Leith Connections

Post 12-Month Data Collection Summary Report

The City of Edinburgh Council

November 2024

Delivering a better world

Contents

1. Introduction

AECOM was commissioned by The City of Edinburgh Council (CEC) to provide consultancy support to carry out associated pre and post monitoring and evaluation tasks for the Leith Connections project.

This report presents data gathered in October 2024 by AECOM 12-months after the start of the trial Low Traffic Neighbourhood (LTN) layout introduction. Data in this report will be compared to the previously published baseline data and post-6-month data, which was collected before the implementation of the LTN and after 6-months of the LTN being in place.

Results from the following post-12-month surveys are summarised and compared to the baseline and post-6-month surveys in this report:

- Automatic Traffic Counts (ATCs);
- Junction Turning Counts (JTCs);
- Pedestrian / Cycle Surveys; and
- Acoustic Surveys.

2. Automatic Traffic Counts

Automatic Traffic Counts (ATC) were undertaken at the following locations for 24 hours per day between Monday 28th October and Friday 1st November 2024:

- Site 1 – Coburg Street
- Site 2 – Sandport Place
- Site 3 – Henderson Street
- Site 4 – Water Street
- Site 5 – Queen Charlotte Street
- Site 6 – Baltic Street
- Site 7 – Elbe Street
- Site 8 – Links Place
- Site 9 – Duncan Place
- Site 10 – Wellington Place
- Site 11 – Salamander Place
- Site 12 – Fox Street
- Site 13 – Hermitage Place

It is worth noting that baseline data was not collected for sites 11, 12 and 13. Data for these sites was collected for the post-6-month and post-12-month monitoring only. The comparison analysis between the baseline data and post-12-month data only considers sites 1-10.

A summary of the ATC results for post-12-month surveys is given in **Figure 1**. Results are given for sites labelled 1-10. The following results are given:

- Average vehicle flow (weekday);
- Average northbound/eastbound AM peak hour flow (weekday) and the average northbound/eastbound PM peak hour flow (weekday);
- Average southbound/westbound AM peak hour flow (weekday) and the average southbound/westbound PM peak hour flow (weekday);
- Average northbound/eastbound AM peak hour speed (weekday) and the average northbound/eastbound PM peak hour speed (weekday);
- Average southbound/westbound AM peak hour speed (weekday) and the average southbound/westbound PM peak hour speed (weekday).

All flows and speeds include bicycles, except for the post-6-month period speeds, due to a significant increase in the proportion of bicycles recorded during this period.

In the baseline JTC analysis, the peak AM and PM hour periods at the 10 sites were found to be 07:45 to 08:45 (AM) and 16:00 to 17:00 (PM). For the baseline ATC analysis, the closest available time-periods were 08:00 to 09:00 (AM) and 16:00 to 17:00 (PM). For consistency, this post-12-month ATC reporting has compared against the same fixed peak periods, as the baseline ATC report (08:00 to 09:00 (AM) and 16:00 to 17:00 (PM).

(a description of an Automatic Traffic Count and methodology can be found in the Leith Connections Monitoring & Evaluation Plan)

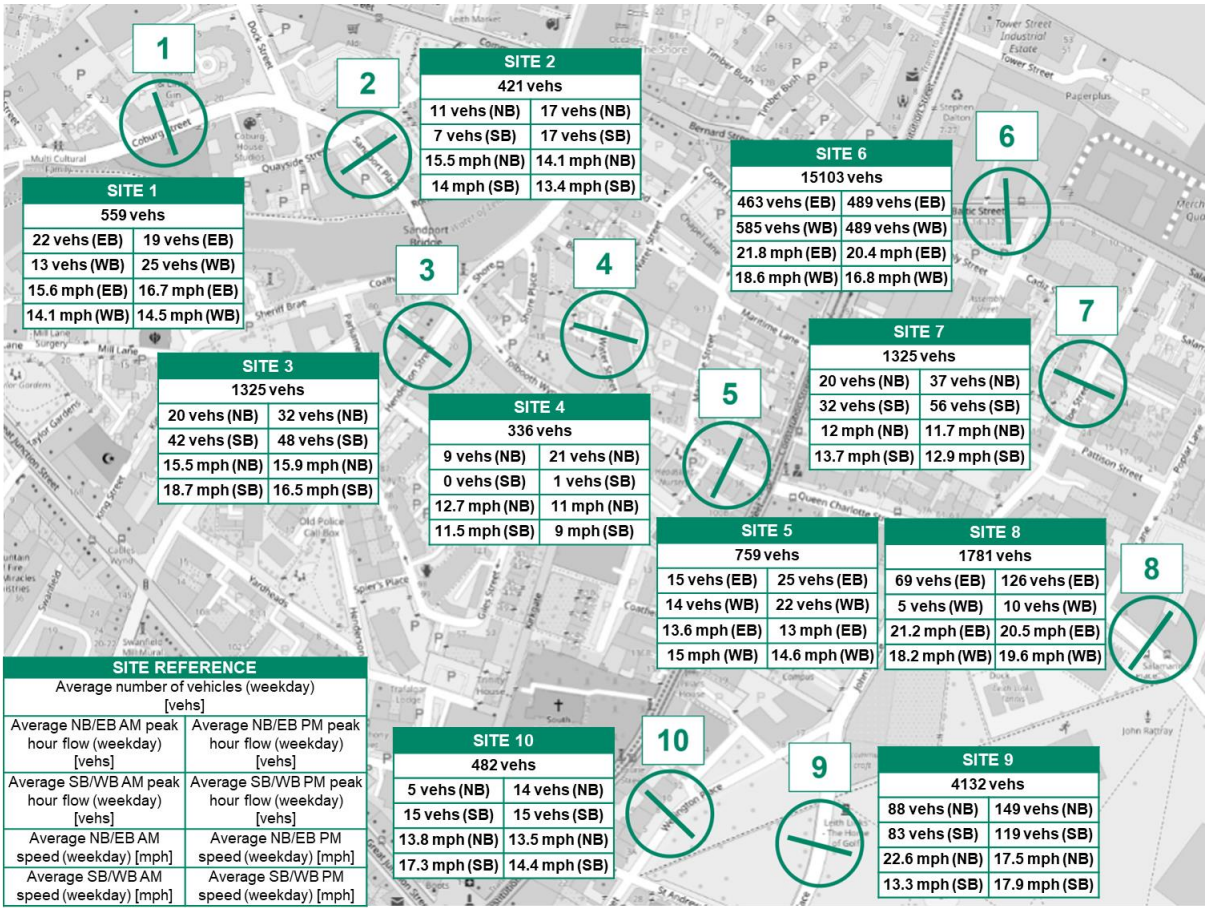


Figure 1: Summary of ATC Surveys

Table 1, **Table 2** and **Table 3** below compare flows and speeds for the baseline, post-6-month and post-12-month ATC study periods. All values are daily averages for a full 24-hour period.

Two-way results are not always the sum of both directions due to rounding. For the average flows, sites shaded in grey (11-13) only have data for the post-6-month and post-12-month period and are therefore excluded from the totals' comparison. Bicycles are excluded from the speed calculations for the post 6-month period due to a significant increase in the proportion of bicycles recorded during this period.

The 85th percentile speed is the speed at or below which 85% of vehicles are traveling at a particular ATC site. For example, if you were to measure the speeds of cars at a site with 100 vehicles, 85 of them would be going at or below this speed. Weekday average 85th percentile speeds have been calculated by finding the 85th percentile speed for each weekday and averaging these values.

Table 1: Full 24 Hours - Weekday Average Flows (vehs)

Site	Location	Road Type	Baseline Surveys (March '23)			6 Month Surveys (June '24)			12 Month Surveys (October '24)			Difference (12 Month vs Baseline)			
			NB/EB	SB/WB	Two-Way	NB/EB	SB/WB	Two-Way	NB/EB	SB/WB	Two-Way	NB/EB	SB/WB	Two-Way	Two-Way (%)
1	Coburg Street	New no-through road	2664	2439	5103	385	329	714	283	276	559	-2279	-2110	-4389	-86.0%
2	Sandport Place	New no-through road	2376	1531	3910	221	234	455	211	210	421	-2155	-1297	-3455	-88.4%
3	Henderson Street	New no-through road[1]	1843	2579	4421	584	905	1489	499	826	1325	-1259	-1674	-2932	-66.3%
4	Water Street	New no-through road	2571	3	2575	390	25	415	319	16	336	-2181	-	-2160	-83.9%
5	Queen Charlotte Street	LTN internal road	988	1969	2960	523	592	1116	369	390	759	-465	-1377	-1844	-62.3%
6	Baltic Street	Boundary road	8095	8099	16192	7035	6350	13385	7252	7852	15103	-1060	-1749	-2807	-17.3%
7	Elbe Street	LTN internal road	702	885	1587	422	584	1006	522	804	1325	-280	-301	-581	-36.6%
8	Links Place	New no-through road[2]	2781	3020	5800	1700	293	1993	1611	169	1781	-1081	-2727	-3807	-65.6%
9	Duncan Place	LTN internal road	1952	1371	3320	2401	1541	3942	2274	1858	4132	449	170	622	18.7%
10	Wellington Place	New no-through road	923	875	1800	236	233	469	231	251	482	-687	-642	-1331	-73.9%
		Boundary road total			16192			13385			15103			-2807	-6.7%
		LTN internal road total			7867			6064			6216			-1803	-21.0%
		New no-through road total			23609			5535			4904			-18074	-79.2%
11	Salamander Place	LTN internal road	-	-	-	2292	1277	3569	2201	1159	3360	-	-	-	-
12	Fox Street	LTN internal road	-	-	-	118	413	531	136	446	582	-	-	-	-
13	Hermitage Place	Boundary road	-	-	-	4727	4471	9197	4061	4431	8492	-	-	-	-

[1] No-through road except buses in both directions and southbound general vehicle access available between 0600-1200 and taxis 24 hours a day.
[2] No-through road westbound expect for buses and taxis, eastbound remains unchanged.

