

Submission No.			68	
Organisation Name or Name of Submitter			Dublin Airport	
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Letter Re: Re: NA29N.314724 Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin				
1	Airport Specific Security	3	daa requests that should a grant of permission be issued, a condition is included requiring MetroLink to adhere to all relevant security measures during construction and operation as detailed by daa as the responsible organisation for Aerodrome Security provisions.	Safety and security is extremely important to TII. TII also recognises that daa will need to be comfortable with aspects of the design and construction which relate to applicable airport security. TII confirm that they will work with daa to identify and ensure all applicable necessary security measures during both construction and operation are adhered to, and has no difficulty with An Bord Pleanála including a suitable condition to that effect in the Railway Order.
2	Airport Specific Security	3	The proposed MetroLink must comply with the relevant security requirements adopted by daa, including but not limited to Aviation Security in Airport Developments (ASIAD), Security in Design of Stations (SIDOS) and should take account of other relevant UK codes such as G085 Code of Practice (2018). All above and below ground, subsurface design should be in accordance with the relevant standards.	Please refer to response (1) above.
3	Airport Specific Security	3	daa requests that MetroLink prepare the following Security Plans for design, construction, and operation:  • Concept Security Plan (CSP): Sets out the concept for developing the mitigation strategies for the design and operation of the final station that evolve from the Threat Vulnerability and Risk Assessment (TVRA) into a set of design intent details. The CSP shall be submitted to the Dublin Airport Security Committee (DASC) at the commencement of detail design stage.  • Construction Stage Security Plan (CSSP): Sets out the plan for mitigating construction stage security risks. These differ from the permanent case design and operations mitigation set out in the CSP. A CSSP is to be submitted to the DASC a minimum of 1 year prior to planned construction commencement.	Please refer to response (1) above. TII confirms that it is working with DAA regarding its request for both a CSP and CSSP. TII confirm that these security plans will be provided, within a suitable timeframe. -
4	Airport Specific Security	3	MetroLink is requested to nominate representatives to sit within the Dublin Airport Security Committee as headed by An Garda Síochana and the CSP and CSSP shall be agreed within this forum.	TII confirm representatives will be nominated to sit within the Dublin Airport Security Committee. -
5	Airport Specific Security	3	It is important that the final design and the phased construction stage implementation allows flexibility to accommodate the required security measures. daa requests that should a grant of permission be issued, a condition is included requiring MetroLink to adhere to all relevant security measures as detailed by as the responsible organisation for Aerodrome Security provisions.	Please refer to response (1) above.
6	Pedestrian and Traffic Impact	3	daa request the Metrolink station is designed to accommodate an elevated pedestrian walkway. This will ensure there is no impact on the safe and efficient operation of our internal roads which may be impeded by the number and frequency of the crossings.	The pedestrian modelling undertaken by TII demonstrates that the current proposed at-grade connection between the Station and terminals 1 and 2 permits adequate capacity for vehicles and does not cause unacceptable delays or excessive vehicle queuing for traffic using the Airport, and that such connection provides an acceptable, functioning , efficient and safe Level of Service and route for pedestrians with no excessive queuing or pedestrian crowding or corralling evident for pedestrians travelling to and from the Station.TII's latest version of the VISWALK model is based on the approach agreed with DAA in April 2022. The model has been prepared for future year scenarios with forecast pedestrian demand based on ERM and vehicle demand based on daa projections. This model indicates that the airport road network will operate with adequate capacity for vehicles and pedestrians, even with the addition of MetroLink passengers. All the crossings in the immediate vicinity of MetroLink and the GTC operate efficiently for both pedestrians and vehicles, with no excessive vehicle queuing or pedestrian crowding evident. The modelling results can be found in section 6.1.3.1.1 of Appendix A9.2-D Traffic and Transport Assessment Dublin Airport.The TII VISWALK model demonstrates that signal timings can be implemented that would accommodate both pedestrians and vehicles, vehicles can be accommodated without excess delay and that an appropriate LoS would be provided for pedestrians. The VISWALK assessment also demonstrates there is sufficient capacity to accommodate vehicles on the Airport network with no queuing back to the motorway occurring.TII confirm that current pedestrian modelling does not justify the need for an elevated walkway.
