

# **Lighthouse Green Fuels**

## **Development Consent Order**

Preliminary Environmental Information Report

### **Chapter 18 - Appendix 18a: Base Traffic Survey Report**

Planning Inspectorate Reference: EN0110025

**2<sup>nd</sup> December 2025**

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# 1. Traffic Survey Report

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## 1.1 Introduction

- 1.1.1 This Appendix of the Preliminary Environmental Information Report (PEIR) summarises the available base traffic data relevant to the Proposed Development.
- 1.1.2 It identifies the existing project baseline data and the survey specification and data outputs for a traffic survey carried out in July 2025, the latter of which have been used as part of the main traffic assessment, as set out in Chapter 18: Traffic and Transport (PEIR Volume 1).

## 1.2 Background and Project Requirements

- 1.2.1 The Main Site is expected to be accessed via Seal Sands Road to the Seal Sands industrial area, located off the four-arm roundabout at the junction between the A1185, the A178 Seaton Carew Road and the main access road.
- 1.2.2 The baseline traffic flows have been derived from traffic surveys conducted in July 2025 on 3 junctions, and from existing traffic counts available from an online database maintained by DfT.
- 1.2.3 The traffic survey sites were chosen in relation to the A1185 as the identified HGV priority route for access to the Proposed Development, and its connections to the strategic road network.

## 1.3 Data Sources

- 1.3.1 The main sources of traffic data which are relevant to the Proposed Development are as follows (as listed in Table 1-1):
  - a. Department for Transport (DfT) traffic counts: this dataset provides street-level data for every junction-to-junction link on the UK motorway and 'A' road network, as well as for some additional minor roads throughout. This classified count data (directional) is presented in the form of Annual Average Daily Flows (AADF) and is derived from a combination of manual / observed counts and estimated counts (source: <https://roadtraffic.dft.gov.uk/#6/55.254/-9.415/basemap-regions-countpoints>).
  - b. Local junction turning counts undertaken in 2024: commissioned to inform the Preliminary Environmental Impact Report (PEIR) Update for the original LGF site, located off Huntsman Drive. This data is presented

as a combination of Manual Classified Counts (MCC), queue lengths, and Automatic Traffic Counts (ATC). The MCC data is available for 6 junctions within the study area, with the data then disaggregated by vehicle type and presented in 15-minute intervals across 24 hrs. The ATC data is available for 11 sites, with the hourly data disaggregated by vehicle type, direction and recorded continuously over a 7-day period. Finally, the queue length data is available for each of the 6 junctions referred to above and presented as maximum queue lengths per 5-minute interval, per lane.

- c. Local junction turning counts undertaken in 2025: traffic surveys undertaken for 3 sites, commissioned to inform assessment on A19 Wolviston junction (data is in the same format as the 2024 traffic data).

1.3.2 The A1185 corridor provides a critical link between the Proposed Development and the wider strategic road network. In particular, the roundabouts connecting the A1185 to the A689 and A19 serve as key junctions facilitating access to and from the site. The A19 is a major north-south trunk road forming part of the national strategic road network, while the A689 provides important east-west connectivity across Teesside. As such, these roundabouts are expected to accommodate a significant proportion of construction-related traffic. Surveying these junctions was considered as essential to understand their current operational performance and to assess their ability to accommodate future traffic growth associated with the Proposed Development.

1.3.3 The T&T assessment process, including methodology and results, are discussed within Chapter 18: Traffic and Transport (PEIR Volume 1). The purpose of this Appendix is simply to identify the traffic survey process and present the resulting survey outputs.

1.3.4 At this stage the available traffic data does not cover all of the roads identified in the Study Area. As part of the Environmental Statement (ES), it is anticipated that new traffic counts will be undertaken at locations where there are gaps in the baseline data and assessment is required. The traffic counts will be used to update the baseline for the ES including updating the DfT data utilised for this PEIR.

## 1.4 Data Types

1.4.1 Two primary data types were collected through the survey process:

- a. Queue length data was recorded during the AM and PM peak periods to capture the extent of vehicular queuing on each approach to the surveyed roundabouts; and
- b. Junction Turning Count (JTC) data was collected to quantify vehicular

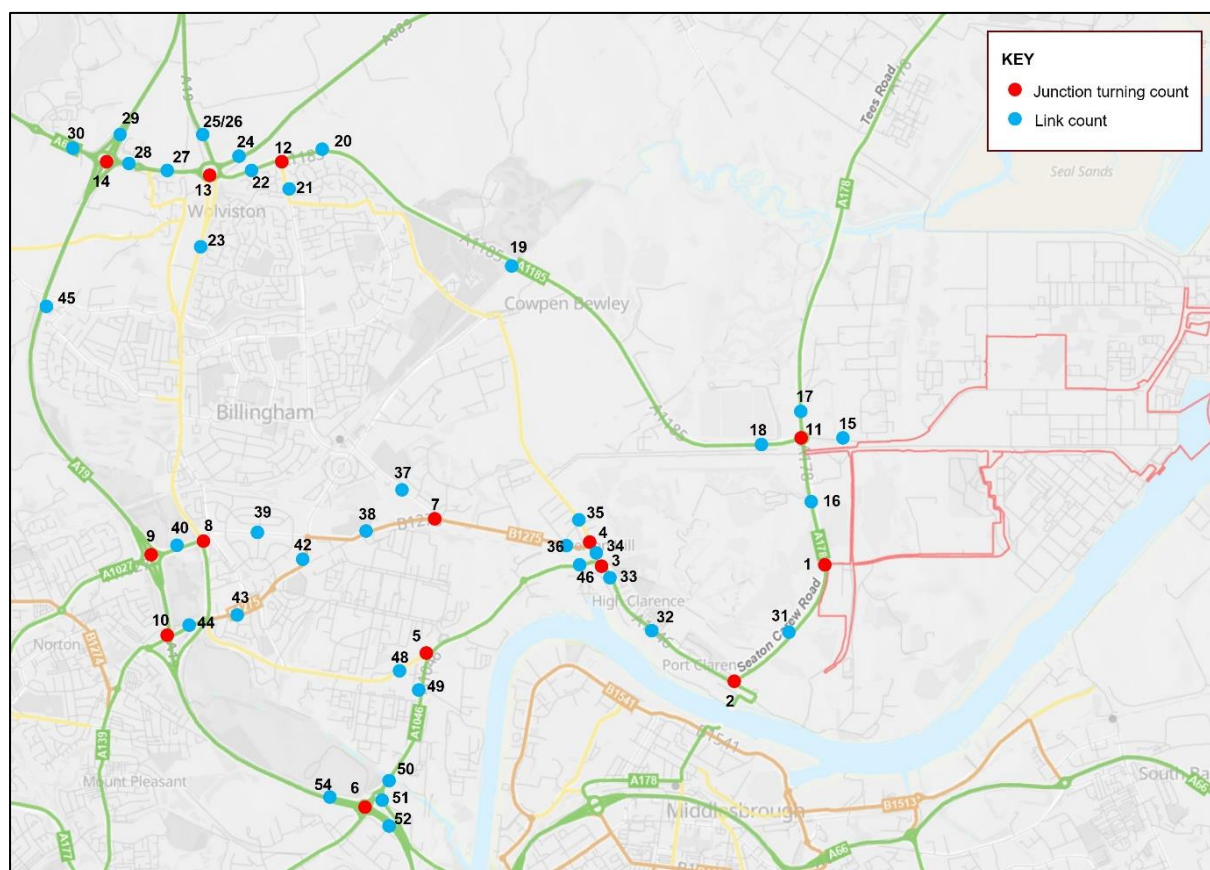
movements through each arm of the roundabouts. This data includes classified counts by vehicle type (e.g., cars, LGVs, HGVs) and direction of travel, enabling a detailed understanding of traffic distribution and flow patterns.

