

Heathrow Expansion DCO Consultation Response

Surface access

September 2019

1. Overview

- 1.1 This paper sets out the detailed response by TfL on surface access to the statutory consultation by Heathrow Airport Limited (HAL) on its expansion proposals.
- 1.2 Central to the surface access proposition for expansion, HAL had to demonstrate how it could meet its targets for mode share – including no extra traffic – as well as its obligations for air quality. HAL has failed to set out a credible surface access strategy to achieve this and it has not provided a robust assessment of the likely impacts.
- 1.3 HAL’s position is not tenable, that little if any substantial additional public transport infrastructure is required to enable expansion and secure significant mode shift. The lack of rail access from the south and west fundamentally undermines HAL’s ability to secure mode shift from these directions. Its belief that bus and coach could take up the slack, in the absence of the infrastructure to improve journey time and reliability on the key corridors serving the airport, is not borne out by credible evidence and is wholly unwarranted.
- 1.4 The proposals for an ultra low emissions zone and a road user charge are not underpinned by any analysis demonstrating their effectiveness. There is a lack of evidence to support the charge level and geographic scope of both schemes, and to justify why staff, rental cars and possibly freight are to be excluded, nor does there appear to be any understanding or acceptance of the knock-on impacts around the edges of the scheme.
- 1.5 The proposed parking strategy makes accessing the airport by car significantly more attractive to passengers than today, completely at odds with the sustainable mode share objectives. It is far from clear that the proposed reduction in staff parking is deliverable or to what extent it will be effective in securing the envisaged mode shift.
- 1.6 The assessment is undermined by a flawed modelling approach – including a highway model that is not yet fit for purpose nor, indeed, compliant with DfT WebTAG criteria and assumptions which range from the uncertain to the questionable to the incorrect.
- 1.7 A key pillar of HAL’s approach is its ‘Environmentally Managed Growth’ framework, by which it seeks to demonstrate how its surface access impacts can be controlled. However this requires a monitoring strategy that is objective, robust and transparent

if it is to be credible. However, HAL's proposed boundary for monitoring 'no extra traffic' is designed such that not only would it systematically omit a wide range of airport-related highway trips, but it risks rewarding measures by HAL which artificially displace highway trips to beyond the airport boundary, when these are just as much impacts of the project.

- 1.8 What is presented by HAL in this consultation with regard to surface access is a wholly unsuitable basis upon which to take forward its expansion proposals, and one that will seriously damage the operation of surface access to the detriment of Londoners and commuters generally. As significant changes are required to remedy these significant defects, there is a strong case for HAL to reconsult once it has rectified the fundamental issues that persist in its analysis.

2. Policy context and approach

Policy and sustainable mode shift

- 2.1 All the relevant policy documents are clear that expansion can only proceed on the basis of a shift to sustainable modes. Central to this is ensuring that legal obligations for air quality can be met, alongside considerations of carbon and highway capacity.
- 2.2 The Airports National Policy Statement (NPS) gave the go ahead for Heathrow Expansion on the basis that it meets targets for both passengers and staff trips. It has also been clarified by the DfT that these are minimum targets and that the surface access and air quality impacts will need to be adequately addressed. The latter was reinforced by the judgment in relation to the judicial review challenge of the NPS, in which the judge described air quality as “the reddest of red lines.”
- 2.3 The draft London Plan¹ is also clear that the air quality harm associated with Heathrow expansion must be fully addressed and that it must be demonstrated how surface access networks will accommodate increased expansion demand alongside background growth. HAL accepts that the draft London Plan is a relevant and material consideration².
- 2.4 In light of these, HAL has stated its aspiration to deliver expansion without an increase in highway trips, which has been welcomed by TfL.
- 2.5 Heathrow expansion must also be understood within the context of the Mayor's Transport Strategy (MTS), which is also recognised in the PTIR³. The MTS sets a target that, by 2041, 80% of trips in London are to be made by active, efficient and sustainable modes, namely public transport, walking and cycling (up from 63%

¹ Draft London Plan, Policy T8

² PTIR Volume 1, 4.3.4

³ PTIR Volume 1, 4.3.7

today)⁴. By contrast, Heathrow today achieves a sustainable mode share of around 39%.

- 2.6 More generally, based on the analysis that HAL has presented in this consultation, it has not demonstrated that it can credibly deliver expansion while meeting the requirements of the NPS⁵ and the draft London Plan to address the surface access and air quality impacts.
- 2.7 Moreover, the NPS included a robust forecast of demand at an expanded Heathrow. TfL's understanding is that HAL has not and does not intend to test the NPS forecast scenario. Instead it is testing a phased approach to delivery, albeit without actually committing to that phasing. It is essential that HAL tests the NPS forecast scenario to fully understand the impacts.

Engagement and approach

- 2.8 While the DCO material points to substantial engagement between HAL and TfL⁶, the reality is that these sessions have generally been lacking in substance, with little progress made. Indeed, despite a year of engagement, none of the fundamental issues that TfL has raised with HAL in relation to the expansion plans and their assessment have been addressed, either in the meetings or in the consultation materials.
- 2.9 As the main consultation opportunity for both key stakeholders and the wider public to understand the impacts of expansion, it is imperative that this statutory consultation is informed by credible and accurate evidence and analysis. Instead, the evidence presented is, to a great extent, based on assumptions ranging from the hopeful to unsound and modelling which is not fit for purpose nor compliant with DfT WebTAG criteria.
- 2.10 Indeed, given the uncertainties inherent in the assumptions, it is imperative that HAL tests a range of scenarios to capture that uncertainty. Conservative assumptions should be assessed cumulatively (rather than one-by-one) to present a plausible 'worst-case' scenario. Instead, the 2030 Assessment Case which HAL claims to be a conservative and the worst-case scenario is in fact an optimistic view which could significantly underestimate the surface access and air quality impacts.
- 2.11 As things stand, it is hard to escape the conclusion that this consultation is premature and that it will be essential for HAL to reconsult once it has rectified the fundamental issues that persist in its analysis.

⁴ Mayor's Transport Strategy, Policy I

⁵ Airports NPS, 5.17

⁶ PTIR Volume I, Table 8.2

Scoping opinion

- 2.12 In a similar vein, HAL has largely ignored the recommendations of the Planning Inspector (PINS) on surface access in its Scoping Opinion – and, indeed, for several recommendations, HAL offers no response whatsoever. HAL’s response to concerns raised about its modelling suite appears to be to state that it has discussed its (flawed) approach with TfL, while concerns about the study area have also been dismissed.
- 2.13 The Planning Inspector recommended that HAL’s Environmental Statement have regard to TfL best practice guidance on transport assessment, healthy streets, the promotion of active travel and constructions logistics but HAL fails to make reference to any of these.

3. Demand challenge

- 3.1 The analysis underpinning the NPS, and its conclusion that a new northwest runway at Heathrow should be taken forward, was based on updated DfT Forecasts⁷. This predicted that by 2030, with expansion, demand would reach 132 million passengers per annum (mppa). As already mentioned, HAL has not used the DfT forecasts and has instead assumed a much slower build-up of passenger demand.
- 3.2 However, even assuming slower growth than the NPS, HAL should be under no illusion as to the scale of the demand challenge it is facing.
- 3.3 Analysis by TfL⁸ in line with the NPS forecasts suggests that by 2030, expansion would result in a 55% increase in daily passenger and staff trips. Indeed, HAL has also forecast an increase of over 50% in daily non-transfer passenger and staff trips, but by 2040 rather than 2030, as a result of its phased growth. As such, HAL is forecasting an increase in demand which equates to over 130,000 additional daily passenger and staff trips on the surface access network.
- 3.4 However, if that increase in demand is to be accommodated without increasing highway trips, all of those additional trips would need to be accommodated on sustainable modes. This means a 170% increase in daily passenger and staff trips by 2030 compared to today. TfL estimates that the overall sustainable mode share would have to increase to 66%, from 39% today.
- 3.5 The twin challenge for HAL to demonstrate is thus i) how to attract passengers and staff to public transport, walking and cycling and ii) how to accommodate that additional demand on public transport. TfL’s view is that its proposals fail this challenge.

