

8A. Transportation & Access

Appendix 8A.1

TRANSPORT ASSESSMENT

Shearer Property Regen Limited

Coventry City Centre South Addendum Transport Assessment

November 2022

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1 INTRODUCTION

- 1.1.1 This note serves as an addendum to the previously approved Transport Assessment (TA), submitted in 2020.
- 1.1.2 Transport Planning Practice (TPP) were originally commissioned by Shearer Property Regen Limited (SPRL) to provide transport planning advice to support a hybrid planning application for the redevelopment of Coventry City Centre South referred to herein as City Centre South (CCS).
- 1.1.3 The proposed minor material amendments to the above scheme have been reviewed within this addendum to ascertain the acceptability of the revised proposals in relation to their impact on the highway, parking and sustainable transport modes.
- 1.1.4 The remainder of this Addendum Transport Assessment comprises the following chapters, which remain consistent with the 2020 application TA:
- Chapters 2 and 3 set out how the baseline transport conditions including the results of surveys have not changed since the previous TA;
 - Chapter 4 sets out the future transport conditions within the city centre which CCC are looking to bring forward;
 - Chapter 5 sets out the revised development proposals;
 - Chapter 6 sets out the updated trip generation and travel mode share for the development proposals;
 - Chapter 7 sets out the impact of the development on the local highway network;
 - Chapter 8 sets out the impact of the development on the city centre parking provision;
 - Chapter 9 sets out the impact of the development on the local sustainable transport network;

- Chapter 10 confirms that the construction vehicle routeing and access, and impacts of the construction period on the local highway network have not materially altered;
- Chapter 11 sets out how the approved proposed measures to mitigate the impact of the proposals on the local transport network are adequate for the revised scheme;
- Chapter 12 sets out the transport policy on which the development proposals will be assessed against; and
- Chapter 13 sets out the summary and conclusions of this Addendum Transport Assessment.

2 BASELINE TRANSPORT CONDITIONS - OVERVIEW

- 2.1.1 This chapter remains materially unchanged from the previous assessment, which summarised the existing transport conditions within the vicinity of the site based on supplied material and published information.

3 BASELINE TRANSPORT CONDITIONS - SURVEYS

- 3.1.1 This chapter summarises the surveys that were undertaken to inform the original Transport Assessment. Surveys were undertaken of the local road network, the CCS site's four service yards, the city centre car parks, taxi ranks and of pedestrian and cycle links within the CCS site demise.
- 3.1.2 TPP commissioned the independent survey company Nationwide Data Collection to undertake a number of transport related surveys. The scope and timing of the surveys were discussed and agreed with CCC Highways during the highways meeting on 12th September 2019. It was confirmed in a telephone conversation with CCC Transport and Highways on the 6th July 2022 that the surveys undertaken in November 2019 would continue to be valid and no additional traffic surveys would be required. This was confirmed in an email from CCC dated 1st September 2022.

3.2 Traffic surveys

- 3.2.1 Automatic Traffic Counter (ATC) surveys were undertaken for a seven-day period between 21st and 27th November 2019. The ATC locations remain unchanged and are summarised below:
- ATC A: Little Park Street
 - ATC B: New Union Street
 - ATC C: Greyfriars Lane
 - ATC D: Warwick Road
 - ATC E: Queen Victoria Road
 - ATC F: Croft Road
 - ATC G: Corporation Street
 - ATC H: Upper Well Street
 - ATC I: Corporation Street
- 3.2.2 Fully classified turning count surveys were undertaken at a number of road junctions within close proximity of the CCS site. The surveys were undertaken on

Thursday 21st and Saturday 23rd November 2019. The junction locations are summarised below:

- Salt Lane / Little Park Street Junction.
- New Union Street / Little Park Street Roundabout.
- New Union Street / Greyfriars Lane Junction.
- Greyfriars Road / Warwick Road Roundabout.
- Greyfriars Road / City Arcade car park access Junction.
- Queen Victoria Road / Croft Road / Rover Road Junction.
- Queen Victoria Road / Lower Precinct car park and service road access Junction.
- Upper Well Street / Corporation Street Junction.
- Corporation Street / West Orchard car park and service yard access Junction.
- Corporation Street / The Burges / Hales Street / Bishop Street Junction.

3.2.3 These surveys included recording data for the pedestrian crossings at the junction where appropriate.

3.3 Car park surveys

3.3.1 Surveys of the main city centre car parks were undertaken on the same days as the fully classified turning count surveys. Therefore, the surveys were undertaken on Thursday 21st and Saturday 23rd November 2019. The surveys recorded the vehicle arrivals and departures in five-minute intervals between 07:00 – 19:00. The car park locations are summarised below:

- City Arcade
- Barracks
- Market
- Lower Precinct

- Salt lane
- Skydome
- Ikea
- New Union Street and Cheylesmore

3.4 Servicing surveys

3.4.1 Surveys of the four service yards that serve the existing development on the site were surveyed on Thursday 21st and Saturday 23rd November 2019. The surveys recorded the number and class of the delivery vehicles accessing the yards, the time they arrived and their departure time with dwell time calculated. The service yard locations are summarised below:

- Service Yard 1: City Arcade.
- Service Yard 2: Rover Road - South of Coventry Market.
- Service Yard 3: Rover Road / Lower Precinct - North of Coventry Market.
- Service Yard 4: Barracks, with separate details for the northern and southern sections of the yard.

3.5 Pedestrian and cycle surveys

3.5.1 Pedestrian and cycle surveys were undertaken at a number of entrance points and links within the proposed development site. The surveys recorded the number of pedestrians and cyclists arriving and departing if at an entrance, or the direction if on a link, (i.e. north-south or east-west) per 15 minute period. The surveys covered a period of 07:00 - 19:00 on the same weekday and Saturday as the traffic surveys. The entrance points and link locations are summarised below:

- City Arcade
- Rover Road - through to service yard
- Rover Road - Coventry Market - southwest entrance
- Rover Road - Coventry Market - southeast entrance

- Coventry Market - east entrance
- Market Way
- Bull Yard - east-west direction
- Bull Yard - north-south direction
- Hertford Street

3.6 Taxi ranks

3.6.1 Surveys of the taxi ranks near the development site were undertaken on Thursday 21st and Saturday 23rd November 2019. The surveys recorded the number of taxis waiting and passenger pick-ups including occupancy between 07:00 - 19:00. The taxi rank locations are summarised below:

- Rover Road
- Greyfriars Lane
- Queen Victoria Road
- Fleet Street*
- Spon Street*
- Warwick Road*
- Lower Holyhead Road*

3.6.2 The taxi ranks with an asterix were requested by CCC Highways to be surveyed although it was advised that the ranks may no longer be in operation. The survey company undertook an investigation of the taxi ranks and found them to be non-operational during the time of the surveys.

3.7 Survey summary

3.7.1 It was agreed with CCC that the above surveys remain valid and represent a reasonable and robust set of data from which to base the revised assessment.

4 FUTURE TRANSPORT CONDITIONS

- 4.1.1 This chapter sets out the future of transport for Coventry which is being investigated by CCC and Transport for West Midlands (TfWM). The proposals have not materially changed since the original 2020 application TA.

4.2 Very Light Rail

- 4.2.1 Very Light Rail (VLR) is a research and development project for Coventry city centre, using the latest automotive expertise developed in the region to deliver an innovative and affordable light rail system that would run through the city. The proposed route would utilise Queen Victoria Road to the west of the development site.
- 4.2.2 The scheme remains aware of these proposals and can accommodate them with minimal impact.

4.3 Cycle hire scheme and cycle infrastructure

- 4.3.1 A city centre cycle hire scheme is now available in Coventry. The cycle scheme is a docked system, with stations located strategically around the city centre and beyond. In addition to the cycle hire scheme, CCC continues to investigate improvements to the cycle route infrastructure. The provision of a cycle hire scheme was incorporated into the previous assessment and apart from giving certainty to the proposals the impact is minimal.

4.4 Electric Scooter trials

- 4.4.1 Coventry will undertake an electric scooter trial to see how e-scooters can safely be used in public places to ease the pressure on public transport. The development can accommodate these proposals.

4.5 Removal of through traffic

- 4.5.1 CCC Highways are investigating a number of schemes that will restrict traffic crossing through the city by using bus only lanes, no-through roads and other measures. Drivers will instead make use of the A4053 Ringway to transverse the city with vehicles entering the city for access only. This will reduce traffic on the local roads and could improve the capacity at some of the key junctions.

5 PROPOSED DEVELOPMENT

- 5.1.1 This chapter provides a description of the proposed development scenario assessed in this Addendum Transport Assessment. The Section 73 Minor Material Amendment Application seeks to vary Condition Nos. 1, 2, 46, 50 and 51 attached to hybrid planning permission reference OUT/2020/2876 (as amended) to allow for alterations to approved Parameter Plans Document, Development Principles Document and associated drawings. This facilitates the following changes to the maximum development quanta approved under the extant hybrid consent:
- 5.1.2 Increasing maximum residential (Class C3) parameter from 1,300 to 1,500 units;
- 5.1.3 Reduction in minimum mixed-use non-residential floorspace parameter (Class E / F.1 / Sui Generis Pub or Drinking Establishment / Hot Food Takeaway / Cinema uses) from 37,500sqm to 20,000sqm.

The consented car parking space and hotel (Class C1) parameters remain as per the hybrid consent (ref: OUT/2020/2876) as amended. No changes are proposed to the full planning component of the hybrid consent, in terms of the works to the existing Coventry Market basement ramp and its replacement, and various external works to Coventry Market.

In addition, 21A-25 Hertford Street is being retained. The 'HMV Empire' a live music venue at 22 Hertford Street has been assessed as part of this addendum, as the site was previously vacant (and therefore not assessed) and is now in use and is being retained.

5.2 Access

Pedestrian and cycle

- 5.2.1 Pedestrian and cycle access to the site remains unchanged and was detailed in the original TA.

Vehicles

- 5.2.2 The number of parking spaces being provided is consistent with the previous assessment and the findings of the original TA remain valid.
- 5.2.3 The key vehicle access points onto the public highway remain broadly unchanged.

5.2.4 Vehicle access will be via the locations set out below:

- Barracks Way as per the existing situation;
- the realigned City Arcade car park access to be renamed as Lower Market Way;
- Vehicle access routes directly from Queen Victoria Road;
- via the existing service route to the north of Coventry Market via the Lower Precinct service yard.

5.2.5 The previously approved alterations to a small number of highway junctions will remain. These include the Queen Victoria Road / Croft Road junction, which will be adjusted to include pedestrian crossing facilities and a potential egress from the CCS site.

5.3 Cycle parking

5.3.1 Cycle parking for the proposed CCS development will continue to accord with the standards set out in the *Coventry Local Plan 2016, Appendix 5, Car and Cycle Parking Standards for New Development*.

5.3.2 The visitor cycle parking will be located at 'access points' to the development to allow visitors to cycle directly to the development but not cycle through the pedestrianised areas. As part of the detailed design these cycle parking locations will be reviewed to ensure they are in convenient locations to maximise potential cycle use. Some parking areas will also include mini bike repair stations with robust permanent cycle pumps. The visitor cycle parking will be located to make best use of the radial cycle routes which provide cycle access to the city from its outer areas. This is in-line with Local Plan policy AC4: *Walking and Cycling* and Chapter 5 of the Coventry Connected SPG.

5.3.3 The type of visitor cycle parking remains in line with the advice set out within the *Coventry Local Plan 2016, Appendix 5, Car and Cycle Parking Standards for New Development*. Paragraph 3.5 of the Appendix 5 standards states:

For large developments, or in exceptional circumstances, the cycle parking allocation can be open to negotiation. In these cases the applicant will be required to provide justification regarding the level of expected provision bearing in mind

the characteristics of the development site and the nature of the proposed development. The phasing of provision may be appropriate.

- 5.3.4 A cycle hire scheme has been implemented by TfWM. The proposed residential aspects of the development will result in a significant area of floorspace dedicated to cycle parking. Professional experience shows that a large proportion of residential cycle parking tend not to be used. Therefore this area could be better utilised for other uses if residents had access to cycles on a flexible basis. There is therefore potential to incorporate areas for the cycle hire scheme within and around the development.

5.4 Car parking

- 5.4.1 As per the previous scheme, the proposed development will remove all public car parking within the boundary of the site and there is no intention to re-provide public car parking elsewhere, either within or off the site. Coventry currently has a large car parking supply within the city centre with tariffs that are unlikely to encourage modal shift to more sustainable forms of transport.
- 5.4.2 The residential parking provision has been based on disabled parking requirements, operational needs, site constraints and expected requirements.
- 5.4.3 The revised scheme continues to be based on the same principles as the approved 2020 Transport Assessment. To help formulate the proposed parking provision the following points were considered:
- Discussions with potential Build-to-Rent operators with regard to their requirements and operational needs.
 - The possible accessible parking provision for the scheme (Part M of the Building Regulations suggest 10% of units are accessible and therefore have an accessible parking space).
 - The desire for family homes to have access to a car parking space.
 - The provision of car club bays.
 - Accessible and key staff parking spaces for certain uses such as the medical centre.

