On behalf of: the Claimant
By: Sean Foster Martell
No: 3
Exhibit: **SFM2**

Date: 25 July 2024

QB-2021-003576

IN THE HIGH COURT OF JUSTICE
KING'S BENCH DIVISION

BETWEEN:

NATIONAL HIGHWAYS LIMITED

Claimant

- and -

PERSONS UNKNOWN CAUSING THE BLOCKING OF, ENDANGERING, OR PREVENTING THE FREE FLOW OF TRAFFIC ON THE M25 MOTORWAY, A2 A20 AND A2070 TRUNK ROADS AND M2 AND M20 MOTORWAY, A1(M), A3, A1081, A12, A120, A13, A21, A23, A30, A414 AND A3113 TRUNK ROADS AND THE M1, M3, M4, M4 SPUR, M11, M26, M23 AND M40 MOTORWAYS FOR THE PURPOSE OF PROTESTING

Defendants

EXHIBIT SFM2

This is the exhibit marked SFM2 referred to in the witness statement of **SEAN FOSTER MARTELL** dated this 25 day of July 2024.

Signed .....

Protest on the Strategic Road Network

M25 Junction 31
20 July 2022

Impact Assessment Statement

(Assured)

Data sources, impact methodology, assumptions & examples

Data sources

To calculate impact the National Operations team will use a variety of data sources to collate and validate the data presented in this pack

National Traffic Information Service (NTIS) – Real time

NTIS collects data from induction loops that are situated under the roads surface. The loops are able to count vehicles, measure speed and measure vehicle length. NTIS also collects data from in vehicle Global Positioning Sensors (GPS). These different data sets are then validated by the system before being combined to produce a near real time view of conditions on the Strategic Road Network (SRN). The data is updated every 1 minute. The system compares the real time data to a historical data profile for the same location and time. NTIS can then confirm if traffic conditions at a location are as expected or not. Delay is then described as being above profile for a duration of time. The data is the presented to users as a heat map and event list via a user interface. This allows the national operations team to see in real time the impact of any incident on the SRN. The heat map can also be used to measure the length of a queue. This is validated using Closed – Circuit Television (CCTV) where possible. *Please note that if NTIS data cannot be obtained for any reason, third party data such as Google will be used*

Control Works data

Control Works is an operational dataset used to manage incidents which Regional Operating Centres (ROCs) have been made aware of

Data, limitations & assumptions

The national operations team will use all available data sources to assess the impact of protests:

- NTIS traffic data and heat map will be used as primary source to measure delay and the extent of queues
- CCTV observations & Google maps will be used as a source to measure delay and the extent of queues where NTIS data is unavailable

National Operations data input

Incident details

Log Number	EROC 1391
Region	South East
Day	Wednesday
Date	20.07.2022
Start time	11:06
End time	17:28
Road	M25
Junction	J31
Location	Dartford River Crossing

Incident commentary

- 11:06 A female has climbed up a gantry above the highway to protest as part of the Just Stop Oil protest group at J31 Marker Post 186/8A clockwise
- 11:59 Essex Police have fully closed the clockwise carriageway at J30 A (for a closure of the M25 clockwise between J30 and J31 on health and safety grounds approaching the QE2 bridge)
- 17:14 Police resolved the situation – protestor removed
- 17:28 Carriageway confirmed as re-opened.

Peak congestion queues clockwise of 14 miles with a maximum delay of 90mins above profile for customers on the clockwise carriageway
The anti clockwise carriageway, including the A282 Dartford River Crossing also experienced delays from J2 through to J31.

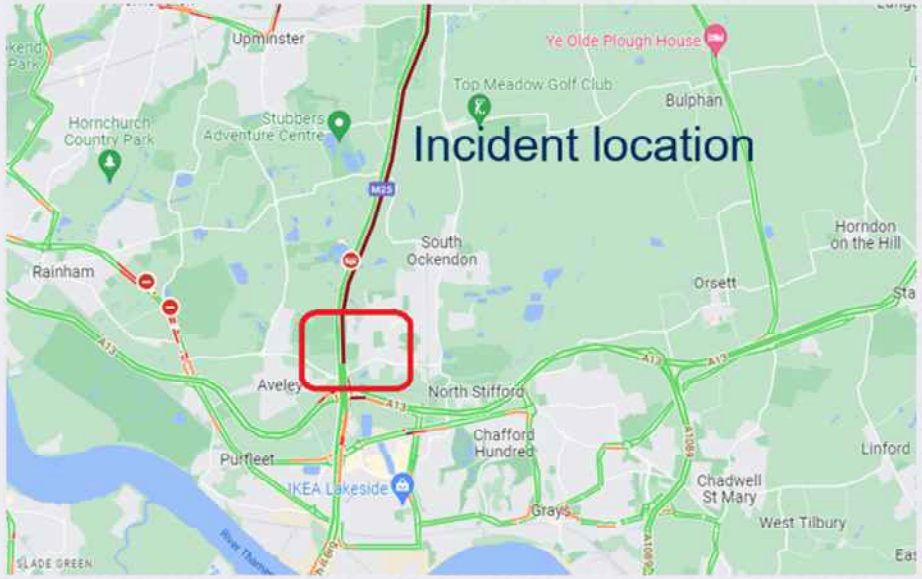
****Information source – Regional Operation Centre Controlworks Log 1391**