Table 2: Full 24 Hours - Weekday Average Speeds (mph)

Site	Location	Road Type	Baseline Surveys (March '23)		6 Month Surveys (June '24)		12 Month Surveys (October '24)		Difference (12 Month vs Baseline)	
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	Coburg Street	New no-through road	21.1	20.4	16.9	15.4	16.5	15.0	-4.6	-5.4
2	Sandport Place	New no-through road	20.9	20.7	13.9	14.2	13.8	13.6	-7.1	-7.1
3	Henderson Street	New no-through road[3]	16.7	18.6	15.6	17.0	15.6	17.2	-1.1	-1.4
4	Water Street	New no-through road	14.3	-	11.9	-	11.6	8.9	-2.8	-
5	Queen Charlotte Street	LTN internal road	14.7	18.1	12.3	14.9	13.0	14.2	-1.7	-3.9
6	Baltic Street	Boundary road	19.7	22.5	21.0	19.4	21.2	17.3	1.6	-5.2
7	Elbe Street	LTN internal road	13.9	13.6	11.8	12.1	11.3	12.4	-2.7	-1.3
8	Links Place	New no-through road[4]	16.6	16.7	20.4	19.4	20.6	19.2	4.0	2.5
9	Duncan Place	LTN internal road	20.2	20.7	20.1	19.9	20.0	20.2	-0.2	-0.6
10	Wellington Place	New no-through road	16.3	16.1	16.3	15.4	13.3	14.9	-3.0	-1.2
11	Salamander Place	LTN internal road	-	-	14.8	15.3	14.5	15.0	-	-
12	Fox Street	LTN internal road	-	-	13.4	13.4	12.4	13.7	-	-
13	Hermitage Place	Boundary road	-	-	22.5	20.7	22.6	20.9	-	-

[3] No-through road except buses in both directions and southbound general vehicle access available between 0600-1200 and taxis 24 hours a day.
[4] No-through road westbound expect for buses and taxis, eastbound remains unchanged.

Table 3: Full 24 Hours - Weekday Average 85th Percentile Speeds (mph)

Site	Location	Road Type	Baseline Surveys (March '23)		6 Month Surveys (June '24)		12 Month Surveys (October '24)		Difference (12 Month vs Baseline)	
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	Coburg Street	New no-through road	24.7	24.4	21.6	19.9	21.0	19.1	-3.7	-5.3
2	Sandport Place	New no-through road	24.4	24.4	17.3	17.7	17.1	16.8	-7.3	-7.6
3	Henderson Street	New no-through road[5]	20.1	22.0	19.4	20.7	19.2	21.1	-0.9	-1.0
4	Water Street	New no-through road	17.3	-	14.8	-	14.5	11.5	-2.8	-
5	Queen Charlotte Street	LTN internal road	18.3	21.6	15.5	18.9	16.9	18.0	-1.4	-3.6
6	Baltic Street	Boundary road	24.4	25.6	24.4	23.9	25.0	22.4	0.6	-3.2
7	Elbe Street	LTN internal road	17.7	17.0	14.5	15.0	13.8	15.4	-3.9	-1.6
8	Links Place	New no-through road[6]	22.6	21.2	24.0	25.1	23.9	24.1	1.3	2.9
9	Duncan Place	LTN internal road	23.6	23.8	24.5	24.5	24.8	24.5	1.2	0.7
10	Wellington Place	New no-through road	20.6	20.4	21.1	19.9	17.5	19.4	-3.1	-1.0
11	Salamander Place	LTN internal road	-	-	17.8	18.7	17.4	18.0	-	-
12	Fox Street	LTN internal road	-	-	16.5	16.2	16.0	16.3	-	-
13	Hermitage Place	Boundary road	-	-	27.2	25.5	27.3	25.5	-	-

[5] No-through road except buses in both directions and southbound general vehicle access available between 0600-1200 and taxis 24 hours a day.
[6] No-through road westbound expect for buses and taxis, eastbound remains unchanged.

3. Junction Turning Counts

Junction Turning Counts (JTC) were undertaken at five junctions in the morning and in the afternoon of Wednesday 30th October 2024. The AM and PM peak hour flows are summarised in figures below for the following five junctions:

- Junction 1 – Ocean Drive / Commercial Street / North Junction Street / Lindsay Road
- Junction 2 – Great Junction Street / Cables Wynd / Bonnington Road
- Junction 3 – Constitution Street / Duke Street / Great Junction Street / Leith Walk
- Junction 4 – Vanburgh Place / Lochend Road / Easter Road / Duke Street
- Junction 5 – Seafield Road / Seafield Place / Salamander Street

In the baseline JTC analysis, the peak AM and PM hour periods at the surveyed sites were found to be 07:45 to 08:45 (AM) and 16:00 to 17:00 (PM). For consistency, this JTC reporting will compare against the same fixed peak periods.

An overview map of the five junctions is shown in **Figure 2** below.

(A description of a Junction Turn Count and methodology can be found in the Leith Connections Monitoring & Evaluation Plan).

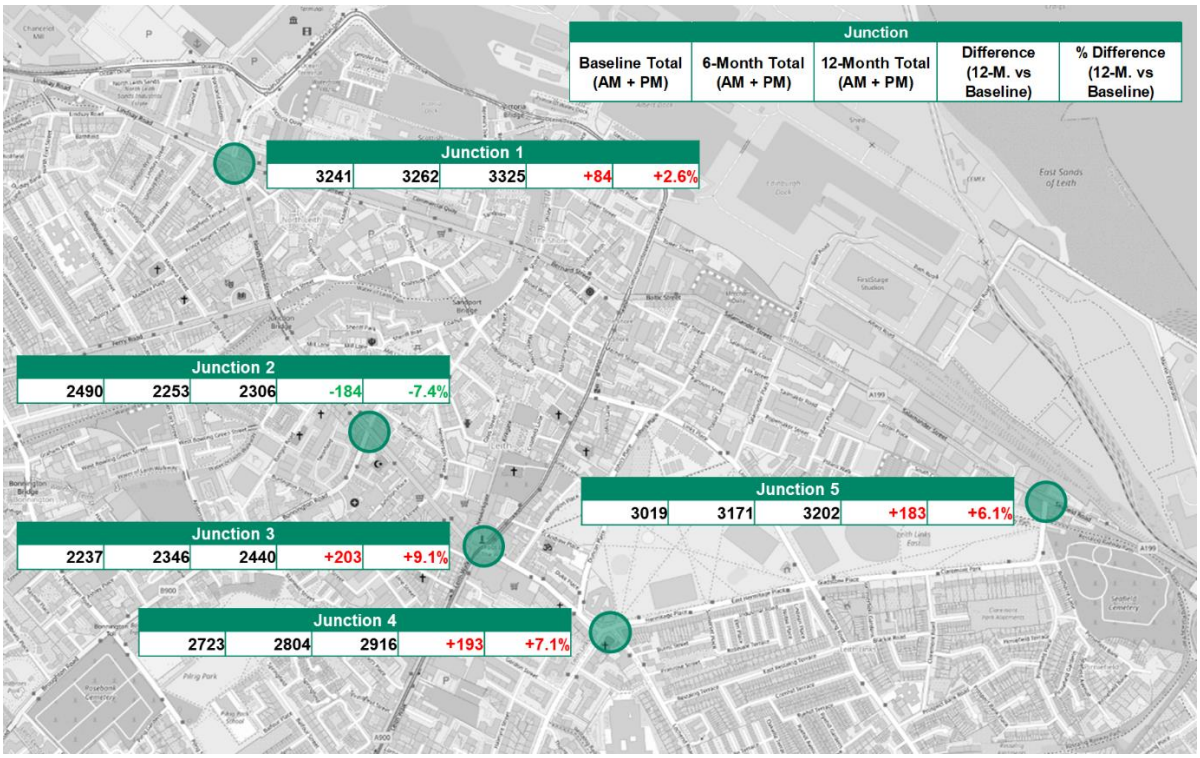


Figure 2: Peak Hour JTC vehicles (Baseline vs post-12-Month)

The below figures provide a comparison of 6-month and 12-month JTC data against the baseline data.

