

Two-Way Vehicles Per Day (Worst Case)	2025					2026												2027											
	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December
EXCAVATED MATERIAL	122	122	122	122	122	122																							
IMPORTED FILL		40	40	40	40	40	40																						
CONCRETE	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70													
REINFORCEMENT	2	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2													
FORMWORK	8	8	2																										
PILING PRE CAST	12	12	12	12	4																								
PILING BORED INSITU	2																												
PILING (RIGS)	2																												
SHEET PILING	6	6																											
BOLTS / EMBEDDED STEEL etc			2	2	2	2	2	2	2	2	2	2																	
STRUCTURAL					4	4	4	4	4	4	4	4	4	2															
CLADDING							2	2	2	2	2	2	2	2															
RAIL TRACK						4																							
ASPHALT				10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
ROAD KERBING			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
SITE CABINS	6	6	6																										
MECHANICAL						12	12	12	12	12	12																		
ELECTRICAL - TRANSFORMERS											2	2																	
ELECTRICAL - CABLES CONTAINMENT															2	2	2	2											
ELECTRICAL - CABLES DRUMS																		2	2	2	2	2	2	2	2	2	2		
ELECTRICAL - HVAC - BUILDING SERVICES																			2	2	2	2	2						
WORKFORCE (CIVIL)	80	160	200	300	300	300	300	300	300	300	300	300	300	300	160	100	50	40	10	10	10	10	10						
WORKFORCE (STRUCTURAL)					40	70	100	100	100	100	100	100	100	100	80	80	60	60	40	10	10	10	10						
WORKFORCE (MECHANICAL)						100	200	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	150	100	40	40	40	
WORKFORCE (ELECTRICAL)											20	40	80	160	240	240	240	240	240	240	240	240	240	240	160	80	40	40	
TOTAL HGV	230	268	262	264	260	272	148	108	108	108	110	96	92	90	88	88	16	18	18	18	18	18	18	12	2	2	0	0	
TOTAL CAR	80	160	200	300	340	470	600	832	832	832	852	872	912	992	912	852	782	772	722	692	692	692	692	390	260	120	80	80	
TOTAL PCU	540	696	724	828	860	1014	896	1048	1048	1048	1072	1064	1096	1172	1088	1028	814	808	758	728	728	728	728	414	264	124	80	80	

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APPENDIX E

1. The trip distribution method for the proposed construction workers is based on a simple gravity model.
The methodology is as follows:-
2. A 60-minute drivetime isochrone has been centred on the site access using Microsoft Mappoint software (see below plan). Within this isochrone, population data for each postcode sector has been exported. 60 minutes has been taken to represent the maximum driving time for the majority of commuters driving to work. This is considered robust when considering 27 minutes is the average driving time for commuters driving to work and back during the peak hours (as derived from the DfT's July 2007 "Travel to Work" Factsheet).



3. The population density, P, in each postcode sector is set out below.
4. The travel time, D, from the approximate centre of each postcode sector to the site is estimated using Google route planning software.
5. The factor P/D (to the power of 2) is estimated for each postcode sector to determine the relative attractiveness of the development in that sector.
6. The P/D ratios for each sector are expressed as a percentage of the total.
7. Each postcode sector is assigned to an appropriate route based on that specified by Google route planner software and any other obvious network constraints around the site.
8. The total percentage of trips assigned to each route is determined.

Postcode Sector	Population (P)	Travel Time in Minutes (D)	p/d^2	% p/d^2	ROUTE
SA34 0	4113	60	1.14	0.03	C
SA3 1	2539	35	2.07	0.06	C
SA33 4	4852	55	1.60	0.04	C
SA33 5	3246	55	1.07	0.03	C
SA33 6	3369	55	1.11	0.03	C
SA31 3	6212	35	5.07	0.14	C
SA16 0	7771	45	3.84	0.10	C
SA17 4	5413	50	2.17	0.06	C
SA17 5	2538	50	1.02	0.03	C
SA31 2	3978	35	3.25	0.09	C
SA31 1	5401	35	4.41	0.12	C
SA39 9	2363	60	0.66	0.02	C
SA15 2	6738	35	5.50	0.15	C
SA15 1	8873	35	7.24	0.20	C
SA3 2	2452	40	1.53	0.04	C
SA3 3	3618	40	2.26	0.06	C
SA4 3	9725	26	14.39	0.39	C
SA14 9	6526	26	9.65	0.26	C
SA2 7	11742	28	14.98	0.41	C
SA4 6	7006	26	10.36	0.28	C
SA3 4	8375	40	5.23	0.14	C
SA3 5	9133	40	5.71	0.15	C
SA4 4	10876	26	16.09	0.44	C
SA5 4	5558	22	11.48	0.31	C
SA2 8	5891	28	7.51	0.20	C
SA2 9	6079	28	7.75	0.21	C
SA2 0	11084	28	14.14	0.38	C
SA1 4	3199	18	9.87	0.27	C
SA1 6	12816	18	39.56	1.07	C
SA5 5	7220	22	14.92	0.40	C
SA5 8	7795	22	16.11	0.44	C
SA1 3	2949	18	9.10	0.25	C
SA1 5	512	18	1.58	0.04	C
SA1 1	1792	18	5.53	0.15	C
SA5 9	8236	22	17.02	0.46	C
SA1 2	5151	18	15.90	0.43	C
SA6 7	6559	20	16.40	0.44	C
SA6 8	4797	20	11.99	0.32	C
SA1 8	6298	18	19.44	0.53	C
SA1 7	6145	18	18.97	0.51	C
SA7 9	12479	14	63.67	1.72	C
SA15 4	4884	35	3.99	0.11	C
SA15 5	6017	35	4.91	0.13	C
SA15 3	6668	35	5.44	0.15	C
SA32 8	2959	50	1.18	0.03	C
SA14 8	11667	26	17.26	0.47	C
SA4 0	2833	26	4.19	0.11	C
SA14 6	5672	26	8.39	0.23	C

SA14 7	5644	26	8.35	0.23	C
SA32 7	3530	50	1.41	0.04	C
SA4 8	5810	26	8.59	0.23	C
SA4 9	4262	26	6.30	0.17	C
SA5 7	5870	22	12.13	0.33	C
SA18 3	9943	35	8.12	0.22	C
SA18 2	8611	35	7.03	0.19	C
SA6 6	13087	20	32.72	0.89	C
SA6 5	8691	20	21.73	0.59	C
SA8 4	6865	24	11.92	0.32	C
SA18 1	8555	35	6.98	0.19	C
SA19 6	2894	40	1.81	0.05	C
SA19 7	2555	45	1.26	0.03	C
CF36 3	8600	14	43.88	1.19	A
SA13 1	3007	6	83.51	2.26	B
SA13 1	3007	7	61.36	1.66	I
SA12 7	8371	5	334.84	9.06	E
SA10 6	8583	12	59.60	1.61	C
SA10 7	9238	26	13.67	0.37	C
SA12 6	9507	5	380.28	10.29	E
SA12 8	6805	7	138.88	3.76	F
SA11 2	9040	20	22.60	0.61	C
SA11 1	5741	20	14.35	0.39	C
CF33 4	6029	9	74.43	2.01	H
SA13 2	3421	6	95.03	2.57	B
SA13 2	3421	5	136.84	3.70	G
SA11 3	11138	14	56.83	1.54	C
SA12 9	6476	8	101.19	2.74	I
CF36 5	6289	12	43.67	1.18	A
CF32 0	5533	18	17.08	0.46	H
CF61 1	5023	35	4.10	0.11	A
CF31 5	1842	16	7.20	0.19	A
CF31 3	4279	16	16.71	0.45	A
CF35 5	5093	18	15.72	0.43	A
CF33 6	7197	9	88.85	2.40	H
CF34 9	9240	20	23.10	0.62	I
CF34 0	11025	20	27.56	0.75	I
SA13 3	5184	22	10.71	0.29	I
CF31 4	13470	16	52.62	1.42	A
CF31 1	9008	16	35.19	0.95	A
CF32 9	9867	14	50.34	1.36	A
CF31 2	10352	16	40.44	1.09	A
CF35 6	9022	20	22.56	0.61	A
CF32 8	7571	18	23.37	0.63	A
CF32 7	5945	24	10.32	0.28	A
CF42 6	7708	45	3.81	0.10	C
SA8 3	4794	24	8.32	0.23	C
SA9 2	6537	35	5.34	0.14	C
SA10 8	6004	16	23.45	0.63	C
SA11 4	3036	18	9.37	0.25	C
SA9 1	7548	30	8.39	0.23	C
SA19 9	1452	50	0.58	0.02	C
SA11 5	5808	22	12.00	0.32	C
SA10 9	3822	23	7.22	0.20	C
CF42 5	6337	40	3.96	0.11	A
CF44 9	8802	28	11.23	0.30	C
LD3 8	3751	50	1.50	0.04	C
CF61 2	4482	35	3.66	0.10	A
CF71 7	8299	28	10.59	0.29	A
CF62 4	4602	35	3.76	0.10	A
CF62 3	5581	35	4.56	0.12	A
CF39 8	13590	26	20.10	0.54	A
CF41 7	11149	35	9.10	0.25	A
CF40 2	11908	35	9.72	0.26	A
CF40 1	9070	35	7.40	0.20	A
CF43 4	8022	40	5.01	0.14	A
CF43 3	4908	40	3.07	0.08	A
CF72 9	12347	18	38.11	1.03	A
CF72 8	8798	26	13.01	0.35	A
CF38 2	12182	30	13.54	0.37	A
CF37 1	9233	35	7.54	0.20	A
CF39 9	8907	35	7.27	0.20	A
CF39 0	5435	35	4.44	0.12	A
CF45 3	10392	40	6.50	0.18	C
CF37 2	5822	35	4.75	0.13	A
CF37 3	7664	35	6.26	0.17	A
CF45 4	9104	40	5.69	0.15	C
CF62 6	5725	35	4.67	0.13	A
CF62 7	6581	35	5.37	0.15	A
CF62 8	7159	35	5.84	0.16	A
CF62 5	1905	35	1.56	0.04	A
CF63 4	4760	35	3.89	0.11	A
CF63 3	1365	35	1.11	0.03	A
CF5 6	4078	26	6.03	0.16	A
CF62 9	6507	35	5.31	0.14	A
CF63 1	7791	35	6.36	0.17	A
CF5 4	15893	26	23.51	0.64	A
CF63 2	5145	35	4.20	0.11	A
CF64 5	5472	35	4.47	0.12	A
CF64 4	7574	35	6.18	0.17	A
CF5 5	10772	26	15.93	0.43	A
CF5 3	11704	26	17.31	0.47	A
CF5 2	9834	26	14.55	0.39	A
CF11 8	3160	28	4.03	0.11	A
CF5 1	10283	26	15.21	0.41	A
CF64 2	8460	35	6.91	0.19	A
CF11 0	52	28	0.07	0.00	A
CF64 3	7344	35	6.00	0.16	A
CF64 1	4997	35	4.08	0.11	A
CF11 6	9719	30	10.80	0.29	A
CF11 9	5982	35	4.88	0.13	A
CF14 3	10262	30	11.40	0.31	A
CF11 7	7426	30	8.25	0.22	A
CF10 1	253	35	0.21	0.01	A
CF10 5	3939	35	3.22	0.09	A
CF10 2	352	35	0.29	0.01	A
CF10 3	887	35	0.72	0.02	A
CF24 4	15033	35	12.27	0.33	A
CF24 0	3097	35	2.53	0.07	A
CF24 3	8303	35	6.78	0.18	A
CF23 5	8966	35	7.32	0.20	A
CF15 9	5971	30	6.63	0.18	A
CF38 1	8991	30	9.99	0.27	A

CF37 5	8097	35	6.61	0.18	A
CF15 8	4907	30	5.45	0.15	A
CF15 7	5399	30	6.00	0.16	A
CF37 4	6950	35	5.67	0.15	A
CF46 5	6344	45	3.13	0.08	A
CF83 4	6337	35	5.17	0.14	A
CF46 6	7621	45	3.76	0.10	A
CF82 8	5939	45	2.93	0.08	A
CF14 7	4303	30	4.78	0.13	A
CF14 2	10704	30	11.89	0.32	A
CF14 1	9441	30	10.49	0.28	A
CF14 6	9288	30	10.32	0.28	A
CF83 2	10612	35	8.66	0.23	A
CF83 1	12403	35	10.12	0.27	A
CF14 4	8485	30	9.43	0.26	A
CF14 5	7220	30	8.02	0.22	A
CF14 9	7001	30	7.78	0.21	A
CF23 6	9776	35	7.98	0.22	A
CF14 0	5555	30	6.17	0.17	A
CF83 3	11632	35	9.50	0.26	A
CF82 7	11491	45	5.67	0.15	A
NP12 3	7757	55	2.56	0.07	A
CF83 8	10302	35	8.41	0.23	A
NP12 1	7901	55	2.61	0.07	A
NP12 2	8197	55	2.71	0.07	A
CF44 8	8509	30	9.45	0.26	C
CF44 7	3869	30	4.30	0.12	C
CF44 6	9954	30	11.06	0.30	C
CF44 0	7276	30	8.08	0.22	C
CF48 1	7993	40	5.00	0.14	C
CF47 8	3601	40	2.25	0.06	C
CF48 4	7463	40	4.66	0.13	C
CF47 0	6270	40	3.92	0.11	C
CF47 9	10548	40	6.59	0.18	C
CF48 3	4148	40	2.59	0.07	C
CF48 2	6037	40	3.77	0.10	C
LD3 9	4938	55	1.63	0.04	C
CF81 9	7876	55	2.60	0.07	C
NP22 5	6827	50	2.73	0.07	C
NP22 3	7515	50	3.01	0.08	C
NP22 4	7309	50	2.92	0.08	C
CF81 8	7999	55	2.64	0.07	C
NP24 6	4843	50	1.94	0.05	A
NP12 0	6782	55	2.24	0.06	A
NP12 4	3	55	0.00	0.00	A
NP23 8	635	50	0.25	0.01	C
NP23 6	9137	50	3.65	0.10	C
NP23 7	2809	50	1.12	0.03	C
NP23 5	10576	50	4.23	0.11	C
NP23 4	9705	50	3.88	0.11	C
LD3 7	4592	60	1.28	0.03	C
CF24 5	517	35	0.42	0.01	A
CF24 1	3976	35	3.25	0.09	A
CF24 2	11702	35	9.55	0.26	A
CF23 9	10490	35	8.56	0.23	A
CF23 7	7355	35	6.00	0.16	A
CF3 4	5481	35	4.47	0.12	A
CF3 3	7368	35	6.01	0.16	A
CF23 8	5967	35	4.87	0.13	A
CF3 1	4447	35	3.63	0.10	A
CF3 5	8417	35	6.87	0.19	A
CF3 0	10614	35	8.66	0.23	A
CF3 2	2689	35	2.20	0.06	A
CF3 6	744	35	0.61	0.02	A
NP11 7	8588	45	4.24	0.11	A
NP11 4	5295	45	2.61	0.07	A
NP11 6	10723	45	5.30	0.14	A
NP11 5	5671	45	2.80	0.08	A
NP10 8	9645	40	6.03	0.16	A
NP10 9	7800	40	4.88	0.13	A
NP20 3	10116	40	6.32	0.17	A
NP20 2	5234	40	3.27	0.09	A
NP20 4	5767	40	3.60	0.10	A
NP20 1	493	40	0.31	0.01	A
NP10 0	1982	40	1.24	0.03	A
NP20 7	8029	40	5.02	0.14	A
NP44 7	5333	45	2.63	0.07	A
NP44 6	5291	45	2.61	0.07	A
NP44 5	6178	45	3.05	0.08	A
NP44 4	7513	45	3.71	0.10	A
NP20 5	9534	40	5.96	0.16	A
NP20 6	8268	40	5.17	0.14	A
NP44 3	6147	45	3.04	0.08	A
NP44 1	7588	45	3.75	0.10	A
NP44 8	3297	45	1.63	0.04	A
NP44 2	5580	45	2.76	0.07	A
NP19 0	8386	45	4.14	0.11	A
NP19 8	8944	45	4.42	0.12	A
NP19 9	13936	45	6.88	0.19	A
NP19 7	12632	45	6.24	0.17	A
NP18 3	5974	45	2.95	0.08	A
NP18 1	4732	45	2.34	0.06	A
NP11 3	4517	45	2.23	0.06	A
NP13 2	5928	55	1.96	0.05	A
NP13 3	4852	55	1.60	0.04	A
NP13 1	8606	55	2.84	0.08	A
NP4 6	7301	50	2.92	0.08	A
NP4 7	6300	50	2.52	0.07	A
NP4 9	5736	50	2.29	0.06	A
NP4 5	8727	50	3.49	0.09	A
NP4 8	7887	50	3.15	0.09	A
NP4 0	7512	50	3.00	0.08	A
NP15 1	4779	55	1.58	0.04	A
NP15 2	1921	55	0.64	0.02	A
SA19 8	1690	60	0.47	0.01	C
SA20 0	3486	60	0.97	0.03	C
NP26 4	7366	55	2.44	0.07	A
NP26 5	5250	55	1.74	0.05	A