1.4.2 The traffic flows were collected in accordance with the following vehicle classifications:

- Car;
- LGV – Light Goods Vehicle;
- OGV1 – Other Goods Vehicle 1 (larger rigid vehicles with two or three axles);
- OGV2 – Other Goods Vehicle 2 (articulated vehicles and rigid vehicles with four or more axles);
- Bus and Coach;
- MCL – Motorcycle; and
- PCL – Pedal cycle.

## 1.5 Traffic Survey Locations

1.5.1 The location of all of the traffic survey sites are shown in Inset 1-1 and set out in Table 1-1.



**Inset 1-1**      **Location of survey data collection points**

**Table 1-1**      **List of survey data location points**

Site ref	Name	Location	Type
1	Junction 1	A178, Seaton Carew Road/Huntsman Drive Junction	JTC
2	Junction 2	A1046, Port Clarence Road/A178, Seaton Carew Road Junction	JTC
3	Junction 3	A1046, Haverton Hill Road/A1046, Clarence Street/B1275, Hope Street Junction	JTC
4	Junction 4	B1275, Robson Street/Hope Street Junction	JTC
5	Junction 5	A1046, Haverton Hill Road/New Road Junction	JTC
6	Junction 6	A19 Portrack Interchange	JTC
7	Junction 7	B1275, Belasis Avenue/Greenwood Road/Coxwold Way Roundabout	JTC

Site ref	Name	Location	Type
8	Junction 8	A1027/Wolviston Road/Central Avenue Double Roundabout	JTC
9	Junction 9	A19 Norton Interchange	JTC
10	Junction 10	A19/A139 Junction	JTC
11	Junction 11	A1185/A178, Seaton Carew Road (Seal Sands Roundabout)	JTC
12	Junction 12	A1185/Marsh House Avenue Junction	JTC
13	Junction 13	A689/A1185/A19 Southbound Off-Slip Roundabout	JTC
14	Junction 14	A19/Wolviston Interchange	JTC
15	Link 1	Site access road (East of Seal Sands Roundabout)	ATC
16	Link 2	A178, Seaton Carew Road (Between Huntsman Drive and A1185/A178, Seaton Carew Road (Seal Sands Roundabout))	ATC
17	Link 3	A178, Seaton Carew Road (North of Seal Sands Roundabout)	ATC
18	Link 4	A1185 (Between A1185/A178, Seaton Carew Road (Seal Sands Roundabout) and Saltholme North Power Station))	ATC
19	Link 5	A1185 (Between Saltholme North Power Station and Cowpen Woodland)	ATC
20	Link 6	A1185 (Between Cowpen Woodland and Marsh House Avenue)	ATC
21	Link 7	Marsh House Avenue	ATC
22	Link 8	A1185 (Between Marsh House Avenue and A689, Stockton Road/A1185 Roundabout)	ATC
23	Link 9	Wolviston Road	ATC
24	Link 10	A689, Stockton Road	ATC
25	Link 11	A19/Wynyrd Park Southbound Off-Slip	ATC
26	Link 12	A19 Wolviston Interchange Northbound On-Slip	ATC
27	Link 13	A689 (Between A689, Stockton Road/A1185 Roundabout and A689/Wolviston Services Roundabout)	ATC
28	Link 14	A689 (West of A689/Wolviston Services Roundabout)	ATC
29	Link 15	A19 Mainline (North of A19 Wolviston Interchange)	ATC
30	Link 16	A689, Coal Lane (West of A19 Wolviston Interchange)	ATC
31	Link 17	A178, Seaton Carew Road (Between A178 Seaton Carew Road/Huntsman Drive and A1046, Port Clarence	ATC

Site ref	Name	Location	Type
32	Link 18	A1046, Port Clarence Road (Adjacent to High Clarence Primary School)	ATC
33	Link 19	A1046, Clarence Street (East of A1046, Haverton Hill Road/B1275, Hope Street Signal Controlled Junction)	ATC
34	Link 20	B1275, Hope Street (Between A1046, Haverton Hill Road/A1046, Clarence Street Junction and B1275)	ATC
35	Link 21	Hope Street (North of B1275, Robson Street (Belasis Avenue))	ATC
36	Link 22	B1275, Belasis Avenue	ATC
37	Link 23	Greenwood Road (North of B1275, Belasis Avenue/Greenwood Road/Coxwold Way Roundabout)	ATC
38	Link 24	B1275, Belasis Avenue (Between Greenwood Road and Cowpen Lane)	ATC
39	Link 25	Central Avenue (Between Cowpen Lane and A1027/Wolviston Road/Central Avenue Double Roundabout)	ATC
40	Link 26	A1027 (Between A1027/Wolviston Road/Central Avenue Double Roundabout and A19 Norton Interchange)	ATC
41	Link 27	A1027 (West of A19 Norton Interchange)	ATC
42	Link 28	Cowpen Lane	ATC
43	Link 29	B1275 (Between Cowpen Lane and A139/A19 Southbound On-slip)	ATC
44	Link 30	A139	ATC
45	Link 31	A19 Mainline (Between A19 Wolviston Interchange and A19 Norton Interchange)	ATC
46	Link 32	A1046, Haverton Hill Road (Between A1046, Haverton Hill Road/Hope Street Junction and A1046)	ATC
47	Link 33	A1046, Haverton Hill Road (Between A1046, Haverton Hill Road/SUEZ EfW Roundabout and New Road)	ATC
48	Link 34	New Road	ATC
49	Link 35	A1046, Haverton Hill Road (Between New Road and Able UK Head Office Access)	ATC
50	Link 36	A1046, Haverton Hill Road (East of A19 Portrack Interchange)	ATC
51	Link 37	A1032, Newport Bridge Approach Road	ATC
52	Link 38	A19 Mainline (South of A19 Portrack Interchange)	ATC
53	Link 39	A1046, Haverton Hill Road (West of A19 Portrack Interchange)	ATC
54	Link 40	A19 Mainline (North of A19 Portrack Interchange)	ATC

## 1.6 Traffic Flow Data

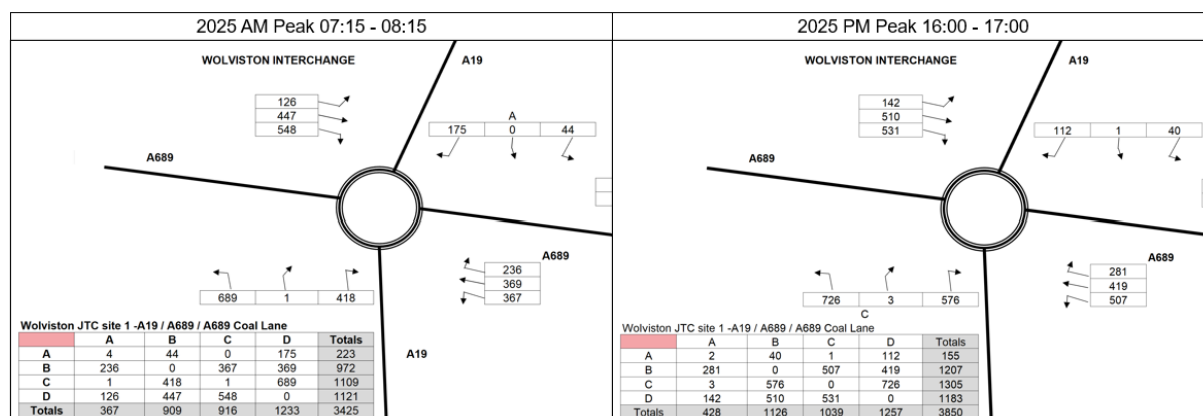
1.6.1 Traffic flow diagrams are shown in Appendix A.1, for all junctions surveyed

however details of the new data collection in 2025 is outlined below.