- The desire to provide the minimum adequate quantum of parking to avoid use of the surrounding car parks by those unable to operate / work without access to a car, e.g. plumbers, electricians, care workers etc.

5.4.4 As per the Council's Air Quality Plan, Policy EM7 of the Local Plan and the emerging Air Quality SPD, an allocation of spaces will have an electric vehicle charging point. The developer is also reviewing the allocation of a number of the bays to car clubs to facilitate more sustainable travel and minimise car ownership. This is in-line with the Coventry Connected SPG section 4.3.8.

5.5 Shopmobility

5.5.1 As part of the demolition of the Barracks car park the existing Shopmobility provision will need to be relocated. Since the 2020 submission it has been confirmed that the intention is to re-provide the offer within the city centre adjacent to Salt Lane car park. The relocation of the Shopmobility is secured through an appropriately worded planning condition.

5.6 Servicing

5.6.1 The revised servicing arrangements accord with the principles as set out in the original 2020 TA, and are summarised below.

Block A1 and A2

5.6.2 Block A1 will be serviced from a lay-by provided on Queen Victoria Road.

5.6.3 Block A2 will be serviced via the Lower Precinct service area to the north of Coventry Market. This route is already used to service this area and the eastern side of the market. This provides unrestricted service access.

Block B

5.6.4 Block B will be serviced from a basement service yard accessed via the Barracks Way underpass which currently provides servicing access for retail units located within the development site on Bull Yard, Market Way and Hertford Street. The existing service yard also provides loading facilities for retail units located to the north of the CCS development site on Market Way, Hertford Street and Upper Precinct. These units will continue to be serviced from the Block B service yard in

addition to the proposals for Block B. The proposed service yard will be sufficiently sized to accommodate the demand.

Block C

- 5.6.5 Block C will be serviced from a dedicated loading area accessed via the realigned City Arcade car park access to be renamed as Lower Market Way.

Block D

- 5.6.6 Vehicles will access Block D either via an access route directly from Queen Victoria Road, or from the realigned City Arcade car park access to be renamed as Lower Market Way.

Block E (Pavilion)

- 5.6.7 The Pavilion will continue to be serviced by vehicles approaching from the realigned City Arcade car park access to be renamed as Lower Market Way.

Coventry Market

- 5.6.8 Coventry Market does not form part of the development proposals but will continue to be adequately serviced.

Servicing summary

- 5.6.9 The proposed development will continue to provide sufficient servicing facilities to accommodate the demand on-site and will provide on-site turning facilities where required. This is in-line with Local Plan policy AC7: *Freight* and Chapter 8 of the Coventry Connected SPG.

5.7 Taxi ranks

- 5.7.1 There are no alterations to the Taxi Rank proposals as part of this addendum. As part of the realignment and proposed pedestrianisation of Rover Road, the proposal is for the existing taxi stand for three Hackney carriages to be re-provided on Warwick Road by utilising the loading lay-by outside the Reform Club.

5.8 Emergency access

- 5.8.1 As part of the overall vehicle access design strategy, emergency vehicle access has been considered throughout.

5.9 Coach parking

- 5.9.1 Coach parking provision remains unchanged. White Street Coach Park is located to the north east of the site and has capacity for seven coaches and is accessible from junction 2 of the A4053 Ringway.

6 TRIP GENERATION AND TRAVEL MODE SHARE

6.1.1 This chapter sets out the trip generation and travel mode share predicted for the proposed development. The trip generation calculations have been broken down into:

- Vehicular modes;
- Sustainable modes; and
- Servicing vehicles.

6.2 Trip generation

6.2.1 Due to the alterations to the scheme and the expected quantum of different land uses there have been changes to the expected trip generation. The expected increase in residential trips is more than off-set by the reduction in the retail elements and this has led to an overall reduction in trips generated by the scheme by all modes including servicing.

6.2.2 The trip generation has been based on the previously agreed person trip rates obtained from the TRICS database to derive person trips for each existing and proposed land use. As the proposal involves the redevelopment of existing retail and offices uses, which currently generate person trips, the number of person trips estimated for the existing site have been deducted from the person trips predicted for proposed development. This provides the net impact of person trips associated with the CCS development proposals.

6.2.3 It should be noted that the modal split for the development has been assumed prior to any modal shift associated with the use of the Travel Plans that will be submitted for each land use for each development block as part of the reserved matters. Because of this the assessment represents an overly robust scenario in relation to car movements which should be further improved upon during the reserved matters applications.

6.3 Consultation

6.3.1 The trip generation and travel mode share calculation methodology was discussed and agreed with CCC Highways at meetings on the 6th and 20th February 2020 prior to undertaking the assessment. The same approach has been used for this addendum.

6.4 Vehicle modes - all land uses

6.4.1 The peak hours calculated for the vehicle modes impact assessment remain:

- 09:00 – 10:00 and 17:00 – 18:00 on a weekday; and
- 14:00 -15:00 on a Saturday.

Weekday trip generation

6.4.2 The total net person trip generation for the development proposals on a weekday for the vehicular impact assessment peak hours is shown in Table 6.1.

Table 6.1: All uses net total person trips across development – Weekday

Time	Arrivals	Departures	Total
09:00-10:00	-74	317	243
17:00-18:00	972	244	1216
Daily	3077	2913	5990

6.4.3 As can be seen from Table 6.1, there would be 3077 new person arrivals across a 12 hour period between 07:00 – 19:00 and 2913 new departures resulting in a total of 5990 new person trips on a weekday.

6.4.4 This represents a significant reduction over the 4,864 new person arrivals across a 12 hour period between 07:00 – 19:00 and 4,689 new departures resulting in a total of 9,553 new person trips on a weekday previously assessed for the 2020 submission.

All uses vehicle travel mode share – Weekday

6.4.5 The vehicular travel mode share for all uses of the proposed development during the AM and PM peak hours is shown in Table 6.2.

Table 6.2: Net vehicle travel mode share – All uses – Weekday peak hours

Mode	AM peak hour			PM peak hour		
	Arr.	Dep.	Total	Arr.	Dep.	Total
Car or van	-61	57	-4	265	33	298
Car or van pass	-6	16	10	54	13	67
Taxi	0	0	0	0	0	0
Motorcycle	0	5	5	12	4	16
Total	-67	78	11	331	50	381

6.4.6 As can be seen from Table 6.2, there would be a total of 11 new person trips travelling by vehicle on the highway network in the AM peak hour. This reduction

in vehicle trips compared to the previous assessment (268 trips) is due to the loss of retail and the lower propensity for residents to drive.

- 6.4.7 In the PM peak hour there would be a total of 381 new person trips travelling by vehicle on the highway network of which 298 would be car or van trips. This compares with a total of 471 new person trips travelling by vehicle on the highway network of which 382 would be car or van trips for the previously approved 2020 scheme.

Saturday trip generation

- 6.4.8 The total net trip generation for the development proposals on a Saturday for the vehicular impact assessment is shown in Table 6.3.

Table 6.3: All uses net total person trips across development – Saturday

Time	Arrivals	Departures	Total
14:00-15:00	11	84	95
Daily	2116	1316	3432

- 6.4.9 As can be seen from Table 6.3, there would be 2,116 new person arrivals across a 12 hour period between 07:00 – 19:00 and 1,316 new departures resulting in a total of 3,432 new person trips on a Saturday.
- 6.4.10 This represents a significant reduction over the previously assessed 4,466 new person arrivals across a 12 hour period between 07:00 – 19:00 and 3,771 new departures resulting in a total of 8,237 new person trips on a Saturday.
- 6.4.11 This reduction of over half the trips is due to the sharp drop in quantum of retail trips not being offset by the minor increase in residential weekend trips.

All land uses vehicle travel mode share – Saturday

- 6.4.12 The vehicular travel mode share for all uses of the proposed development during the Saturday peak hour is shown in Table 6.4.

Table 6.4: Net vehicle travel mode share – All uses – Saturday peak hour

Mode	Saturday peak hour		
	Arr.	Dep.	Total
Car or van	-8	-1	-9
Car or van pass	1	4	5
Taxi	0	0	0
Motorcycle	0	1	1
Total	-7	4	-3

6.4.13 As can be seen from Table 6.4, there would be a reduction in vehicle trips (excluding deliveries) on the highway network during the Saturday peak hour.

6.5 Sustainable modes - all land uses

6.5.1 The peak hours calculated for the sustainable travel modes impact assessment are:

- 17:00 – 18:00 on a weekday; and
- 13:00 -14:00 on a Saturday.

6.5.2 The Saturday peak hour used is the same as the previous assessment, being based on the peak person trip generation rather than the highway use peak. This represents a robust scenario for assessing the sustainable trips as they are not affected by the highway peak hours. The AM peak has not been assessed as this is much lower than the PM peak.

Weekday trip generation

6.5.3 The total net trip generation for the sustainable modes impact assessment for the development proposals on a weekday is shown in Table 6.5.

Table 6.5: All uses net total person trips across development – Weekday

Time	Arrivals	Departures	Total
17:00-18:00	972	244	1216
Daily	3077	2913	5990

All uses sustainable travel mode share - Weekday

6.5.4 The revised travel mode share for all uses of the proposed development during the PM peak hour is shown in Table 6.6.

Table 6.6: Net sustainable travel mode share – All uses – Weekday

Mode	PM peak hour		
	Arr.	Dep.	Total
Walking	331	108	439
Cycle	23	6	29
Bus	217	60	277
Train	70	20	90
Total	641	194	835

- 6.5.5 As can be seen from Table 6.6, there would be a total of 835 new sustainable travel mode trips in the PM peak hour. This is broadly similar to the previous assessment of 874 trips.

Saturday trip generation

- 6.5.6 The revised total net trip generation for the development proposals on a Saturday is shown in Table 6.7.

Table 6.7: All uses net total person trips across development – Saturday

Time	Arrivals	Departures	Total
13:00-14:00	11	84	95
Daily	2116	1316	3432

- 6.5.7 As can be seen from Table 6.7, there would be a net increase of 3,432 person trips across the day. This is less than half of the 8,237 new person trips on the previously assessed Saturday. This is due to the large reduction in retail trips compared to the modest increase in residential trips.

All uses sustainable travel mode share - Saturday

- 6.5.8 The travel mode share for all uses of the proposed development during the Saturday peak hour is shown in Table 6.8.

Table 6.8: Net sustainable travel mode share – All uses – Saturday

Mode	Saturday peak hour		
	Arr.	Dep.	Total
Walking	13	47	60
Cycle	0	2	2
Bus	3	22	25
Train	2	9	11
Total	18	80	98

- 6.5.9 As can be seen from Table 6.8, there would be a total of 98 new sustainable travel mode trips during the Saturday peak hour.

6.6 Servicing vehicle trips

6.6.1 The assessment of servicing vehicles has been calculated using the same principles as the original 2020 TA. The resultant net CCS development servicing trips for a weekday and Saturday are set out in Table 6.9 and Table 6.10 respectively.

Table 6.9: Net servicing trip generation - Weekday

Time	Arrivals		Departures		Total		Total
	LGVs	HGVs	LGVs	HGVs	LGVs	HGVs	
07:00-08:00	9	4	9	4	18	8	26
08:00-09:00	13	2	10	3	23	5	28
09:00-10:00	15	7	18	6	33	13	46
10:00-11:00	13	-3	3	0	16	-3	13
11:00-12:00	5	5	15	3	20	8	28
12:00-13:00	8	-3	15	0	23	-3	20
13:00-14:00	12	1	11	-3	23	-2	21
14:00-15:00	1	3	9	0	10	3	13
15:00-16:00	19	-2	14	2	33	0	33
16:00-17:00	18	0	21	0	39	0	39
17:00-18:00	3	3	5	2	8	5	13
18:00-19:00	2	0	2	0	4	0	4
Total	118	17	132	17	250	34	284

Table 6.10: Net servicing trip generation - Saturday

Time	Arrivals		Departures		Total		Total
	LGVs	HGVs	LGVs	HGVs	LGVs	HGVs	
07:00-08:00	5	3	6	3	11	6	17
08:00-09:00	9	2	8	4	17	6	23
09:00-10:00	17	8	17	6	34	14	48
10:00-11:00	10	0	4	0	14	0	14
11:00-12:00	5	4	17	6	22	10	32
12:00-13:00	16	-1	14	-3	30	-4	26
13:00-14:00	13	1	13	1	26	2	28
14:00-15:00	0	3	8	0	8	3	11
15:00-16:00	18	0	15	3	33	3	36
16:00-17:00	15	0	19	0	34	0	34
17:00-18:00	8	3	5	3	13	6	19
18:00-19:00	-1	2	3	2	2	4	6
Total	115	25	129	25	244	50	294

6.6.2 As can be seen from Table 6.9, the net servicing trip generation results in a total of an additional 46 service vehicles in the weekday highway AM peak hour of 09:00 – 10:00 and a total of 13 vehicles in the PM peak hour of 17:00 – 18:00 will be

on the local highway network. This compares to 68 vehicles and 20 vehicles respectively for the previous assessment. During the Saturday highway peak hour of 14:00 – 15:00, Table 6.10 indicates a total of an additional 11 service vehicles will be on the local highway network, down from 17 vehicles.

