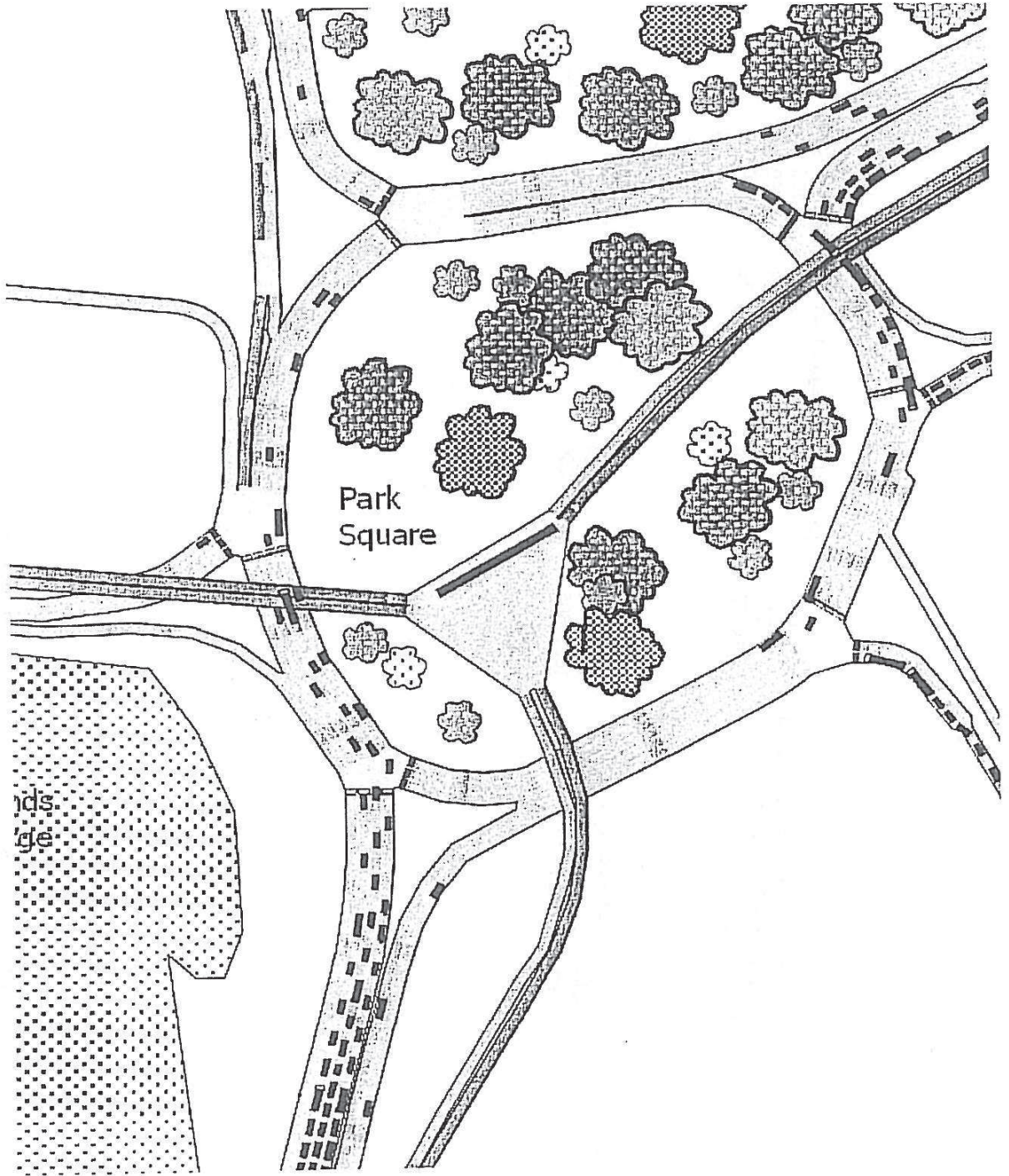


Duke Street Bus Gate

1. The brief asked what would be the effect of reducing the current 12 hour operation of the bus gate to peak periods only. The morning peak period being from 07:30 until 09:30 whilst the evening peak period is between 16:00 and 18:30.
2. The traffic model was adjusted to reflect peak hour only operation of the bus gate. Because of this reduced restriction, in the inter-peak period, 250 vehicles per hour chose to divert from Granville Road directly to Duke Street and entered Park Square junction.
3. The effect of this additional traffic demand was that the journey times between the top of Granville Road and Park Square increased from 1 minute 30 seconds to over 6 minutes. This is a significant increase in delays to the three bus routes using Duke Street. Traffic queues would be commonly seen at this location under these revised circumstances.
4. This increase in journey time is to be expected since the traffic demand clearly increases on Duke Street in the inter-peak period. However, the entry green time at Duke Street was maintained to ensure that all the exit slip roads from the Park Square roundabout are kept clear and free running in all time periods.
5. It is accepted that a marginal increases in the Duke Street entry green time could be made to reduce the increase in journey time but traffic priority would always be given to ensuring that the Park Square roundabout was kept clear by minimising entry green times at Duke Street.
6. Members were particularly concerned about the lack of accessibility the current arrangement provide in terms of the re-development of Park Hill by Urban Splash. Phase 1 of the redevelopment will be completed in December 2012.
