DID THE TAYLOR SWIFT CONCERT CAUSE TRAFFIC CHAOS?

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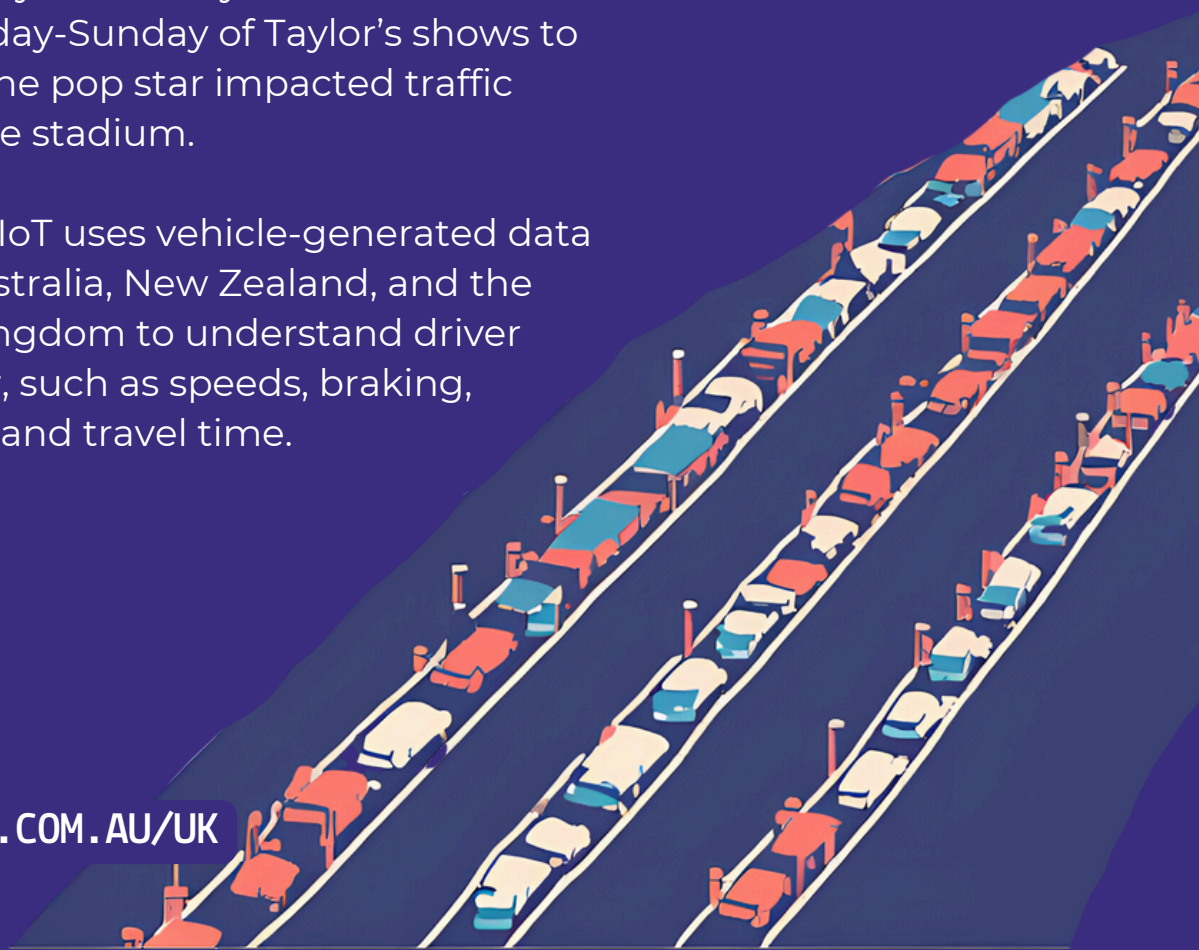
How did Taylor Swift impact traffic?

Taylor Swift performed at Wembley Stadium in late June 2024, resulting in 90,000 fans flocking to the stadium and causing delays for Swifties and general road users.

We compared data from the Monday-Wednesday before Taylor's concert and the Saturday-Sunday of Taylor's shows to see how the pop star impacted traffic around the stadium.

