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STATEMENT ON BEHALF OF IRISH LIFE ASSURANCE PLC. ('ILA') BY CONOR SHEEHAN BL MRTPI

MODULE 1 – Metrolink Hearing – 4th March 2024

INTRODUCTION

My name is Conor Sheehan BL MRTPI. I am part of a team making a submission to the Board relaying ILA's concerns about the impacts of the metro tunnel on their newly constructed Cadenza office development, which is located at the junction of Earlsfort Terrace and Adelaide Road, close to the proposed southern terminus for Metrolink at Charlemont.

Our response¹ is to an invitation received from the Board to make submissions on TII comments/replies made to Irish Life's submission concerning 19-20 Earlsfort Terrace and 65A Adelaide Road (recorded as submission No. 129 in the TII's response to submission No's 001 to 140 document) and we will have input from experts led by Waterman Moylan Consultant Engineers, BDA façade consultants, and AGL consulting geotechnical engineers. In addition, we have a statement/report commissioned by our client from Allegro Acoustics on the Noise and Vibration impact of the construction and operational phases parts of which I will hand in. The authors of that report are unavailable today. I would like to read some key paragraphs from that into the record after AGL has made its submission on behalf of ILA.

Copies of written statements/reports (which form part of ILA's submission) prepared by ILA's experts have also been handed in. Some copies are available to other parties, if desired.

PRELIMINARY REMARKS

ILA is fully supportive of the Metrolink proposal and recognises the complexity of the project and of the process undertaken by TII and its team. Ideally, we would wish to be on the other side of the table, but find ourselves with very serious concerns that we feel have not been adequately addressed.

We hope that through today's process, for which we thank the Board, we can find a mutually acceptable solution to these concerns.

THE BUILDING IN QUESTION

The Cadenza building is a c.12,622 sq m LEED Platinum office building with a double basement. It was permitted under ref. 3040/17 (ABP-300914-18) and has been amended by series of planning permissions since then.

Its façade incorporates large volume glazing and modern materials that are not typical of many other buildings in the city and as such the building is more vulnerable to damage by reason of vibration and settlement than many other buildings in the city.

Images of the building are at Figures 1, 2, and 3 below.

The metro tunnel will be located directly beneath the Cadenza building

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¹ TII's response to submission on the Draft Railway Order Application – Submission No. 129



Figure 1. Photograph of the building viewed from Adelaide Road.



Figure 2. Photograph of the building from the intersection of Adelaide Road and Earlsfort Terrace.

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Figure 3. Photograph of the building from Earlsfort Terrace.

SUMMARY OF CONCERNS

Irish Life has serious concerns that the proposed tunnel will cause damage to their recently completed Cadenza building. This is because:

- The building assessment report in appendices to the EIAR appears to have assessed the impact of the tunnel on Davitt House, which was previously located on the same site but was demolished in 2019, rather than the current Cadenza building (permitted in 2018 – ABP Ref. 300914-18 - drawings for which are in the public domain and are available online via DCC's planning portal) and, in consequence, did not take account of the double basement under the Cadenza building. Davitt House had a single basement.
- In effect, the tunnel, as currently configured, will hit our anti- flotation ground anchors of the existing foundations see Figure 4.

