Submission No.	212
Organisation Name or Name of Submitter	Olan O'Brien (66 Saint Joseph's Place)

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Letter Re: Case reference: NA29N.314724: Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin (Metrolink)				
1	Letter	1	There are a number of issues that need further clarification as this directly impacts my house: Airborne noise from construction works and railway operation (also referred to as "environmental noise");	TII understand the reasons for your concerns and would like to provide the assurance that the potential disturbance impact on your property as a result of the proximity of the proposed tunnel and station has been carefully assessed. This includes the impact of noise and vibrations from: the tunnel boring machine (TBM) and the operation of MetroLink. All of which have been assessed and reported in the EIAR and are summarised below. With the exception of a temporary disturbance when the TBM passes your property, TII are predicting a 'not significant' impact to the building occupants and your building, or risk to the integrity of your house. This is based on similar properties on Nelson Street, as presented in Appendix A13.7 Construction Phase Modelling (Chapter 13 Airborne Noise and Vibration). Construction Phase – Airborne Noise and Vibration The EIAR Chapter 13 Airborne Noise and Vibration, Table 13.64 summarises the potential significant construction noise impacts from the construction of the proposed Mater Station. The predicted impact without additional noise mitigation is Significant to Very Significant during some of the work phases. Noise mitigation measures are detailed in section 13.6.1 and include a proposed 4m high acoustic noise screen along the mid-east, south & south-west boundaries of Mater construction compound. As outlined in section 13.6.1.2 of Chapter 13 (Airborne Noise and Vibration), the key principles relating to noise mitigation will be applied across all construction areas for the proposed Project: * Noise control at Source: Selection of quiet plant, site layout, attenuation at source, operational control (hours and periods); * Noise control along pathway: Localised screening to plant items on site, enclosures site buildings, site hoardings and noise barriers; and, * Noise control at receiver: Noise Insulation (NI) and Temporary Rehousing) Following the implementation of noise mitigation measures, noise receptors in the vicinity of your property are calculated to be controlled to within the noise thresholds, as set out in section 13.7 of Chapter 13 (Airborne Noise and Vibration). Operational Noise and Vibration EIAR Chapters 13 and 14 present a comprehensive and detailed assessment of operational airborne and groundborne noise and vibration, respectively. No residual noise impacts are identified at this location during operation, as presented in section 13.7.2 Operational Noise in Chapter 13 (Airborne Noise and Vibration). The calculated rail noise levels across the proposed Project are not significant in terms of any widespread community disturbance and results in a not significant to slight impact when added to the prevailing noise environment, as detailed in section 13.7.2.2. of Chapter 13. EIAR Chapter 13, sections 13.2.3.2 and 13.5.3.2.3, details that ventilation systems, if not designed and mitigated effectively are potential noise and vibration sources. Section 13.6.2.3 outlines the detailed considerations that will be included in the design to ensure that the ventilation systems do not exceed limits as per BS 4142, including: • Reduction of induct flow rates; • Reduction of elements in the airflow; • In duct attenuators; • Orientation of grilles and louvres away from sensitive receptors; • Acoustic louvres; and • Anti-vibration mountings and couplings will be incorporated into the design to control vibration. Measures to mitigate noise from the use of public address systems is also detailed in Chapter 13 (sections 13.5.3.2.4 and 13.6.2.4). Best practice design principles will be employed to minimise noise breakout at the surface from these systems via escalators, lift shafts and stairwells.

