

TfL Planning **Technical note**

**Revised National Policy Statement (NPS) on Airport capacity**  
***Mayoral submission to the consultation***

*November 2017*

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**1.** Introduction

- 1.1 The revised NPS, together with its associated new data and analysis, has fundamental implications for the case for Heathrow expansion and the scale of its impacts. The forecast acceleration in demand growth of a three-runway Heathrow supports its financeability but has consequences for route connectivity, competition and reliability as the airport's third runway fills up shortly after opening. It also exacerbates the surface access and air quality impacts in particular. In the case of the latter, the updated air quality analysis shows an expanded Heathrow breaking legal limits for NO<sub>2</sub> and making London non-compliant.
- 1.2 Together with the updated economic analysis which shows that a second runway at Gatwick offers greater monetised economic benefits, the evidence is mounting that the scheme for a third runway at Heathrow is fundamentally flawed.
- 1.3 Since the launch of the original NPS, the Mayor has published drafts of his London Plan, Mayor's Transport Strategy and London Environment Strategy which mark a clear direction for the capital. These set out how London must address fundamental challenges including the transport needs of a rapidly growing city and making very significant reductions in air pollution to improve public health, as well as outlining how aviation can develop sustainably within this context. Any expansion proposal being taken forward at Heathrow should be mindful of the London policy context and should not seek to undermine the steps the Mayor is taking to address these challenges.

**2.** Forecasts

- 2.1 The new DfT forecasts show a sharp acceleration in aviation demand growth compared to the previous forecasts. The result is that all three runways at an expanded Heathrow are forecast to be full in 2028, just two years after opening. This will leave the airport suffering from the fundamental capacity constraints and reliability issues which plague it today.

- 2.2 The release of these forecasts is significant, as they are the first to be published since the Airports Commission (AC) work and update the baseline to 2016, capturing the most recent demand trends in aviation.
- 2.3 In particular, the new forecasts take into account the large increase in passenger numbers observed in the five years to 2016. The new forecast central case demand is higher at both Heathrow and Gatwick, with the increase particularly strong at the latter.
- 2.4 The most notable result of the forecast accelerated growth in demand is the finding that a three-runway Heathrow will be operating at full runway capacity from 2028, just two years after the third runway would have opened.

*“Under the LHR Northwest Runway scheme, Heathrow airport is expected to be full by 2028, compared to 2035 in the AC’s assessment of need, carbon traded forecasts. This assumes no phasing of additional capacity, and no barriers to airlines making use of this capacity as soon as it becomes available.”*  
*[Updated Appraisal Report, 2.19]*

- 2.5 The forecasts indicate that additional growth in passengers after this time will come from larger aircraft. It will be relatively straightforward for most airlines to switch larger aircraft to their Heathrow routes (without the need to obtain additional slots) as demand grows.
- 2.6 That all three Heathrow runways will be full in 2028 has important implications for an expanded Heathrow. It leaves Heathrow operating as it does today, without the capacity to attract new routes and frequencies and eroding competition as new entrants are unable to gain slots at the airport. By 2028, an expanded yet capacity-constrained Heathrow will suffer the same reliability issues that affect Heathrow today. Airport users will suffer worsening delays, while the severe additional environmental impacts resulting from expansion will be brought forward.
- 2.7 Another notable finding is that Gatwick’s actual passenger figures have exceeded the AC’s demand scenario range for the same period. This suggests that its choice of five scenarios was flawed and cannot be relied upon.

### **3. Economic appraisal**

- 3.1 The revised NPS seeks to make the case for Heathrow on economic grounds, yet the updated appraisal shows that a third runway at Heathrow delivers fewer economic benefits than the main alternative, namely a second runway at Gatwick.
- 3.2 An updated economic appraisal has been published to reflect the new demand forecasts. The higher demand has led to higher passenger benefits in all scenarios.

With passenger benefits for Heathrow having seen a lower increase under the revised forecasts, Gatwick expansion emerges as the stronger option for the total benefits to passengers and to the wider economy.

**Monetised impacts under the DfT central, carbon-traded, forecasts**

	LGW Second Runway	LHR Extended Northern Runway	LHR Northwest Runway
Passenger Benefits	69.4	57.2	67.6
Government Revenue	4.6	2.9	3.5
Wider Economic Impacts	0.1-1.3	1.6-2.7	1.8-3.1
<b>Total benefits to passengers and the wider economy</b>	<b>74.1-75.3</b>	<b>61.7-62.8</b>	<b>72.8-74.2</b>

*[extract from Updated Appraisal Report, Table 9.2]*

- 3.3 The updated appraisal still shows that Heathrow expansion has a higher net social benefit, but that is only because this figure includes airline profits. With a full runway, airlines are able to take advantage of the substantial capacity constraints, whereby competition will be restricted and new entrants prevented. This will ultimately lead to significantly higher fares than might otherwise be the case.
- 3.4 The net social benefit also includes the monetised environmental disbenefits. The standard methodology for calculating environmental disbenefits significantly underplays the nuisance and public health impact. As such, though a third runway at Heathrow imposes a monetised environmental disbenefit which is 78 per cent higher than a second runway at Gatwick, both are a tiny fraction of the calculated economic benefits.

