	10	10	73	48	48
Leeds - London	2	3 to 4	4	119	93	81
Manchester - London	3	4 to 5	4 to 5	119	73	73
Newcastle - London	2	3	4	193	177	140
Nottingham - London	2	4	6	109	58	89

Table 2 – Journey times for baseline + 50% scenarios

The benefits of regional prioritisation

I will admit that my reasons for liking the regional proposals are very parochial and reflect the fact that I live in the Midlands between Birmingham, Derby and Nottingham. I suspect my views might be different should I live in Leeds. That being said, the major benefits from my perspective are as follows.

- Links between Birmingham and the East Midlands (and Nottingham in particular) are much better than those offered by the current HS2 proposals, which would need to be routed through the proposed East Midlands Hub at Toton (27 minutes as opposed to 53 minutes).
- Nottingham gains a direct link to the high-speed line facilitating faster overall journey times to London. (58 as opposed to 89 minutes).
- The need for the East Midlands Hub at Toton is removed. The proposal for a hub there has always been in my view a mistake of potential historical significance. Such a station would suck the life out of the centres of Nottingham and Derby into a new urban centre at Toton which, because of its proximity to the M1 and A52, would also very likely be a major generator of road traffic in the area.
- Services within and across the East Midlands, Yorkshire and Lancashire would be greatly enhanced – see table 2.

In addition, a link from the line from Derby to Birmingham to HS2 at Tamworth, would allow high-speed running most of the way from London to Derby. It is also of interest to note that the route of the proposed high-speed line to Nottingham appears to be further south than the current HS2 proposal and would allow a new station to be built close to East Midlands Airport. This would thus allow for a high-speed connection with Birmingham Airport, which would allow greater operational flexibility. for both airports.

The drawbacks of regional prioritisation

The main selling points of the current HS2 scheme are decreased journey times and the release of capacity on the classic network for other services, both passenger and freight. With regard to the former, table 2 shows that for the regional-links option journey times are mostly decreased from the long-distance links option between centres other than London. London to Sheffield, Leeds and Newcastle take 6, 12 and 37 minutes longer for the former than for the latter. The first two I would suggest are hardly significant. If the ECML upgrade is included in the regional-links option, the Newcastle / London time takes just 3 minutes longer than the long-distance option – as noted above this was, oddly, included in the +25% regional links option but not the +50% option.

The issue of capacity has also been addressed by the report. Whilst there can be seen to be significant benefits to the number of inter-regional services that it is possible to schedule, the report admits that the regional-links approach does little to release freight paths on the ECML and in the North and Midlands. This will not please the rail freight sector of course and must be seen as a weakness of the regional-links proposal.

One other point. The report only briefly mentions Scottish links. Those that are proposed in the HS2 plans for the WCML and the western arm of HS2 will not of course be affected. Those that are proposed for the eastern arm and the ECML will be affected to the same level as the Newcastle services – and the effects can be minimised by an ECML upgrade. This being said, I strongly suspect by the time these upgrades are delivered, we will have an independent Scotland and a united Ireland, with a transport focus on an east west corridor with high speed ferries from the continent to Edinburgh connecting with cross Scotland lines to high speed ferries to Ireland. Links to London and England in general will be of less concern, and may well involve customs and passport checks.

Final thoughts

As noted above, I find the report and its conclusions plausible and convincing. It is not ideal of course, particularly with regard to freight capacity, but it does seem to me to be realistic, and at least from my Midlands perspective, offers significant benefits. I strongly suspect however that that won't be everyone's view.

A (half hearted) defence of Autonomous Vehicles and other transport innovations

January 1, 2021

Preamble

Over recent years it has almost become the norm amongst practicing railway engineers to pour scorn on any new transport proposal that emerges – for example Hyperloop, the autonomous metro system, being developed for Cambridgeshire, autonomous vehicles in general, vehicle platoons, bus rapid transit schemes and so on. Now whilst some new concepts deserve all the opprobrium that they receive and are often ideas looking for an application rather than the more sensible opposite, I want to argue in this post, that there is some merit in some of these concepts that deserves further consideration, particular as components of a rail based public transport network.

Before proceeding however, I need to be a little more explicit about those concepts that I do not believe are viable. These fall within two categories – very high- speed tube transport, and autonomous vehicles in mixed traffic situations. The former, exemplified by the monstrosity that is Hyperloop, faces very major technical difficulties. From my own aerodynamic perspective these include the difficulties of maintaining a controlled vacuum along very long tubes, and the highly complex unsteady forces that exists as flow speeds around some parts of the passenger capsule exceed the speed of sound i.e. locally supersonic flow with the Mach number >1 . With regard to the latter, I have seen no published information that these effects have been properly considered. Formidable as these technical issues are, they are of small concern in terms of the major practical issues of capacity (multiple tubes would be required to give the same capacity as high-speed trains); and safety (how these tubes would be evacuated in terms of an accident or fire). In these terms the concept is flawed.

Much of the hype concerning autonomous vehicles has been around the possibility of them providing door to door service with no human involvement in driving. I used to be of the view that this was a possible, if very long term, aim. I no longer think that that is the case, primarily for reasons of liability and safety. If there is an accident (as there will be) who is to blame – the passenger, the owner of the vehicle; the manufacturer; the software designer etc.? Who would wish to accept responsibility for injuries and fatalities? I believe that this consideration alone will cause the development of high levels of autonomy in private vehicles to stall – again when designers and engineers are faced with practical realities. I fear that autonomous vehicles are in the main “toys for the tech boys”. And they are boys – look at any AV website and count the relative number of males and females.

Having thus been dismissive of these two areas, let us proceed to think about those novel transport concepts that might have an application.

What are the viable concepts?

The two specific areas where I believe there might be possibilities of large-scale usage are in the field of tracked autonomy and platoons for public transport use.

Whilst I have doubts concerning the use autonomous vehicles on public highways, their use on restricted systems (let us call them tracks) seems to me less problematic. Such systems already exist in busways and bus metro concepts. Whilst many good railway folk would shout loudly that these would be better replaced by light railways or trams, these systems do have the distinct advantage in some areas of going where passengers wish to go rather than to some remote railway station – Cambridge is the classic example of this where the busway from St Ives allows buses to originate at a range of departure points in north Cambridgeshire, use the busway for the majority of the journey, and then end their journey in the city close to their place of work. Similar autonomous systems could equally be conceived, where the vehicle operate in a driverless mode whilst using the tracked system, with reduced staffing costs and redirection of staffing effort towards passenger care and revenue collection. If autonomous vehicles are restricted in this way, then the guidance system could be very much simpler than those currently proposed, with either short range infrastructure mounted wireless systems every few hundred yards or embedded in the tracked pavement.

The other novel area that has potential for significant use is the concept of platooning, particularly when combined with the idea of tracked autonomy. Autonomous tracked systems can in principle easily be configured to operate as platoons with the headway between vehicles along the platoon being controlled by the leading vehicle. Whilst close platoon running will reduce aerodynamic drag and lead to reduced fuel use, the major advantage would be scalability, in that the capacity of such systems could be increased easily by adding extra vehicles in platoon, without a corresponding increase in staffing resource required.

Autonomous Platoon Transport (APT)

These thoughts lead me to propose a new hybrid concept, which I will refer to as Autonomous Platoon Transport (APT), largely because I rather like the acronym and its associations. APT would have the following components.

- Self-powered vehicles (almost certainly electric, but I would be open to hydrogen power if only to further irritate some of my rail readers) that have the ability to operate as ordinary vehicles on public roads, or as autonomous vehicles on reserved track. I would envisage a typical vehicle capacity to be around 30 to 40.
- A simple paved road, single carriageway track (with passing places) with suitable guidance sensors either at trackside or embedded within the pavement – this would be much cheaper and easier to construct than a light railway or tramway.

- These would operate as driven vehicles away from the reserved track, and as autonomous vehicles, either individually or in platoons, on the reserved track.
- In principle vehicles could be either passenger or freight, although the latter might make significant demands upon pavement design. The operation of freight APTs would be of a different nature to those for passengers, and I won't consider them further in this post.

I make no claims that such a concept would replace existing public transport systems, but I will argue in what follows that there are some circumstances where it could complement such systems.

Possible passenger applications

Conventional rail and tram systems have obvious advantages for long distance travel and for travel within major conurbations and meet the journey time and capacity requirements well. The specific areas where APT systems might have a role is where there is large variation of demand either geographically (with many small trip origins) or temporally (with large seasonal variations), or where there are major capital cost constraints that mitigate against the use of conventional rail.

First consider geographical constraints. The type situation here is that of Cambridge and its regions – and indeed the APT system bears a strong resemblance to the proposed Cambridge Autonomous Metro system, although with the use of driver-controlled vehicles at its outer limbs and autonomous platoon running in the central region. Here there is a large, dispersed commuter demand around the city that cannot be met economically by conventional systems but could potentially be met by the cheaper infrastructure required for APT operation.

Cambridge is a special case in that the historic nature of the centre requires the hub of the system to be underground, but there are many other towns and cities of a similar size and with similar characteristics, where the central routes, where platoon operation would be in place, would be at surface level.

Typical temporally constrained routes would be rail routes with generally low local usage, but high usage in the summer months – such as coastal branch lines, where overcrowding, often to very unpleasant levels, can occur. The advantage of an APT system would be that it would be easily scalable in terms of capacity without the need for an increase in staffing resource. Whilst the base service might be operated by one APT vehicle, with a driver or passenger manager, this would be supplemented in peak times by other vehicles in platoon – perhaps diverted from those towns and cities with geographical constraints but where demand falls during the summer months and a reduced service is all that is required. This has implications concerning the nature of the infrastructure – either such lines need to be converted to operate in this mode, with paved instead of rail formations, or a new track needs to be constructed along the route, or a hybrid paved / track formation needs to be developed. I suspect the latter would prove to be a challenge, but could allow rail usage when appropriate, although new types of control and safety system would be required. This will bring accusations that I am a

closet supporter of converting railways to roads. But no, I am not funded by the TPA (or anyone else come to that) – I am simply interested in providing the most appropriate services for customers that gets them to their destination in reasonable comfort and security. (Interestingly note the reversal in order of acronyms from APT to TPA – a device commonly used in Satanic circles I understand).

The third use of such a system might be in the re-use of old railway lines where rail re-instatement is simply not possible because of major track obstructions / loss of infrastructure. As an example, we might consider the Penrith – Keswick – Workington route in Cumbria. Here an APT system could be used along the existing trackway where this is still in place, with on road / driver sections where major infrastructure no longer exists – primarily in this case at the start and end of the route. Local demand would be small, but the much larger seasonal demand could be met by again scaling the number of vehicles and using platoon running for most of the route.

