Submission No.	041
Organisation Name or Name of Submitter	Charlemont & Dartmouth Community (CDCG) on behalf of Dartmouth Square West (Agent - MacCabe Durney Barnes)

Item No.	Section Ref.	Page No.	Observation Statement	TII Response
Railway (Metrolink-Estuary to Charlemont via Dublin Airport) Order 2022				
1	1.2 Strategic Planning Issues	1	That submission concludes the link between St. Stephens Green and Charlemont cannot be justified in planning terms. Furthermore, it undermines the business case for the entire project. For this reason the associated submission requests that the section between Tara Street and Charlemont be omitted from the railway order application for the section between Tara Street and St Stephen's Green be submitted.	The business case for the Project is a matter for the Oireachtas, the Government, NTA and TII to be approved in accordance with the Public Spending Code. ABP role is only to determine whether the project should be approved by reference to the proper planning and sustainable development of the area and the impacts of the project on the environment, including the carrying out of an EIA and AA. A scheme which terminates at Tara Street would not be consistent with the Transport Strategy for Greater Dublin Area (2022-2042). Tara Street and Charlemont are specifically identified as locations for stations in the GDA Transport Strategy 2022-2042. ABP is required to have regard to those requirements as policies and objectives for the time being of a public authority whose functions have a bearing of the proper planning and sustainable development of Dublin (Transport (Railway Infrastructure) Act 2001 and 143 of the Planning and Development Act 2000). The transport strategy is also a consideration material to the proper planning and sustainable development of the area (Section 31 J of the Planning and Development Act 2000). ABP has to give considerable weight to the GDA Transport Strategy, given its elevated role in the statutory scheme relating to proper planning and sustainable development, including that: *the NTA is required to provide a report to planning authorities making regional spatial and economic strategies, development plans and local area plans ("relevant plans") with recommendations on the optimal use, location, pattern and density of new development taking account of the Transport Strategy and stating whether there is inconsistency between the relevant plan and the Transport Strategy; * relevant plans are required to be consistent with the Transport Strategy; *the Office of the Planning Regulator is required to evaluate relevant plans to ensure that they address consistency with the Transport Strategy; *the Minister for Housing can direct variations to draft relevant plans to ensure that they are consistent with the Transport Strategy; *landowners are not entitled to compensation where permission is refused due to inconsistency with the Transport Strategy. The responses to the observations made in this submission explain why TII, by reference to Transport Strategy and project level assessment data that supports the conclusions of the Transport Strategy, do not consider it is correct or appropriate that the MetroLink alignment south of the proposed Tara Station should be omitted. Any decision to terminate the scheme at Tara street will reduce the overall benefits of the scheme by €1.5BN euro (Preliminary Business Case Page 68)
2	3. AREA CONTEXT 3.2 Property Details	10	The book of reference does not differentiate between the affected properties in the permanent acquisition of the laneway.	The book of reference details the extent of permeant and temporary land acquisition required to construct the scheme.

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3	4.2 Noise and Vibration 4.2.1 Methodology	13	It appears as though the EIA is being the subject of further assessment, which the applicant is suggesting to be undertaken post determination of the Railway Order application. We contend that this in appropriate and that the EIAR does not properly assess the impacts of the development. .....The assessment of the effects upon residential amenities is different between the construction stage and the operational phase. In the construction stage, there is no assessment upon the internal noise levels.	Noise and vibration assessments have not been deferred until after an enforceable railway order is granted. The EIAR presents a comprehensive and detailed assessment of both groundborne and airborne noise and vibration in Chapter 13 and 14 of the EIAR in accordance with best practice and the guidance cited in those chapters of the EIAR. The assessments includes for predictive modelling in order to identify the potential impacts on sensitive receptors during both the construction phase and the operational phase. Where necessary, mitigation measures are proposed to reduce any identified effects. Section 13.2.6.1.3 simply identifies that the project will develop within the confines of the consent as contractors are appointed and translate the designs and methods developed for the purpose of the Railway Order and EIAR into detailed designs and methods. The EIAR proposes monitoring and mitigation measures that will ensure that the proposed construction and operation of the proposed Project is in line with that presented in the EIAR. The Board can also impose any requirements of an enforceable Railway Order if it considers it necessary. The assessment of noise levels at building facades is normal best practice for this type of analysis noting the assessment criteria generated from best practice guidance (BS5228) all refers to noise levels at building facades. This applies to both construction and operational phase noise assessments.
4	4.2 Noise and Vibration 4.2.2 Airborne Noise and Vibrations	16	Noise impacts on Dartmouth Square West are predicted to range from moderate to very significant. Notably, the hours working are specified as 07:00 hrs to 19:00 hrs. The passage of the Tunnel Boring Machine (TBM) through the station will be 24 hours, 7 days a week. In addition, HGV deliveries will be ongoing over a lengthy period of time. Evidently the impact upon Dartmouth Square West will be very significant. Table 13.68 of the EIAR includes the following predicted dB and predicted impacts.	Table 13.68 shows the predicted noise impacts before mitigation. Potential noise impacts identified due to airborne noise & vibration are presented in EIAR Chapter 13. Mitigation proposed includes 4m high noise barriers and further proposed mitigation in line with the Airborne and Ground borne Noise Mitigation Policy at 10 & 11 Dartmouth Square. On the implementation of these measures the residual impacts are predicted to be moderate. However, as outlined in Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) there is a process proposed whereby further mitigation measures including temporary relocation can be implemented at individual properties should this be merited. Proposed Working Hours are outlined in Section 5.2.4 of Chapter 5 of the EIAR. Standard working hours will generally be the norm for all above ground works i.e. Monday to Friday 07:00 to 19:00 and Saturday 07:00 to 13:00. HGV deliveries will not be permitted outside of these hours. Only tunnelling and other works underground will be undertaken 24 hours a day. The only exception to this is the requirement for other noisy work above ground outside standard working hours for events such as concrete pours, abnormal deliveries etc. TII and their Contractor will engage with the local community and local authority to advise of any such upcoming events such as this, and will do their best to minimise any such occurrence so far as practicable. All planned night-time work activities will have to be undertaken, controlled and mitigated under the detailed Construction Environmental Management Plan to maintain impacts below the agreed construction noise thresholds. Examples of mitigation measures that can be used to reduce impact are detailed within Chapter 13, section 13.6, including the use of enclosure structures for planned activities outside of the standard working hours. The rationale for 24/7 working on underground activities such as Mechanical Electrical Power (MEP) installation, TBM strip out, and tunnel clean and track laying, is that they can be managed underground without causing disturbance at night. While activities below ground are progressed on a 24/7 basis, site level activities such as deliveries etc will be limited to standard working hours (Chapter 5, Section 5.5.17.3 refers). In addition progressing this work 24 hours a day will ensure that the construction phase is completed much more quickly, thereby reducing the duration of effect on nearby sensitive receptors. Owing to the nature of the sprayed concrete intervention tunnel construction and to ensure a safe and stable method of excavation, and minimising settlement impact, the sprayed concrete intervention tunnel construction will be undertaken 24 hours per day, seven days per week. The groundborne noise and vibration arising from mechanical excavation of the tunnel will not exceed threshold limits. During night-time support works at the surface, an acoustically clad steel framed temporary building located above the access to the SCL work site on the south east corner of the compound will control airborne noise breakout to surrounding sensitive properties. All concrete to support the sprayed concrete tunnel lining operation will be batched on site within the acoustic enclosure and will not require night-time delivery.

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			Response (4) continued.	The predicted level of groundborne noise during TBM passage will result in a significant impact for a relatively short 2-week duration of the TBM passage. Unfortunately there are no effective methods available to reduce groundborne noise from TBMs at source and therefore the principal mitigation measure is advance consultation and engagement to inform residents of the timing of the TBM passing to allow building occupants to prepare for the temporary elevated noise levels. Therefore with the exception of some temporary disturbance (c. 2 weeks) resulting from the TBM passing. All other activities are not predicted to cause significant impact after mitigation. As outlined in Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) there is a process in place whereby further mitigation measures can be implemented at individual properties should this be merited.
5	4.2 Noise and Vibration 4.2.2 Airborne Noise and Vibrations	16	The advice attained from RINA, however acknowledges that the noise levels will be very significant at times outside at this location. In addition, impacts are expected for noise levels inside rooms with open windows during most of the construction phases. This is wholly unsatisfactory for residents' to experience for approximately 9 years.	Potential noise impacts identified due to airborne noise & vibration are presented in EIAR Chapter 13. Mitigation proposed includes 7m high noise barriers and further proposed mitigation in line with the Airborne and Ground borne Noise Mitigation Policy at 10 & 11 Dartmouth Square. On the implementation of these measures the residual impacts are predicted to be moderate. However, as outlined in Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) there is a process proposed whereby further mitigation measures including temporary relocation can be implemented at individual properties should this be merited.
6	4.2 Noise and Vibration 4.2.2 Airborne Noise and Vibrations	16	Given the underwhelming engagement experienced by residents to date at Dartmouth Square West, significant concerns rightly have emerged for residents in the capabilities of contractors to effectively engage and communicate with residents on inevitable noise disturbances. The implementation of 'quiet times' for residents would also be considered appropriate given the significant disturbances incurred during the construction phase.	TII would note that as set out by EIAR Chapter 8 Consultation, section 8.9.3 Construction Phase. Subsequent to the planning stage and in the event of a grant of approval of the RO the project will progress to the construction phase (subject to funding approval). It is anticipated that the construction period would progress for approximately 9 years, with the proposed Project becoming operational by 2035. Engagement will continue throughout this period to ensure that the public, stakeholders and interested bodies are informed of progress on the construction of the proposed Project and to allow for members of the public to submit complaints/queries or other communications with the project team. The proposed working hours for the construction phase of the proposed Project (as per Section 5.2.4 of Chapter 5 of the EIAR) will be for all above ground works to progress Monday to Friday 07:00 to 19:00 and Saturday 07:00 to 13:00. This means that there are already significant "quiet times" built into the construction phase programme. However, as previously noted, the Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) provides a process whereby further mitigation measures including temporary relocation can be implemented at individual properties should this be merited.
7	4.2 Noise and Vibration 4.2.2 Airborne Noise and Vibrations	16	It is contended that the level of piling is not adequately assessed in the Railway Order and they only address blasting vibration. The EIAR includes some data and mitigation measures regarding blasting, but vibration is also derived by deep piling and yet, there is no data to show the impact of that in the construction phase. The extensive depth of the excavations proposed will be within 14m of the rear walls of three storey Victorian houses on Dartmouth Square which are protected structures located within an Architectural Conservation Area.	This is incorrect. Piling has been assessed in both Chapter 13 and Chapter 14 where relevant. Please refer to Tables 13.5/14.11 and 13.6/14.12 for details of how secant piling and D-walling have been assessed and in which chapter they are assessed. The EIAR assessment concludes that for Dartmouth Square West properties there is no significant effect once mitigation measures are implemented. These mitigation measures include the installation of a noise barrier along the eastern perimeter of the site. For the assessed impact of ground movements on Dartmouth Square West properties please refer to response (15) below.