**Strategic benefits**

- 3.5 As described, the Government’s own data shows Heathrow expansion to be a worse option in terms of economic benefit. Nonetheless, the Government maintains that Heathrow expansion is the best scheme for the economy:

*“The Government considers that the Heathrow Northwest Runway scheme delivers the greatest strategic and economic benefits, and is therefore the most effective and appropriate way of meeting the needs case.”*

*[Revised NPS, 3.73]*

- 3.6 It justifies this by focusing on strategic and economic benefits which are difficult to monetise, notably greater longhaul and domestic connectivity as well as increased air freight. However, whether each of these benefits is of sufficient scale and certainty in Heathrow’s favour is open to question.

- 3.7 The claim for better longhaul connectivity and freight for an expanded Heathrow compared to an expanded Gatwick is rooted in the current profiles of each airport. It assumes that the pattern of activity at each airport will remain broadly unchanged, regardless of which airport secures an additional runway.
- 3.8 However, if Gatwick, not Heathrow, were to expand, the former would attract more longhaul flights as airlines take advantage of the spare capacity. Even in recent years, Gatwick's relatively limited spare capacity has attracted several airlines operating longhaul flights, whether adding to their Heathrow frequencies or entering the UK market for the first time. These longhaul routes have also brought substantial additional cargo capacity. Were Gatwick to gain the capacity of an additional runway, these trends would likely accelerate.
- 3.9 Furthermore, assuming that only Heathrow can deliver longhaul connectivity and freight capacity ignores the changes that are already reshaping the industry. The growth of low-cost longhaul carriers, one of which operates a major base at Gatwick, looks set to continue and unlike the typical low-cost shorthaul flight, the low-cost longhaul model entails carrying freight. Airports and airlines have also launched schemes that facilitate passengers connecting between different airlines, including low-cost carriers, effectively replicating the hub model and the connectivity it brings.
- 3.10 As such, there is a convergence between the traditional hub model and the low-cost model, which increasingly is allowing the latter to deliver longhaul connectivity and freight once exclusively associated with the former. The reliance on such longhaul connectivity and freight benefits to justify expansion at Heathrow over Gatwick, runs counter to recent experience. (Domestic connectivity is addressed in a separate section below.)

### ***Timing***

- 3.11 The NPS also indicates that Heathrow expansion will deliver its economic benefits more quickly than previously assumed. Reporting the finding of its Appraisal of Sustainability, it says:

*“It concludes that the Heathrow Northwest Runway scheme is best placed to maximise the monetised economic benefits that the provision of additional airport capacity could deliver in the short term, although this scheme is likely to do so with the greatest negative impact on local communities.”*

*[Revised NPS, 3.70]*

- 3.12 However, questions have been raised about how quickly a third runway could actually be delivered. The revised NPS now states 2026 to be the opening date of a third runway, a year later than Heathrow Airport had previously claimed. Appearing before the Transport Select Committee (TSC) on 4 December 2017, DfT officials

indicated that the Government expected delivery by 2030 and whether 2026 could be achieved was a question for Heathrow Airport.

- 3.13 Moreover, the revised NPS also introduces the concept of phasing of Heathrow expansion for the first time:

*“The need for requirements in respect of the phasing of the scheme is likely to be an important consideration, so that effects of construction and operational phases are properly mitigated, as well as any changes in the operations of the airport that may occur in line with the phasing of physical works and commencement of operations.”*

*[Revised NPS, 4.9]*

- 3.14 The question of phasing is raised more than once in the revised NPS, including in relation to assessment of the surface access and environmental impacts. It is also tested as a sensitivity, where capacity at an expanded Heathrow would be released over a 10-year period. In front of the TSC, DfT officials mentioned that Heathrow Airport has assumed phasing of capacity up to 2040.
- 3.15 A phased approach would improve the financeability of the scheme and has the potential to delay the environmental and surface access impacts. However, delaying the release of capacity would also undermine the Government’s conclusion that the benefits of Heathrow expansion can be delivered more quickly.
- 3.16 Moreover, if a phased approach is to be relied upon to claim a slower build-up of the environmental and surface access impacts, this can only be justified if accompanied by Development Consent Order (DCO) requirements restricting the release of capacity and passenger throughput.

### ***Financeability***

- 3.17 There remain unanswered questions about the fundability of an expanded Heathrow. The NPS highlights that these concerns have been raised by several parties:

*“Several respondents express concern about the cost of the proposed Northwest Runway, particularly in the context of the projected lower cost of an additional runway at Gatwick and proposed public sector cuts. [...] In particular, they feel there is a lack of clarity about the funding streams for different parts of the wider project, including surface transport access.”*

*[Summary of responses to the draft NPS, 7.9.4]*

- 3.18 However, the NPS maintains that Heathrow expansion is financeable without Government support. Given the scale of investment required for an expanded Heathrow, it is unclear how this can be achieved when Government has previously

also stipulated that there should not be a significant increase in aeronautical charges.