Compass IoT uses vehicle-generated data across Australia, New Zealand, and the United Kingdom to understand driver behaviour, such as speeds, braking, swerving, and travel time.



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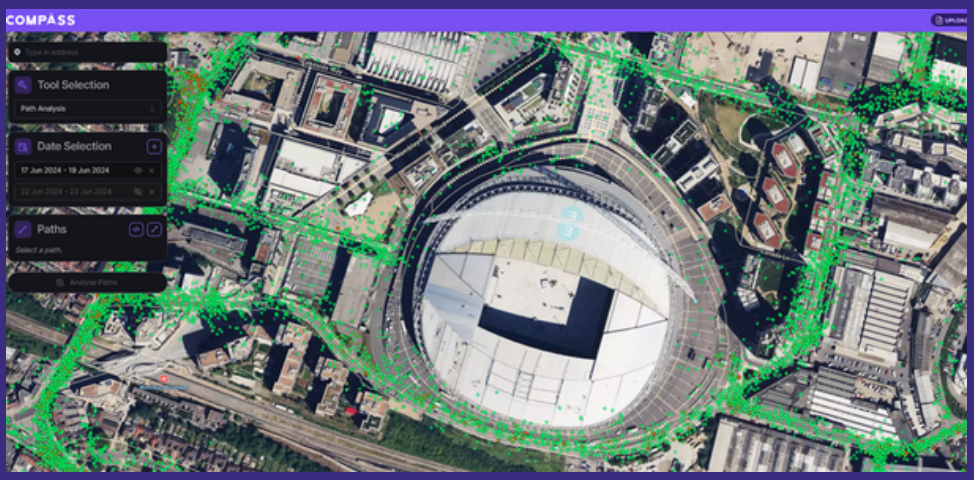
Surrounding Road Closures

As a result of the shows, the following **roads were partially closed, limiting access to the venue** during the event days.

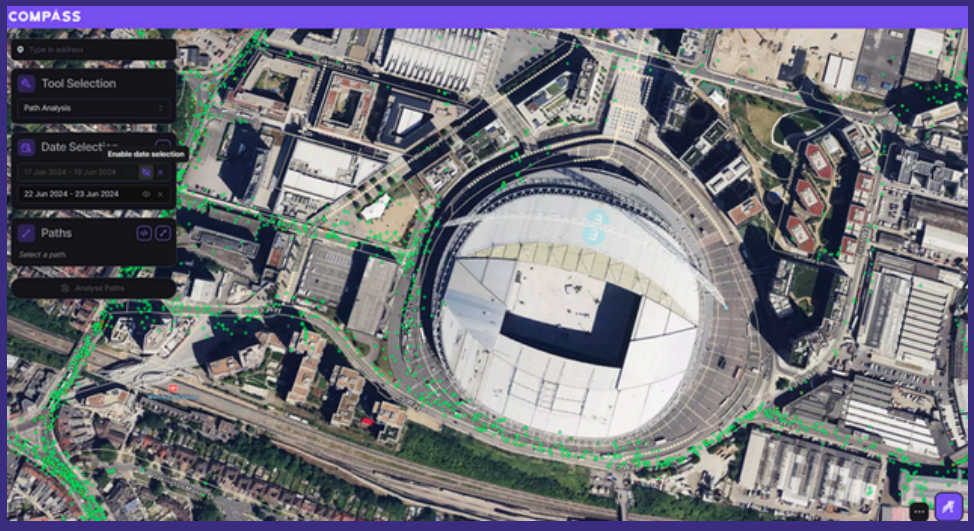
- Engineers Way from Empire to First Way
- Rutherford Way (resident access only)
- South Way from Wembley Hill Rd to Pink Parking
- Fulton Rd from Empire Way to Albion Way

The closure of the streets is evident in the Road Intelligence rendered maps, which show a reduction of traffic in the streets of Fulton Rd, Engineers Way and South Way.



Before

During



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Speed Analysis of Traffic

A speed analysis shows that during the weekend of Taylor Swift's concert, average speeds of vehicles were slower than they had been earlier in the same week (before the concert).

The graph below shows that along Wembley Park Drive, there was a considerable variation in speed in the surrounding residential area. This shows a braking and acceleration fluctuation of approximately 5km/h to 20km/h along the route.