6.7 Summary

- 6.7.1 The changes in the quantum of different land uses has resulted in a reduced level of trips than was previously assessed in the approved 2020 TA. The revised trip generation predicted for the vehicle modes and servicing trips have been used within the junction capacity assessment set out in Chapter 7. The trip generation calculated for the sustainable modes has formed the basis of the sustainable modes impact assessment set out in Chapter 9.

7 IMPACT ASSESSMENT – HIGHWAY NETWORK

- 7.1.1 This chapter sets out the findings of the impact assessment undertaken on the highway network.

7.2 Traffic distribution

- 7.2.1 A traffic distribution model was built to apply the predicted vehicular trip generation including service vehicles for the proposed CCS development to the existing vehicle flows on the assessed highway network. This model has been updated with the revised vehicle trips (including service vehicles) discussed in Chapter 6.
- 7.2.2 As per the previous assessment, the CCS development vehicle trip generation has been applied and distributed onto the local highway network based on each development block's location in relation to the A053 Coventry Ringway junctions and professional judgement. Existing vehicle trips associated with car parking within the site has been redirected to Salt Lane car park, which is now operational.

7.3 Scope of assessment

- 7.3.1 The traffic model includes links to the A4053 Coventry Ringway Junctions 5, 6, 7, 9 and 10. The assessed road network does not connect Junction 8 of the A4053 Coventry Ringway.
- 7.3.2 The traffic model indicated that the predicted traffic flows on links to junctions on the A4053 Coventry Ringway will not increase by more than 30%. A review of Department for Transport (DfT) Count Point data for the A4053 Coventry Ringway shows the predicted development traffic will be well below 10% of the ring road flows for the weekday peak hours. Therefore, the A4053 Coventry Ringway junctions were not assessed within the original Transport Assessment. Following a reduction in traffic with the revised scheme this approach remains valid.

7.4 Cumulative schemes

- 7.4.1 An updated list cumulative schemes have been reviewed and included within the impact assessment. It should be noted that due to their location none of the sites add significant additional vehicle trips onto the assessed highway.

7.5 Traffic growth

7.5.1 The first full year of opening for the development is 2034. Therefore, the updated traffic growth rates have been obtained from the DfT's TEMPro software.

7.5.2 To assess the opening year and ten years after opening, the following National Transport Model (NTM) local growth rates have been obtained for the purposes of the highway impact assessment:

- 2019 – 2034 AM Weekday: 1.1377
- 2019 – 2034 PM Weekday: 1.1397
- 2019 – 2034 Saturday: 1.1417
- 2034 – 2044 AM Weekday: 1.0783
- 2034 – 2044 PM Weekday: 1.0735
- 2034 – 2044 Saturday: 1.0746

7.6 Assessment scenarios

7.6.1 The following assessment scenarios have been undertaken for the weekday AM and PM peak hours and the Saturday peak hour:

- **2022 Baseline** – See Figures 1, 2 and 3 for the traffic flow diagrams.
- **2034 Future Baseline** - See Figures 4, 5 and 6 for the traffic flow diagrams.
- **2034 + Development** - See Figures 7, 8 and 9 for the traffic flow diagrams.
- **2044 + Development** - See Figures 10, 11 and 12 for the traffic flow diagrams.

7.7 Junction capacity assessment

7.7.1 The junction capacity assessment results for the assessed highway network in the 2022 Baseline scenario has been updated with the revised TEMPro growth as the original baseline was 2019.

7.7.2 Salt Lane / Little Park Street junction (Site 1), whilst surveyed, was not assessed in terms of capacity as Little Park Street is one-way northbound and Salt Lane is a one-way egress off of Little Park Street. Therefore, there would be no opposing movements resulting in no capacity issues. Junction capacity assessments have therefore been undertaken for the previously assessed junctions as follows:

- Site 2 – New Union Street / Little Park Street roundabout
- Site 3 – New Union Street / Greyfriars Lane junction
- Site 4 – Greyfriars Road / Warwick Road roundabout
- Site 5 – Greyfriars Road / City Arcade car park access junction
- Site 6 – Queen Victoria Road / Croft Road / Rover Road junction
- Site 7 – Queen Victoria Road / Lower Precinct car park access and service road access junction
- Site 8 – Upper Well Street / Corporation Street junction
- Site 9 – Corporation Street / West Orchard car park and service road access junction
- Site 10 – Corporation Street / The Burges / Hales Street / Bishop Street junction

7.7.3 Models of Sites 2 to 10 were built using Junctions 9 software with geometry being taken from topographical survey data. The traffic flows were obtained from traffic surveys undertaken on Thursday 21st and Saturday 23rd November 2019. The existing junction capacity modelling results were previously validated against queue length surveys undertaken on the same dates. These flows have then been updated to represent the 2022 Baseline flows by applying TEMPro growth.

7.7.4 The model for the future scenario for site 6 has been assessed using LinSig to explore the potential of introducing signals on this junction.

7.7.5 The assessment of a junction's capacity is provided by its Ratio of Flow to Capacity (RFC). RFC is measured as a percentage with 85% - 90% generally recognised as the threshold at which a junction is reaching its theoretical capacity to allow for daily variation in traffic. In addition, the queue lengths predicted by the models

indicate potential issues with junction capacity and design. The queue lengths for this assessment have been provided in PCU's (Passenger Car Unit's).

- 7.7.6 When reviewing the results it should be noted that the modelling is based on a worst case vehicle trip generation which assumes the existing modal split, resulting in a high car usage. As the scheme progresses and detailed Travel Plans are provided for the different elements of the wider scheme it is expected that the development car trips will reduce further as sustainable travel modes are encouraged. This includes by limiting the resident car parking in the City Centre.
- 7.7.7 The revised junction modelling takes into account the increased background flows (due to the later opening year increasing the TEMPro growth) and the reduced development flows.
- 7.7.8 Based on the previously agreed junction alterations all the junctions are expected to operate as efficiently as those in the modelling undertaken for the approved 2020 TA.
- 7.7.9 As highlighted in the original TA, The proposed mitigation, by way of alterations to the junctions, demonstrates one possible option that could be used to accommodate the development traffic on the highway network. However it is noted that the vehicle flows may be further refined and CCC are already implementing other initiatives that may impact on the quantum of vehicles in the City Centre, vehicle routeings and general accessibility. There will also be other considerations to take into account when reviewing the final detailed designs including CCC's preferred junction types and their general approach to discouraging traffic in the City Centre. In light of this, these proposals show that it is possible to mitigate against the impact of the proposed development on the highway network albeit that alternative options may be preferred as the design progresses.

8 IMPACT ASSESSMENT - CITY CENTRE PARKING

- 8.1.1 This addendum does not change the findings or impact of the development on the city centre parking.
- 8.1.2 The proposed development will still remove all public car parking within the boundary of the site and there is no intention to re-provide public car parking elsewhere. Coventry currently has a large car parking supply within the city centre with tariffs that are unlikely to encourage modal shift to more sustainable forms of transport.

9 IMPACT ASSESSMENT - SUSTAINABLE TRAVEL MODES

- 9.1.1 The impact of the development proposals on the walking links within the development and cycle routes to key destinations has been assessed. In addition, the increase in bus and train patronage has been calculated and reviewed based on the updated trip generation.

9.2 Walking

- 9.2.1 The proposed development will provide improved pedestrian amenity through the provision of significant public realm improvements and enhanced passive surveillance due to increased active frontage and night-time economy. In addition, gradient improvements to the site improve accessibility for all. This is in-line with Local Plan policy AC4: *Walking and Cycling* and Chapter 5 of the Coventry Connected SPG.
- 9.2.2 Being located in the city centre, the proposed development provides excellent connectivity via walking routes to established trip generators such as residential areas, education, employment, healthcare, retail destinations, leisure attractions and public transport interchanges. This is also in-line with Local Plan policy AC4: *Walking and Cycling* and Chapter 5 of the Coventry Connected SPG.

9.3 Cycling

- 9.3.1 The development proposals will provide policy compliant short-stay visitor cycle parking and long-stay staff and resident cycle parking spaces. The visitor cycle parking will be located at 'access points' to the development to allow visitors to cycle to the development but not cycle through the pedestrianised areas.
- 9.3.2 The visitor cycle parking will be located to make best use of the radial cycle routes which provide cycle access to the city from its outer areas. Some parking areas will also include mini bike repair stations with robust permanent cycle pumps. This is in-line with Local Plan policy AC4: *Walking and Cycling* and Chapter 5 of the Coventry Connected SPG.
- 9.3.3 Being located in the city centre, the proposed development provides excellent connectivity via cycle routes to established trip generators such as residential areas, education, employment, healthcare, retail destinations, leisure attractions and public transport interchanges. This is also in-line with Local Plan policy AC4: *Walking and Cycling* and Chapter 5 of the Coventry Connected SPG.

9.4 Bus

- 9.4.1 Being part of the city centre, the site is well located to make use of the local bus network. Pool Meadow Bus Station is located on Fairfax Street, to the north east of the site within a 10-minute walk and the route is mostly car-free bar the need to cross Fairfax Street. A number of bus stops are located within a short walking distance of the CCS site on Queen Victoria Road, Croft Road and Greyfriars Road. This is in-line with Local Plan policy AC5: *Bus and Rapid Transit* and Chapter 6 of the Coventry Connected SPG.
- 9.4.2 The proposed development is predicted to generate a similar number of bus trips to the previously approved TA.

9.5 Rail

- 9.5.1 The impact on the rail remains broadly unchanged and therefore acceptable.

10 CONSTRUCTION

- 10.1.1 A Demolition Traffic Management Plan (DTMP) and Construction Traffic Management Plan (CTMP) will be prepared as part of the reserved matters application. This is in-line with Local Plan policy AC7: *Freight* and Chapter 8 of the Coventry Connected SPG. The DMP and CMP are secured by the use of appropriately worded planning conditions, with separate DMPs and CMPs being required for each of the individual construction areas / blocks/phases. The DMPs and CMPs will include vehicle routeing and the expected vehicle trip numbers and the expected number of staff per development phase.
- 10.1.2 The effect of the minor amendments on the construction impacts is expected to be minimal.

11 MITIGATION

11.1.1 This chapter sets out the proposed improvements to the local transport network in order to mitigate the impacts of the proposed development on it.

11.2 Walking

11.2.1 The mitigation remains as per the approved 2020 TA.

11.2.2 The entire public realm within the CCS development site will be improved as part of the proposals. This includes the pedestrianisation of the realigned Rover Road, to be known as Rover Way. The scheme also increases permeability across the site and designs out many of the level issues currently impacting on the pedestrian experience. The proposals will also provide an improved level passive surveillance for pedestrians.

11.3 Cycling

11.3.1 The mitigation remains as per the approved 2020 TA.

11.4 Buses

11.4.1 The mitigation remains as per the approved 2020 TA.

11.5 Highway

11.5.1 The mitigation remains as per the approved 2020 TA.

11.6 Sustainable transport

11.6.1 The scheme will continue to accommodate CCC's future aspirations for VLR, a city centre cycle hire scheme, electric scooter hire and the removal of through traffic from the city centre.

12 TRANSPORT POLICY CONTEXT

- 12.1.1 Whilst the NPPF has been updated there are no policy changes that have taken place since the submission of the approved TA that impact on the findings of the original report.

13 SUMMARY AND CONCLUSION

13.1 Summary

- 13.1.1 This application for a minor material amendment proposes an increase in the maximum parameter from 1,300 to 1,500 residential units and a reduction in the quantum of mixed-use non-residential uses. In addition, the 'HMV Empire' at 22 Hertford Street has been assessed as part of this addendum, as the site was previously vacant (and therefore not assessed) and is now in use and is being retained. The previously consented maximum and minimum development quantum parameters for car parking spaces and hotel (Class C1) use remain as per the hybrid consent and are not proposed to be altered.
- 13.1.2 Due to the alterations to the scheme and the expected quantum of different land uses there have been changes to the expected trip generation. The expected increase in residential trips is more than off-set by the reduction in the retail elements and this has led to an overall reduction in trips generated by the scheme by all modes including servicing.

13.2 Conclusion

- 13.2.1 The findings of this Addendum Transport Assessment demonstrate that the alterations result in a reduced trip generation, reducing the scheme's impact on the highway, parking and sustainable transport modes. The assessment methodologies remain valid and the impact on other highway and transport elements are negligible.