7. The current position of the bus gate restriction lies between the entrance to Park Hill and the Park Square roundabout. It may be possible to move the position of the bus gate beyond the entrance to Park Hill and therefore provides direct access to Park Square roundabout. Although this would increase traffic demand at the Duke Street entry point, the increase in journey time would be much less than in the inter-peak and perhaps could be accommodated within the Sheffield Bus agreement which the City Council will be asked to enter as a partner in September/October 2012. A separate briefing note concerning this agreement about the Strategic bus network will be provided by the Transport Vision team.

8. Members clearly wish to see the bus gate restriction removed in total but this of itself would reintroduce traffic queues at this location and journey times would significantly increase because the amount of green time at Duke Street entry onto Park Square would always be adjusted to ensure that this key junction was kept free running particularly in the peak periods.
9. A further relaxation of the hours of operation might also be viewed as a breach of the Sheffield Bus Agreement but it isn't yet clear how a breach would be dealt with.
10. Cabinet will receive a briefing on the progress of the Sheffield Bus Agreement on Wednesday 22nd August 2012.
11. In addition, the additional traffic using this route would add to the queues wishing to access Commercial Street and it is believed that traffic would start to stand on the Park Square roundabout and seriously affect the flow of the morning peak hour traffic.
12. Members are particularly concerned that the lack of traffic on Duke Street throughout the day creates an atmosphere where there is a perceived lack of safety but the gradual repopulation of the Park Hill development should help to increase pedestrian and vehicular activity in the area overall.
13. It is very clear that there is a direct conflict between the aspiration for the strategic traffic network and the local aspiration expressed by members who require greater accessibility and activity.

