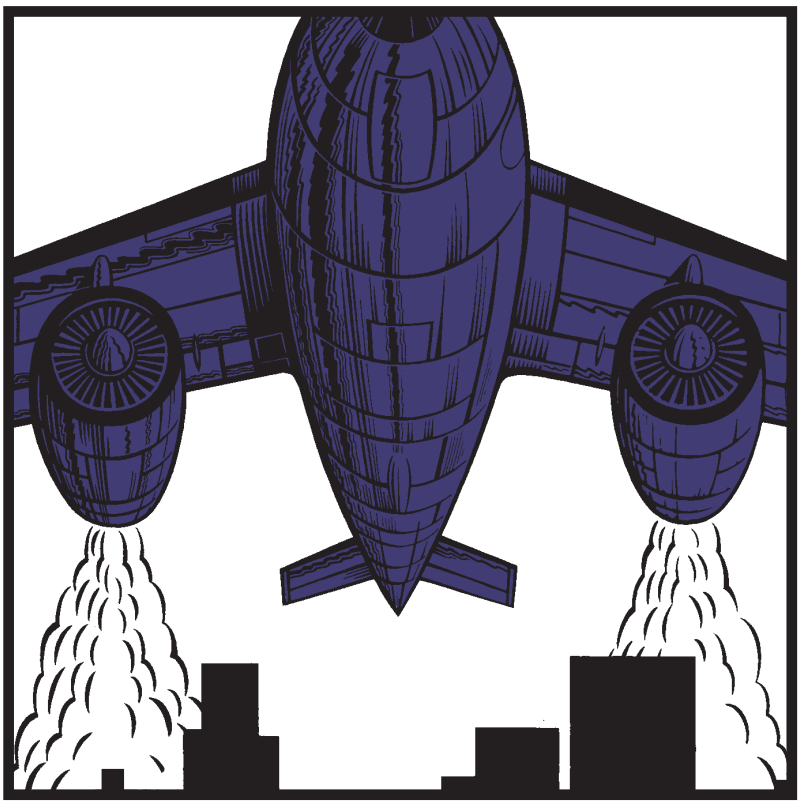
TOWN & COUNTRY PLANNING
Tomorrow Series Paper 3

HEATHROW – A RETIREMENT PLAN

BY TONY HALL AND PETER HALL



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Introduction

In 2006 Heathrow airport celebrates its 60th birthday. It opened for business on 31 May 1946, somewhat inauspiciously, in an army surplus tent. The first permanent building, now Terminal 2, had to wait until 1955, together with the tunnel under the north runway. That was soon to be seen as a planning mistake, creating permanent congestion into and out of the central terminal area as the Oceanic Terminal, now Terminal 3, was followed by Terminal 1.

It was not the first mistake made in planning Heathrow, nor would it be the last. In fact Heathrow's history is a series of minor planning disasters that together make up one of the country's truly great planning catastrophes. Our purpose in this paper, published for Heathrow's 60th birthday, is to ask whether it is not time to call it a day. At 60, some people retire; Turner Report or no, most begin to contemplate retirement. The same, we argue, should be true for our ageing national airport.

Heathrow became London's first airport, and subsequently the world's busiest international airport, in 1943 almost by accident. The wartime government urgently needed a fighter airfield which would allow planes to scramble quickly to meet an enemy attack. Heathrow, located on flat land to the west of London – hence on the far side from the enemy – was the best possible site. The original layout provided for no less than nine runways arranged in a Star of David pattern, with personnel and control facilities in the middle of the star – ideal for scrambling fighters to fight the Luftwaffe but the worst possible pattern for civil aviation. Several of these runways were actually built after the war and then abandoned as it was realised that they were useless for peacetime operations. Only three remain and only two are in regular use – a severe constraint, coupled with the perversely sited central terminals that can be reached only by tunnel. To compound this, the two runways are oriented precisely east-west and the field is due west of the capital, ensuring maximum possible noise nuisance over the maximum possible area either on approach or take-off.

