



Heathrow Airport

**Response to Consultation on Draft
National Policy Statement: new runway
capacity and infrastructure at airports
in the South East of England**

May 2017



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Summary

Greengauge 21 regards it as vital that Heathrow, the nation's sole international hub airport, is fully connected with the national rail system as it expands.

Rail developments and runway/terminal arrangements need to be planned together, with the airport's expansion through the North West Runway matched by a step-change in rail network connectivity: coordination cannot be left to chance or to uncertain funding arrangements.

We do **not** suggest that provision of extra rail connections is made a condition of the third runway approval through an obligation on the airport owner. We believe the obligations to co-deliver rail network enhancements is an obligation for which the Secretary of State for Transport should assume responsibility. This is because suitable national rail access cannot be sensibly delivered through an essentially local mechanism, by the airport company in consort with purely local stakeholders.

The ambitions set out in the draft National Policy Statement (for increased rail share of airport access trips at the same time as the airport expands and the volume of access trips expands) are challenging – and fully supported.

This submission sets out specific themes and then responds to the consultation questions.

Four key themes

Our submission makes four substantive points:

1. There is a need – in designing an airport fit for purpose across the decades ahead – to consider from the outset two questions: the **need for the highest levels of safety and security and the need to plan for passenger and user convenience**. Any response to these questions is bound to recognise that mass transit systems must be prioritised over car-based access. We endorse proposals developed by Matthew Coogan, and shared with Heathrow Airport and the Airports Commission, that indicate how this can be achieved at Heathrow.
2. This is a national policy statement reflecting the role of Heathrow to the whole of the national economy. **Questions of the airport's rail connectivity need to be considered likewise at a national level** and not regarded as a matter of local impact mitigation.
3. The distinction drawn between surface access (regarded as a local issue) and regional connectivity (which is discussed in terms of additional domestic flights) is therefore inappropriate – and ignores the impact of the nation's evolving **high-speed rail network**.

4. A **strategic approach** is needed to ensure that airport expansion and the rail network are developed together in a way that:
 - a. can accommodate the expected high levels of airport-related demand (needed to ensure environmental targets, especially on air quality, are met) and
 - b. the substantial latent demand that exists for better non-central London rail connectivity in this very busy part of South East England.

This was a conclusion of the **Mawhinney Review** of airport access prepared for Government in 2010, and it remains true today.

Taking these four key themes in turn:

(i) Delivering passenger security and convenience

Greengauge 21 endorses a proposal developed by Matthew Coogan¹ that limits ‘unauthorised’ car access to the Heathrow passenger terminals and provides instead two car access gateways, located to the north and south of the airport (reducing the need to drive around the airport as many car users need to do today). With two car-user gateways sited away from the passenger terminals, space is freed up between the two existing runways for aircraft piers and airside facilities. More piers can be provided close to the main terminals where public transport access is provided, reducing lengthy within-airport walks/transits. Passenger and staff access from the gateways to the relevant terminals is achieved by high-frequency automated shuttles.

The objectives of this approach are:

- » to reduce the security risks associated with unrestricted vehicle access;
- » to enable local air quality limits to be met;
- » and, in the process, to re-balance the attractions of using differing access modes to the airport, specifically improving the experience for airport users that travel to or from the airport by rail.

1. Matthew Coogan developed his design concept for presentation to Sir Howard Davies, the head of the Airports Commission, and has since also submitted it to DfT, and worked directly with management of Heathrow Airport Limited to coordinate with their on-going planning efforts. With eight American colleagues, he has made a separate submission to this NPS consultation. They all worked together on key projects of the Airport Cooperative Research Program of the Transportation Research Board. Coogan’s work has included reports for the Airport Cooperative Research Programme (ACRP) of the US Transportation Research Board, including ACRP Report 118: Integrating Aviation and Passenger Rail Planning and ACRP Report 4: Ground Access to Major Airports by Public Transportation.

As the draft NPS makes clear, security is a major concern and is recognised as having a bearing on design from the outset:

“Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. The nature of the aviation sector as a target for terrorism means that security considerations will likely apply in the case of the infrastructure project for which development consent may be sought under the Airports NPS.”

The twin gateway proposal, based on the illustrative master plan shown in the Consultation Document, is shown in Figure 1 below.