### Junction 1: A19 / A689 / A689 Coal Lane (Peak Hour)

- 1.6.2 Wolviston Interchange is situated at the intersection of the A19 and A689, under the management of National Highways. At the interchange, both the A19 and A689 are dual carriageways, facilitating high-capacity traffic flows in both directions. This interchange offers connections to Sunderland, Middlesbrough, and Darlington to the south, as well as Sunderland to the north. Inset 1-2 shows the 2025 base vehicle flows at Wolviston Interchange at the identified at both the AM and PM peak periods.

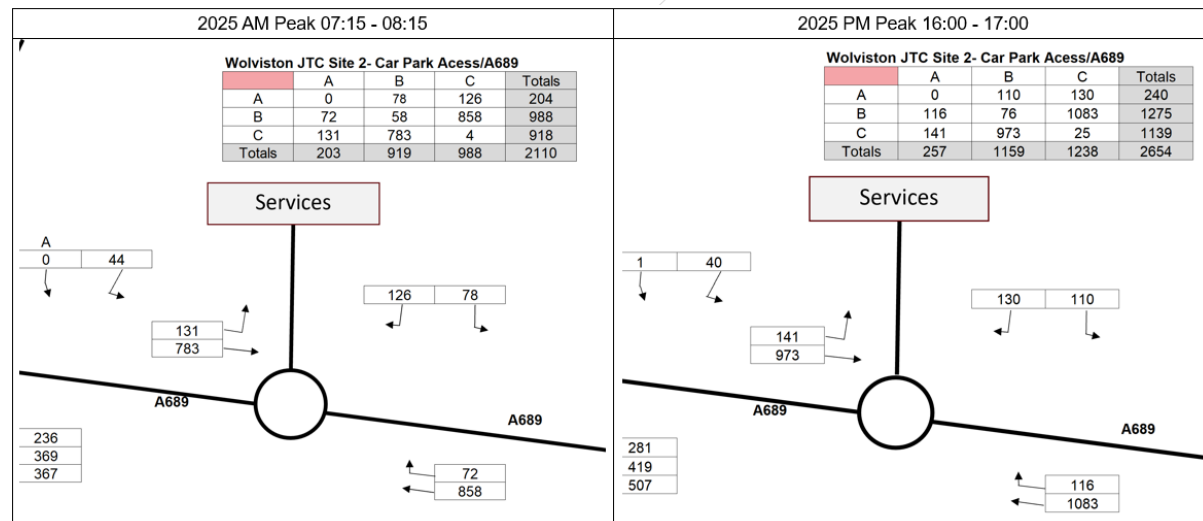




**Inset 1-2 2025 Wolviston Interchange (A19 / A689 / A689 Coal Lane) Traffic Flow Diagram (Peak Hour)**

### Junction 2: Car Park Access / A689 (Peak Hour)

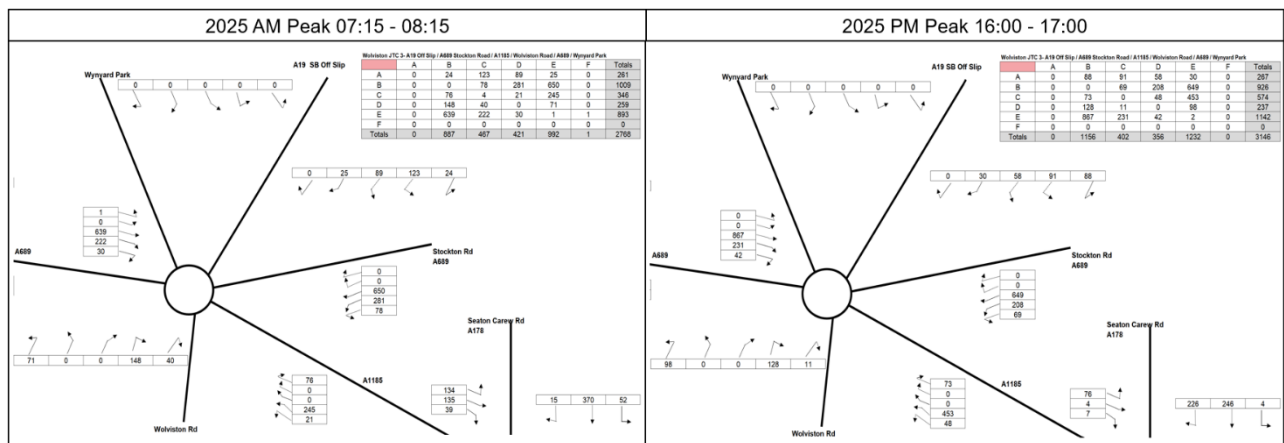
1.6.3 Following Wolviston Interchange, Junction 2 provides east and westbound connections to other significant routes within the local highway network via the A689. Additionally, the roundabout provides access to the Billingham Wynyard Services to the north. The traffic survey data is shown below in Inset 1-3.



**Inset 1-3 2025 Car Park Access / A689 Traffic Flow Diagram (Peak Hour)**

### Junction 3: A19 Off Slip / A689 Stockton Road / A1185 / Wolviston Road / A689 / Wynyard Park (Peak Hour)

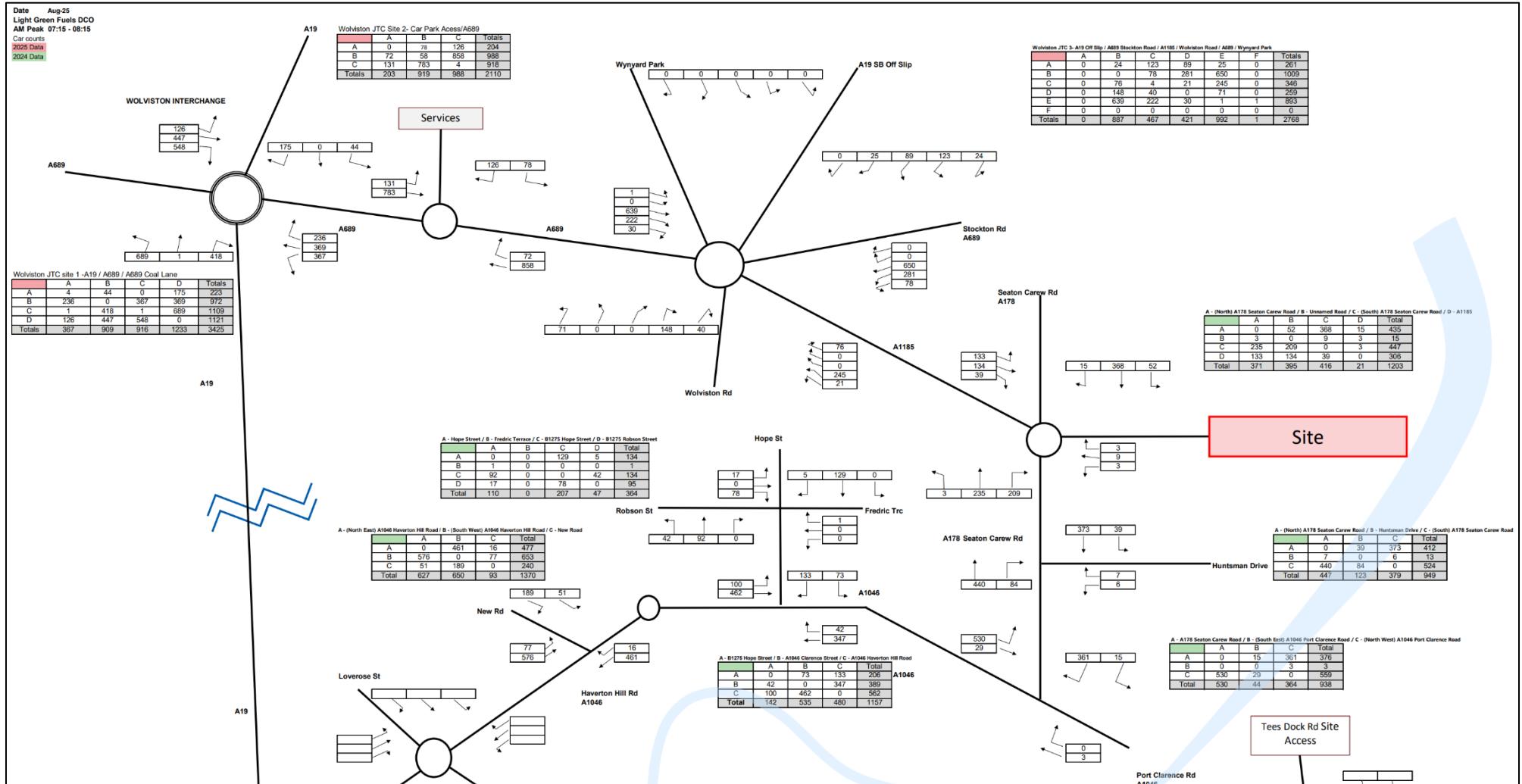
- 1.6.4 Junction 3, shown in Inset 1-4, is a significant, signalised roundabout that serves as a connection point for several major routes in the region, including the A689 Stockton Road leading to Hartlepool in the north and Wolviston Road heading towards Billingham in the south. Additionally, this roundabout provides access to the Main Site via the Seal Sands roundabout through the A1185.