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8	4.2 Noise and Vibration 4.2.2 Airborne Noise and Vibrations	16	We would contend that the impacts identified above on very sensitive residential properties are profound and not merely very significant. We submit that, with reference to the EIAR guidelines definitions, the noise effects would be profound as an effect which "...obliterates sensitive characteristics" (residential amenity), rather than merely a very significant which by "....its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment."	The assessment undertaken in chapter 13 of the EIAR, as explained above, is undertaken in line with best practice and is in line with all relevant guidelines and policy requirements as laid out in Section 13.2.2 of the EIAR. The analysis identifies the sensitivity of the "sensitive receptor" and considers in the context of the level of noise that is predicted. The level of noise predicted is considered in the context of British Standard BS 5228 which defines widely accepted Construction Noise Thresholds (CNT) for the assessment of impacts. It is important to note that as per Table 13.13 of the EIAR, the definition of a profound effect (Derived from the DMRB guidance (UKHA, 2020)as modified by the EPA EIA guidelines (EPA 2022) is where noise levels increase by 20dB or more. This is not the case here.
9	Section 4.2.2 Airborne Noise and Vibration	17	Critically, the EIAR does not assess the night time impacts of the construction compound, notwithstanding the fact that the EIAR itself as highlighted above, indicates that it will be operating on a 24/7 basis. This in itself would trigger a profound impact which has not been assessed. The EIAR is therefore fundamentally inadequate.	There is limited assessment of noise & vibration arising from compounds and above ground work sites because as outlined in Table 13.6 of Chapter 13 of the EIAR, the standard working hours will not entail night-time working. Where there are night-time works these will be managed as explained by response (4) above and therefore no works will result in a profound effect.
10	4.2.2 Airborne Noise and Vibration	17	It is considered the mitigation measures proposed are unacceptable as they currently stand. Further consideration is required on how noise impacts will be mitigated against at every stage of construction for Dartmouth Square West residents. the monitoring measures proposed under ANV8 includes: "A full monitoring and auditing programme will form part of the CNVMP which will be agreed with the Local Authorities prior to the commencement of the Construction Phase. As a minimum the monitoring programme will include an alert system for threshold exceedances, remote access and a platform for sharing monitoring results between the contractor, TII, DCC and FCC." No mitigation measures have been included which explicitly requires the continuous real time monitoring of noise impact of construction activity or the impact upon internal noise environment in houses affected. Additionally, while ANV8 mitigation measures is noted, such monitoring and auditing must also be transparently shared and accessible to members of the public.	Having regard to mitigation measures proposed there are a combination of measures that will be implemented at each construction area and specific measures required where screening is needed. The mitigation measures proposed are explained by response (5) above. TII confirm that monitoring will be undertaken in accordance with the CNVMP. Monitoring and auditing will be transparent. It is envisaged that monitoring data and audit results will be presented and shared in community forums. TII will consider options for sharing that data and results with the public and stakeholders in a timely and transparent way which may include the use of online portals and tools. It proposes that this is not fixed by way of condition so that the content and manner of can be adapted to the changing circumstances of the project over time.
11	4.2.3 Mitigation	17	The mitigation measures were remodelled on the basis of localised screening as applied to surface level breakers and drills; and enclosures to compressors, generators, pumps, motors and ventilation fans. Table 13.90 of the EIAR refers to the impacts upon certain properties. However, the properties on Dartmouth Square West are not identified in the assessment. The EIAR goes onto state "At all other locations construction noise impacts are not significant to moderate to significant ". No details of the outputs of this assessment are given in the main EIAR or the appendices. Just broad parameters are given and no details of the precise location of the hoardings, or details of the enclosures are provided. This is a critical issue for our clients, given the potential impacts. The mitigating measures in The EIAR must be deemed inadequate in relation to the detail provided.	Please refer to Section 13.6.1.2.4 for specific screening requirements which as outlined in Table 13.85 does require a 4m tall site hoarding to mitigate the predicted noise here. In addition to these measures please also note that primary mitigation measures entails the control of noise at source as outlined in Section 13.6.1.2. Furthermore, the document Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) sets out the further mitigation measures and supports which will be available to those who meet the eligibility criteria. Construction phase modelling has been undertaken along the entirety of the alignment and is detailed in EIAR Appendix A13.7 and includes Dartmouth Square West properties. The EIAR main document summarises the potential for significant effects and the required mitigation measures. Table 13.85 outlines the specific locations of noise barriers (site hoarding) and this includes locations surrounding the Charlemont compound.

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12	4.2.4 Ground-borne Noise and Vibration	18	The EIAR takes Dartmouth Square West as the location for this element of the assessment (Table 14.28). It does not however indicate where on Dartmouth Square West the impacts are going to vary between nos. 1 and 17 Dartmouth Square. However, the tunnel and works associated with it, do not pass under the houses on Dartmouth Square West..... There will be significant excavations works, including blasting and drilling associated with the start of the intervention tunnel in the area immediately to the rear of house nos. 1-17.	Please refer to Figure 13.2 Sheet 30 where all noise assessment locations including those on Dartmouth Square West are identified. The results as they relate to each individual property are contained within Appendix 13.7 Construction Phase modelling (pages 17 - 28). Please note that there is an error in Table 14.13 of the EIAR where it is outlined that drill and blast will be used at "all underground stations and intervention tunnels". A number of amendments were made to the proposed construction methodology for the intervention tunnel and these were assessed in the EIAR. The intervention tunnel alignment has been dropped to mitigate impacts and the tunnel will be excavated by mechanical means only and blasting will not be required at this location. Both of these interventions were proposed to reduce potential effects arising from the construction of the intervention tunnel. Section 13.6.1.2.4 discusses the proposed steel clad building, in the fourth bullet point under Table 13.85. To reduce reverberant noise build up, the requirements of this building are that it will be suitably clad to achieve a minimum sound reduction index of 24dB Rw.
13	4.2.5 Mitigation	18	Given the deficiencies in the EIAR, it is difficult to judge whether the mitigation measures are adequate. There is little that can be done in terms of mitigation to render the impacts non-significant, particularly where these have not even been identified in the first instance.....Only 6 locations have been identified for pre-construction surveys in relation to noise and vibration arising from project, these excluded the properties on Dartmouth Square West. While the Charlemont station new oversite development is identified, the properties on Dartmouth Square West are not.	All potential impacts have been identified in EIAR Chapter 13 (Section 13.5) and associated appendices as referenced above. Furthermore, required location specific mitigation measures are identified in EIAR Chapter 13 (Section 13.6). Residual impacts i.e. those remaining after mitigation measures have been adopted are presented in Section 13.7 of EIAR Chapter 13. While we are not clear on the observation referring to "to 6 locations have been identified for pre-construction surveys....." we can confirm that multiple locations will be monitored in advance of and during the construction phase and this monitoring will include a number of locations in the areas of Charlemont compound.
14	4.2.5 Mitigation	18	Condition 15 of the previous metro north railway order specified that the airborne construction noise levels that should be applied at the facade of any residence. (ref. Table 3) From the evidence submitted, it is apparent that it will not be possible to achieve these thresholds, particularly when the cumulative impacts of noise and vibration, both air borne and ground borne, are taken into account. Condition 12 and 13 of the aforementioned Metro North relate to vibration impacts. They reference German Standard DIN 4150-3:2016 "Vibrations in buildings - Part 3: Effects on structures". The ability of the project to comply with any such standard needs to be fully explored by the Board and at any oral hearing held. For this reason, we request that the Board appoints specialist noise and vibration consultancy advice in order to assist it in conducting this element of the assessment.	The assessment undertaken in EIAR were completed by internationally recognized specialist consultants and is in line with best practice and with all relevant guidelines and policy requirements as laid out in EIAR Chapter 13 Airborne Noise and Vibration, section 13.2.2. The assessment of noise levels at building facades is normal for this type of analysis as the assessment criteria generated from best practice guidance all refers to noise levels at building facades as referred to in response (3) above. As per "Old Metro North", the assessment has been presented in Chapter 13 of the EIAR in terms of the potential effects at the façade of all properties potentially impacted (as detailed in other responses above). As also stated it is generally possible to achieve the criteria at the majority of facades. The exceptions are presented in Section 13.7 Residual Impacts. Having regard to groundborne vibration, the DIN 4150 standard is also utilised to determine the potential for building damage in the assessment presented in Chapter 14. (Please refer to Table 14.5 of Chapter 14).