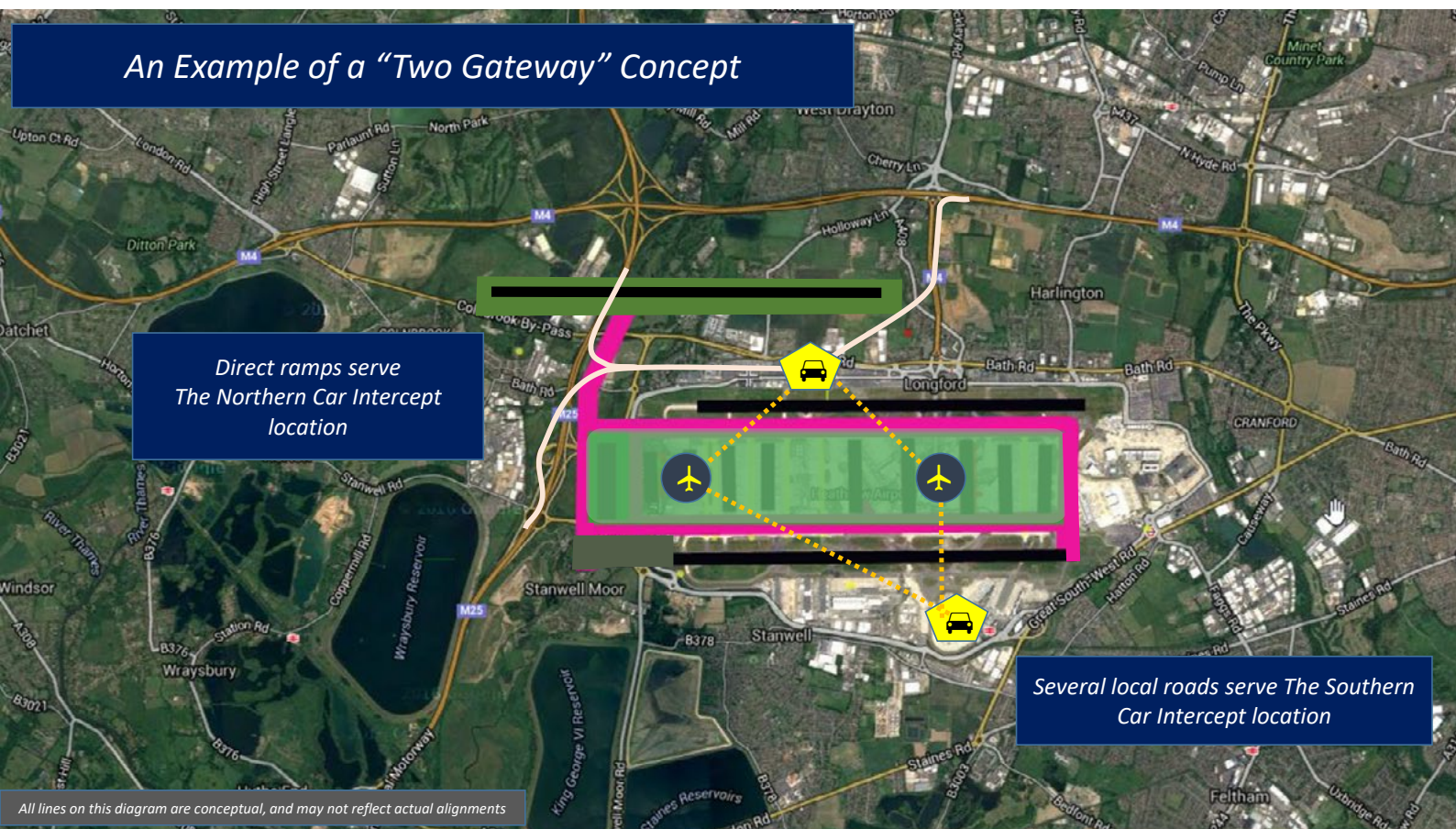


Figure 1: Gateway Proposal. Source: Matthew Coogan

The concept is for 'gateway' car terminals to be located at the entry points to the Airport. These car terminals would be the location for passenger set down and pick up, car parking (short and long term, differentiated as required, plus staff) and car rental facilities. These facilities would be provided in purpose-designed buildings linked directly to the nearby principal road network. The principle is based on the concept of the gateway intercepting road traffic before it reaches the airport terminals, which would probably comprise an Eastern Campus (based on an expanded T2) and a Western Campus (based on an expanded T5).

The northern gateway would service traffic from the M4 and M25 North, while a southern location would service traffic from the A30, M3 and M25 South. Both locations would serve both the Eastern and Western Campuses and therefore provide an added degree of flexibility and resilience.

Access from the 'gateway' car terminal(s) to the airport terminals would be provided by a people mover system, the technology for which we do not specify, but could include zero or low emission road vehicles, tracked transits, or any intermediate technology or combinations thereof. Such systems could handle the required passenger numbers, including baggage, at a high frequency and with a short journey time.

At the airport passenger terminals, the main form of access would be by public transport, with the aim of achieving the 55% public transport mode share target contained in the draft NPS.

The proposals meet the objectives noted above by:

- » Providing enhanced access to and egress from public transport facilities (especially rail). See Figure 2 for an example of what might be achieved – to the extent that more passengers will be attracted to the superior accessibility it offers compared with car access;
- » Shortening and simplifying road access to the 'gateway' terminals. This would reduce road traffic emissions at the critical entry points to the Airport which are adjacent to nearby residential areas, and reduce mileage of vehicles in the vicinity of the Airport;
- » Restricting unauthorised vehicles in the terminals. This reduces the security risks imposed by unrestricted access.