- 3.19 The NPS again references work done by independent financial advisers to verify the financeability of the schemes:

*“Independent financial advisers have undertaken further work for the Government, and agree that all three schemes are financeable without Government support.”*

*[Revised NPS, 3.45]*

- 3.20 Given this advice underpins the Government policy to take forward Heathrow expansion, it is imperative that it publishes this advice including the assumptions on which it is based.

#### 4. Jobs

- 4.1 The revised NPS paints a very cautious view of the jobs delivered by Heathrow expansion and it does not claim any net additional national jobs as a result of the scheme. In terms of the local employment impacts, it has increased the forecast number of jobs by 50 per cent in 2030 compared to the previous NPS, but indicates that the entire increase will have been reversed by 2050. This means that jobs are not a strong reason to choose Heathrow expansion over alternatives.

- 4.2 The revised NPS continues to make clear that there is insufficient evidence to suggest that the additional jobs created as a result of Heathrow expansion will be net additions to the UK economy:

*“These jobs are not additional at the national level, as some jobs may have been displaced from other airports or other sectors. The department has not quantified the impact of the shortlisted schemes on national jobs.”*

*[Updated Appraisal Report, 9.5]*

- 4.3 The suggestion is that many of these jobs will simply be displaced from other parts of the UK and therefore cannot be assumed as a benefit.

- 4.4 With regard to local employment, the revised NPS also provides updated estimates based on the new demand forecasts.

### **Additional local employment at the expanded airport**

	Year	Original NPS (AC forecasts)	Revised NPS (New forecasts)	Change
LGW Second Runway	2030	5,000-13,000	9,000-21,000	+61-80%
	2050	19,000-44,000	25,000-60,000	+32-36%
LHR Northwest Runway	2030	38,000-77,000	57,000-114,000	+48-50%
	2050	39,000-78,000	39,000-78,000	+0%

*[adapted from Updated Appraisal Report, Table 6.1]*

4.5 These entail an uplift of 50 per cent in the additional jobs forecast in 2030 compared to the original NPS; this is surprisingly high and no further information is provided as to how these revised figures were calculated. However, the additional jobs in 2050 are the same as the previous NPS forecast. This means that the new forecasts predict 19,000-37,000 additional jobs in 2030 compared to the previous forecast but that all these jobs will have been lost by 2050.

4.6 More broadly, it is essential that Government now updates its surface access analysis to reflect the 50 per cent increase in additional staff now predicted shortly after opening. This increase also needs to be considered in analysing the housing implications of expansion.

## **5. Domestic Connectivity**

5.1 The NPS continues to place a strong emphasis on the domestic connectivity of an expanded Heathrow. This is despite the fact that neither Government nor airports are legally able to dictate the routes to be served in the future, while the Government's own evidence indicates that the number of domestic routes will fall from eight today to just five.

5.2 The revised NPS now includes a speculative list of 14 routes that Heathrow Airport says could be delivered with a third runway. Nonetheless, the NPS states very clearly that:

*"The Government recognises that air routes are in the first instance a commercial decision for airlines and are not in the gift of an airport operator."*

*[Revised NPS, 3.34]*

5.3 The slot allocation rules prevent interference from both airport operator and Government to avoid distortion of the market. Government may implement Public Service Obligations (PSOs) on marginal routes having evaluated the economic conditions of the region to be connected. However, there are substantial restrictions on the use of PSOs and their use cannot be determined years in advance (as the economic conditions have to be evaluated at the time). As such, it would be

premature and unlawful for Government to provide any guarantees of their use, and the provision of such routes cannot be claimed as a benefit of Heathrow expansion.

5.4 The tools available to the airport operator to support domestic connectivity are severely limited. Heathrow Airport has talked of route development funds and lower charges but is legally restricted in the extent to which it can offer these. In any case, the sums the airport would likely be willing to forego are small relative to the profitability gap between a typical domestic flight and longhaul route, competing for use of the same slots at a constrained, three-runway airport.

5.5 This has led to the weak condition that the NPS applies to the airport operator with regard to domestic connectivity:

*“The Government requires Heathrow Airport to demonstrate it has worked constructively with its airline customers to protect and strengthen existing domestic routes, and to develop new domestic connections, including to regions currently unserved.”*

*[Revised NPS, 3.34]*

5.6 To “work constructively” provides no reassurance that existing domestic routes and frequencies will be safeguarded, or new domestic routes secured. This provides an example of where the revised NPS is lacking: providing specific, enforceable and clear requirements that reflect Heathrow and the Government’s commitments.

