

SERIOUS INCIDENT EVENT REVIEW

Incident Description: Load fell from Flatbed when leaving site

Incident Date: 08.12.2020



Tideway



SERIOUS INCIDENT EVENT REVIEW

SIER 2: WITHIN 7 DAYS



2600-TDWAY-TTTUN-990-ZZ-PF-700007-P5 ▪ OFFICIAL ▪ Approved Status: Approved

Incident Details

Date of incident	08.12.2020
Time of incident	10:00
Incident reference n°	INC_11753
Tideway Area	ACTST (Outside site)
Contract	C405
Contractor	BMBJV
Location	Canham Road
Weather	Clear
Actual consequence of this incident	4 hour road closure / damaged flat bed / damaged car / damaged pavement
3 rd Party interfaces affected	Parked car damaged. Pavement Damaged.
Potential consequence of a recurrence of this incident	Severe damage / Injury

Injured Person

Condition of injured person	N/A
Injured person’s personal status and support provided to their family	Driver Involved in Incident was put on furlough for 2 days
IP’s employer	WFS (Worton Freight Services)
Experience of IP / competence checks of IP at induction?	Attendance of EPIC – 1 Day Tideway , 11 years driving experience
Results of D&A tests, as applicable?	Potentially undertaken by police?
Any fatigue considerations?	N/A

Other People Involved

Personnel and Roles	<i>Crane Supervisor – Mammoet Slinger /Signallers - Mammoet Driver – WFS (Worton Freight Services) Herrenknecht Operatives</i>
Supervision and Site management	<i>Project Engineer - Simon Kalmbach Herrenknecht</i>
Involvement of Personnel in Incident	<i>Driver - In possession of load when incident occurred</i>
Experience / Competence checked at induction?	<i>Sean Gallacher - SSSTS, Crane Lift Supervisor Kieran Barker - ECITB Level 3 Diploma in Moving Engineering Construction Loads / CPCS Slinger/ Signaller Kyle Flounders - CPCS Slinger/ Signaller Simon Kalmbach - SSSTS</i>
Results of D&A Tests, as applicable.	<i>Driver of Vehicle – Possibly undertaken by Police - Unconfirmed</i>
Any fatigue considerations?	<i>Driver had slept in excess of 7 hours and Tachograph was found by police to be in order</i>

Witness Statements

Witness statements taken?

Summary of information obtained from Witness Statements?

Mammoet –Crane Lift Supervisor – Sean Gallagher

WFS (Warton Freight Services) – Driver - Chris Bassett – Taken informally as Police present

Sean Gallagher

A Plan for loading had been made first thing with the driver from WFS on evaluating the parts to load. We had decided to put one split gantry deck on top of one another, so stacked two high as previous loads. Driver said he was happy to take third tier piece that was smaller

The second gantry was stacked in a way as to counteract and spread the load distribution evenly.

The timbers used were smaller than would have liked however thought these were ok

Each leg was packed with timbers, the yellow upstands that had been welded were not quite the same length so we had to pack them to square up. All 5 supporting areas (2 yellow welded uprights and 3 existing gantry legs) were supported with timbers. 4 straps were used in total and two chains each tied down each end piece to stop slippage from the back. We packed out other areas with timber boards on the third tier to ensure support.

Driver did all the strapping down himself, we only assisted was happy and he responded

Chris Bassett

Not sure of what the load was apart from scrap metal, no idea of dimensions, weight

Checked the straps and chains of load and happy to leave site

I presume you left the site and went round the bend cautiously?