We recognise that it is not the purpose of a National Policy Statement to 'ask for views about the detailed design of the Heathrow Northwest Runway scheme itself or any associated infrastructure. That will come later...'. But it is clear to Greengauge 21 that a simple expansion of the existing type of facilities will not achieve the required increase in public transport mode share, zero growth of airport-related vehicle traffic, local air quality limits, and a reduction in the risk of unrestricted vehicle access. The Coogan proposal, on the other hand, is a means towards these ends. Moreover, as we explain in this submission, its adoption could have a material impact on the way rail surface access developments could and should be funded and progressed. It will contribute to the economic success of new rail access links.



Figure 2. A reconfigured Eastern Campus with prioritised rail access and reduced travel times and distances to aircraft gates. Source: Matthew Coogan

The NPS should challenge the applicant to develop proposals that:

1. achieve the aim of enhanced security by removing unauthorised vehicular access to passenger terminals;
2. provide for more convenient access by rail to aircraft gates, with reduced average within-airport walk times and distances;
3. accommodate a wider direct regional rail connectivity strategy;
4. signal clearly how the attraction of differing access modes is to be radically transformed.

(ii) The risk of losing the national benefits of the NPS in its implementation

As the Secretary of State says in his introduction to the draft NPS, Heathrow Airport will be a growth engine for the whole of the UK. It is a draft *National* Policy Statement. Yet there is a risk that the regions and devolved nations are not regarded as relevant communities and stakeholders and will not be fully engaged as the policy moves forward:

“This consultation relates specifically to the draft Airports NPS, which sets out the need for a Northwest Runway at Heathrow Airport and the supporting measures for those communities who will be impacted by expansion.”

It is true that there are plans for regional events ‘to be held across the UK with invited stakeholders, facilitating consultation responses nationwide’ as part of the preparation of the NPS. And the national interest is clearly reflected in the draft NPS text, which states:

“Heathrow Airport is the UK’s biggest freight port by value. [...] The aviation sector is a successful part of the modern UK economy. The sector contributes £20 billion to the UK economy, and employs around 230,000 people. It creates jobs and delivers growth, and enables activity in other important sectors like financial services and the creative industries.”

“International connectivity facilitates trade in goods and services, enables the movement of workers and tourists, and drives business innovation and investment, being particularly important for many of the fastest growing sectors of the economy.”

The Airports Commission established in September 2012 was tasked to identify and recommend options to *maintain the UK’s position as Europe’s most important aviation hub*.

And the draft NPS also states that:

“Important positive impacts are expected to include securing the UK’s hub status, better international connectivity, and providing benefits to passengers and the UK economy *as a whole (for example for the freight industry)* [emphasis added]. The negative impacts are expected to include environmental impacts, for example on air quality and affected local communities.”

It adds that the following matters need to be taken into account in the NPS:

“environmental, safety, social and economic benefits and adverse impacts should be considered at *national, regional* and local levels [emphasis added]. These may be identified in the Airports NPS, or elsewhere.”

Already, Heathrow attracts surface access journeys from a widely drawn catchment, with a quarter of (passenger) surface access journeys being to or from areas outside the South-East.² Local transport access is only a part of the story.

In relation to airfreight, the draft NPS adds:

“Expansion at Heathrow Airport will further strengthen the connections of firms from *across the UK* to international markets [emphasis added].”

2. http://www.heathrow.com/file_source/Company/Static/PDF/Heathrow_STP_inter.pdf

And in relation to wider passenger benefits:

“These benefits are expected to be realised by passengers across the UK” [emphasis added].

However, while the draft NPS refers to the possibility of new rail links at the airport, as of today, Heathrow *only* has direct rail connections with London, undermining the draft NPS claim that:

“Heathrow Airport already has good surface transport links to the rest of the UK.”

Given the congested nature of the strategic road network to the west of London (that is, the M25/M4/M3/M40 complex), the critical question Greengauge 21 wishes to raise is how the rail network can be developed at Heathrow so that the benefits across the UK that Heathrow expansion is designed to achieve, as set out in the draft NPS, can be delivered in practice.

Current plans for better rail access to Heathrow are not well attuned to this challenge. **The benefits that the Airports Commission and the draft NPS identify for the national economy are at risk if the expansion of Heathrow is not accompanied by a clear plan to deliver better connectivity to places other than London. This can only be achieved in practice by new rail connections and services** – in addition to the announced slot reservations for domestic air services, (which are important for some English regions as well as Scotland and Northern Ireland).

There is a body of evidence that supports the importance of regional connectivity to Heathrow. A major study by the English Regional Development Agencies in 2004, for instance, saw direct rail access to Heathrow as being the single most important shared objective.³

Regrettably, in 2015 HS2 Ltd abandoned its plans to provide high-speed rail links directly into the airport. The wider benefits that Greengauge 21 identified from such a scheme⁴ are therefore lost. Unlike the competitor national hub airports in France, the Netherlands and Germany, the UK national hub airport will remain disconnected from the national high-speed rail network.