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2	Letter	1	Vibration and groundborne noise from metro construction and operation;	Construction Phase – Groundborne Noise and Vibration The EIAR Chapter 14 Groundborne Noise and Vibration, Appendix 14.5 presents the predicted groundborne noise levels during the construction phase of the project for 66 Saint Joseph's Place: • The predicted level of groundborne noise during TBM passage is 49 dB LASmax, which is above the 45 dB LASmax threshold resulting in a significant impact on the occupants of the building for the relatively short duration of TBM passage. • The predicted level of groundborne vibration during TBM passage is 0.262 ms-1.75 day and 0.22 ms-1.75 night, below the VDV (Vibration Dose Value is a parameter that combines the magnitude of vibration and the time for which it occurs) Threshold Level of 1.0 ms-1.75 day and 0.5 ms-1.75 night, resulting in a not significant impact on the building. Unfortunately, there are no effective methods available to reduce groundborne noise or vibration from the TBM at source but noting that the duration of this impact will be temporary and in the order of up to two-weeks as the TBM passes. TII will undertake advanced consultation and stakeholder engagement to prepare people for the passing of the TBM and ensure the timing of these impacts are known. Details of the residual effects associated with tunnel boring are presented in section 14.6.1.1 of Chapter 14 (Groundborne Noise and Vibration). TII's contractor(s) will prepare a Construction Noise and Vibration Management Plan (CNVMP) for the proposed Project as referred to in EIAR Appendix A5.1, Outline Construction Environmental Management Plan (CEMP). The CNVMP will be a live document and will include a full monitoring and auditing programme which will be agreed with the Local Authorities prior to the commencement of the Construction Phase, including predetermined monitoring trigger levels to ensure noise and vibration limits are not breached, noting that it is not possible to mitigate TBM groundborne noise and vibration at the source. Table 6.2: Noise and Vibration Measures of the Outline CEMP outlines the monitoring programme requirements. The Transport Infrastructure Ireland (TII) Airborne Noise and Groundborne Noise Mitigation Policy (Appendix A14.6 of EIAR Chapter 14) also sets out the construction noise insulation and temporary rehousing measures to be implemented where required. Operational Phase - Groundborne Noise and Vibration. As detailed in section 14.6.2 of Chapter 14 (Groundborne Noise and Vibration), there will be no residual significant effects with regard to groundborne noise following the implementation of mitigation measures such as enhanced track isolation systems such as floating track slab at select locations. Only in the case of highly sensitive laboratory equipment is it likely to prove difficult to avoid exceeding manufacturers' specification for ambient vibration, which will necessitate receptor-specific mitigation, as detailed in section 14.6.2.2. of Chapter 14 (Groundborne Noise and Vibration. As listed in EIAR Volume 5 Appendix 14.5, the predicted level of groundborne noise during operation at your property is 30 dB LASmax, which is below the 40 dB LASmax threshold resulting in no significant impact on the occupants of the building.

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3	Letter	1	Influence of proposed works on surface water;	The Mater Station main construction site is located 1.4km from the River Liffey and 1.20km from the Tolka river and therefore there is considered to be no risk of flooding. The Royal Canal is approximately 500m north of the Mater Station location. However, as detailed in section 18.5.3.4 of Chapter 18 (Hydrology), there are no proposed discharges to nearby watercourses. All water from the construction phase will be discharged to sewer where appropriate. All water discharges (combined surface water and groundwater) from construction site areas are initially likely to be high in sediment, with potentially elevated alkalinity where cement works are on-going and will require adequate attenuation and treatment prior to approved discharge to the respective defined sewer. Each site compound will be established with an emphasis on the protection of existing surface water infrastructure. As stated in Chapter 18 (Hydrology) section 18.4.9.4.1, all station drainage is designed to ensure that there is no net increase in runoff as a consequence of the proposed Project. The works at Mater will impact on existing highway drainage particularly at the northern end of the proposed station, at the junction between Eccles Street and Berkeley Road. The existing infrastructure will be surveyed and alternative diversions of surface water infrastructure made if required and approved by DCC as part of the preparation for the commencement of the works. As indicated in Chapter 22 (Infrastructure and Utilities), all impacted utilities will be reinstated in accordance with current standards and specifications for the relevant utility. The EIAR Volume 5, Appendix 5.1 provides an outline Construction Environmental Management Plan (CEMP), that includes the requirement to develop a Water Management Plan for each site. The appointed contractor will be required to operate in compliance with a project-specific detailed CEMP. Section 6.4 of Appendix A5.1 Outline CEMP details the minimum mitigation measures to be implemented with regards to water. All construction sites will be installed with water treatment systems and will be monitored weekly to ensure no impact to the surrounding hydrological environment. The proposals for the control and management of water within each site compound are set out within EIAR Volume 5, Appendix 5.11 - Water Management.
4	Letter	1	Influence of proposed works on ground water;	As outlined in the EIAR Chapter 19, Hydrogeology, petroleum hydrocarbons and PAHs were identified in several locations in the groundwater at the proposed Mater Station location which may be reflective of the hydrocarbon content associated with Made Ground present. Nitrogen species (ammoniacal nitrogen, nitrite) and some metals (manganese, iron, boron and arsenic) are also reported here. The predicted effect of Construction Phase dewatering (from either drawdown or water quality effects) on identified water features in the wider area is considered Imperceptible. The calculated drawdown does not extend as far as the protected habitat Dublin Bay nor does the modelled ZOI (Zone of Influence) intercept any watercourses that potentially receive baseflow and which ultimately discharge to this habitat feature. This is detailed in section 19.5.3.5.6 of Chapter 19 (Hydrogeology). Modelling has indicated that where groundwater flow is in parallel to the MetroLink alignment, the potential barrier effect will be less significant. In contrast, if the groundwater flow is more acute or perpendicular to the structure alignment the potential for groundwater damming is more significant. In addition, the modelled trajectories show how groundwater flow is able to 'overcome' the interference imposed by D-walls at stations which indicates less significance in the long-term (Operational Phase). This is detailed in section 19.5.3.6.5 of Chapter 19 (Hydrogeology).