Finally, the concept could be applied to longer routes where there are both geographical and temporal constraints. A typical case here might be the Cambrian Coast line, where demand is highly seasonal. There are also geographical constraints in the dispersed nature of the communities it serves, and the lack of connectivity to surrounding areas. Thus for example one could envisage the base demand could be met by APT vehicles in short platoons, but joining and leaving the platoons at different places to more directly serve surrounding areas – for example at Harlech to serve the town and connect to Blaenau Ffestiniog, or at Porthmadoc, to again serve the town and to connect to Caernarfon. Such a scheme would rely on a hybrid track form, in order that through trains could operate to Birmingham and that the large summer demand could be met. Again there would be design and operational challenges.

Final thoughts

I suspect many will disagree with some or all of what I have written in this post – hopefully in a civil fashion. And of course all I have written is provisional and might not survive translation into a practical reality. All I would hope is that it encourages discussion of the use of novel transport systems, and how they might complement a modern transport network, rather than simply dismissing them.

Covid-19 death rates – an international comparison

June 30, 2021

Preamble

One of the things that has become clear during the pandemic is the widespread public misunderstanding of statistics. Nowhere is this clearer than in the attempts to compare the UK performance in the pandemic with that of other countries. Many on social media attempted comparisons with countries of very different social structure (such as those in East Asia), or with very different levels of connectivity (such as New Zealand and Australia) – effectively trying to compare apples with oranges. Comparisons were also made using daily statistics for case numbers and deaths on specific days, completely ignoring day to day statistical variability, the place of the country in the pandemic cycle and indeed the variability in population size. Very often comparisons of this kind were made on Twitter etc. for overtly political reasons and to attack or support the government and were very selective both in their content and timing – government critics were at their most vociferous when infection rates were increasing and strangely quiet when they were decreasing, and the opposite was true for government supporters. All these comments served to do was to illustrate the ignorance and prejudice of the commentator.

In this post, I want to address the same question – how did the UK cope with the pandemic in comparison to similar countries – but to do so in a slightly more rigorous way. It will become clear I am no epidemiologist, but hopefully the argument will be based on a rather more firmly based methodology than in the past. To do so, I will use one statistical measure only – that of deaths due to Covid-19, which seems to me the statistic that is most likely to be recorded accurately. I will not use case numbers as the variations in testing regime between countries means that any such comparisons are unreliable from the beginning. Further, I will only make comparisons with a subset of countries in Western Europe, essentially extending as far east as Poland and Hungary, but not including countries in the Scandinavian or Balkan peninsulas, 18 such countries in all. These are all broadly similar in terms of culture and society. An argument can be made that the comparison should be restricted further to just that small number of countries with populations similar to the UK – France, Germany, Italy, Spain and Poland – and indeed we will use this subset to some degree in what follows.

Nature of the analysis

The weekly death rates [from March 2020 to June 2021 for the UK are shown in figure 1 below from the WHO web site](#). The curves for all the other countries considered are broadly similar, but the precise shapes and timings of the curves depend crucially upon the lockdown measures that were imposed by different countries, upon the spread of the new variants through the countries (in particular the so-called Kent or alpha variant) and the effectiveness and rapidity of the vaccination programmes.

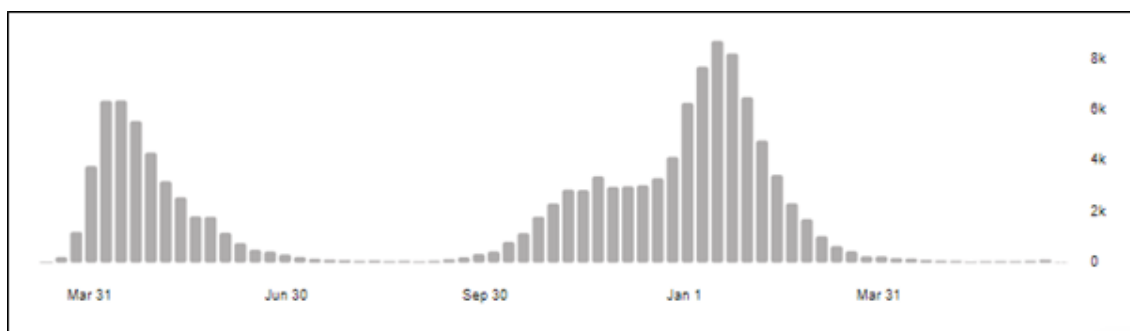


Figure 1 United Kingdom weekly death rates throughout waves 1 and 2

In the analysis we use [WHO data for deaths](#) and data from [Wikipedia](#) for country populations. The cumulative death figures at 30th June 2020 and 30th June 2021 are used and are shown in Table 1. The first wave of the pandemic was over by the first date, and the second wave well on the way to being over by the second, at least in terms of deaths. The death rates up to June 30th 2020 and between July 1st 2020 and June 30th 2021 have been calculated from the data and are expressed in what has become the conventional statistic of deaths per 100,000 population.

Country	Population (m)	Deaths 1/7/20	Deaths 1/7/21	Rate in first wave	Rate in second wave
Germany	83	8985	90819	10.8	98.6
France	67.1	29760	110094	44.4	119.7
UK	66.7	40394	128103	60.6	131.5
Italy	60.4	34767	127500	57.6	153.5
Spain	46.9	29738	80789	63.4	108.9
Poland	37.8	1463	75055	3.9	194.7
Holland	17.2	6086	17741	35.4	67.8
Belgium	11.5	9628	25168	83.7	135.1
Czechia	10.7	349	30298	3.3	279.9
Portugal	10.3	1576	17086	15.3	150.6
Hungary	9.8	595	29906	6.1	299.1
Austria	8.6	705	10477	8.2	113.6
Switzerland	8.5	1726	10289	20.3	100.7
Denmark	5.8	605	2533	10.4	33.2
Slovakia	5.5	28	12510	0.5	226.9
Slovenia	5.5	114	4749	2.1	84.3
Ireland	4.9	1736	4989	35.4	66.4
Croatia	4.1	107	8295	2.6	199.7
Luxemburg	0.61	110	818	18.0	116.1

Table 1 Death rates per 100,000 for first and second waves

(At the time of writing – June 30th 2021- the delta variant continues to increase case rates in the UK, in effect a third wave, but deaths remain at a very low level. It is likely that this wave will

spread across Europe in the next few months, but hopefully because of the vaccination efforts, serious illnesses and deaths in those countries too will remain at a low level.)

The first wave

The distinction between the first and second waves of the pandemic is important. For the first wave up to 30th June 2020, it can be seen from Table 1 that some countries were affected significantly whilst others hardly at all. The death rate per 100,000 in the UK of 60.6 was amongst the highest in the countries studied. The reasons for this variation are complex, and can be expected to include the degree of initial seeding of the countries from areas where Covid-19 was already endemic, the age profile of the population etc. The February half term skiing trips by many on the UK seem to have been a significant source of the spread, together with international travel from affected areas. There also seems to have been a pronounced west / east gradient, with the easternmost countries in the sample suffering very few deaths in this phase. Germany seems to have straddled this boundary. To unravel these effects would take a much more sophisticated analysis than I can carry out, and it must be left to those better able to do it, . This is not to say that what happened in this wave is unimportant, and the UK death rates were very high. Indeed, it is likely that the UK government will ultimately have to answer serious questions on their level of preparedness, PPE supplies, and in particular the decisions that were made to send untested elderly hospital patients back into care homes. The government estimate for the excess deaths in care homes up to mid-June 2020 was 19,394. If this figure is excluded from the totals the UK death rate in the first wave falls to 31.5 – close to the average of the death rates in the other countries. That being said, the level of the analysis I am able to undertake does not enable me to draw any further conclusions concerning the relative performance of the different nations in the first wave of the pandemic.

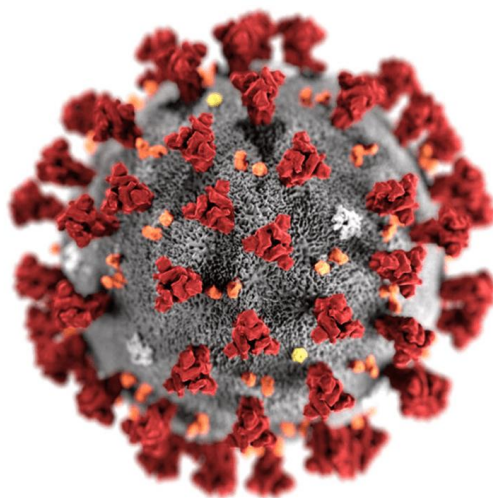
The second wave

In the UK the rise in September and October 2020 was brought under control through a fairly severe lockdown from November 5th 2020 to 2nd December 2020 although by the end of the lockdown it had not fallen to pre-lockdown values. There was much criticism if the government at the lateness of the imposition of the lockdown. The rate began to rise again in early December, due to the emergence of the Kent or alpha variant, peaking in mid-January before being brought down by another lockdown which started on January 6th and was relaxed in stages from March 8th. Again, there was a widespread feeling that the government were late these restrictions and should not have allowed social mixing over Christmas. Vaccinations begin in late December 2020, and this also played a significant role in the lockdown. In the other countries under consideration, the peak in early 2021 due to the Kent variant usually began a month or two later, and the vaccination programmes were also a month or two behind those in the UK, so in general the curves were shifted along the time axis by a month or so. But by the end of June 2021 death rates were very low in all countries.

The international comparison shown in Table 1 indicates that in the second wave, the deaths per hundred thousand of all 18 countries varied widely between 33 in Denmark and 299 in Hungary. The population weighted average was 133. The average of the seven most populous countries was 129. The value for the UK was 132 – very close to the average for both the complete data set of all countries and for the restricted number of countries. Many of the death rates are similar with half the countries having rates between 75 and 150. The data offers little encouragement for those who would either praise or denigrate the performance of the UK – it was boringly average. No doubt it's mistakes in not locking down quickly enough have been compensated by the rapid vaccination roll out, but the same sort of trade offs can be found in all countries. Perhaps the most important questions to ask are how Denmark, Ireland and Holland achieved the lowest death rates of less than half the average. There are almost certainly important lessons to be learnt from these countries.

Covid-19 – how risky are church services?

July 21, 2021



As I write, in late July 2021, Covid-19 infection rates are increasing rapidly, at the same time as restrictions are being eased, and people from all walks of life are becoming increasingly nervous about being infected. This nervousness is, quite understandably, shared by church congregations, and some are questioning whether it is actually safe to come to church in the current circumstances. Is it therefore actually possible to be a bit more precise about what the actual risk of attending church might be? The answer is a qualified, yes, it is possible, very approximately, to calculate the risk of infection at church services, and, in this article, I will describe the risks of attending church for different scenarios, based on the current situation at St. Michael's church in Lichfield, where I serve as a minister.