Nonetheless, since 1946 Heathrow has remained London's, and the UK's, principal airport. Over the last half a century, air travel has changed out of all recognition, both in technology and scale, but the UK's principal airport has remained on the same site. Compared with other major world airports, London is not especially close to the city centre – in Europe, Paris Charles de Gaulle is almost the same distance from the city centre (14 miles, 23 kilometres), while Amsterdam, Copenhagen, Frankfurt, Madrid and Zürich are much closer – but the greater spread of the conurbation results in a burden of noise pollution and traffic congestion to a large part of the Greater London area. The policy of successive governments has been to relieve pressure on this site by building subsidiary airports around London, first at Gatwick from 1956, and then at Stansted from the 1970s. An additional, and similar, idea to that of the 'relief airport' approach has been that of promotion of provincial airports within the UK, especially in the major conurbations, again to relieve the pressure on Heathrow. None of these policies has been successful. No other airport in the country has approached it in scale of operations, particularly long-haul. In response to overwhelming demand, Heathrow has continued to expand on its original site. It remains overwhelmingly the busiest international airport in the world in terms of traffic volume.

The contrast with other countries could not be greater. Mercifully for the rest of the world, the British style of short-term muddling through is not widely copied. A few fortunate cities, like Amsterdam, Frankfurt, Copenhagen and Singapore, managed to plan their airports so well in the first place that they could expand logically and rationally: Amsterdam's Schiphol and Singapore's Changi, two airports that regularly win awards from business travellers, are outstanding examples. But, although few people in Britain seem aware of the fact, elsewhere in the world the standard solution to the growth of air travel has been to build a new and larger airport further out from the city. This new airport becomes the principal airport. The original airport then takes on a subsidiary role. This process may then be repeated 10-20 years later. City after city has done this. Sometimes, at first, there were complaints that the new airport was too far out. These complaints were seldom heard for long; urban growth and traffic growth caught up.

The classic example is Paris. Here, as with London, the principal airport serving the capital also acts as both the main airport for the country as a whole and also as one of the major world airports for transit traffic. In the period immediately after the Second World War, it was located at Le Bourget, 13 kilometres from the centre of Paris. At the beginning of the 1960s, a far larger, state-of-the-art airport was constructed at Orly, 15 kilometres from the city centre. Le Bourget was then relegated to a subsidiary role, losing its international services in 1977 and its regional services in 1980. In 1974, Orly was itself replaced by Charles de Gaulle, a new and far larger facility on a greenfield site 23 kilometres from the centre of Paris. Orly became the subsidiary airport, with Le Bourget having only a very minor role for private business flights. Paris is now looking for yet another, even larger airport as a replacement for Charles de Gaulle in the long term, although the idea of a site in Picardy, close to the TGV line to Lille and London, seems to have been shelved – at least for the time being.

The Paris story is especially complicated because two successive transfers took place in as little as 20 years. But replacement of airports by newer and larger airports, further from city centres, has been a common experience both in Europe and elsewhere. Some of the most notable cases are summarised in the table on the right. The need in every case was to provide for increased traffic more efficiently. Generally, the major international airport was relocated. Sometimes, all operations were transferred to the new airport and the old airport was closed down. Sometimes, the old airport was retained in a secondary role, invariably as the domestic airport.

Major Airport Relocations and Distances from the City Centre

City	Airport 1	Distance, kilometres	Airport 2	Distance, kilometres	Date of opening
Paris	Orly+	14	Roissy-CDG	23	1974
Athens	Ellenikon*	9	Venizelos	33	2001
Stockholm	Bromma+	7	Arlanda	43	1960
Munich	Riem*	7	Franz-Josef Strauss	28	1992
Milan	Linate+	7	Malpensa	45	1998
Berlin	Templehof (to 2007)*	6	Berlin Brandenburg	20	2011
	Tegel (to 2011)*	8	International (Schönefeld)		
Oslo	Fornebu*	7	Gardermoen	50	1998
São Paulo	Congonhas+	7	Guarulhos	25	1985
Rio de Janeiro	Santos Dumont+	2	Galeão	20	1952
New York	La Guardia+	13	JFK	24	1948
Washington	National (Reagan)+	7	Dulles	42	1962
Houston	Hobby+	11	Intercontinental (George Bush)	37	1969
Denver	Stapleton*	8	Denver International	37	1995
Tokyo	Haneda+	16	Narita	65	1978
Hong Kong	Kai Tak*	5	Chep Lap Kok	34	1998
Kuala Lumpur	Subang+	17	KLIA	47	1998

+ Remained as secondary (usually domestic) airport * Closed after opening of new airport
Note: Distances are crow's-flight. Actual ground distances are typically 20-25 per cent longer

Why Has the British Approach Not Worked?

