

Oliver Stewart
RAIB Recommendation Handling Manager



26 November 2024

Mr Andy Lewis
Deputy Chief Inspector of Rail Accidents

Dear Andy,

RAIB Report: Tram collision with pedestrian near Market Street tram stop, Manchester on 12 May 2015

I write to provide an update¹ on the action taken in respect of recommendation 2 addressed to ORR in the above report, published on 12 April 2016.

The annex to this letter provides details of actions taken in response to the recommendation and the status decided by ORR. The status of recommendation 2 is **'Closed'**.

We do not propose to take any further action in respect of the recommendation, unless we become aware that any of the information provided has become inaccurate, in which case I will write to you again.

We will publish this response on the ORR website.

Yours sincerely,

Oliver Stewart

¹ In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

Recommendation 2

The intent of this recommendation is to promote a further examination of the need for additional risk control measures in the Piccadilly Gardens area.

Metrolink RATP Dev Ltd in conjunction with Transport for Greater Manchester should review the effectiveness of risk mitigation measures associated with tram operations through the pedestrianised area in the vicinity of Piccadilly Gardens. This review should include:

- reference to previous risk assessments;
- identification of the dominant contributors to the overall level of risk;
- historical experience of accidents and near misses in this area (based on collation of existing data); and
- the experience and knowledge of tramway staff, including drivers.

The findings of this review should be used to identify and evaluate possible additional mitigation measures. Any that are considered to be reasonably practicable should then be programmed for implementation

ORR decision

1. Transport for Greater Manchester (TfGM), Manchester City Council and Keolis Amey Metrolink (KAM, who replaced Metrolink RATP Dev Ltd as the operator of the Metrolink system) commissioned an independent risk assessment of the Market Street/Piccadilly Gardens area. The risk profiling work included analysis of historical data, hazardous events and precursor types.

2. The risk assessment identified a number of longer-term control measures which may be reasonably practicable and which should then be put in place as part of a wider redesign of the Market Street/Piccadilly Gardens area of central Manchester over the next 3-5 years. ORR will require an action plan to be produced as part of the redesign work which takes into account the conclusions of the risk assessment. As an interim risk control measure, new steel studs marking the swept path of the tramway (observable at 15-20 meters), will be fitted through the pedestrianised area of Market Street/Piccadilly Gardens. The new studs should improve the visual demarcation of the tramway for pedestrians/cyclists without introducing additional risk, such as risk of trips and slips. The work is expected to be completed by February 2025. This work comes out of the risk assessment.

3. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, TfGM has:

- taken the recommendation into consideration; and
- has taken action to close it

Status: Closed.

Previously reported to RAIB

4. On 13 April 2017 ORR reported the following:

The review, in conjunction with Transport for Greater Manchester (TfGM) by RATP Dev UK Ltd of the effectiveness of risk mitigation measures for tram operations around Piccadilly Gardens has not yet taken place. ORR has asked for confirmation of what arrangements are being made, particularly as RATP Dev UK Ltd will no longer be the tram operator after July 2017.

Update

5. On 15 September 2020 Keolis Amey Metrolink and Transport for Greater Manchester (TfGM) provided the following joint update:

Thank you for your email dated 21 August 2020 requesting an update on the actions taken to address recommendation 2 of the RAIB report into the Tram collision with a pedestrian near Market Street tram stop, 12 May 2015. We are writing to you jointly as our teams are working together to address this.

We have reviewed the actions taken to date in relation to recommendation 2, and have identified that after an initial review of the relevant risk assessment and the collation and review of near miss and accident data for the location, no further progress was made following the change of operator from Metrolink RATP Dev Ltd (MRDL) to Keolis Amey Metrolink (KAM) in July 2017 and focus on addressing the recommendations of the Sandilands recommendations.

In March 2019 KAM and TfGM worked together with Atkins to develop the Manchester Metrolink safety risk model, which would later to be used as the basis for the common risk profile tool for the UK light rail industry. In establishing the risk profile, historical data was analysed and hazardous events and precursor types were identified to aid in the prioritisation of risk management activities.

In establishing the Metrolink risk model, the risk of collision with pedestrian was identified as the network's number one risk when ranked by total fatal risk. Precursors were placed into two categories; those for which Metrolink has direct control and those of which we have no direct control. 'Driver Error' was found to be the number one pre-cursor event of which Metrolink had direct control over, of the latter category 'Public Behaviour' (LRTPC.044) was ranked as the number pre-cursor event.