The method I will use is that developed by Prof Jose-Luis Jimenez at the University of Colorado – Boulder in the USA. This is a simple spreadsheet-based model of Covid transmission and infection using the latest scientific knowledge and which can be used in a variety of situations – residential homes, shops, public transport and places of worship for example. [It is more fully described here](#). It is based on aerosol transmission of the virus, which is now regarded as the main way in which the virus is transmitted, particularly if simple hygiene methods are followed, such as regular cleaning of services and washing of hands, to reduce the risk of picking up the virus by touch. Prof Jimenez would be the first to admit that the method is very approximate and comes with lots of uncertainties, not least because the understanding of the way in which infected people emit the virus is at the moment poorly understood. Nonetheless it does give a rough indication of risk.

The situation I have looked at is effectively the current practice in St. Michael's in Lichfield – a large, fairly poorly ventilated area, with a congregation of about 60 and a choir of 6. Social distancing is assumed, together with everyone wearing masks and only the choir singing, for a

one-hour service, with the current community infection rate of about one in a hundred people being infected with Covid at any one time. 80% of the congregation are assumed to be double vaccinated. Plugging this lot into the spreadsheet gives a risk of any one member of the congregation being infected with the virus at a particular service of 1 in 26,700. To give some perspective, the risk of being involved in a road vehicle accident in Britain in the week following the service is 1 in 22,000. Thus, attending a service at St. Michael's with the current practice is very safe indeed, even allowing for the very approximate nature of the calculations – we are all likely to be in much more hazardous situations at other times in the week.

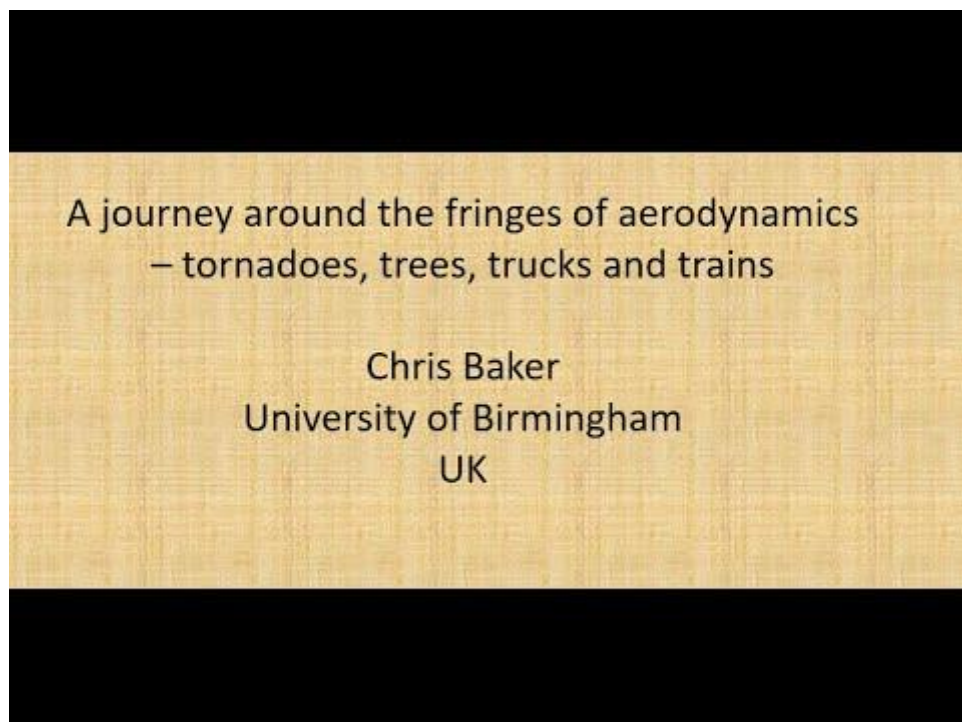
As restrictions ease, churches across the country are considering easing their own restrictions, and Jimenez's spreadsheet gives a way of how this might change the risk. Again, for St Michael's, having 100 people in the congregation in church as opposed to 60 (and reducing social distancing) increases the risk to 1 in 17,500. Doing away with masks as well increases the risk further to 1 in 6,100. This is a big jump, as masks both restrict the spread of the virus from those who are infected, and also give some protection to those who aren't. Taking the next step and letting the congregation sing hymns increases the risk to 1 in 2500. This is because singing, or speaking loudly, increases the breathing rate and allows more virus to be both exhaled and inhaled. As an interim step, should we keep social distancing and mask wearing but allow congregational singing with masks on, the risk of infection comes out as 1 in 10,200.

How these results should be interpreted is of course a matter for the individual. I personally would find a risk of 1 in 5000 acceptable but would begin to get a bit twitchy if the risk were as high as 1 in 1000. Importantly though it should be remembered that the risks are more or less proportional to the number of infected in the general population. So as the community infection rate drops, as one hopes it will, the risk decreases. For example, if the community infection rate was 1 in 500, the risk of being infected at a church service with no social distancing, no masks and with singing, falls to 1 in 12,500, which I, for one, would regard as very acceptable and quite safe.

A journey around the fringes of aerodynamics - tornadoes, trees, tricks and trains

December 8, 2021

A presentation to a church group in the USA in which I give an overview of my career and discuss, in very general terms, some ongoing work.



The English domestic cricket schedule

January 3, 2022

Preamble

Following the recent Ashes debacle, there has been much talk of why the England cricket team's performance has been so poor. One of the reasons (but by no means the only one) seems to be the lack of emphasis given to the red ball game in the domestic structure.

In addition the fact that red ball cricket has been increasingly pushed to the margins of the season to accommodate more and more white ball cricket, and in particular the abomination called the Hundred (and here I let my prejudices show clearly), and thus not allowing the development of batting skills in dry, hot conditions – which are the normal conditions in most other cricket playing countries. Thus in this blog post I set out a possible programme for the domestic season that, whilst allowing the financially lucrative white ball cricket proper exposure, also allows for red ball cricket to be played in the high summer months. I think it would be workable, but, inevitably, others will disagree.

Principles

In setting out the proposal, I adopt the following principles.

- The domestic season should have a clear, identifiable structure that allows for each of the three formats to take the limelight at appropriate times.
- All formats should be contested by the existing county teams, rather than by multi-county franchises based on the larger grounds, thus allowing for equitable treatment of all counties based on performance, and thus acknowledging the importance of history and tradition.
- That there should be space in the high summer months for both red ball and white ball cricket.



New Road Worcester

What I propose is for the men's game – I am afraid I simply don't know enough about the structures, resources and finances of the women's game to be able to make coherent proposals. That being said, it would seem to me that something mirroring the proposals below might be quite feasible, albeit with a reduced number of teams and matches.

Fifty over format

- Three groups of six county teams, perhaps geographically based, playing each other twice (10 games) with quarter finals, semi-finals and final.
- First round of five group matches to be played in last two weeks in March in southern hemisphere countries, and perhaps marketed as a cricketing holiday to county members and the public.
- Second round of five group matches to be played in last two weeks of April in England (which will thus give an interesting variety of conditions overall).
- Quarter finals on the Friday before May Bank Holiday. Semi-finals a week afterwards.
- Final on Late May Bank Holiday Saturday.

Two innings format

- First division of eight county teams, each playing each other twice (14 games) with bottom two relegated to second division.
- Second division of ten county teams, split into two groups of five, which may or may not be geographically based. Each team to play the others in the group twice and those in the other group once (13 games). Top team in each group promoted, with play off for the divisional championship.

- Games to be played from Sunday to Wednesday from first week in May to second week in August (15 weeks) with some exceptions to accommodate the twenty over format (see below). This would allow games to be played in high summer conditions.

Twenty over format

- To be played in two stages. County teams in first stage to be divided into three geographical groups of six, each playing each other twice (10 games), with games on Friday evening or Saturday afternoons between the start of May and end of July. Games would thus not be spread through the week which might not please broadcasters. There might need to be some slight modification of the schedule for two innings games to accommodate two games on one or two weekends. Top two in each group and two best third place teams to Premier league, and others to National League.
- The ECB to give contracts to twenty or more overseas players with different skills, who would be allocated to the Premiership counties at the start of August, based on the county's requirements.
- The Premier league would run in the last two weeks in August and the first week in September, with each team playing the others once (7 games). It would be desirable for there to be no international games during this period to allow England players to compete. A "hundred" format could be used if felt desirable (although I can think of no reason why it should be so). Finals day on the second Saturday in September would consist of a play off between second and third place teams, and a final between the winners of that tie and the first placed team.
- The National league would consist of ten counties, play six franchise teams composing those displaced from premiership squads, second eleven, university and academy players etc. over the same period. These would be divided into two groups of eight, and each play each other once (7 games). The franchise teams would be based at holiday destinations, or conurbations normally without top level cricket as a means of widening audiences. The top teams in each group would contest the final, on the same occasion as the Premiership finals day.

Final thoughts

I would suggest that the advantages to such a system would be as follows.

- The format would thus give a structured approach to the season, with the three formats contented sequentially, with manageable overlap between the formats.
- There would be three high points in the season – the fifty over final on the late May Bank holiday; the climax to the two innings game in early / mid-August; and the short form finals day in mid-September.

- The international / domestic structure for the fifty over competition would both be attractive in its own right for at least the more affluent spectators, would give players experience of a range of conditions, and would also take some scheduling pressure off the domestic season
- The structure would allow two innings games to be played in high summer conditions. The proposed second division structure would enhance the integrity of the competition with teams only being judge against teams that have played the same number of games against the same opponents.
- It would also maximise audiences for the short form game on summer evenings and during the last two or three weeks of the school holiday period.

As a final point, such a schedule would also allow space in late September for a regional championship between, say, teams drawn from northern south eastern and south western counties with three four day matches over a two week period. This would give the players some experience of cricket between county and international level. But this is not an integral part of the proposal.

A new rail connection for Blaenau Ffestiniog?

January 10, 2022



https://en.wikipedia.org/wiki/Blaenau_Ffestiniog_passenger_stations#/media/File:BlaenauFfestiniogMap.png

In a 2019 issue of the Ffestiniog Railway Society magazine, a brief article described the early days of a project to restore the Dinas branch at the Blaenau Ffestiniog end of the line, thus reconnecting the town centre with the area in the midst of the slate heaps to the south of the Conwy Valley line tunnel (see the above map from Wikipedia which shows the complex FR layout around Blaenau). A useful history of the branch is give [here](#). It was lifted in the 1950s but the trackbed remains visible and accessible to the west of the Conwy Valley line south of the Ffestiniog tunnel. The main driver for the project would have been to provide a connection between the town centre station and the Llechwedd quarry, to the east of the Conwy Valley line near the tunnel portal, which has become a [major tourist attraction](#), both in terms of its mining heritage but also as a mountain cycling and zip line venue. Unfortunately, with the advent of the pandemic, this project seems to have dropped from view, which is hardly surprising. The idea was raised recently once again on the Ffestiniog & Welsh Highland Railways Insider [Facebook page](#), and the large potential costs of re-opening the branch against the potential income was again emphasized as the main barrier to taking this idea further.