⁷ DfT - 2017 UK Aviation Forecasts

⁸ <http://content.tfl.gov.uk/tfl-surface-access-analysis-note-17-01-15.pdf>

4. Rail

- 4.1 In the context of the significant increase in trips as a result of expansion and the objective for sustainable mode shift, it is a serious concern that no additional rail infrastructure is deemed required by HAL to enable expansion.
- 4.2 HAL needs to provide credible evidence, under a range of scenarios, how the mode share and 'no more traffic' targets and air quality obligations can be achieved without significant new rail (or other public transport) infrastructure as claimed. At the same time, it must also show that expansion can be delivered without worsening crowding and congestion for non-airport users – or else commit to providing the necessary rail improvements.

The need for sufficient rail capacity

- 4.3 To reiterate, it is critical that HAL ensures both the rail connectivity and capacity are in place to attract passengers and staff to rail and to accommodate the resultant demand without impacting existing services.
- 4.4 HAL, by placing such heavy reliance on pre-existing schemes such as the Elizabeth line and Piccadilly line Upgrade, risks undermining their original objectives, to provide capacity to support housing and economic growth in west London and beyond – alongside incremental growth at Heathrow. If those objectives are not fulfilled as a result of Heathrow expansion, then such non-fulfilment should be considered an adverse impact of the project. They were never designed to accommodate the substantial uplift in demand from Heathrow expansion. They are already forecast to experience crowding at or shortly after opening and expansion risks exacerbating that. Losing that capacity will limit their potential to enable housing and growth – but it is also a problem for Heathrow. Worsening crowding – and the associated impacts on journey time and reliability – will inevitably reduce the attractiveness of the services, undermining their ability to encourage the shift HAL needs from non-sustainable modes.
- 4.5 Capacity is no less important for any new rail services such as the Western Rail Access (WRA) and Southern Rail Access (SRA). There is a particular concern for SRA, with most of the schemes currently under consideration plugging the airport into the existing railway network without a credible plan for accommodating additional trains. The severe constraints on the southwest rail network are exacerbated by three level crossings in each of Sheen (in the London direction) and Egham (in the Surrey direction) which limit or prevent additional trains. For the same reasons as above, diverting or replacing existing or planned services is not a credible solution to providing the capacity required alongside existing and forecast non-airport demand. As such, if SRA and WRA are to enable expansion, sufficient capacity also needs to be integral to the schemes.

The need for new rail connectivity

4.6 Analysis previously published by TfL⁹ shows that a substantial package of infrastructure, including both WRA and SRA, will be necessary to provide the capacity and connectivity to secure sufficient sustainable mode shift – *from all directions*. It does this by encouraging people to switch to rail (and other sustainable modes) and then accommodating the resultant increase in flows.

4.7 However, according to HAL, its modelling shows that it is reliant on neither WRA nor SRA because of its “ability to vary the proposed vehicle access charge, the fares on the Heathrow Express and the bus and coach improvements¹⁰.” Herein lies the fundamental misconceptions in HAL’s approach:

- **Bus and coach improvements**

If bus and coach are to increase their attractiveness to secure a significant increase in demand, this will require improved journey times and reliability. Little that HAL is proposing will prevent buses and coaches getting delayed on already heavily congested local and strategic roads on the corridors serving the airport (this is discussed further in the next section). Even then, bus and coach would struggle to be as effective as rail in securing a significant shift out of cars – with certain market segments a particular challenge.

- **Heathrow Express fares**

This is an entirely spurious point. Substantially reducing the fares on the rail service between the airport and central London – even if it were likely – has little if any bearing on the likelihood of passengers and staff living to the south and west of the airport (i.e. in the opposite direction) to switch to sustainable modes.

- **Road user charge**

Placing ever greater financial penalties on those driving to the airport from the south and west, without ensuring they have a fast, reliable, sustainable alternative is not just unfair, it is also unlikely to be very effective. Without a perceived choice, many will grudgingly pay the charge, which is relatively small compared to the overall cost of a holiday, or if disincentivised too much, use a different airport altogether, thus defeating the object of expansion.

4.8 Heathrow today is served by eighteen trains per hour; in the future that will increase to at least twenty-two. The problem is that every single one of those trains is heading in the same direction: east, towards central London. The result is a high public transport mode share of over 50% in that direction, to places like Hammersmith & Fulham and Kensington and Chelsea. But the public transport mode share to locations to the south and west of Heathrow, without direct rail access, is typically

⁹ <http://content.tfl.gov.uk/tfl-surface-access-analysis-note-17-01-15.pdf>

¹⁰ Surface Access Proposals, 2.6.18

less than 25% – places like Richmond, Kingston, Guildford and Slough – some only managing single digits.

- 4.9 The implication is clear. If HAL is to secure the significant sustainable mode shift required – and do so from all directions – then the gap in rail connectivity needs to be filled and this requires both WRA and SRA – and, realistically, from day one of opening of a third runway. Other measures can – and must – complement this new rail infrastructure; but they cannot be a substitute for these new rail links.
- 4.10 The need for WRA and SRA was also affirmed by the High Court judgment on the challenge to the Airports NPS: “If delivery of those public infrastructure schemes is delayed, then the (Heathrow) NWR Scheme can be phased in and/or the applicant will have to demonstrate how other forms of mitigation will enable it to comply with the air quality requirements set out in the (Airports) NPS”¹¹.

Elizabeth line and Piccadilly line frequencies

- 4.11 In the context of capacity, the service frequency is a key assumption. Through its engagement with HAL, TfL has repeatedly raised specific issues with what HAL had assumed with regard to service frequencies on these TfL services and what the most appropriate assumptions would be. Despite this HAL appears largely to have ignored those issues and has presented an account of planned and potential frequencies in the consultation material which is unsound.
- 4.12 The frequencies modelled in both the Assessment case and Expected case also contain inaccuracies which serve to overstate the attractiveness of both the Elizabeth line and Piccadilly line services and so the potential mode shift.
- 4.13 For the avoidance of doubt, the appropriate frequency assumptions, which have already been communicated to HAL, are set out below.
- 4.14 The Elizabeth line is committed to operating six trains per hour to Heathrow, all serving the CTA (central terminal area – i.e. Terminals 2 and 3), with four continuing to Terminal 4 (T4) and two continuing to Terminal 5 (T5). Though stated as an aspiration, it has not been possible to identify how two additional Elizabeth line trains to Heathrow could be accommodated on the network, without incurring a prohibitive infrastructure cost, contrary to what HAL suggests¹².
- 4.15 A turn-up-and-go frequency is essential if the service is to be attractive – this equates to a national rail service of at least four trains an hour. As such, two T4 Elizabeth line trains could only be switched to T5 – as HAL proposes¹³ – if two of the Heathrow Express T5 trains were then switched to T4, thus maintaining the overall four trains

¹¹ [2019] EWHC 1070 (Admin), Judgment, 273

¹² Surface Access Proposals, 3.2.118

¹³ Surface Access Proposals, 3.2.116

per hour frequency at T4. There is no indication from HAL that it intends to do this, nor is it secured in its proposals. Moreover, platform capacity constraints at the CTA station prevent a CTA-T4 shuttle being run alongside six Elizabeth line trains and four Heathrow Express trains per hour.

- 4.16 The Piccadilly line Upgrade is due to deliver new, higher capacity, walk-through trains and a new signalling system, improving journey times and reliability. However, unless addressed by Government in its next Comprehensive Spending Review, a lack of funding means that the Upgrade has to be phased over a longer period and a key element remains unfunded. A one-for-one replacement of the rolling stock is envisaged for the mid-2020s, with new signalling introduced in 2030. However, the additional rolling stock required to take advantage of the new signalling is currently unfunded. As such, contrary to what HAL asserts¹⁴, a frequency of no more than 12 trains per hour to Heathrow can be relied upon at this time. This means no increase over today, albeit with higher capacity trains and improved journey times.
- 4.17 Again, a turn-up-and-go frequency is essential, which for a tube service entails at least six trains an hour. This means that, contrary to what HAL claims¹⁵, the even split of six trains per hour serving each of T5 and T4 would remain (with all twelve services serving the CTA).
- 4.18 If the full funding for the Upgrade were to be secured, this could enable 18 trains per hour to Heathrow, which in turn could allow for a 2:1 split between T5 and T4, while still maintaining a minimum six trains per hour service at each. However, as this stage, there can be no certainty that this funding will be forthcoming.

