LLATVCC News-Sheet

Newsletter 65 – May-June 2021

Enjoy the relative peace while it lasts

It's been so pleasant during the last few months, with virtually no flights during the small hours and relatively few during the day especially since the Government's edicts about "essential travel". In the light of that ruling a surprising number of folk, mostly flying between UK and Eastern European destinations though Milan and Malaga also turn up, have nevertheless declared an essential need to travel; the early mornings have been fairly busy and, though numerical averages are probably misleading, based on the numbers of passengers and flights declared by the airport each flight has conveyed around 55 passengers.

The overall effect on noisiness has been very welcome: not only have the numbers of movements reduced but the noisiness of each departure has been less because, on average, each departing aircraft will have been about 15 tonnes lighter (fewer passengers) and therefore needing less power (and therefore less noise) to take off. Add to that the near-universal ability for air traffic control to decree constant climb departures (because the surrounding airspace is much less crowded) instead of stepped departures with Luton traffic being held low to keep clear of traffic at higher levels and we have about the best noise climate we could have expected. The story is not quite so good for communities on the arrivals flight-path, however, where the greatest contribution to the noise is airframe noise largely from the 140mph wind hitting landing gear and flaps. So enjoy the peace while it lasts – it'll not last.

Planning Application 21/00031/VARCON The proposal to grow by "only another million"

At the date of writing (mid-May), there has been no decision by Luton Borough Council as to whether it would grant this application, which would in effect "legitimise" the continuing breach of planning conditions on the subject of noise disturbance from its airport. The results of Covid lockdown on passenger numbers have called into question the urgency of this application as the growth curve for passenger numbers has taken a dive, but we sense from the tone of discussions at the airport Consultative Committee that the airport operator has some anxiety over airlines choosing to desert Luton if they could not see a firm long-term commitment to its growth. The effects on airlines' ability to fund the replacement of noisier aircraft, on which the environmental statements which supported that application depend, may have become an issue. **But see below:**

The "second terminal" DCO application : now it's all back to square 1 – STOP PRESS

London Luton Airport Limited (LLAL) now intends to begin a new full consultation on revised plans later this year or next year, the firm's chief executive Graham Olver told the Local Government Chronicle. These would consist of two stages, with an initial focus on improving the existing terminal, followed by the construction of a second terminal "at some point in the future". MPs from constituencies near the airport have recently spoken out against the expansion plans, citing concerns including noise and environmental impact, but the pandemic has also had a devastating impact on the airport's finances. Before Covid, the airport contributed a significant

amount to the council's income, providing a £19.1m dividend in 2019-20, £15.8m servicing debt and a further £9.9bn for local charities and community groups. The airport says it has provided £287m to the council since 1998 in dividend, rents and payment for services.

But last year the council had to borrow £60m from the Public Works Loans Board and lend it to LLAL to ensure its stability as the pandemic resulted in a collapse in passenger numbers. Luton BC was also granted a £35m emergency capitalisation direction for 2020-21 by the government in February, with a further £14m expected this financial year. This support is tied to an assurance review that will explore "reducing the council's financial exposure to the airport".

We'd already understood that an application for a Development Consent Order (DCO) to construct a second terminal and associated works would not be submitted this year and work is in hand to make the application the greenest possible. Quite how this will play against the Government's inclusion of international aviation in the UK's carbon budget very much remains to be seen – the airport owner LLAL has insisted that its airport is already almost as green as it could be and contributes "only" around 4% of all the greenhouse gas emissions from flights which use it. The extent to which even the very local component of the landing and takeoff cycle, which on average (a slightly misleading statistic) consumes 40% of the fuel burnt on the average flight and thus the CO2 generated, was factored into that assertion isn't clear. Given that the preponderance of Luton flights being of relatively short duration, with low-cost carriers keen to operate as many daily cycles as possible, their landing and takeoff cycle fuel burn would constitute more than the overall 40% average, which is for flights of all lengths and durations.

So there will clearly be a lot of new and creative arithmetic to be done to support the application – we may see a hint of it when we are involved once more with the Design Group working on the design of a noise envelope for an expanded airport. One would have thought that, in the light of the change of Government policy on the carbon budget now having to incorporate international aviation, airports with inclinations to expand would have put such plans on "hold". The recent plan to grow Leeds/Bradford was called-in by the Minister, but we hear that Heathrow is once again buying up houses that would need to be levelled if their third runway scheme was to go ahead. It's not easy to read the future.....

Another sideways look at the airport and its contribution to local employment:

In our last newsletter we set out the rarely-debated down-side of aviation-based tourism. Broadly stated, our estimate was that with the overwhelming proportion of Luton's passengers being outbound tourists the Office of Statistics data suggests that the net loss to the national and local economy caused by Luton's operations at the level of 18million passengers per year was around £2.4 billion.

Here's another aspect. For years, until we and many others exploded the myth, the aviation industry peddled the "1000 new jobs per 1 million additional passengers" tale when justifying expansion schemes. In some of Luton's own recent publications the claim is that each additional million passengers somehow generates another 800 local jobs.

Each year a jointly-owned Annual Monitoring Report (AMR) is published by Luton Borough Council (LBC) and the airport operator (LLAOL). It used to be largely produced by LBC and represented its annual stewardship report for its airport, but has been progressively taken over by LLAOL who have turned it into more of an element of their overall PR arsenal. One component of the AMR is a section on the airport's contribution to local employment. The "jobs" numbers are, as they have been for years, flattering estimates based on a mix of actual counts and calculations of "indirect, induced and catalysed jobs" - for example, claiming a share of the number of jobs in local branches of McDonalds because airport employees

may have bought burgers there. But, flawed though they undoubtedly are, the basis on which they're calculated doesn't change.