To understand why the British approach has not worked, it is necessary to appreciate the critical distinction between long-haul and short-haul operations. Most short-haul traffic is point-to-point in nature for both business and tourist purposes. It can be served by equivalent point-to-point operations by airlines. It is most efficiently managed by flying between local airports near to the origins and destinations of the passenger trips themselves. The essential characteristics of these operations are that they endeavour to avoid change of plane and intermediate stops. Ryanair and easyJet have brilliantly applied this concept to low-cost short-haul travel, borrowing from a model first developed by Southwest Airlines in the United States some 20 years ago. Ryanair in particular has expanded over ten years from an insignificant Dublin-based airline to a major European carrier, actually carrying more passengers than British Airways (BA) in the latter's strike-hit August 2005. It has developed a main London base at Stansted, which in consequence is rapidly expanding, but very few of its passengers transfer between planes there.

Long-haul operations are an entirely different matter. In addition to passengers originating and terminating their journeys in major cities across the world, a great deal of long-haul business is from passengers changing aircraft at principal international airports. Much of this is of the so-called 'hub and spoke' nature: passengers changing between a long-haul flight and one of a variety of local feeder services. For example, a passenger from Albany, NY to Newcastle, UK would take a local flight to New York or Boston, a long-haul flight across the Atlantic to London Heathrow and then change there to a local flight to Newcastle. There is also interchange between long- and medium-haul services. Passengers from, say, the Middle East to North America can change aircraft at Heathrow, Charles de Gaulle, Schiphol or Frankfurt. This interchange traffic is essential for the success of the long-haul business. This is why, for nearly all the world's major airlines, concentration on one principal long-haul airport in the UK is the only option. They have mounted the strongest resistance to moving to Gatwick, let alone Stansted. The number of scheduled long-haul flights from Gatwick is very small in comparison with Heathrow, and BA has actually reduced the number and range of its Gatwick operations. Occasionally, one or two long-haul scheduled services have operated from Stansted, but none survived for long. There are regular long-haul services from Glasgow, Manchester and Birmingham, predominately to North America, but their numbers are insignificant compared with those at Heathrow. This is not because of lack of capacity at these airports. They could take, and indeed want, more long-haul services, but it occurs because of the reasons already outlined.

There is no reasonable prospect of any other British airport taking any significant amount of long-haul traffic away from Heathrow. It has the additional advantage of being very close to the centre of London: only 14 miles, 23 kilometres.

The only realistic alternative to Heathrow, therefore, is to do what has been done in so many other leading cities: *to plan long-term to build a replacement national long-haul hub serving London, with Heathrow relegated to a secondary role or eventually closed entirely.*

There was one abortive attempt to establish an airport larger than Heathrow, as opposed to smaller relief facilities. In the mid-1960s, the government established the Roskill Commission to evaluate alternative sites. The majority recommendation was for Cublington in Buckinghamshire, but it was the dissenting opinion from Colin Buchanan for an offshore site at the mouth of the Thames, at Foulness in Essex, later called Maplin, that was taken up by the government. Unfortunately, it was later abandoned because a shortage of public funds.

Why is Heathrow a Problem?

The most obvious and pressing environmental problems of Heathrow airport arise from its location within the built-up area of Greater London. Residential areas adjoin its boundary on the eastern and southern sides. On the north side, residential areas are 1.5 kilometres from the boundary and less than 1 kilometre distant on the west side. Although the land to the west is not so heavily built up, the centres of the substantial towns of Slough, Staines and Windsor are only 8 kilometres away.

Noise pollution is acute. The flight path into the airport passes right across the centre of London; in 'normal' weather conditions with westerly winds, experienced 70 per cent of the time, aircraft fly low over the suburbs of Barnes, Richmond and Hounslow as they make their final approach. In these conditions, take-off is in the Windsor direction. The 63 decibels noise footprint extends 19 kilometres and is approximately 3.5 kilometres wide. Its eastern 6 kilometres cover the residential area of Hounslow. Although improvements in technology have resulted in quieter aircraft and a smaller noise footprint than in the past, the number and size of aircraft have increased enormously. During the other 30 per cent of the time, when winds come from the east – corresponding to fine sunny weather, especially in summer – aircraft take off towards London, splaying out immediately after take-off into two big noise corridors: a northerly one over Ealing and Brent, a southerly one over Richmond and Kingston, equally blighting much of West London suburbia.