Totals 3696.470 100.00

Percentage assignment to each route:-

A	M4 (South) / A48 Margram Road (South) / A4241 Harbour Way	31.5%
B	A48 Heilbronn Way (East) / A4241 (South) / A4241 Harbour Way (East)	4.8%
C	M4 (North) / A48 Pentyla Baglan Road / A48 Heilbronn Way (North) / A4241 (South) / A4241 Harbour Way (East)	25.9%
D	Water Street / A4241 (South) / A4241 Harbour Way (East)	0.0%
E	A4241 (West) / A4241 Harbour Way (East)	19.3%
F	A48 Pentyla Baglan Road / A48 Heilbronn Way (North) / A4241 (South) / A4241 Harbour Way (East)	3.8%
G	A48 Margram Road (North) / A4241 Harbour Way (West)	3.7%
H	A48 (East) / A48 Margram Road (South) / A4241 Harbour Way (West)	4.9%
I	B4286 Heilbronn Way / A48 Heilbronn Way (North) / A4241 (South) / A4241 Harbour Way (East)	6.1%

 Transportation Planning : Infrastructure Design	Gravity Model	15/08/2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number SCP/210634
		Appendix E

S|C|P

APPENDIX F

Junctions 9										
ARCADY 9 - Roundabout Module										
Version: 9.5.2.1013										
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: Junction 7.j9

Path: C:\Users\Junctions shared\Desktop\Craig\EAF Junction Assessments Remote Comp

Report generation date: 16/08/2024 06:27:00

»2022 Surveyed Flows , AM

»2022 Surveyed Flows , PM

»2026 Do Minimum, AM

»2026 Do Minimum, PM

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.3	1.65	0.20	A	D2	0.2	1.48	0.16	A
Arm 2		0.0	1.30	0.03	A		0.1	1.41	0.11	A
Arm 3		0.3	1.64	0.22	A		0.3	1.65	0.21	A
Arm 4		0.0	2.48	0.02	A		0.0	0.00	0.00	A
	2026 Do Minimum									
Arm 1	D3	0.3	1.78	0.26	A	D4	0.2	1.52	0.18	A
Arm 2		0.0	1.35	0.03	A		0.1	1.43	0.11	A
Arm 3		0.3	1.71	0.26	A		0.3	1.74	0.25	A
Arm 4		0.0	2.57	0.02	A		0.0	0.00	0.00	A
	2026 Do Something									
Arm 1	D5	0.2	1.55	0.20	A	D6	0.2	1.52	0.18	A
Arm 2		0.0	0.00	0.00	A		0.2	1.47	0.13	A
Arm 3		0.2	1.54	0.18	A		0.3	1.75	0.25	A
Arm 4		0.0	2.36	0.02	A		0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)
Location	
Site number	
Date	17/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	06:45	08:15	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:45	18:15	15
D3	2026 Do Minimum	AM	ONE HOUR	06:45	08:15	15
D4	2026 Do Minimum	PM	ONE HOUR	16:45	18:15	15
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4241 Harbour Way (South)	
2	Main Gate Access	
3	A4241 Harbour Way (North)	
4	Access (East)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.59	10.90	18.5	84.6	70.0	35.0	
2	8.80	10.50	16.0	66.2	70.0	31.0	
3	7.14	9.95	18.5	76.9	70.0	29.0	
4	3.65	7.24	17.7	37.8	70.0	27.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.714	2996
2	0.740	3144
3	0.695	2845
4	0.533	1825

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	507	100.000
2		✓	82	100.000
3		✓	575	100.000
4		✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	161	346	0
	2	15	0	64	3
	3	263	310	0	2
	4	2	18	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.20	1.65	0.3	A
2	0.03	1.30	0.0	A
3	0.22	1.64	0.3	A
4	0.02	2.48	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	382	253	2816	0.136	381	0.2	1.478	A
2	62	266	2947	0.021	62	0.0	1.247	A
3	433	15	2834	0.153	432	0.2	1.498	A
4	21	442	1589	0.013	21	0.0	2.295	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	456	302	2781	0.164	456	0.2	1.547	A
2	74	318	2909	0.025	74	0.0	1.269	A
3	517	18	2832	0.183	517	0.2	1.554	A
4	25	528	1543	0.016	25	0.0	2.371	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	558	370	2732	0.204	558	0.3	1.655	A
2	90	390	2856	0.032	90	0.0	1.301	A
3	633	22	2830	0.224	633	0.3	1.638	A
4	31	647	1480	0.021	31	0.0	2.484	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	558	370	2732	0.204	558	0.3	1.655	A
2	90	390	2856	0.032	90	0.0	1.301	A
3	633	22	2830	0.224	633	0.3	1.638	A
4	31	647	1479	0.021	31	0.0	2.484	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	456	302	2780	0.164	456	0.2	1.550	A
2	74	318	2909	0.025	74	0.0	1.271	A
3	517	18	2832	0.183	517	0.2	1.556	A
4	25	529	1543	0.016	25	0.0	2.371	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	382	253	2816	0.136	382	0.2	1.478	A
2	62	267	2947	0.021	62	0.0	1.247	A
3	433	15	2834	0.153	433	0.2	1.500	A
4	21	443	1589	0.013	21	0.0	2.298	A

2022 Surveyed Flows , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	418	100.000
2		✓	278	100.000
3		✓	536	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	72	346	0
	2	91	0	187	0
	3	392	142	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.48	0.2	A
2	0.11	1.41	0.1	A
3	0.21	1.65	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	315	107	2920	0.108	314	0.1	1.381	A
2	209	260	2952	0.071	209	0.1	1.312	A
3	404	68	2797	0.144	403	0.2	1.503	A
4	0	470	1574	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	376	128	2905	0.129	376	0.1	1.422	A
2	250	311	2914	0.086	250	0.1	1.350	A
3	482	82	2788	0.173	482	0.2	1.560	A
4	0	562	1525	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	460	156	2885	0.160	460	0.2	1.484	A
2	306	381	2863	0.107	306	0.1	1.407	A
3	590	100	2775	0.213	590	0.3	1.646	A
4	0	688	1458	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	460	156	2885	0.160	460	0.2	1.484	A
2	306	381	2862	0.107	306	0.1	1.407	A
3	590	100	2775	0.213	590	0.3	1.646	A
4	0	688	1458	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	376	128	2905	0.129	376	0.1	1.425	A
2	250	311	2914	0.086	250	0.1	1.350	A
3	482	82	2788	0.173	482	0.2	1.560	A
4	0	562	1525	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	315	107	2920	0.108	315	0.1	1.381	A
2	209	261	2952	0.071	209	0.1	1.314	A
3	404	69	2797	0.144	404	0.2	1.505	A
4	0	471	1574	0.000	0	0.0	0.000	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	640	100.000
2		✓	83	100.000
3		✓	657	100.000
4		✓	29	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	166	474	0
	2	15	0	65	3
	3	336	319	0	2
	4	2	19	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.26	1.78	0.3	A
2	0.03	1.35	0.0	A
3	0.26	1.71	0.3	A
4	0.02	2.57	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	482	260	2811	0.171	481	0.2	1.545	A
2	62	362	2876	0.022	62	0.0	1.278	A
3	495	15	2834	0.175	494	0.2	1.537	A
4	22	504	1556	0.014	22	0.0	2.345	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	311	2774	0.207	575	0.3	1.636	A
2	75	433	2824	0.026	75	0.0	1.308	A
3	591	18	2832	0.209	590	0.3	1.605	A
4	26	602	1504	0.017	26	0.0	2.436	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	381	2724	0.259	704	0.3	1.781	A
2	91	530	2752	0.033	91	0.0	1.352	A
3	723	22	2830	0.256	723	0.3	1.708	A
4	32	737	1432	0.022	32	0.0	2.571	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	381	2724	0.259	705	0.3	1.781	A
2	91	531	2752	0.033	91	0.0	1.352	A
3	723	22	2830	0.256	723	0.3	1.708	A
4	32	738	1431	0.022	32	0.0	2.572	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	311	2774	0.207	576	0.3	1.639	A
2	75	434	2823	0.026	75	0.0	1.311	A
3	591	18	2832	0.209	591	0.3	1.608	A
4	26	603	1503	0.017	26	0.0	2.438	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	482	261	2810	0.171	482	0.2	1.548	A
2	62	363	2876	0.022	63	0.0	1.279	A
3	495	15	2834	0.175	495	0.2	1.538	A
4	22	505	1556	0.014	22	0.0	2.348	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	471	100.000
2		✓	285	100.000
3		✓	640	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	75	396	0
	2	93	0	192	0
	3	492	146	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.52	0.2	A
2	0.11	1.43	0.1	A
3	0.25	1.74	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	355	110	2918	0.122	354	0.1	1.403	A
2	215	298	2924	0.073	214	0.1	1.328	A
3	482	70	2796	0.172	481	0.2	1.554	A
4	0	549	1532	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	131	2903	0.146	423	0.2	1.451	A
2	256	356	2881	0.089	256	0.1	1.370	A
3	575	84	2787	0.206	575	0.3	1.627	A
4	0	657	1474	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	519	161	2882	0.180	518	0.2	1.522	A
2	314	436	2822	0.111	314	0.1	1.434	A
3	705	102	2774	0.254	704	0.3	1.739	A
4	0	804	1396	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	519	161	2881	0.180	519	0.2	1.522	A
2	314	436	2822	0.111	314	0.1	1.434	A
3	705	102	2774	0.254	705	0.3	1.739	A
4	0	805	1396	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	131	2902	0.146	424	0.2	1.451	A
2	256	356	2881	0.089	256	0.1	1.373	A
3	575	84	2787	0.206	576	0.3	1.630	A
4	0	658	1474	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	355	110	2918	0.122	355	0.1	1.406	A
2	215	298	2924	0.073	215	0.1	1.328	A
3	482	70	2796	0.172	482	0.2	1.557	A
4	0	551	1531	0.000	0	0.0	0.000	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	513	100.000
2		✓	-905	100.000
3		✓	461	100.000
4		✓	29	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	39	474	0
	2	-372	0	-536	3
	3	336	123	0	2
	4	2	19	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.20	1.55	0.2	A
2	0.00	0.00	0.0	A
3	0.18	1.54	0.2	A
4	0.02	2.36	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	386	113	2916	0.132	386	0.2	1.422	A
2	0	362	2876	0.000	0	0.0	0.000	A
3	347	2	2844	0.122	347	0.1	1.441	A
4	22	345	1641	0.013	22	0.0	2.223	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	461	135	2900	0.159	461	0.2	1.475	A
2	0	433	2824	0.000	0	0.0	0.000	A
3	414	2	2844	0.146	414	0.2	1.481	A
4	26	413	1605	0.016	26	0.0	2.280	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	165	2878	0.196	565	0.2	1.555	A
2	0	530	2752	0.000	0	0.0	0.000	A
3	508	2	2843	0.179	507	0.2	1.540	A
4	32	505	1555	0.021	32	0.0	2.362	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	165	2878	0.196	565	0.2	1.555	A
2	0	531	2752	0.000	0	0.0	0.000	A
3	508	2	2843	0.179	508	0.2	1.540	A
4	32	505	1555	0.021	32	0.0	2.362	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	461	135	2900	0.159	461	0.2	1.478	A
2	0	434	2824	0.000	0	0.0	0.000	A
3	414	2	2844	0.146	415	0.2	1.481	A
4	26	413	1605	0.016	26	0.0	2.280	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	386	113	2916	0.132	386	0.2	1.425	A
2	0	363	2876	0.000	0	0.0	0.000	A
3	347	2	2844	0.122	347	0.1	1.443	A
4	22	346	1640	0.013	22	0.0	2.223	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	470	100.000
2		✓	344	100.000
3		✓	633	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	74	396	0
	2	126	0	218	0
	3	492	139	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.52	0.2	A
2	0.13	1.47	0.2	A
3	0.25	1.75	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	104	2922	0.121	353	0.1	1.401	A
2	259	298	2924	0.089	259	0.1	1.350	A
3	477	95	2779	0.171	476	0.2	1.562	A
4	0	569	1521	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	125	2907	0.145	422	0.2	1.448	A
2	309	356	2881	0.107	309	0.1	1.399	A
3	569	113	2766	0.206	569	0.3	1.637	A
4	0	680	1462	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	517	153	2887	0.179	517	0.2	1.518	A
2	379	436	2822	0.134	379	0.2	1.472	A
3	697	139	2748	0.254	697	0.3	1.753	A
4	0	833	1380	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	517	153	2887	0.179	517	0.2	1.518	A
2	379	436	2822	0.134	379	0.2	1.472	A
3	697	139	2748	0.254	697	0.3	1.753	A
4	0	833	1380	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	125	2907	0.145	423	0.2	1.450	A
2	309	356	2881	0.107	309	0.1	1.401	A
3	569	113	2766	0.206	569	0.3	1.638	A
4	0	681	1462	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	105	2921	0.121	354	0.1	1.401	A
2	259	298	2924	0.089	259	0.1	1.350	A
3	477	95	2779	0.171	477	0.2	1.565	A
4	0	570	1521	0.000	0	0.0	0.000	A