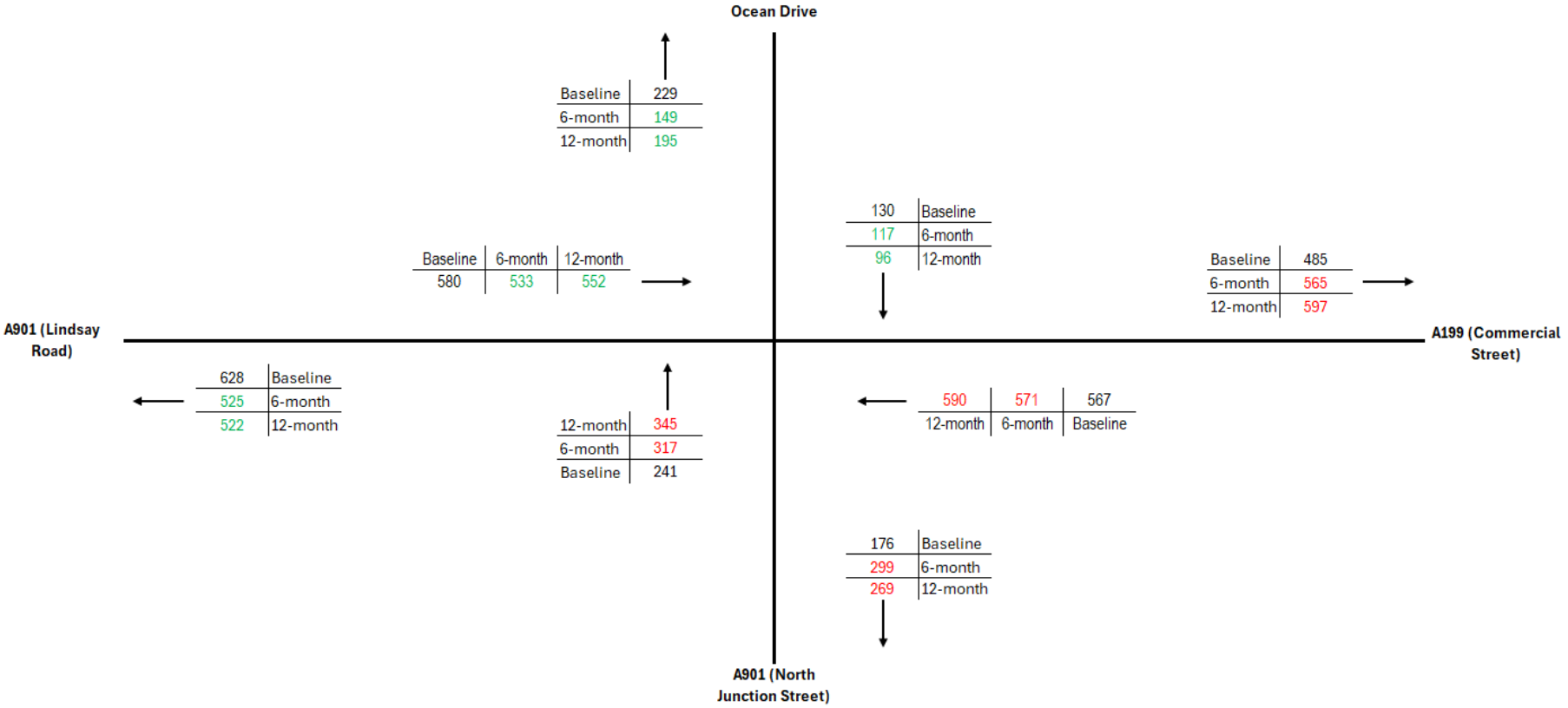


Figure 3: Junction 1 Turning Counts - AM Peak

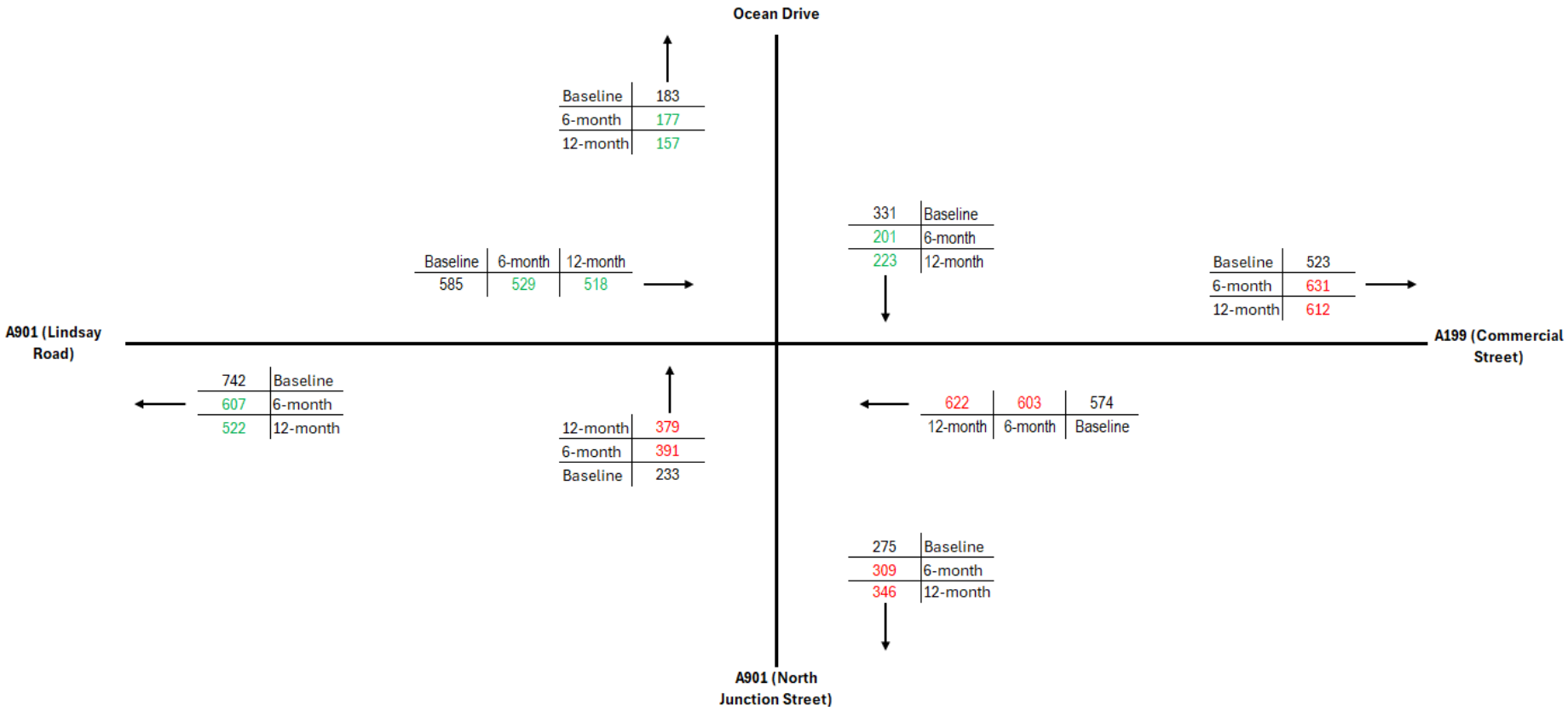


Figure 4: Junction 1 Turning Counts - PM Peak

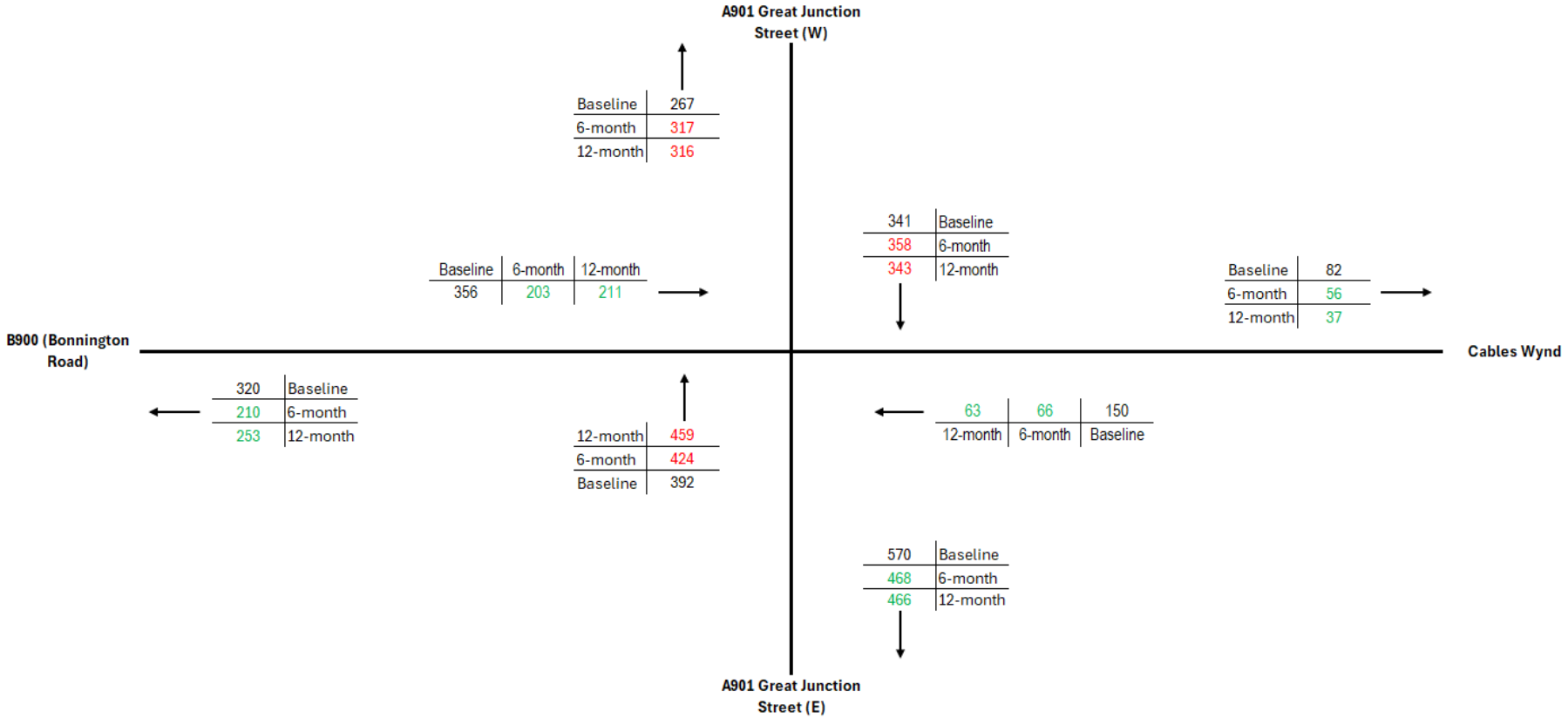


Figure 5: Junction 2 Turning Counts - AM Peak

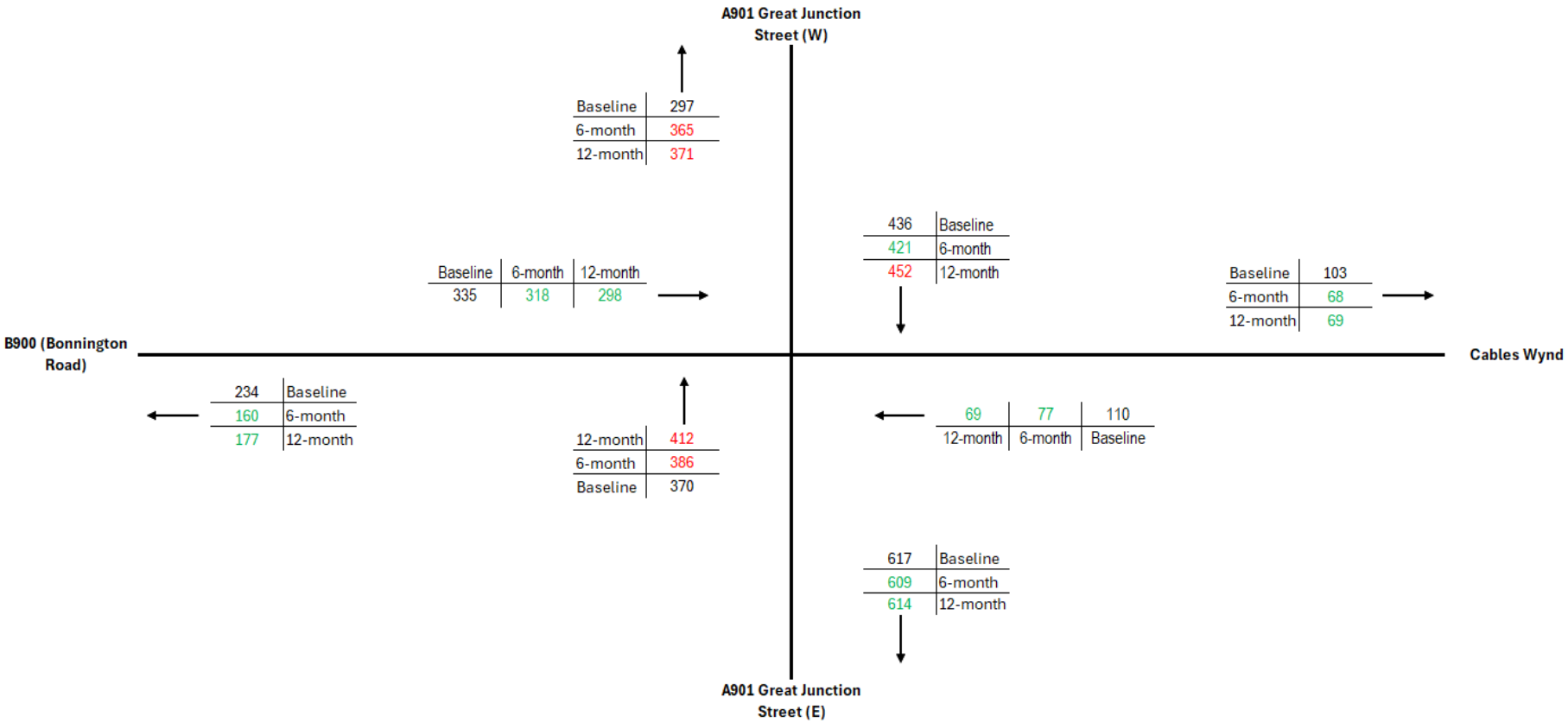


Figure 6: Junction 2 Turning Counts - PM Peak

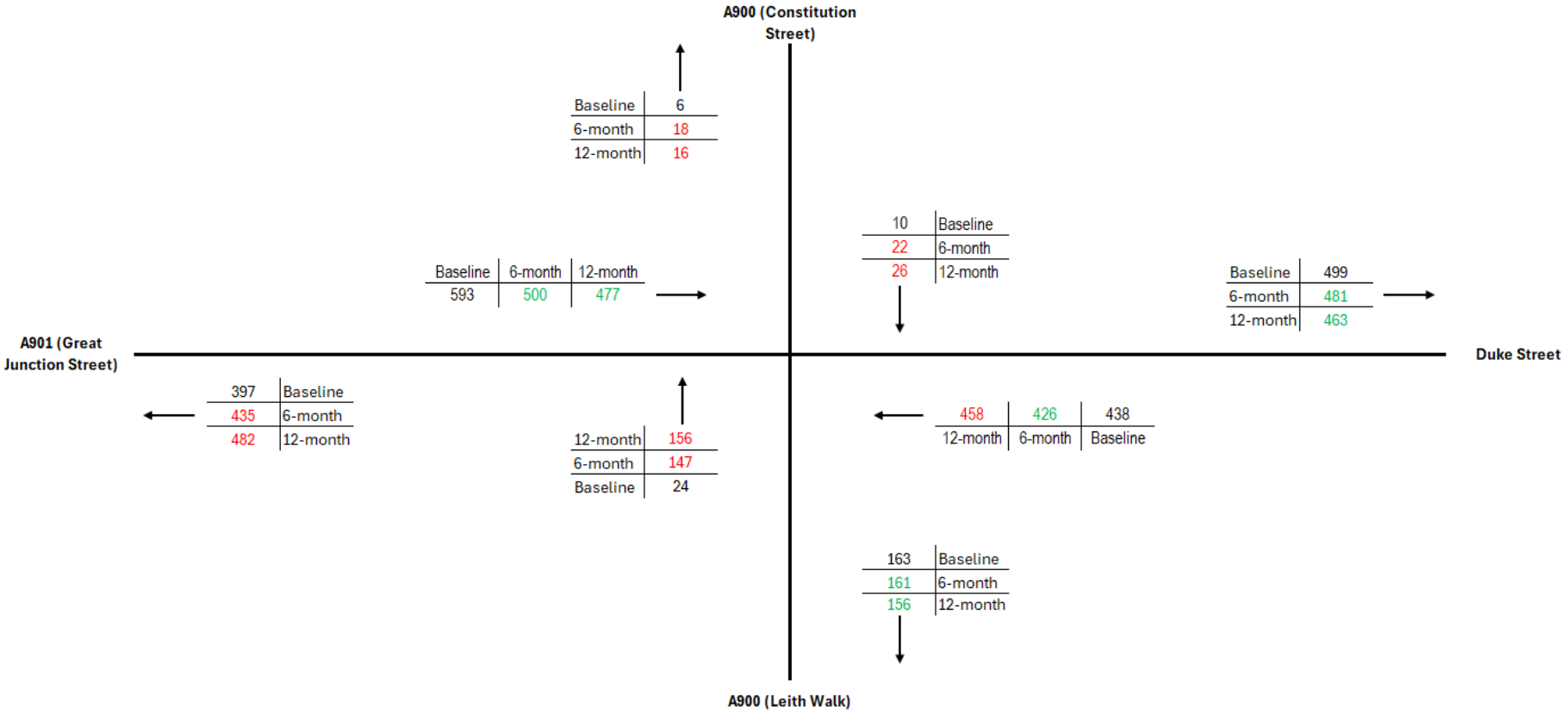