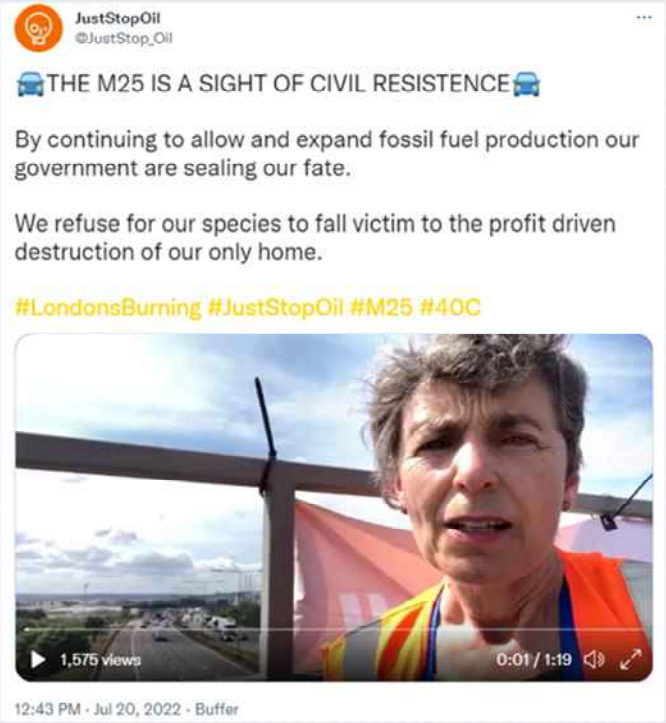
Incident Impact

Start time of delays on SRN (NTIS)	11:59			
End time of delays on SRN (NTIS)	18:57			
Total time delays persist on SRN (mins)	418			
Peak delays on SRN (minutes)	90			
Breakdown of impact	Road	Delay extent	Queue (miles)	Peak delays (mins)
Location 1	M25	J27 – J31 Clockwise carriageway	14	90
Location 2	M25	J2 – J31 Anti clockwise carriageway	4	25

****Information source - National Traffic Information Service (NTIS) – Real time**

Area impacted



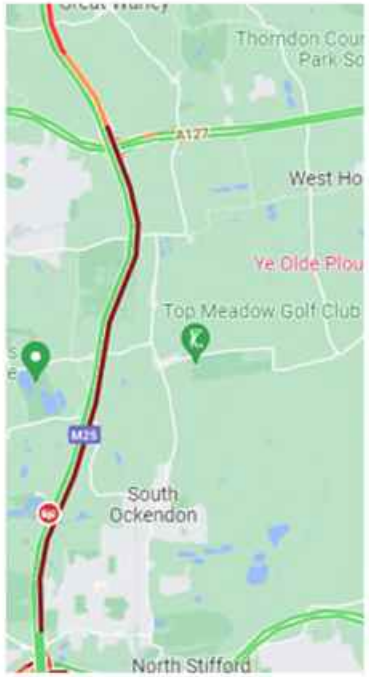


****sourced through Google maps, CCTV Images & Social media (where available)**

Area impacted

Heat Map Data:

12:34



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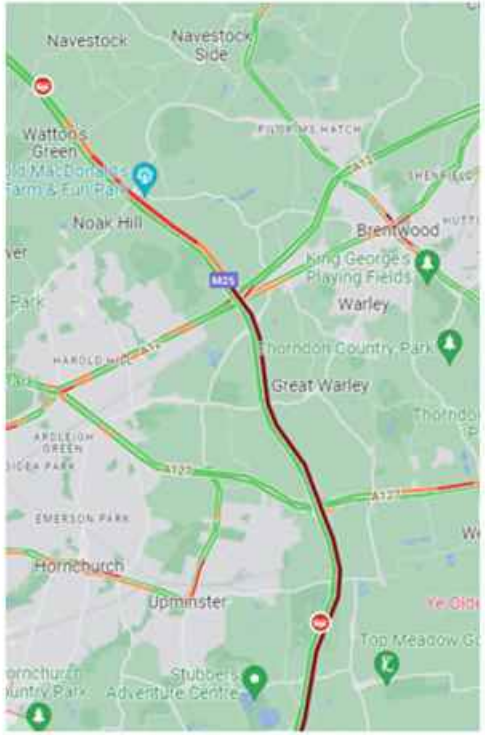