3. See https://ied.co.uk/images/uploads/sinei_tcm9-35434.pdf – the so-called SINEI (Surface Infrastructure of National Economic Importance) report by Faber Maunsell of 2004; and see also https://ied.co.uk/images/uploads/RDAs_Heathrow_Consultation_Final_Report_tcm9-35440.pdf by York Aviation in February 2008.

4. See www.greengauge21.net/wp-content/uploads/heathrow-opportunity.pdf published February 2010.

On this topic, the draft NPS suggests that the interchange that it is to be provided at Old Oak Common will enable Heathrow passengers to make a connecting journey to access HS2. But air passengers are heavily dissuaded from using rail as an access mode if interchange en route to the airport is required. This is reflected, for instance, in highly differentiated rail shares of access travel to Manchester Airport which has direct rail services from many cities across northern England (but not all), and in HS2 Ltd's low levels of forecast demand for such journeys accessing via Old Oak Common.

The draft NPS refers to the possibility of a new southern rail access to Heathrow but describes this as a link to Waterloo – so another London rail link, but one of limited value to the rest of the UK.

The Western Rail Access to Heathrow *could* provide much of the necessary national connectivity⁵, but on current plans it will connect Heathrow only with the slow pair of tracks on the Great Western Main Line. This will be fine for Slough and Maidenhead and even Reading, beyond which trains are expected to go no further. So, while the important Thames Valley economy will benefit from such a connection, the wider UK will still only have access to the airport if passengers are prepared to interchange *en route*.

The proposed freight terminal at Colnbrook just to the west of Terminal 5 failed to obtain planning consent. Yet the dominant position of Heathrow in carrying high value products calls for a fast, sustainable, transport system to ensure this benefit too is available across the nation and this means a rail freight terminal close to Heathrow is needed.

We set out below how these limitations in current rail development plans at Heathrow can be addressed – limitations which would undermine the contribution that an expanded airport could make to the wider national economy beyond London.

(iii) Surface Access and Domestic Air Connectivity

The emphasis in the draft NPS on Surface Access and Domestic Air Connectivity leaves a policy gap: surface regional connectivity. The gap arises because surface access is treated by airports under statutory obligations as a local matter.

Domestic Air Connectivity is important – especially for remoter communities in the UK such as in Northern Ireland and Scotland – but across much of England and Wales, access by rail (and in some cases by high-speed rail) is important as well. Slot reservations for new domestic flights that can be accommodated with a new runway can be made a condition of Development Consent. No equivalent arrangement exists for the requirement to provide rail access for the English regions and Wales, even though the volume of passengers affected is likely to be much higher than by the proposed new domestic flights.

The draft NPS falls into this trap by seeing the effects of airport expansion as being felt 'in and around the airport' and therefore a question of impact mitigation:

5. See www.greengauge21.net/publications/great-western-conditional-output-statement/ of June 2012.

“Airport expansion will affect the local and national transport networks which operate in and around the airport. The Government’s objective is to ensure that access to the airport by road, rail and public transport is high quality, efficient and reliable for passengers and airport workers who use these services. This should be delivered in a way that minimises congestion and environmental impacts, for example on air quality.”

“Heathrow Airport will need to mitigate the impacts of more passengers and employees accessing the airport in order to avoid additional congestion, as well as increased noise and emissions on the wider transport networks.”

And so there is no mechanism by which either the Examining Authority or the Secretary of State can gain assurances on the delivery of benefits across the UK since this will be reliant on the provision of regional surface access transport for which there is no regulatory or enforcement handle. The draft NPS merely says:

“In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State will take into account:

- Its potential benefits, including the facilitation of economic development (including job creation) and environmental improvement, and any long term or wider benefits; and
- Its potential adverse impacts (including any longer term and cumulative adverse impacts) as well as any measures to avoid, reduce or compensate for any adverse impacts”

The draft NPS notes that where ‘the applicant’s proposals in relation to surface access meet the thresholds to qualify as nationally significant infrastructure projects under the Planning Act 2008, or is associated development under section 115 of the Planning Act 2008, the Secretary of State will consider those aspects by reference to both the National Networks NPS and the Airports NPS, as appropriate.’ This is helpful and it could of course apply to proposals developed by parties other than the [airport] applicant, but it leaves unaddressed the critical area of service provision such as direct regional rail services to Heathrow in a way analogous to the treatment of domestic air service provision.

The localised approach is reflected in the requirement that surface transport should be addressed by the Airport:

“in conjunction with its Airport Transport Forum, in accordance with the guidance contained in the Aviation Policy Framework.”⁶

6. See <https://www.gov.uk/government/publications/aviation-policy-framework>.

The access strategy, it is said, should:

“include a mechanism whereby the Airport Transport Forum can oversee implementation of the strategy and monitor progress against targets alongside the implementation and operation of the preferred scheme.”