Whilst I quite understand why the project has not progressed, it still seems to me that the initial reason for the proposed re-opening still remains. The centre of Blaenau has been transformed in recent years, but it is still an area that requires much investment in its future. To have its major tourist attraction an inconvenient mile and a half out of town with no public transport links, does little to help with the development of the town itself – indeed visitors to Llechwedd have no real need to stop off in the town centre at all. And of course the lack of any public transport connection simply encourages what is being increasingly appreciated as the unsustainable use of the private car. Thus in this brief post I suggest a way in which this project could be taken forward in what might be an affordable fashion (although I present no sort of cost benefit analysis at all).

The basic idea is simple – instead of relaying the former Dinas branch, the existing track formation of the Conwy Valley line should be used instead. With the current level of service provision on the line, in normal times the section from Roman Bridge just north of the tunnel is occupied for only 45 minutes every 3 hour period. With a little imagination in the development of a signalling system to ensure safety, I would suggest that the line between the town centre and Dinas could be used for a shuttle service to take visitors between the town centre and the quarry complex when that section of track is not occupied. This could be done in two, relatively cheap, ways – either through the use of (lung destroying) standard gauge heritage DMUs, between the Conwy Valley line platform and a new platform at Dinas (which could be positioned on the eastern, Llechwedd side of the track and would avoid the need for a foot crossing that would be inherent in the relaying of the FR Dinas branch) and an access road to the quarry. More interestingly, a narrow-gauge track could be laid within the standard gauge track, with switches to allow narrow gauge trains to access these rails from the FT station, and a short station branch at Dinas. This would of course allow existing FR stock to be used.

Both these alternatives should be much cheaper than the relaying of the branch and could provide an attractive link between town and quarry. Realistically however they are likely to meet with strong opposition from the very conservative Network Rail culture, with its massively inflated approvals procedure, and great determination would be required to take forward these or other similar ideas.

At some stage in the future, I will write another blog post on the development of public transport links within the World Heritage Slate Landscape region – there is much to be said about transforming the current private vehicle dominated system into something that could be accessed by public transport. But that is for another day / week / month / year.

Football leagues – development sides and lower divisions

February 8, 2022

From time to time, the coaches of Premiership football clubs call for their development teams (usually for under 23s with a limited number of older players) to be allowed to play in the Championship or League 1 to give them more competitive games. Such proposals are usually strongly resisted by the lower leagues, as an attack in the integrity of their divisions. In this short post, I will try to show that league competitions can be constructed in a way that allows for the needs of the higher league Development teams and yet retains the integrity of the lower league competition and perhaps even enhances it. The method outlined is not just applicable to the football Premiership and Championship, but could be applied to other sports at all levels where there is a similar of “second” teams playing those in lower leagues.

Suppose we have 20 higher division development teams and 24 lower division teams (the current numbers in the Premiership and Championship). We divide each group into two – HD1 and HD2 for the higher division development teams (10 in each group) and L1 and L2 for the lower league teams (12 in each group). The teams would play each other as follows.

- L1 teams would play all the other L1 teams home and away (22 matches), the L2 teams once, half home and half away (12 games) and the HD1 teams once at home (10 games), giving 44 games in total (27 home, 17 away).
- L2 teams would play all the other L2 teams home and away (22 matches), the L1 teams once, half home and half away (12 games) and the HD2 teams once at home (10 games), giving 44 games in total (27 home, 17 away).
- HD1 teams would play all the other HD1 teams once, half home and half away (9 games) and the L1 teams once away (12 games), giving 21 games in total (4/5 home, 17/16 away).
- HD2 teams would play all the other HD2 teams once, half home and half away (9 games) and the L2 teams once away (12 games), giving 21 games in total (4/5 home, 17/16 away).
- L1 and L2 teams would be ranked separately on the basis of all games played, with the winners of each playing for the L title of that division. Both would be automatically promoted to the league above, with the second and third place teams in each section playing off for other promotion places.
- HD1 and HD2 teams would be ranked separately on the basis of all games played, with the winners of each playing for the title of the HD section of that division .

This format thus ensures the following.

- The lower league teams and the development teams of the higher league teams would be ranked in separate divisions, even though there is some cross over on the teams that are played.
- All teams would be ranked only alongside those teams that have played the same opponents the same number of times, ensuring integrity of competition.
- The lower leagues teams would play a similar number of games to those that would be played in a conventional competition (44 as against 46), but with an increased number of potentially attractive home games against the higher league development teams.
- The higher league development teams would play a significantly smaller number of games than the lower league teams, which conforms with current practice for such sides (for example on the Premier 2 league, teams play around 14 to 15 games in a season). All the games they play against the lower league sides can be expected to be very competitive.

The World Test Championship

February 8, 2022



The cricket World Test Championship is perhaps one of the most impenetrable of all sports competitions, with playing regulations and points coring systems that are not all easily understood by any except those who devised it and those with advanced statistical training. Details [can be found here](#) for those interested. The result of this complexity is to make it poorly understood by media and public, and it does little to generate interest (and perhaps financial sponsorship) for the test match format. But it needn't actually be so. In this short post I describe a simple format for a World Test Championship that would be easily understandable; would result in meaningful matches and series; and would produce an undisputed champion every year. There is a snowball in hells chance of anything this sensible being implemented by the ICC, but its formulation has proved to be intellectually satisfying at any rate.

The basic principle would be to divide test playing countries into divisions of three. Based on [current rankings \(January 2022\)](#) these would be

- Division 1 – India, New Zealand, Australia
- Division 2 – England, Pakistan, South Africa
- Division 3 – Sri Lanka, West Indies, Bangladesh
- Division 4 – Zimbabwe, Ireland, Afghanistan

Given the current political climate Afghanistan's position in Division 4 might be untenable, and it might need to be replace by another side (perhaps Netherlands or Scotland).

The basic principle would be that the sides in each division each year would play each other in a three-match series – one home series and one away series. The position in the division would be determined by giving 2 points for a series win and one point for a draw, or, if these points are equal, on the number of matches won. The top side in each division would either be declared

world champion for the year, or be promoted to the next division, whilst the bottom side would be relegated. It would be no more complicated than that.

Essentially this would give a baseline for the number of test matches per year of six per team, which ought to be achievable. It does not preclude other series (such as the Ashes) being played as required – and indeed the world championship games could be designated tests in, say, a five-match series. Each team would play different teams in succeeding years, apart from the top two in Division 1 and the bottom two in Division 4.

The main requirement would be a need for flexibility in arranging fixtures on an annual basis, rather than as part of the longer-term future tours programme. This may be easier if designated periods were kept free from other series. The real advantage of such a method would be that it would greatly increase the profile of the long form game, with each of the series that are played being meaningful in terms of promotion and relegation, and gives the possibility of the championship finding a significant sponsor.

Train services on the Ffestiniog and Welsh Highland Railways

March 31, 2022

	 WOODLAND WANDERER Porthmadog to Tan-y-Bwlch	 MOUNTAIN SPIRIT Porthmadog to Blaenau Ffestiniog	 GLASLYN VENTURER Porthmadog to Beddgelert	 HARBOUR MASTER Porthmadog to Caernarfon	 GELERT EXPLORER Caernarfon to Beddgelert	 SNOWDONIA STAR Caernarfon to Porthmadog
Monday 28th March	-	-	-	-	-	-
Tuesday 29th March	✓	✓	-	-	✓	-
Wednesday 30th March	✓	✓	-	-	-	-
Thursday 31st March	✓	✓	-	-	✓	-
Friday 1st April	-	-	-	-	-	-
Saturday 2nd April	✓	✓	-	✓	-	✓
Sunday 3rd April	✓	✓	✓	-	✓	-

The March / April 2022 service pattern

There are ongoing discussions, which at times are becoming quite heated, within the wider Ffestiniog / Welsh Highland Railway community about the nature of the services planned in this post pandemic period. On the one hand, the company sees the need to maximise train loadings and thus reduce the unit costs, to cope with huge increases in fuel and staff costs. This leads logically to the need to continue the successful pandemic style timetable of booked tours – from Porthmadoc to Tan-y-Bwlch / Blaenau Ffestiniog / Beddgelert / Caernarfon and back, with one train journey being filled before another is timetabled, and with no intermediate stops. The service pattern for late March 2022 shown above reflects this and consists of a number of named and themed trains. Without a doubt this meets the needs of most passengers, who are not necessarily railway enthusiasts, but simply want a good day out for them and their family, and is cost effective in that trains are maximally loaded. On the other hand, there is a strong, and as I perceive, growing, feeling amongst Ffestiniog and Welsh Highland Society members and supporters that a more normal scheduled timetable with intermediate stops should be reinstated, to restore the railways to what are perceived as their true selves as service providers. I have sympathy with both points of view – the financial challenges are certainly significant and need to be addressed, but the provision of specific tours simply does not meet the needs and aspiration of many. This includes myself, as I nearly always use the railway for journeys to intermediate stops, with walks of varying length between stations and “tours” hold no attraction at all for me. As things stand I, along with others, have no real reason to travel on the railways. As I write there are, I understand, proposals are being

worked on to reinstate intermediate stops on some journeys, although it is not clear if this will approach anything like a regular service pattern.

The purpose of this post is to raise just one issue that is of potential significance. Last year I had the privilege of being an examiner for a University of Birmingham PhD thesis by Robin Coombs entitled “The sustainability of heritage railways”. I quote from the thesis abstract.

.....In particular, the thesis explores the necessary condition(s) for the successful operation of a heritage railway in terms of governing their sustainability as expressed through consideration of their life cycle trajectory around the three pillars of sustainability – environmental, economic and social. The hypothesis proposed in the study is that good governance of railway assets and management is the key determinate of the sustainability of a heritage railway. This hypothesis was tested through a survey of 39 Directors and General Managers and 252 heritage railway enthusiasts of 104 heritage railways, semi-structured interviews with 15 Directors and General Managers, and the author’s recorded field observations and participation in 52 heritage railway visits and events. The research shows that the longevity of heritage railways does not simply arise from ‘good governance’ but is in fact the product of multiple interlinked variables and processes. Indeed, many heritage railways have survived and prospered despite poor governance, rather than because of ‘good governance’. One of the most significant of these explanatory variables is social capital, a hitherto under-researched governance variable in heritage railway studies. Through case study examples, social capital is demonstrated to have compensated and mitigated for failures of organisational governance and weaknesses in operational conditions on heritage railways. In this respect, heritage railways are argued to be similar to charitable and other public-good organisations. On this basis the hypothesis was rejected, and an alternative hypothesis proposed: that social capital (of which philanthropy, reciprocity and trust are key constituents) is a key determinant of the sustainability of heritage railways.