7	Pedestrian and Traffic Impact	4	Pedestrian movement and traffic flows are key to Dublin Airport efficient operation and security. In particular to Airport Security is the movement of pedestrians and pedestrian approach/dispersion routes. The MetroLink design must not allow pedestrians to be corralled and become a potential target.	Please refer to response 6 above.

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8	Pedestrian and Traffic Impact  Pedestrian Movement:	4	<p>The location of the proposed station means that, to access the airport, staff and passengers will need to cross internal airport roads. This will significantly increase the numbers of pedestrians crossing and therefore increase the level of conflict between pedestrian movements and internal airport vehicular traffic movements. The figures outlined in Table 1 indicate close to 6,000 pedestrian movements during the AM peak hour in the Opening Year 2035, these movements will conflict with vehicle movements<sup>2</sup> on the T2 Departures Road (approx. 670) and in the GTC (approx. 450) in the vicinity of the station.</p> <p>Footnote 2: Source: 7-day average flows recorded in May 2019 (Dublin Airport operated at the permitted 32 million passengers per annum cap in that year)</p>	Please refer to responses 6 above.
9	Pedestrian and Traffic Impact  Pedestrian Movement:	4	<p>MetroLink proposes five new signalised at grade pedestrian crossings. These are upgrades to existing zebra crossings. An assessment including VISWALK modelling was undertaken for these five crossings. Signalised junctions at these locations are deemed to be the minimum appropriate intervention to accommodate the forecast pedestrian volumes. Two crossing points, between Terminal 1 and the Terminal 1 Multi Storey Car Park have not been assessed by MetroLink within the Traffic &amp; Transportation Assessment (TTA). Static analysis tools of the Transport for London (TfL) Pedestrian Comfort Analysis were also used in the TTA to assess pedestrian movement. Table 6.2 of the TTA4 shows that in the opening year pedestrians will experience a comfortable to acceptable level.</p> <p>Footnote 3: Source: EIAR Volume 5 Appendix A9.2 Overall Project Traffic &amp; Transportation Assessment – Dublin Airport Station</p>	<p>Please refer to response (6) above.</p> <p>At the two unassessed crossing locations referenced, the majority of demand and movements are not created by MetroLink, and are a management issue of DAA regardless of the presence of MetroLink.</p>
10	Pedestrian and Traffic Impact  Impact on internal Roads:	4	<p>The TTA also states that, with MetroLink providing an attractive alternative for journeys that are currently made by bus, it is likely that there will be a shift from existing bus services onto MetroLink, resulting in a reduction in bus, as well as taxi and private car, trips on the road network at Dublin Airport. This assessment is purely qualitative, however, and the TTA does not provide any details of the modelled flows on the internal Airport road network to illustrate this.</p> <p>daa identifies that consideration is not given to:</p> <ul style="list-style-type: none"><li>• The potential impact of additional pedestrian crossing movements on general traffic on the internal Airport road network, or</li><li>• The potential impact of additional traffic (buses and cars) dropping off/picking up at the Metro Station.</li></ul>	<p>TII disagree that the assessment is "purely qualitative". Signiificant analysis has been carried out to assess modal shift Post MetroLink using the NTA ERM model.</p> <p>The potential impact of additional pedestrian crossing movements on general traffic on the internal Airport road network, and the potential impact of additional traffic (buses and cars) dropping off/picking up at the Metro Station was considered as part of the modelling for the MetroLink Airport Study. The modelling results can be found in section 6.1.3.1.1 of Appendix A9.2-D Traffic and Transport Assessment Dublin Airport..</p> <p>The NTA’s ERM has been utilised by the MetroLink project to determine future modal splits at all stations, including the Airport station. The ERM has been applied on major projects such as BusConnects and MetroLink and is considered to be the most appropriate basis upon which to forecast the impact of MetroLink.</p> <p>The modelling shows a shift from other modes of travel to the Metrolink, which will then result in reduction in travel by these modes. The vehicle flows used within the VISWALK modelling were provided by daa’s consultants, and we have not reduced these flows to take into account any shifts away from other modes.</p> <p>Consideration of the potential impact of the additional pedestrian crossing movements on general traffic on the internal Airport road network was presented within the Airport TTA for the 2035 Opening Year.</p> <p>The MetroLink Airport station has been designed to accommodate Airport passengers and workers. TII are committed to working with daa to ensure that appropriate traffic management measures are provided at the Airport to minimise any such drop-off/pick-up activities.</p>