Air Transport Forums allow ‘*local people, town and parish councils which have qualifying airports within their boundaries*, business representatives, health and education providers, environmental and community groups to be involved in the development of airport surface access strategies. We recommend that ATFs produce airport surface access strategies (ASASs) to set out ... a system whereby the forum can oversee implementation of the strategy’⁷ [emphasis added].

The missing element here is the development of a national and regional rail access strategy. The Airport NPS should recognise this gap explicitly because of its importance in delivering the benefits the new runway and increased air connectivity should bring for the UK as a whole.

Since the Secretary of State for Transport has a determining input into the rail sector’s planning processes through *inter alia* his/her role in providing a Statement of Funds Available (SOFA), this is where responsibility must lie for the development of a suitable strategy in terms of infrastructure and service provision for Heathrow national rail access. The Airport NPS should add the necessary provisions to bring this about.

(iv) A National Rail Access Strategy for Heathrow

The draft NPS states that:

“High quality, efficient and reliable road and rail access to airports contributes greatly to the experience of passengers, freight operators and people working at the airport ... The Government wants to maximise the numbers of journeys made to airports by sustainable modes of transport.”

Greengauge 21 welcomes these statements. Rail is not the only relevant ‘sustainable’ mode of transport. But the only sustainable alternative mode to rail for *regional connectivity* would be coach, and National Express provides a significant set of services to Heathrow. But they hardly provide a viable alternative to rail if travel time is a key factor. The company’s advice to travellers is that 3 hours should be allowed between arrival at the airport and flight times, reflecting potential delays *en route*. Coach links from Manchester, to take an example, are scheduled to take 6h20 on average. Rail is inevitably the surface access mode on which the airport will need to rely to deliver regional surface access.

7. Aviation Policy Framework Cm 8584 March 2013 paragraphs 4.20–4.21.

We note that Government expects Heathrow Airport to contribute towards the cost of new rail links. Our view is that it is more important that the Airport delivers the type of design at the airport with suitable car access gateways, freeing up space between the two existing runways in a way that benefits those accessing the airport by rail. Since this will have a capital cost implication – particularly in relation to the provision of people-mover access between the gateways and terminals, the NPS should state that, if the Airport is prepared to adopt (and fund) such a design approach, **it should be relieved of the obligation to contribute funding to enhance rail access infrastructure.** In effect, this is a device that would ensure that Heathrow Airport contributes to the economic value of new rail links through expenditure that can be treated as appropriately incurred on behalf of airport users within the airport by the CAA when considering its economic determinations going forward.

The question of responsibility for rail access then lies clearly with the rail sector.

There is no overall long term strategy for the development of the national rail network, but that doesn't mean one shouldn't be developed for Heathrow. In the past, decisions on rail links at Heathrow have arisen because of a need for incremental adaptations with successive terminal developments (Terminal 4 required a disruptive and awkward re-configuration for rail with continuing ramifications for network capacity at the airport; Terminal 5 was a more straightforward route extension). Now is the time for a coherent strategy: clear objectives, a specification of a set of regional services ('outputs'), and a staged implementation programme.

The objectives that the rail strategy should seek to meet are:

1. ensuring that the economic benefits provided by Heathrow and its expansion through the addition of the North West runway (as identified by the Airports Commission) are provided across the UK, to its regions and devolved nations.
2. providing the capacity and capability to achieve the airport's public transport modal share targets and through them environmental targets, and in particular those related to air quality standards.
3. provide rail connectivity in the surrounding sub-region and more widely so that a more sustainable and resilient means of travel is provided than the current pattern, which is pre-dominantly private transport use for all but central London journeys.

The strategy needs to be framed in terms of services as well as infrastructure needs. Clearly it cannot be prepared in isolation from other developments planned for rail in the surrounding region. The geography to be covered does not fit into any one of Network Rail's routes.

The service requirement (outputs) could be specified as an hourly direct service between Heathrow and the major cities in each of the English regions and Wales and Scotland (with perhaps lower frequencies for more remote locations). In practice service levels will depend on commercial considerations and network capacity availability. Combining Heathrow connectivity with other market aims in the same rail service is likely to be appropriate.

It is worth exploring briefly how the service specification might be achieved in relation to the English regions and Scotland & Wales. This helps build an understanding of why a strategy with Secretary of State direction would be needed, how extensive the interfaces will be with other parts of the national rail network, and how different the outcome would be from an approach generated through a local stakeholder Airport Transport Forum.

Of course, there are many options. What follows is illustrative.

In practice, a set of hourly direct regional services would need to be delivered in stages. The Western Rail access to Heathrow scheme⁸ could be adapted and made ready prior to the new or runway for use to achieve this aim for access from half of the English regions:

- » **South East** (Basingstoke, Southampton, Bournemouth)
- » **South West** (Taunton, Exeter, Plymouth) and **Wales** (Bristol, Cardiff, Swansea)
- » **West Midlands** and the **North West/Scotland** (Oxford, Birmingham, Preston, Glasgow).