The size and role of the airport also make it a focus for road journeys, particularly those by private car. Not all use the motorway link, because they may approach from all directions, passing through the urban areas that surround the airport. This creates noise and fume pollution for local residents and adds to the general level of traffic congestion. It also adds significantly to the traffic on the already heavily loaded sections of the M4 and M25 motorways to the west of London.

It is not as though this environmental cost can be balanced against operational efficiency. The reverse is the case. Amazingly, the landing field is essentially the same as in the 1950s, when it was carrying less than one tenth of today's traffic. The terminal buildings from that period have been incrementally adapted and extended, even though they were designed for a very different age, one that bears little resemblance to now. The whole site has been rebuilt repeatedly *in situ*. There has never been the opportunity to build a completely new airport, purpose-designed for the needs of the 21st century.

What is now Terminal 2 was originally built in 1955 for all types of air traffic but has had to be extensively rebuilt several times *in situ*, mainly on the airside. This has been a far more expensive and disruptive process than would have resulted from building new terminal buildings from scratch on a new site to meet current and future requirements. Terminal 1 was originally opened in 1968, solely for domestic traffic. It now serves international short-haul flights and some long-haul operations, and is heavily overloaded in spite, again, of reconstruction airside. Terminal 3 was also built in the 1960s for intercontinental traffic but is, likewise, heavily overloaded. Terminal 4 was built in the 1986 as a state-of-the-art facility for BA to take the pressure off Terminal 3. Unfortunately, the only place available for it was against the southern boundary of the airport, away from the other three terminals, necessitating all aircraft taking off or landing on the distant north runway to cross the live southern runway, with a 10-20 minute time penalty. The underground railway link, constructed not long before, had to be extended to serve it in a manner far from ideal.

The continued growth of air traffic at Heathrow, growing in spite of expansion of Gatwick and Stansted, has resulted in a situation where all four terminals cannot cope and, after a five-year planning inquiry, a fifth is now under construction. This is on land obtained by extending the airport boundary to the west, on the former site of a sewage works, and away from all four of the other terminals. It is necessitating a further difficult and expensive extension of both the London Underground and Heathrow Express railway lines, together with equally expensive new road links.

While this incremental growth was happening over half a century, the runway capacity remained unchanged. Heathrow, remarkably, depends on only two parallel runways, plus a third substandard cross-runway used only in abnormal weather conditions: a ridiculously inadequate number for an airport carrying 67 million passengers a year (the 2004 figure), let alone the 97 million projected for 2015 when Terminal 5 is in full operation. These constraints are now beginning to show. Heathrow is steadily slipping down the ranks of Europe's leading airports in terms of the number of destinations it offers; it now stands at fifth place, with 178 routes, compared with 233 at Frankfurt, 220 at Paris Charles de Gaulle, 203 at Amsterdam Schiphol and 179 at Munich, Germany's number two airport.[1]

The pattern of runway and terminal facilities that has resulted from the *ad hoc* expansion over the years is absurdly sub-optimal when compared with the design of an airport built from scratch on a new site. Passengers who fume at the long taxiing operations culminating in a take-off queue, or at the long periods spent in the four holding areas at the four corners

1 *Financial Times*, 20 Mar. 2006

of the metropolis, might well echo Dr Johnson's famous remark about a dog walking on its hind legs: it is not that it is done well; but you are surprised to find it is done at all.

The outcome of the 2002-03 consultation and White Paper is pressure from BAA – the owner of Heathrow as well as Gatwick and Stansted – for further expansion, with a third northern runway, between the M4 and A4, as well as a sixth terminal. This is despite BAA's categorical promise to the contrary, made to the inspector at the Terminal 5 inquiry. There is extensive opposition to the proposal in West London and it currently breaches EU environmental limits, although BAA claims that technological improvements to plane fleets could overcome this objection within a decade. In any case, the new runway would be severely constrained, substandard in length and so able to serve only short-haul traffic. Were such a project ever to be approved, it could be achieved only with a degree of disruption and expense far greater than has arisen from the provision of Terminals 4 and 5, and it would perpetuate, or even aggravate, the awkward pattern of intra-airport movement.

The plain fact is that any airport of Heathrow's size and importance would nowadays be expected to have not two, not three, but four full-standard runways. This is the case with its obvious comparators (and, in some cases, competitors): Paris Charles de Gaulle, Frankfurt, New York or Hong Kong. Continued expansion on the same site not only creates problems for movement within the airport but also requires the transport links to and from it to be improved and extended. The works for this have to take place within an existing, crowded urban area.