11	Pedestrian and Traffic Impact  Pedestrian Movement:	5	<p>The Terminal 1 and Terminal 2 kerbside set down areas are a key airport surface access ‘processor function’ at Dublin Airport. At-grade pedestrian crossings are present in both Kerbside areas. Although assessment of the pedestrian crossings has been undertaken from a pedestrian comfort / level of service perspective, the impact of the additional pedestrian movements caused by MetroLink on Kerbside operations and requires additional considertation in the TTA. It is also possible that the MetroLink operations will result in pedestrian surges from the station as services arrive in either direction.</p>	<p>The TII VISWALK model assesses the set down area at the Terminal 2 kerbside. The model indicates that there is sufficient capacity for pedestrians to travel through the area.</p> <p>The Terminal 1 kerbside set down is remote from the MetroLink station. Pedestrians at this point originate from all access points and must pass through this point to access Terminal 1. It is therefore considered that MetroLink will not alter the pedestrian demand at this location.</p>

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12	Pedestrian and Traffic Impact  Impact on internal Roads:	5	The proposed station layout will introduce an additional uncontrolled junction in close proximity to the signal-controlled junction between Corballis Road North and the T2 departures road. Corballis Road North is the main exit route from both terminal areas and associated car parks and its efficient operation is crucial to the wider operation of the internal Airport road network. Consideration should be given to how the proposed exit junction impacts on the operation of Corballis Road North and the adjacent T2 departures road junction.	This junction is not required for the operation of the Metrolink Station, but is required to facilitate daa plans to provide future bus parking area. These plans are in accordance with daa requirements as communicated to us in November 2019. It is therefore a daa design issue but TII will agree the most suitable access junction arrangements with daa.
13	Pedestrian and Traffic Impact  Bus Circulation and Junctions Improvements on Campus:	5	daa identifies that:  • the impact of the additional pedestrian movements caused by MetroLink on bus circulation and other traffic movements within the GTC requires additional consideration in the Dublin Airport Station TTA.	The TII VISSIM/VISWALK model has been prepared for future year scenarios of 2035 with forecast pedestrian demand based on ERM and vehicle demand based on daa projections. With regard to vehicular modes, cars, taxis and buses are included within the model. Therefore, TII has assessed the impact of ERM forecast pedestrian demand against the daa forecast of bus numbers at 2035. The VISSIM model indicates the model will operate with a satisfactory level of capacity for vehicular traffic. The modelling shows this includes the ability for all vehicles to discharge across the stopline during the relevant green phase at the pedestrian crossings.
14	Pedestrian and Traffic Impact  Alternatives Considered:	5	Alternatives were considered to facilitate safe and efficient pedestrian movement. daa considered Elevated Pedestrian Connections to be a safer and preferable solution. When assessed all elevated alternatives offered a quality user experience that provides a safe, efficient, enjoyable and stress-free journey that encourages repeated use of MetroLink to access the airport. It is noted that a similar pedestrian walkway is provided at the proposed Estuary Station, connecting the MetroLink Station to the proposed car park. daa requests that the Metrolink station is designed to accommodate an elevated walkway.	TII do not agree that an Elevated walkway is required. Please refer to response (6) above.
15	Future Airport Development	5	daa request the station structure be designed, in agreement with the airport, such that it does not compromise future development above the station. is adapted to support a multistorey development.	Please refer also to response (6) above. We understand that there are no details for any planned multi-storey development at the Ground Transportation Centre or in the immediate vicinity of the Metrolink Station. When proposed design details are available, TII will be willing to engage with daa designers and support development of future design for over-station development which is compatable with the current station design and Railway Order and which ensures that any adjacent or over-station works can be executed without negatively impacting MetroLink.