Heathrow Express fares

- 4.19 The four trains per hour Heathrow Express service to Paddington, operated by a wholly-owned subsidiary of HAL, is possibly the world's most expensive rail service; at £25 for a one-way peak fare, it is more expensive per mile than Concorde was.
- 4.20 HAL has cited varying the Heathrow Express fares as an important lever for encouraging mode shift¹⁶. However, the primary driver for HAL to reduce the Heathrow Express fares is more likely to be the introduction of Elizabeth line services in 2020. The Elizabeth line will provide stiff competition to the Heathrow Express, offering a higher frequency to Paddington with only a slightly longer journey time – and, crucially, providing direct services beyond Paddington to the West End, City, Docklands and beyond. As such, is it inconceivable that HAL would not reduce Heathrow Express fares precisely because of that competitive pressure; but it is unclear how much of the resulting shift will be at the expense of non-sustainable modes rather than other rail services.

¹⁴ Surface Access Proposals, 3.2.122

¹⁵ Surface Access Proposals, 3.2.124

¹⁶ Surface Access Proposals, 2.6.18

- 4.21 However, the modelling undertaken by HAL for both its Assessment Case and its Expected Case has gone further and has assumed that Heathrow Express fares will be reduced to approximately the same level as the Elizabeth line¹⁷. The concern is that, for the purposes of the assessment, such an assumption maximises the potential sustainable mode shift from the Heathrow Express – while in reality such a scenario is not credible. Based on TfL’s experience of dealing with HAL on the Heathrow Express when the objectives of its surface access strategy are at odds with its commercial interests, it is reasonable to assume that the future Heathrow Express fare will be set at a level that maximises profitability. Post-Elizabeth line, this will undoubtedly be at a level lower than today’s fares, but it is also unlikely to be similar to the Elizabeth line fares; the Heathrow Express will most likely continue to be positioned as a premium services.
- 4.22 As such, unless HAL is explicitly committing to a Heathrow Express fare set at the same level as the Elizabeth line, it is not justified for it to have assumed this in its modelling, given the likelihood that it overstates the sustainable mode shift that could be delivered.

Delivery of WRA, SRA

- 4.23 Though HAL maintains that neither WRA nor SRA are required for expansion, its inclusion of both in its Expected case highlights the extent to which it effectively recognises that it will need them at some stage of its expansion programme. Yet neither scheme is certain to be delivered.
- 4.24 WRA remains further advanced, with a single preferred scheme and its own DCO application currently being prepared by Network Rail. SRA, by contrast, is still in its early stages, with a preferred scheme and delivery model yet to be identified.
- 4.25 However, fundamental questions about the operation of both schemes remain unresolved. It is also essential that they do not adversely impact the operation of Elizabeth line services.
- 4.26 The greatest obstacle to both schemes remains funding. Despite both being focused on enhancing access to Heathrow, HAL is yet to offer a concrete funding commitment towards either scheme.
- 4.27 Recent history reminds us why we cannot take this for granted. At the Heathrow T5 inquiry, both HAL and Government indicated that Airtrack would be delivered, as SRA was then known. Such was the momentum behind the scheme that no planning condition was attached to it – but in the end, neither HAL nor Government were willing to contribute sufficient funds and the scheme subsequently fell through. If there continues to be no commitment to WRA or SRA and if no planning condition is secured, then history could repeat itself, with neither delivered, gravely undermining

¹⁷ Surface Access Proposals, 3.2.60

efforts to secure sustainable mode shift.

5. Bus and coach

- 5.1 Given the lack of rail infrastructure that has been committed to, HAL is relying on a significant increase in bus and coach patronage, but with little evidence to suggest that the levels of uptake needed are achievable. To secure substantially greater bus and coach ridership requires marked improvements in journey time and reliability; frequency increases alone will not be sufficient. Airport passengers and staff are particularly sensitive to journey time reliability, given inflexible check-in deadlines and shift start times.
- 5.2 Moreover, the lack of good public transport alternatives is likely to keep people in their cars, adding to highway congestion and further eroding the attractiveness of bus and coach. The section of the M25 adjacent to Heathrow is already the busiest stretch of motorway in the UK and the concern is that expansion will make it substantially worse.
- 5.3 HAL seeks to draw on a recent research study on coach travel to airports to suggest that “many coach users will return once they have sampled the offer¹⁸.” But the study also confirms the most important attributes for passengers to be i) travelling when they need to and ii) feeling confident about the arrival time – the latter reinforcing the importance of journey time reliability.
- 5.4 HAL focuses on ensuring roads around the airport “always remain free flowing for public transport services to provide reliable and consistent journey times¹⁹” – but does not appear to define what “free flowing” is, nor does it recognise the necessity for this on the roads approaching the airport.
- 5.5 There needs to be a recognition of and commitment to significant bus and coach priority infrastructure interventions, both on- and off-airport, if HAL is to increase the attractiveness of bus and coach services. There are indications that HAL is starting to accept this for bus, albeit not for coach.
- 5.6 No less important than the commitment to the principle of priority infrastructure is identification of where and how it can be delivered. It cannot be taken for granted that there is the road space in key corridors serving the airport to accommodate bus and coach priority measures. Detailed work will need to be undertaken to understand what might actually be deliverable and the wider traffic impacts that could arise. This will need to include discussions with the relevant highway authorities on specific and feasible proposals, none of which, we understand, has happened.

¹⁸ Surface Access Proposals, 3.2.94

¹⁹ Surface Access Proposals, 3.3.67

New and existing coach services

- 5.7 HAL places particular emphasis on coach, both in terms of new services and enhancing existing services. There is a welcome recognition by HAL that it may need to financially support the introduction of some coach services – but it falls substantially short of the level of commitment that will be required if its plans are to have any credibility.
- 5.8 The coach sector is a deregulated private market and HAL needs to acknowledge that this complicates its planning for coaches and requires collaboration with multiple operators.
- 5.9 Where, based on its analysis, HAL has found there to be a strong financial case for operating a new service or enhancing an existing service, this alone is not enough to justify inclusion of this in its assumptions. For example, if it wants to rely on a new coach service being introduced, it must commit to its introduction and confirm it will step in and fund it, should an operator not be forthcoming.
- 5.10 For the avoidance of doubt – and contrary to what HAL states in its DCO material²⁰ – TfL has no plans to close Victoria Coach Station.

Operational considerations

- 5.11 More thought will need to be given to the practical operation of bus and coach facilities at the airport, including stand capacity. HAL has concluded that 30% extra capacity will be needed to accommodate future growth but it is unclear whether there is analysis to underpin this estimate. There is a concern that the masterplan does not appear to allow, or even acknowledge, the significant space needed for stops, bays as well as the high quality waiting facilities described in the proposals²¹.
- 5.12 HAL says that new bus and coach facilities will be designed “in the longer term, towards 2025 and following expansion²²”. To be clear, any new facilities must be ready for Day 1 of a third runway.

6. Active travel

- 6.1 While cycling and walking constitute a very small proportion of total airport trips and this is likely to remain the case. Nevertheless, TfL welcomes HAL’s ambition of increasing the cycling and walking mode share to the airport, with a particular focus on staff. However, in the absence of any firm financial commitment nor detailed underpinning evidence, HAL’s approach lacks credibility.
- 6.2 As with bus and coach, HAL’s proposed network of radial cycle routes will require a

²⁰ Surface Access Proposals, 3.2.168

²¹ Surface Access Proposals, 3.2.180

²² Surface Access Proposals, Appendix A, Reference Annex, 4.3.2

commitment to the cycle priority infrastructure interventions on those corridors and the detailed work to understand what might be deliverable and the wider traffic impacts that could arise. The gap in the cycle network between Hounslow and Heathrow is particularly key for HAL to commit to filling and which would have a disproportionate benefit in terms of encouraging cycling trips.

