



Developments Affecting Trunk Roads and Special Roads

Highways England Planning Response (HEPR 16-01)

Formal Recommendation to an Application for Planning Permission

From: Divisional Director, South West Operations Division, Highways England.
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To: North Somerset Council
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cc: transportplanning@dft.gsi.gov.uk
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Council's Reference: 18/P/5118/OUT

Referring to the hybrid application referenced above, received 20 December 2018, for outline planning permission (with reserved matters details for some elements included and some elements reserved for subsequent approval) for the further development of Bristol Airport to enable a throughput of 12 million terminal passengers in any 12 month calendar period, comprising: 2no. extensions to the terminal building and canopies over the forecourt of the main terminal building; erection of new east walkway and pier with vertical circulation cores and pre-board zones; 5m high acoustic timber fence; construction of a new service yard directly north of the western walkway; erection of a multi-storey car park north west of the terminal building with five levels providing approximately 2,150 spaces and wind turbines atop; enhancement to the internal road system including gyratory road with internal surface car parking and layout changes; enhancements to airside infrastructure including construction of new eastern taxiway link and taxiway widening (and fillets) to the southern edge of Taxiway GOLF; the year-round use of the existing Silver Zone car park extension (Phase 1) with associated permanent (fixed) lighting and CCTV; extension to the Silver Zone car park to provide approximately 2,700 spaces (Phase 2); improvements to the A38; operating within a rolling annualised cap of 4,000 night flights between the hours of 23:30 and 06:00 with no seasonal restrictions; revision to the operation of Stands 38 and 39; and landscaping and associated works at Bristol Airport, Northside Road, Felton, notice is hereby given that Highways England's formal recommendation is that we:

~~a) offer no objection;~~

~~b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – Highways England recommended Planning Conditions);~~

- c) recommend that planning permission not be granted for a specified period (see Annex A – further assessment required);
- d) ~~recommend that the application be refused (see Annex A – Reasons for recommending Refusal).~~

Highways Act Section 175B is not relevant to this application.¹

This represents Highways England formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should you disagree with this recommendation you should consult the Secretary of State for Transport, as per the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via transportplanning@dft.gsi.gov.uk.

Signature:



Date: 24 January 2019

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¹ Where relevant, further information will be provided within Annex A.

Annex A Highways England recommended further assessment required

HIGHWAYS ENGLAND (“we”) has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

This response represents our formal recommendation regarding application reference 18/P/5118/OUT and has been prepared by the Planning Manager for North Somerset.

We have undertaken a review of the relevant documents supporting the planning application to ensure compliance with the current policy of the Secretary of State as set out in DfT Circular 02/2013 “*The Strategic Road Network and the Delivery of Sustainable Development*” and the MHCLG National Planning Policy Framework (NPPF).

Statement of Reasons

The Site

The outline planning application for development of Bristol Airport relates to the existing Bristol Airport site at Felton, North Somerset and seeks consent for further development of the site to accommodate 12 million passengers per annum (mppa) including the associated infrastructure and necessary operational changes. Bristol Airport Limited was granted consent in 2011 for the expansion of the airport to accommodate 10mppa (maximum cap), which is forecast to be met during 2021.

The airport is located adjacent to the A38, which connects to the M5 via J22 at Edithmead. The A38 routes along the eastern boundary of the Airport and provides the primary surface vehicle access route to the site. The site can also be accessed via the A370, which routes to the north and west of the Airport. The A370 connects to the M5 via J21 at Weston-super-Mare and A370/A4 to connect to the M5 via J18. The combination of the A38 and A370 connect the Airport to the M5 to the north, west and south-west of the Airport. The A38 and A370 also provide access to Bristol city centre.

Bristol Airport is the principal airport and main international passenger gateway for the South West. It is the ninth busiest UK airport and the third largest regional airport in England.

