Investigation into Seven Sisters PTI Incident

Presented by Ryan Dearlove – Operations Development Manager

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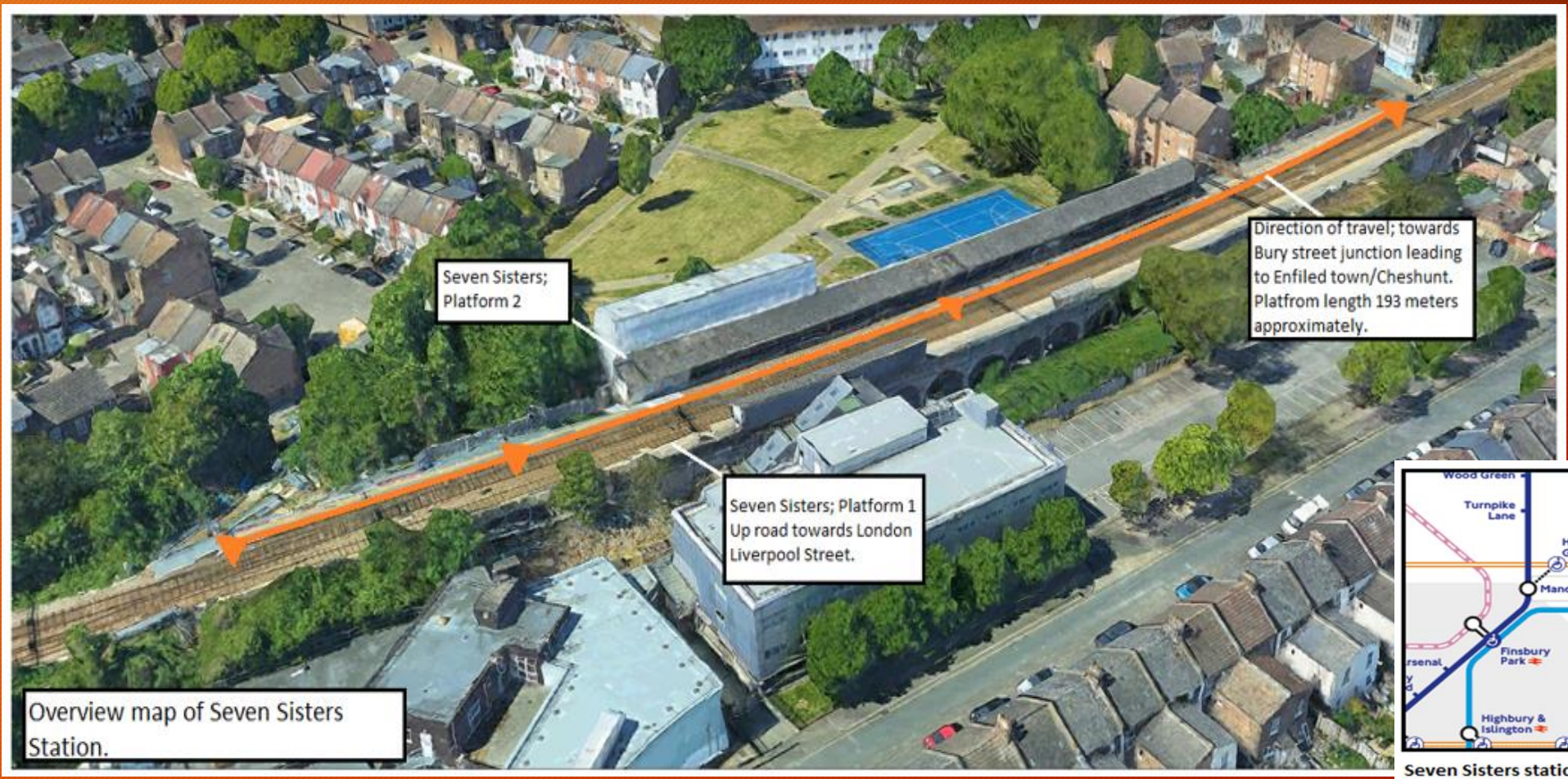
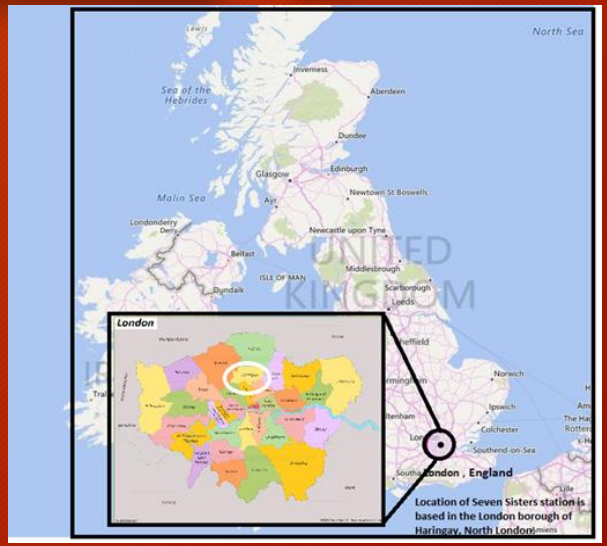
Location of the Incident Seven Sisters station.