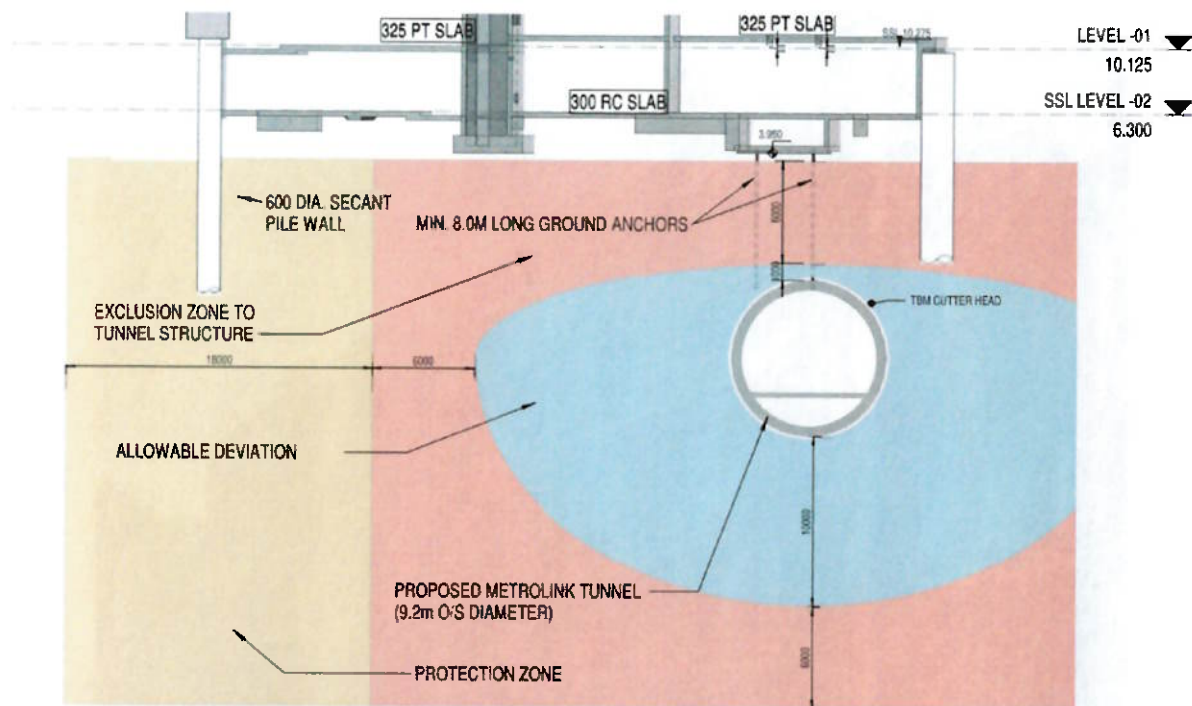


Figure 4. Image showing that the tunnel boring machine will hit existing ground anchors at Cadenza.

B-147	10020	Davitt House	12.0	4	25.0	2.5	2 (slight)	2 (slight)	N	N	Damage category 2 or below
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Figure 5. Extract from the Building Damage Report showing that 'Davitt House' rather than Cadenza was assessed. Davitt House had a single basement. Cadenza has a double basement.

- The characterisation of the damage to the building as being slight or very slight in TII's response and in the EIAR (building damage report) does not reflect the real impact the tunnelling and operation of the metro will have – it will cause cracking to the tanked basement leading to water ingress and subsidence, it will lead to cracking of the extensive glazing;
- In addition, noise receptors relied on in the EIAR assessment are located too far from the Cadenza building to provide a reliable assessment of construction impacts and it is feared that noise will make it difficult to work in the building during both the construction and operational phases, particularly where the basement of the Cadenza building is deeper than that of Davitt House (the now-demolished building which formed the basis of the TII assessment) and ILA are concerned that the predicted impacts in terms of noise, vibration, settlement, and structural damage do not provide a full picture of the environmental impacts of the development.
- Further the Draft Guidelines for Developers document which has submitted to the Board by the TII as part of this application includes exclusion zones and protection zones – the existing piling for the Cadenza building is within the exclusion zone already. This is perhaps best illustrated in the Figure 6 below.