Figure 7: Junction 3 Turning Counts - AM Peak

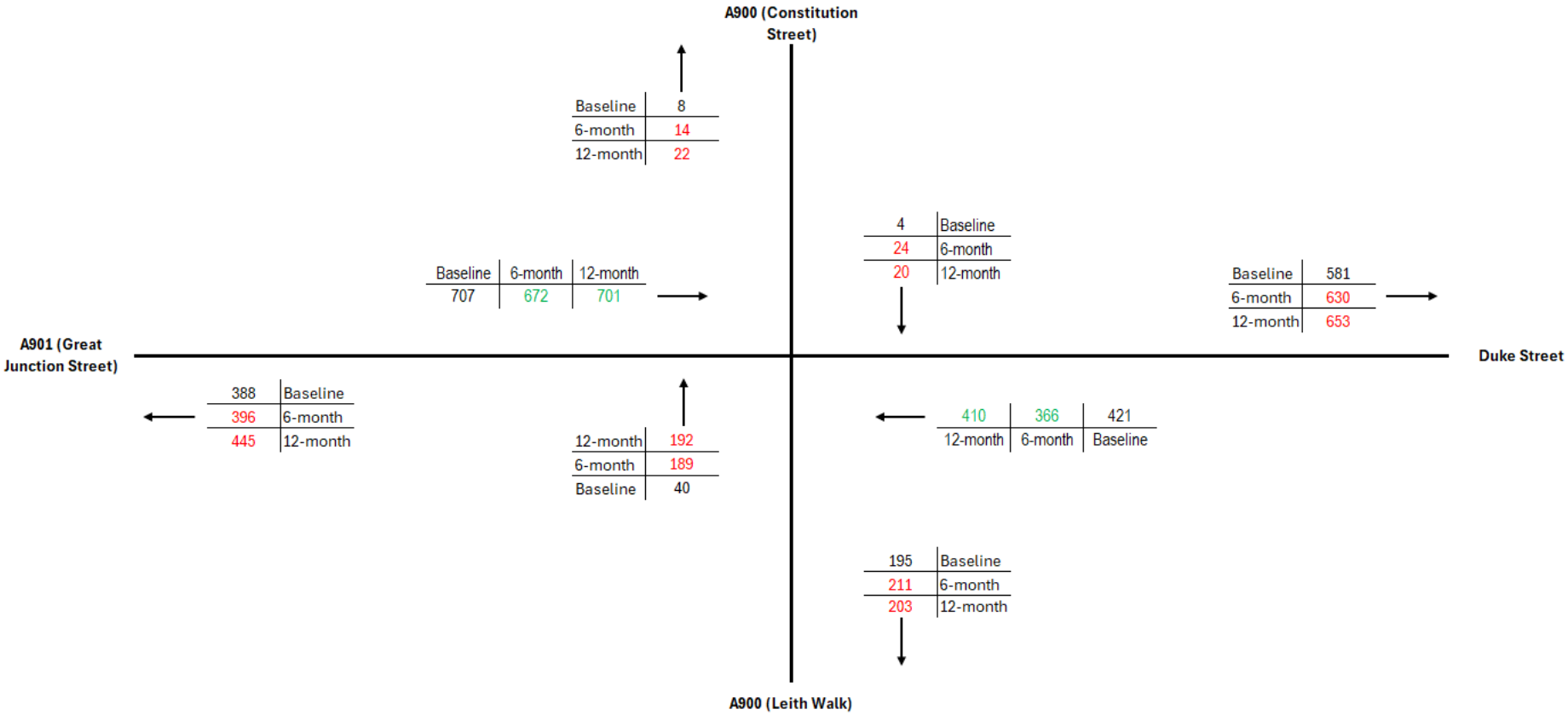


Figure 8: Junction 3 Turning Counts - PM Peak

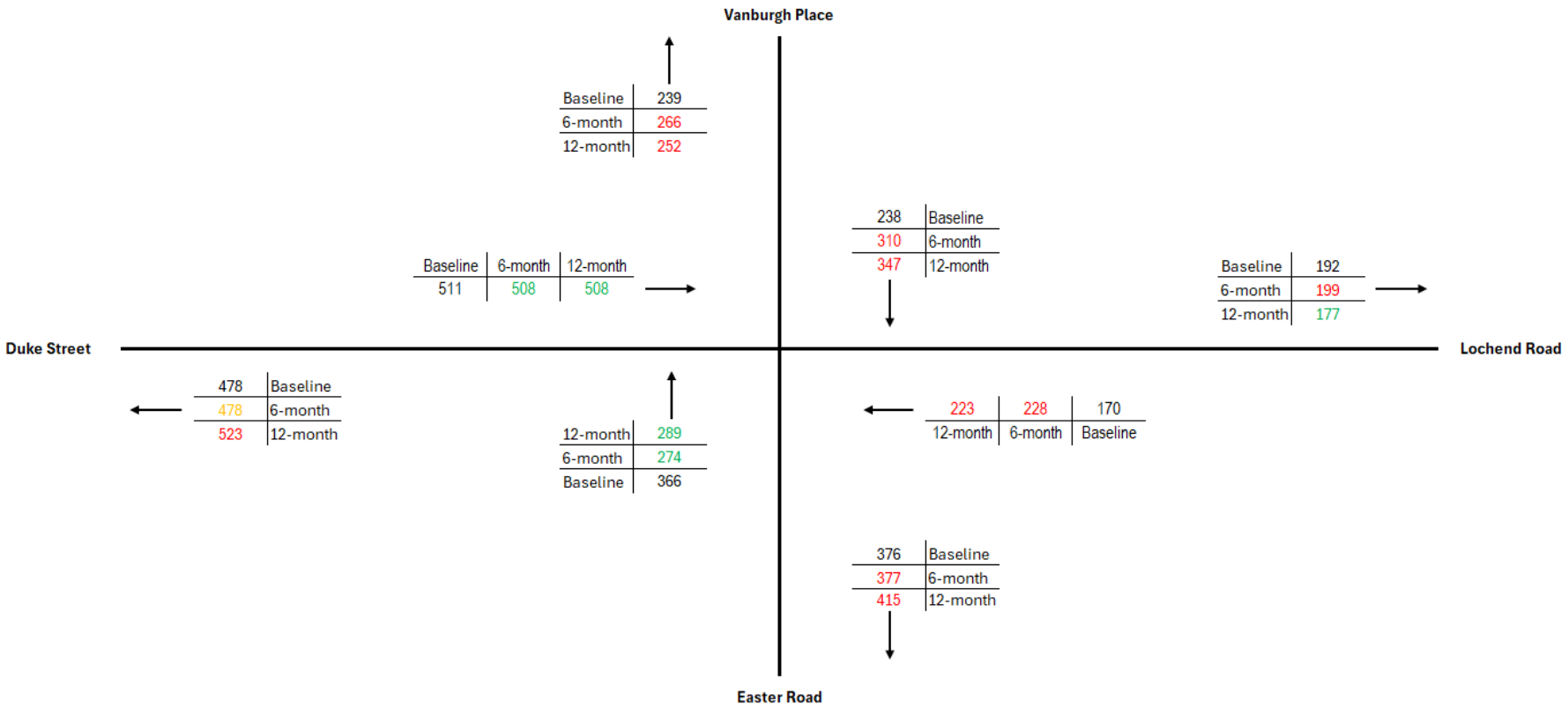


Figure 9: Junction 4 Turning Counts - AM Peak

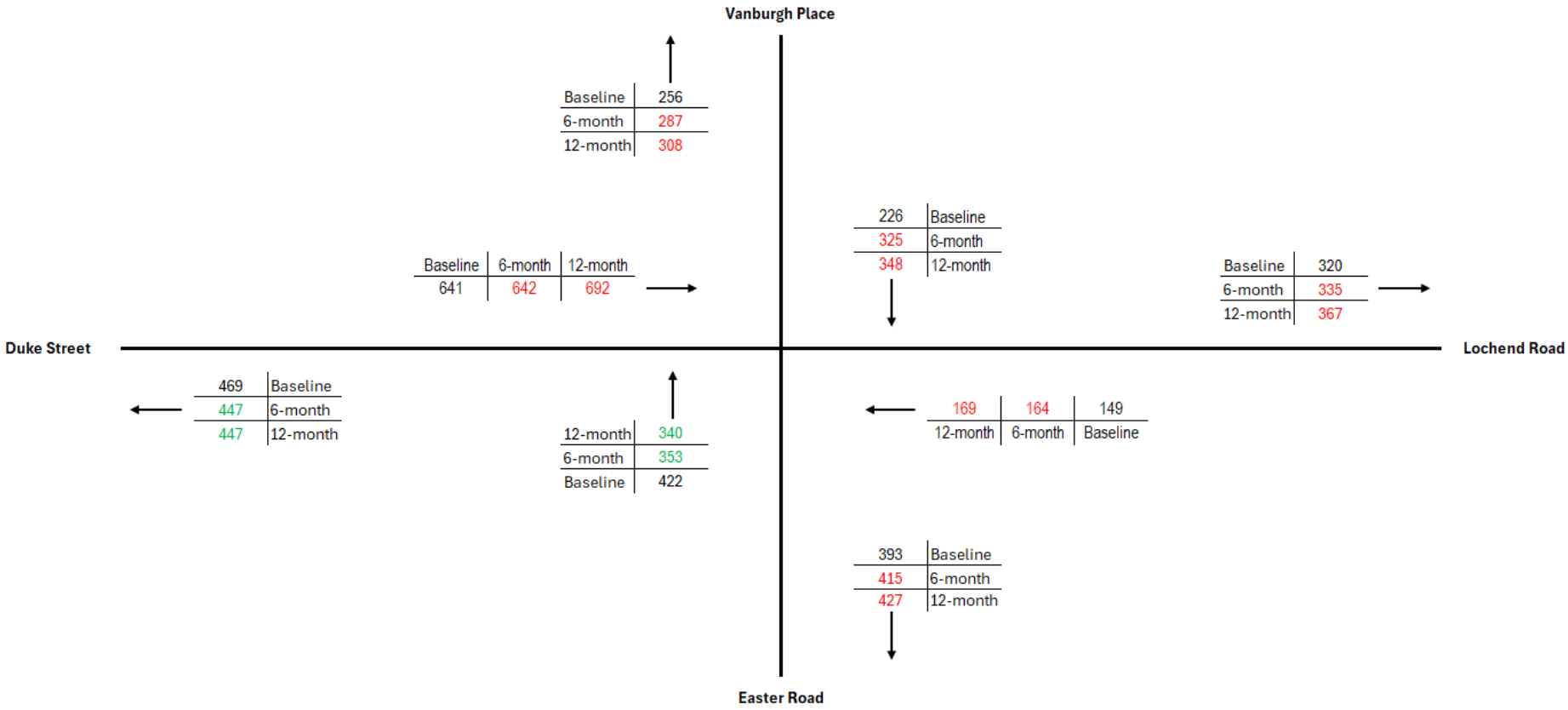


Figure 10: Junction 4 Turning Counts - PM Peak

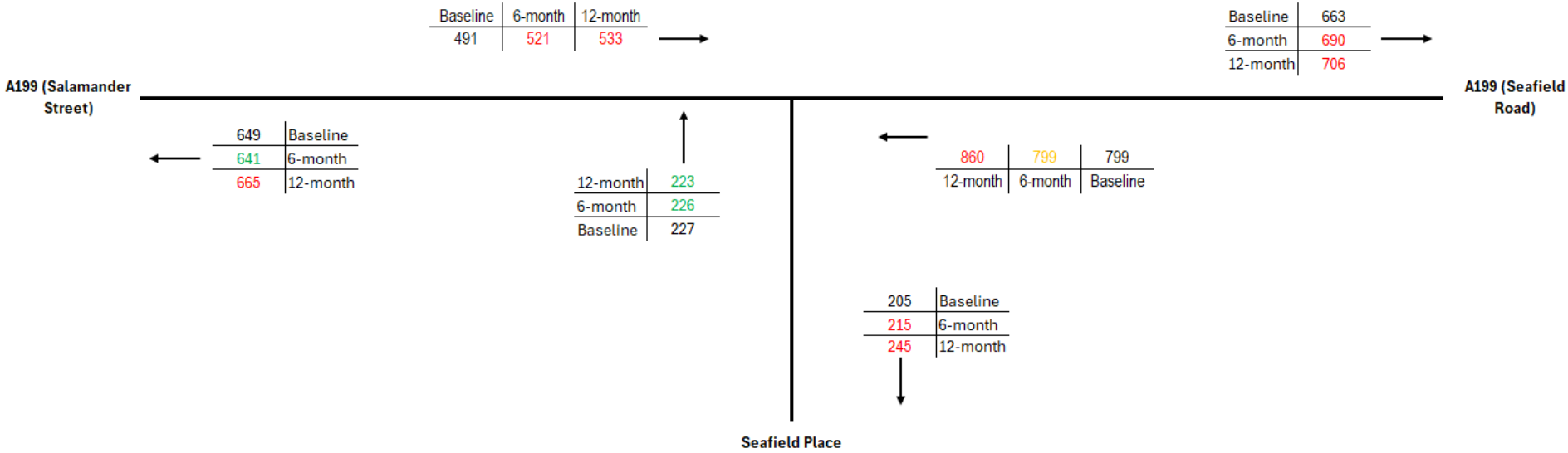


Figure 11: Junction 5 Turning Counts - AM Peak

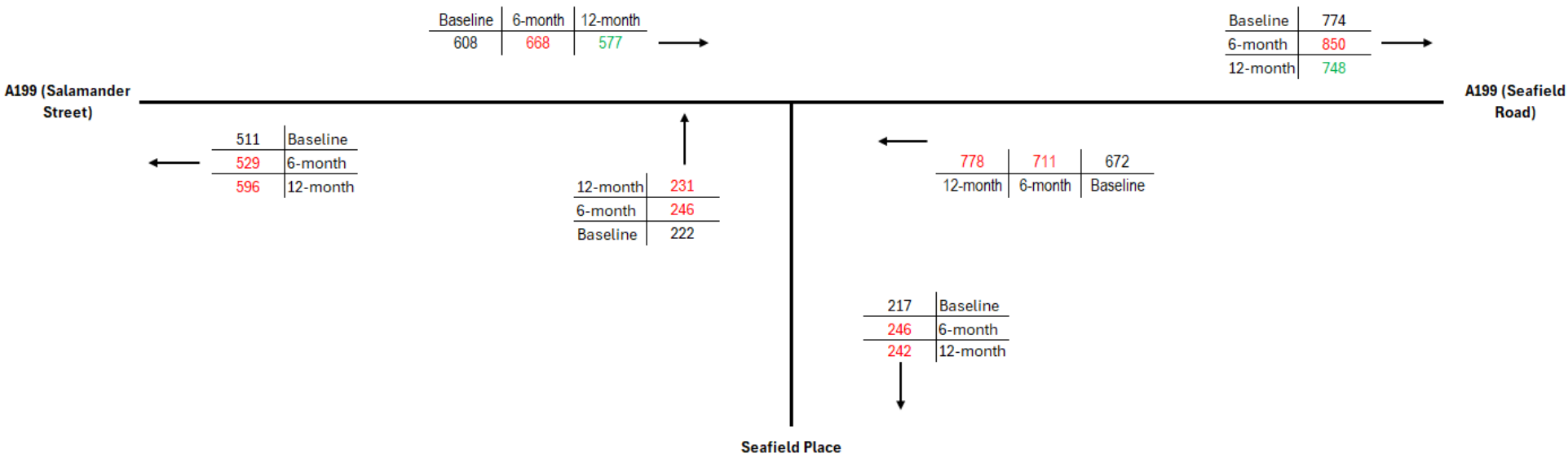


Figure 12: Junction 5 Turning Counts - PM Peak

4. Leith Links Surveys

Further to the pedestrian and cycle movement surveys summarised in **Section 5**, classified vehicle flow counts were undertaken at Links Gardens (location shown in **Figure 13**). The data was collected during a 12-hour period on 28th March 2023 (baseline), 27th June 2024 (post 6-month) and 30th October 2024 (post-12-month).

