



## **Army and Navy Sustainable Transport Package – Updated Local Junction Modelling Results for Hamburger Roundabout**

The following tables outline the predicted change in journey times for different modes of transport (general traffic, buses, walking and cycling) for the Hamburger Roundabout compared with if there was no junction improvement scheme.

The data has been updated following design changes made in response to the public consultation, which ran from August – November 2021.

The information is presented separately for the different arms of the junction and includes data for both the morning (AM) and evening (PM) peak periods.

All of the data relates to the opening year of the junction (2026) and is based on our latest traffic modelling (as of September 2022), which uses estimated future traffic flows and journey times for vehicles passing through the Army and Navy junction.

### Local Junction Modelling results of Hamburger Roundabout in opening year - General traffic

The following table contains forecast traffic flows and journey times for vehicles passing through the Army and Navy junction. The start and end points for journeys are Odeon Roundabout, Chelmer Road/Chelmer Village Way Roundabout, Essex Yeomanry Way Maldon Road slip roads, Badow Road/Beehive Lane Roundabout.

Approach arm	Time period	Vehicles passing through junction from approach arm (vehicles/hour)	Average journey time from start to end point (minutes)	Change in vehicles from 'No scheme' scenario (%)	Change in average journey time from 'No scheme' scenario (minutes)
Parkway	AM	1345	2.2	-2%	-3.9
	PM	2145	2.6	9%	-2.3
Chelmer Road	AM	2014	2.3	96%	-12.4
	PM	1248	3.5	-8%	0.1
Essex Yeomanry Way	AM	1599	3.0	11%	-3.2
	PM	1330	2.7	54%	-2.1
Badow Road	AM	566	9.4	35%	-3.2
	PM	612	3.2	14%	-3.2
Van Diemens Road	AM	714	5.9	17%	-6.5
	PM	884	4.2	57%	-4.4
Overall combined AM and PM change in average journey time (%)		-53%			

### Local Junction Modelling results of Hamburger Roundabout in opening year – Buses

The following table contains forecast traffic flows and journey times for buses passing through the Army and Navy junction. The start and end points for journeys are Odeon Roundabout, Chelmer Road/Chelmer Village Way Roundabout, Essex Yeomanry Way Maldon Road slip roads, Baddow Road/Beehive Lane Roundabout. 'No Scheme' average bus journey times for Essex Yeomanry Way to Chelmer Road are based on car journey times due to a lack of modelled bus trips. All bus movements are based on current timetable data.

Approach arm	Time period	Average number of scheduled buses able to make it through network (vehicles/hour)	Average journey time from start to end points (minutes)	Change in scheduled buses going through network from 'No scheme scenario' (vehicles/hour)	Change in average journey time from 'No scheme' scenario (minutes)
Parkway	AM	27	3.1	+1	-3.2
	PM	33	3.2	+5	-1.9
Chelmer Road	AM	8	2.6	+1	-9.0
	PM	5	3.9	0	0.9
Essex Yeomanry Way	AM	21	2.7	+1	-0.6
	PM	15	2.9	+1	-0.4
Baddow Road	AM	13	9.1	0	-3.5
	PM	10	3.0	+2	-3.0
Van Diemens Road	AM PM	No bus routes from Van Diemens Road passing through Army and Navy junction			
Overall combined AM and PM change in average journey time (%)		-40%			

### Local Junction Modelling results of Hamburger Roundabout in opening year – Walking

The following table contains forecast journey times for pedestrians passing through the Army and Navy junction. The start and end points for journeys are Baddow Road o/s Parkway House (Parkway North), Odeon Roundabout (Parkway South), Chelmer Road/Rusking Road (Chelmer Road), Meadgate Avenue/Tusser Court (Meadgate Terrace), Baddow Road/Beehive Lane Roundabout (Baddow Road) and Princes Road/Amcotes Place (Van Diemans Road). Pedestrian 'No scheme' journey times are based on ground level routes. All journey times are in minutes.

Approach arm	Time period	Pedestrians passing through junction from arm (pedestrians/hour)	Average journey time from start to end points (minutes)	Change in no. of pedestrians from 'No Scheme' scenario (pedestrians)	Change in average journey time from 'No scheme' scenario (minutes)
Parkway North	AM	15	12	+6	-2.7
	PM	224	12	+74	-1.7
Parkway South	AM	14	14	+5	-0.4
	PM	136	13	+48	-0.6
Chelmer Road	AM	43	20	+16	-3.5
	PM	57	19	+19	-3.9
Meadgate Terrace (EYW)	AM	101	13	+36	-5.1
	PM	37	16	+12	-5.3
Baddow Road	AM	169	14	+58	-0.4
	PM	32	16	+11	-1.7
Van Diemans Road	AM	61	14	+22	1.3
	PM	26	18	+9	0.4
Overall combined AM and PM change in average journey time (%)		-11%			

### Local Junction Modelling results of Hamburger Roundabout in opening year – Cycling

The following table contains forecast journey times for cyclists passing through the Army and Navy junction. Start and end points for journeys are Baddow Road o/s Parkway House (Parkway North), Odeon Roundabout (Parkway South), Chelmer Road/Rusking Road (Chelmer Road), Meadgate Avenue/Tusser Court (Meadgate Terrace), Baddow Road/Beehive Lane Roundabout (Baddow Road) and Princes Road/Amcotes Place (Van Diemans Road). All journey times are in minutes.

Approach arm	Time period	Cyclists passing through junction from arm (cyclists/hour)	Average journey time from start to end points (minutes)	Change in no. of cyclists from 'No scheme' scenario (%)	Change in average journey time from 'No scheme' scenario (minutes)
Parkway North	AM	9	4.1	+4	-0.9
	PM	89	3.7	+34	-0.9
Parkway South	AM	2	5.3	0	1.3
	PM	33	3.6	+14	-0.2
Chelmer Road	AM	8	5.1	+3	-2.1
	PM	13	4.9	+5	-1.6
Meadgate Terrace (EYW)	AM	39	3.0	+16	-9.2
	PM	0	4.6	0	-8.2
Baddow Road	AM	66	7.2	+23	-7.3
	PM	17	4.4	+8	-4.4
Van Diemans Road	AM	18	3.2	+5	-0.6
	PM	6	4.0	+2	-1.1
Overall combined AM and PM change in average journey time (%)		-44%			