Figures

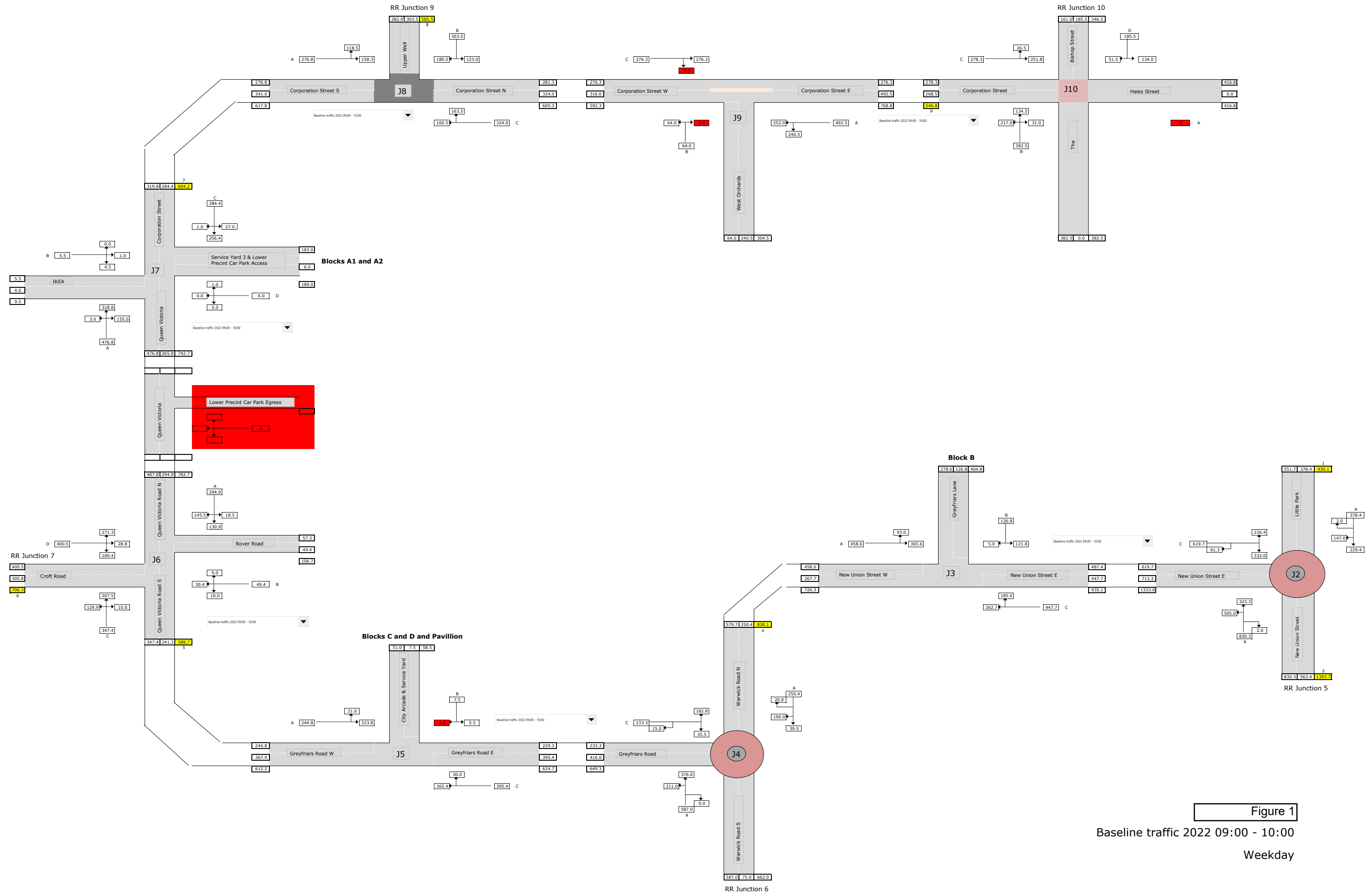


Figure 1

Baseline traffic 2022 09:00 - 10:00

Weekday

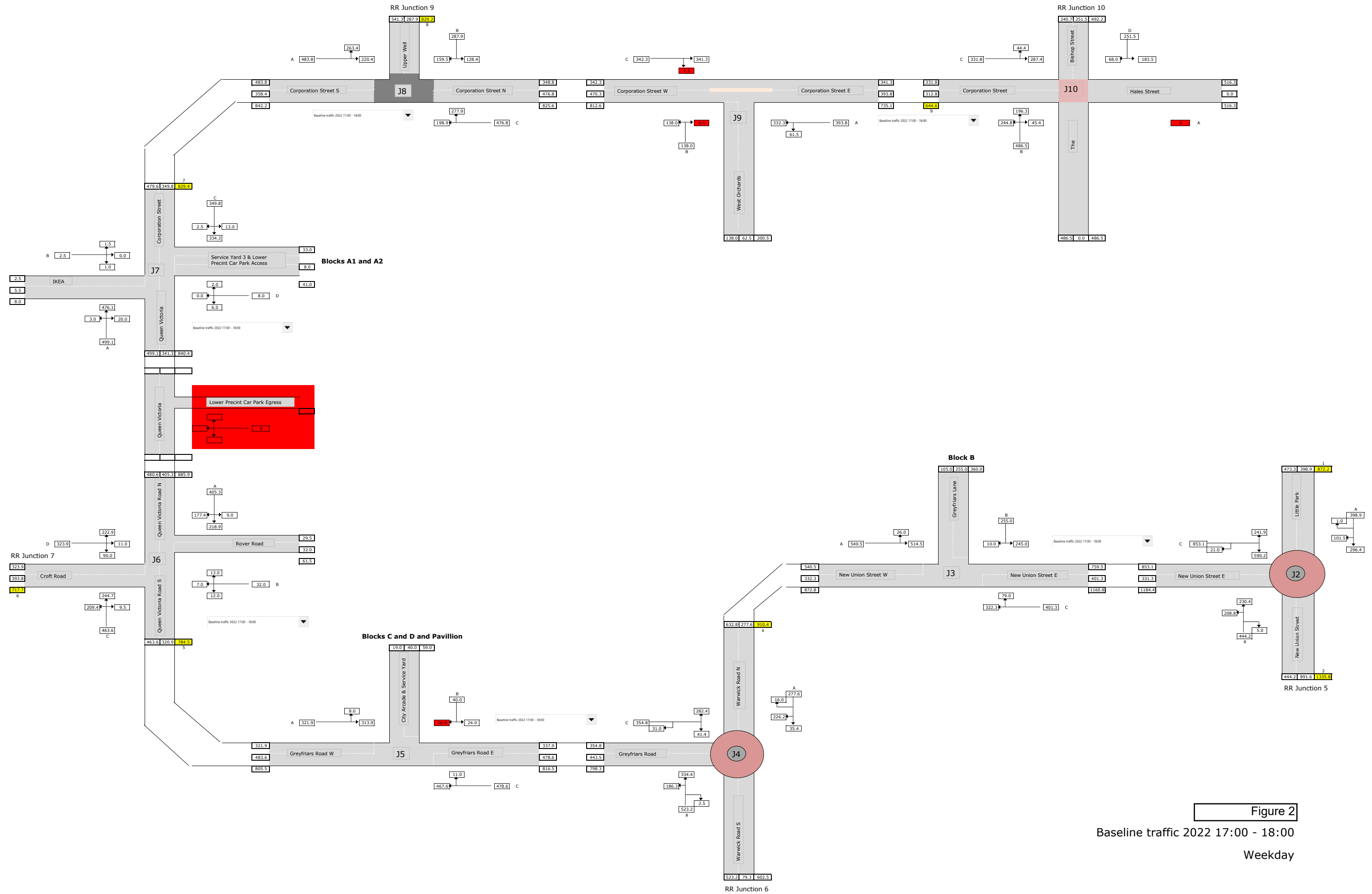


Figure 2

Baseline traffic 2022 17:00 - 18:00

Weekday

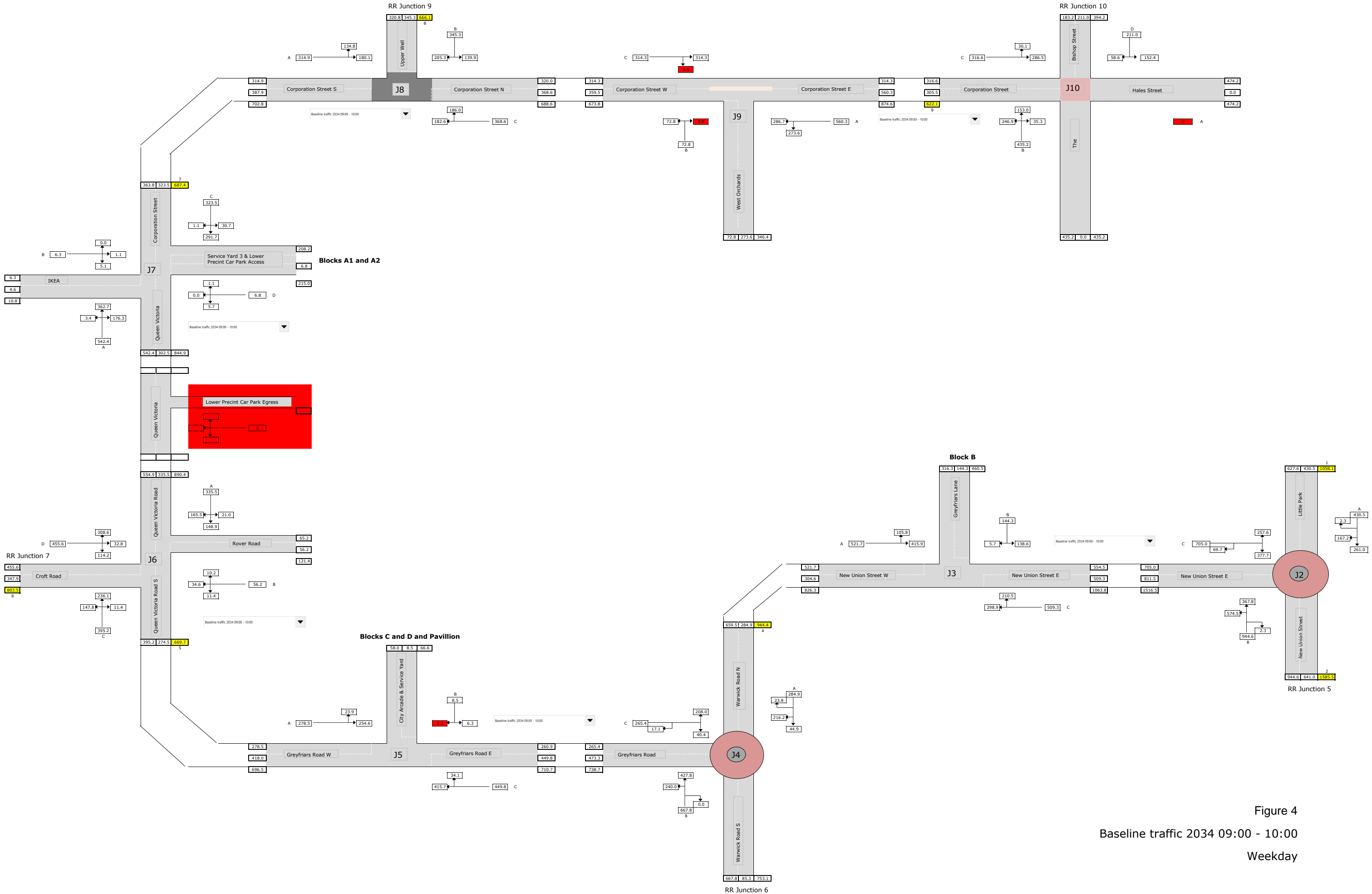


Figure 4
Baseline traffic 2034 09:00 - 10:00
Weekday

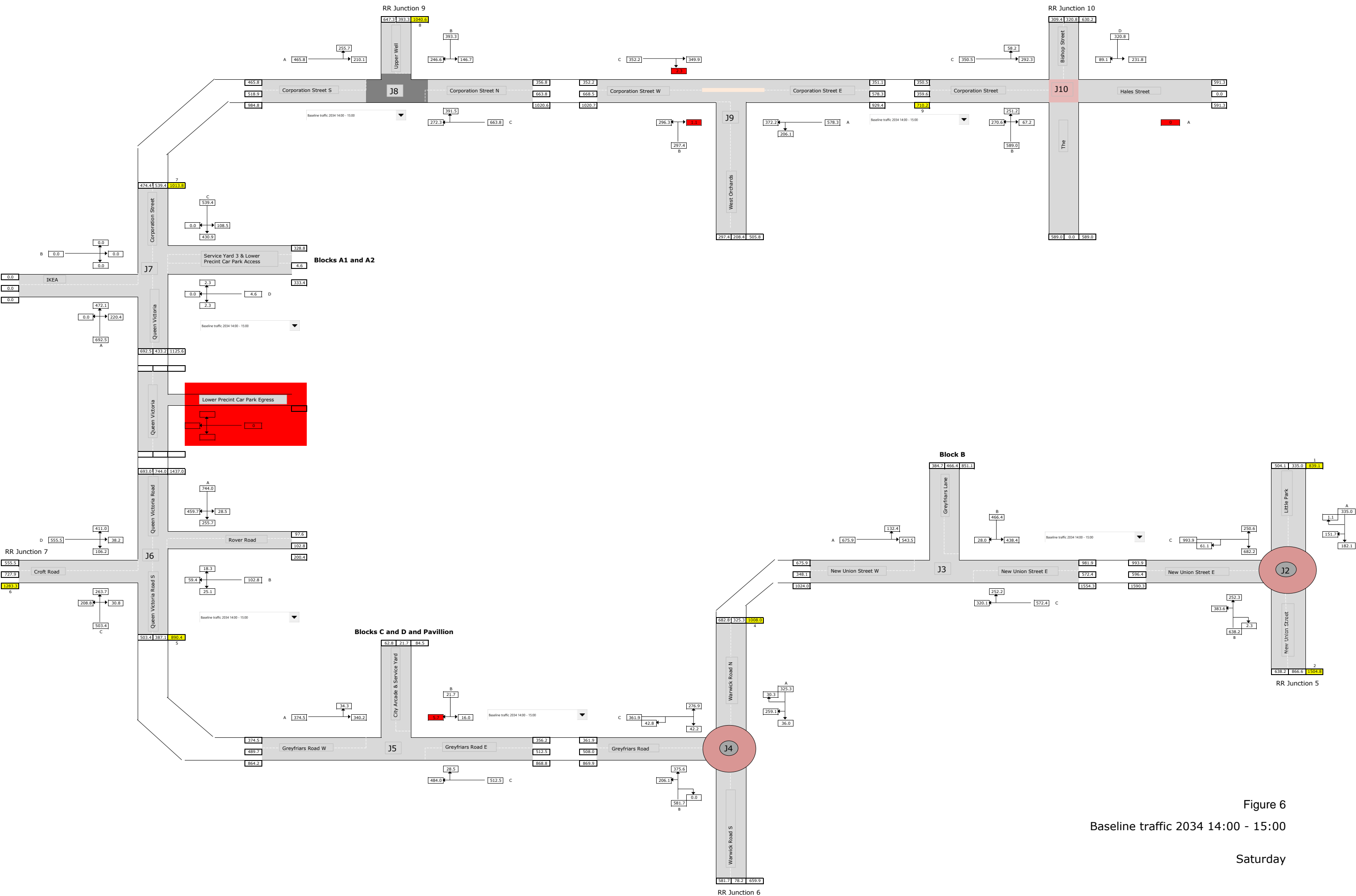
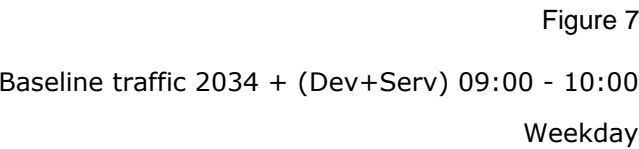


