

Submission No.			132	
Organisation Name or Name of Submitter			Irish Life Assurance plc. (Earlsfort Terrace Block C) - represented by Waterman Moylan	
Item No.	Section Ref.	Page No.	Observation Statement	TII Response
Re: Railway (Metrolink-Estuary to Charlemont via Dublin Airport) Order 2022 Earlsfort Centre Block C, Earlsfort Terrace, Dublin, D02 X668				
1	Submission 1	2	<p>The route selection, including horizontal alignment, vertical alignment and depth of MetroLink below ground in the area between Chainage 18+800 and Chainage 18+900, should be reviewed by NTA / TII to satisfy themselves and to ensure that</p> <p>(a) MetroLink does not cause structural damage to the foundation system supporting our client’s building which comprises a two-storey basement founded on the competent rock.</p> <p>(b) MetroLink does not cause structural damage to our client’s building at the basement level, any damage would result in the ingress of water into the basement.</p> <p>(c) MetroLink does not cause damage to the cladding; glazing and fragile finishes of our client's building.</p> <p>(d) MetroLink provides the necessary vertical and/or horizontal clearance between the existing basements and the tunnels.</p>	<p>On the MetroLink Project, the approach to ground movement and building damage assessment follows the industry standard three-phased ground movement impact assessment process that is undertaken on tunnelling and underground projects around the world, that includes Channel Tunnel Rail Link (CTRL), Dublin Port Tunnel, Crossrail and High Speed 2. The MetroLink tunnel has been assessed going under these properties at the depth and on the alignment proposed and TII are satisfied that the assessed movements will not lead to structural damage to these properties.</p> <p>EIAR Appendix A 5.17, Building Damage Report, covers the assessed impacts of construction generated ground movements and settlement on property. Table 5-2 of this report shows that the building has been assessed as falling within the "Very Slight damage" category currently (building reference B -53), an explanation for which can be found in Table 4-4 of the aforementioned report.</p> <p>The building has been classified under "Damage category 2 or below" following the Refined Phase 2a Building Damage Assessment. EIAR Appendix 5.17 specifies that all buildings that have been subject to a Phase 2 assessment will be reviewed and reassessed by the D&amp;B Contractor. This Phase 2b assessment will use refined and updated parameters available to the D&amp;B contractor as a result of him progressing the development of the detail design and finalising his construction methodology and planning. All buildings that have been classified at the end of the Phase 2b assessment as Damage Category 3 (Moderate) or above (or where there exists any uncertainty after the Phase 2b assessment) will be the subject of a Phase 3 assessment by the D&amp;B Contractor.</p> <p>If the building has a basement we would take your building to a Phase 3 Assessment at detailed design stage to confirm the current results. TII would undertake surveys and collate building drawings to confirm the assessment.</p>
2	Submission 2	2	<p>a) Metrolink has assessed the “Groundborne Noise from Tunnel Boring Machine” and presents its findings on drawing no. ML1-JAI-EIA-ROUT-XX-DR-Y-14009 (a copy is attached to this submission). This drawing indicates MetroLink will generate an additional 50db directly under the location of our client's building which is unacceptable.</p>	<p>Appendix A14.5 Groundborne Noise and Vibration Blasting Modelling Results presents predicted groundborne noise and vibration levels during the construction and operation phase of the project. The prediction of groundborne noise during TBM passage for Earlsfort Terrace Block C is 49 dB LASmax, which is above the 45 dB LASmax threshold, resulting a significant impact on the building for the limited duration of TBM passage. It is important to note however that there will be no potential for damage to the building resulting. The duration of this impact will be in the order of up to two weeks as the TBM passes. TII will liaise with Irish Life Assurance plc. to ensure the timing of these impacts are known.</p> <p>The principal mitigation measures aimed at minimising impacts are as follows:</p> <ul style="list-style-type: none"><li>- Advance public consultation and stakeholder engagement can greatly reduce the significance of groundborne noise effects, as building occupants would be prepared for the passage of the TBM and resultant elevated noise and vibration levels.</li><li>- TII will accept and consider applications for additional measures on a case-by case basis, in accordance with its Noise and Vibration Mitigation Policy (see EIAR Appendix A14.6, Airborne Noise &amp; Groundborne Noise Mitigation Policy).</li></ul>