Seven Sisters station: Served by London Overground and London Undergounds Victoria Line services.

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Seven Sisters Platform:

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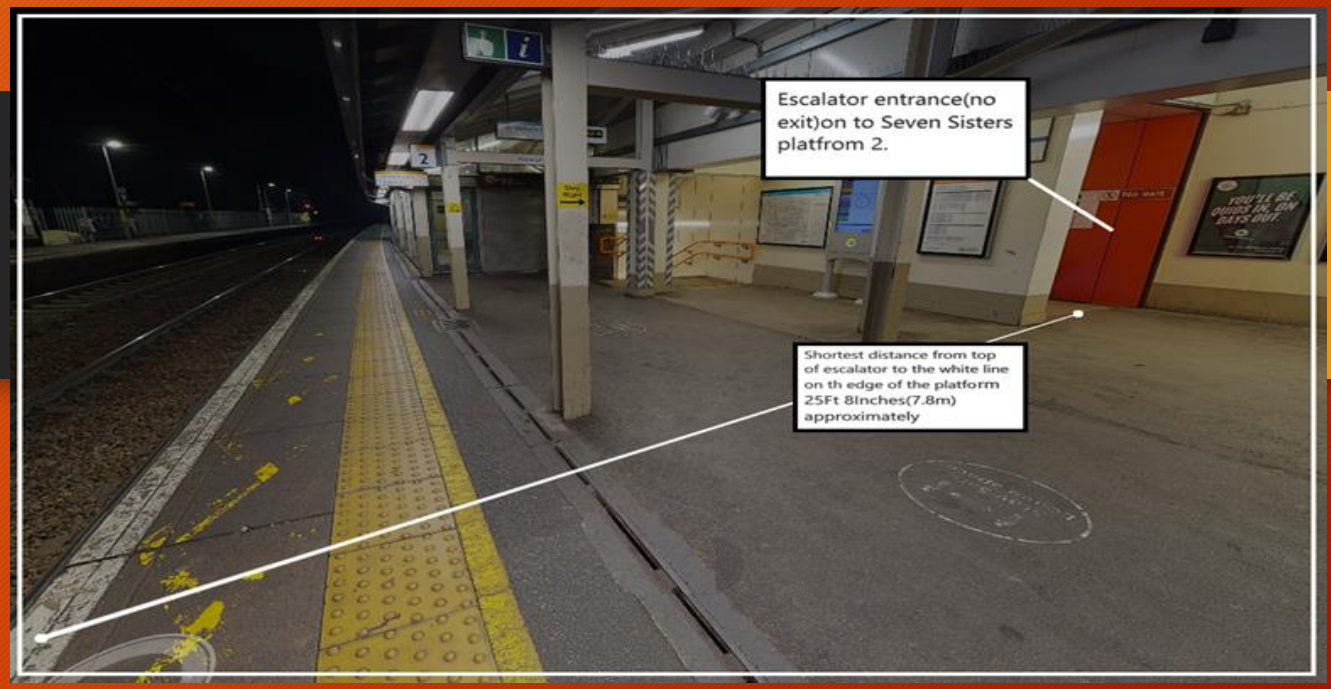
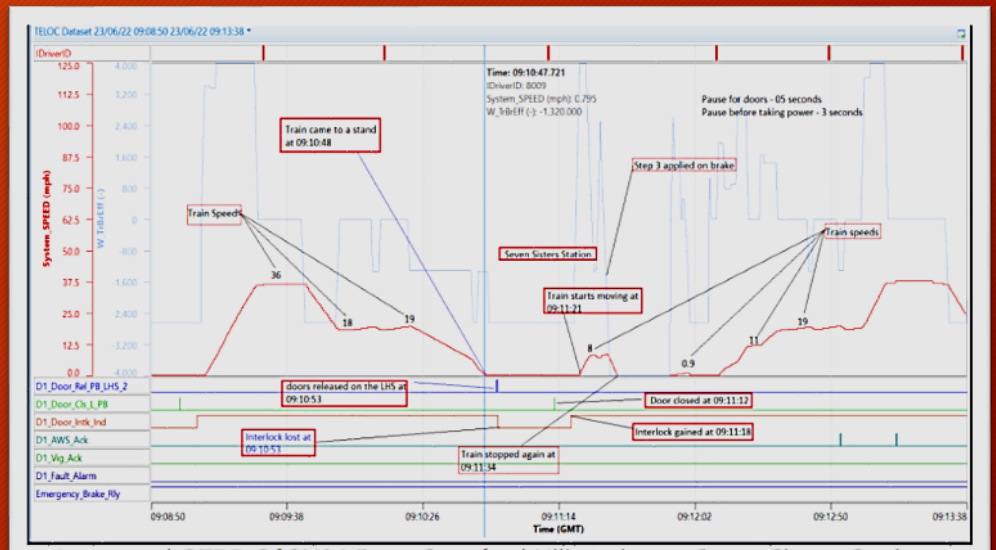
Seven Sisters Platform Layout 2 entrances & 1 exit