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15	4.3 Settlement & Subsidence	20	From a review of the EIAR and associated appendices, it is evident that a very limited assessment of settlement and subsidence has been carried out. It can be seen from the above diagram that the houses on Dartmouth Square West fall within the 10mm to 30mm settlement zone. This is defined as "slight" risk category. However, given all bar one of the buildings covered by this submission are protected structures, they should be classed as damage category 3 (moderate)…… However, the protected buildings on Dartmouth Square West are excluded. Appendix A5.17 provides an assessment of 'representative' buildings. It is unclear why these buildings were selected. There is no map illustrating the location of reference numbers/properties. The presentation of the information is opaque and unclear and does not facilitate a full and proper examination of the true impacts upon the houses on Dartmouth Square West. Again, this is a significant inadequacy in the EIAR. The assessment effectively defers most of the assessment of subsidence and settlement to a further assessment. Such an assessment if undertaken after the railway order is issued, removes property owners' rights to review the actual impact of the development on their properties.	TII do not agree that "a very limited assessment of settlement and subsidence has been carried out". The assessment undertaken covers the whole route of the proposed Project. In addition, as is standard with a long linear project, buildings were selected to provide a representative sample and coverage to inform the EIAR, and TII can confirm that the protected buildings on Dartmouth Square West were not excluded from the assessment. Please refer to Figure 20.16 in Appendix A5.17 where the settlement contours can be examined to identify the predicted level of ground movement for each property. The approach taken by TII for assessing the impact of construction generated ground movements reflects 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 purpose of the Phase 2 Assessment is to study in more detail the response of buildings and infrastructure (identified during Phase 1) to predicted ground movements, and where appropriate consideration of possible mitigation measures. All buildings carried through from the Phase 1 Assessment are individually assessed using the limiting tensile strain approach. Buildings are modelled and assumed to follow the greenfield settlement profile of the ground. This approach is conservative since it neglects any interaction between the stiffness of the buildings and the ground and is therefore appropriate for this stage of the Project to inform the Railway Order application. The maximum tensile strains resulting from predicted differential settlement and horizontal displacement of the foundations are calculated and the corresponding levels of risk are determined in accordance with Appendix A5.17, Table 4-4: Building Risk Categories (Boscardin and Cording with Rankin Criteria). The EIAR has assessed the impact of settlement on the houses on Dartmouth Square West and has taken into account the Protected nature of these properties. EIAR Appendix 5.17 refers. The Phase 2 assessment of the damage for these buildings is "Slight" - please refer building B150 (15 Dartmouth Square West) in table 5-2 of that appendix. This property is the closest property on Dartmouth Square West to the excavation. It is also important to note that the Property Owner Protection Scheme (POPs) scheme (as outlined in section 5.4.11.4 of the EIAR) is available. The Property Owners' Protection Scheme is in addition to the existing legal rights of property owners and is in place to provide a simple and prompt way of rectifying any damage caused under the project up to the ceiling of €45,000. If the sum should exceed this amount the normal claims process would be used with the insurance companies for TII and/or the contractor. The protected nature of a building does not alter the classification of damage from slight to moderate as stated. The protected buildings along Dartmouth Square West, within the zone of influence of the works, will be subject to a further Phase 3 refined assessment (despite the impact only being assessed as 'slight') to take account of final design and construction methodology details, most likely utilising advanced numerical modelling techniques and further surveys of the building. The results of this refined assessment typically show that earlier assessments are conservative and overestimate the likely impact of construction generated ground movements.

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16	4.3.2 Tunnel Driving and Secant Walls	21	Stretching the whole length of the Charlemont site, the excavation will be up to 50m wide and approximately 30m deep. It is proposed to advance this excavation within a containing secant wall construction, following which will be constructed the station box for the proposed MetroLink Charlemont station. Following completion of the station box, it is proposed to drive a TBM through the north east end of the box, and, exiting through the south west corner, continue the tunnel boring activity for 350m further south, to behind Ranelagh Village. Ground settlement following the construction of both secant walls and TBM tunnelling is inevitable. It is unavoidable, and it will occur. It will occur to varying degrees, across a settlement zone around the excavation of the tunnel centre line, and behind all the secant walls. Compounding the alarming settlement projections of between 10mm and 30mm caused by deep secant wall, and subsequent excavations, wall deformations, and disturber water table, the whole of the residential stock within the established slump zone will be subjected to further compounding settlement disruptions with the arrival, and departure, of the TBM tunnelling process, some two years later. Engineering research experience has shown that projection of accurate expected settlement is usually unreliable, and results usually fall within certain ranges above or below expected. This is an important point in the consideration of settlement impacts associated with the proposed development.	EIAR Appendix 5.17, section 4.2 explains the methodology, empirically based and industry recognised approach to estimate the predicted ground movements generated by tunnel, and cut and cover construction, taking account of the design, construction methods and ground conditions. Both cut and cover, and tunnelling generated construction ground movements have been taken account of at this location. TII agree with the observation that ground movements can be challenging to predict and hence the parameters used by TII to predict ground movements are intentionally conservative, and are based on documented empirical data. Settlement and horizontal movements for retaining wall construction and bulk excavation associated with the station box and retaining walls have been undertaken based on the case history data documented in CIRIA Report C760 "Embedded retaining walls – guidance for economic design", taking account of the ground conditions, proposed design and construction methodology. Further details for which can be found in EIAR Appendix 5.17, section 4.2.5. The TBM will be of the type that maintains positive pressure to the face and surrounding ground while the segmental tunnel lining is installed, thereby allowing ground movements to be closely controlled and minimised. TII would also note that TBM entry and exit from the station box will be sealed, with possible ground treatment to further stabilise the ground if required, to manage ground movements within acceptable limits. The prediction of tunnelling generated ground movements has been undertaken in accordance with the volume loss methodology outlined in CIRIA PR 30. This is an empirical method based on the percentage of tunnel volume excavated that is over and above that required for the tunnel itself. The calculation of the resultant settlement trough requires the derivation of a number of ground factors, these are explained in EIAR Appendix 5.17, sections 4.2.2. to 4.2.4. Similar to the cut and cover ground movement predictions, conservative volume and trough width parameters have been selected to ensure the ground movements predictions at this stage are robust. Please also refer to response (15) above that summarises the results of the construction generated ground movement impact assessment.
17	4.4 Hydrogeology	21	The impact upon hydrogeology can be significant, and given the depth of the works and proximity to older buildings they are likely to be impacted. No detailed specific localised groundwater modelling has been undertaken as part of the EIAR. Water depth reading from boreholes some 550m from the proposed station are used in the broad assessment (Table 19.15). The data on which the assessment is undertaken is not related to the site concerned.	TII have undertaken localised and specific groundwater modelling, and TII can also confirm that hydrogeological information along the line of the underground elements has been collected. Please refer to Figure 19.6 of the EIAR which identifies the location of a boreholes at Charlemont. Pump tests were undertaken here and groundwater samples were taken (from 3 boreholes here) and analysed in order to inform the baseline conditions presented in the EIAR. Furthermore calculations were undertaken to estimate the effects of excavations on the groundwater for every station including Charlemont (refer to Table 19.35 Table 19.41 and Charlemont subsection under section 19.5.3.6. As explained by EIAR Appendix 5.17, section 4.7, no external dewatering (outside of the site boundaries) will be permitted during the construction of the station boxes, that increases the impact due to settlement on others, beyond the natural ground water fluctuation. Any settlement due to the short-term lowering of the water table outside of the station box will therefore be constrained to within the site boundaries.

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18	4.5 Phasing & Programme	21	The length of time that the residents of Dartmouth Square West have to endure is not temporary with reference to the EIAR Guidelines (EPA 2022). The EIA Directive requires a project to describe the likely significant effects, including the duration and frequency of effects. Table 3.4 of the EIAR Guidelines sets out definitions, which the introduction and project description suggests have been used. See table below. It is clear the duration of the impacts fall within a medium-term effect as they last between seven to fifteen years. This is length of time is intolerable for any resident on Dartmouth Square West. We also contend that this is a significant inadequacy in the EIAR. The duration of the effects in accordance with the guidelines are not given in any of the relevant chapters in so far as they relate to Dartmouth Square West.	TII do not agree that the duration of impacts have not been assessed. As described elsewhere, the works are undertaken in a series of stages to construct the station, while reducing the impact on Charlemont residents. The assessment undertaken in the relevant chapters of the EIAR is detailed and comprehensive and reflects the different stages of construction and the effects resulting. As a result, effects are described in terms of the duration of these effects, rather than an overall duration for the whole of the construction phase which would be inaccurate. The most impactful construction activities at Charlemont in terms of settlement, noise, vibration and traffic (piling, station build and excavation) will occur in the first 4 to 5 years of the scheme and therefore TII do not agree that the "duration of the impacts fall within a medium term effect as they last between seven to fifteen years". All of these impacts, including the planned closure to vehicle traffic along Dartmouth Road have been assessed and mitigation proposed in the EIAR. Please note that for each of the impact assessment chapters in the EIAR, the likely significant effects, including the duration of these effects are presented as per the EIAR Guidelines definitions. Further descriptors of the works, including a programme of the construction phase for each construction compound is presented in Appendix A5.2.
19	4.6 Hours of Operation	23	It can be seen that there will be significant 24 hour working 7 days a week involving the TBM activities, construction of the evacuation tunnel and associated SCL lining and station works themselves. There will also be weekend working, which is all in addition to the standard 5.5 day working week. This standard working day is Monday to Friday 07:00 hrs to 19:00 hrs (12 hours) and on Saturdays 07:00 hrs to 13:00 hrs (6 hours). It is quite evident that the works undertaken outside of this standard work week are going to be extensive and ongoing given the extent of works required in relation to station construction, site clearance, tunnel construction and MEP station works. This is effectively going to a 24/7 construction for a significant period of time over the 9 years of the project. Given that the development is within a settled residential neighbourhood and very close to all the houses on Dartmouth Square West, this will be an intolerable level of interference in amenities with a loss of sleep, general disturbance and psychological impacts resulting in a detriment to human health.	Please refer to response (4) that explains with the exception of some temporary disturbance (c. 2 weeks) resulting from the TBM passing, all other activities are not predicted to cause significant impact after mitigation.
20	4.7 Construction Compound	23	The laneway to the rear of the houses on Dartmouth Square would be taken into the construction compound for a period of 9 years. This will bring all noise and construction activity right up the rear boundary walls of the residents' properties. This relationship alone will result in significant and profound impacts arising from the construction phase.	The laneway will not be taken in to the construction compound for the a period of 9 years. Access to the laneway to the rear of the Dartmouth Square West properties will be maintained with the exception of a 33m long section which will be occupied for a period of up to 6 months to facilitate construction of the station box. Please refer to response (4) that explains with the exception of some temporary disturbance (c. 2 weeks) resulting from the TBM passing, all other activities are not predicted to cause significant impact after mitigation.
21	4.7 Construction Compound	24	The above sequencing diagram illustrates how the project accepts that the station box constructed as part of the Two Grand Parade development (Hones Phase 1) is an integral and essential part of the project. Issues in relation to legality of this are considered in further detail in the General Submission prepared on behalf of Dartmouth and Charlemont Community Group.	Please refer to TII response to the General Submission referred to.