Roads directly surrounding Wembley Stadium, Wembley Hill Rd and South Way were shown to have the biggest variations in speed the weekend of the concert compared to earlier in the week (see next page).

The drastic change in speeds is due to the amount of traffic travelling to the stadium. The steep incline and decline of the line graphs show vehicles aggressively accelerating and harsh braking, consistent with heavy congestion.

Wembley Hill Rd has a distinct visual difference in speed when comparing Connected Vehicle data before and during the shows.

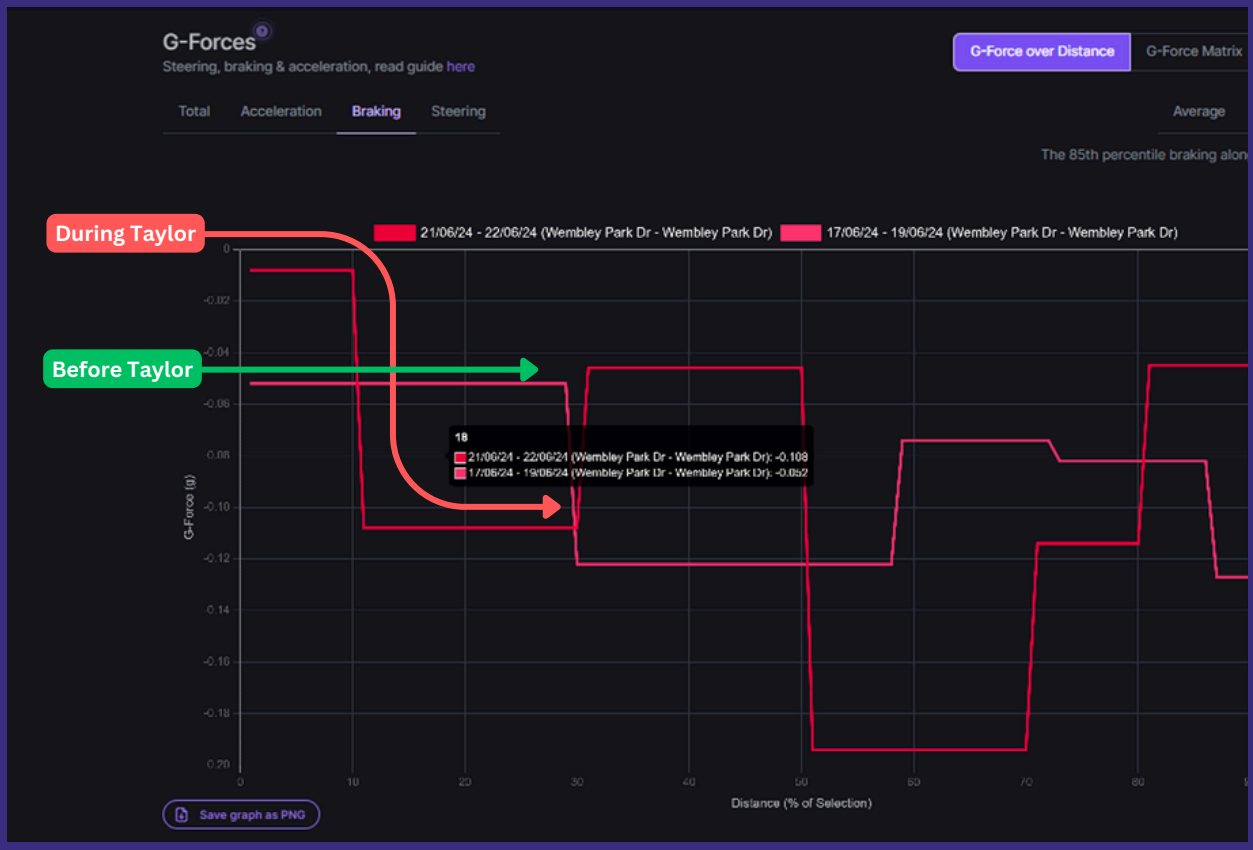
While South Way was partially closed during the shows, there is still some traffic data that shows the difference between speeds before and during.

G-forces of Surrounding Traffic

In conjunction with the lower speeds, g-force graphs demonstrate the harsh steering and braking movement performed by drivers during Taylor's shows. This confirms the heavy congestion previously shown by the speed analysis.