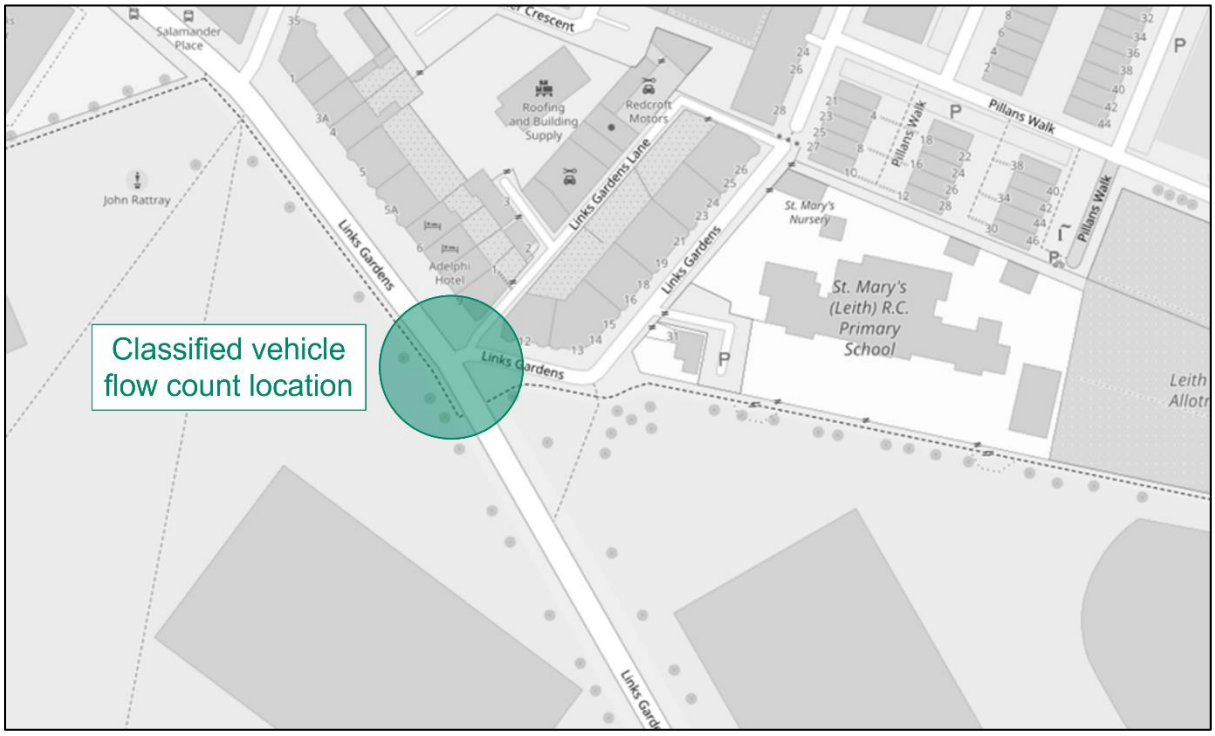


Figure 13: Leith Links Classified Vehicle Survey Location

A summary of the results is given in **Table 4**Table 14 below.

Table 4: Leith Links Classified Vehicle Survey Results

Survey	Direction	Peak Hour	Bicycle	Motorcycle	Cars/Taxis	LGVs	HGVs	Total Vehicles
Baseline	NB	08:15 to 09:15	10	3	331	37	6	**387**
		17:00 to 18:00	2	0	188	12	3	**205**
	SB	08:15 to 09:15	1	1	126	23	6	**156**
		16:15 to 17:15	0	0	263	45	4	**311**
Post 6-month	NB	08:15 to 09:15	10	1	138	27	5	**181**
		17:00 to 18:00	8	1	98	13	3	**123**
	SB	08:15 to 09:15	1	1	114	24	8	**148**
		16:15 to 17:15	4	2	175	30	5	**216**
Post-12-month	NB	08:15 to 09:15	18	1	181	20	8	**228**
		17:00 to 18:00	2	0	111	10	3	**126**
	SB	08:15 to 09:15	4	1	120	23	7	**155**
		16:15 to 17:15	2	0	240	32	4	**278**
Difference (12-month vs Baseline)	NB	08:15 to 09:15	8	-2	-150	-17	2	**-159**
		17:00 to 18:00	0	0	-77	-2	0	**-79**
	SB	08:15 to 09:15	3	0	-6	0	1	**-2**
		16:15 to 17:15	2	0	-23	-13	0	**-34**

5. Pedestrian / Cycle Surveys

5.1 Pedestrian and Cycle Movements

Manual pedestrian and cycle surveys were undertaken at 11 sites in Leith, Edinburgh, during a 12-hour period on Tuesday 29th October 2024. Details of the 11 sites and their corresponding result summaries (figures) are given in **Table 5** below.

Table 5: Pedestrian and Cycle Movement Survey Locations and Corresponding Results

Site Reference	Site Description	Result Summary
Site A	Coburg Street / Couper Street / Water of Leith Path	Figure 14
Site B	Sandport Place / Commercial Wharf / Water of Leith Path	Figure 15
Site C	Sandport Place / Shore / Tolbooth Wynd / Henderson Street	Figure 15
Site D	Shore at Broad Wynd	Figure 15
Site E	Queen Charlotte Street at Maritime Street	Figure 14
Site F	Duncan Place	Figure 14
Site G(i)	Links Gardens (north)	Figure 16
Site G(ii)	Links Gardens (mid-north)	Figure 16
Site G(iii)	Links Gardens (mid-south)	Figure 16
Site G(iv)	Links Gardens (south)	Figure 16
Site H	Leith Links (East / South / West) / South Carron Wynd	Figure 14

As shown in the key for each Figure, the following results are provided for each location:

- Total number of northbound or eastbound pedestrians
- Total number of southbound or westbound pedestrians
- Total number of northbound or eastbound cyclists
- Total number of southbound or westbound cyclists
- Total number of pedestrians crossing the road (where applicable)
- Total number of cyclists crossing the road (where applicable)

