

**M42 Junction 6 Improvement
Scheme Number TR010027
Volume 6
6.3 Environmental Statement
Appendix 13.1 Driver Stress Calculation**

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

January 2019

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M42 Junction 6 Improvement Development Consent Order 202[]

6.3 Environmental Statement Appendix 13.1 Driver Stress Calculations

Regulation Number	Regulation 5(2)(a)
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Author	M42 Junction 6 Improvement Project Team and Highways England

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Rev 1	January 2018	DCO Application

Appendix 13.1 Driver Stress Calculations

13.1 Calculation of driver stress

- 13.1.1 Traffic forecasts containing information relating to the flow and speed of vehicles have been used to calculate existing and future levels of driver stress on parts of the road network that would be modified by the Scheme, and on new roads forming part of the Scheme.
- 13.1.2 The calculation of driver stress has been undertaken in line with the guidance and criteria presented within the Design Manual for Roads and Bridges: Volume 11, Section 3, Part 9 – Vehicle Travellers (Highways Agency, 1993).
- 13.1.3 In accordance with the guidance, the AM and PM peak hour flows on sections of road of a minimum 1km length have been assessed for the worst year in the first fifteen years after opening of the Scheme – this being Year 2038 (the Design Year). The calculations have also taken account of the standard of road (e.g. dual carriageway) and the driver stress thresholds of Low-Moderate-High, as presented within the guidance.
- 13.1.4 **Table 13.1** presents the calculations of driver stress for the Scheme in both the Do-Minimum (without Scheme) and Do-Something (with Scheme) scenarios in the Design Year.

Table 13.1: Calculation of Driver Stress

		Year 2038 (Design Year)											
		AM Peak						PM Peak					
		Do-Minimum Scenario			Do-Something Scenario			Do-Minimum Scenario			Do-Something Scenario		
Road Link	Direction	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress
M42 Motorway													
South of M42 Jct 5A	Southbound	1,751	88	High	1,817	87	High	1,491	93	High	1,532	93	High
	Northbound	2,040	83	High	2,196	80	High	1,832	88	High	1,813	88	High
North of M42 Jct 5A	Southbound	1,751	88	High	1,564	91	High	1,491	93	High	1,414	94	High
	Northbound	2,040	83	High	1,678	91	High	1,832	88	High	1,498	93	High
North of M42 Jct 6	Southbound	2,018	82	High	2,119	79	High	1,727	90	High	1,741	90	High
	Northbound	1,511	92	High	1,540	92	High	2,193	79	High	2,360	74	High
A45 Coventry Road													
East of M42 Jct 6	Eastbound	504	94	Low	797	91	Low	704	53	High	774	92	Low
	Westbound	1,047	87	Low	1,071	87	Low	916	91	Low	1,072	89	Low
West of M42 Jct 6	Eastbound	1,319	70	High	1,251	71	High	1,311	85	High	1,468	82	High
	Westbound	965	74	Moderate	1,187	71	Moderate	1,015	89	Low	1,024	89	Low
Catherine-de-Barnes Lane													
North of Bickenhill Roundabout*	Southbound	272	77	Low	583	80	Low	1,144	58	High	1,418	42	High
	Northbound	1,062	90	High	59	80	Low	791	65	High	51	80	Low
Approaching Clock Interchange	Southbound	514	58	Moderate	N/A	N/A	N/A	1,390	48	High	N/A	N/A	N/A
	Northbound	1,160	44	High	N/A	N/A	N/A	978	40	High	N/A	N/A	N/A

		Year 2038 (Design Year)											
		AM Peak						PM Peak					
		Do-Minimum Scenario			Do-Something Scenario			Do-Minimum Scenario			Do-Something Scenario		
Road Link	Direction	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress
Proposed New Link Road													
Between M42 Jct 5A and the on-slip from Barber's Coppice Roundabout	Northbound	N/A	N/A	N/A	1,018	101	Low	N/A	N/A	N/A	629	101	Low
Between the on-slip from Barber's Coppice Roundabout to the Airport Way diverge	Northbound	N/A	N/A	N/A	1,632	91	High	N/A	N/A	N/A	1,104	101	Low
From Clock Interchange diverge to Bickenhill Roundabout	Southbound	N/A	N/A	N/A	915	101	Low	N/A	N/A	N/A	1,060	101	Low
From diverge into Bickenhill Roundabout to M42 Jct 5A	Southbound	N/A	N/A	N/A	505	101	Low	N/A	N/A	N/A	256	110	Low
Proposed new free-flow link at M42 Jct 6													
Proposed free-flow link from A45 eastbound	Northbound	N/A	N/A	N/A	1,175	55	High	N/A	N/A	N/A	2,093	35	High

		Year 2038 (Design Year)											
		AM Peak						PM Peak					
		Do-Minimum Scenario			Do-Something Scenario			Do-Minimum Scenario			Do-Something Scenario		
Road Link	Direction	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress	Flow/Lane	Speed	Driver Stress
to M42 northbound**													

* for the Do-Something scenario, this represents the section of road between the proposed Bickenhill Roundabout and Barber's Coppice Roundabout

** the length of this free-flow link would be over 1km