For example, the graph below shows the g-forces of traffic along South Way, on approach to Wembley stadium, before and during Taylor Swift's concert.

Even around residential areas, as shown in the g-force graph of Wembley Park Drive (see next page), there is harsh braking and lower speeds. The behaviour of harsh braking could create dangerous conditions for pedestrians in the area.


G-Forces
Steering, braking & acceleration, read guide here
G-Force over Distance
G-Force Matrix
Total
Acceleration
Braking
Steering
Average
The 85th percentile braking alon
During Taylor
Before Taylor
21/06/24 - 22/06/24 (Wembley Park Dr - Wembley Park Dr)
17/06/24 - 19/06/24 (Wembley Park Dr - Wembley Park Dr)
18
21/06/24 - 22/06/24 (Wembley Park Dr - Wembley Park Dr): -0.108
17/06/24 - 19/06/24 (Wembley Park Dr - Wembley Park Dr): -0.052
G-Force (g)
0
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
0
10
20
30
40
50
60
70
80
Distance (% of Selection)
Save graph as PNG

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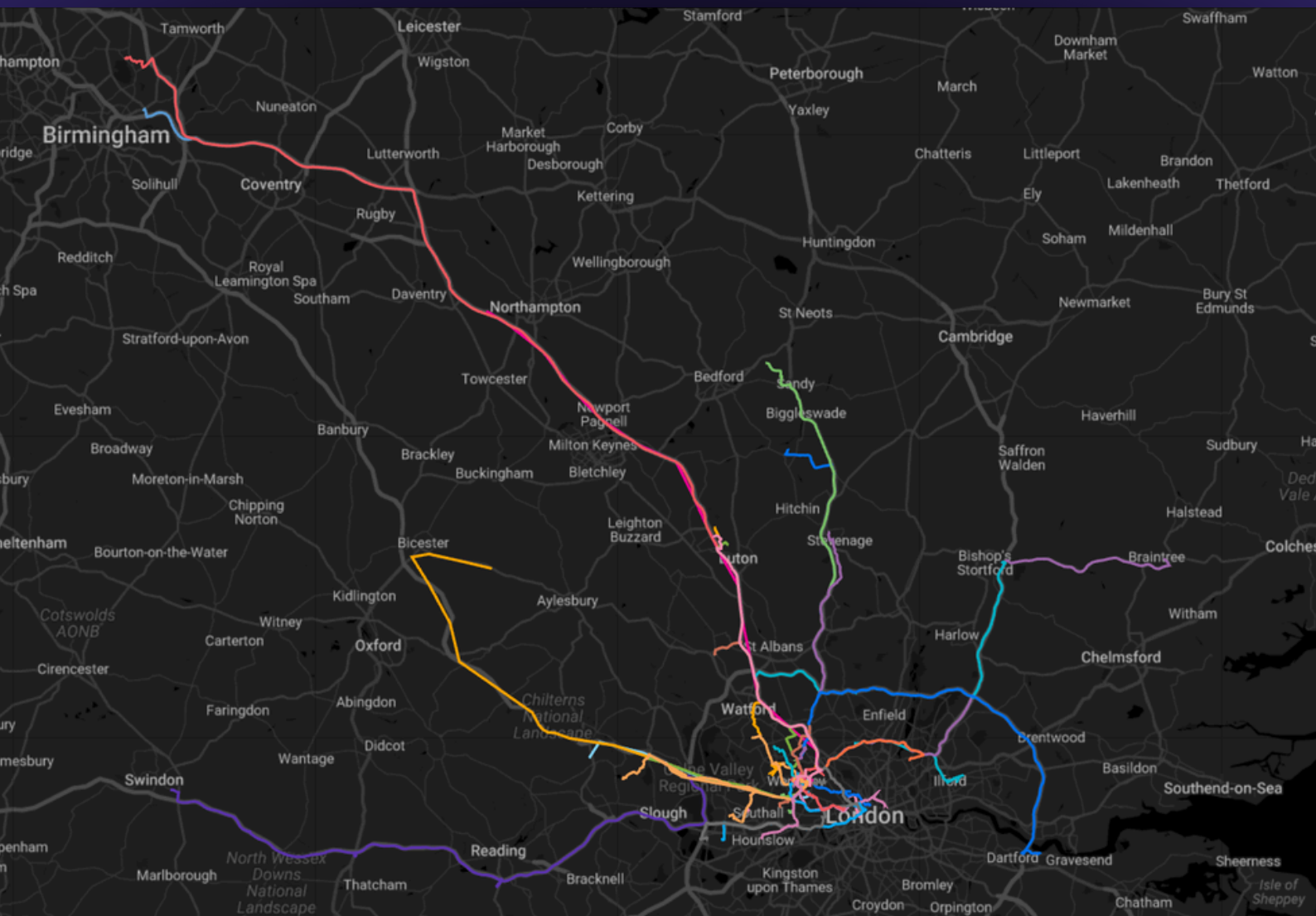
How far did fans travel to see Taylor?