Access to further corridors in the South East (Guildford, Gatwick/Portsmouth) would require some version of the southern rail access scheme to proceed.

- » Serving the eastern side of the country effectively (**East of England**, **East Midlands**, **Yorkshire/Humber** and the **North East**) is harder. The Elizabeth Line will provide a connection to the key London terminus for a very large part of the **East of England** region at Liverpool Street (and to Kent via HS1 from Stratford). This is an early opportunity to provide single (as opposed to multiple) interchange access from eastern/southern England, not possible on today's network, and from 2018 when the Elizabeth Line should be open, which is well before the new runway. But a further infrastructure development would be needed to meet the policy aim of direct service. Use of the completed East West rail link may offer an opportunity in due course to access Cambridge and Norwich *via* Oxford (again using the Western access scheme to access the airport). For Essex, Kent – and indeed Europe – a re-examination of ways to provide a link to HS1 from Heathrow should be explored.⁹
- » Access to the **East Midlands**, **Yorkshire/Humber** and the **North East** is another challenge. Again, the western access could be used and possibly, from the Birmingham area northwards, the eastern limb of Phase 2b of HS2 (which has spare capacity on current plans) to serve Nottingham, Sheffield, Leeds, York and Newcastle and Edinburgh. This would require additional links from the existing rail network to HS2.

8. This may require a development of the currently planned project to provide access to the GW fast lines.

9. See <http://www.greengauge21.net/publications/hs1-hs2-connection-a-way-forward/> which describes how a new link can be provided without compromising the operation of HS2. See also a proposal contained in Ian Alsop letter in RAIL 826, p37.

There will be challenges to address with the capability of the rail network – the need for further route electrification (for example, between Oxford and Birmingham) and capacity. Priorities will need to be set.

Ideally, services would operate across Heathrow, meaning that station calls at the airport are made during a longer distance journey connecting places either side of the airport. This would reduce the need for rail infrastructure at the airport itself (additional platforms and turn-backs) as well as drive better service economics and provide valuable cross-connectivity between places either side of the airport in addition to serving the airport itself.

Commercial factors as well as wider benefits would need to be assessed. Franchise economics are likely to be improved by the addition of further rail services to the airport.

So, in addition to the over-arching objective of ensuring that the national benefits of Heathrow expansion are achieved, the Secretary of State for Transport (and the National Infrastructure Commission) will need to have regard to the implications of rail services development at Heathrow in terms of:

- » Infrastructure investment priorities across multiple Network Rail routes; and
- » Service specifications in multiple franchises.

At the airport itself, serving terminals is made much easier by the adoption of the arrangement by which aircraft stands are concentrated across the whole of the area between the two (existing) runways and ‘fed’ from either end – through a western campus (an extended Terminal 5 that might also be the access point for flights using the new runway) and an eastern campus (today’s Terminal 2). Consistent with Heathrow Airport Ltd’s formal position to the Davies Commission, Terminal 4 would be closed. From the stand-point of the economics of the rail services that would be needed at Heathrow, the Coogan proposals of gateways for private car access would be adopted too. Together these measures should help ensure that the objectives of using sustainable transport access modes and delivery of air quality standards are met.

The required rail network configuration at Heathrow is, in principle, easily defined. The requirement is for **two cross-airport routes** – one configured NE-SW, the other SE-NW, with a shared high-frequency east-west route across the airport serving the two terminal campuses, as shown in Figure 3. This arrangement could be developed in stages, building on the existing airport rail infrastructure, using the existing airport rail stations. It is an arrangement that ensures that all trains can serve both terminals, avoids adding more turnback facilities at the airport, and avoids over-loading the busy Great Western Main Line.



Figure 3. Indicative Rail Strategy for Heathrow

The NE-SW route requires (at least as a starting arrangement) a short-form version of southern access to a terminus connected with the South West trains network at Staines (previously developed as part of the ‘AirTrack’ scheme). This provides an off-airport terminus for services from the Elizabeth Line and Paddington (and opens up access to key locations in Surrey and part of neighbouring counties).

The SE-NW route requires a connection to the south east (to Feltham Junction). The wide range of regional services (as identified above) that could use the planned western rail access could then serve the airport and continue to Clapham Junction (for Crossrail 2, in due course) or Waterloo to terminate. The second rail link into London would add resilience to the airport’s connectivity.

The primary aim of this combination would be to maximise train throughput and capacity with a rich mix of regular interval services providing *direct* airport services from across the country, increasing the extent to which the benefits of Heathrow expansion can be shared fully by the nation as a whole.

In addition, this approach can satisfy two wider objectives:

- » Provide much enhanced rail connectivity across the Thames Valley and M3/M4/M40/M25 area to provide an alternative to growing demand (noting that Highways England has recently ruled out, for example, further widening of the M25 in the vicinity of Heathrow);
- » Provide connectivity between places such as Ealing-Staines and Twickenham-Slough for which the airport is a barrier and rail alternatives are in effect unavailable.

