The business case for a third runway is flawed and the environmental case rests on hugely optimistic assumptions.

Given how long the debate about Heathrow expansion has worn on, it may be tempting for politicians to think “let’s just get on with it”. There is a danger that the sheer weight of paper generated, the time spent debating the issue, and the dogged persistence of the airport’s operator, which has spent £30m promoting its cause\(^1\), now tips the scales towards development, whatever the social and environmental cost. But a third runway represents a very serious threat to the health and well-being of hundreds of thousands of people living around the airport\(^2\) and could also compromise the UK’s ability to deliver on its climate change commitments\(^3\). The decision should be the right one, not just the easiest. Proponents of expansion argue that there is an urgent economic need for the runway; that mitigating measures will protect the health of those affected; and that we will still be able to meet our climate targets. Up close, however, these claims rest on a web of tenuous assumptions and highly optimistic predictions. And, although the House of Commons transport committee has just come out in favour of expansion\(^4\), the endless caveats to its judgment only highlight the huge uncertainties surrounding the scheme.

Take, first, the claim that we urgently need new capacity for business travellers. In practice, over the last ten years, the number of flights made for business at the UK’s five largest airports, including Heathrow, has not increased\(^5\). Latest DfT forecasts also suggest that a new runway will make little difference to the number of flights taken for business across the UK in the future\(^6\).

Instead, the argument made is that business travellers will enjoy more services to key destinations, fewer delays, and (even) cheaper fares\(^7\). However, this is all subject to future business decisions made by the airport’s operator. The level of fares, for instance, depends on whether Heathrow avoids passing on costs of the new runway to its users – something the airlines are deeply sceptical about\(^8\), and one of many areas where the transport committee is now calling for safeguards. Meanwhile, although Heathrow’s hub status may enable it to offer services to more obscure places, there is no guarantee that flights will therefore go to emerging business destinations, rather than more lucrative holiday hotspots.

We might expect the Government’s economic assessment to tell us about the effects on UK-wide prosperity. However, the majority of calculated benefits for expansion come from adding together estimates of small reductions in journey times or fares for individual passengers. Making flying quicker and cheaper is not beneficial for ferry or rail operators, or thousands of UK businesses that depend on domestic tourism. In 2016, UK residents flying abroad for leisure spent £33.5bn, whilst overseas visitors flying here for leisure spent only £14.5bn – a deficit of £19bn\(^9\). This loss to the UK’s tourism economy is not even factored into the cost-benefit analysis of the third runway. And latest Government forecasts also suggest that regional airports will lose out from expansion, since, with the third runway, they will have 17 million fewer passengers by 2050 than they would without it\(^10\).
The validity of the case for expansion is further undermined by the sheer volatility of the figures presented. The maximum estimated benefits (over 60 years) have been repeatedly revised, from £211bn in 2014\textsuperscript{11}, down to £74bn in 2017\textsuperscript{12}. When the costs of the project are then added in, latest official figures show that, in some scenarios, the overall ‘net present value’ for the expansion is actually negative\textsuperscript{13}.

Worse still, the environmental case for the runway relies on a series of hugely optimistic forecasts. In evidence to the transport committee, advocates of the runway argued that there will be no additional road traffic, that air quality will stay within legal limits, that noise impacts can be effectively managed, and that Climate Change Act requirements will not be breached. However, this rests on the following assumptions: planes will get cleaner and quieter at a faster rate than has previously been expected\textsuperscript{14,15}, cars and vans will also get dramatically cleaner\textsuperscript{16}; freight movements will somehow be optimised\textsuperscript{17}; the latest National Air Quality Plan will deliver all anticipated air quality improvements\textsuperscript{18}; the fledgling international aviation carbon offsetting scheme will generate a high enough carbon price\textsuperscript{19}; the national Aviation Strategy (not yet written) will come up with cost-effective mechanisms for constraining aviation emissions further\textsuperscript{20}; the new Independent Commission on Civil Aviation Noise will prove effective; a review of airspace (that has not taken place for over 40 years, because it is so controversial) will take place soon\textsuperscript{21}; HS2, Crossrail and the Piccadilly line upgrades will attract air passengers and airport staff in sufficiently large numbers; funding will be found for Western and Southern rail access\textsuperscript{22}; etc. It seems very unlikely that all of these will fall into place.