- 6.3 Indeed, there is very little acknowledgement of the scale of the barriers and constraints to cycling that will need to be overcome in order to provide a high quality network along existing roads. Some of the routes pass through junctions which are key pinch points for buses and it is not clear how HAL intends to accommodate the needs of buses and coaches while providing a safe and attractive environment for cyclists – alongside heavy vehicular flows.
- 6.4 HAL also needs to share the evidence behind its proposed green infrastructure loop in terms of its usage; facilitating access to local employment centres should be the key focus of walking and cycling investment. HAL needs to be clear on the extent of its commitment to funding and maintaining this infrastructure.
- 6.5 If HAL is serious about increasing cycling, it will need to provide a sufficient, continuous and high quality cycling network, together with supporting facilities and measures. In this vein, HAL should commit to complying with TfL's New Cycle Quality Criteria²³ and London Cycle Design Standards²⁴ (LCDS) for London's roads. The examples of "good cycle provision"²⁵ which HAL has given appear to be some way short of meeting TfL's Quality Criteria.
- 6.6 No timeframes have been proposed for any new cycling infrastructure but TfL deems that any infrastructure must be in place from Day 1, if being relied on for expansion.
- 6.7 Furthermore, there does not appear to be an appreciation of the effects that seasonality, weather and time of day can have on cycling mode share.
- 6.8 There also seems to be some inconsistency in the material as to the extent to which the CTA will be accessible by cycle in the future, from both north and south. For example, the Preliminary Transport Information Report (PTIR) suggests that "consideration is being given to providing cycle access to the CTA from the south via the proposed Southern Access Tunnel²⁶" – while the masterplan gives the impression that this has already been decided.
- 6.9 There is little mention of the impact of construction on pedestrians and cyclists. Given that HAL is proposing to phase construction over a period of up to 30 years²⁷, it is paramount that HAL creates safe routes through or around construction sites.

²³ <http://content.tfl.gov.uk/cycle-route-quality-criteria-technical-note-v1.pdf>

²⁴ <https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit>

²⁵ PTIR Volume 4, 3.2.64

²⁶ PTIR Volume 4, 3.3.8

²⁷ Construction Proposals, Graphic 3.1

TfL has launched the Temporary Traffic Management handbook²⁸ to give guidance on this.

- 6.10 More generally, the Mayor's Transport Strategy sets out Vision Zero, a goal that, by 2041, all deaths and serious injuries will be eliminated from London's transport network. TfL is spearheading efforts through its Vision Zero Action Plan²⁹ which focuses on lower speeds, safer vehicles, safer streets and increased education. HAL needs to play its part in supporting London reach this goal by adopting Vision Zero.

7. Ultra Low Emissions “Zone”

- 7.1 A Heathrow ultra low emissions zone (HULEZ) is proposed by HAL for introduction by 2022, albeit limited to the terminal forecourt and airport car parks. It seeks to mirror what the Mayor has already implemented in central London, but there are questions as to the value and effectiveness of what HAL is proposing. The consultation material fails to provide evidence on the expected response to an emissions-based charge and the anticipated air quality impacts as proposed. This is at odds with the information TfL made available for its own consultations on the various ULEZ proposals it has implemented or got approval for.
- 7.2 In particular, by 2022, when the charge is introduced, TfL plans to have also extended the central London ULEZ to the North and South Circular Roads, covering much of inner London. TfL's forecast (used as part of the proposed expansion of the ULEZ to Inner London) shows that 86% of cars should already be compliant in Outer London – i.e. Euro 4 for petrol cars and Euro 6 for diesel cars – and 94% compliant in Inner London. This means that the potential beneficial impact of the proposed HULEZ is unlikely to be significant, as the percentage of compliance with ULEZ standards across London will already be very high by the time the scheme is implemented.
- 7.3 Indeed, it is unclear how much behaviour change HULEZ could realistically drive, above what the inner London ULEZ will already have achieved. Many of those who drive to the airport also drive to inner London and typically much more often to the latter. As such, if they can be encouraged to switch to cleaner vehicles, they will very likely already have done so because of the inner London ULEZ.
- 7.4 Furthermore, no suitable justification is given for the exclusion of staff from the proposed HULEZ – with staff trips to and from the airport forecast to be 120,000 per day in 2035³⁰. Staff vehicles are those accessing the airport most regularly, so it seems perverse to seek to exclude them from a charge. As a minimum, scenarios should be modelled both with and without staff exemption.
- 7.5 In addition, no evidence has been provided to support the exclusion of freight vans

²⁸ <http://content.tfl.gov.uk/temporary-traffic-management-handbook.pdf>

²⁹ <http://content.tfl.gov.uk/vision-zero-action-plan.pdf>

³⁰ PTIR Volume 3, 4.3.82

from the proposed HULEZ (large freight vehicles will already be subject to the London-wide tightening of the LEZ in October 2020). HAL states that freight generates around 36% of vehicle-related emissions despite only accounting for 5-6% of total daily trips.³¹ TfL forecasts that around 30% of vans would be non-compliant with ULEZ standards in Outer London. In this context, it is flawed to exclude freight trips from the HULEZ. As a minimum, scenarios should be modelled both with and without freight exemption.

- 7.6 The proposed charge level for the HULEZ should be justified. It appears to have been assumed to be the same as the ULEZ charges, but has not taken account of the nature of the trips involved to the airport and how the cost compares to the overall cost of the nature of the travel. Justification for the setting of charge levels particularly for passenger-related trips has not been set out. The charge should be designed to have a meaningful impact not only in terms of air quality, but also in relation to behaviour change – and neither have been demonstrated.
- 7.7 It is also not clear what regulatory regime is to be relied upon and, therefore, which controls are being tied into, or who the charging authority would be. More detail about the exemptions to be applied would also be appropriate, which could have implications for worst case scenario assessments. Given TfL's role in this area, it would expect to be formally consulted on the proposed regime.
- 7.8 HAL must also be explicit in seeking to ensure that the revenue from this charge be hypothecated to funding sustainable surface access.

8. Road user charging

- 8.1 A vehicle access charge is proposed by HAL for introduction at the time a third runway opens, applicable to access to the terminal forecourts and airport car parks. Only indicative charging levels are stated, though in its modelling, HAL has assumed an £18 charge in 2030 and a £29 charge in 2040. There are significant concerns about the effectiveness of the charge and its wider consequences. The consultation material fails to provide evidence for how the level and scope of the road user charge has been determined and what the expected response to different levels of charge is.
- 8.2 In particular, the findings of the Airport Commission³² were that a £40 charge would be required – and TfL's analysis³³ came to a similar conclusion. It is not clear how HAL concluded that a lower charge would suffice and the impact on meeting the mode share targets and no more traffic pledge. Conversely, a higher charge could place significant additional costs on users and erode some of the envisaged economic benefits of the proposals.

³¹ Surface Access Proposals, 2.2.63

³² Airports Commission – Surface Access: Demand Management Study, May 2015

³³ <http://content.tfl.gov.uk/tfl-surface-access-analysis-note-17-01-15.pdf>

- 8.3 Furthermore, no suitable justification is given for the exclusion of staff from the proposed charge. Staff currently just over 30% of the total airport vehicle trips, so it seems perverse to seek to exclude them from a charge. As a minimum, scenarios should be modelled both with and without staff exemption.
- 8.4 Likewise, the lack of clarity on the treatment of freight is a concern. HAL states that it will assess whether freight should be included as it monitors the effectiveness of the charge³⁴. However, there is no detail about what would trigger freight to be included in the charge.
- 8.5 It is also a concern that airport car rental vehicles appear to be excluded from the charge (though this is only implicit in the material presented, based on the geographical scope of the scheme). No justification is offered as to why this type of private vehicle trip should be treated any differently from the other car modes which are envisaged to be subject to the charge.
- 8.6 HAL says that taxis will be included in the charge but there are significant practical obstacles to which HAL appears not to have given due consideration. Black cab tariffs are governed by statutory regulations and these would need to be amended, without which it will not be possible for the charge to be passed onto their passengers. This decision is not in the gift of HAL.
- 8.7 Any such charge will certainly have “edge effects” - i.e. increases in traffic levels beyond the geographical scope of the charge – as some trips are not shifted to other modes but merely displaced to locations where the charge is not triggered. Passenger drop-offs could be pushed to locations near the airport such as Hatton Cross, where there exist onward bus and tube connections to all of the terminals. Parking might also be pushed to residential areas within a short radius of the airport. HAL must fully detail these impacts and how it plans to effectively address them, both in terms of their local implications and their potential to substantially undermine the effectiveness of any charge. This needs to take account of the fact that these residential roads are borough-controlled and it will not be in HAL’s gift to implement mitigation measures like local parking restrictions.
- 8.8 The legal powers to implement and enforce such a charge need to be set out. There needs to be a clear understanding of the committed timeframes for implementation and how this is reflected in the modelling. In particular, confirmation needs to be provided that a road user charge can be delivered in time for opening of a third runway and not before sufficient public transport alternatives are in place from all directions so that passengers have a viable range of alternatives.
- 8.9 HAL must also be explicit in seeking to ensure that the revenue from this charge be hypothecated to funding sustainable surface access.