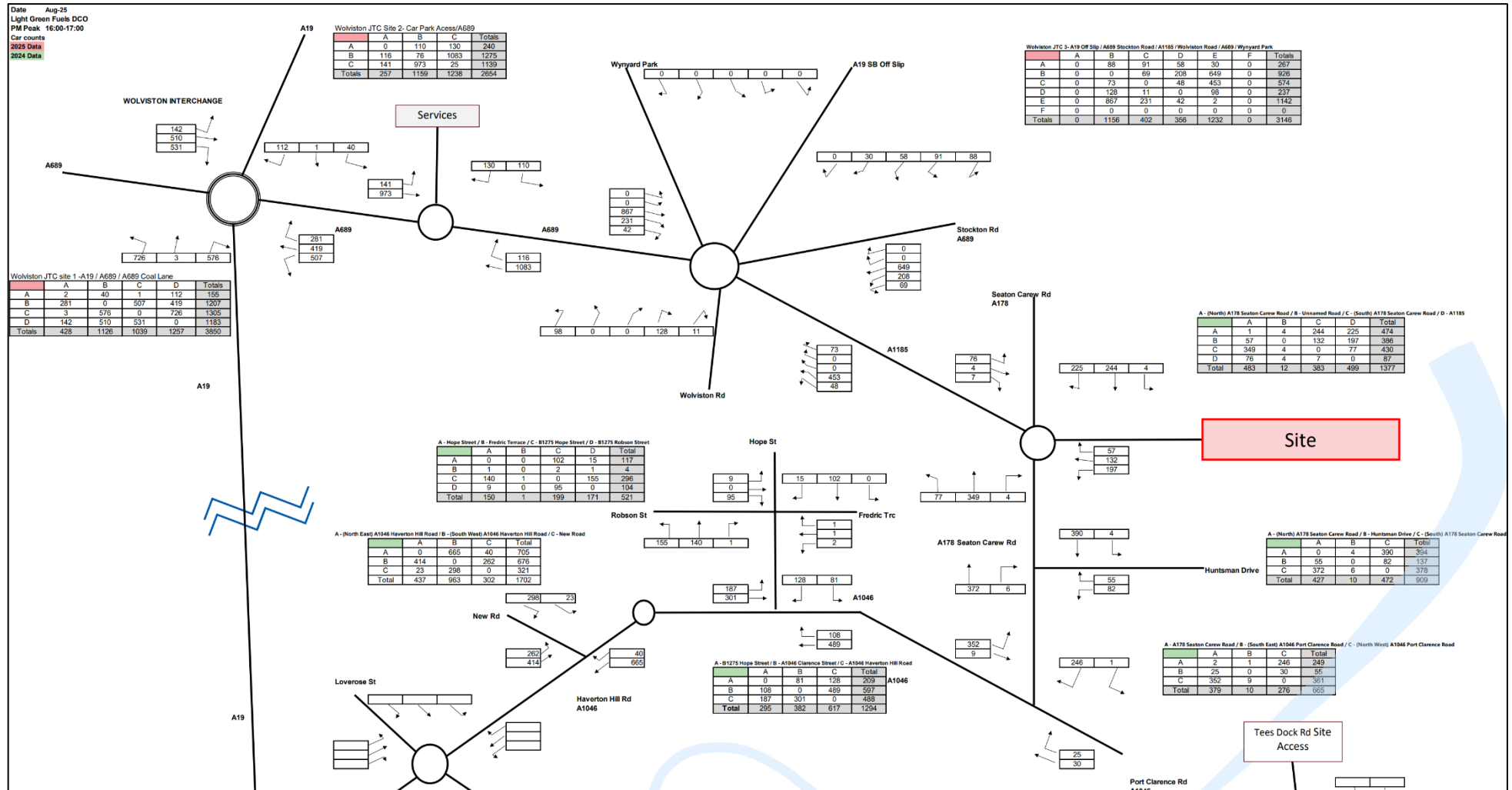
**Inset 1-4 2025 A19 Off Slip / A689 Stockton Road / A1185 / Wolviston Road / A689 / Wynyard Park Traffic Flow Diagram (Peak Hour)**