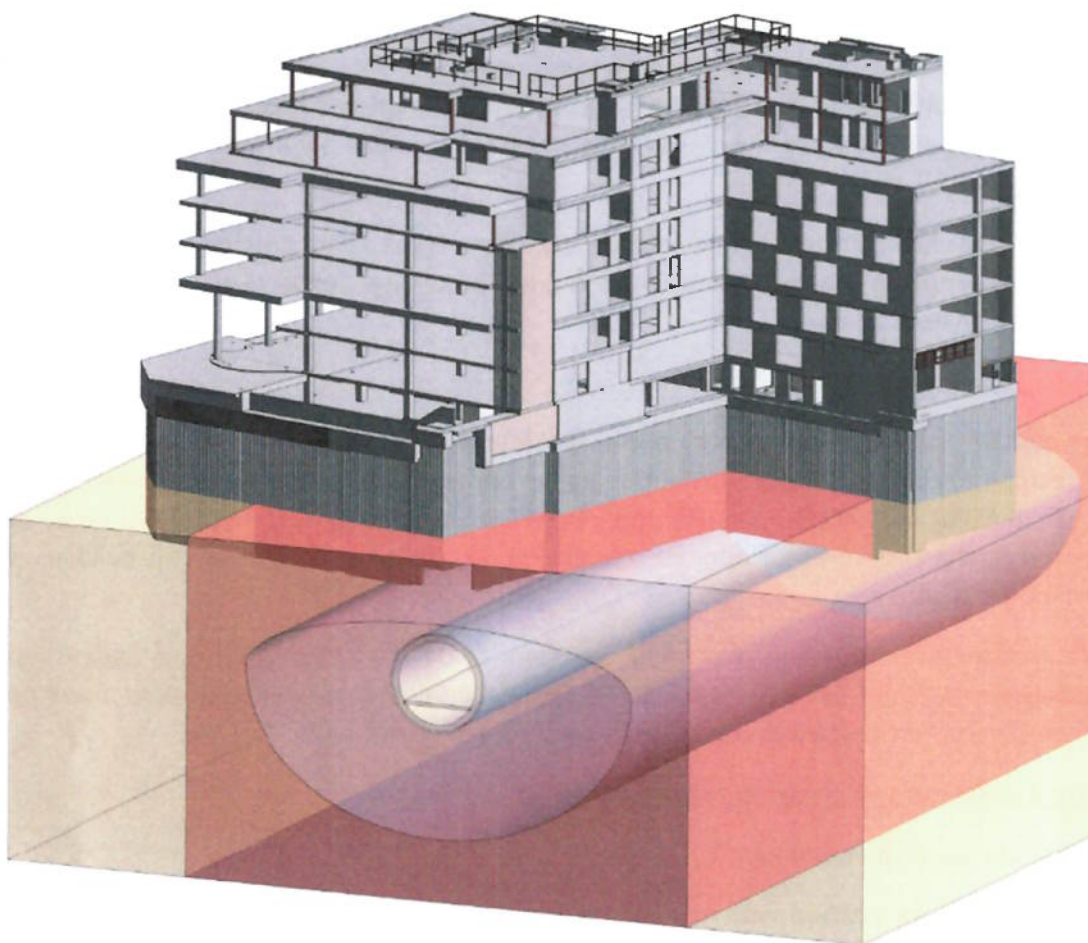


Figure 7. Image showing the exclusion zone in heavy red and the protection zone in light red.

- There is a disconnect between the building damage assessment in the Building Damage Report (Appendix A5.17) and the assessment of related “likely significant effects” in the EIAR and that applicant has not properly assessed these likely significant effects (explained in more detail later in this submission). There is therefore a concern (and a further concern arising from the assessment of Davitt House rather than Cadenza) that the EIAR does not set out the likely significant effects on the environment arising from construction.

COMMENT ON TII’s RESPONSE

Turning specifically to the TIIs response it is considered, respectfully, that it did not fully engage with ILA’s concerns as set out in its original submission to which the Board is referred. ILA’s replies will be dealt with in more detail by members of the team but in summary Irish Life’s position is set out below and is arranged using headings broadly reflecting those used in TII’s response:

Item 1. (Structural Damage, Settlement)

TII’s response is generic in that it does not engage with the submission which pointed out inter alia, that the buildings tension anchors and piles clash with the Metrolink route. Instead, it refers to the EIAR Appendix A5.17 Building Damage Report showing a ‘slight/very slight damage’. It refers to a phase 3 assessment that will be carried out later.

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With respect, this is an unsatisfactory response, particularly where a drawing showing the clash of the tunnel with the anti-floatation anchor piles was submitted, with inevitable damage resulting. TII has not refuted that drawing. In addition, it appears that the Building Damage Report assessed the impact on the demolished Davitt House (which did not have a double basement) rather than the Cadenza building.

In short, the characterisation of damage as 'slight/very slight' is not accepted and will be rebutted by expert evidence. In the circumstances we request a comprehensive response. (see also additional comment on Item 1 below).

Item 2 (Noise Receptors)

We ask that noise receptors be included in the vicinity of the building to monitor construction noise. In relation to the noise impacts from the Tunnel Boring Machines we are concerned, given that the Davitt Building was assessed rather than the Cadenza building that the impacts may have been underestimated as well as the duration of tunnel boring machines underneath the building where they will hit the anchor piles.

Without prejudice to the issue of the assessment of Davitt House rather than Cadenza our expert evidence is that there will be unacceptable noise impacts during both the construction and operational phases. In the circumstances we request a comprehensive response.

Item 3 (Settlement – somewhat overlaps with Item 1)

Please see our response to item 1.

Our expert advice is that a settlement of 30mm cannot be accommodated by the buildings structure. The glazing in the façade will be liable to cracking and damage.