S|C|P

APPENDIX G

Junctions 9										
ARCADY 9 - Roundabout Module										
Version: 9.5.2.1013										
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For sales and distribution information, program advice and maintenance, contact TRL:										
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk										
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: Junction 8.j9

Path: C:\Users\Junctions shared\Desktop\Craig\EAF Junction Assessments Remote Comp

Report generation date: 16/08/2024 06:27:36

»2022 Surveyed Flows , AM

»2022 Surveyed Flows, PM

»2026 Do Minimum, AM

»2026 Do Minimum, PM

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.4	1.79	0.29	A	D2	0.6	1.97	0.36	A
Arm 2		0.0	2.45	0.01	A		0.0	2.63	0.01	A
Arm 3		0.2	1.96	0.14	A		0.4	2.49	0.27	A
Arm 4		0.1	1.53	0.08	A		0.1	1.63	0.09	A
	2026 Do Minimum									
Arm 1	D3	0.6	2.06	0.38	A	D4	0.6	2.06	0.39	A
Arm 2		0.0	2.64	0.03	A		0.1	3.00	0.11	A
Arm 3		0.2	2.07	0.18	A		0.5	2.89	0.34	A
Arm 4		0.1	1.57	0.08	A		0.1	1.71	0.10	A
	2026 Do Something									
Arm 1	D5	0.5	1.89	0.33	A	D6	0.6	2.06	0.39	A
Arm 2		0.0	2.51	0.03	A		0.1	3.00	0.11	A
Arm 3		0.0	0.00	0.00	A		0.6	2.97	0.36	A
Arm 4		0.1	1.42	0.07	A		0.1	1.73	0.10	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	A4241 Harbour Way / A48 Margam Road / Access Road
Location	
Site number	
Date	10/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\abbie.moore
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	06:45	08:15	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:45	18:15	15
D3	2026 Do Minimum	AM	ONE HOUR	06:45	08:15	15
D4	2026 Do Minimum	PM	ONE HOUR	16:45	18:15	15
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	1.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A48 Margam Road (South)	
2	Access Road	
3	A4241 Harbour Way	
4	A48 Margam Road (North) A48 Margam Raod (South)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.30	10.50	23.9	23.0	70.0	33.0	
2	3.70	7.10	29.9	37.0	92.0	34.0	
3	7.40	7.90	2.8	44.4	70.0	38.0	
4	7.20	9.90	11.8	76.6	70.0	31.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.690	2879
2	0.483	1892
3	0.605	2337
4	0.677	2741

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	762	100.000
2		✓	9	100.000
3		✓	281	100.000
4		✓	174	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	23	466	273
	2	7	0	0	2
	3	254	0	3	24
	4	139	1	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.29	1.79	0.4	A
2	0.01	2.45	0.0	A
3	0.14	1.96	0.2	A
4	0.08	1.53	0.1	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	29	2859	0.201	573	0.3	1.574	A
2	7	583	1611	0.004	7	0.0	2.244	A
3	212	212	2208	0.096	211	0.1	1.802	A
4	131	198	2606	0.050	131	0.1	1.453	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	685	34	2855	0.240	685	0.3	1.657	A
2	8	697	1555	0.005	8	0.0	2.326	A
3	253	253	2183	0.116	253	0.1	1.863	A
4	156	237	2580	0.061	156	0.1	1.484	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	839	42	2850	0.294	839	0.4	1.789	A
2	10	854	1480	0.007	10	0.0	2.449	A
3	309	310	2149	0.144	309	0.2	1.957	A
4	192	291	2544	0.075	192	0.1	1.529	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	839	42	2850	0.294	839	0.4	1.789	A
2	10	854	1479	0.007	10	0.0	2.449	A
3	309	310	2149	0.144	309	0.2	1.957	A
4	192	291	2544	0.075	192	0.1	1.529	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	685	34	2855	0.240	685	0.3	1.658	A
2	8	698	1555	0.005	8	0.0	2.328	A
3	253	254	2183	0.116	253	0.1	1.867	A
4	156	237	2580	0.061	156	0.1	1.487	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	29	2859	0.201	574	0.3	1.577	A
2	7	584	1610	0.004	7	0.0	2.247	A
3	212	212	2208	0.096	212	0.1	1.805	A
4	131	199	2606	0.050	131	0.1	1.453	A

2022 Surveyed Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	2.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	925	100.000
2		✓	13	100.000
3		✓	480	100.000
4		✓	199	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	12	376	537
	2	6	0	3	4
	3	417	1	2	60
	4	155	2	42	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.36	1.97	0.6	A
2	0.01	2.63	0.0	A
3	0.27	2.49	0.4	A
4	0.09	1.63	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	696	35	2855	0.244	695	0.3	1.667	A
2	10	719	1545	0.006	10	0.0	2.344	A
3	361	411	2088	0.173	361	0.2	2.083	A
4	150	320	2524	0.059	150	0.1	1.515	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	832	42	2850	0.292	831	0.4	1.782	A
2	12	860	1477	0.008	12	0.0	2.456	A
3	432	492	2039	0.212	431	0.3	2.239	A
4	179	383	2481	0.072	179	0.1	1.562	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	52	2843	0.358	1018	0.6	1.972	A
2	14	1053	1383	0.010	14	0.0	2.629	A
3	528	602	1972	0.268	528	0.4	2.493	A
4	219	469	2423	0.090	219	0.1	1.632	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	52	2843	0.358	1018	0.6	1.972	A
2	14	1054	1383	0.010	14	0.0	2.629	A
3	528	602	1972	0.268	528	0.4	2.493	A
4	219	469	2423	0.090	219	0.1	1.632	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	832	42	2850	0.292	832	0.4	1.786	A
2	12	861	1476	0.008	12	0.0	2.459	A
3	432	492	2039	0.212	432	0.3	2.242	A
4	179	383	2481	0.072	179	0.1	1.565	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	696	35	2855	0.244	697	0.3	1.670	A
2	10	721	1544	0.006	10	0.0	2.346	A
3	361	412	2087	0.173	362	0.2	2.086	A
4	150	321	2523	0.059	150	0.1	1.518	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	2.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	982	100.000
2		✓	41	100.000
3		✓	354	100.000
4		✓	189	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	113	588	281
	2	19	0	4	18
	3	298	13	3	40
	4	143	6	40	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.38	2.06	0.6	A
2	0.03	2.64	0.0	A
3	0.18	2.07	0.2	A
4	0.08	1.57	0.1	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	739	47	2847	0.260	738	0.3	1.707	A
2	31	685	1561	0.020	31	0.0	2.352	A
3	267	239	2192	0.122	266	0.1	1.868	A
4	142	250	2571	0.055	142	0.1	1.481	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	883	56	2841	0.311	882	0.4	1.837	A
2	37	820	1496	0.025	37	0.0	2.466	A
3	318	286	2164	0.147	318	0.2	1.950	A
4	170	299	2538	0.067	170	0.1	1.519	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	68	2832	0.382	1081	0.6	2.055	A
2	45	1004	1407	0.032	45	0.0	2.642	A
3	390	350	2125	0.183	390	0.2	2.074	A
4	208	366	2492	0.083	208	0.1	1.575	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	68	2832	0.382	1081	0.6	2.056	A
2	45	1004	1407	0.032	45	0.0	2.642	A
3	390	350	2125	0.183	390	0.2	2.074	A
4	208	367	2492	0.083	208	0.1	1.575	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	883	56	2841	0.311	883	0.5	1.839	A
2	37	820	1496	0.025	37	0.0	2.469	A
3	318	286	2163	0.147	318	0.2	1.951	A
4	170	300	2538	0.067	170	0.1	1.522	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	739	47	2847	0.260	740	0.4	1.708	A
2	31	687	1560	0.020	31	0.0	2.355	A
3	267	240	2192	0.122	267	0.1	1.872	A
4	142	251	2571	0.055	142	0.1	1.481	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	2.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	996	100.000
2		✓	140	100.000
3		✓	582	100.000
4		✓	205	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	32	411	553
	2	48	0	19	73
	3	502	4	2	74
	4	159	3	43	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.39	2.06	0.6	A
2	0.11	3.00	0.1	A
3	0.34	2.89	0.5	A
4	0.10	1.71	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	748	0.4	1.711	A
2	105	758	1526	0.069	105	0.1	2.533	A
3	438	506	2030	0.216	437	0.3	2.259	A
4	154	418	2458	0.063	154	0.1	1.562	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	895	0.5	1.843	A
2	126	907	1454	0.087	126	0.1	2.709	A
3	523	606	1970	0.266	523	0.4	2.488	A
4	184	500	2402	0.077	184	0.1	1.622	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1096	0.6	2.063	A
2	154	1110	1356	0.114	154	0.1	2.995	A
3	641	742	1888	0.339	640	0.5	2.884	A
4	226	612	2327	0.097	226	0.1	1.712	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1097	0.6	2.065	A
2	154	1111	1355	0.114	154	0.1	2.996	A
3	641	742	1887	0.340	641	0.5	2.887	A
4	226	612	2326	0.097	226	0.1	1.713	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	896	0.5	1.848	A
2	126	908	1454	0.087	126	0.1	2.711	A
3	523	606	1969	0.266	524	0.4	2.490	A
4	184	500	2402	0.077	184	0.1	1.625	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	750	0.4	1.715	A
2	105	760	1525	0.069	105	0.1	2.535	A
3	438	508	2029	0.216	439	0.3	2.265	A
4	154	419	2457	0.063	154	0.1	1.562	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	1.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	867	100.000
2		✓	41	100.000
3		✓	-33	100.000
4		✓	177	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	113	473	281
	2	19	0	4	18
	3	-61	13	3	12
	4	143	6	28	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.33	1.89	0.5	A
2	0.03	2.51	0.0	A
3	0.00	0.00	0.0	A
4	0.07	1.42	0.1	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	653	26	2861	0.228	652	0.3	1.629	A
2	31	588	1608	0.019	31	0.0	2.281	A
3	0	239	2192	0.000	0	0.0	0.000	A
4	133	14	2731	0.049	133	0.1	1.385	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	779	31	2858	0.273	779	0.4	1.731	A
2	37	703	1553	0.024	37	0.0	2.374	A
3	0	286	2164	0.000	0	0.0	0.000	A
4	159	17	2729	0.058	159	0.1	1.400	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	955	37	2853	0.335	954	0.5	1.895	A
2	45	861	1476	0.031	45	0.0	2.514	A
3	0	350	2125	0.000	0	0.0	0.000	A
4	195	21	2726	0.071	195	0.1	1.421	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	955	37	2853	0.335	955	0.5	1.895	A
2	45	861	1476	0.031	45	0.0	2.515	A
3	0	350	2125	0.000	0	0.0	0.000	A
4	195	21	2726	0.071	195	0.1	1.421	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	779	31	2858	0.273	780	0.4	1.732	A
2	37	703	1552	0.024	37	0.0	2.375	A
3	0	286	2163	0.000	0	0.0	0.000	A
4	159	17	2729	0.058	159	0.1	1.402	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	653	26	2861	0.228	653	0.3	1.632	A
2	31	589	1608	0.019	31	0.0	2.282	A
3	0	240	2192	0.000	0	0.0	0.000	A
4	133	14	2731	0.049	133	0.1	1.385	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	2.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	996	100.000
2		✓	140	100.000
3		✓	614	100.000
4		✓	205	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	32	411	553
	2	48	0	19	73
	3	523	4	2	85
	4	159	3	43	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.39	2.06	0.6	A
2	0.11	3.00	0.1	A
3	0.36	2.97	0.6	A
4	0.10	1.73	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	748	0.4	1.711	A
2	105	758	1526	0.069	105	0.1	2.533	A
3	462	506	2030	0.228	461	0.3	2.294	A
4	154	433	2447	0.063	154	0.1	1.569	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	895	0.5	1.843	A
2	126	907	1454	0.087	126	0.1	2.709	A
3	552	606	1970	0.280	552	0.4	2.538	A
4	184	518	2390	0.077	184	0.1	1.631	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1096	0.6	2.063	A
2	154	1110	1356	0.114	154	0.1	2.995	A
3	676	742	1888	0.358	675	0.6	2.968	A
4	226	635	2311	0.098	226	0.1	1.725	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1097	0.6	2.065	A
2	154	1111	1355	0.114	154	0.1	2.996	A
3	676	742	1887	0.358	676	0.6	2.971	A
4	226	635	2310	0.098	226	0.1	1.725	A

17:45 - 18:00

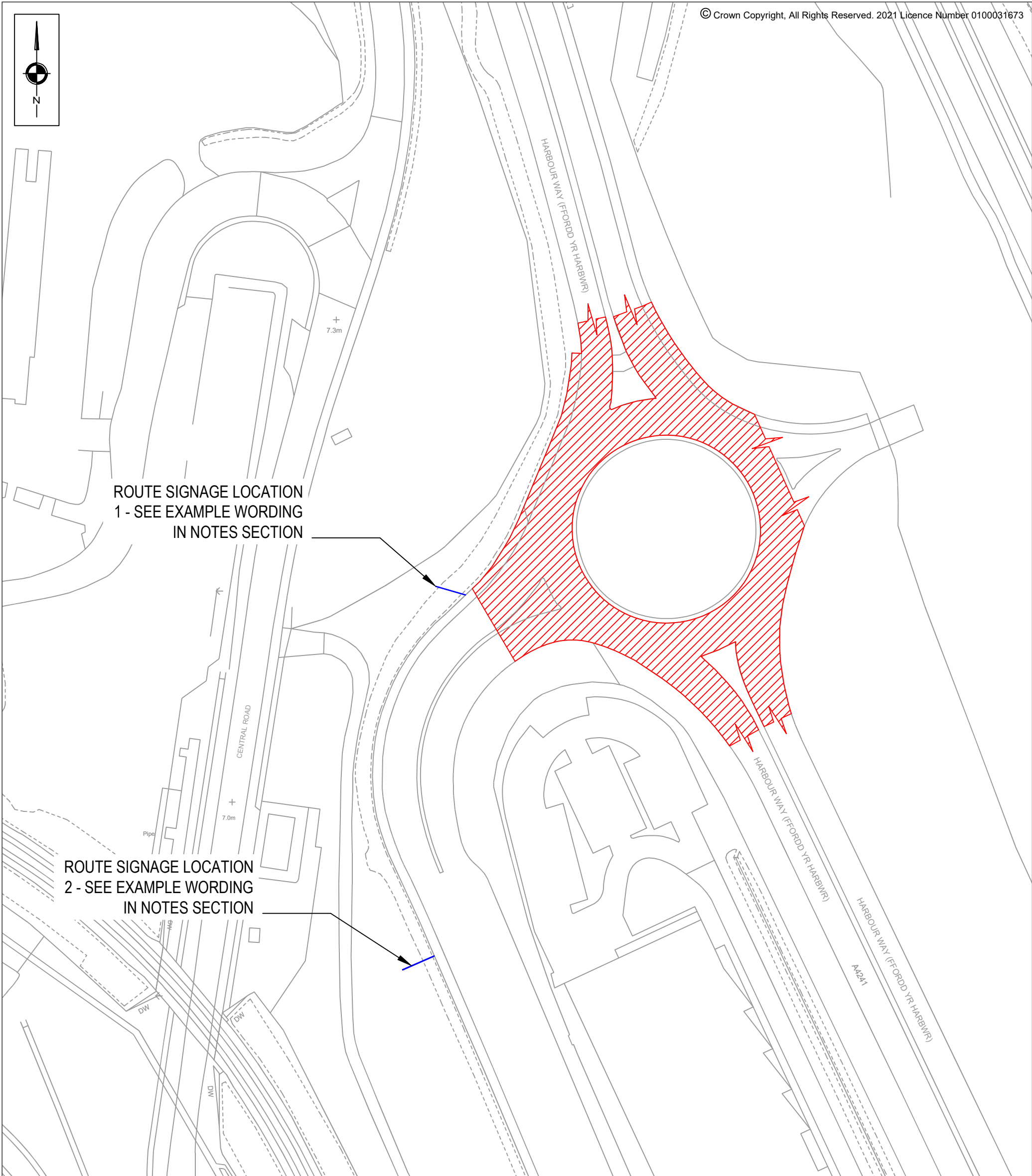
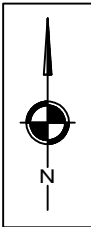
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	896	0.5	1.845	A
2	126	908	1454	0.087	126	0.1	2.713	A
3	552	606	1969	0.280	553	0.4	2.541	A
4	184	519	2389	0.077	184	0.1	1.634	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	750	0.4	1.715	A
2	105	760	1525	0.069	105	0.1	2.537	A
3	462	508	2029	0.228	463	0.3	2.298	A
4	154	435	2446	0.063	154	0.1	1.572	A