## A.1 Traffic Flow Diagram (Weekday Peak Hour)

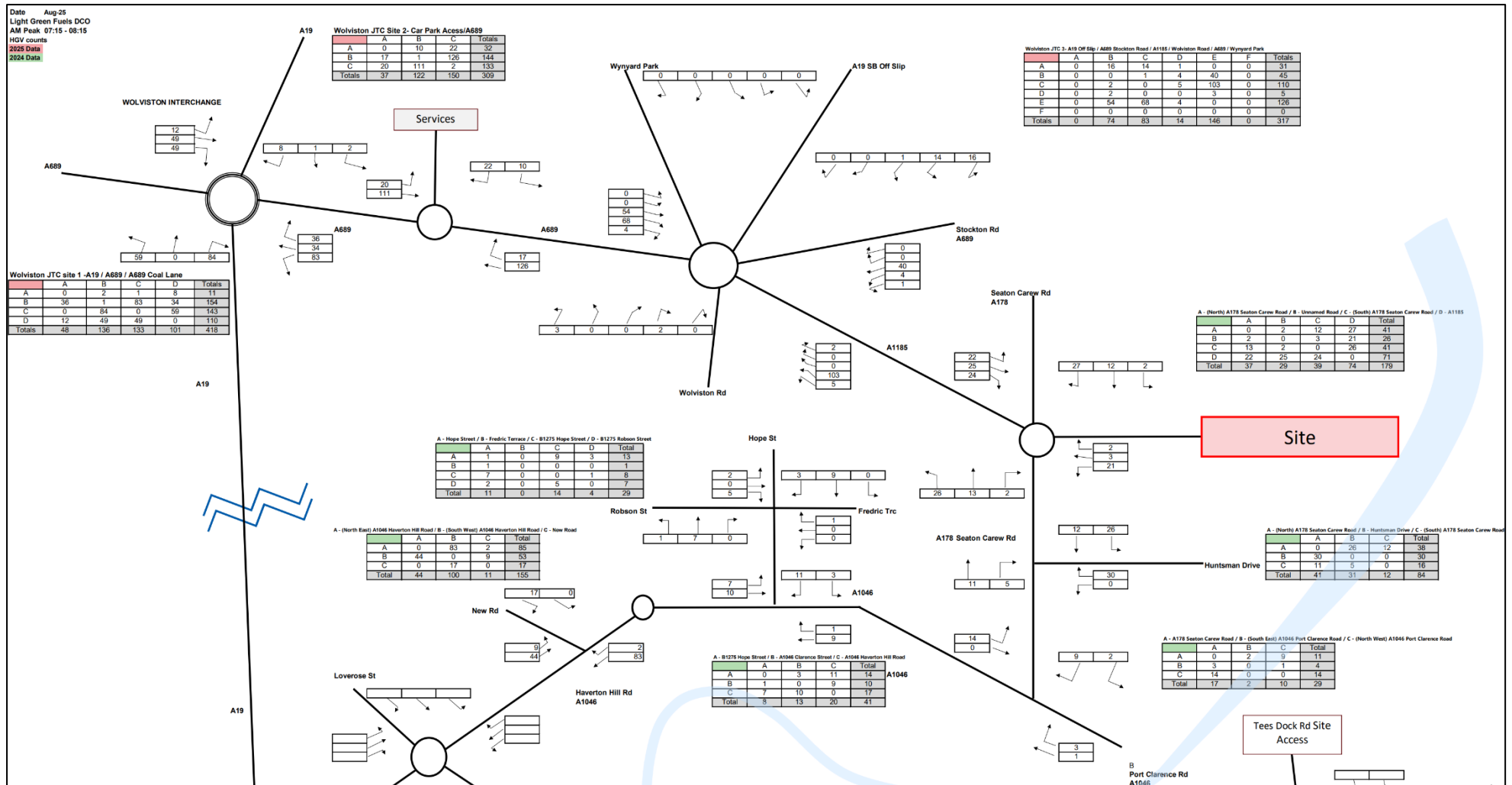
### A.1.1 Car Only AM 2024 & 2025 Network Traffic Flow Diagram (Peak Hour)



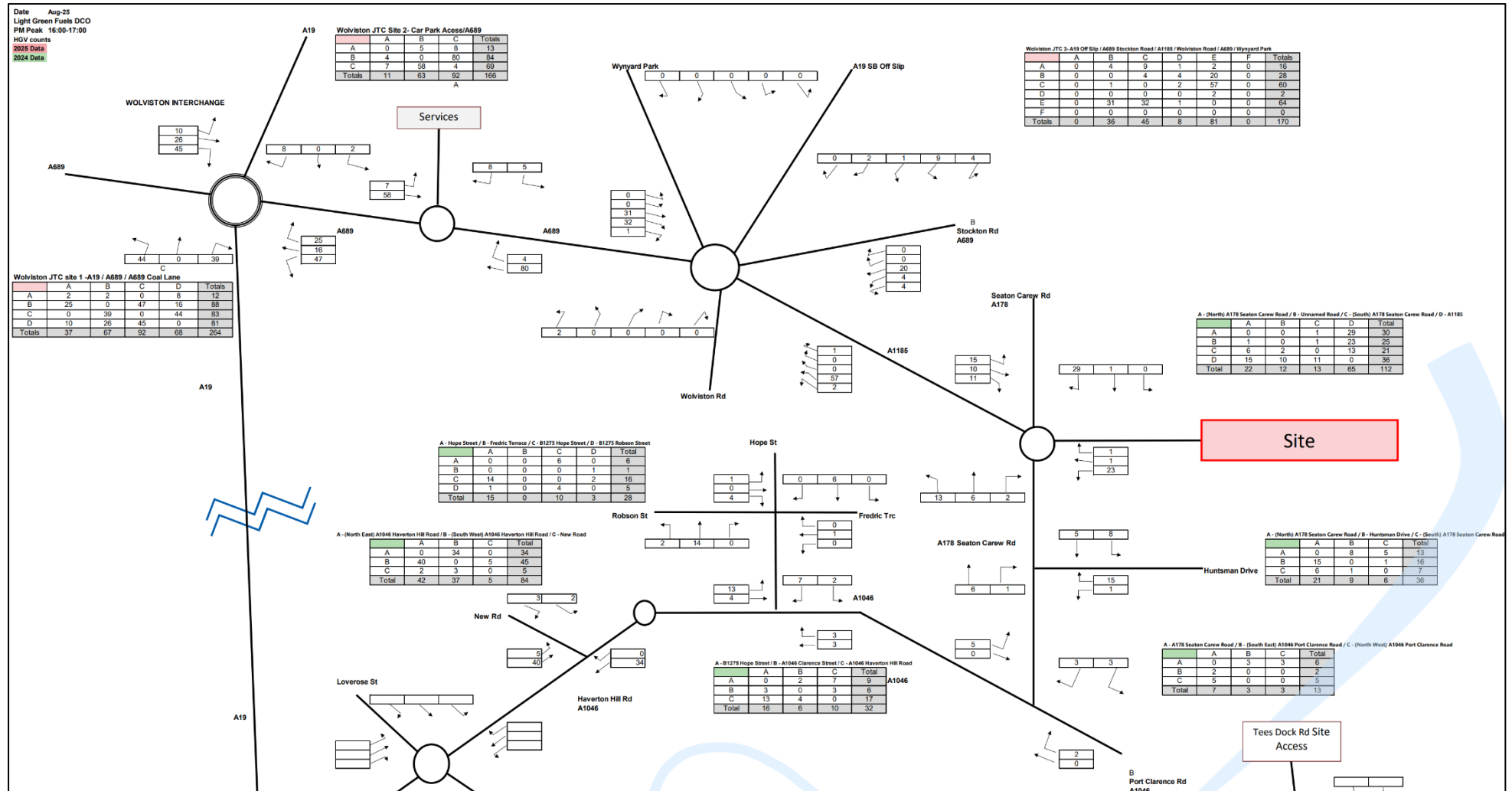
## A.1.2 Car Only PM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



