

Job Name: Development of Bristol Airport to Accommodate 12 mppa

Job No: 43321

Note No: 43321/TN023

Date: 28th March 2019

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Subject: **Phased assessment of M5 J22**

1. Introduction

- 1.1. Peter Brett Associates LLP (PBA) has been commissioned by Bristol Airport Limited (BAL) to support the planning application to increase the permitted passenger cap from 10 million passengers per annum (mppa) to 12 mppa.
- 1.2. As part of post application discussions, Highways England has requested an additional review of the predicted flows at Junction 22 of the M5 in relation to the increase in traffic associated with the expansion of Bristol Airport.

2. Background

- 2.1. The Transport Assessment (TA), submitted to North Somerset Council (NSC) in December 2018, includes calculations of the trip and traffic generation associated with the 2 mppa passenger growth. A revised traffic assignment assessment (primarily affecting trips to/from the west of the airport crossing the M5 such as Weston-Super-Mare, Clevedon, Portishead Nailsea) has been agreed with HE.
- 2.2. The number of additional vehicles predicted to pass through M5 Junction 22 as a result of the Development Proposals is provided in **Table 2.1**.

Table 2.1: Predicted additional vehicles passing through M5 Junction 22 (10 - 12 mppa)

	Outbound	Inbound	Two Way
AM (08:00 – 09:00)	15	25	40
AP (13:00 – 14:00)	66	54	120
PM (17:00 – 18:00)	25	36	61

- 2.3. Highways England has requested that additional information is provided to understand how the incremental passenger growth at Bristol Airport relates to the traffic passing through Junction 22.
- 2.4. A threshold level of an additional 30 two-way vehicles from the airport within either the AM or PM peak has been identified by Highways England before mitigation is required to be in place.
- 2.5. It is possible that some trips from the south could continue beyond Junction 22 and onto Junction 21 to access the airport, but a robust assessment assuming all the traffic from the south on the M5 would access the airport via Junction 22 has been agreed.
- 2.6. This note sets out the passenger throughput at which the traffic passing through Junction 22 is predicted to reach the 30-vehicle threshold identified by Highways England.



3. Results

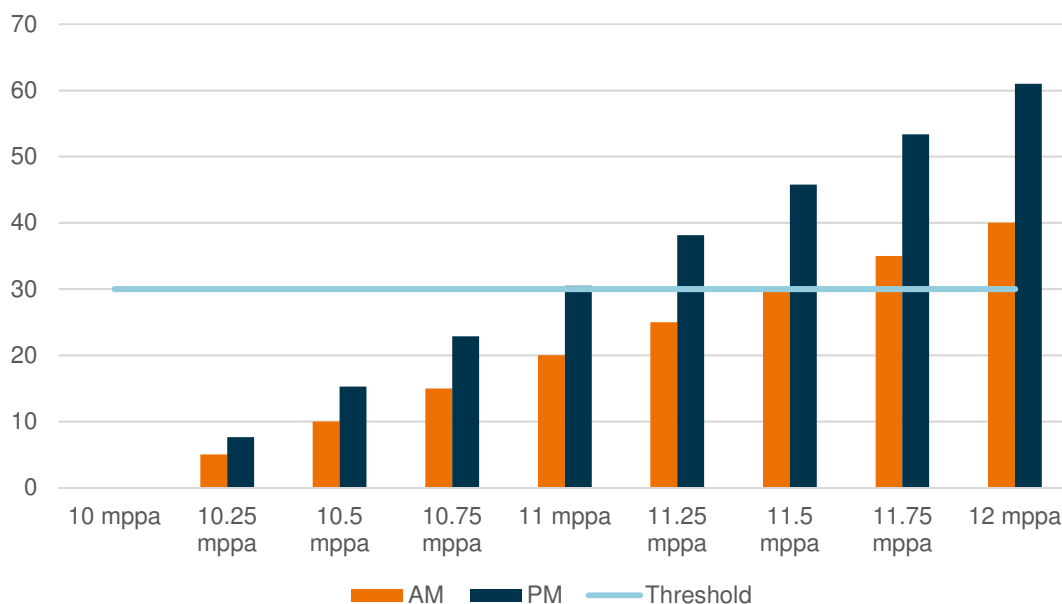
- 3.1. Incremental growth (steps of 250,000 passengers) based on all trips to/from the south on the M5 using J22 is summarised in **Table 3.1**.

Table 3.1: Passenger growth analysis of Junction 22 – Scenario 1

Passengers	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)
10 mppa	0	0
10.25 mppa	5	8
10.5 mppa	10	15
10.75 mppa	15	23
11 mppa	20	30
11.25 mppa	25	38
11.5 mppa	30	46
11.75 mppa	35	53
12 mppa	40	61

- 3.2. The above analysis is also depicted in **Figure 3.1**.

Figure 3.1: Passenger growth analysis of Junction 22



- 3.3. The 30 two-way vehicle level is reached at 10.984mppa in the PM peak. It is therefore proposed that a threshold level of 11 mppa is set before mitigation is required to be in place at Junction 22.