Doubts about the timing and effectiveness of such measures are also expressed by the transport committee, which is calling for more safeguards to be written into the Airports National Policy Statement, including conditions withholding the use of new capacity if targets are not met. However, for Heathrow to open in 2026, the scale of what would have to be delivered in the next eight years is immense. It is unclear how, at this stage, any re-written paperwork can provide the certainty needed. Nor does it seem credible to believe that, after billions have been spent on building the runway, politicians will tell Heathrow they can’t use it.

Surely, instead, before taking any decision, it makes sense to wait and see whether, as promised, in the next few years, air quality improves, planes get quieter, airspace becomes better organised, carbon emissions can be managed, and an increasing share of air passengers and staff start using public transport. If these things don’t happen – or, indeed, if the airport operator then decides that it is no longer financially viable to build the runway – politicians will have made the right choice, safeguarding both the health of local communities and the UK’s climate commitments. Giving a green light to expansion now is an enormous gamble with the future.

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production has been scaled right back. This is a huge gamble, and it has not been properly investigated.”

Val Shawcross CBE, Deputy Mayor of London: “something like three quarters of a million people are already affected, so the potential expansion could push one million people to experience significant noise nuisance.” Q364, House of Commons Transport Committee Oral evidence: Airports National Policy Statement HC548, 15/1/18.

The aviation forecasts currently suggest that Heathrow expansion will lead to total UK aviation emissions from departing aircraft of 39.9MtCO₂ p.a. by 2050, which exceeds the total needed to meet the Climate Change Act requirements (DfT 2017 UK Aviation Forecasts, Table 39, p110). A review of theoretical additional carbon abatement measures was published in conjunction with the revised NPS, however, critics have highlighted the potentially high costs and practical challenges to implementing them.


5 Airports Commission (2015) Final Report shows the trend in the number of international terminal passengers travelling for business at the UK’s 5 largest airports between 2000 and 2013, Figure 3.1, page 70. According to Civil Aviation Statistics, the total number of terminal passengers travelling for business at the UK’s five largest airports (Heathrow, Gatwick, Luton, Stansted and Manchester) was 40.5 million in 2006, 34.9 million in 2011 and 34.8 million in 2016.

6 DfT (2017) UK Aviation Forecasts. Table 31, page 100. In the unconstrained capacity scenario, the forecast is for 93 million business passengers p.a. (including UK business, foreign business and domestic business) in 2050. In the constrained scenario, the forecast is for 91 million. The forecast difference in total passenger numbers is 494 mppa compared with 410 mppa. Allowing a third runway at Heathrow (which is expected to reduce constraints, but not reach the ‘unconstrained’ scenario) is expected to result in total passenger numbers of 435 mppa (Table 34). The Transport Committee’s report (page 17) states that “the passenger growth facilitated by a NWR scheme is accounted for almost entirely by leisure passengers (i.e. those travelling for holiday purposes or those visiting friends and relatives sometimes referred to as VFR) and international transfer passengers”.

Caroline Low, Director of Airport Expansion and Aviation and Maritime Analysis: “The number of people travelling is not dissimilar, because in any scenario, business travellers will pay to travel...” “...the benefits we monetise are reduced delays, increased frequency and reduced fares...” Q464 and 465, House of Commons Transport Committee Oral evidence: Airports National Policy Statement HC548, 7/2/18

7 Craig Keeger, CEO Virgin Atlantic: “...we find ourselves today – being quite concerned that we or our customers, or some combination thereof, would effectively be left holding the bag for any overspending in what is now, at this point, a very unpredictable outcome.” Q578

Willie Walsh, CEO of International Airlines Group thereof, would effectively be left holding the bag for any overspending in what is now, at this point, a very unpredictable outcome.”