5.7 Moreover, according to the updated forecasts, from 2028 there will be no additional aircraft slots available at an expanded Heathrow, with incremental passenger growth beyond that from larger aircraft. This will leave Heathrow facing the same challenge it does today, where every slot has an opportunity cost and domestic flights are squeezed out by more profitable international, especially longhaul, routes. This is the unambiguous conclusion of the Government’s new forecasts:

*“With expansion a total of five domestic routes from Heathrow are protected until 2050, two more than if expansion does not occur.”*

*[Updated Appraisal Report, 3.18]*

5.8 This is one more than the four predicted by the AC, but a substantial reduction on the eight domestic routes offered by Heathrow today.

5.9 Moreover, even if Government or airport operator were somehow able to convince airlines to use some of the newly available slots in 2026 for domestic flights, this would only be a short term fix. As a three-runway Heathrow approached full runway capacity by 2028, the temptation to redeploy those domestic slots to more lucrative international routes would mount, and there would be little if anything that could be done to prevent airlines from doing so.



5.10 The revised NPS is at risk of misleading the UK regions with its lists of new domestic routes when the evidence in the NPS all points to a reduction in domestic destinations, not an increase, even with a third runway.

## 6. Surface Access

6.1 The updated forecasts accelerate the build-up of passenger demand, as well as predicting a disproportionate increase in trips to and from London. These have the effect of exacerbating the surface access challenge that an expanded Heathrow faces. The NPS still fails to require any new rail infrastructure to enable an expanded Heathrow, and so risks severely worsening crowding and congestion on the rail and highway networks, with severe consequences for air quality. Moreover the NPS still does not hold Heathrow Airport to its aspiration for no increase in highway traffic, nor does it acknowledge that road user access charging will be essential to achieving significant mode shift.

6.2 Since the previous NPS consultation, the Mayor has published his draft Transport Strategy (MTS). London's population is expected to grow from 8.7m to 10.5m over the next 25 years and the MTS sets out the Mayor's vision for how this growth can be sustainably accommodated by the transport network. Heathrow expansion must not undermine the strategy being taken forward by the Mayor to address this challenge by putting additional pressure on the surface access network of undermining the benefits of new public transport capacity.

6.3 The updated forecasts serve to exacerbate the surface access challenge faced. The acceleration of demand will mean the impacts on the surface access network being felt more quickly. As described above, this growth in passengers has translated into a 50 per cent increase in the number of additional jobs in 2030 compared to the previous forecasts.

6.4 The updated forecasts also show that there will be a 5-15 per cent increase in aviation passengers starting or ending their journey in Greater London in 2040 compared to the previous AC forecasts; this will impact the busiest surface access corridors serving Heathrow Airport.

*"Figure 2.3 shows that more aviation passengers start or end their journey (i.e. by car or by rail) in London in 2040 under the DfT17 forecasts than in the AC's assessment of need, carbon traded forecasts. This is due to both the distribution of additional passengers seen between 2011 and 2016, and the expected differences in future population growth across regions."*

*[Updated Appraisal Report, 2.14]*

6.5 As such, these updated forecasts increase the pressure to address the surface access challenge of an expanded Heathrow.

## **Mode shift**

- 6.6 Securing significant sustainable mode shift remains key to addressing the surface access impacts of a third runway and specifically achieving no increase in highway trips (car, taxi/private hire and freight). However, the NPS continues to fail to hold Heathrow to account:

*“Heathrow Airport should continue to strive to meet its public pledge to have landside airport-related traffic no greater than today”*

*[Revised NPS, 5.37]*

- 6.7 Crucially, this is not made a binding commitment in the NPS, which instead stipulates a far weaker condition for the DCO to be measured against:

*“Achieve a public transport mode share of at least 50% by 2030, and at least 55% by 2040 for passengers...a 25% reduction of all staff car trips by 2030, and a reduction of 50% by 2040 from a 2013 baseline level”*