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5	Letter	1	Settlement of ground around tunnels and excavations;	Excavation for the tunnels and other below ground structures could potentially lead to ground movements at the surface and below ground. An assessment of the effects of ground movements and potential impacts on existing buildings has been carried out as part of the Scheme Design in Appendix A5.17 Building Damage Report. EIAR Appendix A 5.17 Building Damage Report, covers the assessed impacts of construction generated ground movements and settlement on property. Section 5.2 of this report sets out the rationale for the assessment of properties similar to yours. The results of the assessment provided in Table 5.2 shows that properties Ref B-95 to B-100, in the vicinity of your property but closer to the tunnel alignment, have been assessed as falling within the 'Slight' and below category. The building risk categories shown in Table 4-4 of the aforementioned report are used to define the degree of building damage related to the Risk Category. As your property is within 30m of the alignment, you can register for inclusion in a Property Owner Protection Scheme (POPS) which TII are committed to having in place prior to construction works commencing. The scheme allows residential property owners to register with TII if the property is within thirty metres of the edge of the MetroLink alignment or fifty metres of station structures. The POPS comprises condition surveys of private properties and other selected properties along the route of the proposed Project. The purpose of the condition surveys would be to ascertain the condition of the properties before, during (if deemed necessary), and after the completion of the proposed Project to determine whether there has been any deterioration of any of the properties surveyed and whether the same may be attributable to the proposed Project and recommend repairs as appropriate. Further details on POPS can be found in section 21.6.1.4 Property Protection, EIAR Chapter 21: Land Take. Condition survey data gathered pre and post construction, and possibly during construction, will be used to assist the property owner and TII in the swift and accurate verification of any property damage claims which may be received from property owners. The POPS would be introduced by TII through public consultation and will be formally advised to eligible property owners by the Public Relations Department. Useful information on POPS can also be found in the MetroLink Frequently Asked Questions document which can be found on-line at: https://www.metrolink.ie/en/your-property/property-owners-protection-scheme/

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6	Letter	1	Temporary and permanent traffic impacts.	**Construction Phase** The EIAR Chapter 5, MetroLink Construction Phase, explains that traffic management plans for the construction phase of the Project have been developed to minimise the impact on road users, and to maintain access to residential and other premises. Prior to implementation, all traffic management measures will be agreed with the relevant local authority (FCC or DCC) and where relevant, consultation with An Garda Síochána and other statutory stakeholders will be undertaken. The design of traffic management measures and highways works is based on achieving the key objective of maintaining continual access to all properties during the works. Where necessary, a safe alternative route will be provided for pedestrians and vulnerable road users, such as children, and persons with restricted mobility, to maintain pedestrian access to premises. Where detour routes are required, these will be kept as short as possible and detour signage will be clear and easy to understand. Further details on proposed mitigation measures for traffic and transport can be found in Appendix A5.1 Outline CEMP. EIAR Chapter 9, Traffic and Transport, section 9.7.1.2 includes measures such as the establishment of Local Community forums which will cover areas local to each station, where stakeholders will have an opportunity to inform the traffic management element of the project. Other measures include the control of construction vehicles in terms of their hours of operation and restrictions on vehicle size and weight. A summary of Mitigation Measures in Construction Phase are presented in Table 9.147 of the EIAR Chapter 9 (Traffic & Transport). The mitigation measure for Berkeley Road for general traffic, parking and loading is to monitor if closures are required at all stages of the construction phase, or if spaces can be reinstated temporarily throughout the works. **Operational Phase** The assessment indicates that overall, the proposed Project will result in long-term, Significant, positive impacts on all users, as indicated in Chapter 9 (Traffic and Transport) section 9.6.2.3 Operational Phase Summary. At Mater Station the future street level layout will maintain the existing road network on Berkeley Street. Once MetroLink is operational, to accommodate the station entrance, the current footways and traffic lanes on Eccles Street will be realigned as part of the proposed Project. The realignment of Eccles Street, and the widening of the footway on Berkeley Road will result in the loss of on-street parking at both locations. Approximately 20 on-street parking spaces will be lost on Eccles Street, while approximately 14 spaces will be lost on Berkeley Road, due to the provision of a signalised crossing in proximity to the Station entrance. While there will be a loss of commercial and residential parking and loading infrastructure as a result of the proposed Project, the modal shift from road to public transport when the proposed Project is in place will reduce the overall demand on parking and loading facilities, thus reducing the severity of the impact. The proposed mitigation measure during the operational phase for Mater Station is to consider placement of street furniture to maximise available width and to monitor impacts to determine if further width is required. These details can be found in Chapter 9 (Traffic and Transport) section 9.7.2. Overall, the Mater Station will provide for improvements to the public transport network resulting in decreased private car usage/trips and increased public transport usages, and will facilitate walking and cycling to the station, without significantly impacting on the operation of the road network in the area. Further details can be found in Appendix A9.2-I Traffic and Transportation Assessment - Mater, section 7.