The constraint on train throughput at the airport, in practice, is likely to be station dwell times at the eastern campus station. But with the use of digital train control technologies, even with a 1½/2-minute dwell time at the eastern station, it should be possible to achieve a throughput of 18-20 trains/hour with a combined hourly service capacity of over 20,000 arriving and departing rail passengers/hour. This can be related to Heathrow's current maximum **daily** throughput of around 250,000 air passengers; there is ample rail capacity to accommodate a very large proportion of surface access demand, as well as meet the needs of employees, other visitors and cross-airport passenger flows.

A connection with the national high-speed rail network should also be considered, recognising that HS2 Ltd removed such a link and dropped passive provision to add connections later.

There are two alternative ways to provide connectivity with high-speed rail in Britain to consider:

- » The addition of a direct link from Heathrow to HS1. This would permit high-speed rail services to operate Heathrow – Paris/Brussels/Amsterdam/ Frankfurt (which has implications for Heathrow runway slot allocations) and (directly) from the airport to Kent. And it could also solve the problem of creating direct access from the regions on the eastern side of the country by making possible direct operation from the airport into St Pancras station and onwards using existing (but unused) track connections without passengers needing to change train to reach destinations on the Midland and East Coast Main Lines;
- » As outlined earlier, it would also be possible, provided there was suitable access from the existing rail network, to use the 200 km long eastern limb of HS2 Phase 2 to access the East Midlands Yorkshire/the Humber and the North East. This may be somewhat slower than is theoretically feasible by means of passenger interchange at Old Oak, but customer preferences for avoiding interchange when en route to/from airports should not be overlooked. Wider cross-country connectivity would also be enhanced.

In addition, it is important to provide a railfreight facility, suitable for handling small, high value consignments. This would be best located at a strategic freight terminal at or near to the cargo area or nearby at Bedfont. A new rail link would be needed to access the site (one is under consideration as a possible passenger rail link currently), and careful consideration would need to be given to providing the necessary freight paths on the surrounding rail network. Use of trains with operating performance in terms of speed and acceleration etc matching that achieved by passenger trains would be essential, with possible access routes via Acton Wells/Hounslow and Egham.

In conclusion, as noted above, neither the Examining Authority nor the Secretary of State can gain assurances on the delivery of the economic benefits of Heathrow's new runway across the UK since this relies on providing regional surface access transport for which there is no regulatory or enforcement handle.

The Airport NPS should recognise the need for the development and delivery of a national and regional rail access strategy for Heathrow when the applicant advances its proposals for the new runway and associated development. This is needed to ensure that the national scale of the economic benefits of the new runway are achievable. Preparation of the strategy should be adumbrated in the NPS, and the Secretary of State for Transport identified as the custodian of its delivery.

The need for additional airport capacity

Question 1: The Government believes there is the need for additional airport capacity in the South East of England by 2030. Please tell us your views.

We agree.

The Government's preferred scheme: Heathrow Northwest Runway

Question 2: Please give us your views on how best to address the issue of airport capacity in the South East of England by 2030. This could be through the Heathrow Northwest Runway scheme (the Government's preferred scheme), the Gatwick Second Runway scheme, the Heathrow Extended Northern Runway scheme, or any other scheme.

We agree with the Government's preference because it is the best approach to delivering a truly national (as well as international) hub airport – subject to the point made in answer to question 4.

Assessment principles

Question 3: The Secretary of State will use a range of assessment principles when considering any application for a Northwest Runway at Heathrow Airport. Please tell us your views.

We agree that the local impacts of the new runway and Heathrow's associated development require targets and assessments in relation to air quality, as well as other effects. We also note – and support – the planned protection of some runway slots for domestic air service slots as identified in the draft NPS. These intentions need to find expression in the assessment principles.

The Secretary of State will no doubt wish to include in his/her assessment principles the achievement of the mode share targets identified in the draft NPS. Rather than rely on demand model projections, when considering an application for a Northwest Runway at Heathrow Airport, the Secretary of State should adopt as a principle a requirement that the design of the airports terminals should favour the use of access by sustainable transport as measured in terms of travel times from airport arrival to reaching airside.

The draft NPS states that, in considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State will take into account:

- » the potential benefits, including *the facilitation of economic development (including job creation)* and environmental improvement, and any long term or wider benefits [emphasis added]; and

- » the potential adverse impacts (including any longer term and cumulative adverse impacts) as well as any measures to avoid, reduce or compensate for any adverse impacts.

But there is no mechanism by which either the Examining Authority or the Secretary of State can gain assurances on the delivery of benefits across the UK since this is reliant on the provision of regional surface access transport for which there is no regulatory or enforcement handle.

What is clearly missing is any plan or mechanism to provide the rail connectivity to an expanded Heathrow from across the English regions, Wales and Scotland necessary to ensure that the wider nation and not just London benefits fully from Heathrow's expansion. And as a consequence, the question of regional accessibility is absent from the assessment principles in the draft NPS.