16	Future Airport Development	5	<p>The Dublin Airport Central (DAC) masterplan indicates that the MetroLink site along with other sites within the GTC will be developed into multistorey commercial developments in the future. This is in line with the concept of Transit-Oriented Development supported in the National Transport Authority Greater Dublin Area Transport Strategy 2022-2042. The Fingal Development Plan 2017 – 2023 also sets the following objectives that support further development at Dublin Airport:</p> <p><b>Objective ED30</b> Engage and collaborate with key stakeholders, relevant agencies and sectoral representatives to ensure that Dublin Airport is developed and promoted as a secondary hub to capitalise on the associated wider economic benefits for Fingal and the wider region,</p> <p><b>Objective ED34</b> Engage with and support the DAA and other employment providers in aviation uses associated with Dublin Airport to create quality and easily accessible employment opportunities for Fingal residents.</p> <p><b>Objective DA01</b> Facilitate the operation and future development of Dublin Airport, in line with Government policy, recognising its role in the provision of air transport, both passenger and freight.</p> <p>daa requests that the station structure and retaining walls are designed and constructed to support future loads imposed by Dublin Airport development foundations that may be positioned near the MetroLink stations construction. It should be assumed the pavilion will rise to three levels and may incorporate a possible elevated Automated People Mover platform. It should also be assumed that the multi-storey car park will rise to a height of 110m AOD with the street level being a double height space designed to accommodate the bus/coach park, and thus will likely require increased open plan column spaces with increased foundation loading. daa request that the applicant indicates how the MetroLink station building structure can be adapted to support a multistorey development in line with the above objectives.</p>	Please refer to responses (6) and (15) above.
17	Safeguarding Dublin Airport	6	daa request consultation with and approval by daa and IAA regarding Cranes and Construction Plant, Hazardous, Confusing or Misleading Lights, Runway End Safety Area (RESA) and Electromagnetic Field Safety prior to commencement of development	TII confirm they will consult and comply with IAA and reasonable daa requirements prior to the commencement of MetroLink construction, but noting response (22) below regards the RESA.

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18	Safeguarding Dublin Airport  Aeronautical Safeguarding:	6	Both daa and IAA request engagement in respect to demonstrating that MetroLink operation or construction will not impact airport or aeronautical operations. daa and IAA expect all required measures will be taken to ensure there will be no impact to safety critical systems or infrastructure from construction methodology or operation e.g., vibration or settlement.	TII confirm they agree this will be in accordance with IAA and reasonable daa requirements and undertaken prior to the commencement of MetroLink construction and operation that could impact daa operations.  TII will engage with daa with to demonstrate that MetroLink construction and operations activities will not impact airport or aeronautical operation and safety critical systems.
19	Safeguarding Dublin Airport  Cranes and Construction Plant:	6	In accordance with Statutory Instrument SI 215 of 2005, Obstacles, all cranes in the vicinity of the Dublin Airport must be referred to IAA-ANSP, who will advise whether further assessment is required in relation to Instrument Flight Procedures (IFP) or Communications Navigation and Surveillance (CNS).	TII confirm they agree this will be in accordance with IAA requirements and undertaken prior to the commencement of MetroLink construction that could impact daa operations.
20	Safeguarding Dublin Airport  Cranes and Construction Plant:	7	In accordance with the specifications of ICAO Annex 14, EASA Certification Specifications, and IAA ALM 002 (the Aerodrome Licensing Manual) all obstacles on and adjacent the aerodrome shall be illuminated with approved lighting sources. It is the responsibility of the owners/operators of obstacles to ensure that such sources and systems are maintained.	TII confirm obstacle illumination in accordance with ICAO Annex 14, EASA Certification Specifications, and IAA ALM 002 (the Aerodrome Licensing Manual) will be provided.
21	Safeguarding Dublin Airport  Hazardous, Confusing or Misleading Lights:	7	The development (both in construction and operation) will be required to assess the proposed lighting to ensure that the development will not entail the introduction of hazardous, confusing, or misleading lights, unless suitable mitigations such as shielding can be incorporated in the design. An assessment will be required and assessed, in conjunction with the IAA-SRD and IAA-ANSP, with a view to removing the lights or adapting or shielding them to reduce the hazard.	TII confirm they agree this will be in accordance with IAA requirements and undertaken prior to the commencement of MetroLink construction and operation that could impact daa operations.