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22	4.8 Traffic and Transport 4.8.1 Traffic Modelling and Assumptions	25	From a review of Appendix D of Appendix A9.5 it is apparent that local impact assessments of junctions around the stations using LinSing modelling was undertaken with the exception of Charlemont Station. Effectively, it appears as though the entire assessment was reliant on the strategic modelling exercise at this location. Notwithstanding this significant deficiency, certain conclusions can be drawn from the limited assessment which was undertaken.	It is not correct to say that the entire assessment was reliant on the strategic modelling exercise at Charlemont. It is also incorrect to say that a limited assessment was undertaken. Local Junction Modelling As part of Appendix D of Appendix A9.5 Scheme Traffic Management Plan, the initial criteria used to determine whether local junction modelling was undertaken was as follows: * Station construction requires new site access onto a key road; * Station construction would result in a significant alteration to the receiving road environment; * Station construction would result in a >10% increase on traffic on existing road volumes, special consideration was given to where roads/junctions were subject to the cumulative impact of multiple construction sites (i.e. R108 for example). Local LinSig junction assessments were not undertaken at Charlemont Station as the design indicated it would not meet the criteria. As presented in Appendix A9.5 Scheme Traffic Management Plan, analysis has been undertaken to assess the impact of the traffic management measures on the local road network surrounding Charlemont Station, following a 2-stage assessment process as identified in section 2.4. At the local level the following parameters have been used to assess impacts on general traffic: * Increase in driver delays at junctions; * Changes in traffic flows on surrounding streets; and, * Additional distance travelled due to diversions. Local traffic impacts have been assessed against key performance indicators, including the removal of one or more lanes of traffic, increase in traffic flow of +10% (PCUs), where there is predicted to be a permanent increase in journey length of 500m, or a new signalised junction. Local modelling undertaken at this location indicates that the increased volume of traffic on Grand Parade and Northbrook Road does not translate into any significant increase in driver delay. The largest increase in diver delay of 12 seconds is registered on the westbound approach on Grand Parade to the Ranelagh Road signalised junction. Local Traffic Modelling Local traffic modelling was undertaken to assess the impact of construction traffic and the proposed traffic management measures on the surrounding road network. Impacts to driver delay and traffic flows were assessed and presented. EIAR Appendix A9.5 Scheme Traffic Management Plan presents the analysis undertaken to assess the impact of the traffic management measures on the local road network surrounding the proposed Charlemont Station during the construction phase. At the local level the following parameters have been used to assess impacts on general traffic and on pedestrians: • Increase in walking distance/quality of service for pedestrians (through removal of footpath, reduction of quality of service, removal of a pedestrian crossing or relocation of crossing by more than 100m); • Increase in driver delays at junctions; • Changes in traffic flows on surrounding streets; and, • Additional distance travelled due to diversions. The analysis undertaken at this location indicates that the increased volume of traffic on Grand Parade and Northbrook Road does not translate into any significant increase in driver delay. The largest increase in driver delay of 12 seconds is registered on the westbound approach on Grand Parade to the Ranelagh Road signalised junction. During the construction phase, pedestrians will experience a reduction in quality of pedestrian infrastructure and space. The construction site boundary will encroach upon footways in the local area, including the northern side of Dartmouth Road, and the southern side of Grand Parade. However, a temporary signalised crossing will be provided west of the Luas to maintain pedestrian access to and from the Stop. Whilst there are partial closures on Dartmouth Road and Grand Parade, pedestrian movements will be maintained on appropriately sized footways through the area.

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23	4.8 Traffic and Transport 4.8.2 HGV and General Traffic	26	The number of HGV vehicles accessing the site (up to 210 per day), will give rise to a significant loss of amenity.	TII's analysis shows there will not be a significant loss of amenity due to HGV vehicles accessing the site. Please refer to response (22) above. Appendix A9.5 Scheme Traffic Management Plan details the proposed HGV routing associated with the construction works at Charlemont Station. Routing from the site is mainly via the R111 and R110, and routing to the site is via the R810 and R110. Alternative routing options via the R110/Kildare Road and the R110/R811 are also considered, all of which are part of the regional road network. As detailed in Appendix A9.5 Scheme Traffic Management Plan, access will be provided either from Grand Parade or from Dartmouth Road. The localised construction traffic routeing to and from the various site accesses will require consideration of the local traffic restrictions along Grand Parade and the junctions which intersect it. Due to banned movements on Grand Parade, inbound movements to the south site will need to route via the R114 gyratory to the north. When the full closure on Dartmouth Road (lasting up to 30 months) is in place, inbound and outbound traffic will route via Dartmouth Road, R138 and Grand Parade. Local modelling undertaken at this location indicates that the increased volume of traffic on Grand Parade and Northbrook Road does not translate into any significant increase in driver delay. The longest delay occurs eastbound on Dartmouth Road during the AM peak of 14 seconds. Model outputs indicate that there will be a moderate increase in HGV movements during construction at this location. The most significant increase, of just over 2%, will be in both directions along Ranelagh Road/Charlemont Street, which is part of the regional road network. Elsewhere in the area, including local residential streets, increases are significantly lower.
24	4.8 Traffic and Transport 4.8.3 Access, Loading and Parking	26	Appendix A9.5 suggests that the impact upon loading, parking and access is either slight or moderate. This in our opinion under-estimates the impact upon the residents of the properties listed in this submission. The construction sequence drawing illustrates that there would be a lorry holding area on Grand Parade during stages 2-4 of the project. This has the potential to give rise to noise and disturbance, particularly for properties at the northern end of Dartmouth Square West.	As detailed in Appendix A9.5 Scheme Traffic Management Plan, traffic management plans for the construction of MetroLink have been developed to minimise the impact of the Project on road users, and to maintain access to properties. A hierarchical approach to traffic management has been adopted, with pedestrian, cyclist, public transport and commercial needs provisions taking priority over private vehicles, in line with the GDA Transport Strategy. As identified in Appendix A9.5 Scheme Traffic Management Plan, the impact on parking and loading, and local access has been assessed on the following parameters and key performance indicators: * quantum of on-street parking removed - removal of >30% residential parking with 200m, or removal of >10% commercial parking within 200m; * quantum of loading bays and taxi bays removed- reduction of on-street loading facilities within 200m; and, * additional distance travelled due to diversions - diversion of over 2km for commercial access. Response (22) and (23) above explains the assessed impact on traffic and pedestrians, and response (4) explains the assessed noise impacts. The lorry holding area referred to is an area that will be temporarily closed off with traffic management during mainly off peak periods as and when required to off load major items of plant and equipment. It is not a permanent holding area and will only be used by exception for the reasons noted.
25	4.8 Traffic and Transport 4.8.4 Pedestrian Movement	26	Pedestrian movement in and around the construction compound will be severely constrained. It appears as though the footpath on the southern side of Grand Parade will be lost, with the HGV lorry holding area. There does not appear to be any pedestrian management proposals to manage this interface. Pedestrian and HGV conflicts will be inevitable, particularly at the entrance and exit to the compound, which is immediately in front of the houses.	Response (24) above explains how the lorry holding area referred to will be used. Safe access to the footpath will be maintained for pedestrians. Appendix A5.1 Outline CEMP details the proposed mitigation and monitoring measures that the contractor(s) will be required to adhere to during the construction phase. As detailed, there will be strict controls and regulations at the site entrances/exits for construction vehicles in order to ensure the safety of other road users and pedestrians. This is standard practice for all construction site accesses and egresses.

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26	4.8 Traffic and Transport 4.8.5 Summary of Assessment	26	The assessment provided in Appendix A9.5 suggests in section 7.11.7.2 highlights that in relation to the main works the impacts are as follows: • Severe impact upon traffic volume redistribution. • Moderate impact from HGV volume increase. • Moderate impact upon cyclists caused by diversions. This does not accurately consider the impact as detailed above in relation to access, loading and parking.	Responses (22) to (25) have responded to individual observations made regards traffic and transport, including response (24) that responds to concerns raised regards access, loading and parking.
27	4.9 Impact on Utilities	26	It is evident that the diversion of utilities on Dartmouth Road and Dartmouth Square West will have a significant impact upon local access, including pedestrian, cycle and vehicular.	TII's response to 'Submission 2 (Dartmouth Road)" referred to by section 1.1 of this submission refers to Dartmouth Road. Responses (22) to (25) have covered traffic and transport impacts with regards to Dartmouth Square West.
28	4.10 Human Health	26	Section 10.5.1.2 states in relation to Charlemont: *"there are a number of residences which are predicted to have significant adverse effects from construction noise during the day as outlined in Chapter 13 (Airborne Noise & Vibration), particularly in relation to the upper floors. Significant mitigation including 4m high hoarding is proposed. While residual effects are possible, these would be during the day and will not apply to night-time and therefore will not affect the potential for sleep. Consequently no human adverse effects are expected and although limited noise impacts are predicted near this receptor no significant adverse effects to human health are predicted".* This is the only assessment of the impact upon human health. The houses on Dartmouth Square West are not even identified as very highly sensitive receptors. It appears as though this section to the EIAR has not fully reviewed or had regard to the construction phasing with night-time working, ground borne noise and vibrations and other matters raised above. This is considered to be wholly inadequate assessment of the impact upon human health in so far as it relates to the properties on Dartmouth Square West.	Response (4) above explains how the impacts from night-time working will be controlled. With the exception of some temporary disturbance (c. 2 weeks) resulting from the TBM passing all other activities are not predicted to cause significant impact after mitigation.
29	4.11 Interaction of Effects	27	Again we consider it to be wholly inadequate as it fails to adequately address the interactions between air borne noise and vibrations, ground borne noise and vibrations, traffic impacts, visual impacts (e.g. of the hoardings) and human health. All of these effects come together in an interaction which significantly impacts upon the amenities of the residents listed as part to this submission.	TII disagree with this statement. Chapter 29 of the EIAR presents a comprehensive and detailed assessment of a number of interactions of environmental topics. In Table 29.1 of the chapter the topics that are deemed to interact with each other significantly are set out. It is also worth noting that the Chapter states that *"Some of the environmental topic assessments within this EIAR already address impact interactions. For example, Chapter 11 (Population & Land Use) provides an assessment of effects on community amenity, which relates to the interaction of impacts on air quality; visual amenity; traffic and transport; and noise and vibration. Furthermore, Chapter 10 (Human Health) describes and assesses how a combination of impacts on health determinants (air quality; noise and vibration; community amenity; traffic and transport) can interact and influence health outcomes."* It can be observed from the assessment presented in the EIAR that impacts on Dartmouth Square West properties are not predicted to be significant once mitigation measures are in place for the construction phase. As a result, the potential for interactions is limited as outlined in Chapter 29 of the EIAR. However, having regard to noise, where residents consider that their circumstances merit additional mitigation measures, these can be applied for as per the process outlined in Appendix A14.6 Airborne Noise & Groundborne Noise Mitigation Policy.