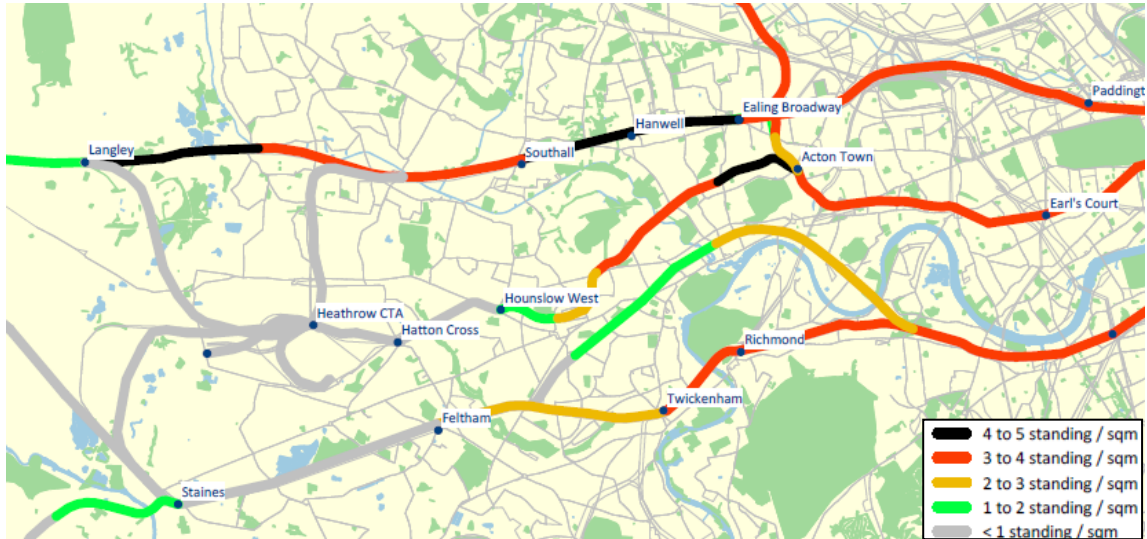
*[Revised NPS, 5.16]*

- 6.8 The new forecasts, by confirming that the three-runway airport will be approaching maximum passenger throughput already in 2030, render these targets even more inadequate. If Heathrow Airport were to achieve these less ambitious NPS targets, according to TfL analysis of the NPS data it is expected to result in at least around 30,000 additional passenger, staff and freight vehicle trips every day on the already congested roads that serve the airport. TfL’s analysis indicates that an overall (passenger and staff) public transport mode share of 61-69 per cent will be required if no increase in highway traffic is to be achieved.
- 6.9 There will also be a need for significant additional public transport capacity and connectivity, both to attract passengers and staff to public transport and accommodate the increase in flows.
- 6.10 The NPS still relies on schemes such as the Piccadilly line upgrades and the Elizabeth line which were designed to support population growth. They were planned on the basis of a two-runway Heathrow and would struggle to cope with the increased demand from an expanded Heathrow without eroding their ability to cater for the population growth they were designed to address.
- 6.11 The NPS also continues to assume both Western Rail Access (WRA) and (a limited version of) Southern Rail Access (SRA), despite neither being committed nor funded. It remains a concern that both Government and Heathrow Airport appear to deem both schemes desirable but not essential for expansion.
- 6.12 Even if these schemes are assumed, modelling by TfL shows the impacts of expansion on the rail and highway networks will be significant. It would have a

substantial effect on journey times for non-airport journeys across a swathe of London and undermine the ability of the transport network to support London's growth.

### **Forecast crowding on key rail links serving Heathrow**

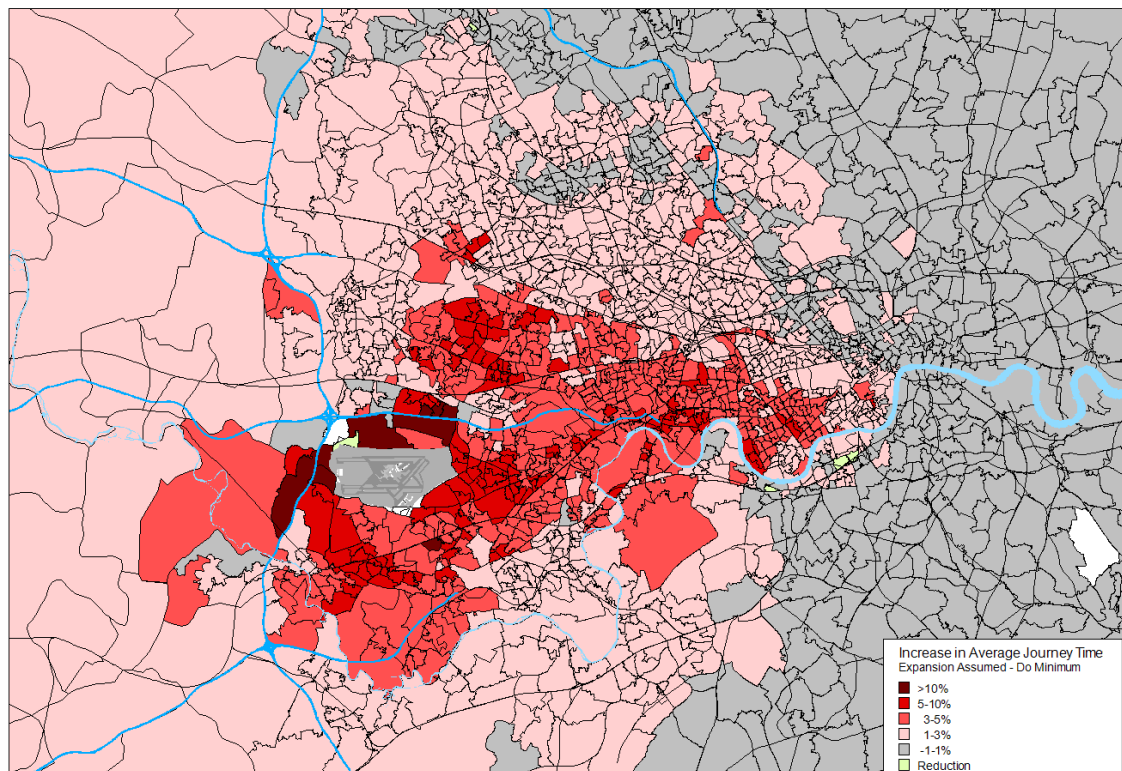
2031 AM peak hour, Eastbound, Committed+Assumed (including WRA, SRA)