22	Safeguarding Dublin Airport  Runway End Safety Area (RESA):	7	The MetroLink South Portal lies adjacent the Departure area of Runway 16 and the Approach Area to Runway 34. The current RESA at the end of Runway 34 does not meet current European Union Aviation Safety Agency (EASA) Requirements. The location of the south portal should allow the relocating of all roads (current and planned), navigational aids and perimeter fencing to establish a compliant RESA. daa also requests that consideration is given to the ability to accommodate future dual road bridges to carry the realigned Old Airport Road (Collinstown Lane).	<p>From our consultations with daa, TII understand that the current RESA does not meet current European Union Safety Agency requirements and currently extends 183m from the end of the approach area to runway 34 and 150m wide. In siting the MetroLink south portal, TII have allowed for an extended/compliant RESA area which extends 300m from the end of the approach to runway 34. The portal has also been sited to allow for the rerouting of the airport maintenance road, lighting and boundary fence. In addition in consultation with Fingal Co Council, TII have also allowed for the future relocation of the old Airport Road (Collinstown Lane) to the east of the MetroLink south portal .</p> <p>The MetroLink design for the Airport tunnel and South Portal structure took into account information supplied by daa. This specified that the present RESA operates under a derogation and provided the required RESA dimensions that the MetroLink portal design should comply with, i.e. an area 300m long from the runway end by 150m wide. The MetroLink southern portal lies fully outside of this RESA.</p> <p>Given that TII have provided a design that complies with the RESA information previously supplied by daa, any further adjustments to the MetroLink design, including those noted will need to be accommodated within the powers granted by the Railway Order (RO) applied for. Where it is possible to deliver such works within the bounds of the applied for and granted RO, and within the constraints of the MetroLink programme to "establish a compliant RESA", this shall be reviewed and considered whether it should be deemed betterment and thus funded by daa.</p>
23	Safeguarding Dublin Airport  Electromagnetic Fields:	7	<p>As noted in the application the proposal is not considered to impact safety or operations of Aircraft at Dublin Airport with regard to electromagnetic fields. Any impact can be overcome by appropriate procedures in the flight crew operations manual. daa requests that the final as constructed alignment is provided to daa and all airlines to ensure appropriate safety procedures are applied to aircraft.</p> <p>daa requests continued consultation to ensure sensitive equipment, such as hold baggage screening (HBS) systems at Dublin Airport is not impacted.</p>	<p>TII confirms that the final as constructed alignment will be made available to daa. TII expects that daa will manage the onward provision of the as constructed alignment and follow up coordination with the airlines so that TII are dealing with a single coordinated interface. i.e. daa.</p> <p>TII will continue to consult with daa in relation to sensitive equipment to ensure impacts are avoided.</p>

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24	Safeguarding Dublin Airport  Public Safety Zone:	7	The north portal construction compound is located partially within the Inner PSZ and Outer PSZ. The central and southern portal compounds are located partially within the Outer PSZ. daa refers the Board to the limitations of the Inner Public Safety Zone, and the appropriate person densities for the Outer Public Safety Zone contained within the ERM Report, Public Safety Zones (2005).	<p>The function of the Public Safety Zones (PSZ) are set out in the PSZ Report (ERM, on behalf of the Department of Transport and the Department of Environment, Heritage and Local Government, 2003). Within the inner PSZ, the objective is to prevent further development. Within the outer PSZ the objective is to prevent high density housing development, and the building of schools, hospitals and facilities attracting large numbers of people.</p> <p>Exceptions for permitted developments in the inner PSZ are:</p> <ul style="list-style-type: none"><li>•developments where persons are not expected to be present;</li><li>•roads and railways where vehicles and passenger trains/trams are not expected to be stationary. For example, road vehicles can be expected to be stationary at major road intersections, junctions, and traffic lights. Therefore, major road intersections, junctions, traffic lights and similar should not be permitted in the inner PSZ.</li></ul> <p><u>North Portal</u> Activities on the site within the Inner PSZ are limited to the operation and control of the access gates, and some piling marginally within the Inner PSZ. Given the North Portal when in operation is a permitted development by exception (see above), TII confirm they will work with daa to resolve any incompatibility between construction activities and Inner Safety Zone policies, recognising that a development can only be realised if construction is permitted.</p> <p><u>Central and Southern Compounds</u> While the central and southern portal compounds are located partially within the Outer PSZ, in accordance with Table 6.1 of the ERM 2003 Public Safety Zones Report referred to above, during construction, the site, deemed a working premises will comply with ≤ 110 persons/half hectare.</p>
25	Construction Phases	8	Dublin Airport is a live campus with ongoing development. Continued co-operation between MetroLink and daa will be required to undertake the construction and operation of MetroLink with particular reference to construction traffic, vibration utilities, tunnel depth, dewatering and airport security.	The specific issues called out in the submission have been dealt with extensively and adequately in the Railway Order application and the EIAR in Chapter 5 MetroLink Construction Phase, Section 5.8 and in particular 5.8.3 Dublin Airport Station. TII is committed to consulting with daa to seek to ensure that any additional issues arising from the devleopment of detailed design and construction methodology are dealt with appropriately.
