

ACCIDENT AT STM on 15th May 2016



SERIOUS ACCIDENTS AT STM

- H Car runaway Feb 2013
- Overhead Wiring Accident – May 2015
- Collision between 675 and 1054 – May 2016

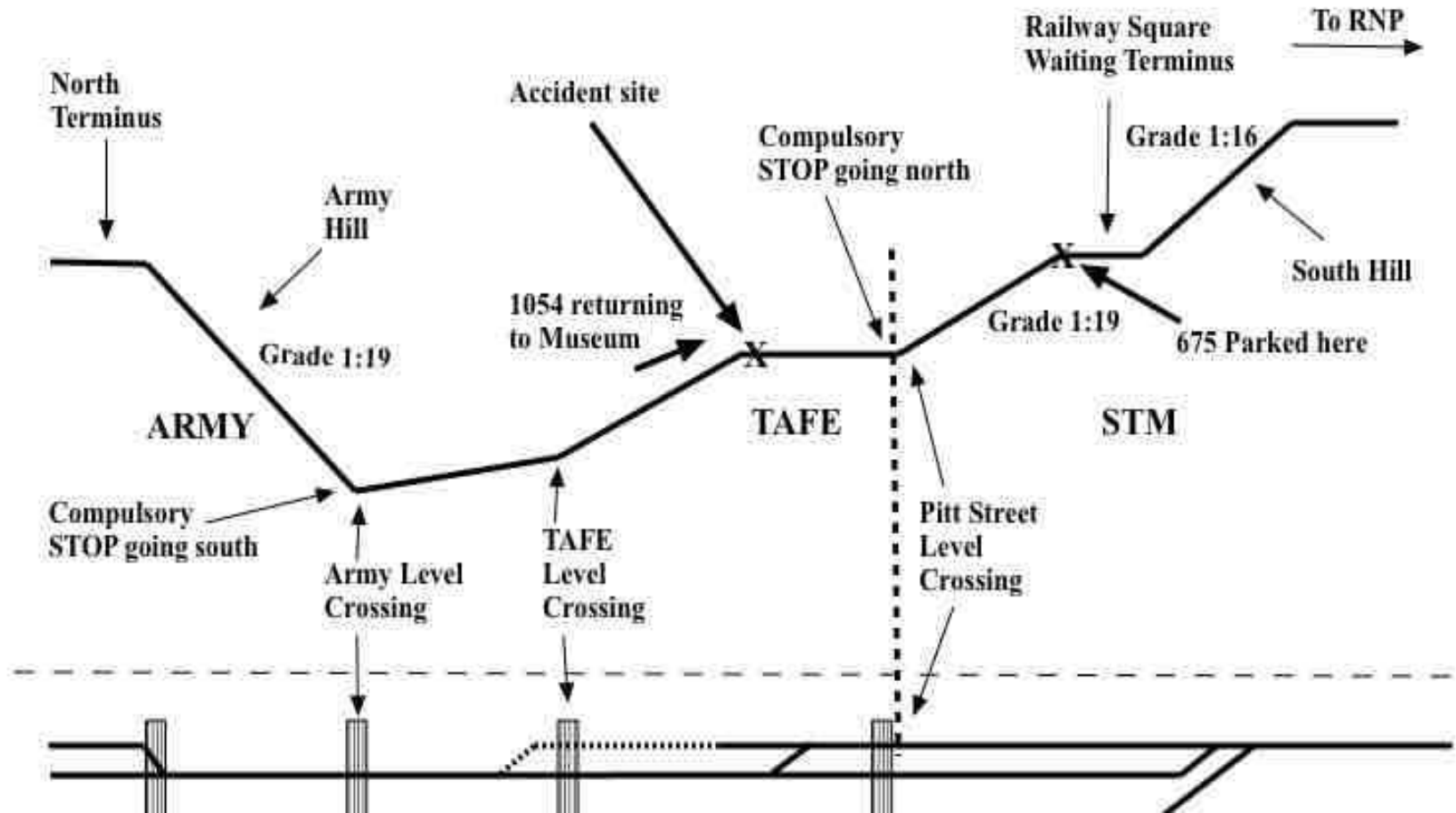
INVESTIGATORS

- Office of the National Rail Safety Regulator (ONRSR)
- Office of Transport Safety Investigations (an independent body to investigate safety occurrences involving bus, ferry and rail transportation in NSW) (OTSI)
- Australian Transport Safety Board (ATSB) investigates air, sea and rail transport.