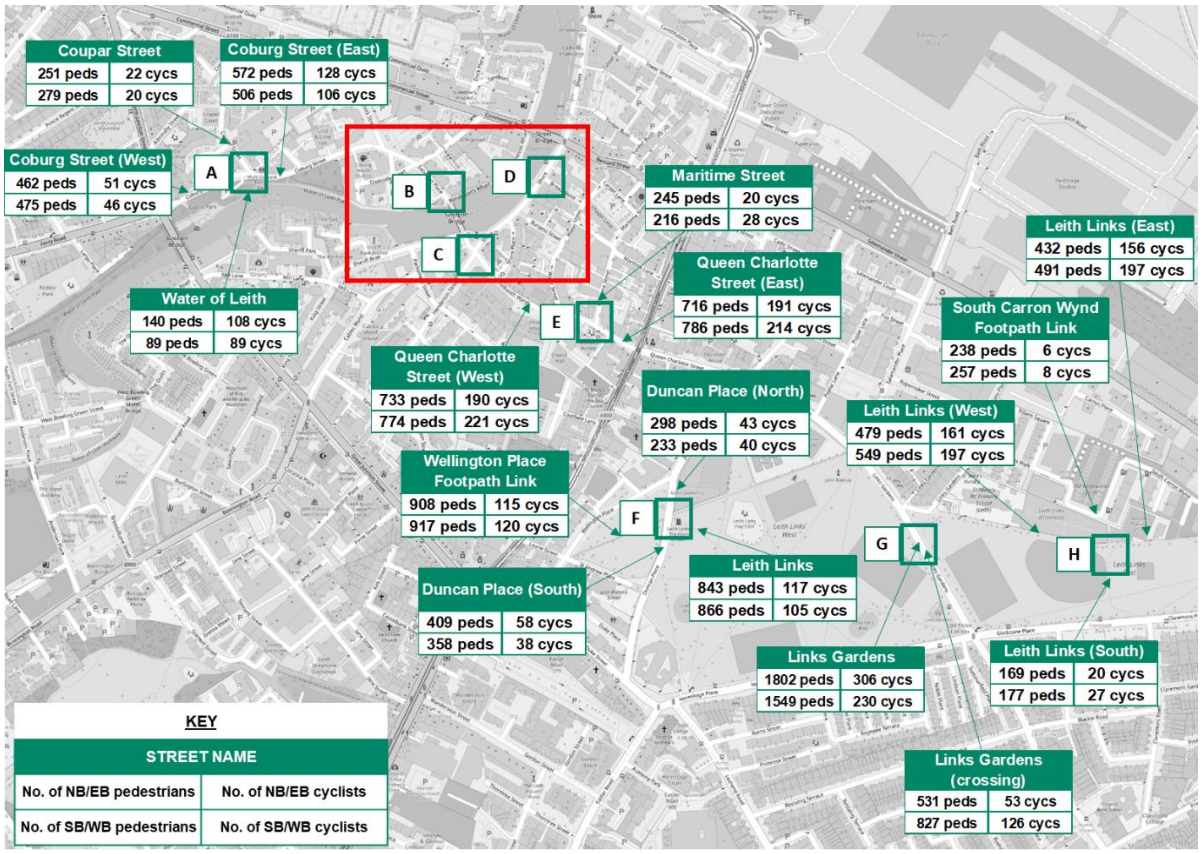


Figure 14: General Pedestrian and Cycle Movements

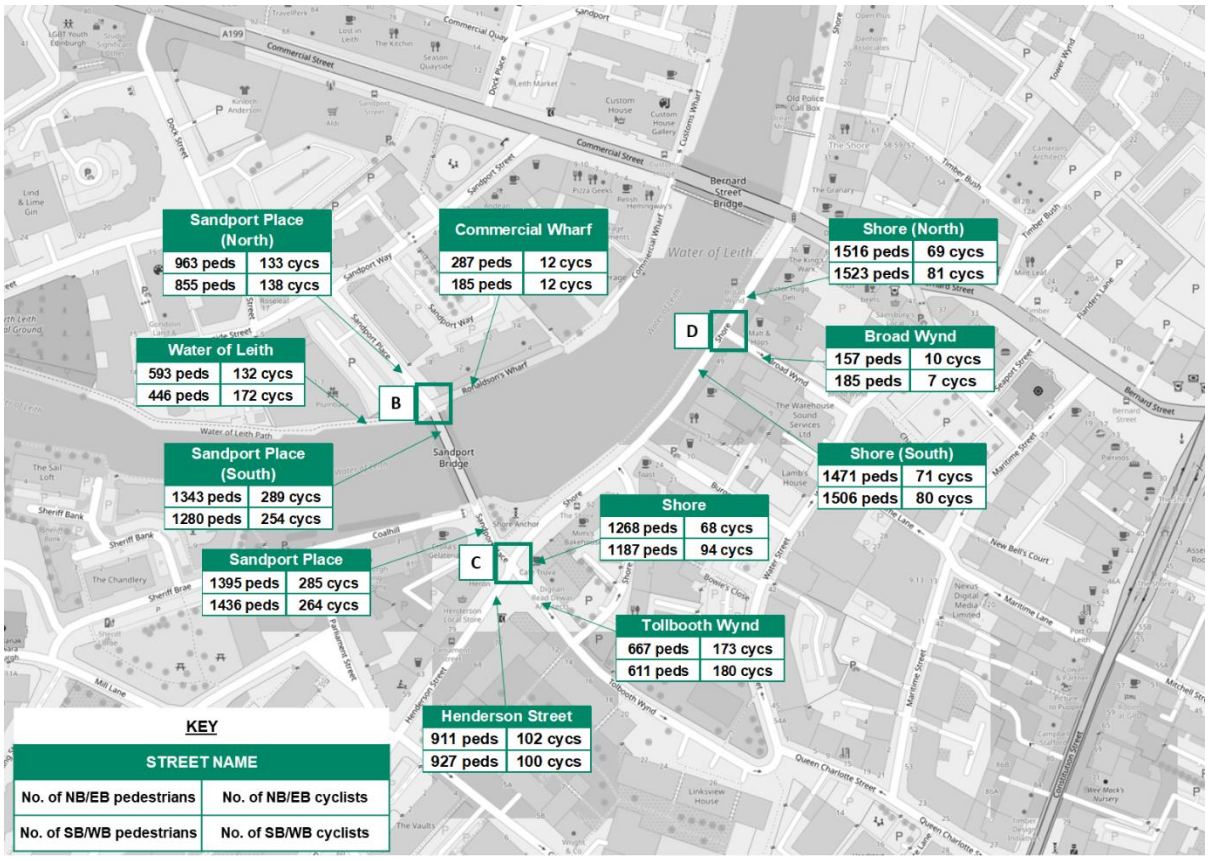


Figure 15: Shore Pedestrian and Cycle Movements

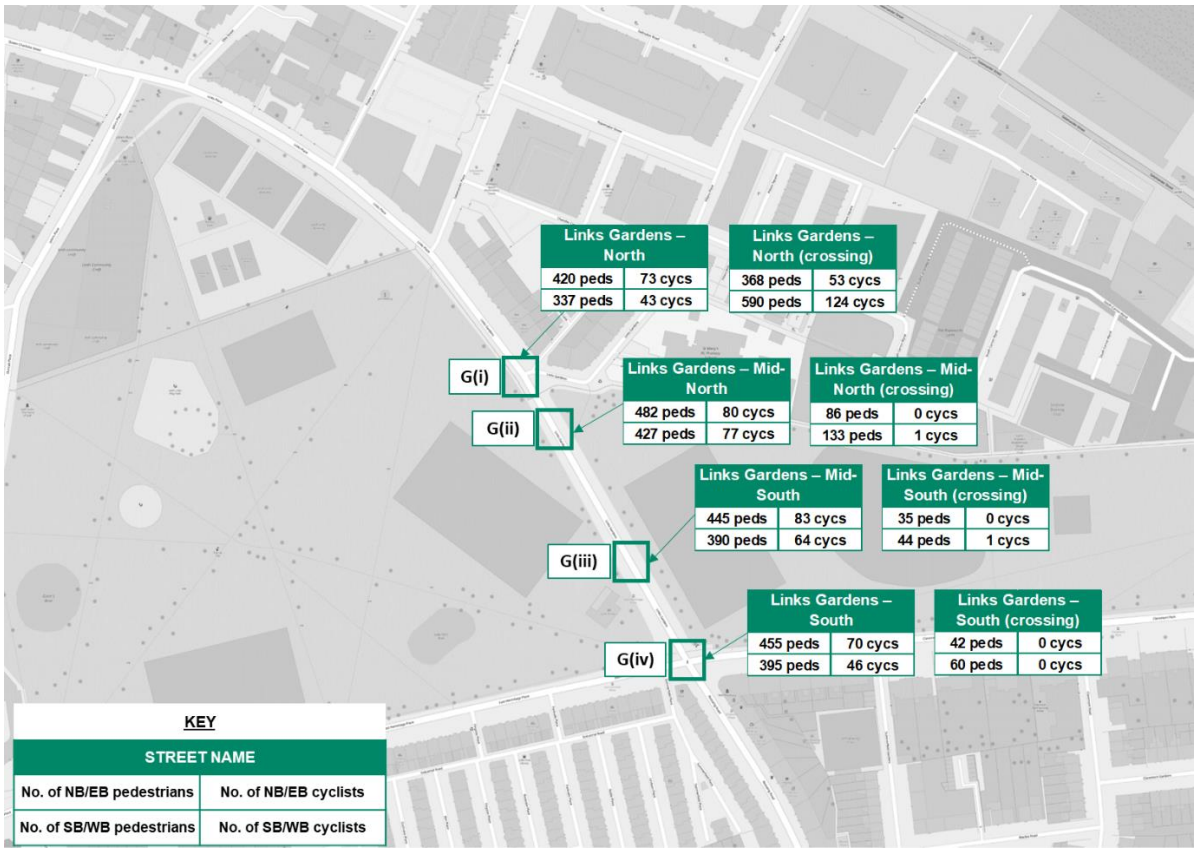


Figure 16: Links Gardens Pedestrian and Cycle Movements

A comparison between the baseline, post 6-month and post-12-month results is given in **Table 6** to **Table 13** below.

When comparing the post 12-month results with the baseline results, it is important to consider the time of year each survey was conducted. While the baseline survey was carried out in early spring (March 2023) the post-12-month survey was carried out in late Autumn (October 2024) when the volume of pedestrians and cyclists could be different, irrespective of any changes to the build environment or traffic volumes.

It should be noted that due to the seasonal differences between the baseline, post-6-month and post-12-month surveys there were varying levels of foliage at Site G(i) and Site G(iv). To ensure a clear view of the sites, this required changing the camera direction between the survey time-periods.

Table 6: Site A Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Coupar Street	145	165	14	16	278	290	24	22	251	279	22	20	106	114	8	4
Coburg Street (East)	433	419	52	43	523	525	99	92	572	506	128	106	139	87	76	63
Water of Leith	123	98	47	36	140	105	63	71	140	89	108	89	17	-9	61	53
Coburg Street (West)	334	365	29	33	439	488	67	50	462	475	51	46	128	110	22	13

Table 7: Site B Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Sandport Place (North)	782	656	58	62	760	730	124	125	963	855	133	138	181	199	75	76
Commercial Wharf	223	135	15	16	236	151	25	12	287	185	12	12	64	50	-3	-4
Sandport Place (South)	1113	952	162	144	1184	1095	252	234	1343	1280	289	254	230	328	127	110
Water of Leith	445	392	103	126	498	472	149	155	593	446	132	172	148	54	29	46

Table 8: Site C Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Sandport Place	1123	1148	163	144	1319	1287	265	238	1395	1436	285	264	272	288	122	120
Shore	1123	991	54	113	1056	986	83	95	1268	1187	68	94	145	196	14	-19
Tollbooth Wynd	724	700	61	104	746	619	175	184	667	611	173	180	-57	-89	112	76
Henderson Street	988	905	60	57	869	894	94	70	911	927	102	100	-77	22	42	43

Table 9: Site D Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Shore (North)	1321	1364	61	73	1338	1322	73	67	1516	1523	69	81	195	159	8	8
Broad Wynd	191	191	8	8	149	171	12	10	157	185	10	7	-34	-6	2	-1
Shore (South)	1258	1301	63	75	1253	1259	76	68	1471	1506	71	80	213	205	8	5

Table 10: Site E Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Queen Charlotte Street (West)	659	745	84	101	609	620	151	193	733	774	190	221	74	29	106	120
Maritime Street	206	223	8	18	221	210	10	16	245	216	20	28	39	-7	12	10
Queen Charlotte Street (East)	646	715	94	101	615	637	153	189	716	786	191	214	70	71	97	113

Table 11: Site F Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Duncan Place (North)	290	255	34	25	198	190	38	46	298	233	43	40	8	-22	9	15
Leith Links	703	748	57	71	843	869	110	118	843	866	117	105	140	118	60	34
Duncan Place (South)	355	368	39	27	292	302	43	57	409	358	58	38	54	-10	19	11
Wellington Place Footpath Link	762	759	54	71	871	879	105	107	908	917	115	120	146	158	61	49

Table 12: Site G Pedestrian/Cycle Movement Comparison

Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
Links Gardens – North	391	291	31	29	458	375	67	40	420	337	73	43	29	46	42	14
Links Gardens – North (crossing)	251	358	30	96	370	455	38	141	368	590	53	124	117	232	23	28
Links Gardens – Mid-North	416	351	40	35	450	417	69	39	482	427	80	77	66	76	40	42
Links Gardens – Mid-North (crossing)	81	116	2	0	64	99	1	2	86	133	0	1	5	17	-2	1
Links Gardens – Mid-South	395	391	34	27	444	397	69	40	445	390	83	64	50	-1	49	37
Links Gardens – Mid-South (crossing)	43	37	0	0	36	35	0	1	35	44	0	1	-8	7	0	1
Links Gardens – South	423	381	36	31	465	407	68	43	455	395	70	46	32	14	34	15
Links Gardens – South (crossing)	312	258	12	5	20	19	0	0	42	60	0	0	-270	-198	-12	-5

** Due to the levels of foliage prevented video capture of cycles crossing at Links Gardens – South for the post-6-month and post-12-month data.*

Table 13: Site H Pedestrian/Cycle Movement Comparison

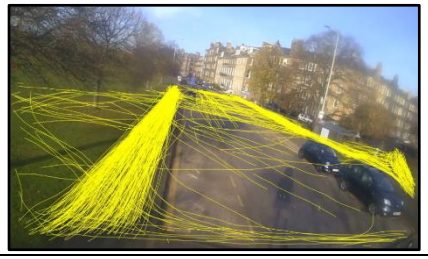
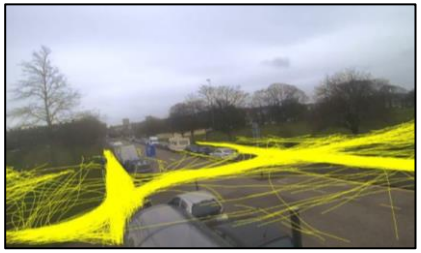
Arm	Baseline				6-month				12-month				Difference (12-month vs baseline)			
	Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle		Pedestrian		Cycle	
	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB	NB/EB	WB/SB
South Carron Wynd Footpath Link	133	139	7	9	169	206	11	12	238	257	6	8	105	118	-1	-1
Leith Links (East)	282	334	88	103	294	326	165	183	432	491	156	197	150	157	68	94
Leith Links (South)	89	109	12	9	103	131	19	12	169	177	20	27	80	68	8	18
Leith Links (West)	347	385	87	107	381	422	158	184	479	549	161	197	132	164	74	90

5.2 Pedestrian and Cycle Tracing

Pedestrian and cycle tracing surveys were undertaken alongside the movement surveys on Tuesday 29th October 2024. Movement tracing maps are shown in **Table 14** below

Table 14: Pedestrian/Cycle Movement Tracing (all sites)

Site Reference	Baseline Pedestrian Tracing	Baseline Cyclist Tracing	12-Month Pedestrian Tracing	12-Month Cyclist Tracing
Site C – Sandport Place / Shore / Tolbooth Wynd (View A)				
Site C – Sandport Place / Shore / Tolbooth Wynd (View B)				
Site D – Shore at Broad Wynd				

Site Reference	Baseline Pedestrian Tracing	Baseline Cyclist Tracing	12-Month Pedestrian Tracing	12-Month Cyclist Tracing
Site G(i) – Links Gardens (north)				
Site G(ii) – Links Gardens (mid-north)				
Site G(iii) – Links Gardens (mid-south)				
Site G(iv) – Links Gardens (south)				

6. Acoustic Surveys

Noise monitoring was undertaken the Wednesday 30th October and Thursday 7th November 2024 and were planned to coincide with selected automatic traffic counts. However, the automatic traffic counters were removed prior to the second day of the survey and therefore, no ATC data is available for measurements recorded on the 7th November.