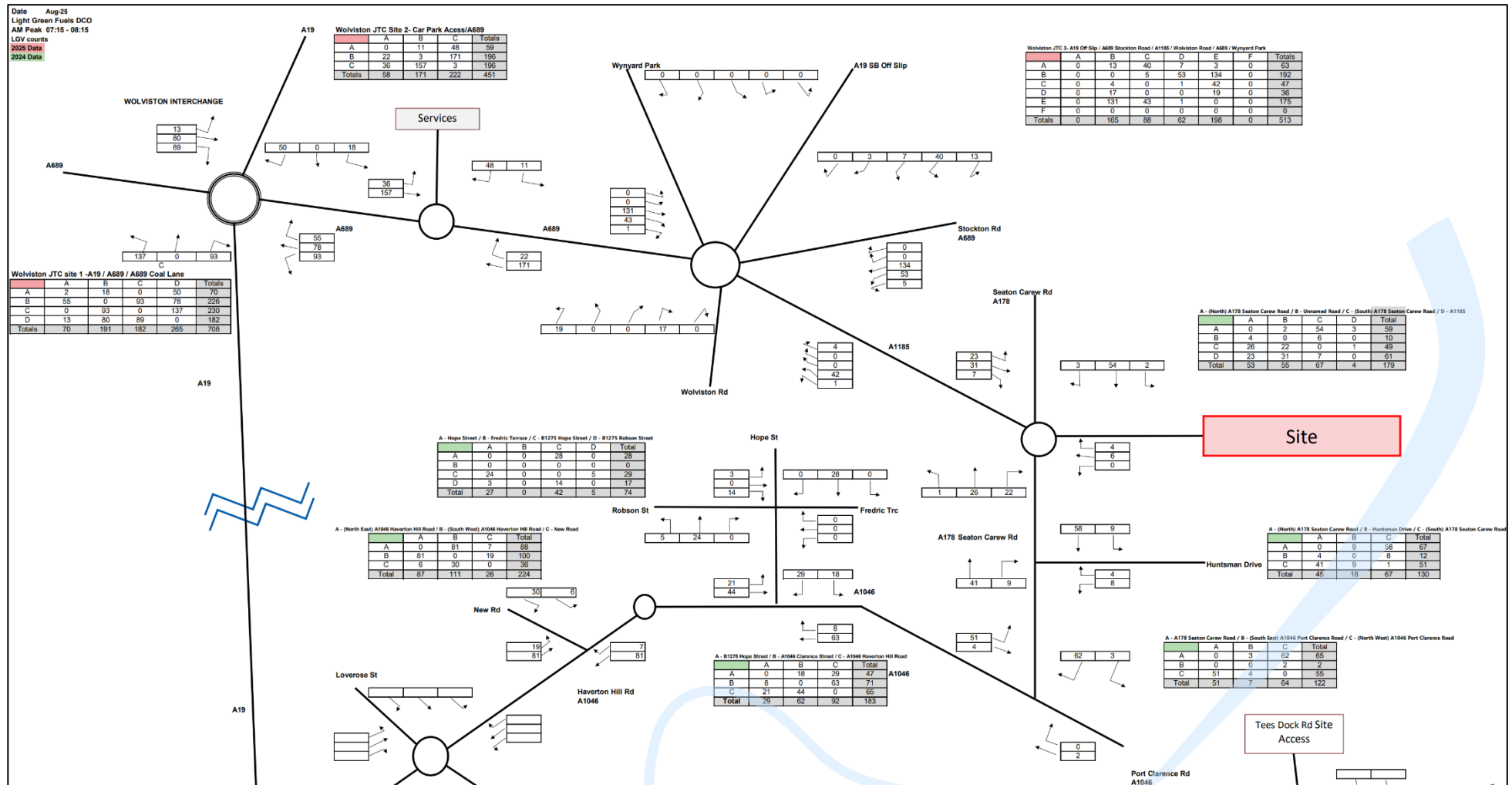
## A.1.3 HGV AM Only (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



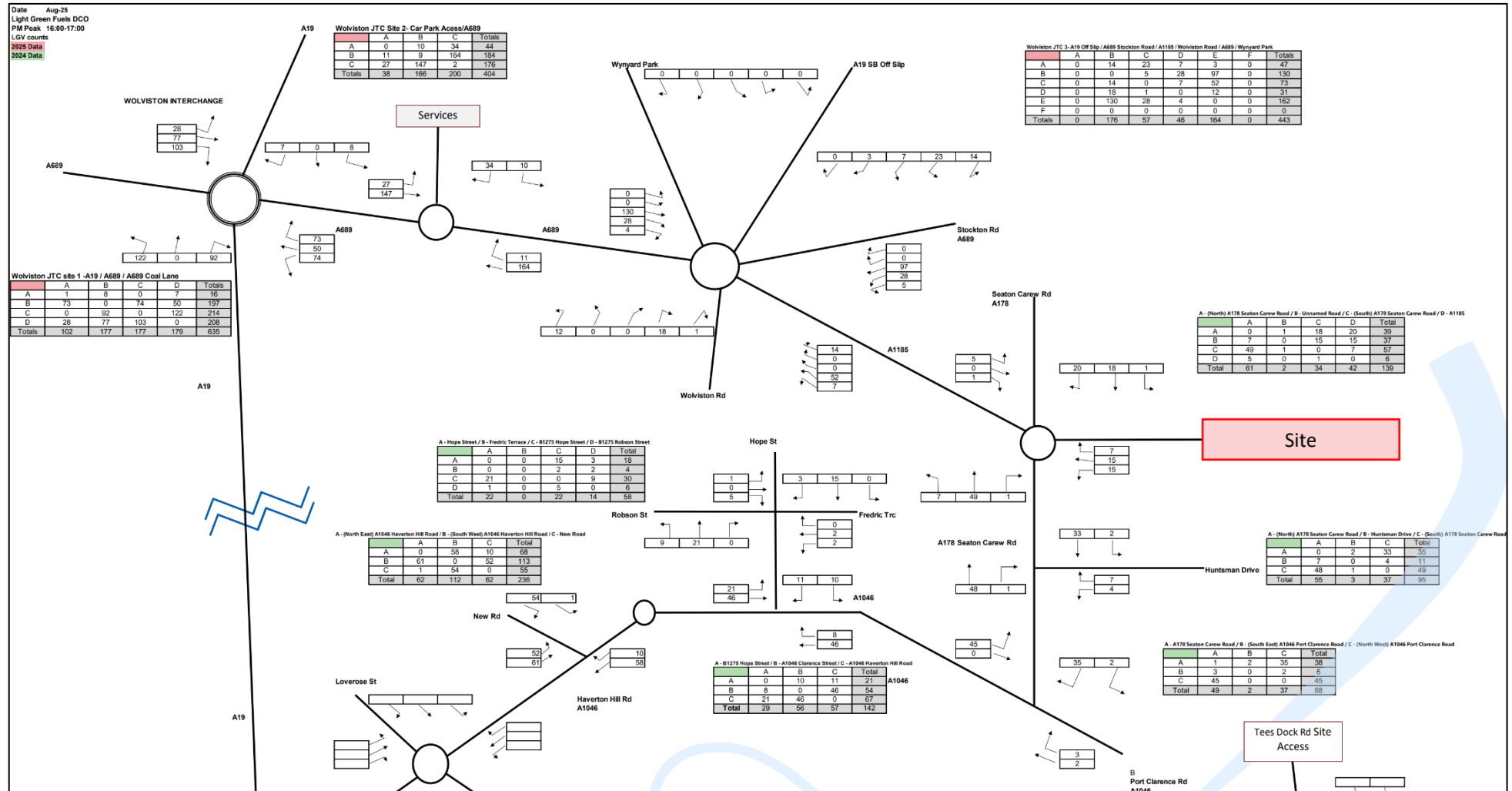
## A.1.4 HGV PM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