- Distance from top of stairs (entry and exit) to the platform edge 4.9m
- Distance from top of escalator (enter only) to platform edge Approximately 7.8m

Arrival of 2U04 – DURING incident

- 2U04 arrives at Seven Sisters Station platform 2 at approx. 09:10:48, (23min later than booked due to disruptions experienced earlier as well as additional passengers during LU strike)
- The passenger saloon doors were released at approx. 09:10:53.
- 2U04 was stationary at Seven Sisters Station with the passenger saloon doors released for 25sec, with the driver operating the door close button at 09:11:12, and gaining traction interlock at 09:11:18.



Annotated OTDR Of 2U04 From Stamford Hill station to Seven Sisters Station.

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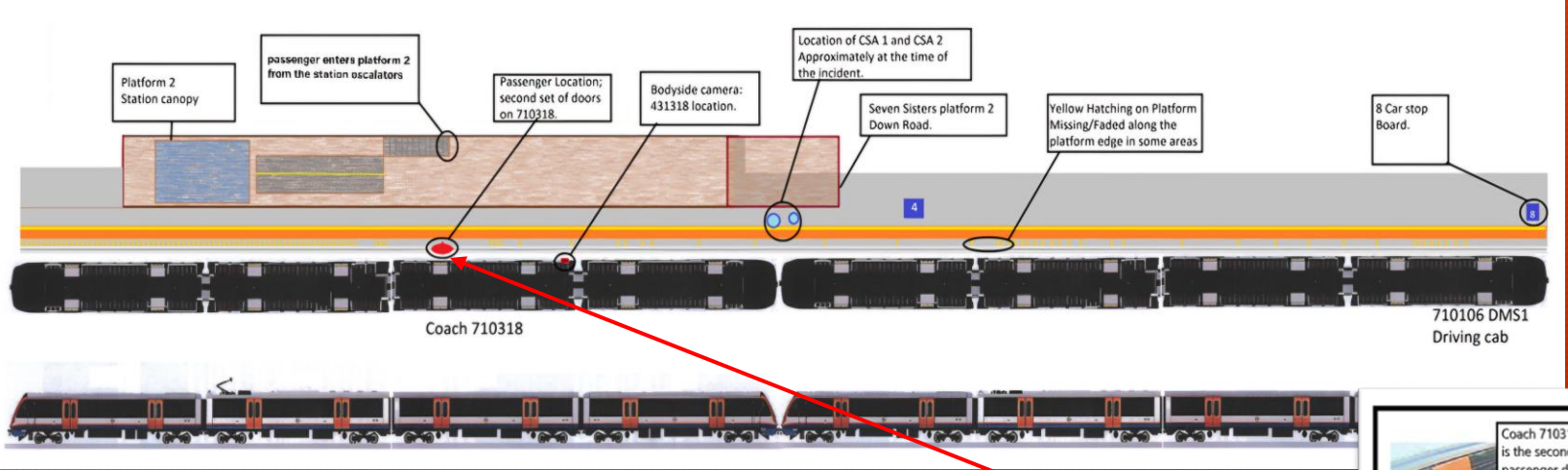
Seven Sisters Station
Overview of the incident