Robin makes a very strong case for the importance of what he calls social capital in the long-term sustainability of heritage railways – supporters contributing financially and materially and through voluntary activities. To my mind this is of very great importance in the current Ffestiniog and Welsh Highland context. A robust approach to income and expenditure through a business plan is certainly required in these financially constrained times, but if in doing so the relationship with volunteers and supporters is fractured, through the provision of a service pattern that does not meet their needs or their aspirations for the railways, this could potentially have a serious effect on the provision of social capital and thus on the long-term future of the railways, as supporters direct their time, efforts and money elsewhere. This simple fact should not be forgotten as future service provision is considered. I would thus suggest that conserving and expanding the social capital that the railways have built up over the decades is as important for the future of the railways as a financially robust business plan.

The 292 bus route from Kidderminster to Ludlow – an important transport link?

June 14, 2023



292 at Kidderminster Bus Station in 2010

I have recently been on a short break to Cleobury Mortimer in Shropshire, travelling there by train and bus from where I live in Lichfield. The train journeys, from Lichfield to Birmingham and Birmingham to Kidderminster went very smoothly and were quite a pleasant experience. There were a number of route permutations, but we chose to walk between Birmingham New Street and Birmingham Moor Street, both on the way there and back. The bus leg from Kidderminster, on the Diamon bus 292 was rather less easy. The bus didn't stop at Kidderminster railway station, with the nearest advertised stops (on Google and various websites) being 400m away in Oxford St. Arriving there however, we found this was not the case, with no mention of the 292 on the timetables at the stop, so we walked on to the bus station, another 400 yards away. There we eventually did get the bus, which was running over half an hour late. The journey itself was fine, and as we were in no hurry, the delay was of no particular concern to us.

Over the days that followed, I kept track of the buses on the 292 route between Kidderminster, Bewdley, Cleobury Mortimer and Ludlow, and it soon became clear that the lateness was endemic. The journey was timetabled for 50 to 55 minutes, with a two-hour frequency, with one bus shuttling backwards and forwards – see the timetable below – from <https://bustimes.org/services/292-kidderminster-ludlow> . This timing was simply too tight to ensure punctual running throughout the day. Whilst some of the delays came from congestion in the towns at either end of the route as might be expected, the most critical delays were due to parked cars on the A4117 between Bewdley and Ludlow requiring single file traffic through the towns and villages along the road. Such delays could of course be quite easily eliminated, given the political will.

Kidderminster to Ludlow

☐ Show all stops

Kidderminster Bus Station (Stand 6)	07:30	09:30	11:30	13:30	15:30	17:30
Kidderminster, adj General Hospital	07:38	09:38	11:38	13:38	15:38	17:38
The Heath, adj West Midlands Safari Park	07:41	09:41	11:41	13:41	15:41	17:41
Bewdley Load Street (Westbound)	07:46	09:46	11:46	13:46	15:46	17:46
Hales Park, opp Hop Pole Inn	07:50	09:50	11:50	13:50	15:50	17:50
Far Forest, adj Plough Inn	07:56	09:56	11:56	13:56	15:56	17:56
Cleobury Mortimer, opp Talbot Inn	08:04	10:04	12:04	14:04	16:04	18:04
Clee Hill, adj Mace Stores	08:14	10:14	12:14	14:14	16:14	18:14
Henley Bridge (opp)	08:19	10:19	12:19	14:19	16:19	18:19
Ludlow, adj Cooperative Store	08:25	10:25	12:25	14:25	16:25	18:25

Ludlow to Kidderminster

☐ Show all stops

Ludlow, adj Cooperative Store	08:35	10:35	12:35	14:35	16:35	18:35
Henley Bridge (adj)	08:41	10:41	12:41	14:41	16:41	18:41
Clee Hill, opp Mace Stores	08:47	10:47	12:47	14:47	16:47	18:47
Cleobury Mortimer, adj Talbot Inn	08:56	10:56	12:56	14:56	16:56	18:56
Far Forest, opp Plough Inn	09:04	11:04	13:04	15:04	17:04	19:04
Hales Park, adj Hop Pole Inn	09:10	11:10	13:10	15:10	17:10	19:10
Bewdley Load Street (Eastbound)	09:14	11:14	13:14	15:14	17:14	19:14
The Heath, opp West Midlands Safari Park	09:19	11:19	13:19	15:19	17:19	19:19
Kidderminster Bus Station (Stand 6)	09:26	11:26	13:26	15:26	17:26	19:26

Current 292 Timetable

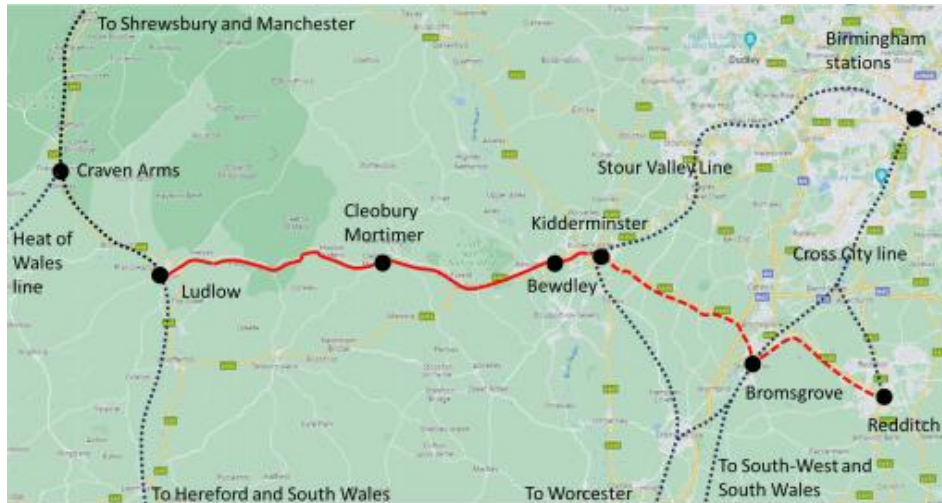
Now service 292, currently operated by Diamond buses, is actually the truncated remains of a much longer Midland Red service with the same number, that ran from Birmingham to Kidderminster, Ludlow and Hereford. A time table for this service is shown below from 1991 for the Birmingham – Hereford direction –

from <http://midlandred.net/service/timetable/display.php?routeID=1007>. The service was withdrawn, apart from the Kidderminster to Ludlow leg, in the early years of the current century. It can be seen at that time there was an hourly service between these two towns, rather than the current two hourly service. This represents a considerable degradation in service provision.

[illegible]

292 Timetable 1991

But the transport context has changed in many ways over the last few decades. The role of the long-distance bus has been largely taken over by trains, with a much greater frequency than 30 years ago. On the original 292 route there are now 4 trains an hour to Kidderminster from Stratford upon Avon through Birmingham, either terminating there or continuing to Worcester, and two from Worcester to Birmingham; at Ludlow there are two trains per hour in each direction between Manchester, Shrewsbury, Hereford and various destinations in south Wales. So in this sense, the truncation of the service was sensible and appropriate. It now serves a purely local market for those who live on its route. But I would argue, in any sane country that takes seriously the need to reduce carbon emissions and the need for modal change (i.e. not the one in which I reside), the Kidderminster to Ludlow route would be of some strategic importance. With improvements in frequency and connections with rail at Kidderminster and Ludlow, it would offer a route from the West Midlands conurbation, via the Stour Valley line, into south Shropshire and the Marches, with major tourist potential. Further, if the route were combined with the hourly 52 from Kidderminster to Bromsgrove (and ultimately Redditch), it would offer connections from the south west at Bromsgrove into the same area, and also from the Cross City line that serves the north of Birmingham and the city centre. The 52 actually runs past both Bromsgrove and Kidderminster stations. Continuation of the service north of Ludlow to Craven Arms (in parallel with the railway) would offer connections to the Heart of Wales line, whose tourist potential has not been fully developed, and perhaps further to Welshpool for connections to the Cambrian line. All these possible connections are shown in the figure below.



But life is of course not that simple. For such a service to be a success other changes would be necessary. Firstly, efforts would be required to split the local markets in Ludlow and Kidderminster from the longer-distance markets to make overall journey times on through services as short as possible. There is no reason why this should not be possible but would require extra resources in terms of service provision to meet the requirements of the very local market. This mix of markets has been a major reason for the demise of long distance inter-urban buses in the past – perhaps most recently in the truncation of the Oxford to Cambridge X5 at Bedford, because the local market between Bedford and Cambridge resulted in significantly increased journey times. Secondly, attention would need to be paid to the interchange points at either end of the route. For example, the bus stops of the Bromsgrove to Kidderminster route at Kidderminster Railway Station are on narrow pavements on a road bridge over the railway line – a very uninviting and inconvenient place for mode transfer. Attention would also of course need to be paid to timetabling to ensure suitable connection times.

The other issue is of course more structural in that there is no overall transport policy in the UK that would facilitate such developments – see the [recent blog by Christian Wolmar](#) on this. And this lack of an overall policy means that resources cannot be channelled to such schemes, despite the fact that their benefits would be significant in terms of carbon emission reductions and stimulating local economies. It has always been thus as far as I can remember. I still want to believe that a competent government will one day realise that this is the road to take. But perhaps I am here opening myself up to a charge of naivety.

An election manifesto for Transport

June 27, 2023

Introduction

As the journalist Christian Wolmar has discussed in a [recent article](#), the UK does not have any sort of agreed National Transport Policy that could be used as a rational way of developing transport infrastructure in a politically non-partisan way. Such a policy will certainly not emerge from the current government, and there is little to suppose that any future government will give priority to developing such a plan. Without it, transport policy is vulnerable to ill thought-out ad hoc initiatives and, as at present, in ad hoc cutbacks. In this post I will suggest a pragmatic way forward on this.

What I propose is based on the assumption that the next Government will be formed by the Labour Party, either as a majority party or with some sort of agreement with the Liberal Democrats. This is certainly what would be suggested by the opinion polls where at the time of writing Labour have a 22% lead over the conservatives. The Labour party has proposed [five “missions”](#) that will direct their approach to the 2024 elections and any subsequent government. None of these missions mentions transport at all, but there are transport issues embedded in each one of them. In what follows, I set out these missions, the transport issues that arise from them, potential policy objectives, and potential policy proposals. I then bring these proposals together to form a list of Transport policies that could be used, no doubt in a modified format, both for the next election and in any subsequent government.