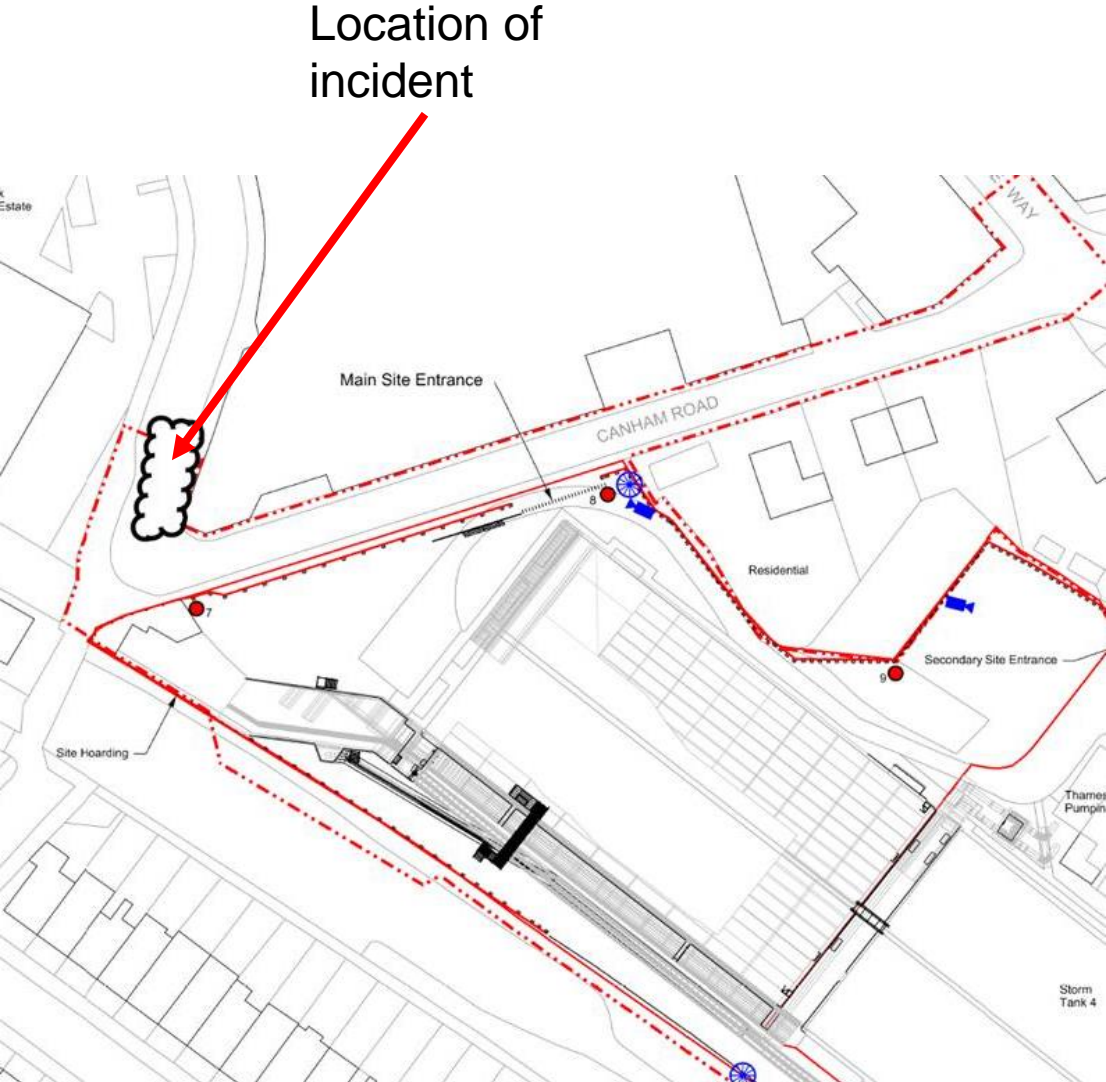
Actually as I was going around the bend I had to stop as 2 people with a dog I think crossed the road in front of me. After that I started again and then I heard a bang and the noise of the load slipping off behind me, I stopped.