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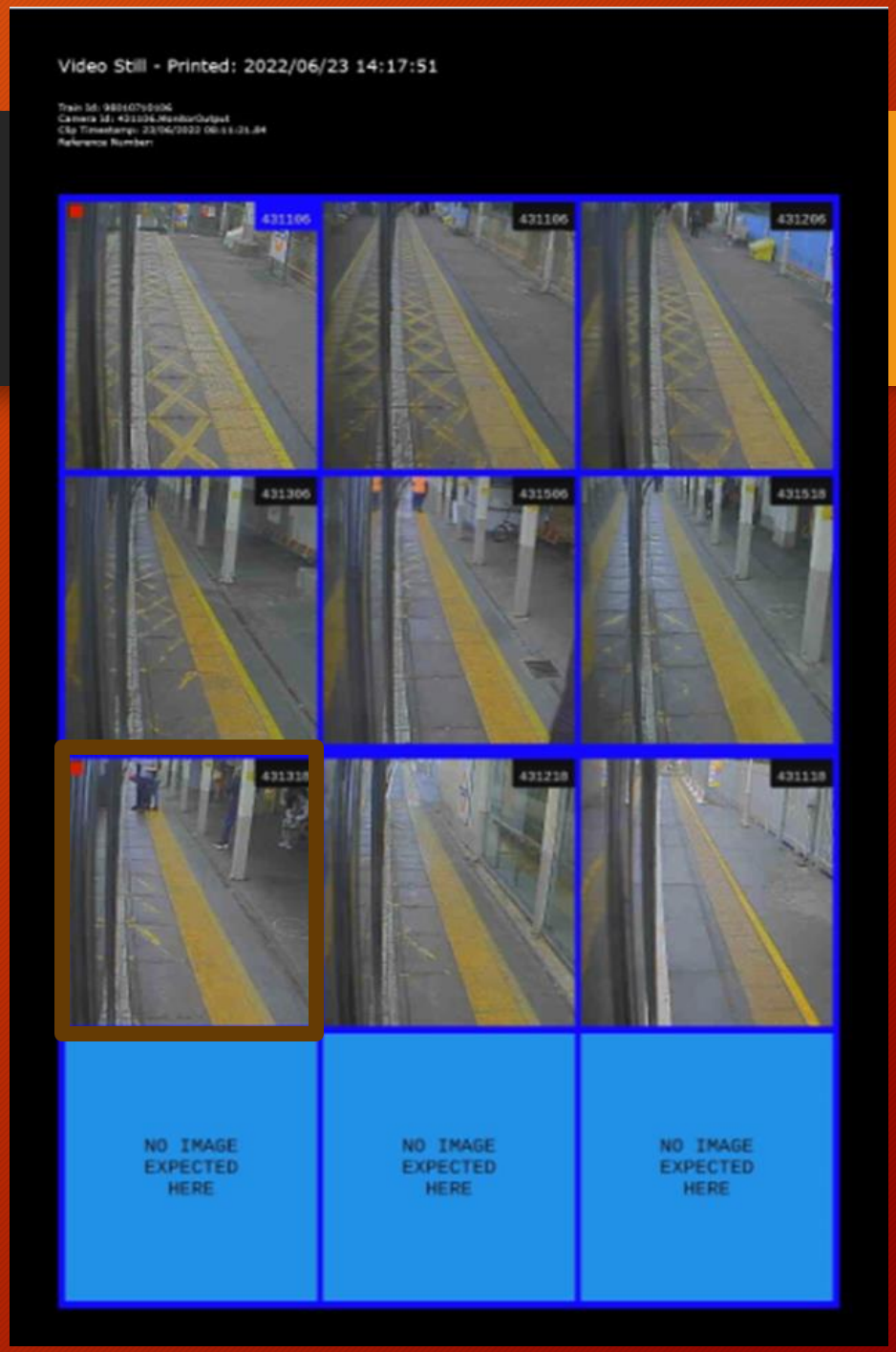
In Cab Equipment
Drivers DOO Images



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Drivers In-Cab DOO vs Station CCTV