26	Construction Phases	8	Continued co-operation between MetroLink and daa will be required to undertake the construction and operation of the MetroLink.	Please refer to response (25) above.
27	Construction Phases  Construction Methods:	8	all construction methods and final design must take account of existing development including aprons, piers and terminals above the tunnel and adjacent to above ground structures.	TII confirm that all construction methods and final design will take account of existing development including aprons, piers and terminals above the tunnel and adjacent to above ground structures. daa will need to provide all current asset record information that is present on daa lands that lies within 30m either side of the proposed tunnel or station so can TII can ensure they have all the relevant and up-to-date record information currently available. It would be helpful if this could be provided at the earliest opportunity.
28	Construction Phases  Construction Traffic:	8	To protect accessibility all construction traffic will be required to work within the limitations of an operating airport. daa will provide a comprehensive set of requirements for contractors to work within.	Please refer to response (25) above.

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29	Construction Phases  Utilities:	8	The application does not illustrate details of Dublin Airport Services such as 10kV Network, Aviation Fuel Network, IAA Utilities, etc. The location and impact on these services must be considered during the consultation phase of MetroLink.	<p>The location and impact on utilities and services (including the 10kv network) has been considered by TII. This has included consultation with the Airport, collation of utility and services asset record drawings, desk top studies, and utility surveys. Specific consultation with the Airport has been undertaken with regards to sensitive equipment as well as sensitive receptor surveys, including electromagnetic interference/compatibility surveys that has enabled the identification of any potential impacts on communications, Nav aids and surveillance systems. No significant impacts were recorded.</p> <p>The utility drawings submitted with the Railway Order application show all the utilities and services for which TII have drawings for. EIAR Chapter 22 Infrastructure and Utilities provides details of the impact assessments undertaken for utilities and services at Dublin Airport. The utilities and services that need to be diverted and their diversions have been identified. The management of these diversions by TII's contractors will be agreed with daa, but noting that services will be maintained for daa operations, and the potential for vibration and movement impact on utilities will be mitigated.</p> <p>TII have also examined the location of the Aviation Fuel Network and do not consider the MetroLink works will impact this item of infrastructure given its location in relation to MetroLink construction.</p> <p>Finally, detailed surveys will be undertaken by the Contractor(s) prior to undertaking the main construction to record all existing utilities in advance of any works. TII will ensure that Contractor(s) undertake joint risk workshops with daa prior to and concurrent with the works to ensure all risks are identified, evaluated and managed.</p>
30	Construction Phases  Tunnel Depth:	8	daa note the proposed depth of approximately 10-15 meters below ground level through the tunnel on airport lands. The interaction with current and future projects must be co-ordinated at the time of construction.	In the event of the possibility of MetroLink and daa projects being under construction at the same time, TII and their contractors will work collaboratively with daa and their contractors to ensure "best for programme outcomes" are delivered for both parties.
31	Construction Phases  Dewatering:	9	Consideration should be given to any dewatering of construction areas, particularly in the area of the proposed station. daa are aware of possible soil and groundwater contamination to the north of this area, which is currently under investigation. Any pumping of groundwater from the station area may have the potential to pull a plume of contaminated groundwater towards the works.	<p>The perimeter diaphragm walls forming the station box will provide effective water cut-off during station box construction and excavation, with any upward flow of groundwater (from below the station formation level) limited to negligible. If analysis identifies a risk that upward groundwater flows could be excessive, a ground water cut-off plug will be formed inside the perimeter walls just above the toe level of the perimeter wall.</p> <p>No external dewatering (outside of the site boundaries) will be permitted during the construction of the station boxes beyond the natural ground water fluctuation.</p>
32	Design	9	daa requests the Board has regard to the Dublin Airport Architectural Design framework and all relevant design elements are agreed with daa prior to the commencement of development and operation as appropriate.	The architectural form of all stations will be in accordance with the MetroLink Architectural Vision and Strategy. TII will have regard to Dublin Airport Architectural Design framework in so far as it relates to consistency of passenger wayfinding from the station to terminal building and the general presentation of the urban realm.