Figure 6
Baseline traffic 2034 14:00 - 15:00
Saturday



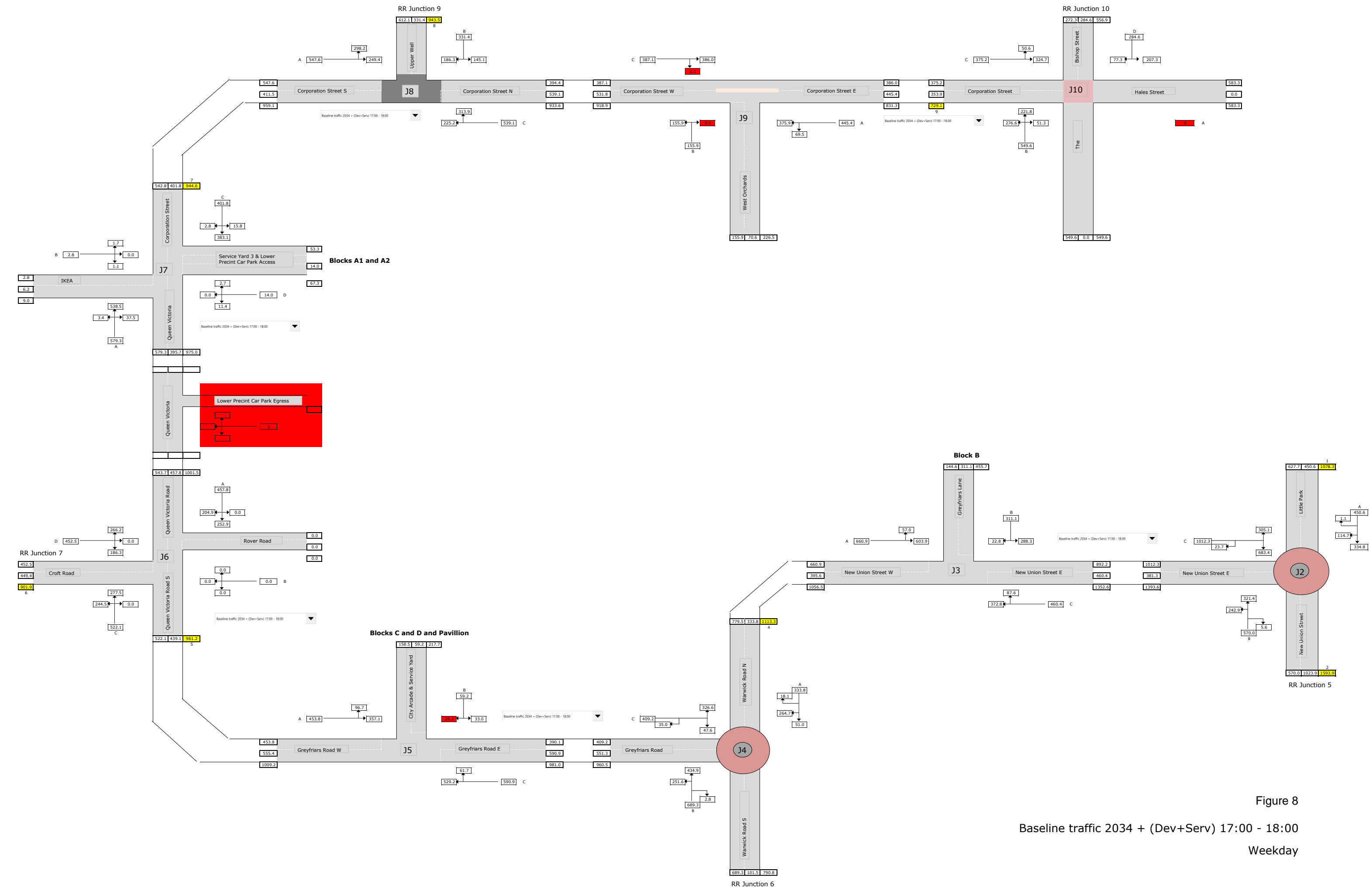


Figure 8

Baseline traffic 2034 + (Dev+Serv) 17:00 - 18:00
Weekday

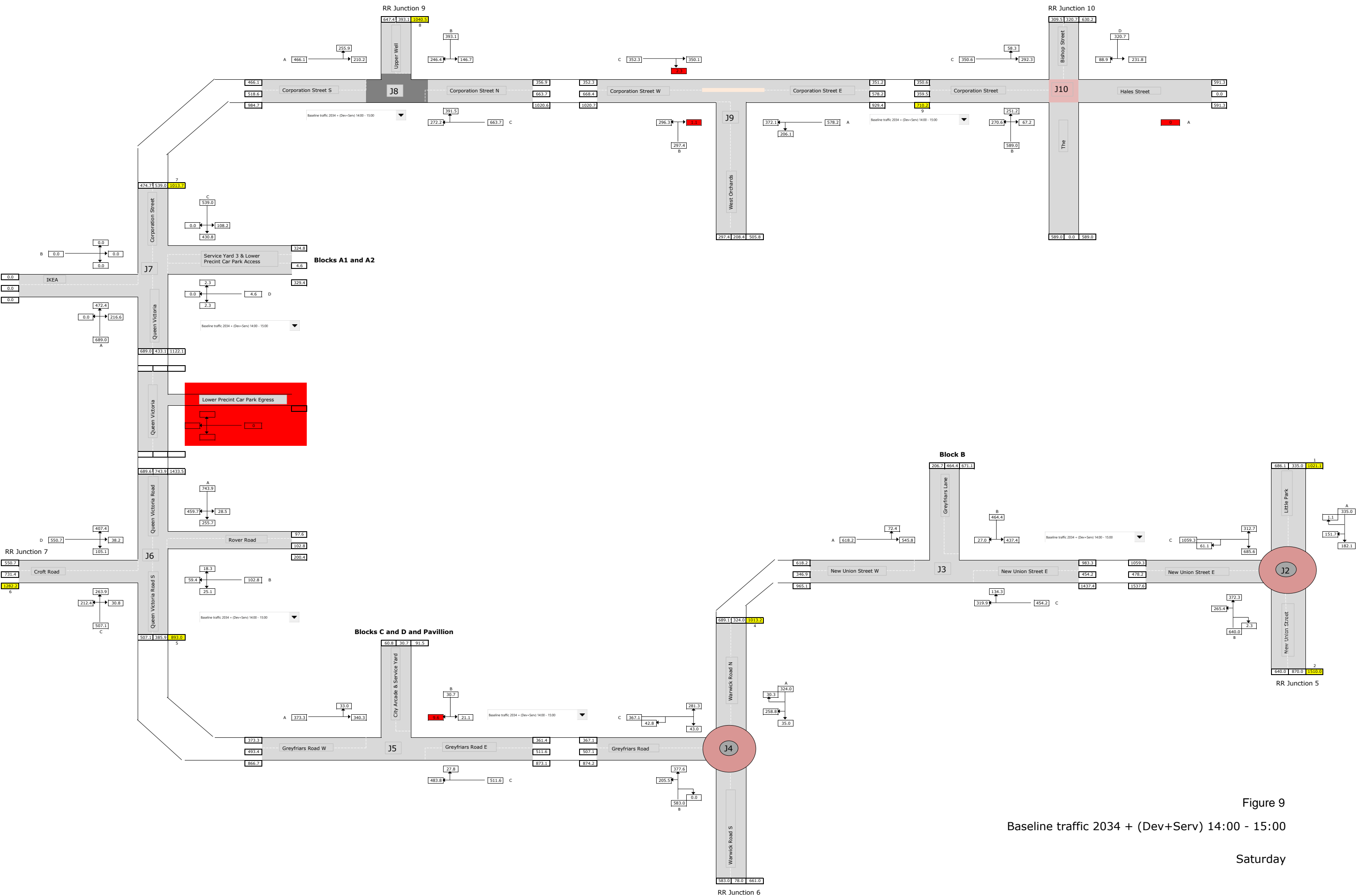


Figure 9

Baseline traffic 2034 + (Dev+Serv) 14:00 - 15:00

Saturday

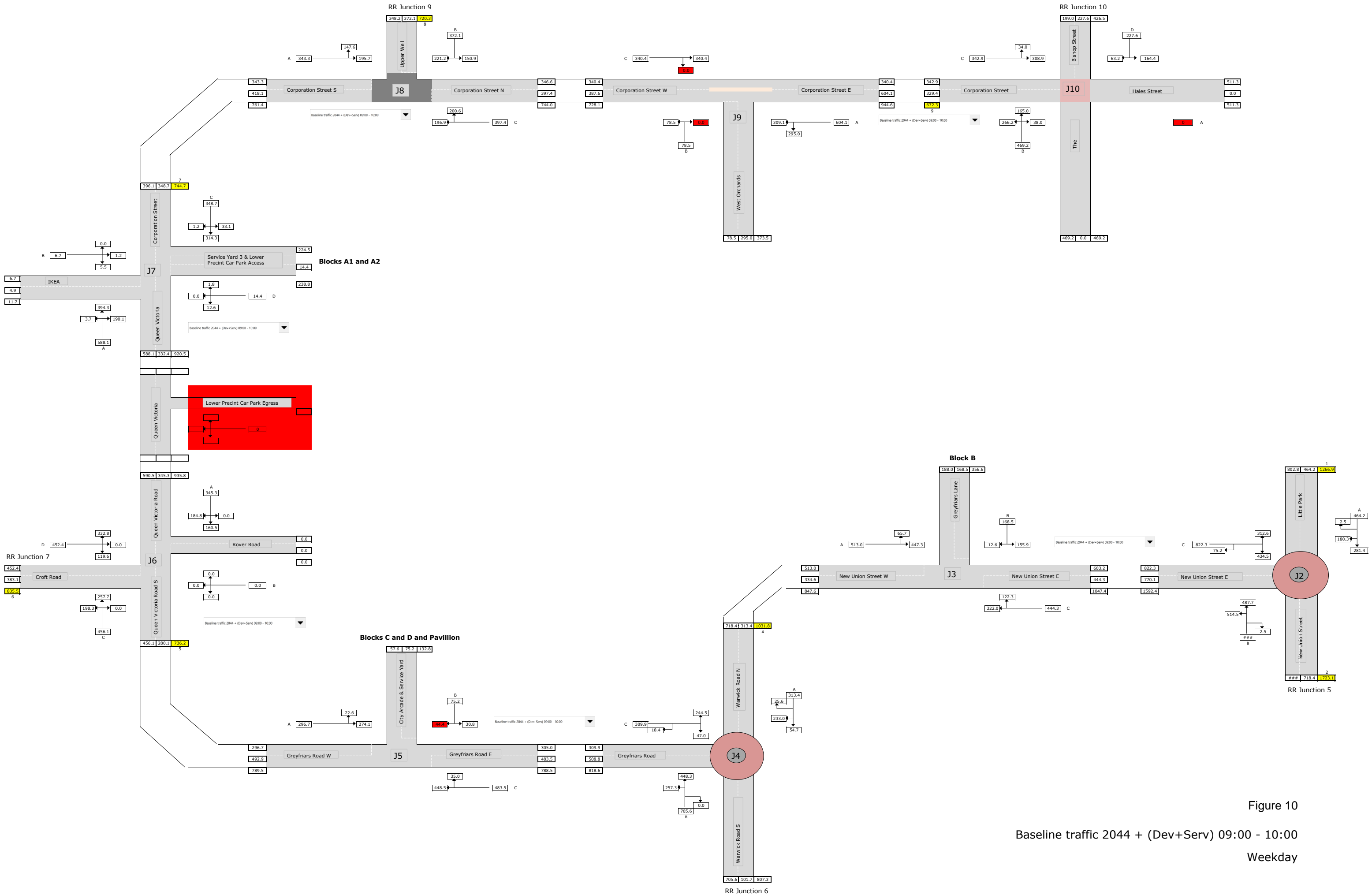


Figure 10

Baseline traffic 2044 + (Dev+Serv) 09:00 - 10:00
Weekday

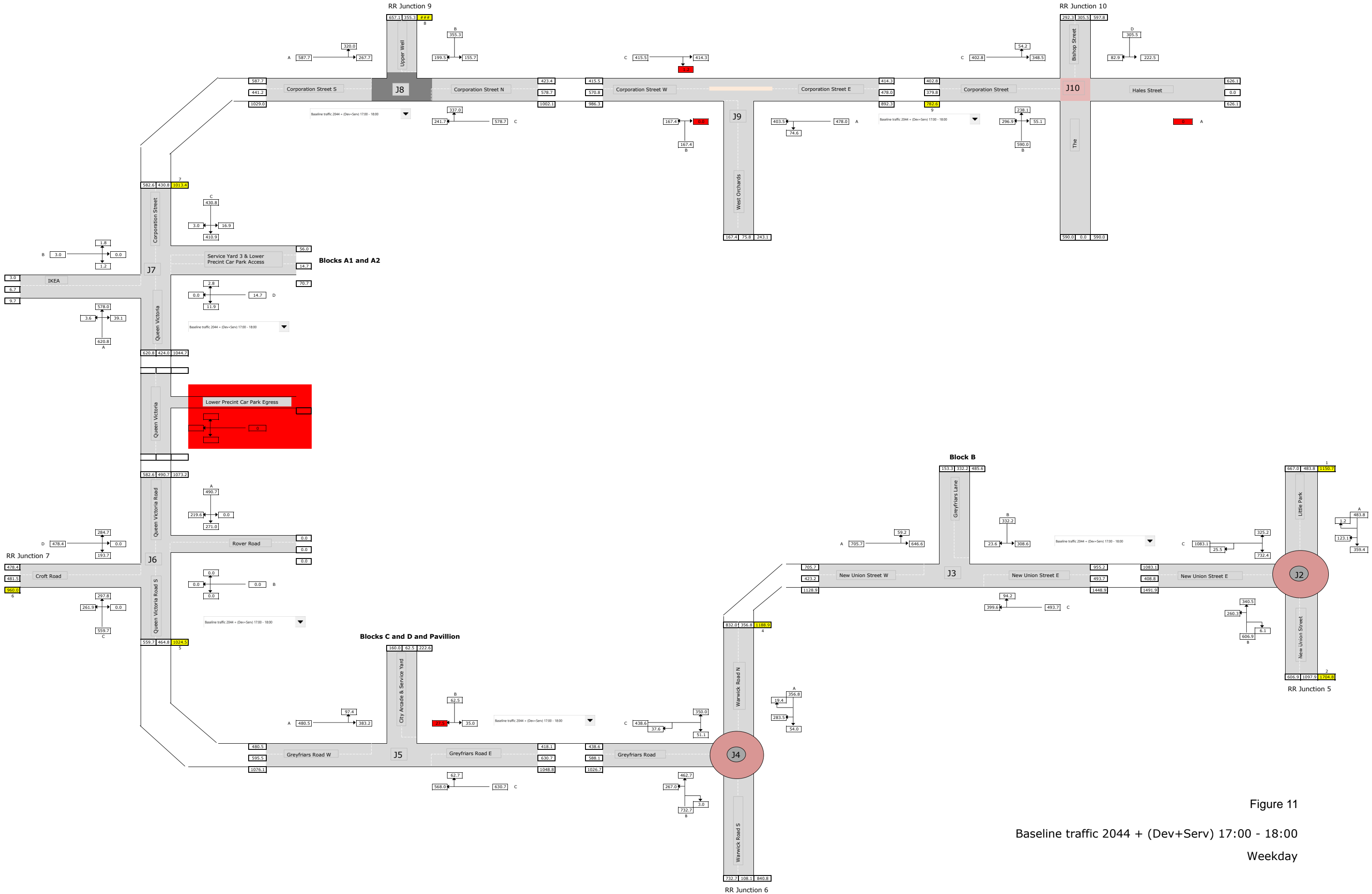


Figure 11

Baseline traffic 2044 + (Dev+Serv) 17:00 - 18:00
Weekday

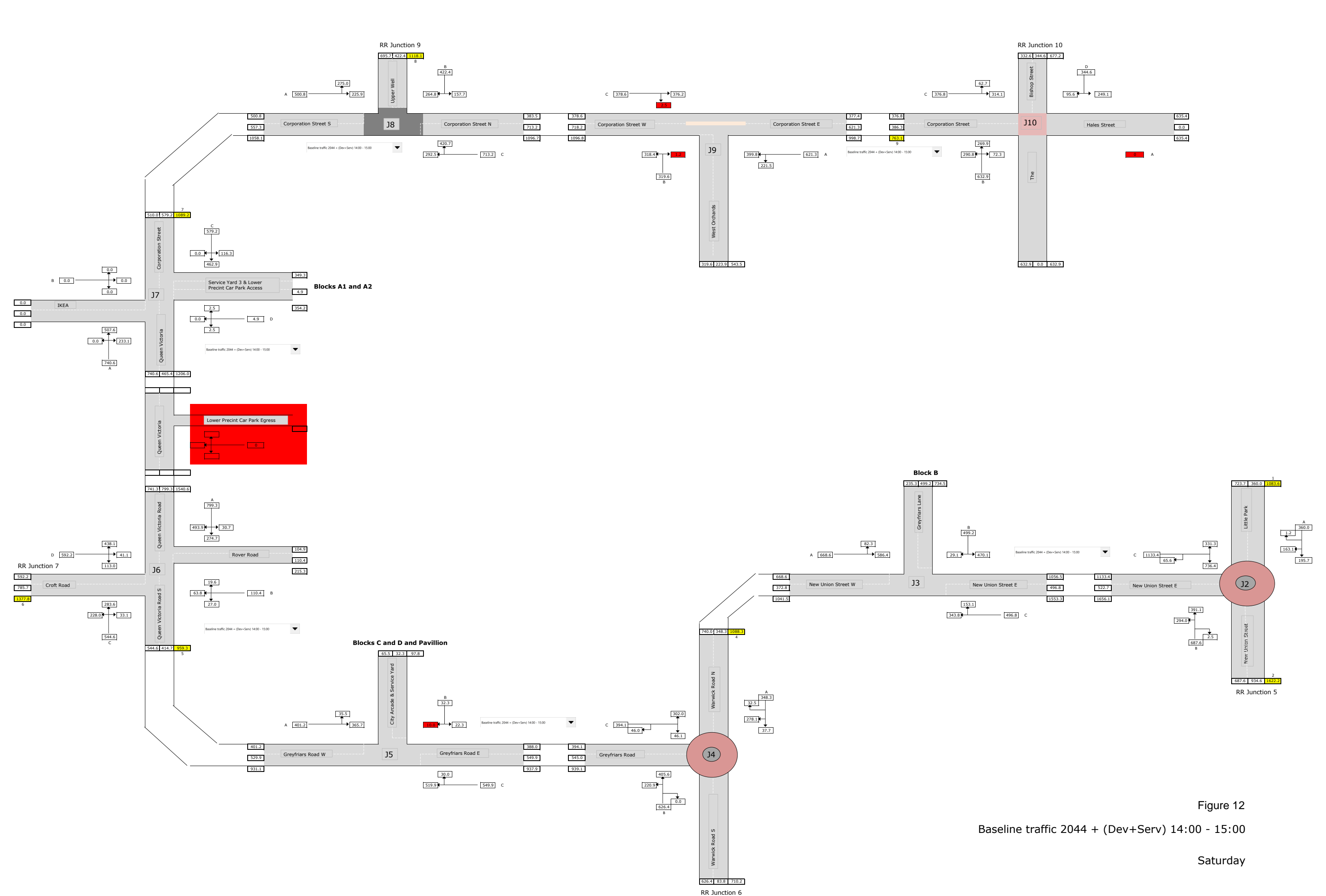


Figure 12

Baseline traffic 2044 + (Dev+Serv) 14:00 - 15:00

Saturday



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Appendix 8A.2

MAXIMUM PARAMETER TRIP GENERATION

Maximum Parameter net trip generation – all modes