There is another more indirect consequence of the failure of long-haul carriers to move from Heathrow. The capacity that they have not occupied at Gatwick, Stansted, Birmingham, Manchester and Glasgow has been taken up by the expansion of point-to-point short-haul operations, especially by the so-called 'low-cost, no-frills' airlines. Coupled with continued growth of nearby airports (Luton, Liverpool, Prestwick) and of other regional airports (Bristol, East Midlands, Cardiff, Newcastle, Edinburgh, Aberdeen) there is a problem of too many airports rather than insufficient capacity. The emergence of the no-frills airlines is a capacity-led expansion. Lower landing fees at the airports they use are a significant element in the lower-cost carriers' profitability. Their low fares (and how they are marketed) create a totally new demand, which previously did not exist, for a mode of travel which does not cover its full environmental costs.

Advantages of a New-Build Airport

Wherever it was located, a newly-built principal airport for London and the UK on a new site replacing Heathrow would bring great advantages. We would be building a state-of-the-art four-runway airport like the new Chep Lap Kok airport at Hong Kong. Not only would extra capacity be provided to meet current long-haul needs, but spare capacity to meet future growth could be incorporated. The design would make it possible to make extensions to the facilities over time. Moreover, the layout could be designed to facilitate aircraft and passenger handling in the most effective and efficient manner, reducing operating costs over the present situation. The road and public transport infrastructure could also be designed-in, rather than being added afterwards. Airports of this scale have been suggested in government consultations. What has been missing from such consultations is the idea of replacing Heathrow and relegating it to a secondary role.

However, the most pressing argument for relocation is the environmental one. The present scale of noise pollution, and other environmental diseconomies, is such that relocation to almost any site outside the Greater London boundary would result in a net improvement. The practicalities of achieving this are discussed below.

There is yet another pressing argument: an economic one. Heathrow was built on the privileged west side of London. Even in the 1920s and 1930s, industry had been moving out in this direction in order to reach the home market more effectively. This included the new and expanding electrical industries. During the Second World War they expanded massively as electronics, especially radar, proved crucial to the war effort. Soon after the war's end, the Cold War caused growth to resume. Seeking space, the firms overleapt the newly-established London Green Belt and established themselves in what came to be known as the M4 Corridor. This in turn reinforced the prosperity of this sector of London as against a depressed east side, further underlined by the closure of the docks and massive de-industrialisation from the end of the 1960s.

The Government's Thames Gateway regeneration strategy and the Mayor's London Plan both seek to counteract this bias by encouraging growth on this east side, along the new Channel Tunnel Rail Link. But airport policy does not reflect the new shift. It follows that one significant potential advantage of relocation would be to build in access to a main-line high-speed railway to mainland Europe. Whereas Heathrow, Stansted and Manchester are served by heavy-rail terminal spurs off main lines, Gatwick is the only major UK international airport to sit astride one.[2] The situation at the main competitor airports in mainland Europe could not present a starker contrast. Paris Charles de Gaulle, Amsterdam Schiphol, Frankfurt International, Cologne-Bonn, Lyon and soon Brussels are all served directly, and, indeed, are linked together, by high-speed railway lines. Zürich and Geneva airports each have their own main-line railway station served by Swiss inter-city trains and could potentially be reached by the high-speed trains from France and Germany that currently serve their city centres. Stockholm is connected not only to the city centre by the new Arlanda Express, but to main-line trains