33	Design	9	<p>The proposed MetroLink at Dublin Airport should adhere to the objectives of the Dublin Airport Architectural Design framework.</p> <p>The Fingal Development Plan 2017-2022 also sets the following objectives:</p> <p><i>Objective DA21 Ensure that all development within the Dublin Airport Local Area Plan lands will be of a high standard of design, to reflect the prestigious nature of an international gateway airport, and its location adjacent to Dublin City.</i></p>	Please refer to response (32) above.
34	Design  Landscaping:	9	Enhanced landscaping is required to soften the current highly utilitarian environment of the Ground Transportation Centre (GTC) and to help improve the passenger experience within this area. ....daa requests further consultation and agreement on final landscaping plans at the proposed Dublin Airport Station.	TII confirm they are committed to working with daa during the detail design phase to assist with improving the Airport passenger experience where possible to do so within MetroLink project's cost, schedule, and scope constraints.



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35	Design  Wayfinding:	9	It is unclear what wayfinding signage strategy is proposed for the MetroLink. Wayfinding is critical within an airport environment and the airport needs to understand how the addition of the MetroLink will affect existing wayfinding within the airport campus and at the entrance and exit from the campus. daa request that all new and alterations to existing wayfinding signage are to be agreed with daa prior to operation.	<p>At this stage of the design one would not expect the wayfinding signage strategy to be defined in detail. The way finding strategy will be to provide clear direction and orientation, using detailed signage that will ensure all passengers (including those with visual and hearing impairments) are provided with clear direction, and that this is integrated with the overall Airport wayfinding strategy. This strategy will be supported by crossings defined with appropriate line markings and tactile paving, lighting improvements, hearing induction loops at crossings, and rationalisation and reduction in some of the street furniture along the pedestrian routes.</p> <p>TII concur with daa that wayfinding is critical and that TII will consult with daa and agree all MetroLink related new and alterations to existing wayfinding within the Airport to ensure MetroLink and daa operations are seamlessly integrated.</p>
36	Design  MetroLink Tickets:	9	It is unclear from the plans shown how tickets are purchased for the MetroLink. Is it proposed that ticket kiosks machines will be provided within the station footprint? Is there any infrastructure required within the Airport Terminals or carparks buildings to facilitate booking or purchasing tickets? Passenger circulation and flow is a key function within an airport and transport environment and the congregation of people along key circulation routes should be avoided for security reasons. daa request further consultation and agreement on the location of ticket machines prior to operation.	<p>Please refer to EIAR Chapter 6, MetroLink Operations and Maintenance, that explains the MetroLink ticketing strategy, including:</p> <ul style="list-style-type: none"><li>• Passengers will be able to purchase tickets from ATVMs, located in prominent positions in the stations, with the number provided sufficient to meet the peak passenger requirements. There are no proposals for manned desks for ticket sales. Smart (Leap) Card validators will also be available at all stations.</li><li>• There will be an automatic fare collection system compatible with an integrated ticketing scheme with other public transport offerings in the Greater Dublin Area (GDA). This will include the purchase of tickets at automatic ticket vending machines (ATVM), smart card validators and means to top up smart cards, gate-free access to the station platforms, portable control devices for staff to check fares, and links with the OCC and banking facilities for central collection of fares</li><li>• Ticket vending machines are equipped with audio support options as well as a user selectable high contrast interface, and will be accessible, with at least one machine with controls set lower for wheelchair users, where the supporting plinth will not project in front of the face of the machine in a way that prevents its convenient use, and there will be a clear space in front of the machine to facilitate wheelchair users.</li><li>• MetroLink stations will not be gated and will not feature turnstiles or accessible gates/doors. All of the public areas are deemed to be a ‘Paid Area’ in that people have either bought a ticket at one of the ATVMs or purchased a valid smart card. The absence of any gateways adds to the fluidity of movement through the station.</li></ul> <p>No MetroLink ticketing infrastructure is envisaged to be required within the Airport Terminals or carpark buildings.</p>
37	Design  The design of the Dublin Airport Station	10	daa request more detailed information in relation to the life expectancy of the façade and roof, and external landscaping.	The design life of particular elements of the station, noting the primary structure will have a 120 year design life, will be determined at detail design, considering and balancing CAPEX and OPEX, and the appropriate operation and maintenance regime. Where this impacts on daa, this will be discussed with daa to ensure daa operations are not unnecessarily impacted.