Weekday AM and PM peak hours

	AM			PM		
Mode	Arrivals	Departures	Total	Arrivals	Departures	Total
Walking	7	131	138	331	108	439
Cycle	-1	8	7	23	6	29
Bus	-10	76	66	217	60	277
Train	-3	24	21	70	20	90
Car or van	-61	57	-4	265	33	298
Car or van pass	-6	16	10	54	13	67
Taxi	0	0	0	0	0	0
Motorcycle	0	5	5	12	4	16
Total	-74	317	243	972	244	1216

Servicing weekday AM and PM peak hours

	AM			PM		
Mode	Arrivals	Departures	Total	Arrivals	Departures	Total
LGV	15	18	33	3	5	8
HGV	7	6	13	3	2	5
Total	22	24	46	6	7	13

Saturday peak hour

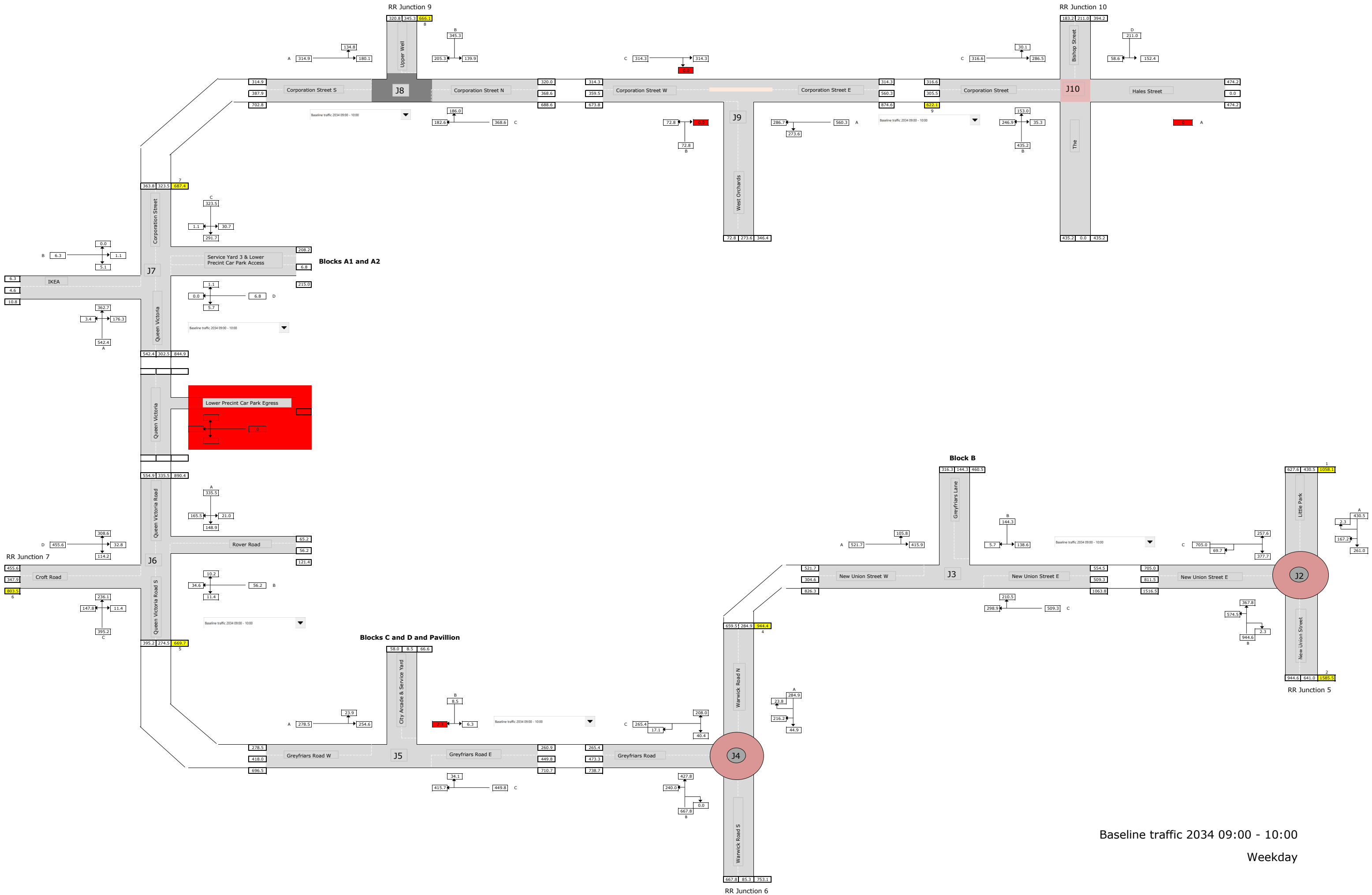
	Saturday Peak 14:00 - 15:00		
Mode	Arrivals	Departures	Total
Walking	13	47	60
Cycle	0	2	2
Bus	3	22	25
Train	2	9	11
Car or van	-8	-1	-9
Car or van pass	1	4	5
Taxi	0	0	0
Motorcycle	0	1	1
Total	11	84	95