We do not believe it would be sensible to place an obligation on the airport company to fund or deliver rail surface access to the nation's hub airport in its application for the NW Runway. Instead there needs to be an associated and enforceable obligation placed on an appropriate statutory body. Our suggestion is that the obligation should be placed with the Secretary of State for Transport (who might choose to discharge it through the Department for Transport or Network Rail).

The obligation should be to plan for and deliver the rail infrastructure, network capacity and services necessary to provide direct rail service connectivity as far as feasibly practical across the regions and devolved nations in order to secure the economic benefits of the runway proposals across the whole nation. Clearly this would have to find its place within the plans set across the rail sector, and prioritised accordingly.

Without such a commitment, we believe the new runway and associated development is at risk of challenge in respect of the benefits to the national economy identified by the Airports Commission and used as a basis for Government support of the NW Runway at Heathrow. A Heathrow with limited direct rail connectivity, or one dependent on an overloaded motorway network, will only be an airport for London; it cannot be the nation's hub airport.

Question 4: The Government has set out its approach to surface access for a Heathrow Northwest Runway scheme. Please tell us your views.

The draft NPS notes that the airport will be expected to achieve a public transport mode share of at least 50% by 2030, and at least 55% by 2040, for air passengers. The draft NPS has a requirement that the airport prepares a surface access strategy to achieve these mode share targets.

The Aviation Policy Framework of 2013 anticipates that such a strategy should be developed in conjunction with a local stakeholder Transport Forum. This is an inadequate arrangement to address the surface access requirements of a project which is of national significance and importance. As rival air hubs in continental Europe (Schiphol, Charles de Gaulle and Frankfurt) show, alongside local transport access, being served by national rail (and high-speed rail) networks is also important for a national hub airport.

In our view, just as Lord Mawhinney found in his review of 2010, what is required for Heathrow is a long-term strategy for comprehensive rail connectivity at the airport. While such a strategy will have a local component, it must also address, in readiness for a post-Brexit status, the question of connectivity between the UK's chosen hub airport and the English regions and devolved nations. A measurable objective needs to be set and this must go beyond a mode share target for sustainable mode use: it needs to ensure direct rail access – as far as feasibly practical – from the major cities of the regions and devolved nations to the airport, preferably on an hourly service basis in order that the wider national economic benefits of Heathrow's expansion can be achieved.

The Heathrow rail access schemes as described and to which the draft NPS refers (Western and Southern) are insufficient to support the need to provide national rail connectivity to the airport – although an intensified use of the western rail access could be used to achieve much more than the currently planned local service access.

The way in which a suitable rail strategy for Heathrow could be developed is set out in the earlier part of this submission.

More generally, we endorse the Coogan proposals for the development of Heathrow with two gateways for car-based access (as shown in Figure 1, above), with aircraft gates located closer to the two rail stations (see example at Figure 2) which would be served by two cross-airport rail routes. These measures together will increase the use of rail for surface access.

The NPS should challenge the applicant to develop proposals that:

- » achieve the aim of enhanced security by removing unauthorised vehicular access to passenger terminals;
- » provide for more convenient access by rail to aircraft gates, with reduced average within-airport walk times and distances;
- » accommodate a wider direct regional rail connectivity strategy (an example of what this could look like at Heathrow is shown in Figure 3);
- » signal clearly how the attraction of differing access modes is to be radically transformed.

Question 5: The draft Airports National Policy Statement sets out a package of supporting measures to mitigate negative impacts of a Heathrow Northwest Runway scheme. Please tell us your views. Are there any other supporting measures that should be set out? In particular, please tell us your views on:

- 5.1. Air quality supporting measures
- 5.2. Noise supporting measures
- 5.3. Carbon emissions supporting measures
- 5.4. Compensation for local communities

No comment.

Question 6: The Government has set out a number of planning requirements that a Heathrow Northwest Runway scheme must meet in order to operate. Please tell us your views. Are there any other requirements the Government should set out?

For the NW Runway scheme to operate, the first stage of an agreed strategy for the development of the airport's wider rail access needs to be implemented, and Government commitments to achieve direct rail access from all the regions and devolved nations by 2040 need to be in place.

Draft Airports NPS Appraisal of Sustainability

Question 7: The Appraisal of Sustainability sets out the Government's assessment of the Heathrow Northwest Runway scheme, and considers alternatives. Please tell us your views.

No comment.

General questions

Question 8: Do you have any additional comments on the draft Airports National Policy Statement or other supporting documents?

The draft NPS represents an important statement regarding Heathrow but as a second stage there should be a commitment to develop a wider statement given the added importance of international connectivity post-Brexit. This should be focussed around airports handling over 10m passengers per annum (which would include Gatwick, Stansted, Birmingham, Manchester and Edinburgh) plus consideration of airfreight (so covering East Midlands as well).

Question 9: The Government has a public sector equality duty to ensure protected groups have the opportunity to respond to consultations. Please tell us your views on how this consultation has achieved this.

No comment.



Ordnance Survey map of Heathrow in the 1940s.
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