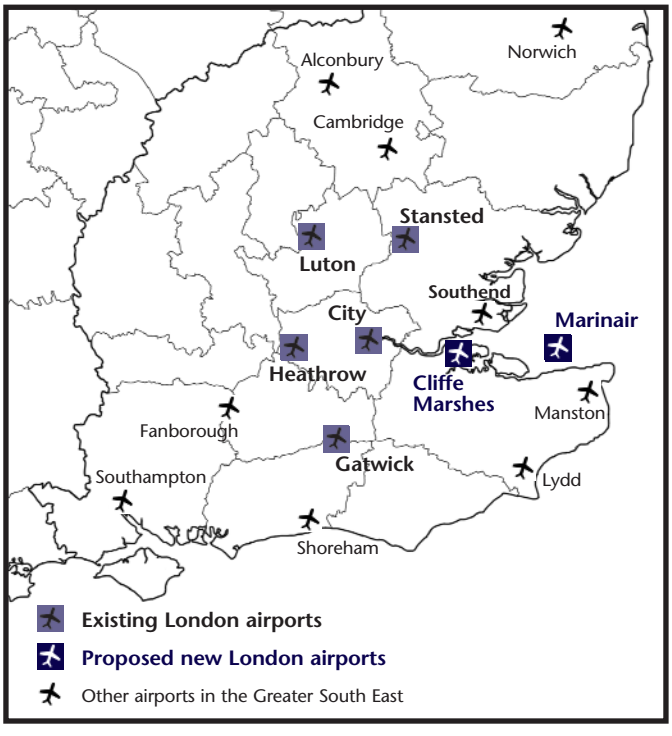
2 Southampton and, to a certain extent, Luton and Prestwick have rail access, Newcastle is served by light rail, and heavy-rail facilities are proposed for Edinburgh and Glasgow

serving a variety of destinations all over Sweden. Copenhagen is likewise served not only by the world's first international regional commuter rail system, connecting Copenhagen suburbs with southern Swedish destinations, but also by the new X2000 high-speed trains to Stockholm. In contrast, although Terminal 5 will be served by two new platforms to cater for new services, it appears almost impossible technically to connect Heathrow to the fast-developing high-speed railway system that, by 2007, will connect the North West European cities of Paris, Brussels, Cologne, Frankfurt, Amsterdam and London. From that point, as competitor flag carriers develop high-speed train services as short-haul airport feeders – already evident at Frankfurt and Paris – Heathrow will steadily lag farther behind these competitor airports and their competitor cities.

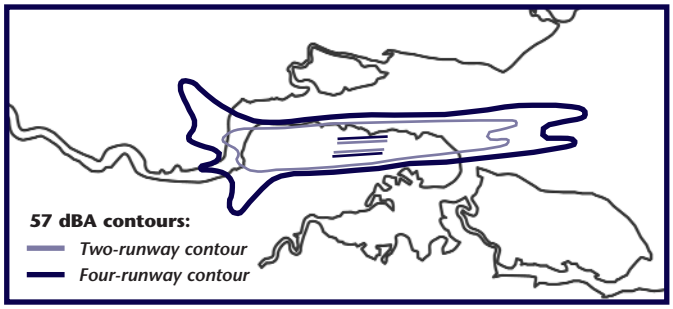
Are the Disadvantages of Relocation Crucial?

Clearly, relocating the principal international airport to a new site would have disadvantages as well as advantages. Most readily apparent is that it would be further away from the centre of London. But this undeniable disadvantage is shared by new airports at similar cities around the globe. As a compensation, though, advances in rail transport technology have greatly reduced transit times between outlying airports and city centres, as has been seen, for example, at the new airports at Hong Kong, Tokyo and Kuala Lumpur. An airport in the Thames Gateway could be reached in half an hour from Central London.

A more indirect argument against relocation would be the loss of employment to the west of London. The west's loss would,



Airports in London and the Greater South East



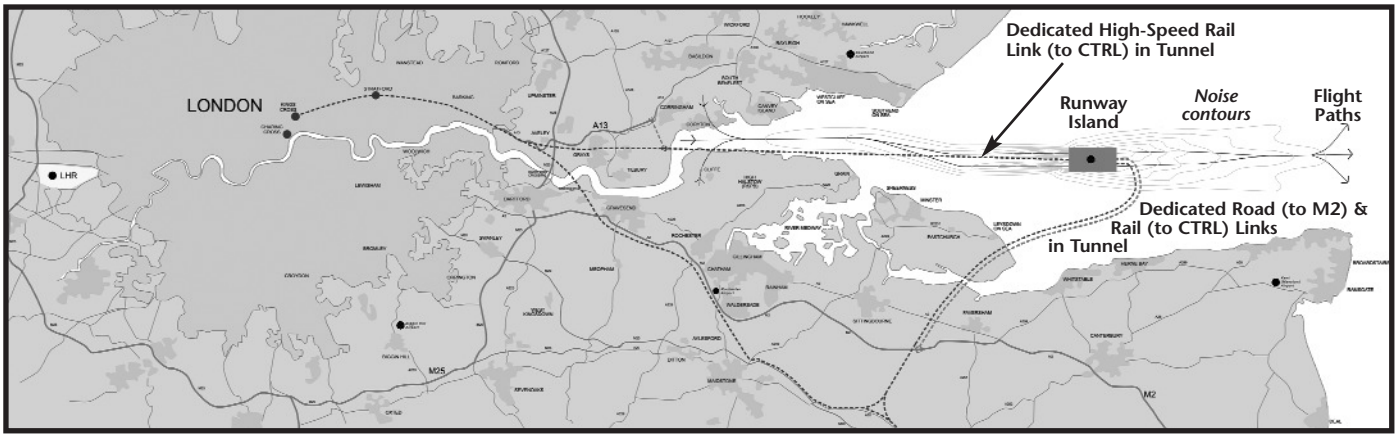
Noise contours for the Cliffe Marshes site. Being largely over water, the approach and take-off paths minimise noise impacts on people