We believe the quantified risk assessment methodology of the safety risk model addresses the element of recommendation 2 relating to the identification of the dominant contributors (precursors) that contribute to the overall level of risk. However, in relation to Market St, we believe further work is required to address risk at this specific location.

To ensure recommendation 2 is fully and effectively addressed, we propose to assemble a joint KAM and TfGM working group, including workforce representatives, to undertake a further review of incident trends, taking into account recent history (from July 2017 – to present day).

The analysis of this data will enable a more informed review of the existing risk assessment of tram operations in the Market St / Piccadilly Gardens area and we will benchmark our findings using the Light Rail Safety Risk Model tool.

Following this risk review we will evaluate the effectiveness of the existing mitigation measures and identify any additional measures that are required to reduce risk as low as is reasonably practicable.

We envisage this work will be completed by the end of this year 2020 and will write to you early in 2021 to update you on our findings and any further actions required.

6. On 13 July 2021 Keolis Amey Metrolink provided the following update:

Following on from our letter dated 15th September in relation to recommendation 2 of the RAIB report into the Tram Collision with Pedestrian near Marker St tram stop on 12th of May 2015, I can confirm that a joint KAM and TfGM working group, including employee H&S representatives, undertook a review of the risk assessment for the operation of trams in Manchester City centre area in April 2021.

Through this assessment a number of recommendations for improvement were identified and will be explored further with a view to implementation. These activities will be tracked via the joint KAM and TfGM Road Trafford Collision working group.

7. On 1 August 2024 there was a meeting between ORR and Transport for Greater Manchester (TfGM) to review progress with measures to address recommendation 2 from the report RAI-0224 – Tram collision with pedestrian near Market Street tram stop:

Summary of the meeting

To assess progress with RAI-0224 – Tram collision with pedestrian near Market Street tram stop, Manchester REC 2 - The intent of this recommendation is to promote a further examination of the need for additional risk control measures in the Piccadilly Gardens area – assess the trial studs fitted to enhance demarcation of the tramway throughout Piccadilly Gardens – studs acceptable.

Key points noted

- 1. 5 x steel studs spaced 1m apart either side of the tramway (at low kerb, outside swept path). Studs observed as noticeable from a distance (approx. 15-20m)*
- 2. Discussed effectiveness of steel studs, consensus is that the studs will improve the visual demarcation of the tramway for pedestrians/cyclists without introducing additional risk (i.e., slip and trip).*

Once go ahead for full installation given should take Manchester City Council 8 weeks (or so) to procure and fit.

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- reference to previous risk assessments;
- identification of the dominant contributors to the overall level of risk;
- historical experience of accidents and near misses in this area (based on collation of existing data); and
- the experience and knowledge of tramway staff, including drivers.

The findings of this review should be used to identify and evaluate possible additional mitigation measures. Any that are considered to be reasonably practicable should then be programmed for implementation

ORR decision

1. The review, in conjunction with Transport for Greater Manchester (TfGM) by RATP Dev UK Ltd of the effectiveness of risk mitigation measures for tram operations around Piccadilly Gardens has not yet taken place. ORR has asked for confirmation of what arrangements are being made, particularly as RATP Dev UK Ltd will no longer be the tram operator after July 2017.

2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RATP Dev UK Ltd has:

- taken the recommendation into consideration; and
- is taking action to implement it, but ORR has yet to be provided with a timebound plan for the review and actions arising from it.

Status: Progressing. ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.

Information in support of ORR decision

3. On 3 March 2017 Metrolink RATP Dev UK provided the following initial response:

MRDL has reviewed our Risk Assessments for the effectiveness of the risk mitigation measures put in place in association with tram operations through the pedestrianized areas in and around Market Street. We included (as normal) a review of any previous associated risk assessments and the history of accidents / incidents in these areas. We also reviewed the training and knowledge of tramway staff,

including drivers. We found that the measures in place are adequate, are reasonably practicable, have been effectively implemented and are subject to formal review.

On a separate issue, MRDL, in conjunction with TfGM, will undertake a review of the content and efficacy of its risk mitigation measures associated with tram operations through the pedestrianised area in the vicinity of Piccadilly Gardens. This review will also involve all applicable agencies and transport undertakings.

4. ORR wrote to Metrolink RATP Dev Ltd asking for confirmation that the review of risk mitigation measures for tram operations around Piccadilly Gardens, due to be carried out in conjunction with TfGM will take place. This is in the context that that RATP Dev Ltd will no longer be the tram operator for Metrolink after July 2017.