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30	5.2 Noise and Ventilation 5.2.1 Ventilation - Description	29	The proposed over track ventilation system and smoke system gives rise to impacts that have not been properly assessed in terms of noise and air emissions.	EIAR Chapter 13, sections 13.2.3.2 and 13.5.3.2.3 recognise that ventilation systems if not designed and mitigated effectively are potential noise 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.
31	5.2 Noise and Ventilation	30 and 31	5.2.2 Ventilation Assessment Ventilation is an important element of the design and workings of the tunnel, for instance in relation to maintaining adequate levels of moisture in the air and to air quality. Yet it does not appear that it was subject of a full assessment. In fact, it will be subject to 'further design development'. Section 13.5.3.2.3 of the EIAR indicates that an acoustic study was undertaken to assess the proposed ventilation strategy. This important referenced study is not included as an appendix to the EIAR..... We would emphasise here that specific noise levels from ventilation from ventilation systems have not been assessed as part of this EIAR but rather would 'be calculated as part of the further design development.' Effectively the impacts upon the houses in Dartmouth Square West of the ventilation systems illustrated on the figure above have not been assessed. 5.2.3 Ventilation - Observation It should be noted that ventilation is also not an element considered under the alternative chapter. There are different technologies that could be used for ventilation, the location of fans and vents could be different, yet no alternative was considered. It is queried why noise that is continuous is not assessed as part of this EIAR and may be assessed as part of future iteration. There is no indication that this would be subject of a consultation with potentially affected parties unless this is clearly specified in a condition of a potential grant of the railway order.	As outlined in Section 13.5.3.2.3 of the EIAR the development of the ventilation design included consideration of noise emissions whereby potential noise sources from the ventilation systems were identified as the ventilation shafts and grilles at ground levels. During a tunnel emergency situation noise levels at the external grilles would be elevated. However these noise levels would be below 55dB LAeq at 10m distance. It was considered that in emergency cases this level of noise was acceptable. It should be noted that there is no "missing study" and that the reference to an acoustic study is part of the "preliminary design development " for the project which is summarised in Chapter 4 and Chapter 6 of the EIAR. The assessment of ventilation systems has been assessed in line with best practice for this type of fixed installation and as is normal will be further refined as the design develops. The observer has not identified any failure to adhere to best practice guidelines in the assessment, which has demonstrated that the ventilation can be provided at this location within noise thresholds consistent with residential amenity. It is anticipated that adherence to those thresholds will be a condition of the RO as standard. In that regard, Section 13.2.6.2.4 of Chapter 13 of the EIAR states that noise level from all fixed installations (which includes ventilation plant from stations) will be limited to not exceed an operational noise level of 50 dB LAeq,16hr during daytime periods and 45 dB LAeq,8hr at noise sensitive buildings to achieve acceptable internal noise levels with windows open. The section also notes that in areas where background noise levels (expressed using the LA90 parameter) are below the fixed noise limits above, there is potential for the operation of a new noise sources at this level to be audible and to generate potential significant effects, depending on the magnitude above the background noise level. Therefore, when considering the potential impact of the noise emissions from operational plant associated with the proposed Project consideration will also be given to the British Standard BS 4142 (BSI 2014 +A1 2019). Background noise levels measured at Location UT52 to rear gardens of Dartmouth Square. This value was used as a more conservative estimate of the background levels of noise in the area. The measured background levels here are below the fixed limits above (Table 13.30, Chapter 9 of EIAR), and hence in line with the EIAR noise design criteria for fixed installations, the design of operational plant will also be undertaken in line with BS 4142: 2014 + A1 2019 to ensure no significant noise impact arises as a result of the operational phase plant items. The operational noise criteria for this source is therefore largely dependent on the most up to date and accurate prevailing background noise level. Given the fixed items of plant will not be installed until some 8 years post project commencement, the background noise environment will be resurveyed at the time of the design development to ensure the most up to date information informs the design, specific plant selection and mitigation to comply with the noise criteria set within the EIAR, which forms part of the Railway Order. This will be undertaken to determine the permittable increase above the prevailing background noise level to avoid any adverse noise impact in accordance with the standard. As discussed, this approach is set as part of the criteria proposed for the project and hence forms part of the proposed railway order. Due to ongoing design development of the systems under consideration here, it is premature to define the specific attenuation measures for noise control until the specific make, model and size of the units is procured. This information alongside the most up to date background noise levels will then inform the acoustic design study at each ventilation location in line with best practice. Notwithstanding, the resultant noise impact will be not significant at the closest noise sensitive locations.

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32	5.2.5 Train Operations - Assessment	33	The assessment indicates that there is no significant impact upon Dartmouth Square West. However, the precise point of assessment is not provided.	With regards to the noise of operating rail infrastructure, EIAR Chapters 13 and 14 present a comprehensive and detailed assessment of operational airborne and groundborne noise and vibration. No residual noise impacts are identified at this location during operation. The calculated rail noise levels across the proposed Project are not significant in terms of any widespread community disturbance and result in a not significant to slight impact when added to the prevailing noise environment. Appendix A14.5 provides building specific outputs of noise and vibration modelling, for Dartmouth Square West refer to pages 95-98.

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33	5.2.6 Train Operations - Observation	33	It is queried why only train rolling have been accounted for in the assessment of groundborne noise at operational stage. As demonstrated in the preceding section, there are other elements that should have been assessed, specifically ventilation. Ventilation, train rolling and the use of the PAVA system should be cumulatively assessed in accordance with the requirements of the EIA directive to provide a more accurate picture of operational noise levels. By way of comparison, we refer to the noise impact assessment prepared as part of the Crossrail Project.....We note the following project elements were considered as part of the assessment of noise levels arising from the operational phase..... In summary, there is a variety of potential sources of noise which could arise from the operational phase. Either these were overlooked by the applicants or scoped out. If the latter applies, an explanation should be provided. At a minimum, noise arising from ventilation and traffic should have been considered as these are measurable. Given that underground metro systems are common in Europe, where the EIA Directive also applies, it is hard to comprehend why the operational noise assessment is so scant and includes so little information. The drawings indicate drop-off point on Grand Parade. There is a further one indicated on the new internal link road. It is evident from drawing ML1-JAI-SRD- ROUT-XX-DR-Z-02090 - Proposed Street Level Design that cars will use this new link as a rat-run to avoid the Ranelagh Road / Grand Parade junction. It is queried why no traffic noise assessment was undertaken and was not considered in cumulation with other operational noise. We query why the assessment of predicted noise levels at operational stage has been narrowed to include sole consideration for train rolling but no other sources of noise. The results presented by TII are not realistic and do not comply with the requirements of the EIA Directive which require that impacts be assessed cumulatively. We also contend that by excluding much of the potential sources of noise, the results presented are misleading and inaccurate.	Section 13.5.3.2.4 of the EIAR notes that the majority of station structures for the proposed Project will be fully underground. Any breakout of noise from the station areas is likely to be via the access stairwells and escalators to ground surface. At Charlemont, the station platform is 22m below ground level and hence noise from PAVA systems at platform level will be significantly attenuated with distance and the screening by the intervening concourse and mezzanine levels between the ground level and the platform. The submission makes reference to the cross rail assessment of rail noise sources, the Cross rail document scopes out a specific assessment / calculation of noise from PA systems based on the following: “Noise from PA systems at Stations and Depots – This is scoped out on the basis that ….. where there is to be a new PA installation, where there was none previously, technology is available to avoid a significant impact or disturbance arising. This is also necessary as local authorities use nuisance control powers to limit noise from PA systems” Section 13.5.3.2.4 of the EIAR explains that the design of the PA system will follow the following requirements: • The PA system shall be designed to minimise noise disturbance to the specific surroundings. An acoustic simulation shall be developed to check audio levels at a later stage of the design; and • Audio levels shall be simulated to ensure correct intelligible levels and audio distribution throughout the stations . The best practice design principles which will be employed as part of the PA system design will have full regard to minimising noise breakout from these systems to the surrounding environment. Specific noise calculations are not undertaken of this source as it will not generate any audible or significant noise impact once operational in line with best practice applied to other similar large scale rail projects, including Cross Rail. Airborne noise from trains within the tunnel and station will not be audible at ground level. The principal noise source associated with operational trains is groundborne noise which has been fully assessed in Chapter 14. No significant impacts are determined. As discussed above, noise from PA systems will be substantially screened due to the platform depth and the system design. There are no significant impacts associated with this source. Escalators will provide access between ground level to station platform level. Mechanical elements associated with escalators are housed below ground and are fully enclosed. The station entrance is enclosed by a roof structure and walls around the perimeter at ground level. The escalators set back into the station. Notwithstanding, operation of escalators do not generate any notable noise sources during operation and will not be audible above the prevailing noise environment to the adjacent residential properties. A traffic noise assessment has been undertaken for the full extent of the study area which includes the surrounding road networks of Charlemont Station. Section 13.5.3 of Chapter 9 of the EIAR discusses the noise impact assessment associated with operational phase traffic on the surrounding road network. The change in road traffic noise is determined to be negligible and not significant as a result of the proposed development. Also please note that no 'drop-off' areas are provided with the exception of a proposed drop-off on Grande Parade for persons of restricted mobility only. The drawing referred to presents a road across the finished station between Dartmouth Road and Grand Parade. The intent of this road is to provide access to the Union Development only and will not allow through access. The road will be barriered and have controlled access, be speed restricted and traffic calmed, and be treated as a shared vehicular pedestrian space. This will prevent it from being used as a "rat-run". Chapter 13 Airborne noise and vibration includes the assessment of changes in road traffic noise resulting from the project in Section 13.5.3.1. In summary, the key potential sources of airborne noise associated with the operational phase is set out in Chapter 9 of the EIAR.