With Connected Vehicle data, Compass can determine where fans travelled to see Taylor Swift and how long it took.

Compass IoT's Origin-Destination (O-D) data shows travel behaviour between and within selected zones, providing travel professionals insight for catchment analysis.



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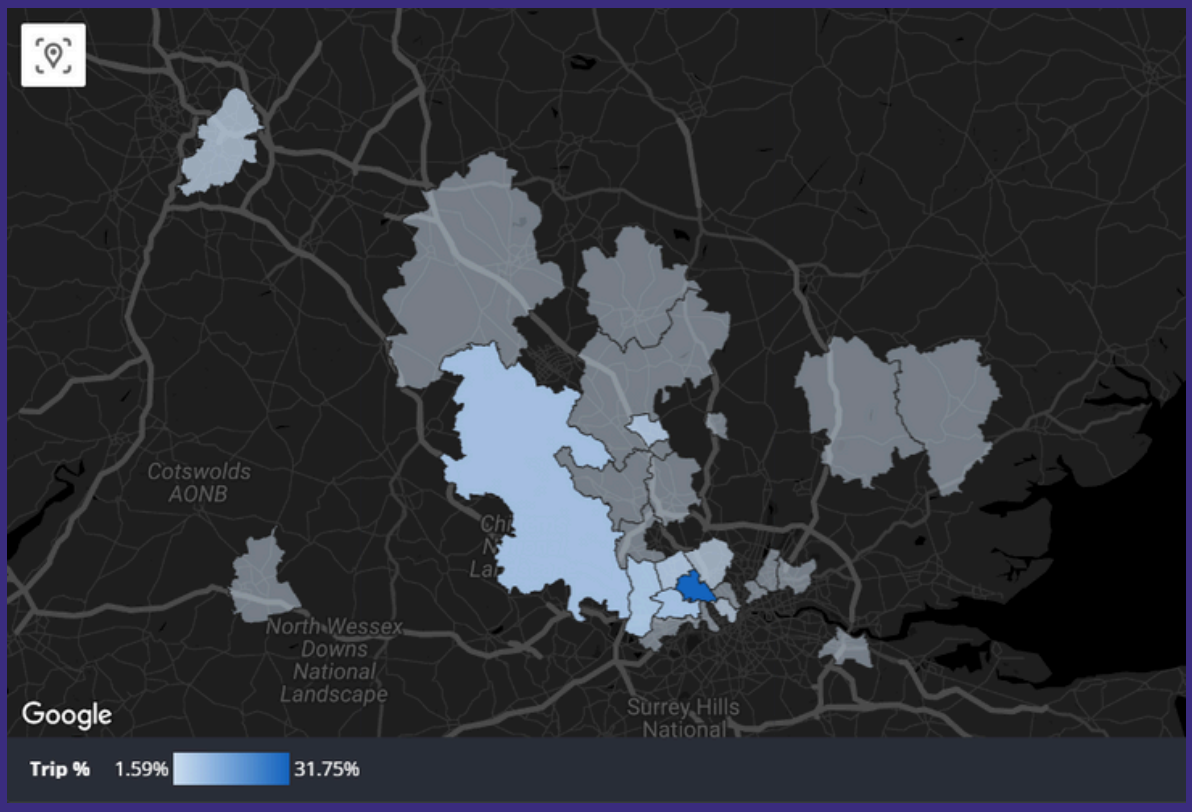