Using the airport's own published data: according to the airport's Annual Monitoring Report, in 2013 the airport handled 9.7 million passengers and claimed to support about 8400 jobs in and around the airport.

According to the 2019 AMR the airport handled 17.99 million passengers so one might expect that this level of passenger activity would, pro rata, have supported 15,600 jobs: but the AMR declares only 11,200 – an increase of **at best 300 jobs per million passengers, not the 800 jobs that some publications have suggested.**

Aviation and the UK's Carbon Budget

There has been a long-awaited strengthening of the Government's willingness to address aviation's climate change impacts, including the significant decision to include international aviation and shipping emissions in the UK's carbon budgets and net zero legislation. Publication of the Government's net zero aviation policy is still awaited: we need to see the "small print". However, the Climate Change Committee (CCC) has made clear that adequate airport capacity already exists to meet the future levels of demand it deems to be compatible with a balanced pathway to achieving net zero by 2050, and advises therefore that there should be no net increase in airport capacity unless the industry over-delivers emissions reductions. **The inescapable logic is that any approved expansion at one airport will necessarily impact upon the existing capacity that can be permitted to be used at others around the country.**

The pandemic has damaged the business capability of some airports and airlines, reducing their ability to invest, particularly in the innovation required to deliver net zero – largely by replacement of older and thirstier aircraft. However, it appears not to have affected airports' appetite to pursue permission to expand. All of these expansion plans have the potential to increase greenhouse gas emissions, and therefore run contrary to the recommendations of the CCC. Allowing some decisions to be determined locally at this time prejudges the outcome of the Government's consultation on net zero aviation. An uncoordinated and unplanned approach to airport expansion before appropriate policy is in place puts achievement of net zero in jeopardy. We suggest that until the Government has framed a net zero plan for the sector, including a national strategy for airport capacity which acknowledges and plans for the new carbon constraints, it would be responsible to impose a blanket moratorium on all airport expansion planning.

Carbon Offsetting: again called into question

Offsetting seems to be rather more "greenwash" than is generally realised, whether it's in the form of simple tree-planting, the more creative (and less credible) schemes based on paying to prevent **de**forestation, or through use of aviation fuel produced from waste materials. We've always been suspicious of the tree-planting schemes: the answer to the question "when is the best time to plant a tree?" is "about 50 years ago" - today's saplings will do nothing to absorb today's emissions, and since the soil is pretty thin at 36000 feet, which is where the CO2 lingers for decades, trees planted at ground level don't absorb much of what's poured out. Those deforestation schemes tend to have relatively short lives rather than dealing with long-term problems, and many seem unable to stand up to audit – especially in the area of forecasting what level of deforestation would have occurred in the absence of the schemes. The Guardian, and Greenpeace surveyed 10 of the largest schemes and called them all into varying degrees of doubt.

The "waste-to-fuel" processes work: but still cannot overcome the disadvantage of consuming lots

of energy to drive the chemical processes. Another scheme that looks somewhat like snake oil involves the conversion of atmospheric CO2 and water into aviation fuel, the argument being that its combustion generates no more CO2 than was used to make it: therefore truly carbon-neutral. There are a few snags, the largest of them being the amount of energy that has to be put into the chemical process to make it, but the process itself has been demonstrated by a Swiss company.

A few years ago, when there were real fears that the supply of oil would quickly run out and the urgency was to address that issue, the aviation industry was apparently becoming keen on "open rotor" engine technology – aircraft would have a performance part-way between turbo-prop and turbo-fan (i.e. current) aircraft but with 30% lower fuel consumption. That particular evolutionary path seems to have come to a halt: aircraft that would have flown lower and slower while making huge amounts more noise while doing it seem not to have caught the mood of the moment.

As for hopes of CO2-free flying through electric aircraft – huge doubts about the likelihood of electric equivalents of an Airbus A320 or a Boeing Dreamliner. The fundamental issue is that hydrocarbon fuel has enormous energy density compared with the very best battery and all the calculations suggest that it would not be possible for such aircraft to take off on electrical power alone though it **might** prove possible for electric aircraft to cruise once they reach height: but the same "range anxiety" must exist unless such aircraft were carrying sufficient hydrocarbon fuel to handle delays, diversions, adverse weather conditions etc.; and had the ability to restart their conventional engines at altitude. They'd also be paying a weight penalty because of the need for two different types of engine.

There is, too, the refuelling issue: it takes very little time to pump 5000 gallons of hydrocarbon fuel into an aircraft but an age to recharge high-capacity batteries, as has become evident with electric cars. It's one thing to demonstrate an electric equivalent of a Cessna 172 whose range is perhaps 100 miles and whose exhausted battery pack could be exchanged for a fully recharged one with lifting equipment in 10 minutes or so but another thing altogether to provide quick electric "refuelling" for a 150-seat passenger transport.

There might be more hope for hydrogen-powered flight but experiments as long ago as 1988 involving a Russian Tupolev TU155 (a copycat version of the Boeing 727) revealed some interesting issues over airframe design. Because the hydrogen fuel tanks cannot be accommodated largely in the aircraft wings as in the case for hydrocarbon fuels because they have to be made from relatively heavy metals rather than the equivalent of huge plastic bags, airframes would need to be both longer and wider, for a given passenger capacity, creating an interesting set of trade-offs between range, capacity and fuel efficiency, even given the weight of hydrogen fuel being only around 30% of hydrocarbon. Some way to go....

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