Readers should not assume from this that I am a Labour Party supporter. I have never been a member of a political party, and never intend to be. Politically I am a centrist, but with somewhat radical environmental views, formed partly by my professional work as a Professor of Environmental Fluid Mechanics at the University of Birmingham (now retired). The proposals below are simply pragmatic – a possible way of influencing the next government to do something sensible in transport terms.



The Labour Part Missions

Mission 1

Secure the highest sustained growth in the G7, with good jobs and productivity growth in every part of the country making everyone, not just a few, better off.

Transport issues

- Transport congestion on road and rail, for both people and products, leading to reduced productivity.
- Poor workforce mobility, leading to inflexibility in employment locations.
- DfT methodology for assessing CBR of transport infrastructure [does not take proper account of induced flows on highways](#) – i.e. new roads encourage traffic growth and can increase congestion.

Transport policy objectives

- Revise DfT methodology for assessment of congestion reduction of new roads to include induced flow effects.
- Infrastructure interventions to reduce road and rail congestion.
- Encouragement of modal shift from road to rail, for both people and products.

Transport policy proposals

- Revision of DfT methodology for assessing congestion reduction of new road schemes to include proper consideration of induced flow.
- Small number of specific congestion-reducing road schemes (consistent with Mission 2).
- Speed up development of rail enhancements and new build (HS2, EWR and NPR).

Mission 2

Make Britain a clean energy superpower to create jobs, cut bills and boost energy security with zero-carbon electricity by 2030, accelerating to net zero.

Transport issues

- DfT methodology for assessment of contribution new transport schemes to carbon production and climate change has been [shown to be flawed](#), particularly in relation to new roads.
- UK Carbon based transport emissions levelling off or increasing.
- Transport is now major carbon producing sector of economy.

Transport policy objectives

- Reassessment of DfT methodology for assessing environmental impact and carbon production of new transport schemes.
- Development and roll out low carbon technologies (electric and hydrogen vehicles, electric trains) including electric car recharging infrastructure.
- Encouragement to use low carbon modes of transport and active travel modes.

Transport policy proposals

- Revision of DfT methodology for assessing environmental impact of new road schemes to be revised.
- Investment in electric and hydrogen vehicle research and production
- Development of electric vehicle recharging infrastructure.
- Electrification programme for railways
- Fiscal incentives to encourage low carbon mode use.

Mission 3

Build an NHS fit for the future by reforming health and care services to speed up treatment, harnessing life sciences and technology to reduce preventable illness, and cutting health inequalities.

Transport issues

- Poor air quality in urban areas mainly due to transport, leading to vulnerability to [respiratory illness](#) and, possibly, [increased dementia risk](#).
- Contribution to [high levels of obesity](#) due to short journeys being made by car.
- Poor access to health facilities for those without cars (20% of households)

Transport policy objectives

- Improve urban air quality through encouraging low emission vehicles.
- Improve air quality through traffic reduction and modal shift to public transport.
- Encourage active travel (cycling and walking).
- Improve public transport (primarily bus) links to health care facilities,

Transport policy proposals

- Fiscal incentives for ULEZs and LTNs.
- Support for public transport
- Fiscal incentives to local authorities to provide active travel infrastructure.

Mission 4

Make Britain's streets safe by reforming the police and justice system, to prevent crime, tackle violence against women, and stop criminals getting away without punishment.

Transport issues

- Safety issues due to high road speeds in urban areas.
- Safety issues due to pavement parking.

Transport policy objectives

- Make urban streets safe for pedestrians and cyclists.

Transport policy proposals

- Fiscal incentives for LTNs.
- Lower and enforce urban speed limits.
- Enforce pavement parking laws.

Mission 5

Break down the barriers to opportunity at every stage, for every child, by reforming the childcare and education systems, raising standards everywhere, and preparing young people for work and life.

Transport issues

- Poor access to childcare and education for those without cars (20% of households)

Transport policy objectives

- Improve access to childcare and education for those without cars.

Transport policy proposals

- Support for public transport
- Fiscal incentives to local authorities to provide active travel infrastructure.

The policies

From the consideration of the individual missions, the following specific transport policies can be developed.

Policy 1

Revision of DfT methodologies for assessing new transport schemes to take proper account on induced flow and environmental effects. (Missions 1 and 2)

Policy 2

Invest in new transport infrastructure with a small number of congestion-relieving road schemes, electric car charging facilities, and major investment to rail infrastructure, including staged development of HS2, NPR and EWR) and a rolling programme of electrification. (Missions 1 and 2)

Policy 3

Support for public transport (trains and buses) for increasing employment opportunities and providing access to healthcare and education. (Missions 1, 3 and 5)

Policy 4

Reduction of urban speed limits and enforcement of pavement parking laws. (Mission 4)

Policy 5

Fiscal incentives and support to local authorities to encourage low carbon vehicles and modal transfer to low carbon modes; for the development of ULEZs and LTNs, and provision of active travel infrastructure. (Missions 2, 3 and 5)

Commentary

Policy 1 is not going to set any electoral debate alight, but it is quite crucial. In the past the DfT has used flawed policies to assess road building schemes against other transport schemes, knowing that they were flawed. This needs to change. Indeed, I would regard the DfT as no longer fit for purpose in many ways (as an example, its current handling of the railway network, the ongoing industrial action and major cutbacks to active travel budgets can be cited) and there is an argument for a complete re-organisation here to establish a wide ranging Department for Infrastructure that brings together transport, the utilities and construction. This would allow proper consideration to be given to the transport effects of new housing build (often built without public transport provision) and conversely the effect of a move to electric vehicles on the development of the electricity grid.

Policy 2 is wide ranging and expensive, and any specific proposals would need to be carefully phased in terms of expenditure. The basic point however is that high quality transport infrastructure for people and products is a fundamental requirement for a productive economy, the more so as the switch to the “green economy” proceeds.

Policy 3 is important for many, and in particular those on low incomes. The provision of a high-quality public transport network (particularly buses) that is comprehensive in its coverage would make access to employment, healthcare and education very much easier for many people.

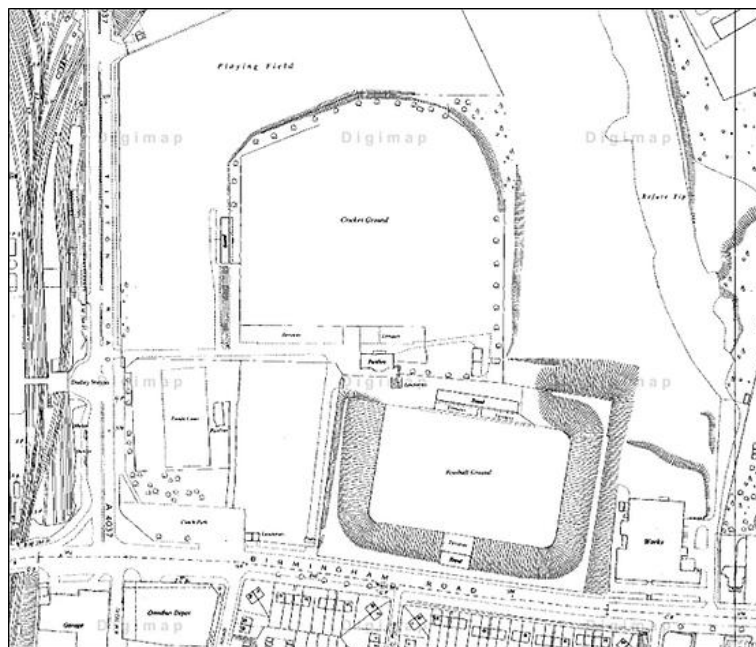
Policy 4 is essentially aimed at public safety. It would no doubt be categorised as a “war on motorists” by sections of the press, but this is a battle that needs to be fought for the public good.

Policy 5 is another proposal that might be electorally contentious as (weirdly to my mind) LTNs, ULEZs and active travel have become very politicised. Fiscal incentives could be a way forward here, as proposed in the more detailed description of Mission 2 recently released by the Labour Party. This might include the possibility of both support for the initiatives and a wider reduction in rates for those Local Authorities that develop such schemes. This would be basically a bribe, and would need to be carefully costed and targeted, but could help in the establishment of such schemes. In terms of encouragement to use low carbon modes, a study should be initiated to look at how road pricing, aviation fuel duty and rail fares could be used to encourage the necessary modal shift.

A memory of Dudley Sports Centre

July 14, 2023

Dudley Sports Centre was a large football and cricket ground of the Tipton Road in Dudley. I guess these days it would be called a multi-sports complex! A 1950s map is shown below. The football ground was to the south with the main stand backing onto the cricket ground, with the cricket ground to the north, with the Pavilion and terraces in front of the back of the football stands. There were playing fields to the north and the west. It dated from the 1880 but was much expanded in the 1930s when the football ground was opened. It was used by Dudley Cricket Club and Dudley Town FC. Over 16000 spectators attended Dudley Town's first match in 1932. Worcestershire CCC used it as an out ground from 1911 to 1977 for first class and list A fixtures.



The Sports Centre in the 1950s

As a teenager, I watched games at the ground on many occasions – football matches between Dudley Town and my team, Brierley Hill Alliance, and a variety of other games including county cup finals; and cricket games when Worcestershire were in town. It is one of the latter that sticks most in my memory. This was the game between Worcestershire and Warwickshire on 5th September 1971, when I was 17. This was a 40 over John Player league game (in the days when it was felt acceptable for manufacturers of carcinogenic products to sponsor sports competitions). Worcestershire had had a good season and in this, their last game of the season, needed to win the match to have any chance of winning the league. As ever with cricket, the situation was complicated, and not only did they need the four points from the win, they needed to ensure that their run rate (runs / over) over the season was such that it surpassed that of Essex, the team below them. Even then they could not be sure of the title, as the third placed team, Lancashire had a game in hand, and played the following week.

Lancashire had to lose that game, even if Worcestershire won on September 5th. I remember sitting on the terraces to the west of the Pavilion shown on the above figure. The TV cameras were in attendance, and my mother spent the entire afternoon watching a cricket match on BBC3 to see if she could see me in the crowd. Warwickshire batted first, and their scorecard is below. The only managed to make 126 – a very low score even in those pre-T20 days. Of the bowlers, [Basil D'Oliveira](#), [Vanburn Holder](#), the overseas signing for the year, and [Brian Brain](#) did most of the damage.