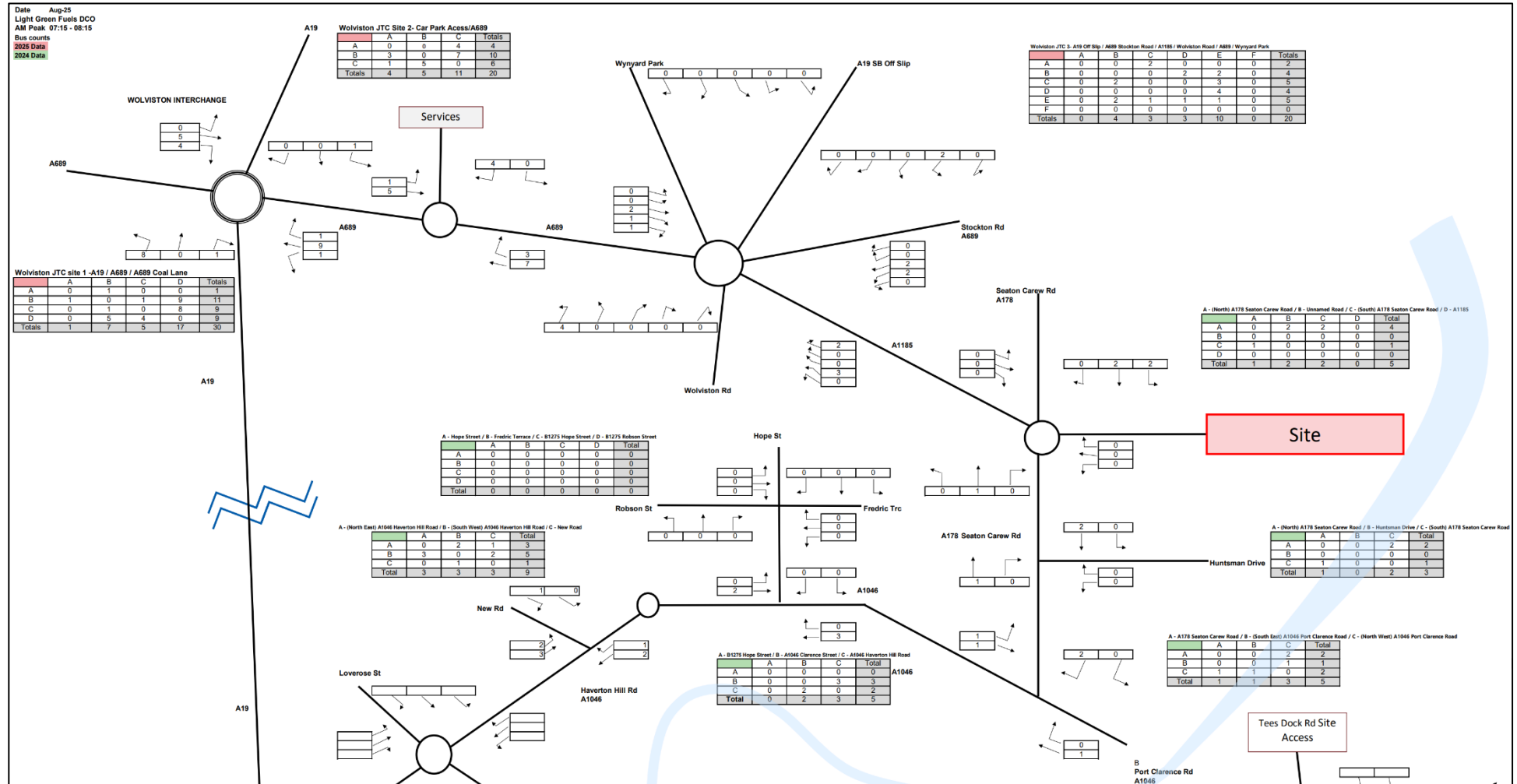
## A.1.5 LGV AM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



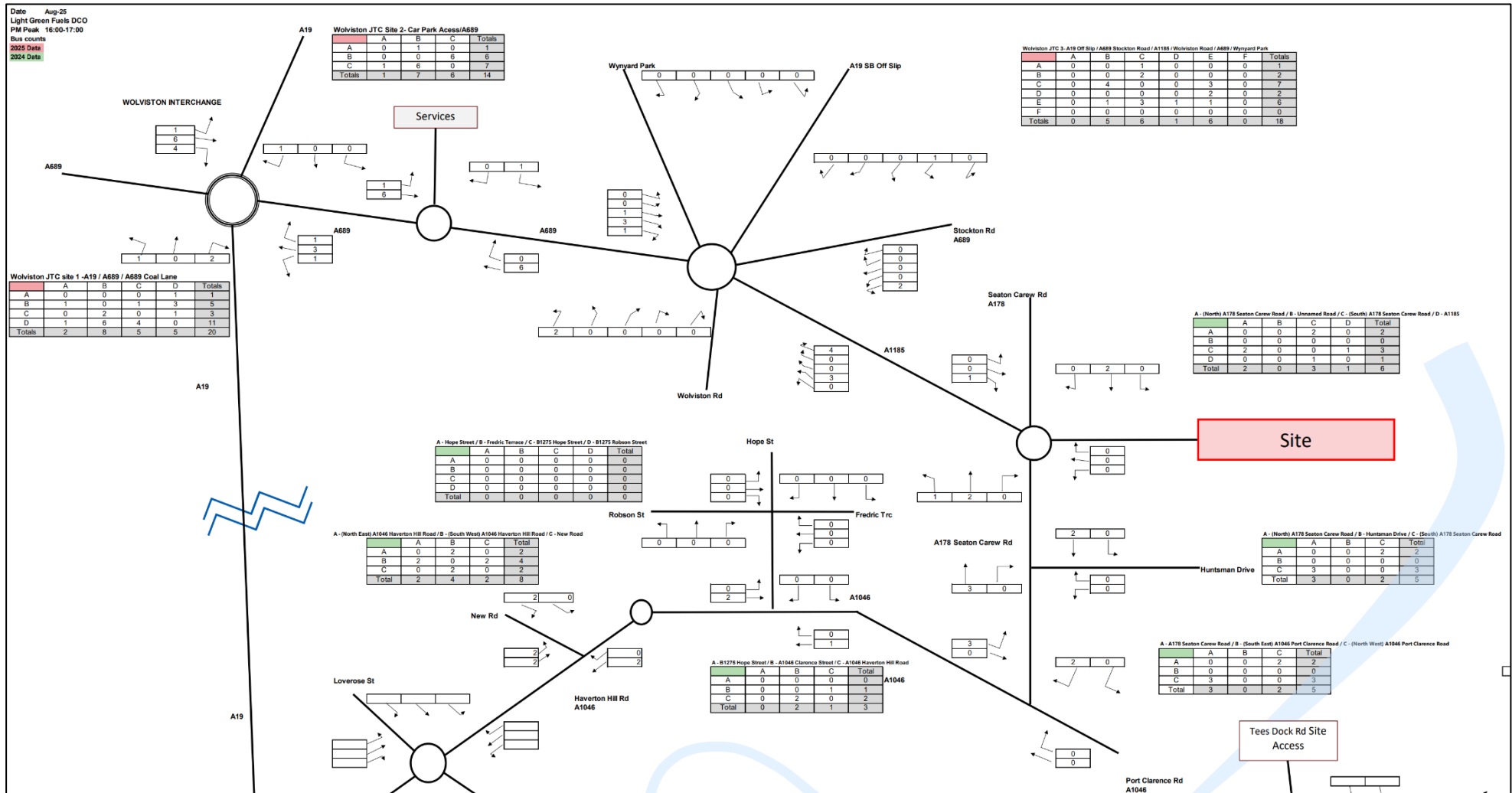
## A.1.6 LGV PM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