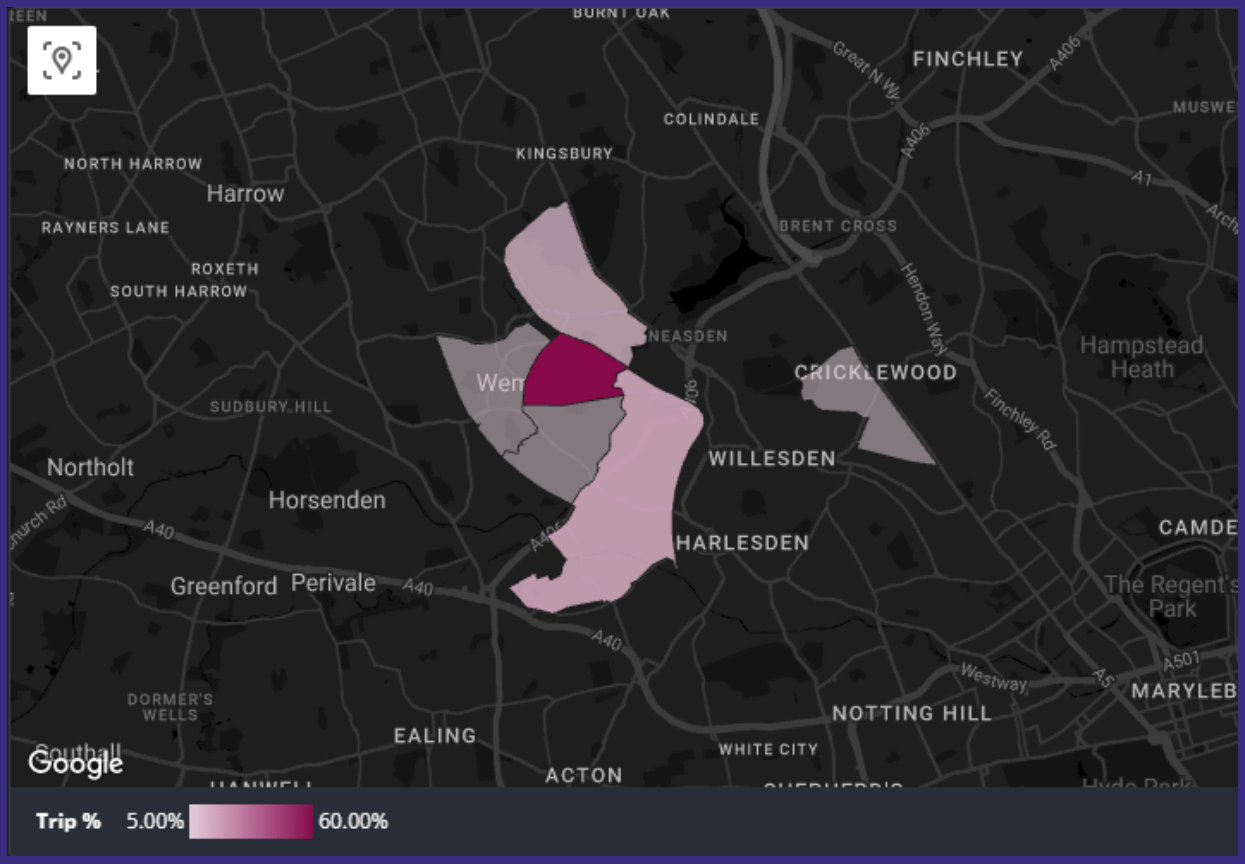
Origin-Destination: Fan Journeys

Compass' Data Science team created a dashboard identifying trips by private vehicles during the days of Taylor's concert (21-23 June) that ended in and around Wembley Stadium. These trip points can be filtered by Starting Local Authority District (LADs), Starting Wards, and the trip start and end hours.