Figure: 3

Station CCTV

DOO Image

Figure: 4

Station CCTV

DOO Image

Figure: 5

Station CCTV

DOO Image

Figure: 6

Station CCTV

DOO Image

Figure: 7

Station CCTV

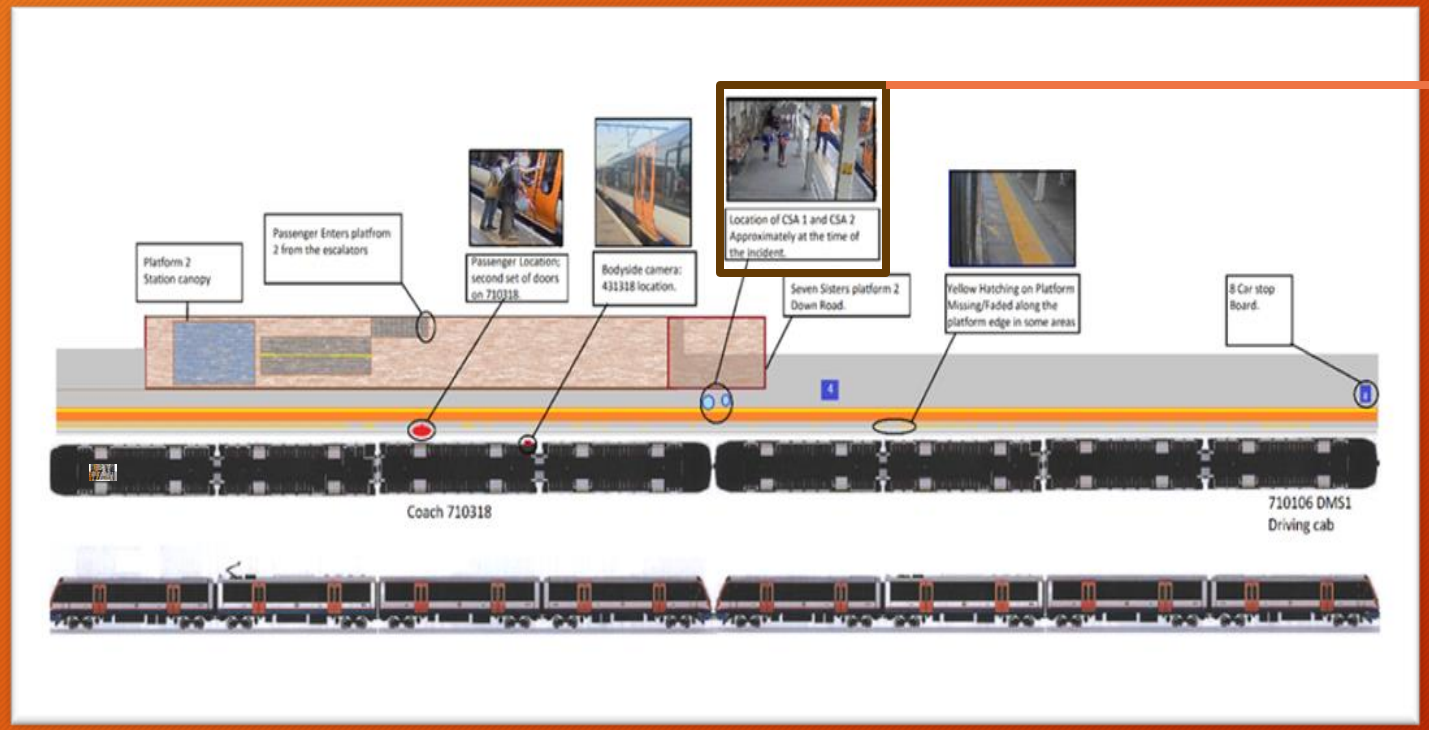
DOO Image

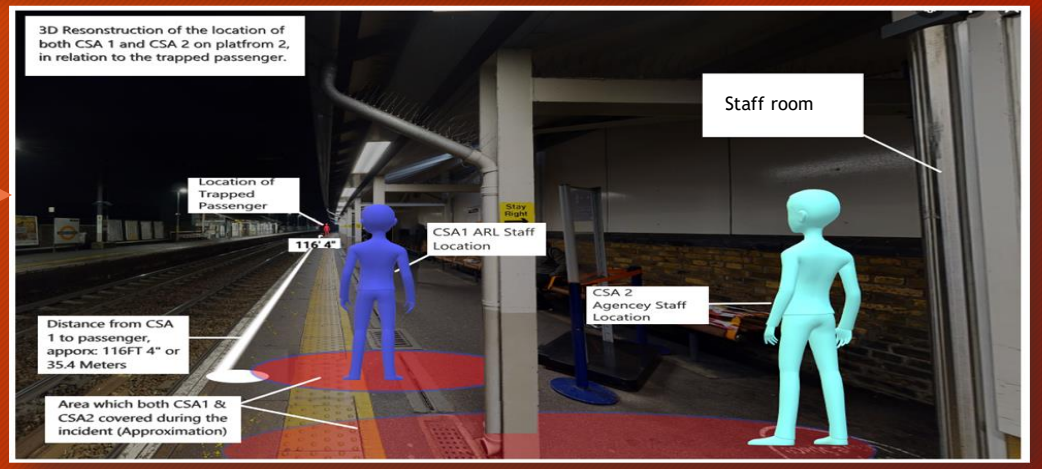
Figure: 8

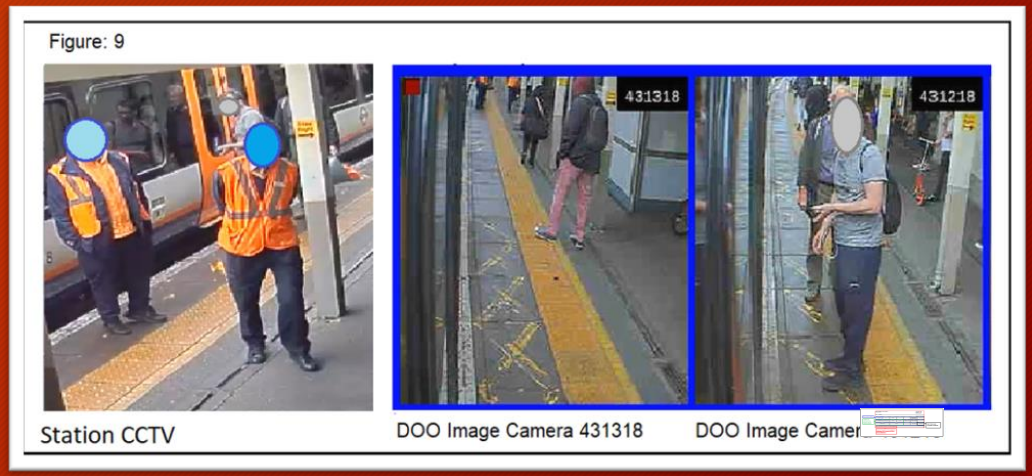
Station CCTV

DOO Image

CSA at Seven Sisters Station







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Factors to consider

- Workload and Resourcing
- Written information on the day
- Risk Management
- Teamwork and Leadership
- Competence
- Infrastructure, vehicles, equipment and clothing
- Process and Procedure documents

Post Incident Unit Testing