S|C|P

APPENDIX H



ROUTE SIGNAGE LOCATION
1 - SEE EXAMPLE WORDING
IN NOTES SECTION

ROUTE SIGNAGE LOCATION
2 - SEE EXAMPLE WORDING
IN NOTES SECTION

NOTES

EXTENTS OF THE EXISTING ADOPTED HIGHWAY



ROUTE SIGNAGE EXAMPLE WORDING
TO BE PROVIDED IN THE ENGLISH AND WELSH
LANGUAGES
"ALL CONSTRUCTION TRAFFIC TURN RIGHT FOR M4
NORTH AND SOUTH"

REVISIONS			
Rev	Description	Date	By
A	SIGNAGE LOCATIONS IMPLEMENTED	05.08.24	LD
-	-	-	-
-	-	-	-

S|C|P

Transportation Planning : Infrastructure Design

Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400,
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Client	EAF PROJECT, SOUTH WALES
Project Title	

Drawing Title	ROUTE SIGNAGE LOCATIONS
---------------	-------------------------

Scale	1:1000 @ A3
Date	25.05.2022
Approved/Unapproved	-

By	BA
Checked	CT
Status	PLANNING

Drawing No.	SCP/210638/D01
Revision	A

S|C|P

APPENDIX I

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.2.1013 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Junction 7.j9

Path: C:\Users\Junctions shared\Desktop\Craig\EAF Junction Assessments Remote Comp\Mitigation

Report generation date: 16/08/2024 06:28:07

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026 Do Something										
Arm 1	D5	0.3	1.57	0.21	A	D6	0.2	1.52	0.18	A
Arm 2		0.0	0.00	0.00	A		0.2	1.47	0.13	A
Arm 3		0.2	1.50	0.16	A		0.3	1.78	0.26	A
Arm 4		0.0	2.31	0.02	A		0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)
Location	
Site number	
Date	17/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4241 Harbour Way (South)	
2	Main Gate Access	
3	A4241 Harbour Way (North)	
4	Access (East)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.59	10.90	18.5	84.6	70.0	35.0	
2	8.80	10.50	16.0	66.2	70.0	31.0	
3	7.14	9.95	18.5	76.9	70.0	29.0	
4	3.65	7.24	17.7	37.8	70.0	27.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.714	2996
2	0.740	3144
3	0.695	2845
4	0.533	1825

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	568	100.000
2		✓	-905	100.000
3		✓	406	100.000
4		✓	29	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	94	474	0
	2	-372	0	-536	3
	3	336	68	0	2
	4	2	19	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.21	1.57	0.3	A
2	0.00	0.00	0.0	A
3	0.16	1.50	0.2	A
4	0.02	2.31	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	428	71	2945	0.145	427	0.2	1.429	A
2	0	362	2876	0.000	0	0.0	0.000	A
3	306	2	2844	0.107	305	0.1	1.417	A
4	22	304	1663	0.013	22	0.0	2.193	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	85	2935	0.174	510	0.2	1.484	A
2	0	433	2824	0.000	0	0.0	0.000	A
3	365	2	2844	0.128	365	0.1	1.451	A
4	26	363	1631	0.016	26	0.0	2.242	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	625	105	2922	0.214	625	0.3	1.567	A
2	0	530	2752	0.000	0	0.0	0.000	A
3	447	2	2843	0.157	447	0.2	1.501	A
4	32	445	1588	0.020	32	0.0	2.313	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	625	105	2922	0.214	625	0.3	1.567	A
2	0	531	2752	0.000	0	0.0	0.000	A
3	447	2	2843	0.157	447	0.2	1.501	A
4	32	445	1587	0.020	32	0.0	2.313	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	85	2935	0.174	511	0.2	1.484	A
2	0	434	2824	0.000	0	0.0	0.000	A
3	365	2	2844	0.128	365	0.1	1.451	A
4	26	363	1631	0.016	26	0.0	2.244	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	428	72	2945	0.145	428	0.2	1.431	A
2	0	363	2876	0.000	0	0.0	0.000	A
3	306	2	2844	0.107	306	0.1	1.420	A
4	22	304	1662	0.013	22	0.0	2.195	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	470	100.000
2		✓	344	100.000
3		✓	633	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	74	396	0
	2	168	0	176	0
	3	492	139	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.52	0.2	A
2	0.13	1.47	0.2	A
3	0.26	1.78	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	104	2922	0.121	353	0.1	1.401	A
2	259	298	2924	0.089	259	0.1	1.350	A
3	477	126	2757	0.173	476	0.2	1.577	A
4	0	601	1504	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	125	2907	0.145	422	0.2	1.448	A
2	309	356	2881	0.107	309	0.1	1.399	A
3	569	151	2740	0.208	569	0.3	1.657	A
4	0	718	1442	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	517	153	2887	0.179	517	0.2	1.518	A
2	379	436	2822	0.134	379	0.2	1.472	A
3	697	185	2716	0.257	697	0.3	1.781	A
4	0	879	1356	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	517	153	2887	0.179	517	0.2	1.518	A
2	379	436	2822	0.134	379	0.2	1.472	A
3	697	185	2716	0.257	697	0.3	1.781	A
4	0	880	1356	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	423	125	2907	0.145	423	0.2	1.448	A
2	309	356	2881	0.107	309	0.1	1.401	A
3	569	151	2740	0.208	569	0.3	1.660	A
4	0	719	1441	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	105	2921	0.121	354	0.1	1.403	A
2	259	298	2924	0.089	259	0.1	1.350	A
3	477	127	2757	0.173	477	0.2	1.580	A
4	0	602	1504	0.000	0	0.0	0.000	A

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APPENDIX J

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.2.1013 © Copyright TRL Limited, 2019									
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Filename: Junction 8.j9

Path: C:\Users\Junctions shared\Desktop\Craig\EAF Junction Assessments Remote Comp\Mitigation

Report generation date: 16/08/2024 06:28:50

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026 Do Something										
Arm 1	D5	0.6	1.96	0.36	A	D6	0.6	2.06	0.39	A
Arm 2		0.0	2.57	0.03	A		0.1	3.00	0.11	A
Arm 3		0.0	0.00	0.00	A		0.6	3.09	0.38	A
Arm 4		0.1	1.42	0.07	A		0.1	1.73	0.10	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	A4241 Harbour Way / A48 Margam Road / Access Road
Location	
Site number	
Date	10/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\abbie.moore
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	1.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A48 Margam Road (South)	
2	Access Road	
3	A4241 Harbour Way	
4	A48 Margam Road (North) A48 Margam Road (South)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.30	10.50	23.9	23.0	70.0	33.0	
2	3.70	7.10	29.9	37.0	92.0	34.0	
3	7.40	7.90	2.8	44.4	70.0	38.0	
4	7.20	9.90	11.8	76.6	70.0	31.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.690	2879
2	0.483	1892
3	0.605	2337
4	0.677	2741

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	922	100.000
2		✓	41	100.000
3		✓	-33	100.000
4		✓	177	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	113	528	281
	2	19	0	4	18
	3	-61	13	3	12
	4	143	6	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.36	1.96	0.6	A
2	0.03	2.57	0.0	A
3	0.00	0.00	0.0	A
4	0.07	1.42	0.1	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	694	26	2861	0.243	693	0.3	1.660	A
2	31	629	1588	0.019	31	0.0	2.310	A
3	0	239	2192	0.000	0	0.0	0.000	A
4	133	14	2731	0.049	133	0.1	1.385	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	829	31	2858	0.290	829	0.4	1.773	A
2	37	752	1529	0.024	37	0.0	2.412	A
3	0	286	2164	0.000	0	0.0	0.000	A
4	159	17	2729	0.058	159	0.1	1.400	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1015	37	2853	0.356	1015	0.6	1.958	A
2	45	921	1447	0.031	45	0.0	2.567	A
3	0	350	2125	0.000	0	0.0	0.000	A
4	195	21	2726	0.071	195	0.1	1.421	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1015	37	2853	0.356	1015	0.6	1.958	A
2	45	922	1447	0.031	45	0.0	2.567	A
3	0	350	2125	0.000	0	0.0	0.000	A
4	195	21	2726	0.071	195	0.1	1.421	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	829	31	2858	0.290	829	0.4	1.774	A
2	37	753	1528	0.024	37	0.0	2.413	A
3	0	286	2163	0.000	0	0.0	0.000	A
4	159	17	2729	0.058	159	0.1	1.400	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	694	26	2861	0.243	694	0.3	1.660	A
2	31	630	1588	0.019	31	0.0	2.313	A
3	0	240	2192	0.000	0	0.0	0.000	A
4	133	14	2731	0.049	133	0.1	1.387	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / A48 Margam Road / Access Road	Standard Roundabout		1, 2, 3, 4	2.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	996	100.000
2		✓	140	100.000
3		✓	657	100.000
4		✓	205	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	32	411	553
	2	48	0	19	73
	3	523	4	2	128
	4	159	3	43	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.39	2.06	0.6	A
2	0.11	3.00	0.1	A
3	0.38	3.09	0.6	A
4	0.10	1.73	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	748	0.4	1.711	A
2	105	758	1526	0.069	105	0.1	2.533	A
3	495	506	2030	0.244	493	0.3	2.340	A
4	154	433	2447	0.063	154	0.1	1.569	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	895	0.5	1.843	A
2	126	907	1454	0.087	126	0.1	2.709	A
3	591	606	1970	0.300	590	0.4	2.609	A
4	184	518	2390	0.077	184	0.1	1.631	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1096	0.6	2.063	A
2	154	1110	1356	0.114	154	0.1	2.995	A
3	723	742	1888	0.383	723	0.6	3.089	A
4	226	635	2311	0.098	226	0.1	1.725	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	57	2840	0.386	1097	0.6	2.065	A
2	154	1111	1355	0.114	154	0.1	2.996	A
3	723	742	1887	0.383	723	0.6	3.092	A
4	226	635	2310	0.098	226	0.1	1.725	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	895	47	2847	0.315	896	0.5	1.848	A
2	126	908	1454	0.087	126	0.1	2.713	A
3	591	606	1969	0.300	591	0.4	2.613	A
4	184	519	2389	0.077	184	0.1	1.634	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	39	2852	0.263	750	0.4	1.712	A
2	105	760	1525	0.069	105	0.1	2.537	A
3	495	508	2029	0.244	495	0.3	2.348	A
4	154	435	2446	0.063	154	0.1	1.572	A

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APPENDIX K

Junctions 9									
ARCADY 9 - Roundabout Module									
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Filename: Junction 9 - M4 Junction 38_Advanced.j9

Path: C:\Users\Junctions shared\Desktop\Craig\EAF Junction Assessments Remote Comp\Mitigation

Report generation date: 16/08/2024 06:29:14

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026 Do Something										
Arm 1	D5	0.3	1.92	0.21	A	D6	0.6	3.55	0.39	A
Arm 2		0.2	1.65	0.14	A		0.3	2.28	0.25	A
Arm 3		0.4	2.68	0.29	A		0.4	2.72	0.27	A
Arm 4		0.0	2.79	0.02	A		0.1	3.00	0.05	A
Arm 5		0.0	1.27	0.04	A		0.4	1.71	0.28	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	M4 Junction 38
Location	
Site number	
Date	17/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15	✓
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M4 Junction 38	Large Roundabout		1, 2, 3, 4, 5	2.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	M5 SB Slip	
2	A48	
3	M4 NB Slip	
4	Heolcae'r-Bont	
5	A48 Margam Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	6.13	6.13	0.0	304.0	91.0	20.0	
2	3.91	11.30	21.2	19.9	91.0	38.0	
3	6.10	6.10	0.0	105.0	91.0	20.0	
4	2.85	5.65	16.4	22.2	91.0	24.0	
5	7.22	7.59	2.3	20.1	91.0	33.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	554	101.00
2	476	70.00
3	513	136.00
4	1099	0.00
5	41	60.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.995	2529
2	1.013	2789
3	0.994	2442
4	0.731	2060
5	1.125	2970

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Do Something	AM	ONE HOUR	06:45	08:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	464	100.000
2		ONE HOUR	✓	315	100.000
3		ONE HOUR	✓	499	100.000
4		ONE HOUR	✓	21	100.000
5		ONE HOUR	✓	103	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
	1	2	3	4	5	
From	1	0	281	0	14	169
	2	0	0	17	4	294
	3	0	19	0	34	446
	4	0	0	7	0	14
	5	0	59	25	19	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
	1	2	3	4	5	
From	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.21	1.92	0.3	A	426	639
2	0.14	1.65	0.2	A	289	434
3	0.29	2.68	0.4	A	458	687
4	0.02	2.79	0.0	A	19	29
5	0.04	1.27	0.0	A	95	142