Warwickshire (40 ovs maximum)		
BATTING		R
John Whitehouse	b D'Oliveira	19
John Jameson	c Ormrod b Carter	20
Rohan Kanhai	c & b D'Oliveira	11
Dennis Amiss	b D'Oliveira	0
Mike Smith (c)	c Griffith b Wilkinson	15
Neal Abberley	c Griffith b Brain	26
Billy Ibadulla	lbw b Brain	6
Norman McVicker	b Carter	12
Stephen Rouse	lbw b Holder	0
Lance Gibbs	b Holder	3
Barry Flick †	not out	3
Extras	(b 2, lb 6, nb 3)	11
TOTAL	37 Ov (RR: 3.40)	126

The Warwickshire Innings



Basil D'Oliveira, Vanburn Holder and Brian Brain

In the Innings break it was announced that, in order to achieve the required overall run rate for the season, Worcestershire needed to surpass that total in 17.5 overs – so the match became a T20 match 30 years before that concept was invented. I remember little of the innings other than its frantic nature. The scorecard is again given below. Nearly all of the runs were scored by three players – [Ron Headley](#), the son on the West Indian batsman George, Basil D'Oliveira again

and [Alan Ormrod](#). Worcestershire made the required total with two balls to spare, resulting in raucous celebrations. Lancashire obligingly lost the match the following week, and Worcester were proclaimed as champions.

Worcestershire (T: 127 runs from 40 ovs)		
BATTING		R
Ron Headley (c)	c Smith b Gibbs	58
Peter Stimpson	c Khalid Ibadulla b McVicker	0
Jim Yardley	run out	1
Basil D'Oliveira	b McVicker	23
Alan Ormrod	b Rouse	27
Vanburn Holder	run out	0
Gordon Wilcock †	b Gibbs	2
Kevin Griffith	not out	9
Keith Wilkinson	not out	1
Extras	(b 4, lb 2)	6
TOTAL	17.3 Ov (RR: 7.25)	127/7

The Worcestershire Innings



Ron Headley, Basil D'Oliveira and Alan Ormrod

I went off to university a year after the match, and I don't remember seeing any more cricket there. As is well known, the Sports Centre was shut in 1985 after a large hole appeared and part of the pitch disappeared into a limestone cavern beneath the site. Worcestershire never played there again, and Dudley CC, a long-term member of the Birmingham League, folded. Dudley Town have led a peripatetic existence ever since, playing at a number of grounds within and without the borough – the Round Oak stadium, the Dell stadium, Tividale and (currently) at Willenhall. The site is now the home of the Castle Gate complex.



The Sports Centre after closure

St. Michael's Churchyard, Lichfield through the year

July 11, 2024

A picture blog featuring the photographs of Maureen Brand – evocative pictures of the churchyard of St Michael in Lichfield through the changing seasons.



January



January



February



February



February



March



April



April



May



May



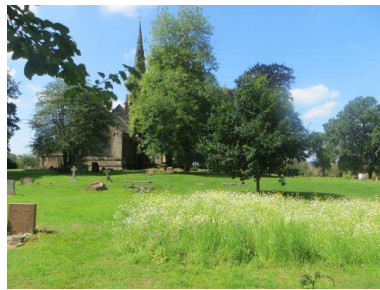
June



June



June



July



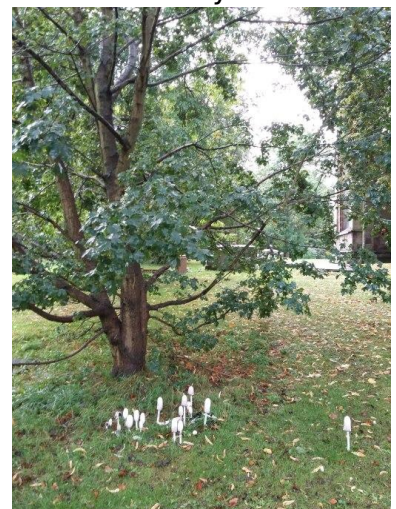
July



August



August



September



September



October



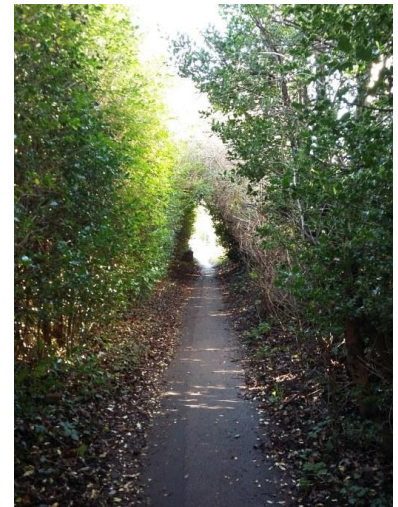
October



November



December



December

Nore information on the church and churchyard can be found using the buttons below.

Traws Cymru – a trip around North Wales

May 18, 2025

Introduction

In mid-May 2025, I made a journey that I have had in mind for a number of years – a circular trip around North Wales mainly by inter-urban bus. I had a number of reasons for wanting to make this trip. Firstly it involves travel through some of the loveliest countryside anywhere in Britain. Secondly, it allowed me to indulge my obsession with looking at heritage railway stations, three of which are shown below – I will leave it to the reader to identify them. And thirdly, and for the purpose of this post most importantly, it allowed me to travel on the Traws Cymru bus network. I have watched this network develop from afar over the years, and have often thought I would like to look at it more closely.

In what follows I firstly describe the route that I took and comment on some general aspects. I then consider the vehicles that I travelled on, and then the infrastructure – bus stops and interchanges. Finally I make a number of comments on the good and bad points of the trip.

The route

The first step of my journey was to travel from my home in Oakham in Rutland to Ruabon on the Welsh border by train. This involved changes to Birmingham New St and Shrewsbury. There were no problems either on the way there or the way out, with all journeys running close to time. At the start of the journey there was the perennial feeling of relief when it became clear my Cross Country train was really running and had not been cancelled, that turned into a feeling of surprise when it actually arrived at Oakham on time. But, as I say, the journey worked well and I arrived at Ruabon around noon as planned.

- Porthmadog 8.05 to Dolgellau 9.02 – T2 (30%)
- Dolgellau 9.03 to Bala 9.33 – T3 (5%)
- Bala 11.33 to Ruabon 12.39 – T3 (25%)

All the journeys kept time very well, and none was more than 3 or 4 minutes late at the point where I disembarked. Throughout the trip, the drivers were helpful and friendly, which makes a huge difference to the passenger experience. The journey not on the Traws Cymru network was the Sherpa S1. I chose to change onto this, rather than continue on the T10 to Bangor and catch the T2 to Caernarfon and Porthmadog there, simply because the ride up to Pen-y-Pass at the foot of Snowdon must be one of the most spectacular and exhilarating in the country.

The vehicles

I am by no means a bus expert, but from what I could gather from various websites, I travelled on the following vehicles.

- 5 – ADL Enviro400 City, operated by Arriva
- Traws Cymru T2 and T3 – Volvo B8RLE MCV Evora operated by Lloyds Coaches.
- Traws Cymru T10 – ADL Enviro200 MMC operated by K and P coaches.
- Sherpa S1 – ADL Enviro400 operated by Gwynfor coaches.

Photographs of all but the first of these are shown below



Lloyd's coaches ([Andrew Simmonds](#))



K and P coaches



Gwynfor coaches

From my point of view as a passenger, the Traws Cymru and Sherpa vehicles were all basically buses – comfortable enough, with nice seats, but not of express coach standards. All vehicles had working USB charging points (something that many rail franchises don't seem to be able to provide), and two of the Traws Cymru vehicles had WiFi, although this tended to drop out in the more rural areas. Most had screens that could potentially be passenger information screens, although they were not in use. As someone who isn't terribly well acquainted with the area, the use of such screens to tell me which stop was coming next would have been really useful, and would have meant that I did not have to rely upon Google maps. In general though, I found the buses a pleasant and efficient way to travel, although I doubt I would have found them terribly comfortable for journeys of much more than an hour.

Bus stops and interchanges

Bus stops and interchanges are an integral part of any public transport journey, but in my experience receive far less attention and allocation of resources than they should. These feelings were reinforced on the journey described in this post



Ruabon station bus stop

At Ruabon the Traws Cymru stop was just outside the station building. It contained basic information about timetables, but no real time information. The shelter was functional but nothing more. I actually only used this stop on my return journey – the Arriva 5 left from a stop at the end of the Station Drive. Here the same information (about northbound buses to Wrexham only) was being displayed in the shelters on either side of the road, which was confusing to say the least. If one didn't have a basic grasp of the geography of the area, it would be easy to have got on the wrong bus.

At Llangollen I got off and on the bus at the Bridge Hotel stop. This can be seen to be a roadside stop of the most basic sort. Fortunately it wasn't raining. There was a timetable displayed, but no real time running information.



Llangollen Bridge Hotel stop (from [Google Street View](#))

Corwen was very different. Here there are proper interchange facilities with good, real time information, a solid shelter and space to wonder in the bus stop area. I think I could make out a toilet block too, but didn't investigate it. This is a nice facility. It would probably benefit from not being branded as "Corwen Car Park" – although it is indeed in the centre of a car park. It is much better than such a name would suggest. My only worry would be that the shelter would not be large enough for all those changing vehicles on a wet day. But this is how it should be done.



Corwen bus stop, waiting area and information panel



Corwen station on the Llangollen railway



T3 to Barmouth



Betws-y-Coed shelter



Betws-y-Coed interchange (from [Google Street View](#))

Betws-y-Coed is a strange place. It seems to be drowning in an ever expanding sea of car parks that have obliterated whatever it was that attracted folk there in the first place. The interchange is close to the station, and whilst there is shelter and some timetable information, I found the interchange, with four buses parking in an area that simply wasn't large enough, very confusing and unsettling. Indeed I boarded the wrong bus at my first attempt. I think that there is scope for producing something like Corwen here, but it will cost I guess. Sadly the adjacent railway line, with its not-quite three hour interval service simply isn't part of the interchange game here, which is based on a regular two hourly frequency.

Caernarfon bus station is simply a row of three or four bus stop and bays along a narrow street. However there is good passenger information and the provision of shelters is adequate. No problems here from my perspective.



Caernarfon bus station



Porthmadog Australia (from [Google Street View](#))

I began my second day at the bus stop outside the Australia in Porthmadog. It is simply a roadside stop. Passenger information and creature comforts are minimal. Porthmadog deserves better.

With my trip almost over, it reached its low point – Eldon Square in Dolgellau. This was perhaps the most chaotic bus interchange I have ever experienced with four buses double parked in wholly inadequate, highly trafficked space. There may have been public information systems,

but such was the chaos I couldn't find anything. The place is simply not fit for purpose. It is clear from a web search that its inadequacy is well appreciated and there have been long term discussions about how to overcome the issues. Maybe something will be sorted out in future, but of all my memories of the trip, Eldon Square is the one that remains with me. I will do my utmost to avoid ever having to use it again.