Detailed Facts relating to Incident

Incident Description

- *Load left site at 09:59*
- *Flatbed turned left onto Canham Road*
- *On the first corner turning right the load fell to the right hand side of the Flatbed.*
- *2no legs welded onto the bottom section of the load had punctured through the flat bed.*
- *2no loads fell off the side of the Flatbed, weighing approximately 3T and 2T respectively.*
- *A car and pavement was damaged.*

Incident Photographs (As necessary)



Incident Photographs (As necessary)



The bottom section of the gantry was supported with 3no large legs on one side and 2no thinner legs on the other.

The 2 thinner legs were placed onto the truck deck with a sections of timber approx. 400mm wide underneath each foot. As can be seen in the photo.

Incident Photographs (As necessary)



Top section secured using 2no chains and 2no straps. (2T)

Middle section secured using 2no straps (3T)

Lower section secured using 2no straps (5T)

Incident Diagrams (As necessary)



Incident Diagrams



Immediate Actions Undertaken

Time	Action
10.00am	Banksmen notified site team of the event
	Area was made safe and driver checked
	Acton team closed road/ footpath and put TM in place.
10.30am	Site team contacted Darren Green and Met Police. Police incident van was sent to site. Incident reference number was given: 2128 08/12/2020
	HRK notified haulier discussed recovery.
11.15am	Police special unit arrived on site and took over the scene to conduct evidence collecting.. Police closed road further up Canham Road and pedestrian footpath closed.
11.45am	TfL NMCC informed, Message left with Ealing contacts, MET Police are going to send out the Commercial Vehicle Unit to have a review of the load / Flatbed, MET Police not able to assist to contacting owner due to GDPR issue,

Immediate Actions Undertaken

Time	Actions
12.30pm	Haulier sends a (c. 50/60t) crane to site, that loaded the first steel section onto one of two standard wagons. It was a Liebherr crane provided by London Crane Hire, organised through the haulier – Warton Freight Services.
	Police still in control of traffic management.
13.00pm	Mobile crane carried out a test lift on the section that was still on the flat bed. Police co-ordinated this and the steel sections came to 5T. They lifted the section free and repositioned it safely for transportation.
	All sections were lifted out of the way and the road cleared of any remaining debris. The road was then opened up afterwards
14.00pm	Road re-opened.
16.00pm	LBE organised for pedestrian footpath repairs.
	Police organise visit hauliers on Wednesday 9 th Dec to review drivers competence and training records.

Further investigation findings



Photo taken at 10:17

Strap snapped



Further investigation findings



Ratchet straps - quick reminder

Webbing ratchet straps can be used to secure most types of loads, but it's important to make sure that you use and store them properly.

When you're not using straps you should store them in a weatherproof container or compartment so they don't get damaged.

As a general rule, if you're transporting palletised goods, boxes and stillages, you will need at least one strap per row.



4129 incidents involving ratchet straps in 2015

✓ If you carry loads like steel, concrete, and scrap metal that can damage the strap material, use corner protectors or webbing sleeves to protect the straps.

✗ Never use a knot in any part of the strap that's under tension.

✗ Cuts, tears, water, rock salt and oil contamination can lead to straps wearing out.

If you're transporting pipes or poles, it's often better to use loop lashing, where the strap wraps around the load to make sure the load stays together.

✓ Choose straps that are strong enough to secure the loads you carry.
✓ Check your straps regularly.