[Source: TfL analysis]

### **Increase in journey time for non-airport users by zone of journey origin**

2031 AM peak hour, Eastbound, Committed+Assumed vs No Expansion



[Source: TfL analysis]

- 6.13 Analysis by TfL indicates that if the aspiration for no increase in highway trips following expansion is to be achieved it will require significant investment in public transport together with a sizeable road user access charge.
- 6.14 The former includes both WRA and a version of SRA that can deliver both connectivity and capacity. Additionally, there would need to be investment in bus/coach and cycle infrastructure on the key corridors that serve the airport.
- 6.15 With regard to the latter, analysis by the AC indicated a road user access charge of £40 for passengers (cars, taxis and private hire vehicles) would be required; work done by TfL found that the charge would need to be at least this much if traffic is to be held at current levels.
- 6.16 The revised NPS is beginning to acknowledge there could be a role for congestion charging:

*“Additional mitigation measures suggested within the AC report...which could potentially be implemented, include...Introduction of an airport congestion charge for travellers or a Ultra Low Emission Zone (ULEZ).”*  
*[Appraisal of Sustainability for revised NPS, A-8 Air Quality, 8.10.1]*

- 6.17 However, the NPS still falls short of legally requiring the airport to take forward such a scheme, even though the modelling demonstrates that it is essential if an expanded Heathrow is to secure sufficient shift to sustainable modes.
- 6.18 Again, clear and appropriate requirements reflecting Heathrow and the Government’s commitments should be imposed, including the aspiration by the former for no increase in highway trips. For example, a statement that the Secretary of State is required to refuse an application where there will or are likely to be increases in vehicle trips (whether expressed as modal shift or as an absolute figure) should be inserted into the NPS.

### ***Freight and induced demand***

- 6.19 The revised NPS continues to claim the economic benefits of freight without properly assessing the surface access impacts. It now clarifies that freight operators should be included in the surface access strategy, but it still does not quantify the impact of freight on the surface access network or to show how the impact could be mitigated.
- 6.20 Similarly, the NPS continues to neglect the trips associated with economic activity induced by expansion in its consideration of surface access.
- 6.21 Moreover, if the air quality has been modelled for the NPS without taking proper account of freight and induced demand, the NPS is likely underestimating the overall air quality impacts of the proposals, including a further increase in the risk to

compliance.

## 7. Air Quality

7.1 The updated re-analysis of air quality in the NPS shows that an expanded Heathrow would breach legal limits for air quality and that it can only avoid this by taking advantage of the air quality measures being implemented by the Mayor to improve the public health of Londoners. Furthermore, applying the appropriate modelling uncertainty factor, the NPS analysis finds that, even with those measures, there is nevertheless a high risk of Heathrow expansion resulting in an exceedance of legal limits and making London non-compliant until at least 2029. The inescapable conclusion of the analysis is that a third runway at Heathrow opening before 2030 is incompatible with the UK meeting its legal obligations on air quality and this should be recognised.

7.2 The re-analysis of air quality in the NPS was undertaken following publication of the latest National Air Quality Action Plan and incorporating the updated passenger demand forecasts. In the draft London Environment Strategy, the Mayor sets out the significant steps he is taking to address the acute air quality challenge in London. The Mayor is pressing ahead with the Toxicity Charge (T-Charge) and Ultra Low Emissions Zone (ULEZ) as well as investments in buses and taxis, part of a comprehensive range of measures to deliver meaningful improvements that will directly benefit the health of Londoners. The Air Quality Plan is once again subject to a legal challenge which may mean that stricter measures are required to be introduced to keep to air quality limit values.

7.3 The NPS analysis considers the NO<sub>2</sub> impacts of an expanded Heathrow in three scenarios: a Baseline scenario, a scenario with a Clean Air Zone (CAZ) in Greater London and scenario with a CAZ in Greater London and a Zero Emissions Zone (ZEZ) in central London and other potential local measures. Its analysis concluded:

*“With the actions set out in the 2017 Plan, Heathrow NWR option has no impact on modelled compliance with limit values in any year (CAZ or CAZ+ZEZ). With early opening, however, there is very little headroom (<1%) without the London ZEZ and the risk of impacting on compliance is high.*

*In the Baseline scenarios, the option causes a delay to the compliance of the zone with opening prior to 2029, although the exceedance of the standard is marginal in 2028 (headroom ~1%).”*

*[2017 Plan Update to Air Quality Re-Analysis, 5.3.2 and 5.3.3]*

7.4 This means that, according to the revised NPS, an expanded Heathrow will delay compliance of the London zone in the years 2026-28 and that the only possibility to avoid this is to rely on the wider air quality measures that London is implementing.