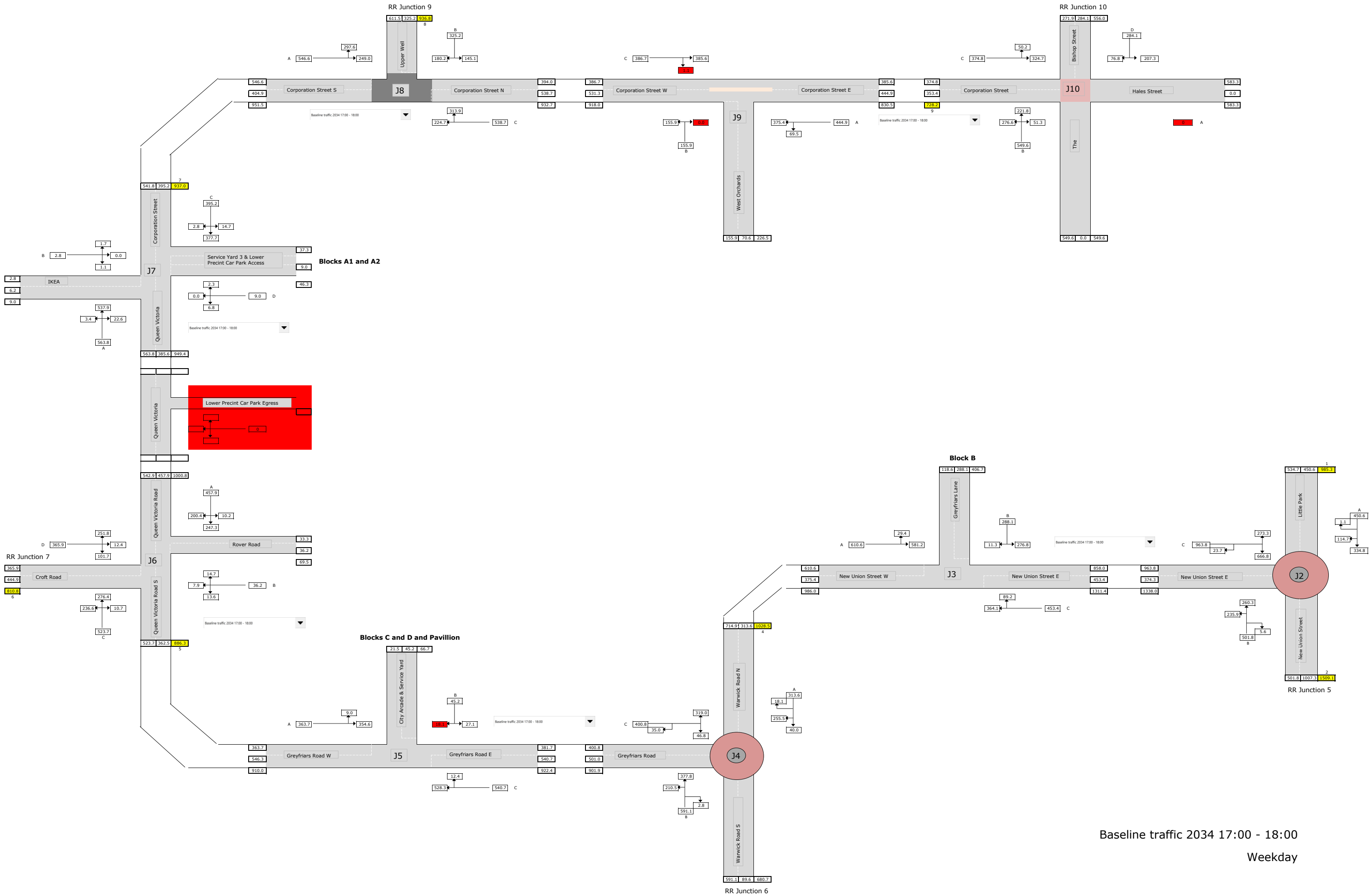
Servicing Saturday peak hour

	AM		
Mode	Arrivals	Departures	Total
LGV	0	8	8
HGV	3	0	3
Total	3	8	11

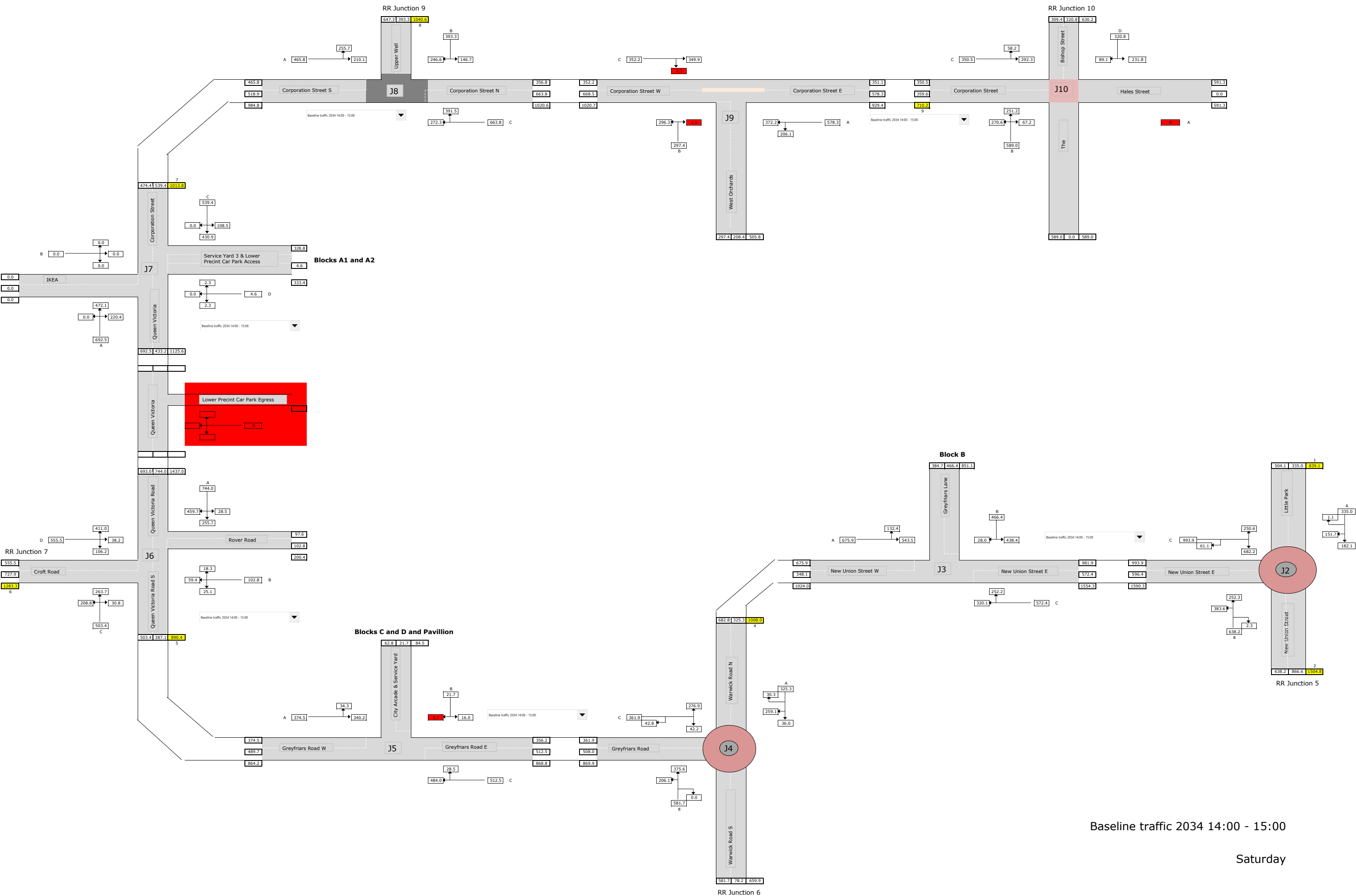
Appendix 8A.3

TRAFFIC LINK FLOWS



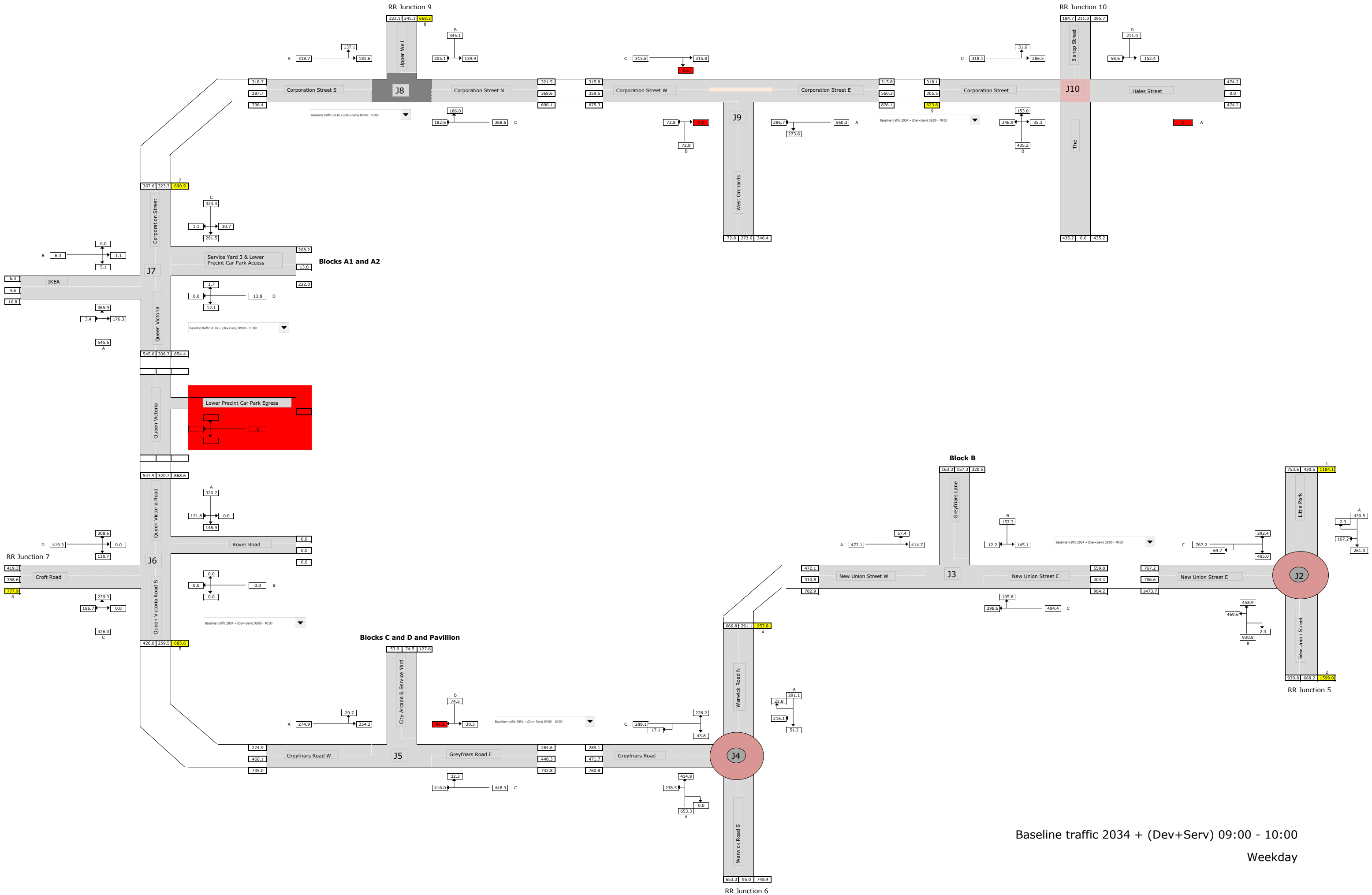


Baseline traffic 2034 17:00 - 18:00
Weekday

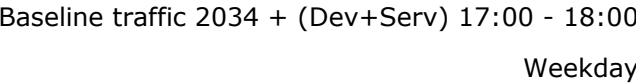