Other loads being sent off site



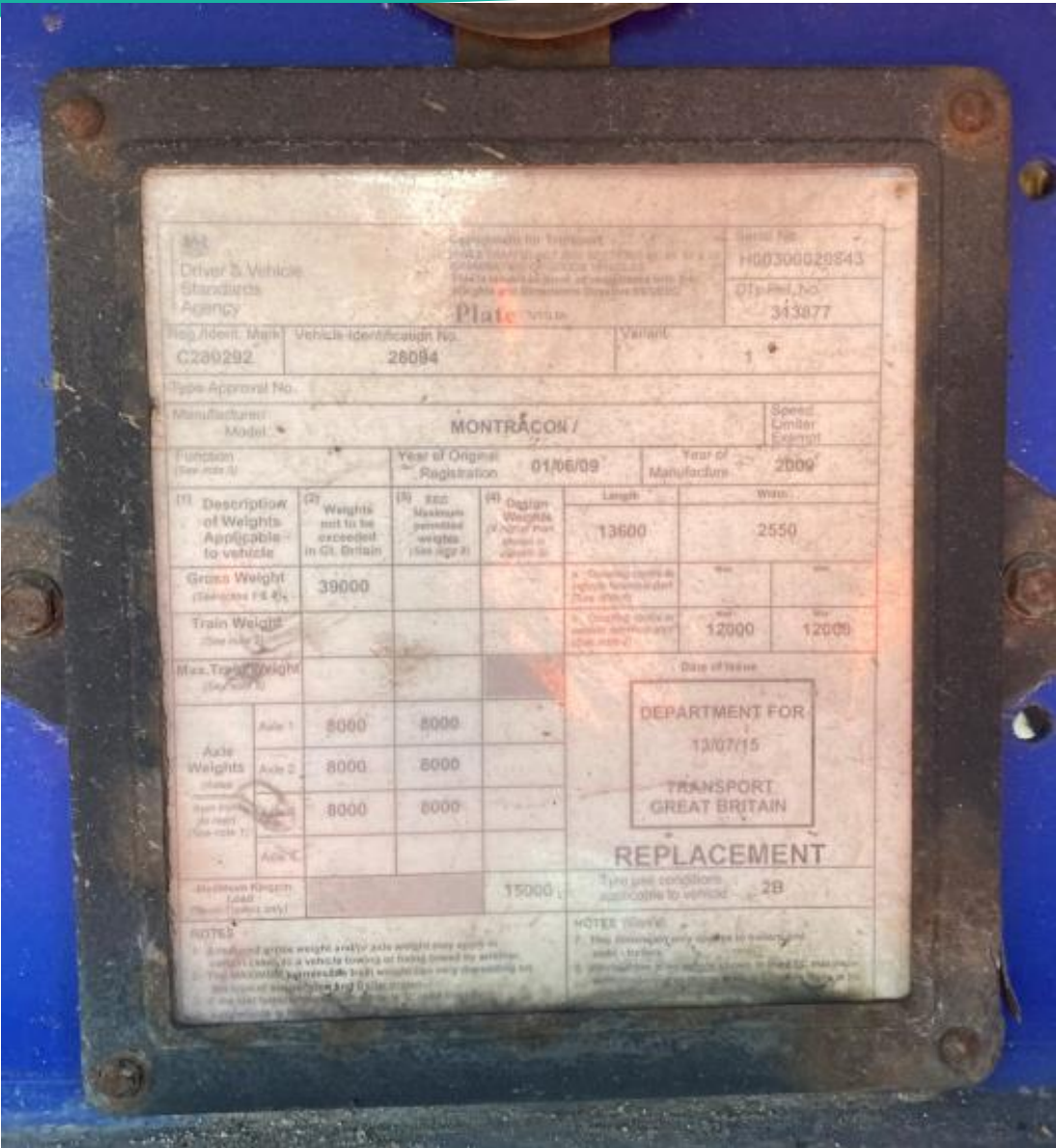
Other loads being sent off site



Other loads being sent off site



Further investigation findings



Flatbed:

Max 8T on each axle
Max 15T in total
Registered 2009

Further investigation findings

These could have been more suitable to use as legs instead.



Response by Hauliers

- Immediate review of incident
- Hauliers were instructed to only take single load sections instead of multiple sections at once
- Driver received additional training by Hauliers
- Additional training also to be carried out for all drivers by Hauliers.