The draft London Plan (Policy SI1, A1c) is clear that “development proposals should not reduce air quality benefits that result from the Mayor’s or boroughs activities to improve air quality.” It is unthinkable that Heathrow be allowed to take advantage of wider measures to justify expansion and thereby effectively deprive Londoners of significant health benefits that would otherwise accrue.

- 7.5 The nature of air quality modelling is such that it is appropriate to apply an uncertainty factor and the NPS analysis follows the guidance of the independent panel of experts appointed by Defra. This led the analysis to conclude:

*“Given the inherent uncertainties in air quality modelling, there remains, however, a risk that the option could delay compliance with limit values...The risk of impact on compliance is high up to 2029 since the option potentially impacts on compliance in central London and exists whether or not the Government’s 2017 Plan actions are fully implemented. From 2030 onwards, the risk falls to medium.”*

*[2017 Plan Update to Air Quality Re-Analysis, Table 1.1]*

- 7.6 This means that even if Heathrow takes advantage of the measures that the Mayor is implementing in London, the risk of exceedence is high up to 2029 and medium beyond that. Moreover, the statement above highlights the geographical scope of the air quality impacts of Heathrow expansion, with airport-related highway traffic in central London having a material impact on air quality compliance.
- 7.7 The National Networks NPS explicitly requires the Secretary of State to refuse permission for an application under the Planning Act 2008 regime that slows down achievement of air quality limit values. This precise and necessary wording is absent from this NPS. If the Government is convinced that Heathrow expansion will not delay compliance (despite its own evidence to the contrary), an explicit requirement that the Secretary of State must refuse consent should be inserted where granting an application would lead to non-compliance with the Air Quality Regulations.
- 7.8 The paucity of ambition in the surface access targets in the NPS which, as discussed above, would be expected to result in at least around 30,000 additional passenger, staff and freight vehicle trips, provides no reassurance about the serious impact of a third runway on air quality.
- 7.9 The London Environment Strategy also sets ambitious targets for particulate matter by 2030, in line with WHO guidelines, and the updated forecasts add to the significant overall negative impact of this pollutant in this timescale as a result of Heathrow expansion.
- 7.10 It should also be noted that the NPS air quality analysis assumed that a Heathrow third runway cannot open in 2025 and no assessment is undertaken for the



previously declared opening year:

*“The assessment is provided by option, for the years 2026 through to 2030. It is possible that Gatwick 2R could open in 2025.”*

*[2017 Plan Update to Air Quality Re-Analysis, 5.1.2]*

## 8. Noise

8.1 Noise remains the fundamental concern of Heathrow expansion for Londoners and a robust assessment is essential; this is not possible when based on indicative flightpaths and a 2013 baseline, as is now made explicit in the revised NPS. The move to use the lower noise metric recommended by the Survey of Noise Attitudes (SoNA) is welcome. Nonetheless, the revised NPS does little to allay the fears of Londoners that an expanded Heathrow will result in very significant noise impacts, in both the day and night periods.

8.2 The revised NPS is now explicit about the use of indicative flightpaths in assessing the noise impacts for the DCO:

*“The applicant’s assessment of aircraft noise should be undertaken in accordance with the developing indicative airspace design. This may involve the use of appropriate design parameters and scenarios based on indicative flightpaths.”*

*[Revised NPS, 5.51]*

8.3 Given the severity of the noise impacts of Heathrow today and following expansion, the future exposure to noise is fundamental to how local residents approach the expansion proposals. It is wholly counterproductive to be proceeding with the planning process for a third runway in the absence of detailed flightpaths. The indicative flightpaths used thus far have been designed based on a number of assumptions, some counter to policy, while some of the flightpaths were even deemed to be unfeasible by NATS. The lack of any requirement for the final flightpaths to reflect the indicative flightpaths being used for assessment purposes renders any such assessment largely pointless.

8.4 If the final flightpaths agreed by the Civil Aviation Authority as part of its consideration of airspace change fall outside those that were assessed in the environmental statement for the Heathrow DCO, then the NPS should require Heathrow Airport to apply to amend its DCO so that it is consented on the correct basis.

8.5 The revised NPS is also now explicit in the use of 2013 as the baseline against which to measure the noise impacts of an expanded Heathrow.

*“The Secretary of State will consider whether the mitigation measures put*

*forward by the applicant following consultation are acceptable. The noise mitigation measures should ensure the impact of aircraft noise is limited and, where possible, reduced compared to the 2013 baseline assessed by the Airports Commission.”*

*[Revised NPS, 5.57]*

8.6 The question arising is why the scheme should not be compared against the future without expansion, allowing it to take advantage of aviation noise reductions in the intervening period to enable more flights, reductions which would otherwise directly benefit local communities. Heathrow is already, by some margin, the noisiest airport in Europe, and local communities should reasonably be able to expect to benefit from any technology changes unrelated to expansion.