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	349	87	97	2433	0.144	349	0	0.0	0.2	1.727	A
2	237	59	176	2610	0.091	237	270	0.0	0.1	1.516	A
3	376	94	376	2068	0.182	375	37	0.0	0.2	2.125	A
4	16	4	697	1551	0.010	16	53	0.0	0.0	2.344	A
5	78	19	20	2948	0.026	77	693	0.0	0.0	1.253	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	104	116	2414	0.173	417	0	0.2	0.2	1.802	A
2	283	71	210	2576	0.110	283	323	0.1	0.1	1.569	A
3	449	112	449	1995	0.225	448	44	0.2	0.3	2.327	A
4	19	5	834	1451	0.013	19	64	0.0	0.0	2.513	A
5	93	23	23	2943	0.031	93	829	0.0	0.0	1.262	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	128	142	2388	0.214	511	0	0.2	0.3	1.916	A
2	347	87	258	2528	0.137	347	395	0.1	0.2	1.649	A
3	549	137	550	1895	0.290	549	54	0.3	0.4	2.675	A
4	23	6	1021	1314	0.018	23	78	0.0	0.0	2.787	A
5	113	28	29	2937	0.039	113	1016	0.0	0.0	1.274	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	128	142	2388	0.214	511	0	0.3	0.3	1.917	A
2	347	87	258	2528	0.137	347	395	0.2	0.2	1.649	A
3	549	137	551	1894	0.290	549	54	0.4	0.4	2.676	A
4	23	6	1022	1314	0.018	23	78	0.0	0.0	2.788	A
5	113	28	29	2937	0.039	113	1016	0.0	0.0	1.274	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	104	116	2414	0.173	417	0	0.3	0.2	1.805	A
2	283	71	210	2575	0.110	283	323	0.2	0.1	1.572	A
3	449	112	450	1995	0.225	449	44	0.4	0.3	2.329	A
4	19	5	835	1450	0.013	19	64	0.0	0.0	2.516	A
5	93	23	23	2943	0.031	93	830	0.0	0.0	1.262	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	349	87	97	2432	0.144	349	0	0.2	0.2	1.730	A
2	237	59	176	2610	0.091	237	270	0.1	0.1	1.516	A
3	376	94	377	2067	0.182	376	37	0.3	0.2	2.128	A
4	16	4	699	1550	0.010	16	53	0.0	0.0	2.348	A
5	78	19	20	2948	0.026	78	695	0.0	0.0	1.255	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M4 Junction 38	Large Roundabout		1, 2, 3, 4, 5	2.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	554	101.00
2	476	70.00
3	513	136.00
4	1099	0.00
5	41	60.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	600	100.000
2		ONE HOUR	✓	472	100.000
3		ONE HOUR	✓	453	100.000
4		ONE HOUR	✓	63	100.000
5		ONE HOUR	✓	727	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
	1	2	3	4	5	
From	1	0	504	0	14	82
	2	0	0	13	1	458
	3	0	32	0	10	411
	4	0	7	15	0	41
	5	0	220	497	10	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
	1	2	3	4	5	
From	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.39	3.55	0.6	A	551	826
2	0.25	2.28	0.3	A	433	650
3	0.27	2.72	0.4	A	416	624
4	0.05	3.00	0.1	A	58	87
5	0.28	1.71	0.4	A	667	1001

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	452	113	587	1945	0.232	451	0	0.0	0.3	2.406	A
2	355	89	464	2318	0.153	355	573	0.0	0.2	1.833	A
3	341	85	424	2020	0.169	340	395	0.0	0.2	2.142	A
4	47	12	738	1521	0.031	47	26	0.0	0.0	2.442	A
5	547	137	41	2924	0.187	546	745	0.0	0.2	1.514	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	539	135	702	1831	0.295	539	0	0.3	0.4	2.786	A
2	424	106	555	2226	0.191	424	685	0.2	0.2	1.997	A
3	407	102	508	1937	0.210	407	472	0.2	0.3	2.352	A
4	57	14	883	1415	0.040	57	31	0.0	0.0	2.649	A
5	654	163	49	2915	0.224	653	891	0.2	0.3	1.591	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	661	165	859	1674	0.395	660	0	0.4	0.6	3.544	A
2	520	130	680	2100	0.247	519	839	0.2	0.3	2.277	A
3	499	125	622	1824	0.273	498	578	0.3	0.4	2.716	A
4	69	17	1081	1270	0.055	69	38	0.0	0.1	2.997	A
5	800	200	59	2903	0.276	800	1091	0.3	0.4	1.711	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	661	165	860	1674	0.395	661	0	0.6	0.6	3.551	A
2	520	130	680	2100	0.248	520	840	0.3	0.3	2.278	A
3	499	125	622	1823	0.274	499	578	0.4	0.4	2.717	A
4	69	17	1082	1269	0.055	69	39	0.1	0.1	2.999	A
5	800	200	59	2903	0.276	800	1092	0.4	0.4	1.711	A

17:45 - 18:00

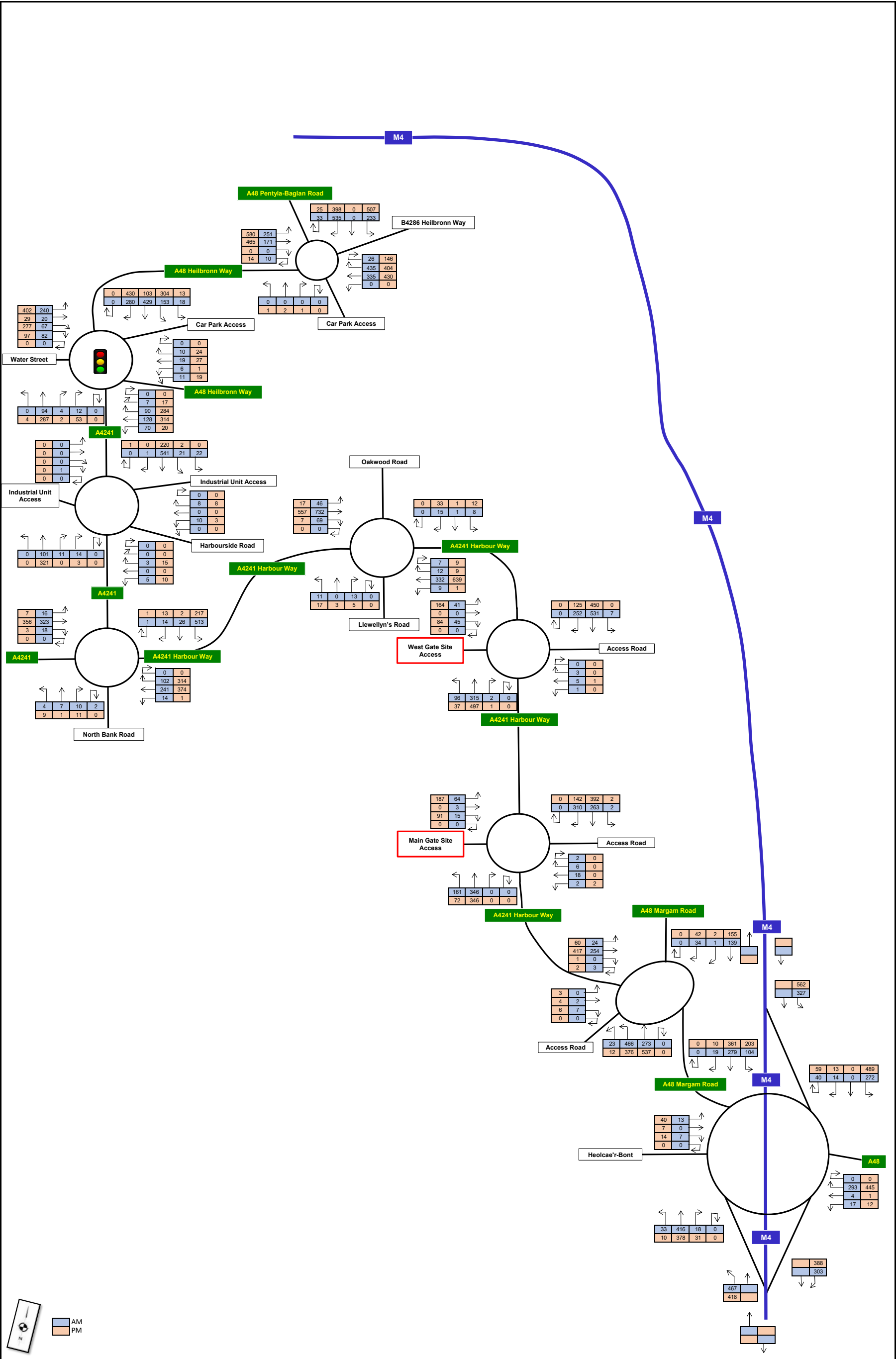
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	539	135	703	1830	0.295	540	0	0.6	0.4	2.791	A
2	424	106	556	2226	0.191	425	687	0.3	0.2	1.999	A
3	407	102	508	1936	0.210	408	472	0.4	0.3	2.357	A
4	57	14	885	1414	0.040	57	32	0.1	0.0	2.654	A
5	654	163	49	2915	0.224	654	893	0.4	0.3	1.594	A

18:00 - 18:15

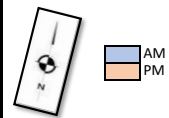
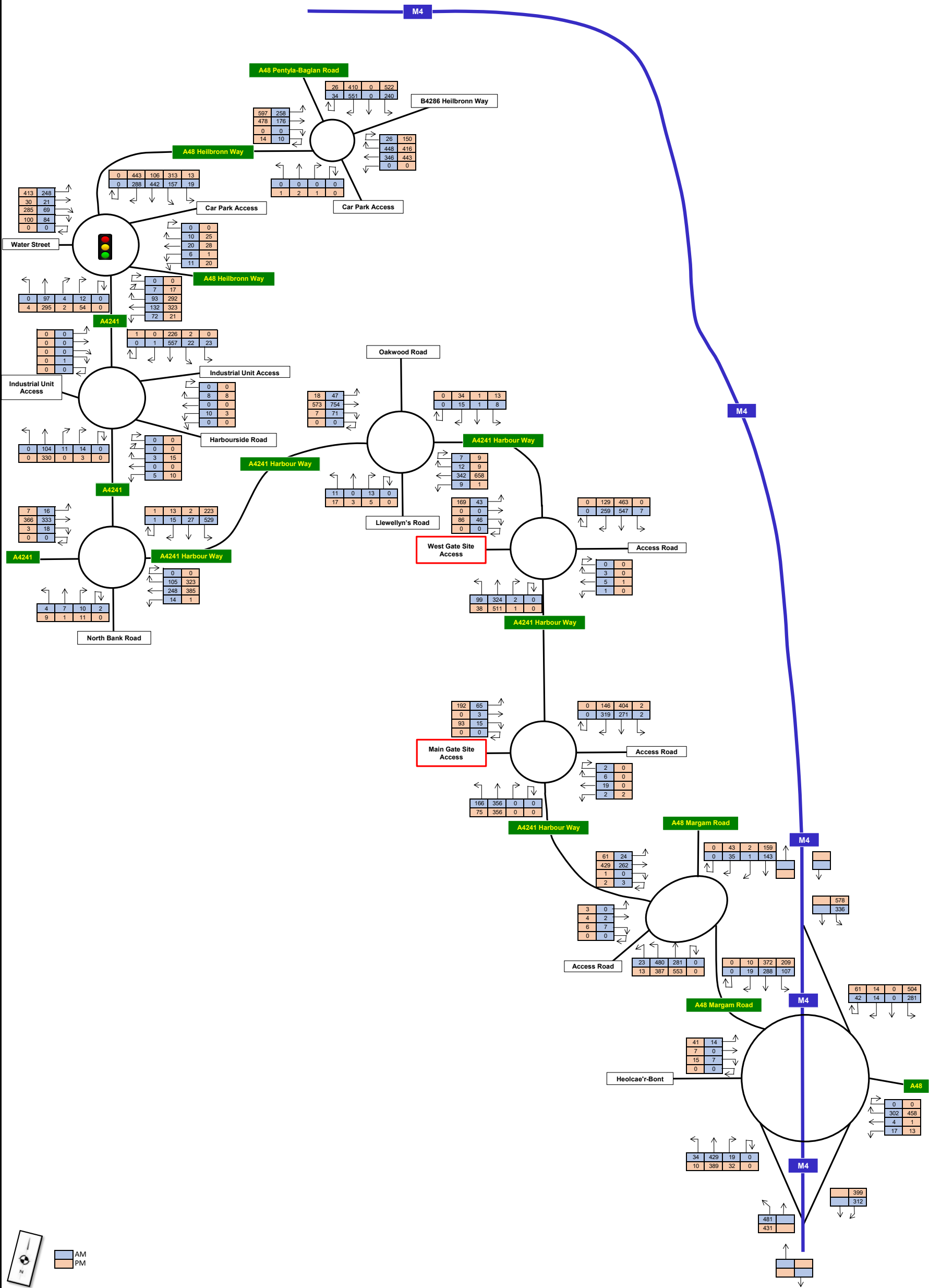
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	452	113	588	1944	0.232	452	0	0.4	0.3	2.413	A
2	355	89	466	2317	0.153	356	575	0.2	0.2	1.834	A
3	341	85	426	2019	0.169	341	395	0.3	0.2	2.148	A
4	47	12	741	1519	0.031	47	26	0.0	0.0	2.447	A
5	547	137	41	2924	0.187	548	747	0.3	0.2	1.516	A