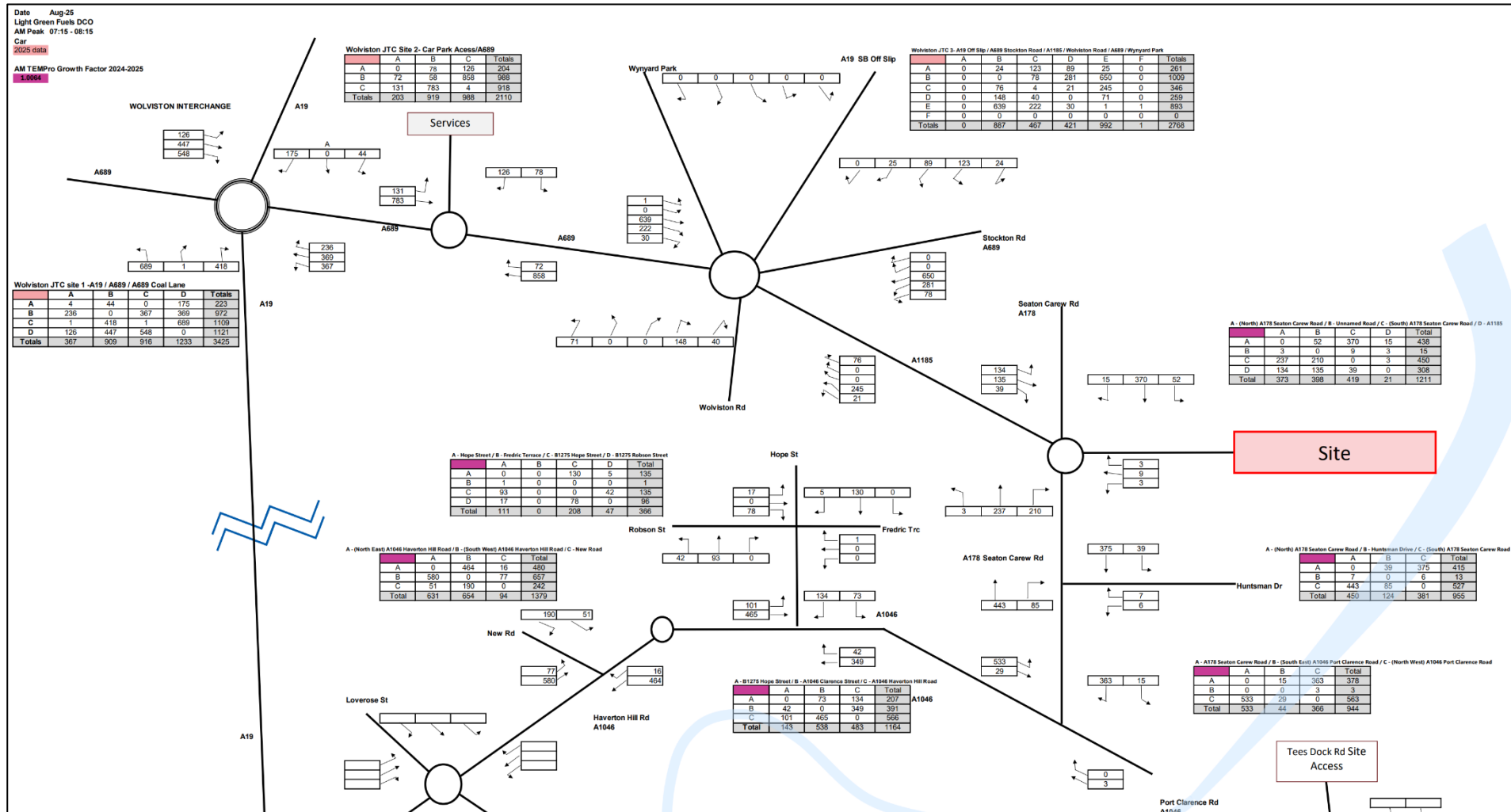
## A.1.7 Bus AM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



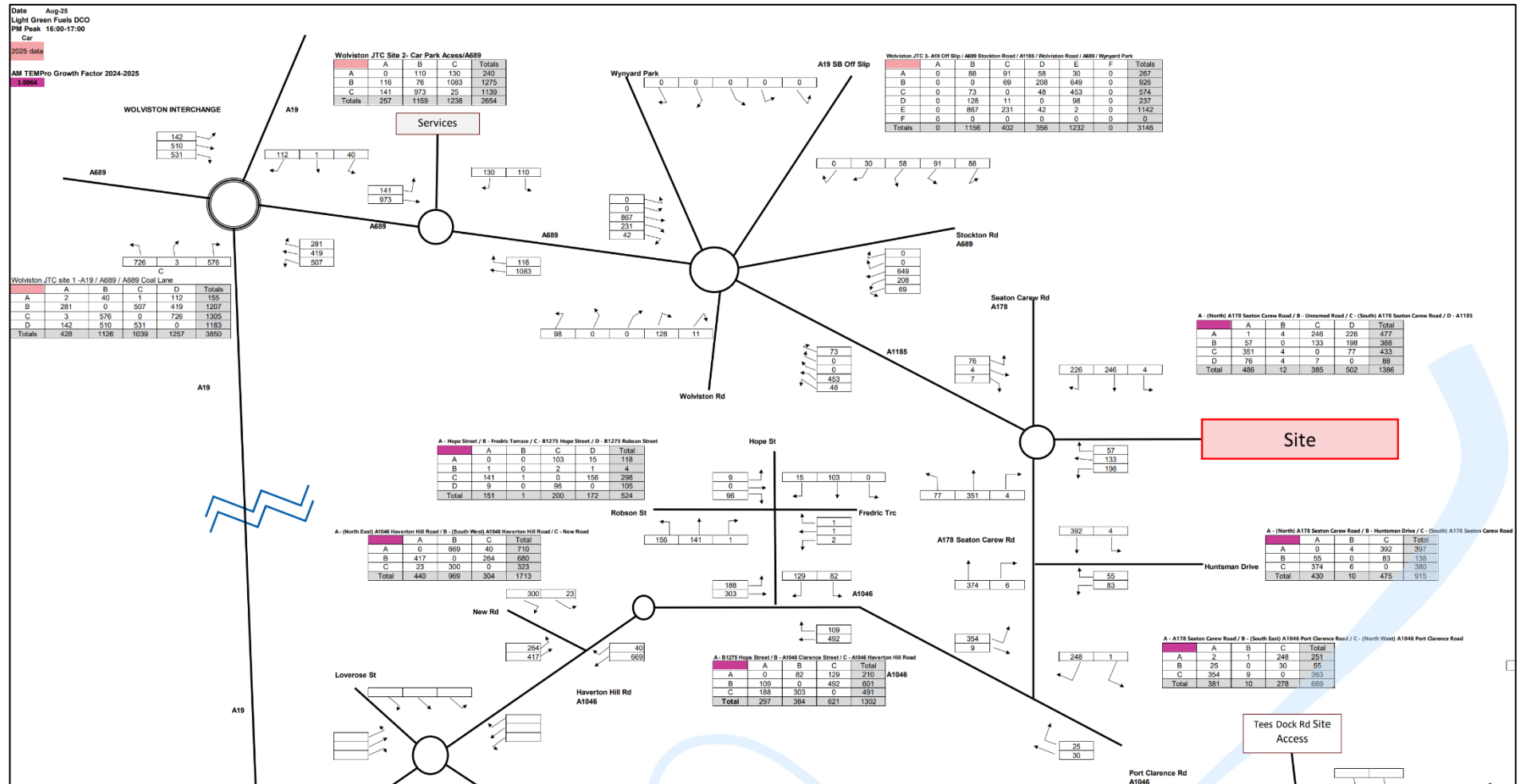
## A.1.8 Bus PM (2024 & 2025 Data) Network Traffic Flow Diagram (Peak Hour)



## A.1.9 Car Only AM (2025) Network Traffic Flow Diagram (Peak Hour)



## A.1.10 Car Only AM (2025) Network Traffic Flow Diagram (Peak Hour)





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