8.7 This is also wholly inconsistent with the approach of the NPS to air quality:

*“The environmental statement should assess...forecasts of air quality at the time of opening, (a) assuming that the scheme is not built (the ‘future baseline’), and (b) taking account of the impact of the scheme, including when at full capacity;”*

*[Revised NPS, 5.32]*

8.8 The NPS should adopt a consistent and credible approach and mandate a future non-expansion baseline for assessing the noise impacts.

8.9 When the original NPS was published, it was criticised for not taking into account the SoNA which though published at the same time had been conducted in 2014. The revised NPS has now done this:

*“Based on the results of the SoNA31 study, a level of 54dB LAeq,0700-2300hrs signifies a level at which significant community annoyance starts to occur.”*

*[Appraisal of Sustainability for revised NPS, A-4 Noise, Table 4.2]*

8.10 The recognition of the need for a more appropriate metric for assessing noise is welcome, in light of the SoNA finding that people have become more sensitive to noise.

8.11 Nonetheless, given other long-standing concerns about the noise modelling undertaken, including the use of indicative flightpaths, optimistic assumptions about aircraft technology improvements and concerns about what has been assumed in the baseline, we remain cautious about any new modelling results.

8.12 It is unclear whether the monetised environmental disbenefits have been recalculated to reflect the new, lower, noise thresholds. If not, this should be undertaken as part of the updated assessment.

8.13 It should also be noted that the threshold metrics for triggering mitigation have not



been changed to take account of the SoNA findings; no proper justification is given for this. This question needs to be revisited and a lower threshold applied if appropriate.

8.14 The revised NPS has taken on board concerns raised about the timescales for installation of noise insulation proposed by Heathrow Airport. Though it stops short of specifying timeframes, the recognition of the need for timely installation is welcome.

8.15 The very real concerns of local communities of increased noise exposure, in particular the halving of respite for many and the significant increase in night noise under all the proposed night flight options, remain unaddressed.

## 9. Carbon

9.1 The revised NPS remains unclear on the implications that the carbon emissions associated with a third runway, will have on the UK's ability to meet its carbon targets. The revised NPS also continues to ignore the advice of the Committee on Climate Change to exclude carbon credits and it still neglects to include freight in its assessment.

9.2 As a result of the accelerated growth forecasts the level of carbon emissions associated with a third runway has also increased.

*Over the 60-year Appraisal Period (2026 to 2086)...under the carbon-traded scenario, it is forecast that the development of LHR-NWR will result in the emission of a further 326.4 MtCO<sub>2</sub> from the expanded airport over the baseline case.*

*[Appraisal of Sustainability for revised NPS, A-9 Carbon, Question 27 Table]*

9.3 This compares to 308.9 MtCO<sub>2</sub> in the original NPS.

9.4 There is no assessment of what these higher carbon emissions mean in the wider carbon context, nor if expansion at Heathrow will require additional reductions in carbon emissions at other UK airports, or in other industry sectors. This is a particular issue if carbon credits are not to be relied upon or if there is a risk that the 2050 carbon target will not be met.

## 10. Housing

10.1 With the increased demand forecasts and higher local employment, the housing requirements have also increased. Given the struggle that local authorities are already facing in delivering new housing, Heathrow Airport needs to be required to play a proactive role if the housing gap that results from expansion is to be

addressed.

- 10.2 Housing remains a critical issue for London and the South East and one which is a key focus for the Mayor, who published his draft London Plan in December that looks to deliver 650,000 new homes over the next 10 years. In the context of London's housing shortage, it is essential to understand the housing implications of a third runway.
- 10.3 The revised NPS forecasts that a third runway at Heathrow will generate up to 114,000 additional jobs by 2030 (albeit displaced from elsewhere in the UK), as well as the induced employment in the local area. These employees and their families will need homes, homes which will need to be delivered in addition to London's forecast population growth that is independent of development at Heathrow.

The forecast increase in local employment has translated into an increased requirement for additional housing:

*“High demand scenarios indicate 42,400 – 69,300 homes would be required. Between 300 and 500 additional homes would be required per local authority per year.”*

*[Revised NPS: Appraisal of Sustainability: Community Assessment, Question 2 Table]*

- 10.4 While this housing need is a direct result of expansion, the revised NPS continues to leave responsibility for their delivery with local authorities, some of whom are already struggling to meet their existing targets. The NPS should ensure that Heathrow Airport plays a more proactive role in identifying how they might be delivered.

## 11. Other airports

- 11.1 The original NPS on airport capacity in the South East of England was criticised for its near exclusive focus on one particular airport. The revised NPS acknowledges the potential for making better use of existing capacity elsewhere in the airport system, independent from any expansion proposals at Heathrow, and this is welcome.

*“In light of the findings of the Airports Commission on the need for more intensive use of existing infrastructure...the Government accepts that it may well be possible for existing airports to demonstrate sufficient need for their proposals, additional to (or different from) the need which is met by the provision of a Northwest Runway at Heathrow.”*

*[Revised NPS, 1.40]*