S|C|P

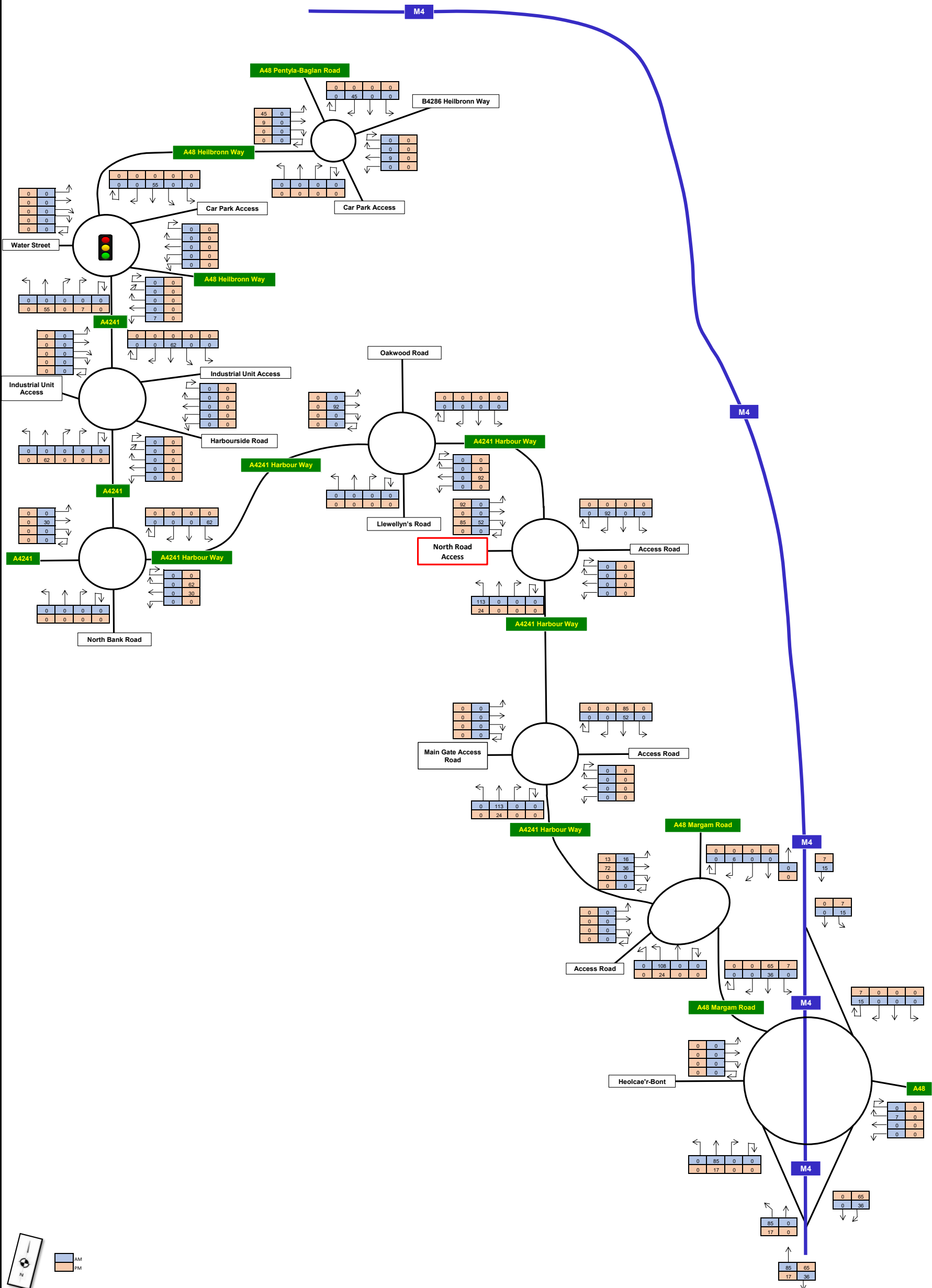
FIGURES



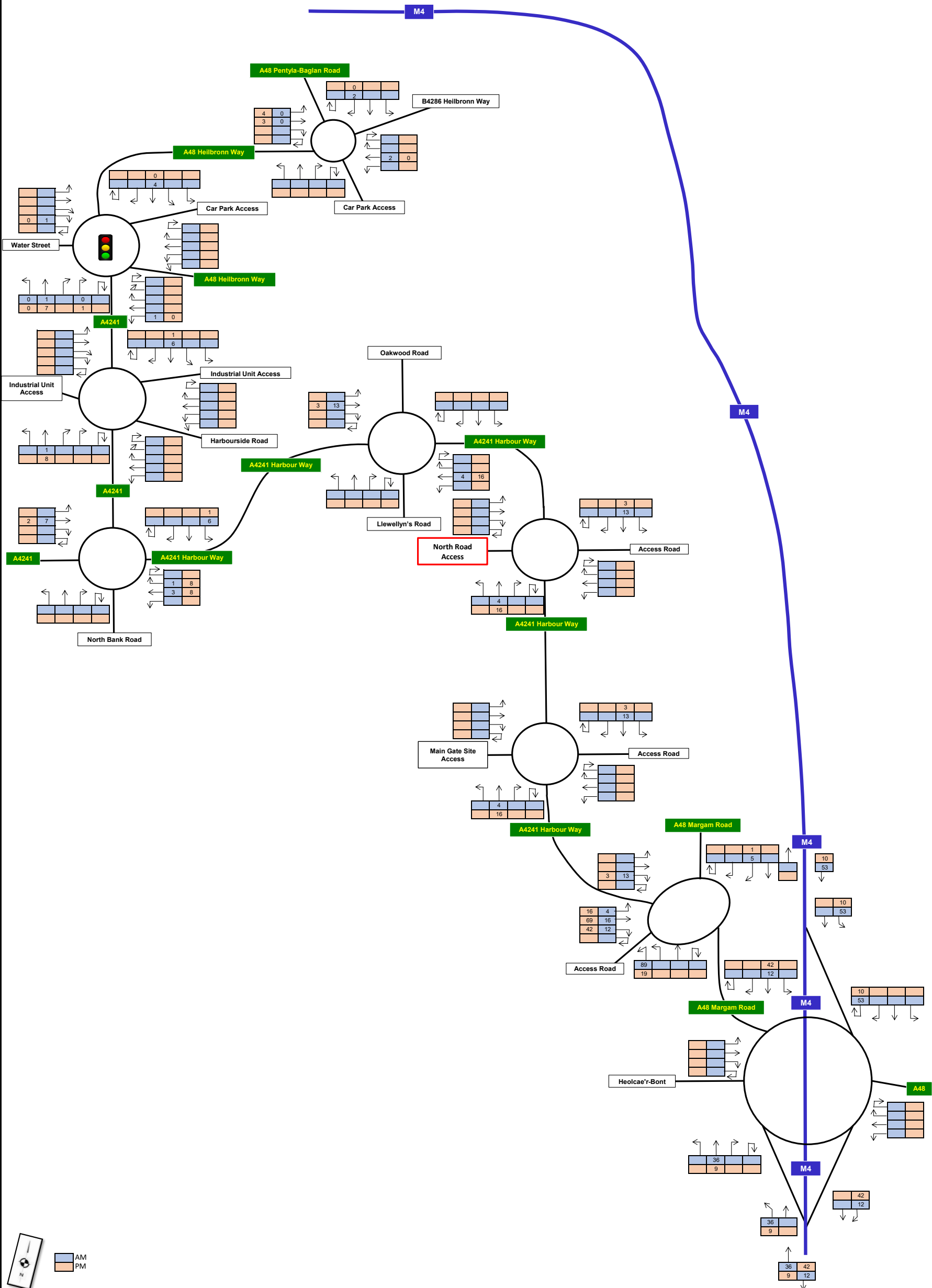
SCP Transportation Planning : Infrastructure Design	2022 Surveyed Traffic Flows - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 1



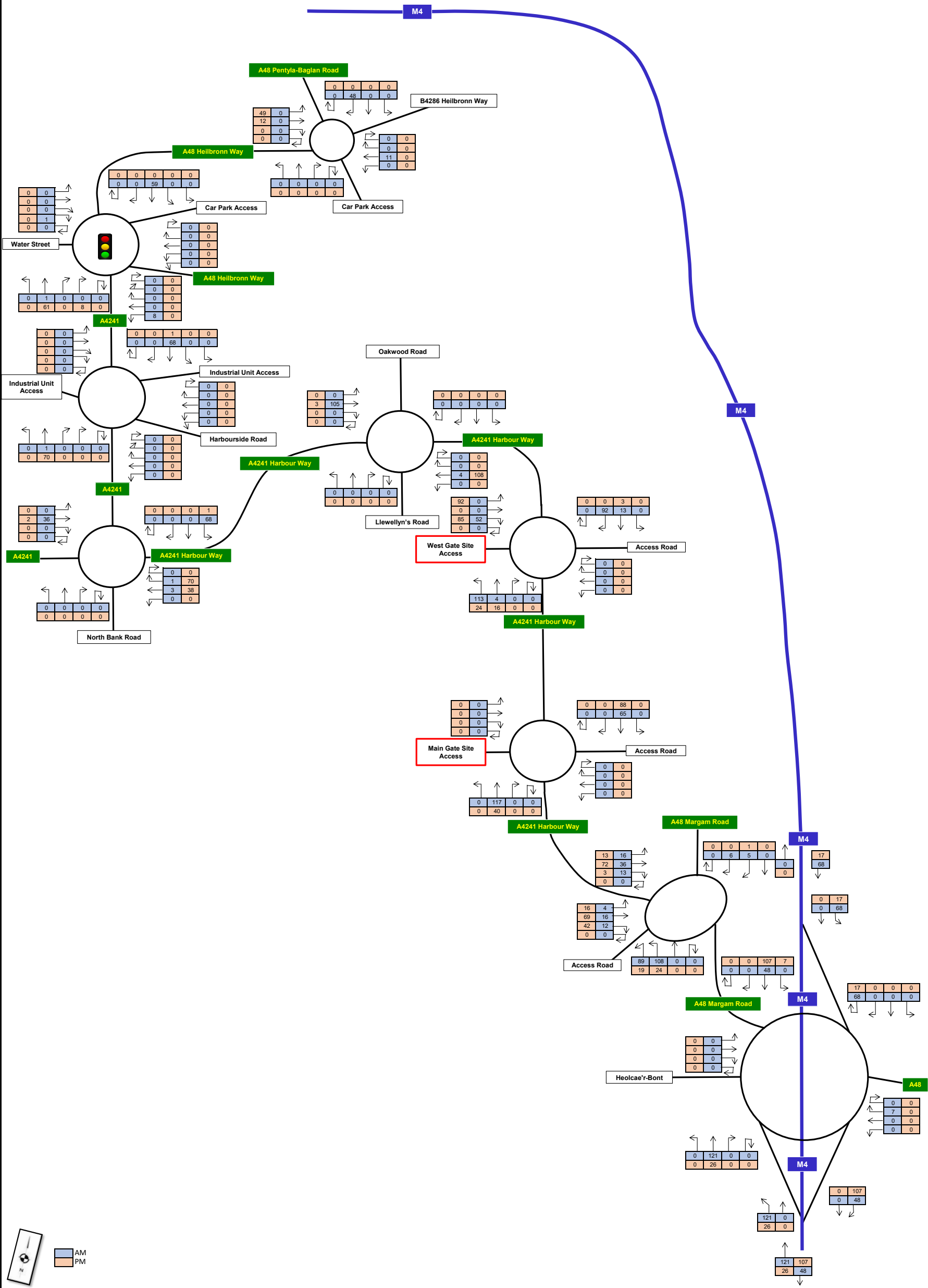
SCP Transportation Planning : Infrastructure Design	2026 Growthed Surveyed Traffic Flows - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 2



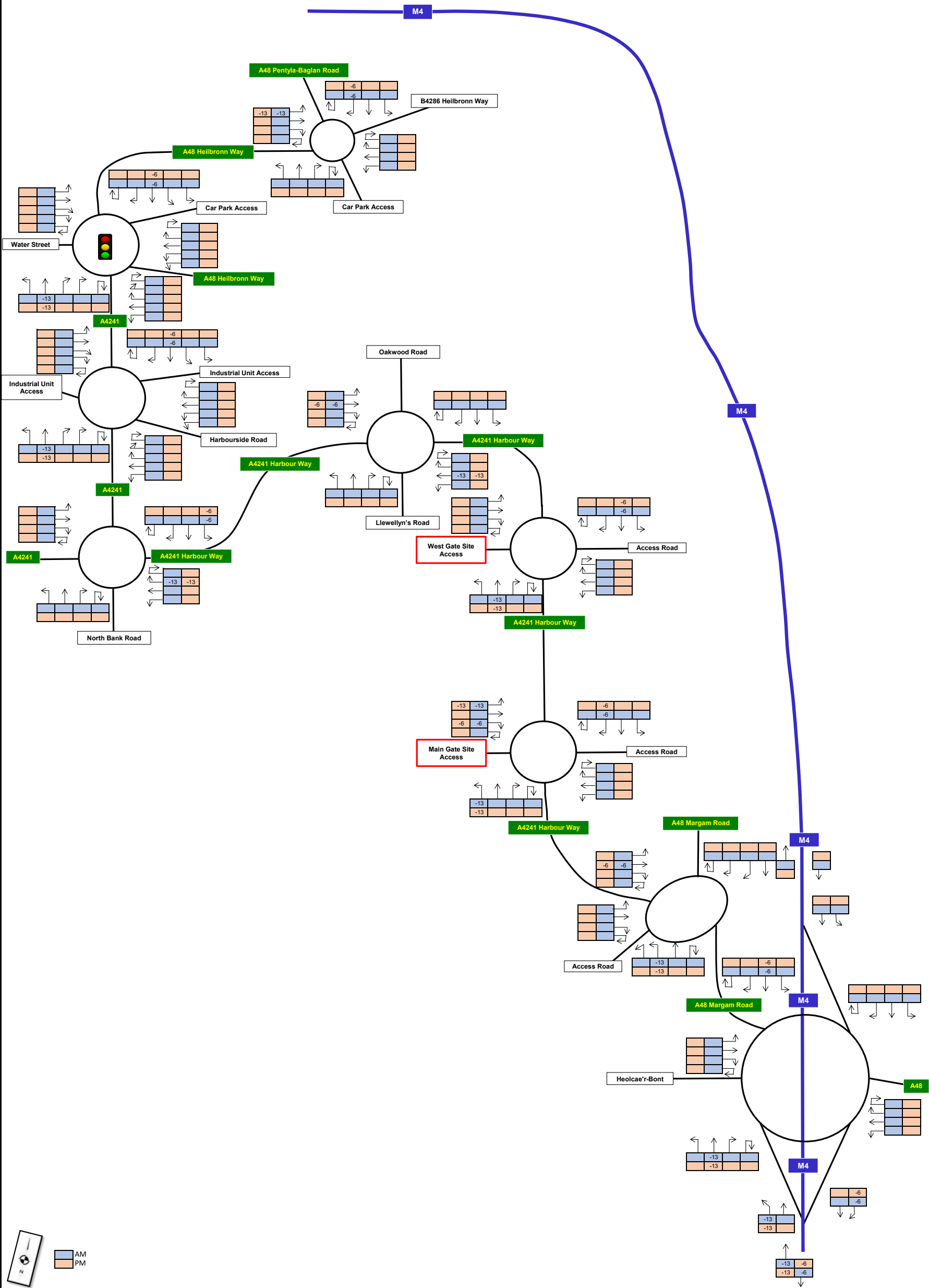
 Transportation Planning : Infrastructure Design	Committed Development Traffic (P2023/0858 - Crown Wharf, Port Talbot Docks) - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 3