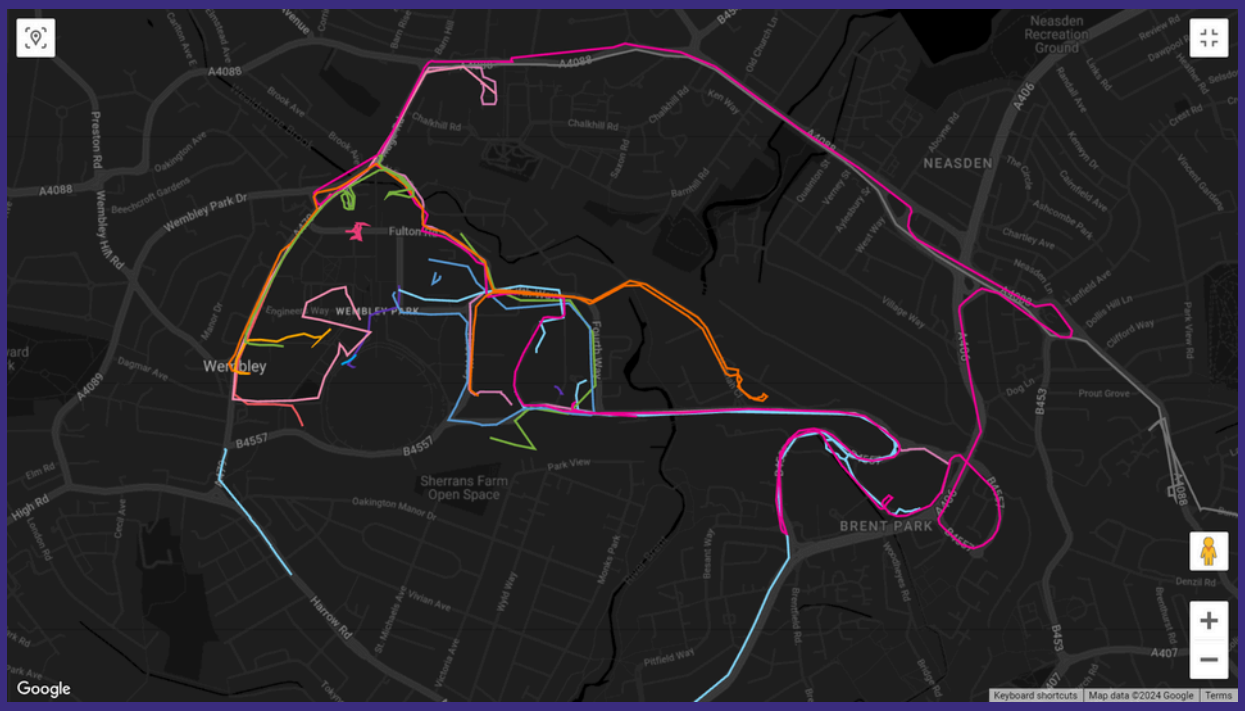
As shown in the map below, most trips to Wembley Stadium originated in Brent (31.75%), while the furthest was Birmingham (3.17% of trips), two hours from Wembley Stadium.



This can be further filtered to see what Wards fans begin their journey from (see next page). For example, fans in Brent travelled from Wembley Park, Stonebridge, Barnhill, Tokyngton, Cricklewood, Mapesbury, and Wembley Hill to see Taylor Swift.



Again, it can be further filtered to show individual trips and the paths drivers took within Brent to reach Wembley Stadium.



Travel Times show Delays

The dashboard also alludes to the delays drivers travelling to Taylor Swift experienced. The table below shows the average travel times for the top five Starting LADs.

	Start LAD	Avg Travel Time (min)
1.	Brent	13.35
2.	Ealing	22.6
3.	Buckinghamshire	97.4
4.	Hillingdon	78.25
5.	Harrow	21.67

Typically, a trip from Brent to Wembley Stadium takes 3-10 minutes, depending on the Starting Ward. The increase in average travel time to 13 minutes further demonstrates the delays around Wembley Stadium due to road closures and the number of fans.

As shown in the table below, the average travel time can further be broken down into Starting Wards, and show the delays. For example, it usually takes 3-5 minutes to drive from Wembley Park to Wembley Stadium. During Taylor Swift's concert days, it took 12-13 minutes on average.

	Start Ward	Avg Travel Time (min)
1.	Wembley Park	12.67
2.	Stonebridge	18.67
3.	Barnhill	14
4.	Wembley Hill	3
5.	Cricklewood & Mapesbury	22
6.	Tokyngton	6

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