Prior to the submission of the planning application, scoping discussion took place between the applicant’s transport consultant (PBA) and Highways England in June and July 2018. During these discussions and written advice, Highways England set out that our main area of concern would relate to the additional demand on the SRN, particularly the M5 and its junctions between and including J18 (A4) to J22 (A38), and the impact of the car park expansions on the Airport’s surface access strategy.

Planning context

Both the emerging Joint Spatial Strategy for the West of England (a further consultation on the submission version has just been completed) and the North Somerset Local Plan (an Issues and Options consultation has just been completed) recognise the importance of the Airport for local employment and economic sustainability. However, there is no specific policy regarding the Airport in the JSP.

In the adopted North Somerset Core Strategy 2017, Policy CS6 sets out the Council's position regarding physical expansion of the Airport.

Policy CS6: North Somerset's Green Belt

Within North Somerset the boundaries of the Bristol – Bath Green Belt will remain unchanged during the plan period.

Further amendments to the Green Belt at Bristol Airport will only be considered once long-term development needs have been identified and exceptional circumstances demonstrated.

Policy CS23 notes the requirement for demonstration of satisfactory resolution of surface access infrastructure prior to further development at the airport.

CS23: Bristol Airport

Proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.

The need for a thorough and robust assessment of the impact of further growth beyond that given permission through existing planning permissions is therefore supported by existing policies.

Highways and Transport Assessment

The application is supported by a Transport Assessment (TA) dated December 2018, prepared by Peter Brett Associates (PBA) on behalf of the applicant, Bristol Airport Limited (BAL).

It is our view that the format and layout of the TA is challenging to audit and it would be helpful to have separate sections for passenger and employee forecast travel demands which are then brought together in a separate concluding section. There are also clear inconsistencies in the way in which data has been selected for presentation (there is not a logical table by table progression through the bespoke derivation of additional journey demand), and in the geographic disaggregation of data (for example, employee home locations and mode share data). There are also a number of inaccuracies in the labelling of supporting tables and figures.

We have set out below a number of areas in the TA where further clarification or information is required. Should the TA be revised or an addendum be provided to address these matters, we kindly request that our comments regarding the format and layout of the assessment are carefully considered.

Forecast Travel Demands

Trip Generation assessment overview

The quantification of the forecast number of additional passengers and employees as a result of the growth from 10 mppa to 12 mppa has been assessed using a bespoke methodology that has used data from a CAA passenger survey and BAL employee survey. The assessment has identified the journey patterns, journey timing and the mode share of journeys to and from the airport. The assessment work has identified that the characteristics of the airport operation mean that peak 'land side' arrivals and departures at the Airport are different to 'normal' housing and employment developments. This is a function of the hours of operation of the airport and the timing of flights. The assessment of journey frequency, times and mode share have therefore been derived from survey data, as opposed to external sources (i.e. TRICS).

The overall methodology to assess the number of journeys follows a logical progression from the raw data. Data is presented to show the 'home' origin of trips, the timing of arrivals and departures at the junction and mode share of those journeys.

The trip generation assessment shows that the majority of passengers come from outside the immediate airport area (as to be expected), but the employees are generally located in nearby settlements. However, the employee data is presented in two locations. The data in Table 5.4 shows that, for North Somerset, 33% of employees come from North Somerset, but in Table 8.14 this has become 31%. However, the split within North Somerset is consistent between Table 5.5 and Table 8.15. It would be helpful to be able to follow the bespoke assessment methodology through each stage.

Mode Share

The TA has assumed a robust 15% split of passengers travelling by public transport (bus based), a figure agreed when considering the earlier 10mppa application and a mode-share target secured by the associated S106 agreement and subject to the successful implementation of the surface access strategy. It is understood that recent surveys by Bristol Airport suggest that the Airport currently has a figure of approximately 12.5% modal split for public transport. We are concerned that the modal split assumptions for future passenger travel to the Airport have been 'reverse engineered' from a target which has not yet been achieved. It may not therefore represent a realistic future forecast and would also rely on encouraging modal shift for existing passengers.