Response by Hauliers

- Load risk assessment developed to be used by all drivers

Load and Securing Risk Assessment

Vehicle Reg _____ Trailer number _____ DATE _____

SITE _____ LOAD _____

DRIVERS NAME _____ Sign _____

Vehicle and load securing equipment suitability		Yes	No	N/A
1	Is the vehicle/trailer suitable for the load to be carried?			
2	Does the vehicle/trailer have the correct securing equipment supplied or fitted?			
3	Is the securing equipment in good and sound condition and suitable for the goods carried?			
4	Is it a full load?			
5	Can the load be loaded against the headboard – is the headboard in sound condition and strong enough to resist movement of the load? *			
6	Will the goods extend above the headboard? *			
7	Is the load of a multi-drop/collection nature? **			
8	Will the load be stacked? ***			
Notes	*Consider temporary blocking, secondary headboard or alternative means of preventing forward movement. **Action will need to be taken to prevent directional movement of part loads. ***Is the base row being loaded stable and level? Additional lashing will be required.			
Securing the load		Yes	No	N/A
9	Can the load be secured from ground level with suitable ratchet straps or equivalent?			
10	Has the load been planned – heaviest stable items at the bottom?			
11	If using pallets are the pallets in a good condition and suitable for the goods loaded on them?			
12	If goods are on pallets are they adequately secured to the pallet? (shrink-wrapped, banded or other suitable material)			
13	Are pallets paired in height to assist top over straps – are top heavy or unstable goods/pallets secured adequately? *			
14	Is there a need to gain access to the loading bed to secure/position the load? **			
15	Does the load securing method comply with the DfT documented CoP? Which stipulates loads must be secured to prevent the total weight of the load moving forward and half of the weight of the load moving backwards and sideways.			
Notes	*Pairing pallets will assist with securing goods to the vehicle deck – unstable goods/pallets will require additional blocking. **Is the vehicle supplied with an access ladder and suitable hand holds to gain safe entry/exit from the vehicle load bed? Y/N Is the vehicle equipped with a edge protection system and is it in use? Y/N			
Is the load secured safely?		Yes	No	
16	Can the load slide or topple forward or back?			
17	Can the load slide or topple off the side?			
18	Is the load unstable?			
19	Is load securing equipment damaged or worn?			
20	Is there anything loose that might fall off?			
Notes	If the answer is yes to any of the questions 16 – 20 reassess the load-securing requirements or securing equipment.			

- Hauliers agreed that in this instance the straps were not suitable for the job
- Whilst two sets of chains were used to secure the top piece, the lower and middle sections were only secured by straps. This could have resulted in a shift of weight due to the flexibility of the straps.

Other factors



INCIDENT



AFTERWARDS

Other factors



AFTERWARDS



CAMBER IN ROAD

Other factors



Other factors



Video evidence

- Video 1 and Video 2

CONTRIBUTING FACTORS

- The height of the stack would not have aided stability. If it was 2 stacks this may not have happened. However this is a “what if”.
- The legs welded on the bottom would have been better suited with wider base plates to spread the load.
- Possibility of wood rot in the flat bed boards may have contributed.

MAIN CAUSE

- When the wagon mounted the kerb, this “shock load” caused some part of the loaded stack to shift, also causing the chains to move and potentially loosen.
- When the last wheel came off the kerb, the drop in height with the camber in the road caused the weight to shift, punching through the flat bed.
- Each section should have primarily been with chains and the straps should have protection on.

Conclusion

Action	Owner	Date
Points from WFS presentation to be taken out and briefed to workforce.	BMB	January 2021
Procedure to identify irregular load/Loading plan and check sheet. That will identify if temp works checks are required.	Andy D/J Capps/KG	January 2021
Identify irregular loads are going out. (Kern)	BMB	January 2021
Planning with sub-contractors for future work (East/Central)	HK	January 2021
Support legs or alternatives to be reviewed.	HK	January 2021
Contact council to see if improvements can be made in the corner (Lines, curb, camber)	JR/J caps	
Plant team to share with regular hauliers companies involved to be removed before sharing	J Capps/KG	