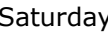
Baseline traffic 2034 14:00 - 15:00

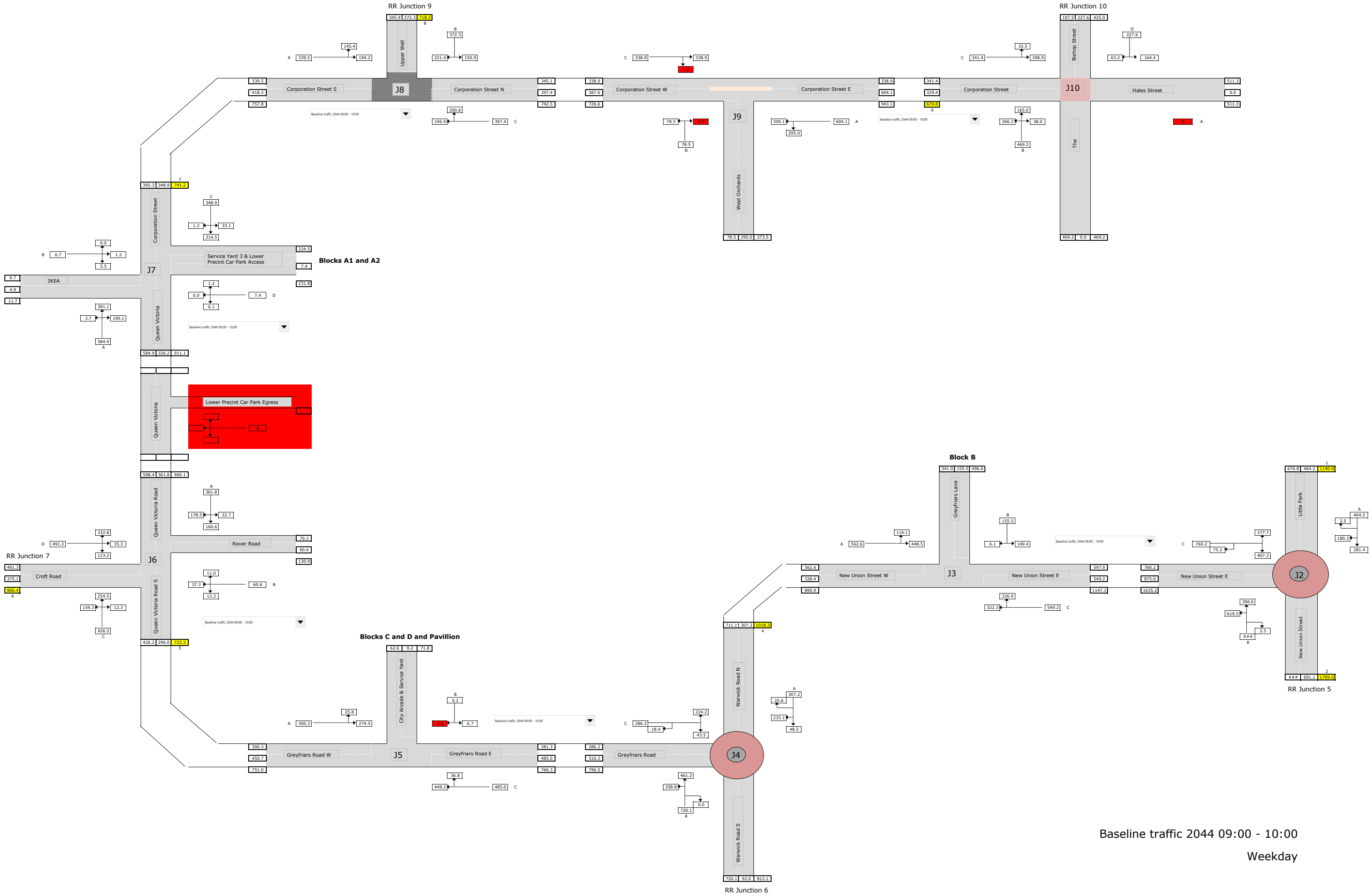
Saturday



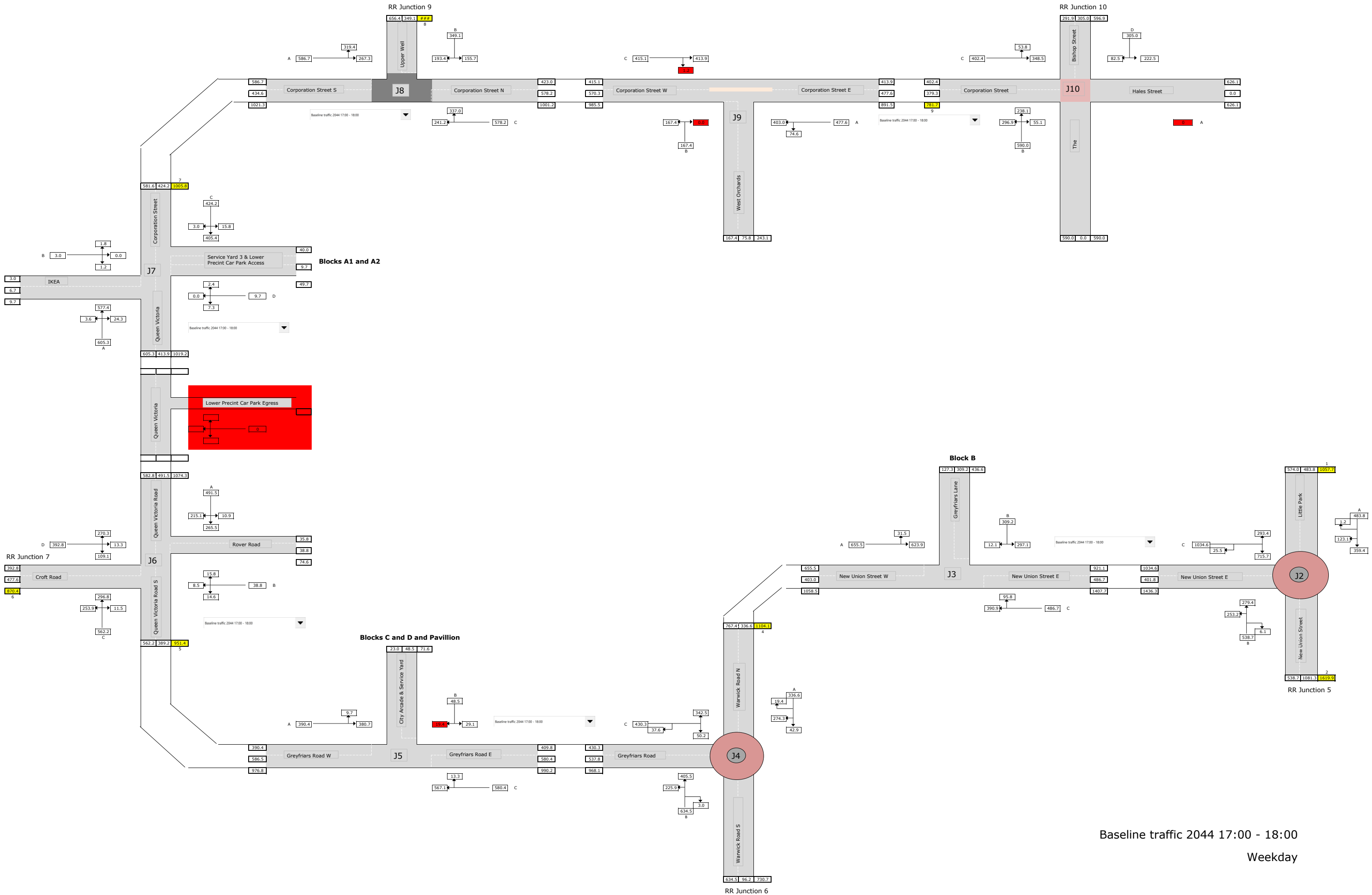
Baseline traffic 2034 + (Dev+Serv) 09:00 - 10:00
Weekday



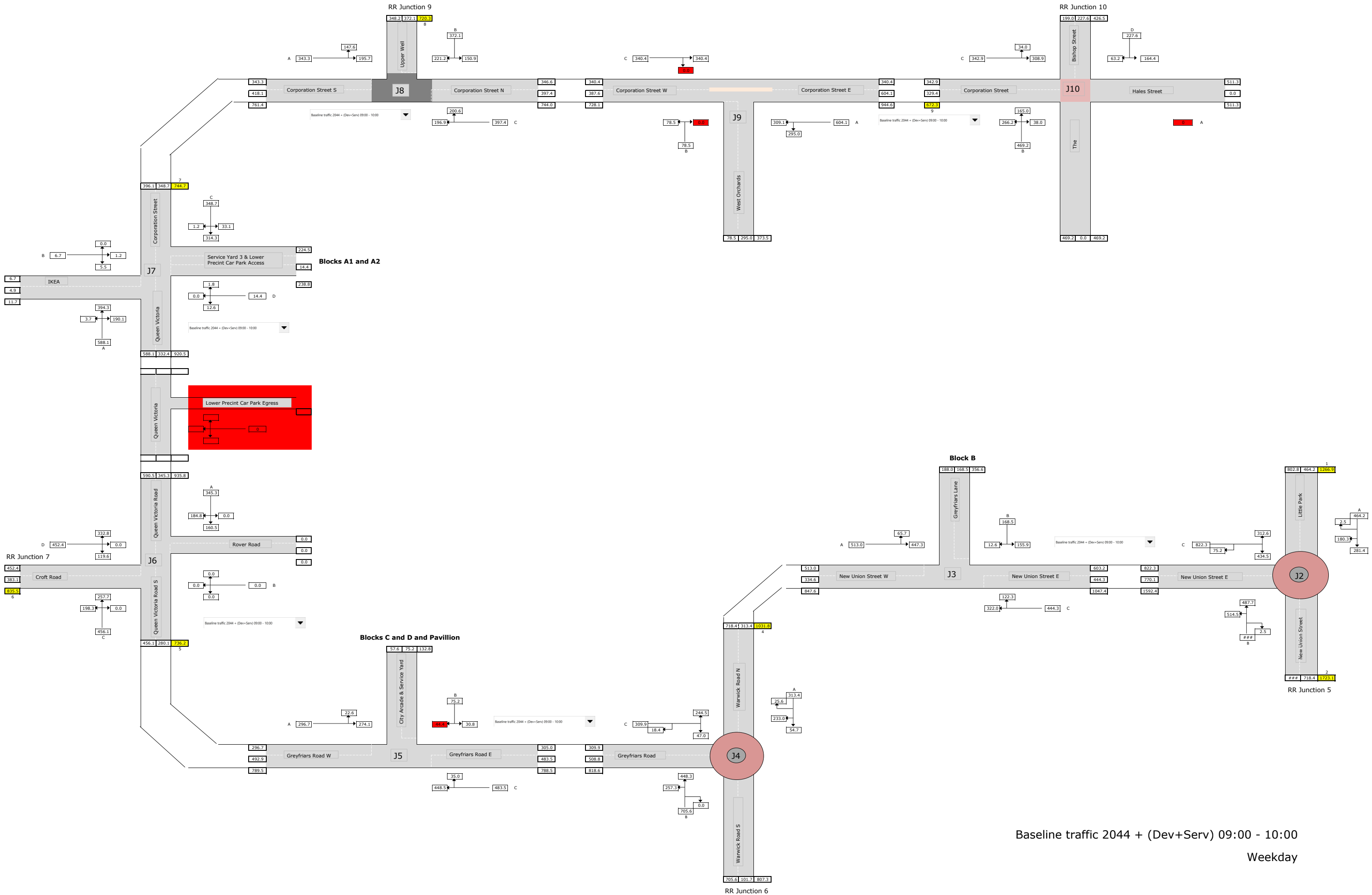




Baseline traffic 2044 09:00 - 10:00
Weekday







Baseline traffic 2044 + (Dev+Serv) 09:00 - 10:00
Weekday