3	Submission 2	2&3	<p>b) Metrolink has assessed the predicted “Settlement” and presents its findings on drawing no. ML1-JAI-EIA-ROUT-XX-DR-Y-21149 (a copy is attached to this submission). This drawing indicates MetroLink will be causing a 40mm settlement directly under the location of our client's building which is unacceptable. Settlements of this magnitude cannot be accommodated by the building's structure and will cause damage to foundations; basement; superstructure; facade and internal finishes. As previously stated the basement structure forms the waterproof envelope to our client’s building and any damage would result in the ingress of water into the basement.</p>	<p>Please refer to Item 1. The settlement contours calculated were used to undertake the building damage assessment and conclude that damage would be limited to "slight / very slight" damage. The damage categories are described in section 4.3.2 of the EIAR Appendix A5.17, Building Damage Report. However, if the basement details are confirmed this assessment would be taken to Phase 3 as part of the further assessment procedure outlined in the EIAR Appendix A5.17.</p>

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4	Submission 3	3	a) Metrolink has assessed the “Groundborne Noise from Operation” and presented its findings on drawing no. ML1-JAI-EIA-ROUT-XX-DR-Y-14041 (a copy is attached to this submission). This drawing indicates MetroLink will be generating an additional 35db directly under the location of our Clients building which is unacceptable.	Appendix 14.5 Groundborne Noise and Vibration Blasting Modelling Results presents predicted groundborne noise and vibration levels during the construction and operation phase of the project. The prediction of groundborne noise and vibration for Earlsfort Terrace Block C during railway operation are as follows: - The predicted level of groundborne noise during the railway operation for Earlsfort Terrace Block C is 35 dB LASmax, which is below the 40 dB LASmax threshold. - The predicted level of groundborne vibration during the railway operation for Earlsfort Terrace Block C is 0.009 ms-1.75, much lower than the VDV (Vibration Dose Value is a parameter that combines the magnitude of vibration and the time for which it occurs) threshold of 0.8 ms-1.75. As a result, we consider that no significant impact is expected on the building as a result of Metrolink operation.
5	Submission 4	3	MetroLink has proposed to acquire the substratum land located under our client's building, which is outlined in drawing no. ML1-JAI-EIA-ROUT-XX-DR-Y-01096 (a copy is attached to this submission). This is unacceptable to our client, as the future potential to develop this prominent commercial site in the future will be damaged.	<p>TII note your concerns about the potential impact of MetroLink Project on future potential development of your site. The acquisition of substratum land beneath the Irish Life Assurance plc. building is to enable the construction of the Metrolink tunnel. The site referred to is zoned Z6 - Employment / Enterprise, however there is no extant planning permission on the site of Block C. The submission does not refer to a specific future development, only to the generality of future development.</p> <p>MetroLink will be a catalyst for and provide opportunity for future development and regeneration. While the MetroLink Railway Order does not include for future neighbouring or overhead development, the tunnels and stations are designed to support appropriate future imposed loads. TII will be required to make submissions in relation to planning applications for proposed future developments on or adjacent to MetroLink and there will necessarily be some engineering constraints (such as permissible loadings) required. However MetroLink is committed to engaging with known development proposals and new development proposals as they emerge with the intent of facilitating such developments as they emerge to the maximum extent consistent with the safe operation of the proposed Project.</p> <p>Again in common with other existing rail and tunnel projects, following grant of the Railway Order and development of detailed design, TII will produce a “Guidance Note for Developers” that will be the subject of bye-laws following the grant of Railway Order and which is designed to facilitate future adjacent or over-site development while protecting the integrity and safety of the MetroLink works and operations.</p> <p>Therefore, at this stage TII is dealing with known development proposals on a case by case basis, TII will work with parties in the future to assist with the wider development of sites over and above stations and tunnels. In this context TII has successfully engaged with a number of developers over the last two years to accommodate development over and in proximity to the alignment and there have been no material restrictions on development subject to the implementation of agreed design and mitigation measures and it is not anticipated that MetroLink will have a material impact on the development potential of sites above and in proximity to the alignment in future.</p>
6	Summary	3	In summary, our client requests that the route of the proposed MetroLink tunnels are diverted away from their current proposed location (under our client's building) to either below the public carriageway or buildings that will not be damaged or compromised by the presence of the tunnels located under.	TII do not intend to alter the horizontal alignment as the building damage assessments currently undertaken support the validity of the alignment. Refer also to Item 1 above.