³⁴ Surface Access Proposals, 3.7.42

9. Funding public transport infrastructure

- 9.1 As has been set out above, meeting targets for sustainable surface access mode share as well as air quality is likely to require significant investment in public transport infrastructure, primarily rail but also bus, coach and cycle priority infrastructure.
- 9.2 The NPS is clear about the responsibility of HAL to fund infrastructure. It states that “where the proposed mitigation measures are insufficient to effectively offset or reduce the impact on the transport network, arising from expansion, of additional passengers, freight operators and airport workers, the Secretary of State will impose requirements on the applicant to accept requirements and / or obligations to fund infrastructure or implement other measures to mitigate the adverse impacts, including air quality.³⁵”
- 9.3 It should not fall on the public purse to fund schemes primarily to enable a private development.
- 9.4 As set out above, revenue from both the HULEZ and the road user charge could contribute to funding for sustainable surface access. Indeed, in both cases, it is essential that revenue raised is hypothecated accordingly. It would not be acceptable if the revenues raised from such a charge were allowed to be used to reduce landing charges or flow to HAL’s bottom line. HAL needs to make the case to the Civil Aviation Authority (CAA), as the economic regulator of Heathrow, to secure this.

10. Parking

- 10.1 It is a significant concern that the parking strategy set out in the material would encourage, not discourage, car use and so run entirely counter to the objective to shift trips to sustainable modes.
- 10.2 The previous HAL DCO Consultation³⁶ committed to “keep the number of spaces at a similar level to today” albeit masking a substantial increase in passenger parking at the expense of staff. It is disappointing that HAL is now no longer fulfilling even this commitment and is now proposing a net increase³⁷ – indeed, the published material appears to suggest an increase in on-site parking for passengers and staff of around 10-20% by 2040. As a minimum, the quantum of parking must not increase if HAL’s ambition for no increase in traffic is legitimate – and this must apply overall and separately to passengers and staff.
- 10.3 HAL has made no secret of its intention to increase passenger parking, but the scale is still a surprise. Based on the data presented, HAL appears to be planning a 90% increase in passenger parking by 2040 compared to today. This compares to its

³⁵ Airports NPS, 5.21

³⁶ HAL – Our Approach to Developing a Surface Access Strategy, January 2018

³⁷ Surface Access Proposals, 3.4.6

forecast increase in passenger trip demand of 62%. It is difficult to square this with its aspiration of no increase in highway trips.

- 10.4 The proposals entail consolidating the dispersed passenger parking (currently not located at the terminals) to two 'parkway' sites. The southern site would be located a short distance from M25 Junction 14, while the northern site would be located directly at M4 Junction 4. The sites would be linked to terminals by convenient express transit systems, albeit their exact nature remains unspecified.
- 10.5 There can be no doubt that making the car parks directly accessible from the motorway network, with fast onward links to the terminals, substantially increases the attractiveness of accessing the airport by car. This is wholly counterproductive to efforts to increase the proportion of trips to and from the airport by sustainable modes.

11. Staff

- 11.1 Disproportionate weight is given by HAL to shifting staff to sustainable modes to help meet its targets. As such, its proposals and assumptions in relation to staff take on a particular importance and, as they stand, raise concerns.
- 11.2 As HAL makes clear, just 10% of airport staff are actually employed by HAL, with the rest employed by a myriad of other companies, including airlines and ground handling agents. This substantially hinders HAL's freedom of manoeuvre in terms of its ability to influence staff behaviour.

Staff parking

- 11.3 The critical element of HAL's staff car reduction strategy is the confiscation of staff parking spaces. However, HAL should be under no illusion as to the challenges entailed in achieving this, both legally and in terms of its acceptability – and HAL needs to fully set these out and alongside a credible approach to overcoming them.
- 11.4 HAL does not have direct control over a significant proportion of car parking spaces, as some are privately owned or on long-term leases³⁸. Moreover, parking is included in the contracts of many staff. It is no surprise that employers – fearful of recruitment and retention issues – are already pushing back, and there is also likely to be significant opposition from staff themselves.
- 11.5 Underpinning this is the paucity of fast, reliable alternatives, particularly for staff coming from the south and west of the airport. This is exacerbated by shift patterns, with services even more limited for early morning journeys.
- 11.6 Perhaps HAL's uncertainty about its own ability to secure this reduction in staff car

³⁸ Surface Access Proposals, Table 2.4

parking is best crystallised in the threat it lays down in the consultation material. Namely, HAL states that in the event that agreement cannot be reached, it will seek powers to control staff parking as part of the DCO application – potentially including powers of compulsory acquisition. This is an extreme response that implicitly reflects the severity of the challenge but it is also far from certain that HAL will be able to justify securing such powers for this purpose.

- 11.7 As such, HAL has much more to do if it is to rely on confiscating staff parking as a tool for reducing staff highway trips and to demonstrate that this is deliverable legally or in terms of its acceptability.

Future staff efficiencies

- 11.8 The assumptions around staff efficiencies have a direct bearing on staff surface access demand and as such need to be properly evidenced.
- 11.9 There is a particular inconsistency evident in the comparison of the staff efficiency assumed between the 'Future Baseline' (No expansion) and 'With Project' (Expansion) scenarios. For example, in 2040, HAL is assuming staff are 40% more productive with expansion than without expansion³⁹, in terms of the ratio of staff employed per passenger. This is, again, a wholly unsubstantiated assumption.

Redistribution of staff along public transport corridors

- 11.10 In HAL's Assessment Case, it is assumed that the distribution of staff origins (i.e. their homes) will change with expansion. Graphics 4.147 and 4.148 of PTIR Volume 3 – which illustrate the distribution in the 'Future Baseline' (No expansion) and 'With Project' (Expansion) scenarios – show that, under expansion, staff are more closely concentrated in areas which have – and HAL might assume to have – good public transport access, compared to without expansion. However, this assumption is based only on HAL's expectation that over time "interventions will result in a change to the geographical distribution of colleague demand compared with today⁴⁰". This is surprising given the paucity of meaningful public transport infrastructure interventions – as highlighted above – which HAL is committing to as part of expansion.
- 11.11 Effectively, HAL is assuming that staff either move to locations better connected by public transport or quit their jobs to be replaced by those who are. Such an assumption, not properly justified, risks substantially understating the highway impacts of expansion

Staff ticketing scenarios

- 11.12 HAL assumes a 'flat discount' on all staff public transport fares in 2030 and 2040.

³⁹ PTIR Volume 3, 4.2.85

⁴⁰ PTIR Volume 1, 7.4.3

This is likely to require HAL securing deals with the relevant public transport operators and also raises questions as to the commercial viability of such an approach. This assumption is unfounded and therefore should not appear in the core scenario.

- 11.13 The modelling also assumes the proportion of staff using travelcards is higher than it is today. This effectively means a lower average fare being paid, which could overstate the attractiveness of rail. It should be noted that this assumption is not explicit in the consultation material, but has been disclosed in unpublished modelling documentation provided to TfL.

Staff car-sharing

- 11.14 The details provided by HAL about its car sharing scheme to date highlight both, how much it has achieved, but also its limited potential to deliver a substantial reduction in highway trips. Take-up is likely to be hampered by shift patterns and dispersed locations.
- 11.15 HAL has assumed that staff vehicle occupancy rates will remain stable without expansion but increase from 1.03 to 1.17 by 2035⁴¹ with expansion – but this equates to a tripling in the number of car sharing trips. Again, this is another unsubstantiated assumption.