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34	5.2.7 Public Address (PA) Systems	33	Section 13.5.3.2.4 of the EIAR relates to PA systems. The majority of station structures for the proposed Project will be fully underground. Any breakout of noise from the station areas is likely to be via the access stairwells and escalators to ground surface. This is a significant concern for the residents of Dartmouth Square West as they reside directly next to the main entrance where PA announcements for 19 hours a day can have the potential to significantly impact their amenities. This is not assessed in the EIAR.	Please refer to response (33) above regards PA systems.
35	5.3 Hours of Operation	33	MetroLink is planned to operate 19 hours per day, 365 days a year. It is planned that there would 20 trains per hour at a frequency of three minutes between trains. Stations would be opened from 5.30 am to 00.30 every day of the year. Further to comments on passing traffic, the operating hours mean that effectively, the new metro street running parallel to the station will become some form of thoroughfare at least 19 hours per day. The drawing no. ML1-JAI-SRD-ROUT-XX-DR-Z-02090 - illustrates the proposed street level design. It is also not clear how the station concourse and area will be physically closed to the public outside of operating hours. Metallic rolling shutters are noisy. Both of these could affect the residential amenities of nearby neighbours. We would also note that the Luas Green Line with which the Charlemont station interfaces closes at 11 pm on Sunday. Yet, it is proposed that Metro will operate the interchange for an extra hour when there is no Luas to interchange to.	Response (33) above explains how access will be controlled to the new road that connects Dartmouth Road and Grand Parade. The station entrances are enclosed with gates, there are no roller shutter doors proposed at the station entrances. It will also be a contractual requirement placed upon the MetroLink operator to act responsibly and considerately, and be a 'good neighbour' when operating the station. The operating hours for Luas services is not a matter for this railway order submission, however TII expect that once the scheme is operational the operating hours of both services will be closely co-ordinated by the National Transport Authority.
36	5.4 Traffic and Transport 5.4.1 Modelling and Assessment	35	No local area modelling is undertaken of the impact upon the road network around the Charlemont Station. The assessment done as part of the EIAR (Appendix A9.2-B Traffic and Transport Assessment- Charlemont Station) fails to have regard to the most up-to-date bus connects plans. As with the construction phase, the assessment relies on a strategic assessment that does not take into account the local impacts. The figure below illustrates the road layout upon completion. The development creates a significant new link in the road network through the site linking Grand Parade with Dartmouth Road and Ranelagh Road. This creates a rat-run which will effectively bypass the Ranelagh Road/Grand Parade signalised traffic junction. This traffic movement has not ben assessed.	It is not correct to say no local area modelling has been undertaken. A VISWALK local model has been developed for this station, assessing the impact of the new pedestrian crossing on Grand Canal on the road network. The model demonstrates that it will have a minimal impact on driver delay on this road. In overall terms, the Charlemont station will provide for improvements to the public transport network resulting in decreases in private car usage/trips, as evident in the forecasted modal shift, and as such further local traffic or junction modelling was not undertaken. Additionally, as detailed in Appendix A9.2-B Traffic and Transport Assessment - Charlemont Station, the Project has been assessed in two alternative future scenarios. Scenario A includes (but is not limited to) Bus Connects Dublin Area Bus Network Redesign, and Bus Connects Fares and Ticketing. Scenario B includes (but is not limited to) Bus Connects Core Bus Corridors (planned 16 corridors). The anticipated future receiving environment at this location with Bus Connects Network Redesign services in place, is presented in section 3.2 of this document, with the assessment of impacts during the operational phase presenting impacts in both Scenario A and Scenario B. Regards the internal street between Grand Parade and Dartmouth, as explained by response (33) above, the intent of this road is to provide access to the Union Development only and will not allow through access.

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37	5.4 Traffic and Transport 5.4.2 Drop-Off, Pick Up and Interchange	35	There is very limited drop-off or pick up facilities or proper interchange for taxi or future bus services. Given that the location of integration with bus services in this suburban location, it is likely that there will be a significant demand for such interchange facilities.	The Station is intentionally designed with only one drop-off for persons of restricted mobility only. As detailed in EIAR Chapter 6, MetroLink Operations and Maintenance, the proposed Project has been designed to ensure maximum interchange with other modes of transport, specifically more sustainable modes of transport such as walking, cycling and public transport, to discourage the use of private vehicles. Charlemont Station provides a short interchange distance to the Green Line, as well as being within a 5-minute walk of BusConnects proposed A Spine and E Spine routes. The provision of drop-off facilities have been considered during the design process with such facilities only provided at locations that are less likely to encourage unnecessary short journey car trips in the local area. During the operational phase, the model zones around Charlemont Station forecast a reduction in Car mode share, with a reduction of between 400 and 800 car trips over the 12hr period. Transport modelling presented in EIAR Chapter 9, Traffic and Transport also indicates that the majority of passengers boarding and alighting at Charlemont will transfer from/to other forms of public transport, and therefore will not require drop-off facilities.
38	5.4 Traffic and Transport 5.4.3 Pedestrian Movements	36	The figure below illustrates the level of pedestrian activity in and around the northern entrance to the station. This will give rise to a significant amount of activity in an around the detriment of residential amenities of those living in Dartmouth Square West.	As detailed in EIAR Appendix A9.2-B Traffic and Transport Assessment - Charlemont Station, a microsimulation VisWalk model has been developed for the immediate area surrounding Charlemont Station. The simulation model covers the full extent of the publicly accessible station entrance, including the immediate vicinity of the station entrance at street level. With the new pedestrian infrastructure in place, the model indicates that at the northern entrance, the footways will operate at an acceptable level of service. A reduced level of service is only observed at the pedestrian crossing whilst pedestrians are waiting for the green phase at signals. The model indicates that the strongest flow of passengers will be going west from the northern entrance, towards the Luas interchange and Charlemont Street, with lower flows of pedestrians going east towards Dartmouth Square West.
39	5.5 Impact upon Amenities 5.5.1 Anti-Social Behaviours	37	The residents have significant concerns that this major interchange station will attract anti-social behaviour for up to 19 hours a day. This is common with many European capital interchanges. This currently is a relatively quiet residential area that benefits from amenities, but the potential for late night arrivals, taxi pick-ups, drop-offs and anti-social behaviour would disturb these amenities and later the nature of the area.	The interchange will certainly increase the number of people passing through the area, however it is important to note that people will be using MetroLink, similar to Luas as a transport hub, moving quickly in and out of the area. The station will not be a destination attracting people to the area. TII have deliberately designed the Station with minimum set down space (with the exception of a drop-off on Grand Parade for persons of restricted mobility only) or room for taxi ranks so that it does not encourage the Station to be used as a terminus. Furthermore as outlined in Chapter 6 of the EIAR, CCTV will be installed at all stations including Charlemont with monitoring of each station being managed from the Operational Control Centre. This means that in the unlikely event of antisocial behaviour, MetroLink security staff and /or An Garda Siochana will be notified immediately to manage the situation.
40	5.5 Impact upon Amenities 5.5.2 General Impacts	37	The overall impact of both the construction and operational phases of the project, in terms of noise, vibration, visual impacts, traffic, HGV movement, construction activity, operational emissions, anti-social behaviour and general activity around the station will be such as to severely and permanently adversely affect the residential amenities of the residents listed in this submission. The impacts will be so severe as to evidently be in material contravention of the Dublin City Development Plan zoning objective for the area, which is Z2: "To protect and/or improve the amenities of residential conservation areas.	The impacts of the proposed project, both during the construction and operational phase have been assessed in the EIAR that accompanies the Railway Order, with mitigation measures proposed where necessary and practicable, to ensure impacts are within acceptable limits, noting that there will be a temporary groundborne noise significant impact when the TBM passes for approximately 2 weeks. For the vast majority of the construction phase and all of the operational phase, the impacts of the Project are consistent with the protection and improvement of the amenities of this residential conservation area. The operation of the project will improve those amenities by improving access to sustainable transport and reducing traffic. The above responses have also addressed in summary the concerns raised by this submission. Regards the reference to the Z2 zoning objective. The zoning under the Dublin City Development Plan 2022 - 2027 for the residential properties in question is "Z2 Residential Neighbourhoods (Conservation Areas)" with an objective to "protect them from unsuitable new developments or works that would have a negative impact on the amenity or architectural quality of the area (See Table 3.11 of the submitted Planning Report). As outlined in Section 4.5.18.6 of the Planning Report, the element of the Project within the Z2 zoning area will affect a below ground area only and will not impact on the amenities or architectural qualities of the area. The majority of the proposed Charlemont Station and all above ground elements are located within the lands zoned Z6 with the objective “To provide for the creation and protection of enterprise and facilitate opportunities for employment creation”. The Station has been designed so that it is integrated with the proposed redevelopment of this site by a third party development, and as such, the Station design promotes the zoning objective. The MetroLink station design does not result in any segregation of the area, with no surface barriers or walls proposed.