Given the scale of the development and the impact that relatively small changes to modal splits can make on the resultant trip generations, a sensitivity test assuming a lower public transport modal split should be provided by the applicant. We understand that this assessment is currently being produced and we request further confirmation in this respect. We will require the opportunity to review this assessment and understand any implications for the SRN before providing a final recommendation in respect of the application.

In respect of employee modal share, paragraph 8.7.1 of the TA states *that "employee method of travel to work has been assumed to remain constant between the most recent travel survey and the forecast scenarios. No adjustments to mode share have been made,*

despite the forthcoming launch of a new Workplace Travel Plan and the future reduction in parking spaces for employees, to ensure the assessment is robust". However, this is inconsistent with the information provided in figure 8.10 'Employees Travel by Mode (%)', particularly in respect of those locations where the 2017 survey suggests 100% of employees travel by car (alone). Whilst the actual numbers are relatively small, further clarification should be provided.

Section 9 of the TA provides further detail in respect of surface access improvement opportunities and suggests that a 'new and ambitious' Airport Surface Access Strategy (ASAS) will be developed to ensure more sustainable transport modes are encouraged. It is implied that the ASAS will be secured through a S106 agreement.

The commentary in Section 9 sets out that the current bus service network and frequency provision is sufficient to accommodate the growth in passenger numbers outlined in this application, with the exception of Weston-super-Mare where service frequency could be increased. However, given that the existing target mode share of 15% is yet to be achieved, it is inferred that the current service provision may not be attractive enough to encourage target modal shift. Section 9 outlines that the Airport is working with a number of transport providers to improve service quality, passenger facilities and information provision, and it would be useful to understand how the new and additional car parking will be managed to maximize the potential of achieving the target mode share and ensuring there is no detrimental impact on existing passenger public transport use. We request further clarification regarding the sensitivity analysis referred to above.

Assessment Years and Scenarios

The TA has tested two scenarios: a 2026 Baseline + committed development (2026 reference case including the 10mppa consent) and 2026 Baseline + Committed development + proposed 12 mppa Development (2026 Test Case).

It is understood that the airport is expected to reach the 12mppa in 2026, hence this choice of assessment year. It is also expected that the airport will reach its current consent limit of 10mppa in 2021, which cannot be exceeded without the consent sought by this planning application. There is therefore a gap of 5 years where effectively no assessment has been undertaken (2021 to 2026) but where there will be an impact on the highway network as passenger numbers grow from 10mppa to 12mppa.

Circular 02/2013 normally requires that an opening year assessment is provided in respect of the SRN. Typically, this is the point at which a development can be first occupied or brought into beneficial use. No phasing plan has been provided with the assessment to demonstrate at what point in the growth trajectory any of the on-site infrastructure for which consent is sought, or identified off-site highway mitigation works, are required. It is also unclear as to how quickly some or all of operational changes could be implemented once permission is granted and thus generate the growth in passenger numbers. At this time, the only year which can be identified confidently as being a year when all aspects of the planning permission and off-site mitigation will be required, is the year at which it is forecast that the airport will throughput 12 mppa (2026).

It is understood that PBA is preparing a phasing assessment which considers the timing of the delivery of necessary infrastructure in relation to the realisation of passenger growth

to 2026. Highways England require confirmation that a phasing assessment is being prepared as this will enable further consideration of an appropriate assessment year.

Para 5.4.4 of the TA sets out the assumptions for background growth. The TA cites the following reasons why the assessment is robust:

- The growth is based on July rather than August counts, hence as August would be higher, the assessment is robust.
- The growth to 2026 is seen as robust as it already includes an element of BAL traffic, which has not been removed prior to growth being applied.
- The traffic counts are 2018 but the passenger survey data is 2017, an extra year of traffic growth has been included to create the 10 mppa Reference Case.