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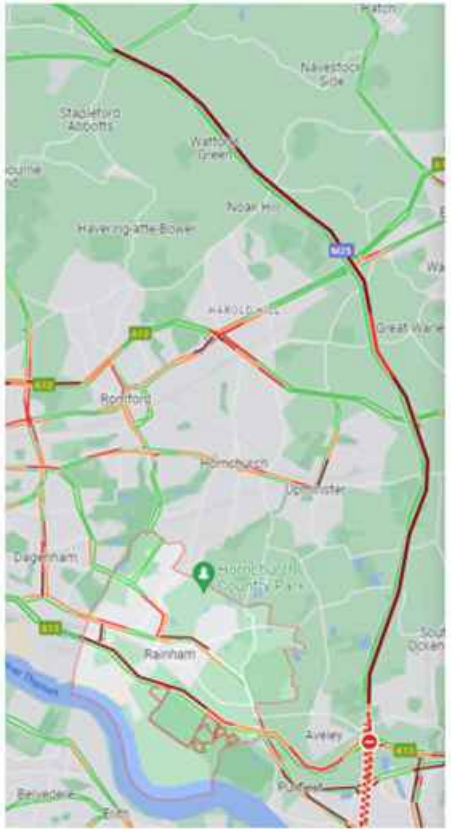

****sourced through Google maps, CCTV Images & Social media (where available)**

Economic Impact Method Statement

Our estimates of impact can only be based on the traffic data available. We have applied a method which allows us to estimate a *lower bound* for the impact in terms of lost vehicle-hours and on the economy.

Calculation	Method Applied	Notes and Caveats	Reported in
Delay to non-stationary vehicles	We have a standard method, using well-established data sources and used in our journey time reliability metric, for calculating delay over and above that we would expect to see on a comparable day. This provides a total number of vehicle-hours.	Details of the metric calculation can be found in the National Highways Operational Metrics Manual. Our calculations cover the protest site, and the surrounding SRN (Strategic Road Network). The main carriageway is covered in both directions, but roundabouts are excluded as there is no data for these.	"Delay Extent" column of the Incident Impact Table
Economic Impact	The DfT's Transport Appraisal Guidance (TAG) provides average values of time for cars (£15.14 per hour). We have multiplied these by the vehicle-hours of delay to give an estimated economic impact.	For simplicity we have assumed all non-stationary vehicle delays apply to cars, which will underestimate the impact. The figures calculated do not include the further economic costs to individuals and businesses as a result of missed appointments, or late delivery of goods. Neither does it include the economic costs of activities which didn't occur because of the protests, or the cost to the police, National Highways, or others involved in managing the incident. Given these limitations the figure quoted is an underestimate.	"Economic Cost" column of the Incident Impact Table

Economic Impact

Start time of delays on SRN (NTIS)	11:00 - 11:15			
End time of delays on SRN (NTIS)	20:00 – 20:15			
Breakdown of impact	**Road**	**Delay extent**	**Number of vehicles**	**Economic cost (£)**
Delays from non-stationary vehicles :	M25 J31	15,492 Vehicle Hours	49,892	£234,543
			Estimated total economic cost (£)	**£234,543**

****Data source - National Traffic Information Service (NTIS) (Non Recurrent Vehicle Hours)**

Chief Analysts Division

Impact Assessment & Analytical Assurance Statement

M25 J31 and approaches, 20/07/22 — 12/08/22

Analytical Assurance Statement: 3rd Line of Assurance

Appropriateness	Compliance	Uncertainty	Fit for Purpose
Green-Amber	**Green**	**Amber**	**Amber**

Supervisor: Tracey Smith
Producer: Network Analysis And Statistics
Assurer: Richard Sweet

Data is from a variety of standard National Highways data sources, CCTV, and third party sources including Google Maps. The analysis is fairly high level, but does not provide inappropriate or misleading levels of detail. Only the direct impact of delay on the SRN mainline can be included – impacts off the SRN, impacts due to diversion, or impacts due to individuals choosing not to travel, are not considered.

The main scope for challenge relates to:

- Lack of data on some affected links
- Relative lack of detail in the information available at an early stage

The analysis has been designed specifically for this purpose, but time constraints necessitate the use of particular data sources which are available rapidly. **Appropriateness is considered Green-Amber**. As the agreed Analytical Plan is followed **Compliance is Green**. Whilst the mainline impact assessed is reasonably robust, our data cannot pick up numerous impacts elsewhere. **Uncertainty is thus Amber**. In summary, the analysis can be used to inform decision-making providing that the uncertainties are understood. **Fitness for purpose is therefore Amber**.

national highways