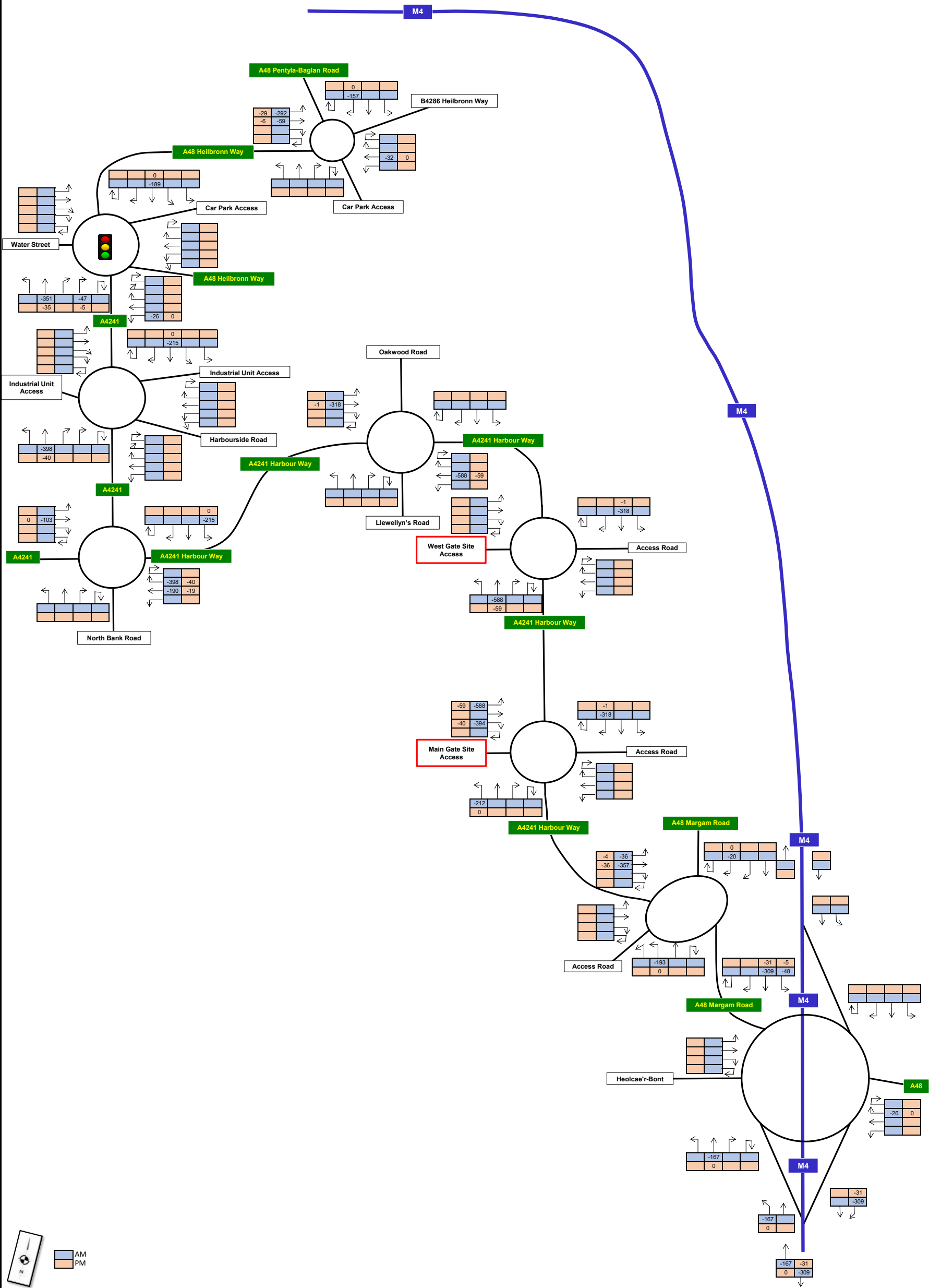


SCP Transportation Planning - Infrastructure Design	Committed Development Traffic (P2021/1255 - Land off J38 of the M4, Margam) - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 4

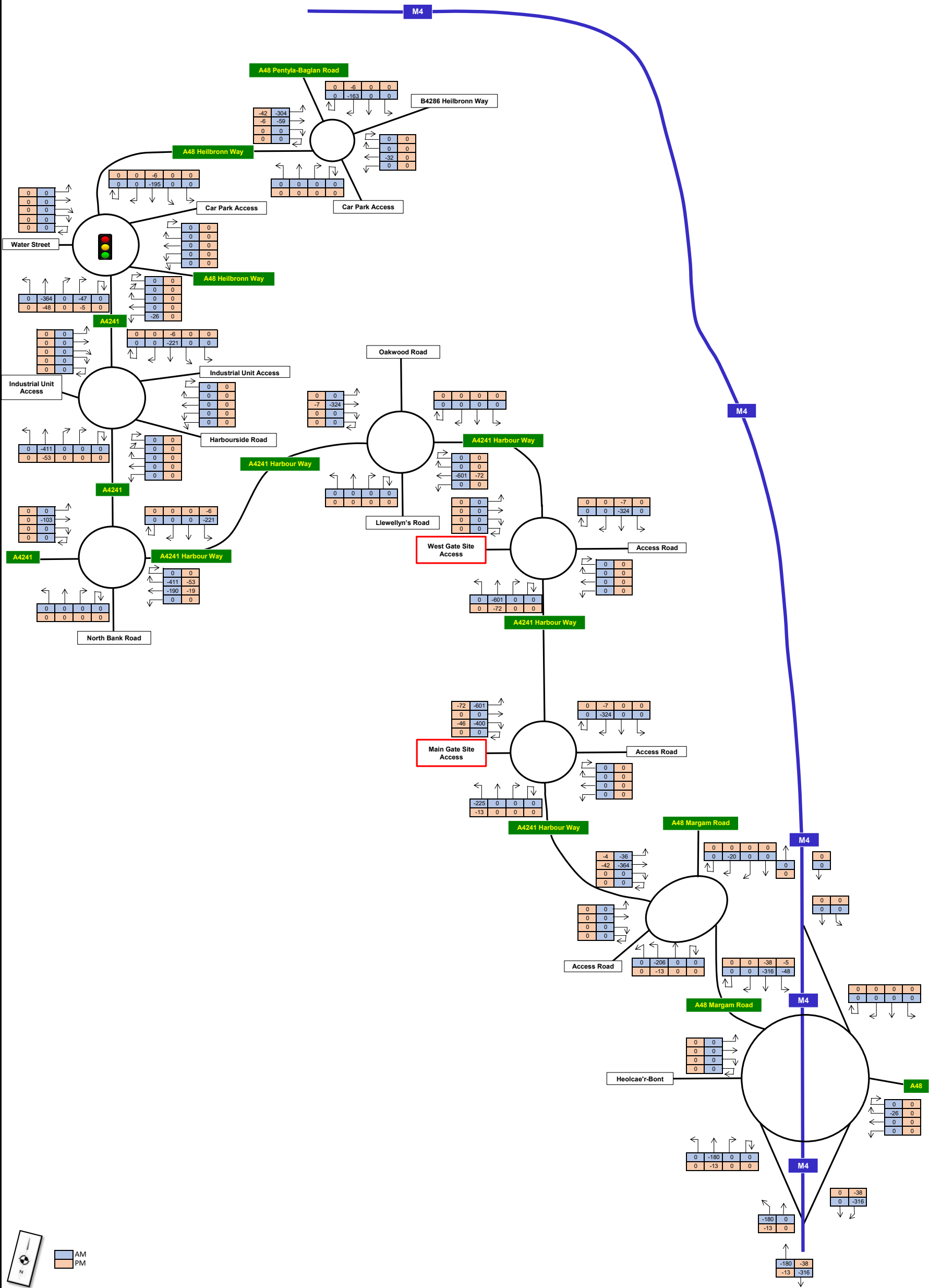


 SCP Transportation Planning : Infrastructure Design	Total Committed Development Traffic - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 5





SCP Transportation Planning : Infrastructure Design	Proposed Peak Hour Reduction in Staff Movements - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 7

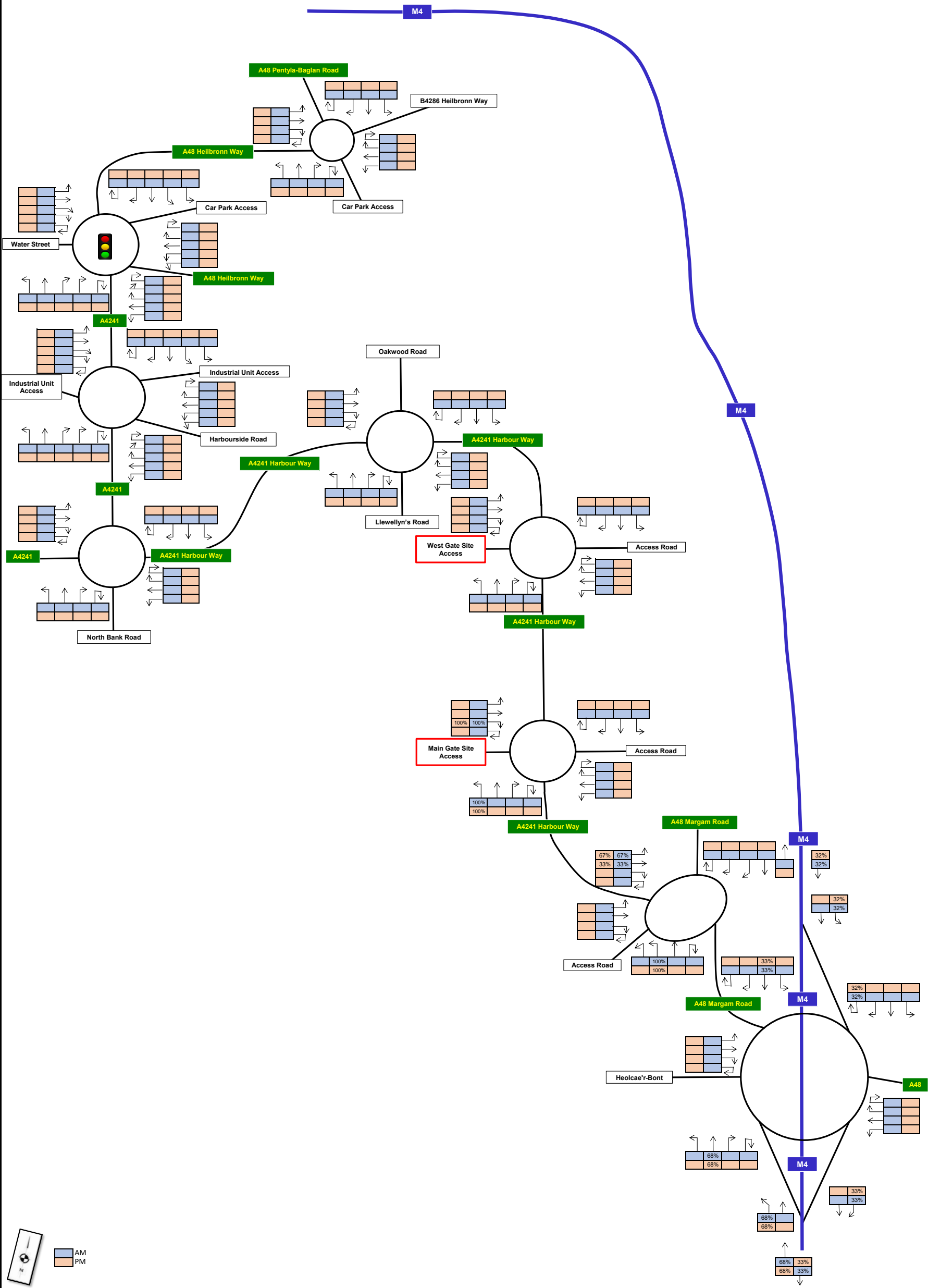


AM
PM



Total Proposed Peak Hour Reduction in Traffic Movements - PCU
Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot