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41	6. PROPERTY ISSUES 6.2 Compulsory Purchase Order	38	We would point out that this submission highlights that there will be a significant loss of amenity of the properties which are the subject of the CPO and hence there will be a diminution in the value of retained land.	The loss of amenity referred to is temporary. TII do not agree that the development will have a long term and permanent negative affect on the value of property. In fact there is evidence to suggest that property values will in fact increase in close proximity to public transport infrastructure and that local residents will greatly benefit from having a world class metro system providing access to the city centre, airport and north city at their door step.
42	6. PROPERTY ISSUES 6.3 Rear Lane	38	Under the proposed railway works of Dartmouth Square, the plans demarcate proposed permanent acquisition (ML 70-A3). The Metrolink proposal includes permanently acquiring a significant portion of the laneway from no. 11 to 15 inclusive with approximately 30% of the laneway width remaining at this location. This leaves c.800mm of space between the proposed permanent acquisition site area and the garden walls to properties no. 11-15 inclusive. In addition, the remainder of the laneway is due to be a temporary site. On 29th October 2019, the National Transport Authority and the National Road Authority Operating as Transport Infrastructure Ireland entered into an agreement with a number of residents of Dartmouth Square West. In entering this agreement, TII agreed to a position in advance of submitting this application. The Application as proposed is in breach of the agreement. In the circumstances, it is submitted that TII ought to amend the application to ensure it complies with their obligations under this agreement.	TII will comply fully with the terms of agreement entered into with the residents of Dartmouth Square West.
43	6. PROPERTY ISSUES 6.4 Properties	38	The owner of no. 1 Dartmouth Square has not been named in the book of reference. However, the occupier has received the documentation issued by TII.	The Occupier (s) of 1 Dartmouth Square has been acknowledged in the book of reference.
44	6. PROPERTY ISSUES 6.5 Devaluation of Properties	39	During the construction stage, there will be a severe impact upon property values. Section 21.3.5.1 of the EIAR states: *"The value of the properties may be impacted upon by various existing external forces which contribute to the degradation of that property. These can include high levels of noise, vibration, traffic or air pollution".* There is no assessment of the impact upon value of properties. Section 10.13.4 of the Non-Technical Summary merely states: *"Existing and planned future properties will benefit from being located in close proximity to a new permanent public transport system. Experience of the effects of the Luas Red and Green Lines on property prices along these lines would indicate that generally residential property values and land values in the study area will increase"* However, there is no evidence in the documentation to support this. The Planning and Development Act 2000 as amended specifically links the loss of amenity and the devaluation of property as the reason for refusal which excludes rights to compensation. It is only properties that are purchased as a result of the CPO associated with the Rail Order that can benefit from compensation. The State is not in a position to grant permission for development which will devalue property, as there is no mechanism for compensation in these circumstances. To grant permission where there is a loss of amenity, and an associated devaluation of property, would adversely affect the right to enjoy one's dwelling and property rights as protected under the Constitution and the European Convention of Human Rights. The intensity and duration of construction and the ongoing impacts during operation, including the proximity of the Terminus to a number of dwellings, are all likely to impact negatively on the value of the affected properties. The potential loss of part of the rear laneway will also have a major detrimental effect on the amenities of the residents of Dartmouth Square West and value of their properties. There has been no examination to the adverse impacts these proposals will have on the valuation of properties at Dartmouth Square West.	For the reasons noted by the observation and response (41) above, evidence indicates that in the long-term the value of property will increase.

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45	6. PROPERTY ISSUES 6.6 Temporary Relocation	40	Effectively some, or all of the residents listed in this submission may have to be temporarily relocated at TII's expense. Indeed, given the 9 year duration of the construction programme, this would effectively be a permanent relocation.	As noted by response (4) above, on the implementation of noise mitigation measures the residual impacts are predicted to be moderate. However, as outlined in Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) there is a process proposed whereby further mitigation measures can be implemented at individual properties should this be merited.
46	6. PROPERTY ISSUES 6.7 Required Purchase at Markey Value	40	The residents of this subject submission do not wish for their homes to be purchased at the market rate.	TII does not have a requirement to purchase any Dartmouth Square West properties.
47	6. PROPERTY ISSUES 6.8 Costs	40	Representation and the costs of this submission by a land-owner affected by a CPO will be a legitimate cost incurred.	Any costs associated with making representations through the RO application process including professional fees, should be recovered from the land-owner/ interest making the submission. Reasonable fees and costs associated with preparing and negotiating a claim for compensation following an enforceable RO may be recoverable from the MetroLink Project in accordance with the compensation code.
48	7. SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Policy & Procedure	41	• The submission is supportive of the CDCG general submission which seeks the removal of the Tara Street to Charlemont section of the rail order.	Response (1) above explains why TII do not consider it is correct or appropriate that the MetroLink alignment south of the proposed Tara Station should be omitted.
49	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Policy & Procedure	41	• Specifically the Charlemont station should not form part of the rail order as it will severely and demonstrably adversely affect the residential amenities of the Dartmouth Square residents both during the construction phase and the operational phase.	Please refer to response (40) above.

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50	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Policy & Procedure	41	• The deep construction required immediately adjacent to residential houses is wholly inappropriate and will result in a very severe loss of amenity and devaluation of property.	TII do not agree that the construction of Charlemont Station in proximity of the Dartmouth Square West properties is inappropriate. The above responses address the concerns raised, including responses (3) and (4) regards the assessment and management of noise and vibration impacts, response (7) regards the assessment and management of piling activity, and responses (15) and (16) regards the assessment and management of settlement and ground movements. TII do not consider there will be a severe loss of amenity or long-term devaluation of property as explained by response (41) above.
51	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	• The construction noise impact assessment is wholly inadequate as it fails to consider the internal noise impact over a 9 year period, defers assessments to the design and construction stage, fails to properly assess night time impacts, incorrectly categorises impacts as very significant as opposed profound.	As explained by the responses above TII do not consider the construction noise impact assessment inadequate. Please also refer to: Response (4) - explains why the construction noise impact assessment is not inadequate. Response (3) - explains that assessments are not deferred and that the assessment of noise levels at building facades is normal for this type of analysis Response (9) - explains how night time impacts have been assessed Response (8) - why impacts are correctly categorised Response (18) - explains duration of predicted impacts.
52	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	The EIAR fails to properly assess the settlement impacts of the tunnelling upon houses on Dartmouth Square West and there may be settlement of between 10mm and 30 mm which would severely affect these protected buildings.	Please refer to responses (15) and (16)
53	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	The hydrogeological impact assessment is inadequate as it has not bene based upon local bore hole logs and no local impact assessment has been undertaken around Charlemont station.	Please refer response (17) above.

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54	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	Construction of the intervention tunnel will give rise to significant noise and disturbance, 24/7 during the period of its construction.	There is an error in Table 14.13 of the EIAR where it is outlined that drill and blast will be used at "all underground stations and intervention tunnels". A number of amendments were made to the proposed construction methodology for the intervention tunnel and these were assessed in the EIAR. These amendments included moving the intervention tunnel deeper and excavating the tunnel by mechanical means only. Both of these interventions were proposed to reduce potential effects arising from the construction of the intervention tunnel. The assessment of the mechanical excavation for the evacuation tunnel and intervention tunnel has been carried out, and is included within Chapter 14 of the EIAR. The assessment of groundborne noise and vibration from mechanical excavation for a number of representative receptors is presented in Table 14.31 and Table 14.33, with predictions for a greater number of receptors in the area presented in Appendix 14.5 Groundborne Noise and Vibration Blasting Modelling Results. Owing to the nature of the sprayed concrete intervention tunnel construction and to ensure a safe and stable method of excavation, and minimising settlement impact, the sprayed concrete intervention tunnel construction will be undertaken 24 hours per day, seven days per week. The groundborne noise and vibration arising from mechanical excavation of the tunnel will not exceed threshold limits. During night-time support works at the surface, an acoustically clad steel framed building will be used within the compound to control airborne noise breakout to surrounding sensitive properties. All concrete to support the sprayed concrete tunnel lining operation will be batched on site within the acoustic enclosure and will not require night-time delivery. Please also refer to response (4) above.
55	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	The construction phase will last over 9 years. This is a medium-term effect which has not been properly considered in the EIAR.	This statement is incorrect. Please refer to Table 2.3 of Chapter 2 of the EIAR where the durations of effect utilised in the analysis throughout the EIAR are referenced. However, please note that the assessment in Chapter 13 has noise and vibration impacts over shorter durations to reflect the duration of the actual activity i.e. excessive noise effects resulting from the construction will not last 9 years, but will last as long as the "noisy activity" lasts. These durations are outlined in Chapter 13 of the EIAR. Please also refer to response (18) above.
56	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	The hours of construction proposed include 12 hour working days and significant element of 24 hour working during certain periods of the contract.	Please refer to response (4).
57	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	The alternative construction compound has not been properly assessed and given the impacts of that proposed, it is incumbent upon TII to properly assess this and propose it as a mitigating measure.	There is one construction site proposed for the construction of this station in the immediate vicinity of the station. No other construction site would be feasible for the construction of this station. In the majority of cases, including Charlemont it is not possible to consider an alternative site for a construction compound as the site is the location of the construction works for the MetroLink Station at Charlemont. Table 7-19 also refers.