8 Office for National Statistics (2017) Travel trends: 2016. Figures taken from the underlying data tables (2.09 and 3.09), in order to exclude international travel done for business, or by sea or channel tunnel. Leisure includes holidays, visiting friends or relatives, and ‘miscellaneous’. In 2012, the equivalent figures were £23.2 billion versus £11.5 billion, a difference of £12 billion. It is also notable that, in 2016, 78% of leisure spending by UK residents flying overseas was on holidays, whereas this was only the case for 48% of leisure spending by overseas visitors. ‘Inbound foreign holiday makers (travelling by air) only spent £7 billion in the UK in 2016. This is a significant difference to the figure of ‘over £22 billion’ for ‘inbound tourism’ given on page 14 of the revised NPS.


9 BEIS (2017) The Clean Growth Strategy refers to intentions for almost every car and van to be zero emissions by 2050 and to end the sale of conventional petrol and diesel cars by 2040 (p85). Meanwhile, the Defra/DfT (2017) Draft UK air quality plan for tackling nitrogen dioxide: technical report includes graphs in Annex H, which indicate the scale of reduction in nitrogen dioxide expected over time, most of which is anticipated to come from reductions in NOx from vehicles.

Stephen Clark, No Third Runway Coalition: “…a heroic gamble is being taken on a quieter fleet. Some of these changes are not happening... The new generation A380s are not being ordered at the moment. There are other new types of quieter planes where production has been scaled right back. This is a huge gamble, and it has not been properly investigated.” Q304, House of Commons Transport Committee Oral evidence: Airports National Policy Statement HC548, 15/1/18


14 The aviation forecasts assume that there will be a 46-48% improvement in fuel efficiency between 2016 and 2050 (DfT 2017 UK Aviation Forecasts, Table 8, page 55). In 2013, the expectation, in line with mid-point technology assumptions used by the UN’s International Civil Aviation Organisation, was for a 32% improvement, according to the Aviation Environment Federation.


15 Alex William, Director of City Planning, Transport for London: “…the NPS sets out no objectives to reduce, manage or consolidate that [freight] to reduce the impacts on the wider network. HAL would like an arrangement where there is no increase in the overall volume of trips. We see no strategy from HAL as to how that will be achieved. It is the right objective in our view, but there is no detailed evidence base to say how it will be achieved.” Q244, House of Commons Transport Committee Oral evidence: Airports National Policy Statement HC548, 15/1/18

16 The updated air quality analysis highlights that there is a ‘high’ risk that the Heathrow scheme could delay or worsen compliance with limit values, and that “the mitigation of risks relies on the effective implementation of the Government’s 2017 Plan measures and RDE legislation to reduce emissions from road transport.” DfT/WSP (2017) 2017 Plan Update to Air Quality Re-Analysis, p4
The aviation forecasts assume that a theoretical global carbon trading scheme is operational, with BEIS estimating the associated cost of carbon to be £77/tonne in 2030 (DfT 2017 UK Aviation Forecasts, para 5.16, p78). This cost feeds through to fares, and thereby causes some suppression of demand, resulting in lower carbon emissions than would otherwise occur. However, in reality, aviation will not participate in a global trading scheme, as the International Civil Aviation Organisation (ICAO) has agreed to introduce an offsetting scheme, known as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). ICAO analysis suggests the carbon costs of CORSIA will be only £11/tonne in 2030, and will therefore fail to have the same effect on demand and CO₂ reduction.


See footnote 3

Lilian Greenwood, Transport Select Committee Chair: “...ultimately, you are having to make choices about who is affected – who is going to be overflown. These are hugely contentious and have proved very difficult issues in the past, have they not?”

Chris Grayling, Secretary of State for Transport: “They are very difficult issues...” Q535, House of Commons Transport Committee Oral evidence: Airports National Policy Statement HCS48, 7/2/18

Alex Williams, Director of City Planning, Transport for London: “We hear warm words in the NPS [about western and southern rail access], but we do not hear firm statements about commitment... We see them as essential to getting anywhere near the mode shift targets.”

Brendon Walsh, Chairman of the Officer Group, Heathrow Strategic Planning Group: “The Heathrow Strategic Planning Group represents 12 local authorities and the local LEPs in the area. We too agree that it is essential rather than desirable to see southern and western rail access.” Q238 House of Commons Transport Committee Oral evidence: Airports National Policy Statement HCS48, 15/1/18