JAMESON ACOUSTICS

Consultants in acoustics, noise and vibration

Technical Note

Our Ref	22045-TN-3-R0
Date	18 September 2025
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Our Client	Domis Construction
Issued To	Domis Construction

Viadux II, Manchester

TfGM Metrolink Asset Protection (Condition 13)

Vibration & Movement from Construction Works

In relation to Planning Condition 13, we write to confirm the approach taken to protect the adjacent TfGM Metrolink asset from effects of vibration and movement resulting from construction works.

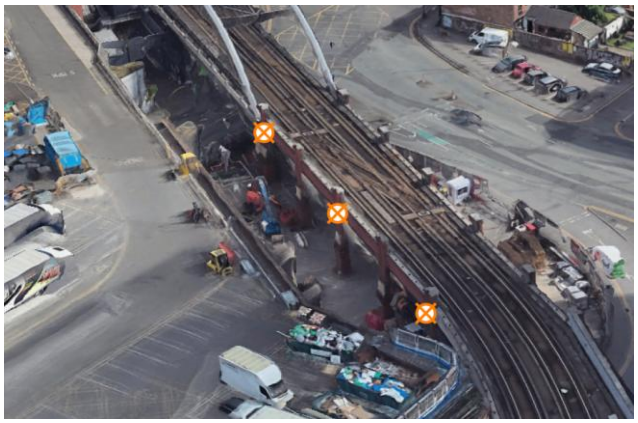
We have consulted directly with TfGM and Metrolink to discuss the needs for vibration and movement monitoring through construction. The parties advised us of their needs, from which we (the project team) have devised a detailed strategy for vibration and movement monitoring, including acceptable limits with associated action plans. This strategy has been issued to TfGM and Metrolink for formal approval. Formal approval has been received in the form of:

(a) A signed Asset Protection Agreement (APA), and
(b) Receipt of 'Blue Permits' to work.

The latter provides the project team permission to install vibration and movement monitoring equipment on the TfGM/Metrolink asset.

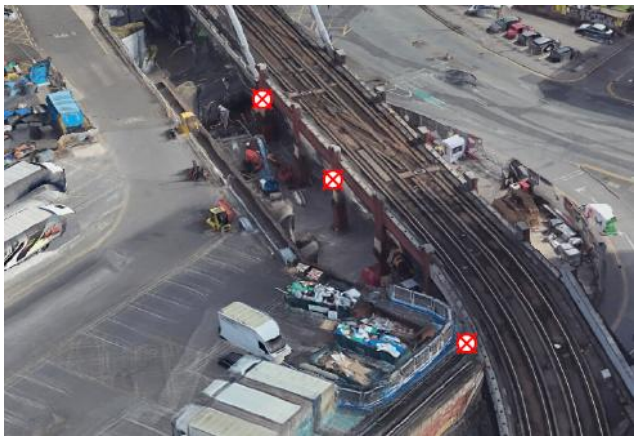
The full methodology of the agreed movement and vibration monitoring is set out in the Renaissance '*Vibration and Movement Monitoring Specification*', ref. V2B-REN-AA-XX-SP-S-00150 (Rev C02). This document was included in submissions to obtain the APA and Blue Permits. This document covers the full scope of vibration and movement monitoring, including TfGM/Metrolink.

Specifically in relation to TfGM/Metrolink, 3nr vibration monitoring sensor positions were agreed, as indicated below. These positions are at the head of bridge piers.



Vibration monitoring positions

The agreed positions for movement monitoring targets are indicated below.



Movement monitoring target positions

Monitoring commenced on-site on 31 July 2025. Movement is being manually monitored by a specialist engineer carrying out regular site visits. Vibration is being continuously monitored with results available in real-time on a website. All monitoring works are being undertaken by Dywidag with input/interpretation assistance provided to Domis by both Jameson Acoustics and Renaissance.

Agreed limits for movement are defined in the Renaissance Specification. For vibration, limits are still subject to agreement with TfGM/Metrolink upon completion of baseline monitoring. In the meantime, the following limits and associated action plan were agreed. Note, however, these limits are only valid if baseline vibration (i.e. from tram movements) does not exceed 1 mm/s PPV. Early baseline readings suggest tram movement induced vibration levels greater than 1 mm/s PPV. The project team will soon be consulting again with TfGM/Metrolink to mutually agree the revised limits and actions.

Level	Limit, mm/s PPV	Action
Green	< 3	Carry on with works but movement will be closely monitored to check if the structures are stable, and movements are not accelerative.
Amber	3-4.9	Review working procedures and assumptions to provide assurance to Metrolink that the total movement will not be excessive, or to warrant modifying working methods.
Red	≥ 5	Halt operations immediately if this limit is exceeded until the reason for reaching the limit has been identified, TFGM/Metrolink to be contacted and any remedial action has been agreed and if it is necessary for a survey of the track to be undertaken to establish if movement has affected track levels.

(relevant for baseline readings between 0-1 mm/s PPV)

We trust the above is clear and of assistance. However, should you have any queries, please do not hesitate to contact the undersigned.

For and on behalf of
Jameson Acoustics Limited



Andrew Jameson
Director, BSc(Hons), MIOA, MIET