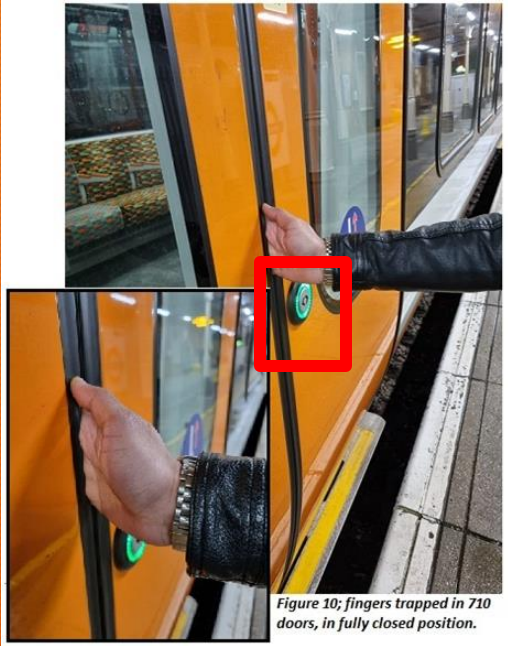


Figure 10; fingers trapped in 710 doors, in fully closed position.

Figure 11; obstacle detection system did not detect trapped fingers.

BTRAMR0001 - Work Order

2022-07-05 14:00:50

ALSTOM • mobility by nature •

Site : LOTRN

Corrective Maintenance

WO#	WO Type	WO Status	Source	Source Ref	Reported By	Reported Date
871789	CM	COMP	12			2022-06-28

Asset	TLA/Unit	Location/Car	Item	Model	Priority
431318 PMS(W) Single Voltage Car	710118	431318	PMS(W)-CAR	LOTRN-PMS(W)	2

Position	Serial #	Target Start	Approval Date	Completion Date
UNIT/CAR3	431318		2022-06-28	2022-06-29

Description

DOO - DOO camera on coach 431318 is out of alignment.