12. Freight

- 12.1 Freight constitutes an important component of the surface access trips to and from the airport and has a disproportionate impact in terms of air quality, noise/vibration as well as highway capacity. According to HAL, freight vehicle trips represent only 6% of all airport trips but generate around 36% of vehicle-related emissions⁴².
- 12.2 However, there are substantial concerns about the credibility of what has been assumed with regard to freight trips. It is not immediately clear how it is possible to double the throughput of air cargo yet reduce the impact of freight tips without any shift to non-road based modes, as HAL is claiming.
- 12.3 A critical assumption is the extent of the freight efficiencies and consolidation that HAL is relying upon. HAL's cites potential innovations but this must be tempered by the difficulties in changing well-established freight industry practice and navigating the myriad of freight forwarding companies active at the airport (as well as revising Government customs regulations⁴³). HAL effectively acknowledges how difficult altering the way the industry works is likely to be, again threatening to seek powers

⁴¹ PTIR Volume 3, Tables 4.2 and 4.4

⁴² Surface Access Proposals, 3.7.4

⁴³ Surface Access Proposals, 3.7.37

through the DCO to impose its will⁴⁴ – but it is far from clear whether the DCO could grant suitable powers to HAL or whether the industry would respond as HAL expects.

- 12.4 There is also a concern as to whether HAL could use its proposals for freight consolidation to circumvent the targets, in particular the aspiration for no more traffic. Our understanding is that HAL envisages its monitoring of this to be limited to the airport boundary; this would mean a freight consolidation centre a few kilometres away would not be included. This would have the perverse result of allowing a very significant increase in freight traffic, with implications for both the local and strategic highway networks, as well as air quality – while freight traffic within the airport monitoring area remained constant or even decreased. Whatever the extent of freight consolidation that HAL is able to secure, it would be unacceptable if the full impacts of this airport-related freight traffic were not captured.
- 12.5 There is also a concern that HAL has forecast freight traffic specifically relating to air cargo based on aircraft movements alone⁴⁵ – and not taking account of aircraft size. This could only be justified if it was assumed that the fleet mix – and in particular the proportion of widebody and narrowbody aircraft – was expected to remain broadly constant. Given the forecast growth in demand, particularly from developing countries (i.e. beyond Europe), and the capacity constraints at Heathrow, even with expansion, this assumption appears unsound. This is important because while a widebody aircraft might typically accommodate 50% more passengers than its narrowbody counterpart, its freight capacity can be more than 20 times a narrowbody aircraft.
- 12.6 HAL has been too ready to dismiss the potential for onward freight trips to be shifted to rail⁴⁶. There are many examples of high-value non-bulk freight being delivered by rail including on passengers services into Paddington and there are also a number of organisations across Europe developing high-speed rail freight services. Given the substantial impacts of freight vehicles, even a modest reduction could merit investment by HAL to enable onward passage of freight by rail and/or improve its viability.
- 12.7 HAL mentions TfL’s Construction Logistics and Community Safety (CLOCS) and Fleet Operator Recognition Scheme (FORS) but does not consider them further on the basis that they do not substantially help reduce the number of freight vehicles⁴⁷. HAL misses the point somewhat, namely that it has to show how it is minimising the impacts of expansion – which is not limited to the number of vehicle trips. The aforementioned schemes are designed to improve road safety and reduce emissions and so can and should play a useful role in mitigating the impacts of the increased

⁴⁴ Surface Access Proposals, 3.7.41

⁴⁵ Surface Access Proposals, Table 3.37

⁴⁶ Surface Access Proposals, 3.7.23

⁴⁷ Surface Access Proposals, 3.7.24

freight traffic associated with expansion. As mentioned earlier, HAL needs to play its part in supporting London to achieve Vision Zero.

13. Taxi and Private Hire Vehicles (PHV)

- 13.1 In order to secure its targets, HAL is also reliant on efficiencies to be made in taxi and PHV trips – but HAL needs to provide the evidence to support the credibility of its assumptions.
- 13.2 Most notably, the HAL Assessment Case has assumed that by 2030, there will be a 10% reduction in the proportion of empty taxi/PHV trips (i.e. more ‘backfilling’) – i.e. that the proportion of empty taxi movements will reduce from 70% to 60% with expansion. This assumption is the primary source of the forecast reduction of 20%, or 10,000, taxi vehicle trips by 2027⁴⁸. HAL has included this assumption in its ‘worst-case’ core scenario nonetheless – even without credible evidence to support it.
- 13.3 The limited influence that HAL has over taxis and PHVs suggests that securing any notable efficiencies will be very difficult. In particular, PHVs not licensed by TfL or whose licence does not cover the airport cannot accept a job at the airport. There are also practical challenges, including widely dispersed destinations and available luggage capacity. Once again, HAL appears to suggest that the DCO could grant it the powers but it is unclear how powers that could be secured through a DCO would assist in that regard.
- 13.4 Support for the adoption of electric vehicles (EVs) and zero emissions capable (ZEC) vehicles including taxis and PHVs is welcome. But if this is to be encouraged, this requires not just that additional charging infrastructure is installed by HAL but also that there is a commitment from HAL to keeping the cost affordable, in line with other locations.

14. Intelligent mobility

- 14.1 Limited weight should be placed on the proposals by HAL on intelligent mobility which are unambitious and lack substance. They are also heavily reliant on third party information providers, limiting HAL’s ability to influence, particularly when their objectives diverge (for example PHV operators who will be against mode shift to public transport).
- 14.2 Furthermore, interventions and assumptions that are based upon innovation are by definition innovative and substantially unproven on a large scale, let alone for airport expansion. That should further caution against any sort of reliance on these types of measures.
- 14.3 Moreover, HAL has overstated the potential to improve real time information,

⁴⁸ PTIR Volume 3, 4.3.73

promoting end-to-end journey planning applications and incentivising passengers to use sustainable transport. Again, these are reliant on third party involvement and already largely exist. HAL assumes that other companies are willing to share data but in TfL's experience this can be very expensive and may not be commercially viable.

15. Local highway network

- 15.1 It is not possible for TfL to provide meaningful comment on the proposals for the A4 and other local roads, in isolation or in the context of the emerging masterplan, until the post-expansion function has been made clear.
- 15.2 The masterplan appears to be focused on designing the infrastructure first without considering how sustainable travel modes will operate on that infrastructure. There seems to have been no appreciation of the interaction between the road's design, the effect that the design will have on how it is used, and how that effect could in turn lead to a necessitate a revised design. TfL considers this iterative approach to be a key part of ensuring the new A4 is optimised for its function as a road.
- 15.3 Little detail has been offered about vehicle, cycle and pedestrian flows, expected land use and relevant spatial constraints, and how these interact and are expected to change over time. Despite repeated requests by TfL, this has not been provided. In the PTIR⁴⁹, Heathrow implies it presented to TfL on land-use and traffic flows, but there was one slide on the former and the modelling presented with regard to the latter was incorrect.
- 15.4 Furthermore, it appears that HAL has not finished testing the performance of the proposed layouts⁵⁰. HAL should not be consulting on the highway network without first understanding the impacts of its proposals.
- 15.5 The proposals should also demonstrate how HAL will deliver improvements in line with the ten Healthy Streets Indicators as per TfL guidance.
- 15.6 Lastly, HAL states that "although the overall level of airport-related traffic is forecast to decrease, there therefore may be localised traffic increases on particular roads⁵¹." It is not acceptable to just acknowledge this. If HAL has undertaken the work to assess the nature and impact of any increase, it must be presented upfront to the public and not hidden in the depths of the PTIR.

16. Fairness of approach

- 16.1 HAL has set out a range of 'push' and 'pull' levers to achieve its targets. However, there is little acknowledgement that these numbers actually relate to people and how

⁴⁹ PTIR Volume 1, Table 8.2

⁵⁰ Surface Access Proposals, 3.2.189

⁵¹ Surface Access Proposals, 2.6.56

these levers will directly affect them and their day-to-day lives.