however, be another sector's gain. But, as already seen, West London and the area to the west of London represent the most prosperous single sub-areas in the whole UK, with a plethora of advanced service and high-technology jobs which would remain; there should be no problem in generating new local jobs to replace those lost by relocation. If the new site for the airport were east of London, the additional jobs would be an important boost to the comparatively less prosperous sub-region of the Thames Gateway. In terms of regional economic policy, this could be seen as an advantage rather than a disadvantage of relocation.

A more subtle objection is the *Realpolitik* of achieving the move. Incremental changes to existing sites are more easily achieved both in terms of finding the money and overcoming local objections. The 'all at once' nature of new-build, however efficient in the longer term, concentrates both expenditure and local objection within a short time frame in which they can be difficult to swallow in one go. This is probably the real reason why it has not been achieved in the past. On the other hand, it appears to be a 'British disease'; evidently, other countries do not find it an insurmountable problem, or indeed a problem at all.

What Sites Are Available?

Both politically and financially, the availability of sites is the difficult question. Compared with, say, France, England lacks large, flat, under-populated areas of land that are both easy to build on and within easy reach of the capital city. This is a part, but not all, of the explanation for the lack of a Heathrow replacement and the policy of incremental expansion. The Roskill Commission recommended Cublington in Buckinghamshire. This site had much to commend it in purely transport terms but would have been most unlikely ever to be politically acceptable because of its impact upon existing settlements and countryside. Professor Colin Buchanan made an impassioned personal appeal in a minority report, and won the day: the government went for the Maplin site on reclaimed sandbanks on the North Sea coast, just beyond the mouth of the Thames Estuary. This project eventually foundered on the cost to the public purse and was also disadvantaged by its distance of over 70 kilometres from Central London.



Based on map by the Thames Estuary Airport Company Ltd

Key features of the Marinair proposal

In 2002-03, a government consultation exercise on airport policy, while not envisaging a replacement for Heathrow, nevertheless again floated the idea of a four-runway airport, either by expansion of the existing single runway at Stansted or through a new site: Cliffe, on Thames Estuary marshland 45 kilometres from Central London. In the White Paper published at the end of this exercise, *The Future of Air Transport*, the Government rejected in principle a single South East hub airport on the rather remarkable ground that airports should be be built so as to serve local demands all over the region – ignoring the attempts being made by the Office of the Deputy Prime Minister and the Mayor of London to steer development into the Thames Gateway on London's east side. Here, as so often, it appeared that the Department for Transport was completely disconnected from regional strategic planning.

In the event, large-scale expansion of Stansted – up to a maximum of four runways – is one of the ideas still under consideration by the Government; it is particularly likely to win favour if the expansion of Heathrow proves impossible on environmental grounds. Stansted has the merit of being in the London-Cambridge-Peterborough strategic growth corridor. But it is inferior to a Thames Estuary hub on key noise pollution, economic and transport grounds.

The Cliffe site would have approach and take-off paths over water, minimising noise impacts on people. Yet, according to the 2003 White Paper, it suffered from two alleged disadvantages: problems of environmental impact, particularly for marine bird life which nests on the Cliffe marshes, and interference with air traffic control systems for Heathrow, London City and Stansted airports. Neither was critically examined in the way that would have been true for the Roskill Commission 30 years earlier – a clear sign that we do not handle these matters as well now as we did then. Other marine airports (Copenhagen Kastrup, Vancouver, Chep Lap Kok, Osaka International) appear to handle bird migrations without problems. The air traffic control objection, which was raised by NATS (National Air Traffic Control Services), did not consider the very real possibility of closing down London City airport, which creates a severe noise pollution shadow over Docklands, and redeveloping it for housing – let alone the scenario of eventually closing Heathrow.