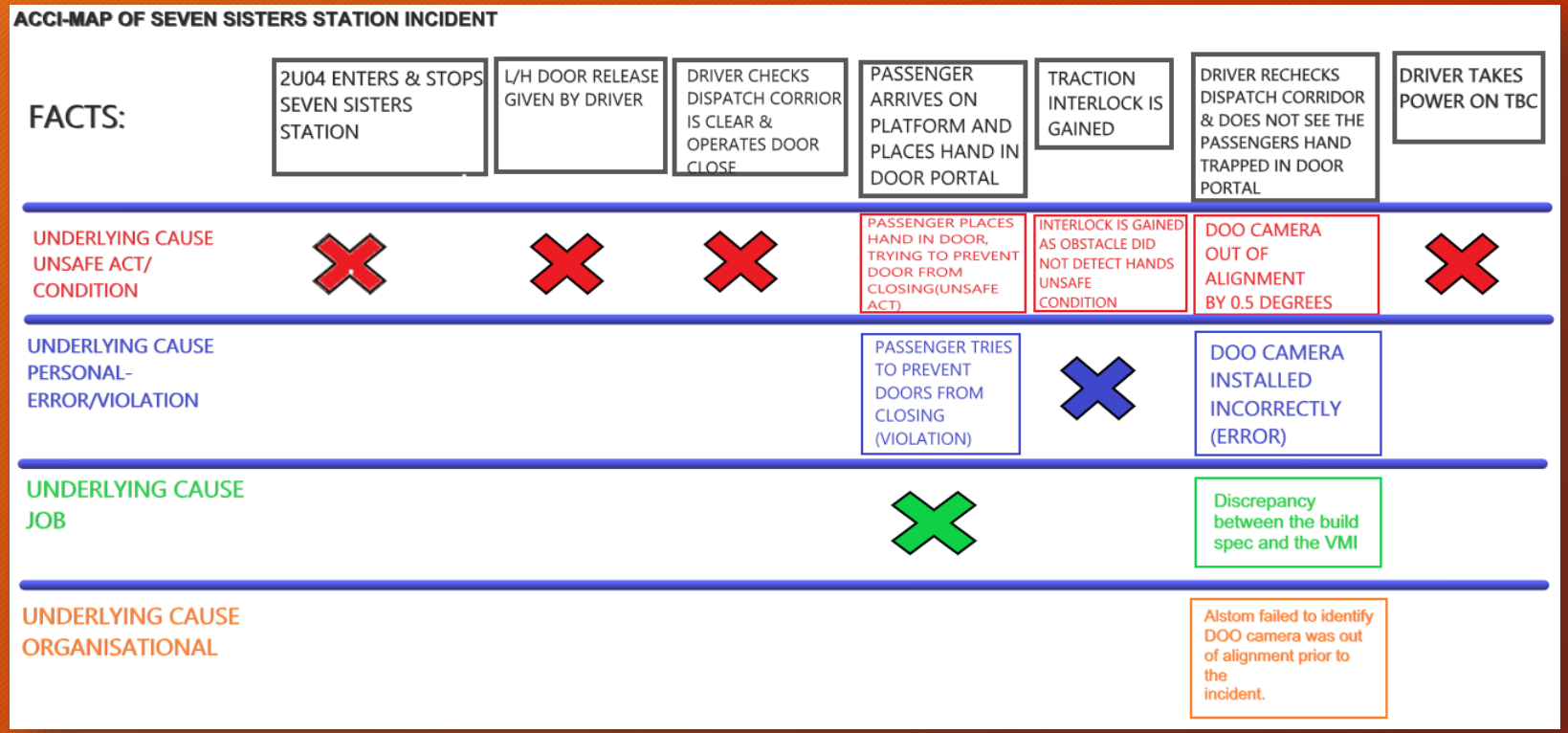
Work Order Number

Location Of Camera being tested(Coach)& Camera Number

Date Tests were completed; 29/06/22

Results Of Test On Camera Alignment; ***Indicating DOO Camera 431318 Is Out Of Alignment.***

Acci-map of incident is produced



Further Actions/Recommendations

- PTI brief for all drivers – All ARL drivers to receive further brief for platform train interface risks.
- Added to safety plans and reviewed in QA plan of assessments – Limitations of OTDR assessments.
- Review of Change management process of stations staff.
- Fleet checks.

NOI & ARLs PTI Briefing

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NOTICE OF OPERATING INCIDENT

Date: 23/06/2022

For the attention of:

Staff groups	Supervisors / Managers	Control	Drivers (P&D)	Drivers (OWN)	Drivers (SLL)	Fleet / Engineers	Station / Train Dispatchers	Relevance rating: 2 = Need to know, 1 = Information only, 0 = Not relevant
Relevance rating	1	0	2	3	2	0	0	

P.T.I INCIDENT-Seven Sisters station 23/06/22

Incident Overview:

On the 23/06/22 approximately 09:10, 2U04 which was formed of an 8-car formation, arrived at Seven Sisters station (platform 2, Down road) as booked.

The Driver released the doors on the LHS to allow passengers to alight and board the train.

When the dispatch corridor was clear the driver operated the door close button.

During this time a group of (Approximately 3) passengers had run from the station entrance and tried to prevent the passenger saloon doors from closing.

As the doors were already in the process of closing, a single passenger had placed their right hand in passenger door portal.

This resulted in the passenger getting their hand stuck in the passenger door portal, and the driver at this point had received the in-cab interlock indication.

The driver then proceeded to take power.

The passenger with their hand stuck in the doorway, continued to run alongside the train for approximately 1 coach length (20 meters) before the passenger managed to free themselves from the train.

This incident is under continued investigation

Location Pictures:

Key Learning points:

- OBSERVE THE DOO CAMERAS AS THE DOORS CLOSE.
- IT MUST BE NOTED THAT THE IN-CAB INTERLOCK INDICATION DOES NOT MEAN OR GUARANTEE AN ITEM, OR A PERSON IS NOT TRAPPED IN A PASSENGER DOOR, ESPECIALLY WITH 710S, THEREFORE IT MUST NOT BE TAKEN AS "CLEAR TO PROCEED"
- ONCE INTERLOCK IS GAINED, HAVE A SYSTEMATIC APPROACH TO FURTHER RECHECK THE DISPATCH CORRIDOR OF THE WHOLE PLATFORM.
- MAKE SURE AFTER RECEIVING INTERLOCK THAT NO PERSON OR OBJECT IS PHYSICALLY IN CONTACT WITH THE TRAIN. IF IN DOUBT DO NOT MOVE, GO BACK AND PHYSICALLY CHECK.