38	Design  Luggage and Trolleys	10	The station design needs to ensure there is adequate provision for passengers arriving and exiting the Airport terminals and carparks with large volumes of luggage including Out of Gauge (OOG) Luggage up to the maximum allowable size including golf clubs and bike boxes. Circulation routes, escalators, lifts, train cars and corridors need to be designed to allow sufficient space for people with luggage. It is unclear if trolleys are provided or if there is a trolley collection point for people bringing trolleys from other facilities. daa request further consultation and agreement on the management of trolleys prior to operation.	The Station and the rolling stock has been designed to accommodate travellers with luggage, including the Station providing 6 high capacity elevators so persons are not carrying luggage on the escalators. There will be no trolleys provided for within the Station itself. TII propose that the management of trolleys at ground level is discussed and agreed at the detail design stage.
39	Design  Washroom Facilities:	10	The Dublin Airport Station plans do not indicate washroom facilities for passenger use. daa requests that MetroLink clarify that the station design meets building regulations, codes, and standards in relation to washroom facilities considering the distance to existing washroom facilities within the Airport Terminals.	TII confirm that washroom facilities will be provided at all interchange stations. MetroLink Airport Station is an interchange station and will have washroom facilities.
40	Design  Sculpture:	10	There is an ideal opportunity to provide a piece of sculpture/art within the proposed MetroLink landscaped space to announce a user’s arrival at Dublin Airport in line with Dublin Airports Design Framework proposals.	A budget has been provided for the provision of Art/Sculptures at each station. This can be discussed with daa at the detail design stage.

Submission No.			68	
Organisation Name or Name of Submitter			Dublin Airport	
Item No.	Section Ref.	Page No.	Observation Statement	TII Response
Letter Re: Re: NA29N.314724 Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin				
41	Design  Areas constructed by MetroLink that will be operated and maintained by Dublin Airport:	10	These areas need to be designed and constructed in accordance with Dublin Airport specifications and design standards in addition to the latest national and international building regulations, codes and standards. The extent of these areas needs to be agreed upon between all parties and Dublin Airport requires input into the specification of materials and construction methods within these areas.	All such areas will be designed and constructed in accordance with appropriate design standards, including those areas that will be operated and maintained by daa . TII will in so far as practicable agree with daa at the detail design stage the extent of these areas, and accept input from daa in relation to the standards and specifications to which these areas will be designed.
42	Key Issues  Aviation Security	12	daa requests that should a grant of permission be issued, a condition is included requiring MetroLink to adhere to all relevant security measures during construction and operation as detailed by daa as responsible organisation for Aerodrome Security provisions.	Please refer to response (1) above.
43	Key Issues  Pedestrian and Traffic Impact:	12	daa request the Metrolink station is designed to accommodate an elevated pedestrian walkway. This will ensure there is no impact on the safe and efficient operation of our internal roads which may be impeded by the number and frequency of the crossings.	Please refer to response (6) above.
44	Key Issues  Future Airport Development:	12	daa request the station structure be designed, in agreement with the airport, such that it does not compromise future development above the station. is adapted to support a multistorey development.	Please refer to response (15) above.
45	Key Issues  Aeronautical Safeguarding:	12	daa request consultation with and approval by daa and IAA regarding Cranes and Construction Plant, Hazardous, Confusing or Misleading Lights, Runway End Safety Area (RESA) and Electromagnetic Field Safety prior to commencement of development.	Please refer to response (17) above.
46	Key Issues  Public Safety Zone	12	daa refers the Board to the limitations of the Inner Public Safety Zone and the appropriate person densities for the Outer Public Safety Zone contained within the ERM Report, Public Safety Zones (2005).	Please refer to response (24) above.
47	Key Issues  Construction Phase	12	Dublin Airport is a live campus with ongoing development. Continued co-operation between MetroLink and daa will be required to undertake the construction and operation of MetroLink with particular reference to construction traffic, vibration utilities, tunnel depth, dewatering and airport security.  daa request that all construction plans are developed in consultation with and approved by daa as the landowner prior to commencement.	Please refer to response (25) above.
48	Key Issues  Design	12	daa requests the Board has regard to the Dublin Airport Architectural Design framework and that all relevant design elements are agreed with daa prior to commencement of development and operation, as appropriate, of the Metrolink. In particular details on the following should be agreed, landscaping, wayfinding, ticket machines, design of the Airport Station and materials proposed, luggage and trollies, washrooms, the inclusion of a sculpture and design standards.	TII have reviewed the daa submission and have responded to each of these matters raised in the above responses.