- 16.2 Passengers from the south and west of Heathrow are faced with limited public transport options for the most part offering uncompetitive and unreliable journey times and there is little in HAL's proposals to address this. They are to be subjected to a road user charge by HAL to access the airport, without being given adequate public transport alternatives.
- 16.3 Staff, as alluded to earlier, will bear the brunt of the mode shift targets and this also raises questions of fairness. While passengers are travelling exclusively to and from the airport locations with the best public transport offering – namely the terminals – many staff are accessing employment sites scattered around the airport perimeter with fewer bus services and no direct rail or coach access. Indeed, HAL state that 80% of jobs are located away from the CTA⁵². Staff are more likely to be going to work when the public transport network is only partly operational, for early morning shifts. The issues of fairness are compounded by the fact that, on average, airport staff are likely to be on lower incomes than the average passenger.
- 16.4 Staff coming from the south and west in particular are likely to find themselves in a difficult position, without fast, reliable journey opportunities (by rail) and those outside London also have few bus/coach services operating outside core hours.
- 16.5 It is unfair of HAL to be seeking to confiscate car parking spaces unless and until it has ensured that comprehensive, fast, reliable alternatives are in place.
- 16.6 Lastly, there are some passengers and staff that might need to travel by private vehicle due to illness or disability. The consultation material does little to allay fears that people with specific needs will not be unduly disadvantaged.
- 16.7 It is important that HAL demonstrates an awareness of these issues and recognises the need to address them.

17. Modelling

- 17.1 HAL failed to mention to TfL until May 2019 that the modelling for this consultation had been “locked-down” since November 2018. Over that six month period, TfL was unaware that the substantial and detailed feedback it was providing to HAL would have no bearing on what was modelled; many of the issues and inaccuracies in HAL's analysis which are raised above are direct consequences of this.
- 17.2 The consultation material states that HAL's highways model (HHASAM) “has followed guidance set out in the DfT's WebTAG Unit M3.1, adopting best practice as far as practicable.”⁵³ However this is liable to mislead as what this is saying is that the model is not sufficiently calibrated for the purpose for which it is being used and is

⁵² PTIR Volume 3, 4.2.97

⁵³ PTIR Volume 1, 6.7.76

not yet compliant with DfT WebTAG criteria. This raises questions as to the extent to which HAL meets the requirement in the NPS that the WebTAG methodology be followed⁵⁴. This means key figures presented in the consultation material, such as mode share percentages that are calculated using generalised costs from this model, should be treated with care. Furthermore, any air quality assessment using traffic figures from HHASAM cannot be considered to be definitive, and this is crucial given the critical nature of the proposals in relation to legal compliance with limit values for NO₂. The ability of the proposals to do this must be clearly demonstrated beyond any doubt and the shortcomings of the current surface access modelling fall short of the required level of confidence.

- I 7.3 The PTIR documentation implies greater use of Railplan than is the case.⁵⁵ LASAM (airport demand) and HEM-CM (staff) do not use the TfL Railplan model – either in its original or ‘enhanced’ (extended) forms. This is despite strong encouragement from TfL (and others) to do so. To obtain cost and travel time data, these demand models use bespoke public transport assignment models that do not take into account current or future levels of crowding. This information has been provided to TfL by HAL in unpublished technical documentation relating to LASAM and HEM-CM, but it is not set out in the PTIR.
- I 7.4 However, without considering crowding appropriately, the models assume that provision of public transport capacity is effectively unlimited and can accommodate any scale of increased demand due to airport expansion. Furthermore, without any iteration between the demand model and assignment models, it is highly unlikely that adequate account has been taken of crowding and congestion effects.
- I 7.5 HAL’s diagram of its modelling suite⁵⁶ indicates that Railplan only provides input to the Non-Airport Demand Model (NADM). As there is no other mention of NADM in the consultation material and TfL has not seen any documentation of this to date, it cannot comment on NADM or the use of Railplan data within NADM. It appears that other model components only ever feed information into Railplan, without any feedback loop.
- I 7.6 For an airport expansion study, consideration should be given to the impact of the additional luggage from airport passengers. This has not been the case in the modelling to date, despite explicit recognition of the specific requirements of airport passengers elsewhere in the consultation material. For example, HAL asserts that the Heathrow Express is “designed specifically for the requirements of airport passengers, including enlarged doors, level access between trains and platforms, and additional luggage storage space.⁵⁷”

⁵⁴ Airports NPS, 5.10

⁵⁵ PTIR Volume 1, 6.7.58 (for example)

⁵⁶ PTIR Volume 1, 6.5.3/Graphic 6.2

⁵⁷ PTIR Volume 5, 3.2.21

- 17.7 The consultation material suggests that both LASAM and HEM-CM model the “last mode” of transport,⁵⁸ but “some minor changes have been made to the allocation of air passenger demand by mode to better represent the mode of transport that is used to access the airport.⁵⁹” It is unclear what this adjustment is and whether this better reflects the “main mode” of transport, which HAL has suggested is modelled during its engagement and what appears in the model documentation shared with TfL. If the “main mode” is not modelled there is a strong likelihood that the models underestimate the number of highway trips and overstate the number of public transport trips. Clarity is needed on this important distinction.
- 17.8 As mentioned in a previous section, there appears to be some discrepancy between assumptions used in the Future Baseline and the With Project (Assessment Case) scenarios. This is because the Future Baseline is forecast on the assumption that the airport continues to operate and grow “business-as-usual⁶⁰”. For example, in contrast to the With Project (Assessment Case) scenario, the Future Baseline assumes no freight efficiencies, no staff efficiencies, no taxi backfilling and no reduction in staff car parking.
- 17.9 The result of this is to play down the impact of expansion compared to no expansion and could give the impression that introducing a third runway will actually lead to a substantial decrease in vehicle trips.
- 17.10 In the case of staff, HAL concludes that “by 2040, daily vehicle trips are forecast to reach almost 22,100 trips per day with the proposed Project, compared with 66,000 trips per day in the Future Baseline scenario.⁶¹” Sensitivities to the Future Baseline should be modelled where the intervention is not dependent on expansion – if not included in the core test.
- 17.11 It is not clear how the Future Baseline impacts the overall assessment and justification, but the difference does serve to highlight the significant effect that assumed efficiencies can have.
- 17.12 In general, the PTIR contains many graphs and plots with description of how things change between the Baseline, Future Baseline and With Project scenarios. However, there appears to be no interpretation or rationalisation of the results.
- 17.13 Furthermore, ‘Alternative Scenarios’ have been presented in the PTIR but these appear to be qualitative assessments and therefore do not form adequate sensitivity tests.

⁵⁸ PTIR Volume 3, 2.3.3 and 2.3.8

⁵⁹ PTIR Volume 3, 4.2.22

⁶⁰ PTIR Volume 3, 4.1.2

⁶¹ PTIR Volume 3, 4.2.135

18. Monitoring strategy and enforcement

- 18.1 The monitoring strategy is key, not least as it underpins HAL's proposed 'Environmentally Managed Growth' (EMG) framework, the mechanism through which HAL can be held to account for pledges made as part of the DCO process. It is essential that any monitoring strategy is objective, robust and transparent if it is to be credible. What HAL is proposing with regards to surface access falls substantially short of this.
- 18.2 HAL needs to ensure its traffic modelling provides a fair and transparent view of the likely traffic impacts of expansion across the wider network, both unmitigated (i.e. maximum extent) and mitigated (i.e. targets to be achieved). These can then be used as comparator baselines for future monitoring.
- 18.3 HAL also needs to agree baselines with TfL and other stakeholders that allow for evaluation of long-term compliance against targets. This means that monitoring needs to start well ahead of 'shovels being deployed' so that representative 'pre-expansion baselines' can be secured.
- 18.4 The definition and monitoring of the no extra traffic and mode share targets must take account of airport-related traffic outside of the airport boundary; otherwise it is at best meaningless and at worst liable to encourage measures by HAL which artificially displace highway trips to beyond the airport boundary.
- 18.5 By setting the monitoring boundary so tightly, a range of trip types will be excluded from the 'no more traffic' aspiration. Yet each of these will likely increase as a direct result of expansion, increasing highway traffic flows and contributing to worsening air pollution. These include:
- **Off-site kiss and fly**
The proposed implementation of a road access charge for Heathrow's terminal and car parks will make it appealing for passengers to be dropped off ('kiss & fly') at locations close to the airport with very good public transport connections to the terminals, such as Hatton Cross and other nearby stations.
 - **Off-site staff hubs**
There are a number of airport-related staff hubs located outside the airport boundary, most notably British Airways' Waterside headquarters, which houses 4,000 employees⁶² (and which has to be relocated to build a third runway). Employment of this type is likely to increase as the airport expands – but only those staff with airport ID will be included in the monitoring.
 - **Freight and servicing consolidation centres**
Some consolidation of servicing (e.g. goods for airport retail) takes place already

⁶² Heathrow's Travel Plan 2004 - 2007

and HAL is proposing more as well as introducing freight consolidation. This entails consolidating freight and other goods at a location a few kilometres from the airport and then taking them into the airport area on fewer vehicles. The result is that a substantial increase in trips to/from the consolidation centre - could translate into a decrease in traffic crossing the airport boundary, yet having substantial negative effects on the surrounding area.