Whilst the latter 2 assumptions do result in a robust total assessment of trip generation, they will have the impact of reducing the proportional increase in trip generation as a result of the increase from 10 mppa to 12 mppa as the Reference Case trip generation is inflated. That said, it is acknowledged that generally trips on the highway network at peak times are reduced in the summer months, due to people taking holidays and less education related trips on the network. Hence, if a neutral month assessment were to be undertaken, the existing highway flows (background) would be higher and the airport related trips lower as a proportion. Hence, though some elements of the justification of the background growth are not accepted, the resulting assumption is considered acceptable for the purpose of the impact assessment presented in the TA.

Forecast Traffic Assignment

To assign new vehicle trips from the 2mppa increase onto the highway network, a basic highway network model has been developed using the SATURN software package. The model prepared considers link distance between specific nodes and journey times are based on recorded HERE speed data. The model network is based primarily on A class roads and the M5, and assumes that all zone to zone movements will assign via the same route (i.e. an 'all or nothing' assignment). Assigned traffic network diagrams for each scenario have been provided in Appendix G of the TA.

The actual zoning assumed is not shown, but the reference to the assignment diagrams reproduced in Appendix G indicates that the zones used are quite large, with, it is assumed, single zones covering Weston-super-Mare and Clevedon. It would help our understanding to have sight of the zoning assumptions as this will ultimately impact the route choice for vehicles. We request that the zoning diagram is provided.

The model is not a dynamic assignment model and therefore does not take congestion into consideration and any reassignment effects this may have. Hence, though traffic generations being tested are proportionately low when compared to existing flows at locations distant from the immediate Airport approaches, on the approaches to the Airport the increases in traffic volumes are significant and this could have an impact on the route choice further afield. For example, given the known congestion issues on the A371 at peak times, it is challenging to believe that no trips from the Weston-super-Mare area would route via the A370 through M5 J21.

The model assigns all trips from the north of the Airport via M5 J18 and all trips from the south of the Airport via M5 J22. For trips accessing the Airport via the motorway beyond North Somerset, this is a not unreasonable assumption. That is it is likely that passengers would take the shortest signposted route to reach the Airport. However, for passenger trips or employee trips originating between these junctions (and therefore within North Somerset), it is not clear where the trip has been assigned, if at all.

The TA suggests that traffic has been assigned in this way because the model is an ‘all or nothing’ assignment tool. However, it is our view that the trip origins and destinations could be refined to a greater level of detail, particularly as more detailed origin data is available to the applicant.

The result of the way in which development traffic has currently been assigned is that trips from Weston-super-Mare (and other locations in North Somerset) have either been assigned to M5 north of J18 or to M5 south of J22 and that no trips are assigned to reach the airport via M5 J21 or M5 J19. These assumptions are overly simplistic and are not considered to reasonably reflect the likely travel patterns of Airport passengers and particularly employees originating from North Somerset. The assumption that no trips would route along the A370 via M5 J21 is particularly challenging given that this is the known route for public transport services operating between the Airport and Weston-super-Mare (A3 Airport Flyer), avoiding network constraints on the A371.

We are concerned that as a result of the model assignment process and the use of (assumed) large zones, we cannot be fully confident in the assignment results and the resulting assessment of impact on the SRN. Further clarification is sought in respect of the assumptions made and the rationale for those assumptions.

The model has assumed a morning peak hour of 8-9 am based on the existing peak hour at most junction locations assessed for the purposes of the TA. However, the analysis of the passenger and employee data shows that the development peak hour for employee arrivals, for example, is 7-8am. We would welcome further information regarding the likely development peak hour arrivals and departures, along with network traffic flows at that time to determine whether additional or extended time periods should be assessed.

SRN Impact Assessment

During TA scoping discussions with PBA, Highways England requested that the development impact was assessed at M5 junctions 18 to 22 inclusive. This is acknowledged in the TA at paragraphs 7.5.1 and 10.4.1. At paragraph 7.5.3, the TA states that *“as agreed with Highways England a quantitative numerical assessment has been undertaken as set out in Section 10.5 at the agreed M5 Motorway junctions”*.