This will be set out in more detail by our experts.

Item 4 (Noise)

Please see our response to Item 2 above which should be read together with the Allegro Acoustics Report. Allegro Acoustics is concerned, inter alia, that no baseline noise and vibration locations have been included in the vicinity of Cadenza, that the airbourne noise outside Cadenza is high, that ground bourne noise from the advancing TBM is likely to cause disturbance, that the EIAR shows, for the operational phase that the predicted ground bourne noise from the metro would be unacceptable to the uses of the Cadenza building – it would be audible and is likely to cause disruption to tenant concentration levels and/or annoyance to the users of the space.

Item 5 (Acquisition of Substratum)

Land acquisition is a matter for Module 2. Without prejudice to this it is noted that item arises tangentially in this Module in that TII's response refers to the preparation of a Guidance Note for Developments and that note relates to the tunnel. A Draft of that document has already been produced at this Oral Hearing. When the exclusion and protection zones in the document are superimposed on the Cadenza building it shows that the piles and basement of the existing Cadenza are within the exclusion zone. Presumably, the reason for the exclusion zone designation is that third

party works within it could compromise the structural integrity of the tunnel. ILA is accordingly highly concerned that the proposed tunnel works will damage its existing building.

In the circumstances we request a comprehensive response to this – it would seem prudent that a similar equivalent exclusion zone should apply to any works below the Cadenza building.

Item 6 (TII assertion that no vertical or horizontal adjustment required)

Irish Life is concerned, having regard to the assessment of impacts against Davitt House rather than the Cadenza building, about TIIs assertion that Metrolink can be constructed without requiring vertical or horizontal adjustment or within the limits of deviation.

This assertion will be rebutted by expert evidence. In the circumstances we request a comprehensive response.

Irish Life requests that tunnel be diverted away from the building and/or it be located deeper underground if this will address the matters arising under items 1-5 above.

SOME QUESTIONS FOR THE INSPECTORATE

Davitt House was assessed rather than the Cadenza building. We have shown that the tunnel boring machine will hit the piling/foundation anchors. In view of this how can the Board be satisfied that the impact of the development on and/or significant impacts has been fully reported on in the EIAR, particularly where the results of any phase 3 assessment are not currently before the Board (or before observers to the Metrolink application)?

Can the tunnel be lowered to a degree that it will not cause damage and not have unacceptable noise and vibration impacts to the Cadenza building?

Can and how can an effective Environmental Impact Assessment be undertaken by the competent authority in these circumstances?

COMMENTS ON THE EIAR ARISING FROM ITEM 1

There appears to be a disconnect between the building damage assessment in the Building Damage Report (Appendix A5.17) and the assessment of related “likely significant effects” in the EIAR. Essentially, I understand that there is no assessment of likely significant effects on non-heritage buildings specifically for building damage related to tunnelling induced ground movements in accordance with the EIAR methodology. This is on the basis that the damage assessment in the Building Damage Report concludes that all of the damage will be within acceptable limits based on empirical criteria for tunnelling. Consequently, no likely significant effects have been assessed in the EIAR. The damage criteria in the Building Damage Report is for old masonry structures and is therefore, not representative of the modern construction characteristics of the Cadenza Building. I am advised by AGL, who are also presenting for ILA today, that the estimated damage exceeds the structural tolerances of the building façade and waterproofing system, therefore, the applicant has not properly assessed these likely significant effects. By the applicant’s methodology this would be in Chapter 21 of the EIAR for buildings – (Land Take). As a result no specific mitigation measures appear to have been identified in the EIAR to reduce the damage level other than inspection, monitoring and repair – reactive measures as part of the POPS Property Owners Protection Scheme. This is significant because, other than construction controls, lowering the tunnel level is the only design mitigation measure that

can be used to mitigate the impact of the ground movements on the buildings. It seems to follow that this has not been properly assessed in the EIAR.

CONCLUSION

ILA wishes to reiterate that it is fully supportive of the Metrolink proposal and recognises the complexity of the project and of the process undertaken by TII and its team. Ideally, we would wish to be on the other side of the table, but find ourselves with very serious concerns that we feel have not been adequately addressed.

We hope that ILA's concerns can be addressed by altering the alignment and deepening the tunnel. As it stands there is a direct impact on anti-floatation anchors which is not acceptable to ILA.

We request that the Board have due regard to Irish Life's submissions.

Conor Sheehan BL MRTPI

4th March 2024