Measurements were conducted using the shortened Calculation of Road Traffic Noise (CRTN[7]) 3-hour shortened measurement procedure. Monitoring was conducted across two days to cover typical day-to-day variations in road traffic noise.

A total of six locations were monitored simultaneously with the ATCs; A, B, C, D, E, and F. These are the same sites that were used to carry out the baseline and post-6-month noise survey. As before, sites A, B, C, D, and E were collated with ATC sites 1, 3, 4, 6 and 8, respectively. **Figure 17** below shows the noise survey locations.

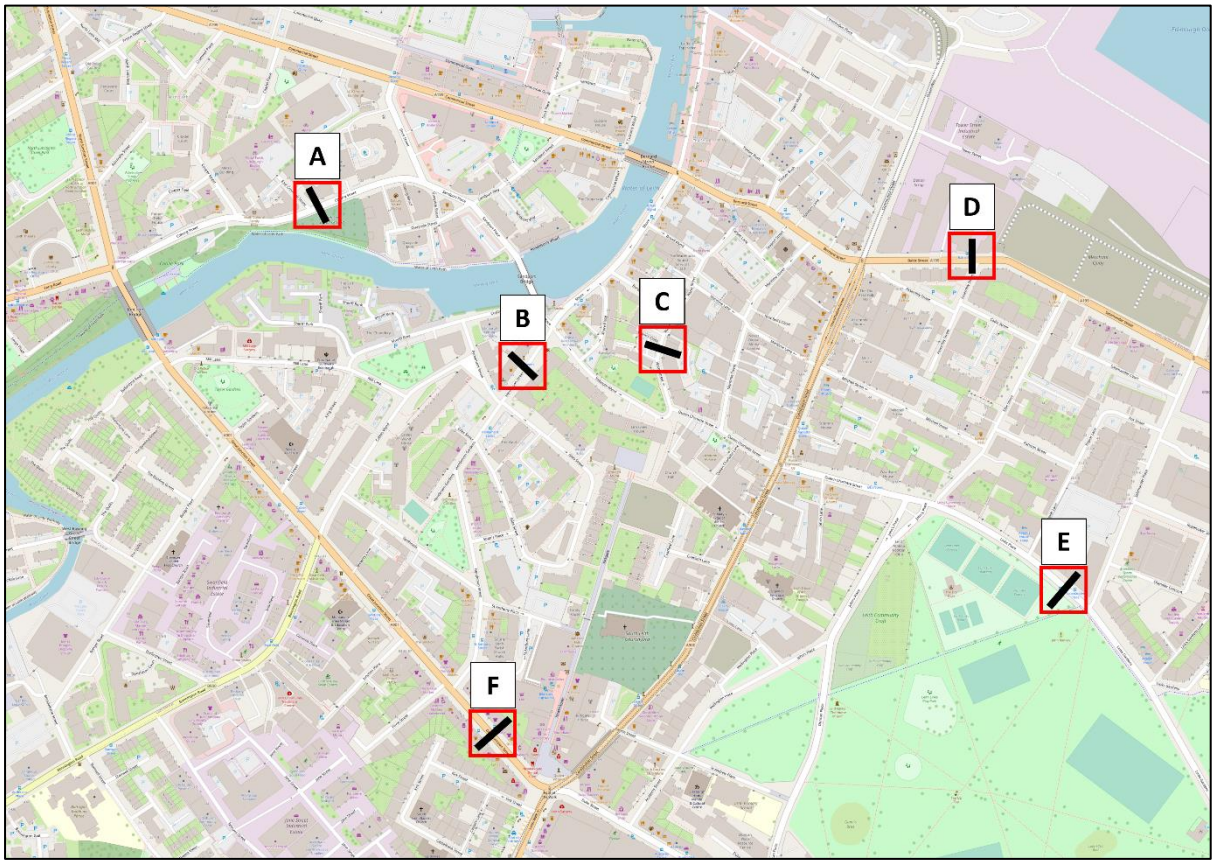


Figure 17: Noise Survey Locations

The surveys were restricted by both weather conditions and the duration of the ATC monitoring, periods of inclement weather were avoided which shortened the survey window. Not all guidelines in the CRTN methodology could be complied with due to the suitability of positioning instrumentation at the recommended distances from façades and road edges, without impeding pedestrian access. The same constraints in terms of the weather and position of the instrumentation apply to both the baseline and post completion surveys so this is not a factor in comparing the results. The weather conditions for both post-12-month surveys were compliant with CRTN guidance.

Measurements were recorded during both morning and afternoon periods at all locations, except for Location C, where morning measurements were repeated on the second day, and Location E, where afternoon measurements were repeated.

[7] Department of Transport, Welsh Office (1988) Calculation of Road Traffic Noise (CRTN)

Due to an equipment error on the 30th October no morning period was recorded at Location A, Coburg Street. However, the measurement was repeated on the 7th November, to account for the missing period.

During the second day of the survey on the 7th of November at Location B, Henderson Street had no buses passing through due to a road closure. This is atypical and resulted in lower $L_{A10,T}$ values, therefore it should be noted that this measurement period is not representative and should be excluded from comparisons respective to the12-month post-completion and baseline results. At this location it was also observed that construction works occurred at a nearby residence during both days. The construction works were not of a continuous nature however high levels of noise occurred periodically. This is apparent due to Location B logging the highest L_{AFmax} levels despite a road closure; road traffic noise would typically be the dominant noise source. The construction works did not impact the measured background $L_{A90,T}$ levels, and the $L_{A10,T}$ results on the 30th October are similar to those measured during the baseline and 12-month post-completion survey. A two-minute period of atypically high noise levels was removed which significantly affected the $L_{Aeq,T}$ levels but did not affect the $L_{A10,T}$ or $L_{A90,T}$.

The results show a range of L_{Aeq} values between 53 dB and 74 dB. L_{A10} values ranged from 51 dB to 75 dB, L_{A90} values ranged between 38 dB and 63 dB, and L_{AFmax} values ranged from 82 dB to 113 dB.

Table 15: 12-month post completion survey sound levels

Measurement Location	Free-field/ Façade	Measurement Period	$L_{Aeq, 3hr}$ (dB)	$L_{A10, T}$ (dB)	$L_{A90, T}$ (dB)	L_{AFmax} (dB)
A – Coburg Street	Free-field	07/11/24 10:15 - 13:30	60	63	44	85
		07/11/24 13:41 - 16:41	59	62	43	89
B – Henderson Street	Façade	30/10/24 10:01 - 13:02	64	67	45	98
		07/11/24 13:35 - 16:35*1	59	61	43	113
C – Water Street	Free-field	30/10/24 10:18 - 13:18	57	55	41	82
		07/11/24 10:11 - 13:11	53	51	38	87
D – Baltic Street	Façade	30/10/24 14:00 - 17:00	70	73	58	100
		07/11/24 10:04 - 13:04	70	73	57	98
E – Leith Links	Free-field	30/10/24 13:55 - 16:55	62	62	51	106
		07/11/24 13:50 - 16:50	59	62	49	89
F – Great Junction Street	Free-field	30/10/24 13:58 - 16:58	74	74	63	103
		07/11/24 10:05 - 13:05	73	75	62	103

As in the baseline and post-6-month surveys, the dominant sound source at all locations was road traffic, although several other extraneous sources also contributed to the sound levels at all locations. These mainly included sounds from pedestrians passing-by, bird calls, and other vehicle sounds such as engines idling.

Table 16 shows the difference in $L_{A10,T}$ levels (which is used by CRTN to quantify road traffic noise) between the post-12-month, post-6-month and baseline surveys. Negative values show a reduction in sound levels measured during the post-12-month completion survey when compared to the baseline survey.

During the post-6-month survey, at Location F, Great Junction Street, surveyors observed temporary traffic lights on Henderson Street between the bus stop and the A901 junction which caused some disruption and build-up of traffic. These temporary traffic lights were not in place during the baseline survey or the post-12-month survey.

Table 16: Difference between post-12-month and baseline sound levels

Measurement Location	Free/field/ Façade	Period	$L_{A10, T}$ (dB) Baseline	$L_{A10, T}$ (dB) 6-month	$L_{A10, T}$ (dB) 12-month	Difference between Baseline and 12-month
A	Free-field	AM	72	63	63	-9
		PM	74	64	62	-12
B	Façade	AM	67	- *1	67	-
		PM	68	65	61*2	-7

C	Free-field	AM	69	56	55	-14
		PM	71	57	51*3	-20
D	Façade	AM	73	72	73	-
		PM	74	- *1	73	-1
E	Free-field	AM	66	64	62*4	-4
		PM	66	63	62	-4
F	Free-field	AM	73	73	75	2
		PM	74	74	74	-

*1 Equipment fault during 12-month survey, no period recorded.

*2 Atypical traffic flow due to road closure, levels not representative.

*3 No afternoon measurement recorded, repeated morning measurement.

*4 No morning measurement recorded, repeated afternoon measurement.

The results show that:

- At Location A there was little variance in levels between morning and afternoon measurements throughout all surveys. The post-6-month and post-12-month surveys report similar levels, however there has been a noticeable reduction in $L_{A10,T}$ levels when comparing both post-completion surveys to the baseline. The dominant noise source during all surveys was road traffic noise. Such a large reduction in measured levels would suggest a change in level to the dominant noise source; road traffic. Analysis of the ATC data during the baseline and post-6-month and post-12-month surveys could provide further insight into the cause of the reduction at this location.
- At Location B the post-12-month morning period is similar to the baseline periods and the post-6-month afternoon period. The pos-12-month afternoon period was not representative due to a road closure which prevented the typical flow of buses.
- At Location C, there is a noticeable reduction in noise levels when comparing the baseline to both post-completion surveys. The $L_{A10,T}$ levels show that the post-12-month post-completion measurements were similar to or lower than the post-6-month measurements. The dominant noise source during all surveys was road traffic noise. Such a large reduction in measured levels would suggest a change in level to the dominant noise source; road traffic. Analysis of the ATC data during the baseline and post-6-month and post-12-month surveys could provide further insight into the cause of the reduction at this location.
- At Location D the $L_{A10,T}$ levels recorded during the post-12-month and post-6-month surveys are very similar to the baseline results.
- At Location E the post-12-month survey results are similar to the post-6-month results, both of which are slightly lower than the baseline.
- At Location F the $L_{A10,T}$ levels recorded during the post-12-month and post-6-month surveys are very similar to the baseline results.
- At all locations there were no significant increases in $L_{A10,T}$ level when compared to the baseline.
- Slightly lower measured levels in the post-6-month and post-12-month surveys may be due in part to the wet/damp weather conditions and road surfaces during the baseline surveys, compared to the dry conditions in post-completion surveys. Wet road surfaces generally result in slightly higher traffic noise levels.