It is therefore disappointing that the motorway junctions did not form part of the traffic survey study area and that existing junction operations (baseline) have not been quantified in the TA. On the basis of the approach taken to the assignment of traffic to the model network (for which we have outlined our concerns above) all traffic to and from the north of the Airport has been routed through M5 J18, and all traffic to and from the south has been routed through M5 J22. Therefore, the increase in vehicle demand generated by the proposed development has been presented for these junctions only.

Table 10.2 presents the forecast development traffic passing through M5 J 18 and J22. The assessment forecasts an increase of 30 two-way trips (19 inbound and 11 outbound) through M5 J18 in the morning peak, and 89 two-way trips (40 inbound and 49 outbound) in the evening peak period. At M5 J22, the forecast increase equates to 40 two-way trips in the morning peak (25 inbound and 15 outbound) and 61 two-way trips (25 inbound and 36 outbound) in the evening peak. During the 'airport peak' an additional 45 two-way trips (27 inbound and 18 outbound) route through M5 J18 and 119 two-way trips (65 inbound and 54 outbound) route through M5J22.

The TA suggests that the forecast increases at both junctions are unlikely to be considered severe in the context of NPPF 2018. However, both M5 J18 and M5 J22 currently operate at capacity during peak network times and are sensitive to increases in demand. At M5 J22 in particular, mainline queuing occurs on the northbound off-slip during peak times as a result of existing demand and the interaction with the A38 Edithmead junction.

Paragraphs 9 and 10 set out the approach that Highways England takes in relation to development proposals as follows:

“9. Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network, or they do not increase demand for use of a section that is already operating at over-capacity levels, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

10. However, even where proposals would not result in capacity issues, the Highways England's prime consideration will be the continued safe operation of its network”.

Applying the principals of paragraph 9 of Circular 02/2013, development proposals are likely to be unacceptable, by virtue of a severe impact, if they increase demand for use of a section that is already operating at over-capacity levels, or cannot be safely accommodated, i.e, a development which adds traffic to a junction which already experiences road safety issues; would increase the frequency of occurrence of road safety issues; or would in itself cause those road safety issues to arise, would be considered to have a severe impact.

The applicant should be made aware that Highways England undertook a cumulative assessment of the emerging Sedgemoor Local Plan (2011-2032) at M5 J22 and identified that an improvement scheme would be required at M5 J22/Edithmead to ensure that future planned growth could be safely accommodated without a severe residual impact on the SRN. The Local Plan is at an advanced stage and will be considered for adoption at Full Council on 20th February 2019. The M5 J22 improvement scheme is included in transport policy BH8 and within a number of land allocation policies.

In order to establish whether the development proposals have a severe impact on the SRN, an assessment of the additional traffic at M5 J22 and M5 J18 as a result of the

development proposals will be necessary, and agreement should be sought on the best way to establish whether the additional traffic constitutes a severe impact.

Given that there are a number of outstanding queries in respect of forecast traffic demand and assignment as outlined above, Highways England also reserves the right to require further assessment of M5 J19, J20 and J21.

Summary

Highways England has been consulted on an outline planning application for the development of Bristol Airport to accommodate an increase to 12mppa by 2026 and provision of supporting infrastructure.

We have requested additional information on a number of matters, namely:

- SRN impact assessment for five M5 junctions: 18,19,20,21,22
- Public Transport mode share sensitivity assessment
- Infrastructure/consent phasing plan
- Assignment model zoning assumptions
- Trip generation and network flows for development peak hours

Recommendation:

On the basis of the above comments, Highways England recommends that permission not be granted for a period of 3 months to allow the applicant time to provide the additional information and clarification requested by Highways England.

I trust the above is clear. Please do not hesitate to contact me should you wish to discuss any further issues.