[Buses Magazine 2019](#)



Bala (from [Google Street View](#))

My final change of buses was at Bala – simply alighting at the stop in the centre and getting on the next bus in two hours time. again, it was a simple roadside bus stop. with only a paper timetable provided, amongst a sea of notices pasted to the stop itself. Very oddly, one of these was advertising a vacancy for a clergyman in East Sussex!

Some closing thoughts

On balance I was quite impressed by the Traws Cymru network. The regularity and timekeeping were impressive (although I suspect the latter might suffer when the traffic is busier in the high season) and the tickets were excellent value. The buses were comfortable, at least for journeys up to an hour or a little longer. It would be good if more use could be made of the on board information screens, particularly for passengers who don't know the area well. The bus stops and interchanges were not so impressive however, with only just tolerable information provision (and hardly any in real time) and shelter provision in most places. I suspect if the weather had been wet, I would have been less impressed by the experience. The contrast between my experience at the well thought out interchange at Corwen and the chaos of Eldon Square in Dolgellau was quite stark. Something really does need to be done about the latter.

[A recent news item](#) indicates that an express North / South Wales coach service is under consideration, over the route of the current T2 to Aberystwyth and the T1 from there to Carmarthen, which would only have a relatively small number of stops in the larger towns. From my perspective this is to be welcomed, but I would urge anyone involved in implementing such a scheme not to forget the passenger infrastructure where the coach calls. If a premium service is to be provided by high quality coaches, then this must be matched by higher quality passenger facilities at its calling points, with good quality shelter and information systems – and ideally toilets and access to refreshments. Good interchange with the rail network should also be provided, with something better than a bus stop in the station carpark. Without such provision I fear any such experiment will fail.

The lighter side

October 25, 2024

This post simply shows some photographs that I have found amusing for one reason or another in the past, in the hope that others may also find them enjoyable. They have been collected over the last couple of decades, and I am afraid I don't know the source of some of them, but if any reader can supply the missing information, I would gladly acknowledge the photographer, or remove the pictures if required.



Unknown source.



Unknown source



Unknown Source



Unknown Source,



BBC Gloucestershire December 2024



From Twitter 2014 "Thomas the Tank Engine: The crystal meth years."



From Prof Roger Goodall,
Loughborough University



Unknown source



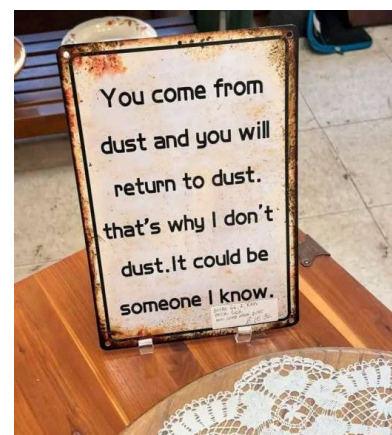
Jim Baker, Cromer 2024



Oakham, 2024



Unknown source 2023



From @OonaghKelleher
24/1/25

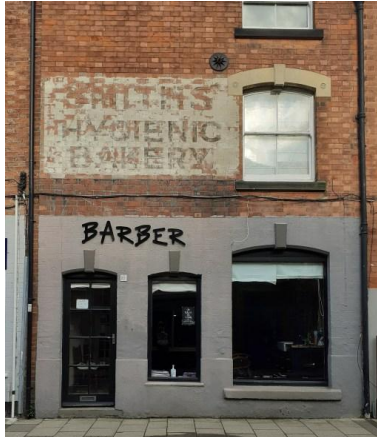
Ghost signs

July 11, 2024

A new interest of mine – the old, faded painted signs on buildings whose function has changed. There are just a few photos for now, and I will add more as I come across them. For those interested there is a much greater selection at this [Historic England site](#).



Oakham, Catmose Street



Oakham, Mill Street



Oakham High Street



Cromer

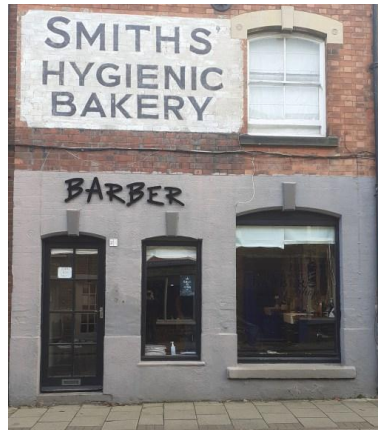


West Runton



Scarborough, Rothbury Street

And from November 2024, the sign in Mill St, Oakham has been repainted or perhaps resurrected or re-embodied?



A cross country experience

August 14, 2025

Preamble

For family reasons, I often make the journey from Oakham to the Chesterton area of Cambridge, travelling by train from Oakham station to Cambridge North, changing at Ely, and then either walking or taking one or more buses to reach my destination. The last leg is actually quite time consuming, and adds considerably to the overall travel time. Now in July 2025, I learnt of the existence of a new bus service from Huntingdon to Fenstanton and then along the Cambridge Busway, through Chesterton to Cambridge, passing very close to my destination ([the Whippet Coaches T1](#)). This seemed to me to offer an interesting, and potentially quicker journey, travelling to Peterborough by Cross Country trains, then to Huntingdon on Thameslink, and then onto the bus to my final destination. What follows is a report on the journey there and back via this route, highlighting both its good and bad points.

The journey

I travelled to Cambridge **very** early on a Saturday morning, catching the 5.47 East Midlands Trains service from Oakham to Peterborough, and then, after a 9 minute connection, the 6.24 Thameslink service to Huntingdon. The connection was straightforward, although there was some conflict between the online information and what actually happened on the ground with regard to the platforming of the Thameslink train at Peterborough. I arrived at Huntingdon on time at 6.38.

Now the weather that day was “interesting” to say the least, as can be judged from the weather radar screen shot below (Figure 1). The T1 was due to leave the station at 7.19, so I was anxious to find somewhere dry to wait. On leaving the Huntingdon station buildings, I found a convenient bus turning circle, with a respectable shelter (Figure 2). The only problem was that this was obviously not in use, and I was directed to a bus stop on the side of the ring road outside the station, which had no facilities other than a bus lay by and a stop sign (Figure 3). Why this change had occurred I have no idea – presumably something to do with operational convenience – but it had nothing to do with the comfort and convenience of passengers. Not good.

I was not anxious to wait to get soaked in such a situation, so I followed the signs to Huntingdon Bus Station, about a 5 to 10 minute walk away (including crossing the ring road) where the T1 was due to call after the railway station. This was a perfectly acceptable facility, with covered seating and adequate information – the only problem was that it wasn’t at the railway station (Figure 4).

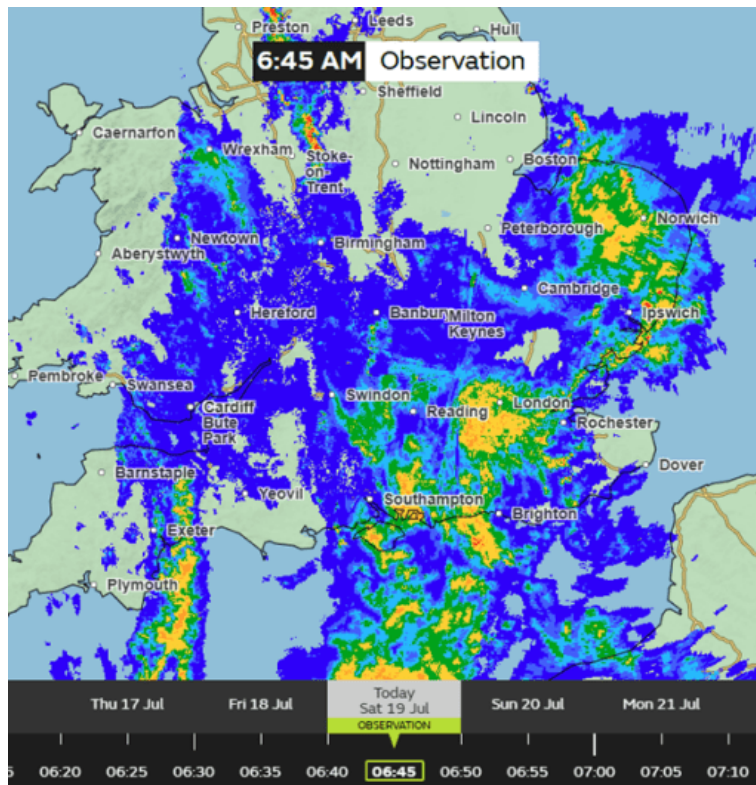


Figure 1. Weather Radar



Figure 2. The bus turning circle at Huntingdon



Figure 3. The bus stop and layby at Huntingdon station



Figure 4. Huntingdon Bus Station

The bus arrived precisely on time. The driver was cheerful and efficient and everything ran smoothly. the bus ran non-stop to Fenstanton, then travelled quite slowly over some minor roads (with cars very dubiously parked) to the Busway at Swavesey. From there the trip was fast

and smooth along the busway. The weather by this time was horrible as can be seen from figures 5 and 6. Loadings were light throughout, perhaps because it was a wet Saturday morning. It left the Busway at Milton Road in the north of Cambridge, and stopped at a number of stops along that road (unlike the standard Busway buses that run limited-stop into the city centre). I arrived at the stop I wanted a little after 8.00. The journey time was about 2 hours and 20 minutes, even with the 40 minute sojourn in Huntingdon. That was about the same time that the journey would have taken by train to Cambridge North. It was however rather cheaper, partly thanks to my Bus Pass!



Figure 5. The Busway



Figure 6. The Busway again

The return journey was uneventful, except for the weather. Around about Fenstanton, the persistent rain became a deluge which persisted until after the bus arrived at Huntingdon. The drop off in the layby outside Huntingdon station and the walk into the station building was unpleasant to say the least. I got on the bus at around 12.30 and arrived back at Oakham at 14.20 – half an hour quicker than the outward journey thanks to good connections in Huntingdon and Peterborough.

Reflections

So what was my overall view of the journey. The T1 bus service itself was very pleasant and convenient and Whippet Coaches are to be congratulated. The journey times and stopping places suited me very well. The service has the potential to be more than just a local service and could have a more inter-urban role, if the connections into the rail network were better. The hourly service inevitably means some extended connection times at Huntingdon and / or Peterborough and a more frequent service would be nice, although whether this would be financially viable is perhaps doubtful.

The unpleasant part of the journey was the lack of proper bus connection facilities at Huntingdon station. It is difficult to see how this could have been made worse, and is a classic example of the neglect of the most basic principle of integrated transport. Whoever is responsible (Cambridgeshire County Council perhaps?) should hang their heads in shame.