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58	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	Additional traffic will be generated during construction and the rediverting of traffic will have an adverse effect upon the local road network. HGV traffic on quiet residential roads will have a severe impact upon amenities.	Please refer to response (23) above.
59	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	41	There will be a severe impact upon human health which has not been properly assessed.	The Human Health Assessment is presented in Chapter 10 Human Health. This chapter identifies human beings as being sensitive due to their age, health status or for other reasons. But as outlined in section 10.3.4 of the Chapter 10 of the EIAR, it is neither possible or necessary to identify every sensitive receptor along the proposed alignment. The approach used in the assessment is to present residences (including the ones listed), schools, workplaces and places of worship as "highly sensitive" as identified in section 10.3.4.2. This EIAR has had full regard to the construction phasing, including night time working, and groundborne noise and vibration etc. as the health assessment is based on the modelling and assessment outputs of a number of chapters (see Table 10.3). These are Chapter 9 Traffic and Transport, Chapter 11 Population and Land Use, Chapter 12 Electromagnetic Compatibility and Stray Current, Chapter 13 Airborne Noise & Vibration, Chapter 14 Groundborne Noise & Vibration, Chapter 16 Air Quality , Chapter 18 Hydrology, Chapter 19 Hydrogeology and Chapter 20 Soils and Geology. It is not correct to say "There will be a severe impact upon human health which has not been properly assessed." EIAR Chapter 10, Human Health has identified that there may some residual effects after mitigation measures due to the noise and vibration arising from mechanical excavation, TBM advancement and proposed blasting resulting in "annoyance to users, but no health effects".
60	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Construction Phase	42	The proposed mitigation measures do not mitigate the profound impact that the proposed scheme will have on residents of Dartmouth Square given the associated scale and time period of the proposed development.	The analysis presented in the EIAR does not support this statement. No profound impacts have been identified for the residents of Dartmouth Square and mitigation measures proposed will be effective at reducing the impacts on these properties and in general terms impacts will be associated with the construction phase only. See below for more details of relevant analysis: (1) EIAR Chapter 9 Traffic and Transport outlines that after mitigation measures have been implemented there will be a residual long term slight impact on pedestrians as there will be more pedestrians in the area. However the use of existing footpaths will be at "acceptable comfort levels". There will be no other residual impacts either in the construction or operational phase related to traffic or transport. (2) EIAR Chapter 10 has identified that from the Human Health perspective, there may some residual effects after mitigation measures due to the noise and vibration arising from mechanical excavation, TBM advancement and proposed blasting resulting in "annoyance to users, but no health effects" (3) These effects are also addressed in EIAR Chapter 13 where mitigation measures are proposed including 4m high noise barriers and further proposed mitigation in line with the Airborne and Ground borne Noise Mitigation Policy at 10 & 11 Dartmouth Square. On the implementation of these measures the residual impacts are predicted to be reduced to moderate.

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			Response (60) continued.	(4) EIAR Chapter 14 assesses ground borne Noise and Vibration and identifies a residual impact on Dartmouth Square West of significant during the advancement of the TBM. However, this will be for a limited duration and residual effects from other construction phase activities are not considered significant following the implementation of mitigation measures. (5) EIAR Chapter 16 Air Quality identifies that there will be no significant effects once mitigation measures are implemented. (6) EIAR Chapter 21 Land Take has identified a significant effect on Dartmouth Square properties due to the requirement for temporary land take for construction and for the erection of noise barriers. However this land will be reinstated following the completion of the construction phase. (7) EIAR Chapter 26 of the EIAR identifies the potential for impacts on Dartmouth Square ACA due to enabling works entailing the redirection of utilities. However it is proposed that these works will be managed in accordance with a method statement to be prepared by the Project Conservation Architect in order to minimise any effects on the historical granite steps, kerbing and lamp standards. The impacts following the implementation of these mitigation measures was considered to be slight. (8) EIAR Chapter 27 identifies potential landscape and visual effects after mitigation associated with the construction phase. These are moderate and negative for the effects on the landscape amenity and slight and negative for the visual effects.
61	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Operational Phase	42	The operation of the trains and associated ventilation systems has the potential to adversely affect the amenities of the residents and has not been properly assessed.	Please refer to responses (30), (31) to (33) above.
62	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Operational Phase	42	The post completion permanent arrangement will result in significant rat-running between Ranelagh Road and Grand Parade to the detriment of the residents on Dartmouth Square West. No adequate drop-off, pick-up facilities, taxi ranks, or interchange with other services are proposed.	Regards the internal street between Grand Parade and Dartmouth, as explained by response (33) above, the intent of this road is to provide access to the Union Development only and will not allow through access. Please refer to response (37) regards drop-off, pick-up facilities, taxi ranks, and interchange with other services.
63	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Operational Phase	42	The overall impact of both the construction and operational phases of the project, in terms of noise, vibration, visual impacts, traffic, HGV movement, construction activity, operational emissions, anti-social behaviour and general activity around the station will be such as to severely and permanently adversely affect the residential amenities of the residents listed in this submission. The impacts will be so severe as to evidently be in material contravention of the Dublin City Development Plan zoning objective for the area, which is Z2: "To protect and/or improve the amenities of residential conservation areas.	Please refer to response (40) above.

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64	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Operational Phase	42	The mitigation measures proposed do not meaningfully mitigate the significant adverse impacts during operation for residents of Dartmouth Square West	The identified impacts associated with the operational phase are limited to impacts associated with the movement of increased numbers of people in the area, but these impacts are not considered significant. Chapter 9 Traffic and Transport outlines that after mitigation measures have been implemented there will be a residual long term slight impact on pedestrians as there will be more pedestrians in the area. However the use of existing footpaths will be at "acceptable comfort levels". There will be no other residual impacts either in the operational phase related to traffic or transport. Please also refer to responses (36) to (38). In addition, no significant residual negative impacts are anticipated on the Population and Land Use from the operation of the proposed Project as outlined in Chapter 11 Population and Land use. With regards this submission and the observations raised: Responses (30) and (31) - explains how potential noise and ventilation impacts will be managed and mitigated. Response (32) - explains why rail noise levels will not have a significant impact. Response (33) - explains how noise from PA and escalators will be managed so that it does not have a significant impact, and that traffic noise has been assessed and is not predicted to be significant. Response (39) - explains how the risk of anti-social behaviour will be managed. Following the incorporation of the mitigation measures into the design of the proposed Project and implementation on an ongoing basis throughout the lifecycle, the residual effects that will arise during operation will be permanent and positive.
65	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Property Issues	42	The permanent acquisition of part of the rear laneway will legally impede rights of access to the rear of properties.	Please refer to response (42) above.
66	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Property Issues	42	The permanent loss of part of the laneway will inevitably impact upon the amenity and value of retained land/property. The development will inevitably impact upon the value of retained land/property. There will be a significant devaluation in property and the Board must refuse this element of the railway order.	Please refer to response(42) and (44) above.
67	SUMMARY & REQUESTED AMENDMENTS 7.1 Summary of Submission Points Property Issues	42	Owners' cost of engaging in the process should be borne by TII.	Please refer to response (47).

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68	SUMMARY & REQUESTED AMENDMENTS 7.2 Requested Amendment and Conditions	42	The parties to this submission fully support the requested amendments in the General submission in relation to the omission of the section between Tara Street and Charlemont and the making of a separate railway order application for a section between Tara Street and St Stephens Green. This element should effectively be refused for the reasons outlined above. The EIAR is wholly inadequate and does not properly assess the impacts of the development in accordance with the requirements of the Directive.	TII do not consider it is correct or appropriate that the MetroLink alignment south of the proposed Tara Station should be omitted for the reasons explained by response (1) above, noting also that a scheme which terminates at Tara Street would not be consistent with the Transport Strategy for Greater Dublin Area (2022-2042). In addition any decision to terminate the scheme at Tara will significantly impact on the overall viability and benefits of scheme. However, while there is a strategic need for a MetroLink station at Charlemont, TII recognise that the short-term implications for local residents will be significant as the scheme progresses through the construction stage. TII are committed to working closely with local residents to ensure the required mitigation measures are put in place. Finally, TII note that throughout this submission MacCabe Durney Barnes have frequently referred to the Railway Order application, and in particular the EIAR as being inadequate. TII do not accept this, and consider that the level of detail not only submitted as part of the Railway Order application, but the particular responses provided above to individual statements and observations made demonstrate the detailed consideration that has been applied to the submitted MetroLink Railway Order application.
69	SUMMARY & REQUESTED AMENDMENTS 7.2 Requested Amendment and Conditions	42	Requested amendments and conditions are as follows: 1. Properly designed drop-off and pick up on Grand Parade. 2. Apply appropriate and binding conditions in relation to noise and vibration limits based upon impacts upon internal noise and not external facades. 3. Restrict construction hours to 07:30 hrs to 18:00 hrs Monday to Friday, 0:800 hrs to 13:00 hrs on Saturday with no working outside of these hours., No night-time working should be permitted. 4. The application should be consistent with the agreed terms between TII and the residents of Dartmouth Square West.	1. Please refer to response (37). The provision of a drop off at this location is proposed for PRMs only. In this context, it is proposed that the number of drop offs will be minimal and as such will not impact traffic movements significantly. TII do not want to introduce further drop off points as they would attract vehicular traffic to the area which would potentially cause traffic congestion. 2. Chapter 13 of the EIAR does specify the use of appropriate noise limits supported by a monitoring programme to ensure that limits are adhered to (at the facade of nearby sensitive receptors). Please refer to the response (3) that explains why the use of the external facade is appropriate for the assessment. 3. Response (4) explains the working hours proposed by the Railway Order application and how both day time and night time works will be managed. The rational for night time working is also explained, noting all planned night-time work activities will have to be undertaken, controlled and mitigated under the detailed Construction Environmental Management Plan to maintain impacts below the agreed construction noise thresholds. Also as noted by response (4), upon the implementation of mitigation measures the residual impacts are predicted to be moderate for day time working. In addition, as outlined by the Transport Infrastructure Ireland (TII) Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6) there is a process proposed whereby further mitigation measures can be implemented at individual properties should this be merited. It is therefore not considered necessary to reduce the proposed day time working hours of Monday to Friday 07:00 to 19:00, and Saturday 07:00 to 13:00 or unreasonable to be able to undertake work during these core day time hours whilst still providing residents with quiet time during MetroLink construction. In addition progressing this work 24 hours a day will ensure that the construction phase is completed much more quickly, thereby reducing the duration of effect on nearby sensitive receptors. 4. Please refer to response (42) above.