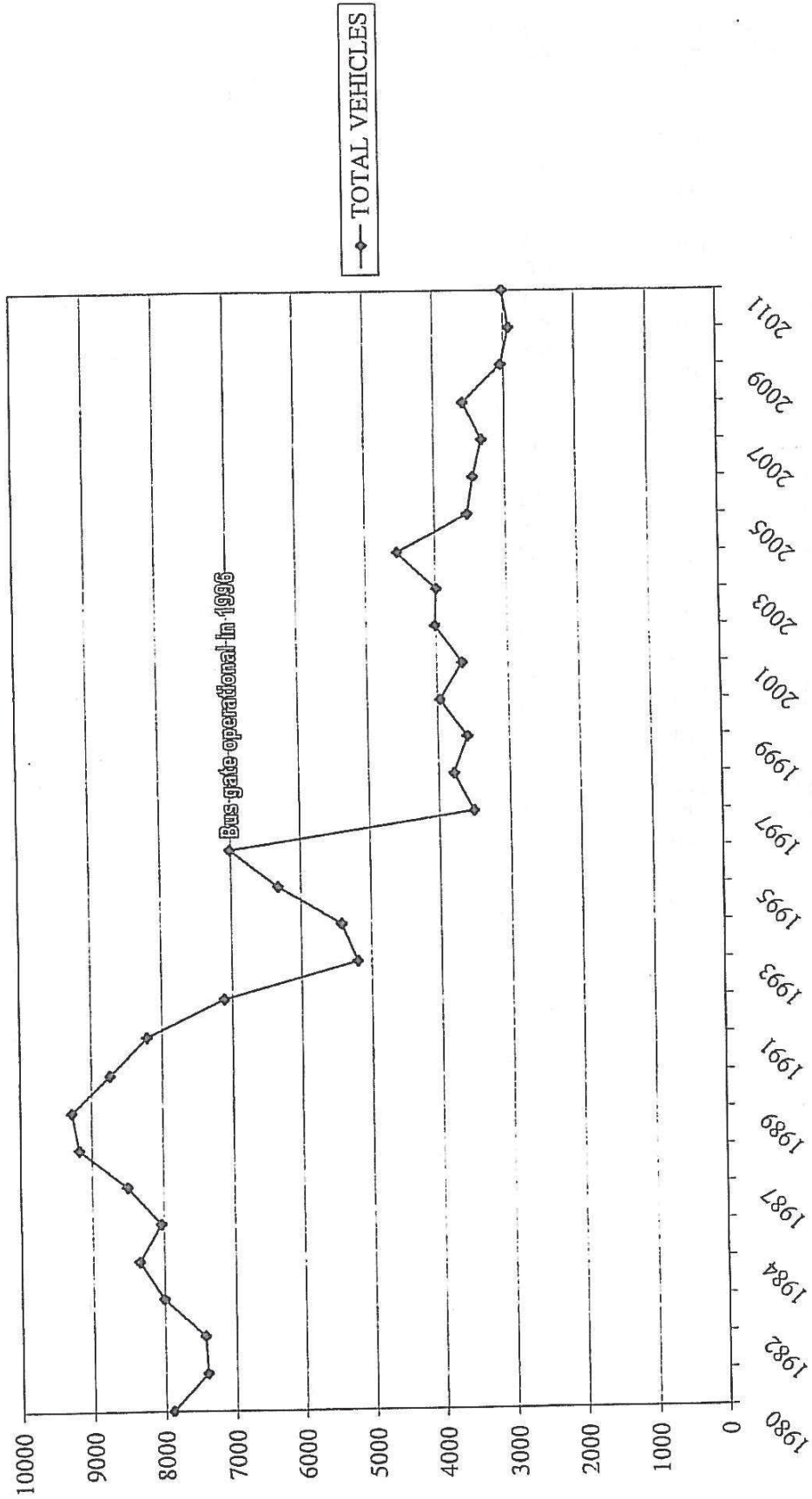
Andy Mckie
September 2012



Duke Street streams

	average flow	IP	Average speed	IP	travel time	delay time
Do Nothing	10214802	8	16	105	75	
	10214804	17	25	99	55	
	10214805	500	38	70	31	
Do Something - unrestricted IP period	10214802	24	15	107	79	
	10214804	234	9	367	328	
	10214805	256	41	63	23	

Duke Street



YEAR	TOTAL VEHICLES	SumOfPSV
1980	7893	332
1981	7403	339
1982	7438	292
1983	8006	305
1984	8347	317
1985	8034	300
1987	8504	327
1988	9178	420
1989	9277	476
1990	8736	358
1991	8210	354
1992	7114	421
1993	5199	326
1994	5421	292
1995	6322	404
1996	7013	388
1997	3512	384
1998	3784	354
1999	3587	346
2000	3966	369
2001	3640	335
2002	4018	308
2003	3991	311
2004	4539	371
2005	3536	411
2006	3450	374
2007	3320	482
2008	3584	569
2009	3042	567
2010	2927	434
2011	3012	394