SUMMARY OF ACCIDENT

- Sydney J class tramcar 675 was parked at Railway Square terminus – left unattended
- Brakes were applied and tram chocked
- Its brakes leaked off, chock pushed aside and it rolled away
- Japanese Nagasaki tramcar 1054 was returning from North terminus with 15 passengers and 2 crew
- Both collided north of the Pitt Street level crossing.

ACCIDENT SITE



CAUSES

- Air brakes leaked off 675
- Chocks not properly placed under wheels
- Wrong way

Right way



Placement of Chocks



RESULTS OF ACCIDENT

- 675



- 1054



RESULTS



ACTIONS TAKEN AFTER ACCIDENT

- Check for injuries
- Called ONRSR & OTSI
- Secured the site
- Organised D&A testing of crews
- Took crews from area – in shock
- Investigators arrived – about 1.45 hours after being called
- Each did their own investigations
- Day ended 8 hours after accident.
- Ban the use of Manual Lap cars

POST INVESTIGATION

- OTSI escalated to ATSB- serious accident
- ATSB interviewed crews, W/Mgr. and OIC
- ATSB/ONSRS looked at Mtce. details of trams
- ATSB/ONRSR looked at crews – fatigue & qualifications
- ONRSR reviewed all procedures
- Onsite inspection of trams
- Tried other tram for speed of 675

My Mistakes During the Day

- Did not induct OTSI & ONRSR before they started the investigation
- Did not close the Museum after accident
- Did not seek witnesses
- Did not check if any passengers were in shock
- Did not Adequately look after crew welfare
- Did a “timeline” which helped in report.

OTSI Suggestions on Day

- “We appeared to be operating a circus not a tram museum”
- Fence off tracks to stop public entering tramline
- Install catch points/derailer in Tramway Avenue

Summary of 22 Recommendations from STM Report

- Ban use of triangular chocks
- Develop a standard details of chock
- Develop procedures for chocking trams
- All trams to be chocked and handbrakes applied when parked
- Retrain all crews in the correct procedure for chocking trams and applying the handbrakes
- Ensure at least 1 crewmember is near the trams at Railway Square Waiting Shed AT ALL TIMES
- All trams travelling NORTH on Tramway Avenue are not to exceed walking pace or 4kph

Recommendations from STM Report

- Normally only 2 trams are to be stabled in front of the RSWS on the level area
- Indicate the level areas at the Railway Square Waiting shed and North Terminus
- When parked on the hill the driver must stay in the cab.
- Retrain Staff on Manual Lap trams
- Review the Risk Register to see if more risks need
- Better secure the fire extinguisher in 1054

Recommendations from STM Report

- Secure the floor latches in 1054
- Ensure that any crews in shock should be taken to a “sick bay” area (*not implemented as no-one on site is medically qualified - **to be taken to hospital***)
- Ensure that any crews in shock should not be allowed to drive home but have transported provided
- Ensure that any crews in shock be offered counselling services

Recommendations from STM Report

- Review when the Museum should close down when a major accident occurs and define the parameters for such a decision to be made
- Review and improve the Emergency Management Procedures
- Have a checklist of actions to be undertaken and displayed in the Starters cabin for the OIC's to follow including contact names and phone numbers

Recommendations from STM Report

- Ban the operation of specific manual lapping brake trams unless specially approved (*Since had all Traffic Staff retrained and re-assessed on manual cars*)
- Review any improvements to be made to trams which have “manual-lapping” brakes (*Decided to retrain Traffic staff*)
- Ensure details are recorded from meetings with STM members about the incident

Other Changes

- Handbrakes checked added to Pre-operation checklist
- Trams parked on hill to have driver in or near cab
- Train crews on Applying/releasing handbrakes on manual lap cars
- Demonstrate the correct way to chock a tram
- Ensuring Crews stay at Rly Sq. Waiting shed terminus

QUESTIONS