16 August 2024
Job Number - SCP/210634
Traffic Figure 8

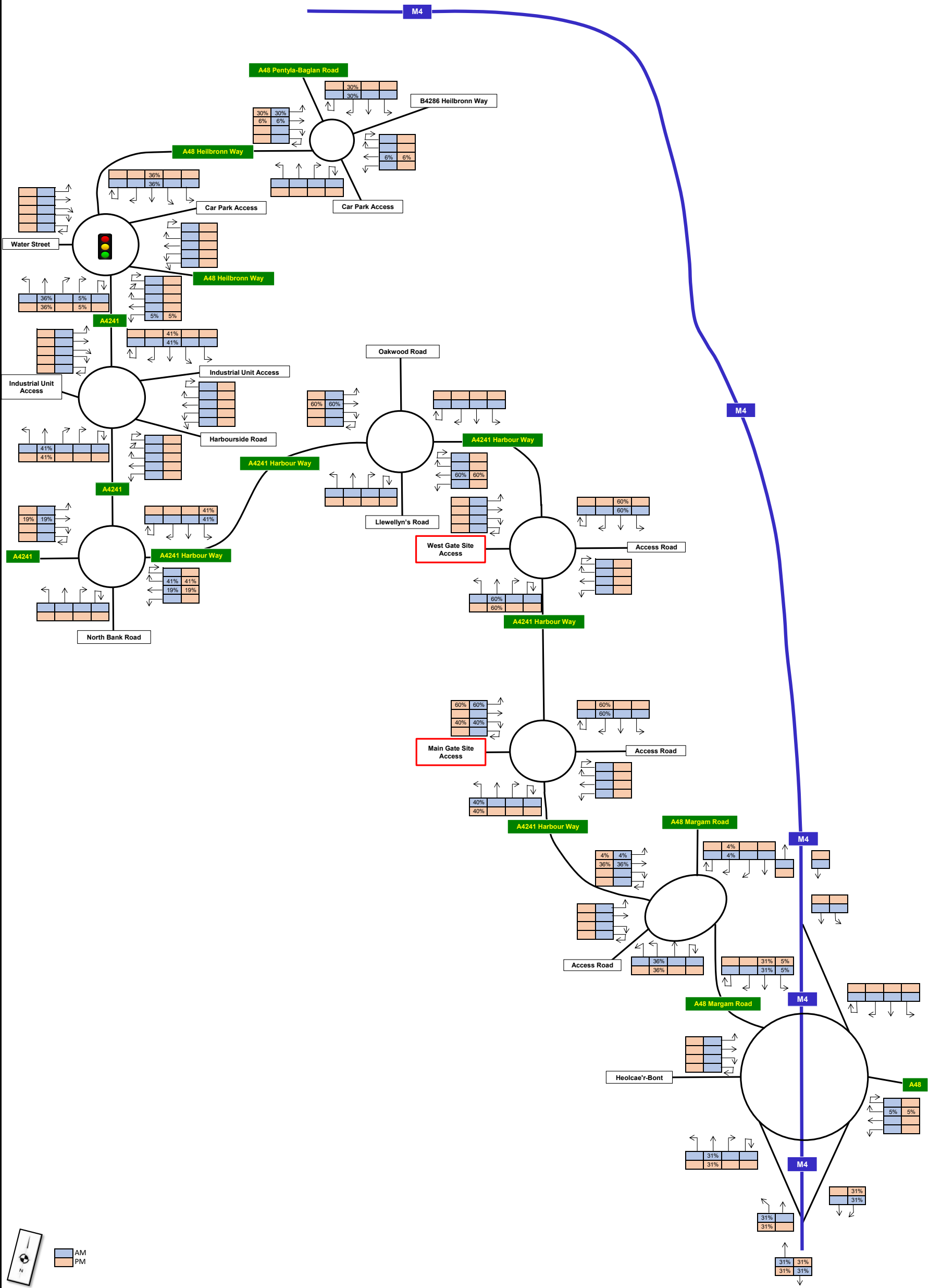


SCP

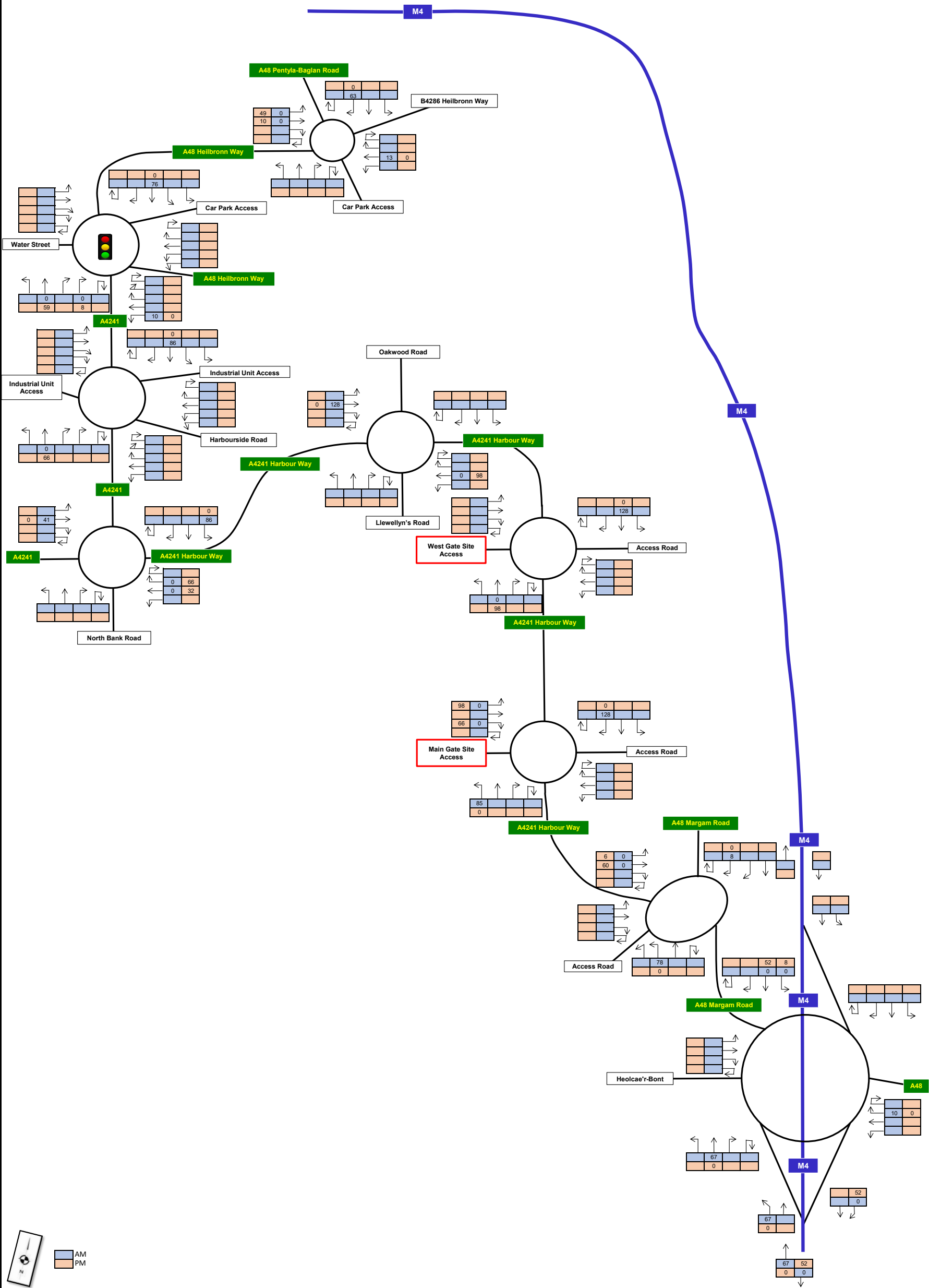
Transportation Planning : Infrastructure Design

SGV Construction Traffic Distribution
Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot

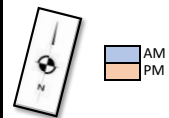
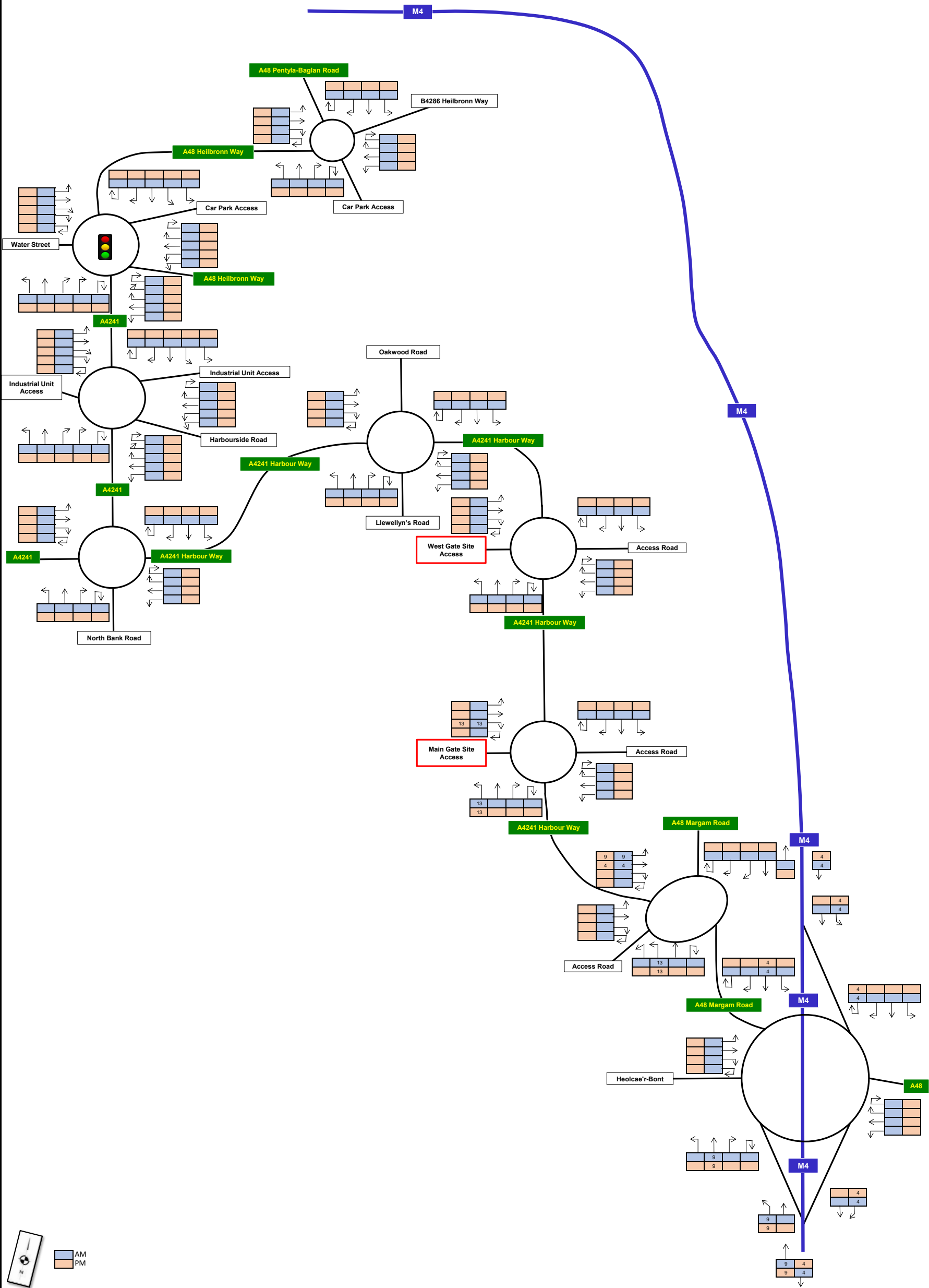
16 August 2024
Job Number - SCP/210634
Traffic Figure 9



SCP Transportation Planning : Infrastructure Design	LGV Construction Traffic Distribution	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 10

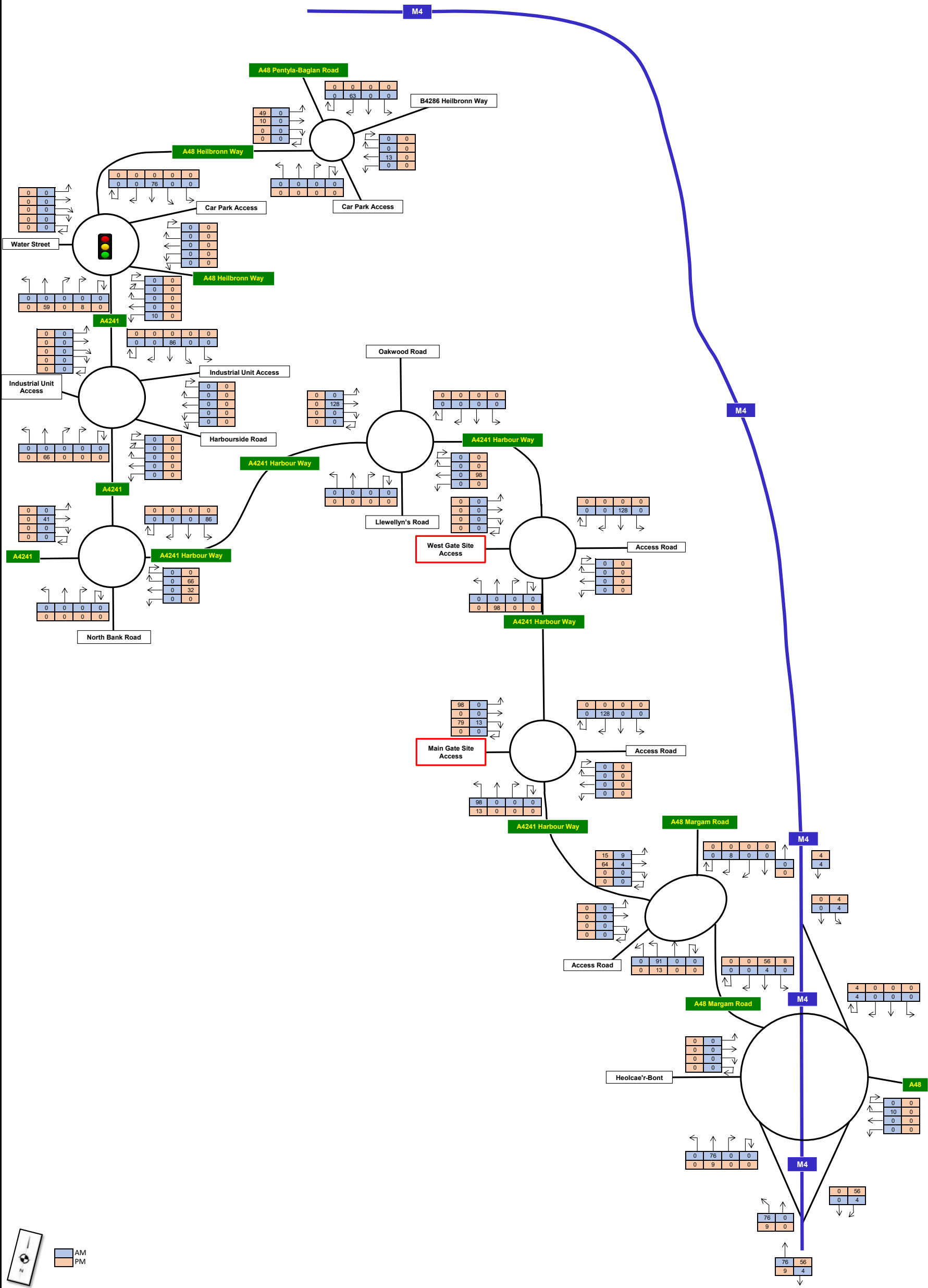


 Transportation Planning : Infrastructure Design	LGV Construction Traffic Generation - PCU	16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	Job Number - SCP/210634
		Traffic Figure 11



HGV Construction Traffic Generation - PCU	
Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot	

16 August 2024
Job Number - SCP/210634
Traffic Figure 12

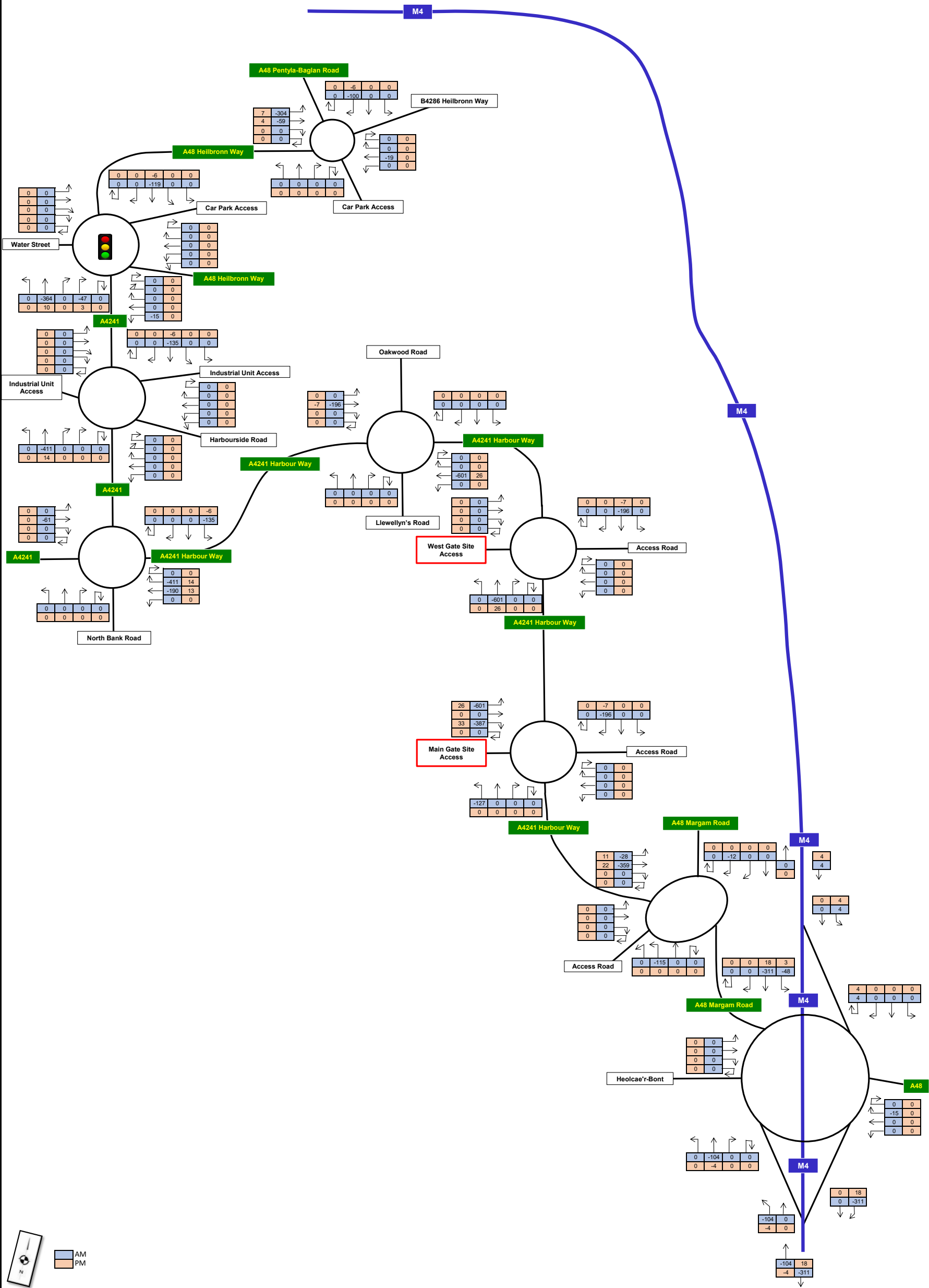


AM
PM



Total Construction Traffic Generation - PCU
Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot

16 August 2024
Job Number - SCP/210634
Traffic Figure 13



 Transportation Planning - Infrastructure Design	Net Construction Traffic Generation - PCU		16 August 2024
	Electric Arc Furnace Project, Land at Port Talbot Steelworks, Port Talbot		Job Number - SCP/210634
			Traffic Figure 14