Thank you for your attention

Driver Managers
Chingford

Local Reference No.:			CHIN000765	
	Case	Duration	Date/Time	Initials
Posting:	LNC	72 Hrs		
Move #1:	NNC	3 Weeks		
Move #2:	QNC	6 Weeks		
Final withdrawal & filing:				

PTI Discussion

Intro

- Open discussion
- Why PTI awareness is important
- Opportunity to share PPS/tips/feedback

Recent incidents – what happened/what could have been done better/PPS (8-car reminder/RTC)

- Wrong side door release
- SSDR
- Trap and Drag
- Buffer Stop Approach

What we as DMs look for and why

- P4D
- Dwell time - SHEILA
- Zoom in function
- Pause between interlock and power – train safety check
- Z-scan
- DO NOT RELY ON INTERLOCK
- Route Risk awareness – high risk locations, platform entrance/exit
- Gradual power application – low traction power
- Detailed driver reports
- Time of year - festive season/events at WHL

Traction discussion

- 30mm gap
- CSDE/ASDO
- MIPs

PTI brief

The purpose of this event was to engage with drivers, with the intention of having a meaningful and open discussion about PTI incidents. All areas of PTI were covered but particular attention was paid to 'trap and drag' incidents. Time was allocated for drivers to ask the driver manager questions and raise/discuss any concerns they have. An anonymous feedback form was issued to attendees to gauge relevance of event contents and points of action to follow up.

A summary of how the event was structured and the topics which were covered can be found below.

Introduction

- Purpose of the event
- The meaning of PTI and why awareness is important
- Opportunity to share PPS, driving styles and feedback

Recent Incidents

- Trap and drag
- Wrong side door release
- Stop short door release
- Station overrun/low adhesion season
- What happened and what would you have done differently?
- PPS including RTC/reminder boards/driving styles

Talk through the PTI brief

- What DMs look for during assessments and the reasons why
- Pause for doors
- Dwell time – checks of SHEILA
- Z-scan: methodical and consistent checks of DOO equipment
- Focus on corridor and checking whether the white line is broken
- Zoom-in function: how it works/demonstration
- Emphasis on not relying on interlock as authority to move
- Gradual power application to allow more time viewing the monitors but be aware of 'low traction power' warning
- Route risk awareness: high risk locations, platform entrance/exit, time of the year/festive season, and events at White Hart Lane
- Importance of detailed driver reports

Traction

- 30 mm tolerance in doors, what this means for a driver and passenger
- DOO images: live image indication, camera alignment, sunlight shadows, dirty cameras and monitor switch
- Position of external door open buttons: potential for someone to be trapped but look like they are attempting to open doors
- CSDE and ASDO: how the systems work and the indications the driver should receive
- MIPs: risks involved and what to be aware of

Further actions

Avoidance Of Operational Incident

Avoidance of Incident :	Platform Train Interface (PTI) and potential Trap & Drag
Date:	Thursday 22nd December 2022
Time:	08:07
Location:	Wood Street Platform 1
Train Details:	2T23 – Chingford to Liverpool Street – 710 stock

Incident Overview:

Driver observed all passengers boarded and the dispatch corridor clear. They confirm signal is clear and begin 'door close' process. As part of their Train Safety Checks, the Driver observes doors closing and notice a late arriving customer, who runs to the train and places their hand into the doors as they close. Despite this, interlock is achieved.

The customer attempts to remove their hand from doors without success despite several attempts. Driver identifies that the customer is trapped, so re-checks the platform side and re-releases doors on correct side. Customer is then able to release hand and boards the train safely.

The Driver reported this incident to their Driver Manager as a near miss.

Location Picture:

Station CCTV image - Wood Street platform

To watch the footage; point your phone camera or app to this QR code.

Identifying Good Practice(s):

- Driver checked signal before starting dispatch procedure
- Train Safety Check carried out correctly, using the Z-scan method, and identified a customer potentially trapped in the doors
- Driver is aware that achieving interlock does not mean it is safe to depart
- Driver carries out re-release, after checking correct platform side.
- Driver re-started the dispatch process from the beginning

Case	Duration	Date	Time	Initial
Incident	8 weeks			
NNC	3 weeks			
GNC	5 weeks			
Withdrawal				

To encourage drivers to report safety concerns, link set up via a driver notice.

QR code led the driver to ARL driver portal, where the video could be watched.