In any case, there are other possible Thames Estuary sites in addition to Maplin and Cliffe. One is the Marinair proposal drawn up by a private consortium. This site is some 20 kilometres further east, out in the water, well away from land, on reclaimed sandbanks. As a result, it is a very long way, over 80 kilometres, from Central London and would require extensive underwater tunnels for access by both road and rail. Surprisingly, the Government consultation did not even consider it, apparently because it lacked evidence. This is remarkable because, aside from the distance issue, the general planning case for a Thames Estuary site is overwhelmingly strong:

- All aircraft noise could be over water, and the noise impacts would consequently be even less than at Cliffe.
- Because there would be no noise shadow, 24-hour operation would be possible.
- No existing settlements would be displaced.
- There is extensive space available for staged expansion from one runway, through two and three to four runways.
- Direct sea-air interchange would be available for freight.
- Proximity to the Channel Tunnel Rail Link means that with a short diversionary loop, associated with a new Lower Thames Crossing which will in any case become necessary in the later stages of the Thames Gateway scheme, high-speed trains from London to mainland Europe could pass through the airport station, giving the same possibility of air-rail interchange as at competitor airports; the same link would provide high-speed transit (less than 30 minutes) to Central London.
- The airport could play a key role in the regeneration of Thames Gateway, generating jobs in an area needing more employment.

Given that any new airport will have to be a substantial distance (around 60 kilometres minimum) from Central London, and will inevitably have some degree of negative environmental impact, the comparative disadvantages arise primarily from the extra costs of both land reclamation and transport links in tunnels. However, these costs could be set against a potential source of substantial income: *the redevelopment of the Heathrow site.*

In the case of Paris, and many other cities across the world, the original site of the airport of 40-50 years ago remains in use for a restricted number of movements by small aircraft. However, the replacement of Heathrow by a new airport would also open up the possibility of its complete closure. A vast area, well over 1000 hectares, of developable land would be released, predominantly for housing: in effect, a new town in-town, at a critically important location on the M4 corridor at the edge of London. This would provide a very substantial financial contribution towards the cost of a new airport. It would also bring total relief from airport noise in West London.

If these advantages were not significant enough, the general town planning arguments are also powerful. The land made available would provide a new town of well in excess of 30,000 new dwellings, a substantial contribution to London's need unlikely to be equalled elsewhere. The new settlement so created would have high-quality transport links already in place, as well as all basic services. It could be planned comprehensively to high standards of design. The incoming population would create a demand for services that would go a long way towards compensating for the loss of airport employment.

What To Do?

This paper is not a plea for the immediate closure of Heathrow – or even for phasing it out in five or ten years' time. That would be logistically impossible and economically ruinous. It is a plea for long-term planning that would result in Heathrow's replacement, and eventual closure, over a long period of time: between now and the mid-century.

Such an approach may seem extraordinarily blue-sky and unworldly. If so, it only demonstrates the degree to which, in the UK, we are wedded to a style of planning that is short-term, incremental and fundamentally sub-optimal in its outcomes. But it does not have to be that way. It merely requires that we think long and think big.

Not far from Heathrow, the traveller on the Heathrow Express joins Isambard Kingdom Brunel's Great Western Railway. Even from the air outside the airport, it is distinctly different from anything else in the English landscape: it runs across the flat Thames Valley plain in almost imperceptible curves of huge radius. Brunel himself explained why to a Parliamentary committee: he had planned his railway for unusually high speeds. Today high-speed trains follow one after another at two miles a minute down this line, designed in 1833 by a visionary genius with posterity in mind. The line would readily carry TGVs at three miles a minute, but we no longer have Brunels.

We badly need Brunel's spirit to inform our transport planning. Who can doubt, could he be brought back on the 200th anniversary of his birth, what his vision for our national airport would be?

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Heathrow – A Retirement Plan
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TCPA

The TCPA is an independent charity working to improve the art and science of town and country planning. It puts social justice and the environment at the heart of policy debate and inspires government, industry and campaigners to take a fresh perspective on major issues, including planning policy, housing, regeneration and climate change. Its key objectives are:

- To secure a decent, well designed home for everyone, in a human-scale environment combining the best features of town and country.
- To empower people and communities to influence decisions that affect them.
- To improve the planning system in accordance with the principles of sustainable development.

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