- **Off-airport parking**

In addition to HAL's long-stay car parks, some holiday parking is provided at a distance from the airport by third parties. What it lacks in convenience, it makes up for in price. According to HAL figures, this accounts for around one third of total passenger parking. Local authority planning controls should help limit growth, but ways of increasing provision might be found; Heathrow's charging proposals are likely to make third-party parking substantially more attractive. Apps are also emerging which allow passengers to find parking spaces available in the locality, by-passing traditional car parking providers.

- **Off-airport car-rental**

The majority of car-rental providers are located on the airport perimeter road and it is not made explicit that these car rental trips will be covered by the monitoring. Furthermore, there are car rental locations which are located beyond the airport boundary, typically smaller operators, which might become more attractive as a result of any measures HAL takes to disincentivise car use at the airport.

- **Hotels, catering and other ancillary functions**

There are a range of ancillary services directly linked to airport activity which are located beyond the airport boundary but which are likely to increase as a result of any expansion. Of particular concern is the common industry practice for airport hotels to sell a night's stay at the start or end of a trip with free parking for the duration of the trip offered as part of the package. Such a proposition is likely to become especially attractive once the road access charge is introduced (including for on-airport parking).

HAL has also not set out how such assets are intended to be delivered, and whether they fall within the definition of "associated development" given its commercial purpose. The lack of transparency on the surface access model makes it difficult to ascertain the need for such assets.

- **Catalytic demand**

Beyond the above, according to the analysis undertaken to date, there is expected to be a substantial increase in economic activity catalysed by airport expansion, even if not directly related to it. This will place further pressure on highway networks and should be captured in some form.

- **Construction traffic**

Particularly given the phasing proposed by HAL – which would see construction continue for a period of two to three decades – it is essential that the highway impacts of construction are fully captured. Not all construction traffic would cross the current or future airport boundary – in part because of construction support sites – and the monitoring would need to allow for this.

- 18.6 HAL argues that using the airport boundary is the only way to accurately assess against the no more traffic pledge, asserting that it would be “difficult to define and impossible to measure [additional locations/areas].⁶³” This is simply not true.
- 18.7 Traffic monitoring methodologies are well established and widely used within the industry. TfL itself has a wealth of expertise and experience in monitoring and setting up road user charging boundaries and baselines, most notably through the central London Congestion Charge scheme and it is disappointing that HAL appears unwilling, so far, to take on board the issues TfL has raised which render the proposed boundary unfit for assessing achievement of pledges which are relied upon to make the proposals appear acceptable from a traffic and environmental impacts point of view. TfL has suggested a number of practical and cost-effective ways that the wider traffic could be monitored; yet HAL maintains that it is impossible to accurately capture the full impact of airport related traffic.
- 18.8 If HAL fails to get the monitoring right, it wholly undermines its ‘Environmentally Managed Growth’ framework and any possibility that it might serve as a mechanism to control the surface access impacts.
- 18.9 Needless to say, alongside a credible monitoring strategy, there also needs to be an effective, independent enforcement mechanism, underwritten by comprehensive planning conditions. It must enable a potential breach of a target, for example the crucial air quality target, to be identified in sufficient time for mitigation to be determined and implemented to prevent an actual breach. What HAL has outlined does not give sufficient reassurance of this.
- 18.10 Indeed, a breach of a “limit” only allows the proposed Independent Scrutiny Panel (ISP) to require HAL to produce a mitigation strategy. Only when the annual monitoring shows the limits continue to be breached will the ISP direct implementation of its strategy which is intended to remedy the breaches. It is not clear how long the breach will have to endure before the ISP can make such a direction to HAL. Moreover, the process would be subject to further dispute resolution by the Secretary of State which has the potential to protract and prolong significant breaches of the proposed limits. This is wholly unprecedented for a DCO, and effectively sanctions the breaches of the particular environmental limits.
- 18.11 In this context, TfL would note that the approach of “environmentally managed

⁶³ Surface Access Proposals, 4.3.35

growth” is to disregard the precedented approach of passenger caps. The Planning Inspectorate has already cautioned HAL against such an approach⁶⁴. In addition, it is not clear whether HAL’s approach is to seek to obtain consent for an unlimited airport capacity provided it is within particular “environmental limits.” It is not clear that such an approach would be consistent with section 23 of the Planning Act 2008.

19. Construction impacts

- 19.1 In light of HAL’s proposed phasing – which could see construction over a thirty-year period⁶⁵ – a comprehensive understanding of the construction impacts and how they are to be mitigated is essential.
- 19.2 Understanding what powers HAL is obtaining under the DCO is key. TfL has a statutory duty under the Traffic Management Act (TMA) 2004 to reduce congestion and disruption on its network. TfL would still require Heathrow to follow TfL processes such as the Traffic Management Act Notification (TMAN) and the London Permit Scheme⁶⁶ in order for TfL to fulfil its duty. This would allow for co-ordination of all works within the area.
- 19.3 Due to the disruptive nature of some of the construction, TfL would require a detailed impact assessment, which may require traffic modelling for some phases of the works.
- 19.4 There is little reference to the utilities masterplan within the Code of Construction Practice (CoCP).
- 19.5 For a project of this nature, TfL would need to see detail on works six months before commencing. There are some early works starting in 2020 and therefore it is a concern that there has been no follow up on this.
- 19.6 HAL would need to work closely with TfL during the switch over of works with the appropriate operational plans in place to ensure safety.
- 19.7 TfL’s freight and servicing plan⁶⁷ may need to be referenced. The use of holding areas is alluded to by HAL and this is a sensible approach, subject to the impacts being fully captured and addressed.
- 19.8 In line with arrangements which TfL is seeking with other major developers such as HS2, it would seek compensation from HAL in relation to the operation of its bus network. Specifically, this would relate to increased operational costs and loss of revenue (and service) as a result of construction.

⁶⁴ https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR020003/TR020003-Advice-00030-1-190315_TR020003_Project%20Update_FINAL.pdf

⁶⁵ Construction Proposals, Graphic 3.1

⁶⁶ <https://tfl.gov.uk/info-for/urban-planning-and-construction/roadworks-and-street-faults>

⁶⁷ <http://content.tfl.gov.uk/freight-servicing-action-plan.pdf>

19.9 Pedestrian and cyclist safety through worksites is an important issue and HAL should follow the guidance in TfL's Temporary Traffic Management handbook⁶⁸.

20. Operational land and property

20.1 Detailed plans have not been provided showing the extent of land that may be required for the project, either on a temporary or permanent basis. Instead only a generic plan with an outline of the boundary for land acquisition across the entire project is shown. It has therefore not been possible to assess in any detail the implications, either temporarily or permanently, on TfL's existing operational assets as result of the project.

20.2 For this statutory consultation we would have expected more detailed plans as to the land required for the project together with a detailed project phasing for the requirement of such land to allow a meaningful consultation on the effect of the project on TfL's existing operational assets. As such, TfL is unable to make any further assessment as to the impact of the project on TfL's existing operational assets at this stage.

⁶⁸ <http://content.tfl.gov.uk/temporary-traffic-management-handbook.pdf>