Appendix A Documents provided by the Stakeholder Groups during the consultation process

Doc. No. P0027301-1-H3 Rev. 0 - September 2022





ALBERT COLLEGE RESIDENTS ASSOCIATION METROLINK SUBMISSION

We the Albert College Residents Association represent the interests of the 177 houses of the Albert College Estate and approx. 100 homes in the two assisted resident's homes in both Hampstead Court and Albert College Court.

We greatly welcome the Metrolink Station to our area and understand that we will have to deal with a large amount of disruption during its construction. That said we believe the site chosen by TII is not the best location for the station in our locality and we were not consulted about the location of the station as was previously suggested.

We have carried out a difficult task during Covid restrictions to inform our residents of the current Metrolink plans and the impacts it will have on our residents, the Church, the three Schools and the elderly residents in Albert College Court. Having given the details to our residents we asked them to vote on their preferred location for the Station.

Church location 9.6% Park Location 90.4%

A large majority of residents are clearly in favour of a Park Station location over the current Church location.

We believe a Park Station will reduce the permanent land-take of parkland which we all enjoy and negate the need for a Ventilation & Maintenance Shaft in the Park.

Whilst the Park Station location would mean a Ventilation Shaft is still required between the Park Station and the Ballymun Station, we propose the ventilation shaft should be located north of Collins Ave at the site south of the Ballymun library, between the Library and the Dentist surgery.

Locating the shaft here will greatly reduce the traffic south of Collins Ave and the impacts on the Schools and Church, as well as negating the need to relocate the Albert College Court Elderly Residents. Finally this would also remove access restrictions on the Albert College Estate residents for the lengthy duration of the construction of the station.

Having examined the TII station designs at Griffith Park Station and Charlemont Station we believe a station design like the aforementioned sites should be constructed at Albert College Park. A station boarding the western edge of the park and not taking more than a 5-metre-wide strip along the edge of the park would significantly reduce the sacrifice of parkland and would not impact on the pitches in a permanent fashion.

In the previous RPA Railway order application for Metro North, the park option was turned down by An Bord Pleanála for taking too much land permanently from the park. This station design had too large an impact on the park and was impeding so much as to permanently remove the availability of the pitch due to the curvature of the track alignment.

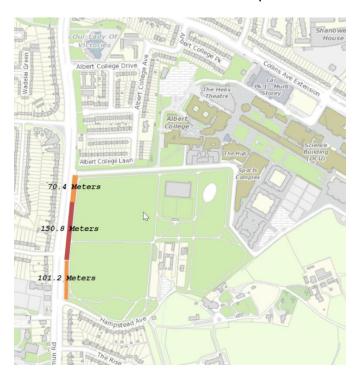


This time the track alignment is running straight down the Ballymun Road and bordering the edge of the Albert College Park.

The design of the Griffith Park station bordering the edge of the Homefarm pitch with minimum impact on Mobhi Road is what we believe to be the best solution for our area.

Dual Entrance Station at the Park.

The DCU station from the previously approved railway order application had the DCU station as the only dual entrance along the route of Metro North. The requests for a park station and not a ventilation shaft in the park by resident associations south of Albert College Park may also be satisfied if the park station is constructed as a dual entrance station with a northerly entrance 70 metres south of the DCU gates and a southerly entrance 100 metres north of Hampstead Avenue.



We the residents of Albert College Estate believe we should be afforded the same respect as was shown Scoil Mobhi and Na Fianna GAA club given how our impacts share such similarities to theirs.

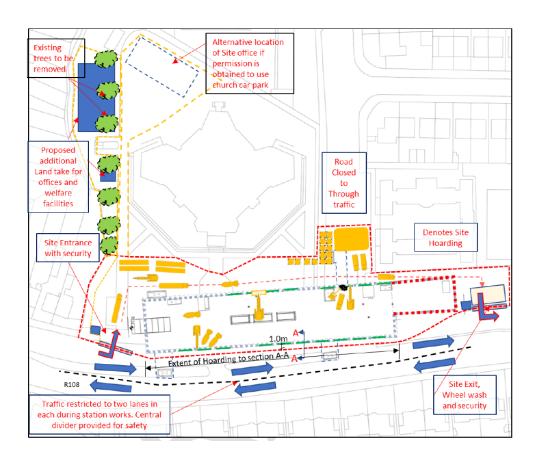
Current Church Station location.

Shown below the 150-metre station box at the current Our Lady of Victories Church station location. It is only a few metres from the elderly residents in Albert College Court which may have to be rehoused because of the proximity of the construction site. In addition the current location would:

- Remove access for Albert College Estate residents to Ballymun Road for 6-8 years.
- Restrict access to the OLV Church
- Remove parking for OLV Schools drop off and collection.







Proposed Park Station location.

150 metre station box at the Albert College Park.

We feel the Albert College Park station location is the best solution for our locality.



It is far from the Schools to avoid the issues with parent & child access.

The Church is not surrounded by a construction site with limited access.

Albert College Estate residents do not lose their access onto Ballymun Road.

Albert College Court residents will not have to be rehoused during construction.

Hampstead Residents will not have a ventilation shaft on their door steps.

The park land take is reduced.

It is no longer required to have a ventilation shaft in the park.

A dual entrance station will give greater service to both DCU at the north and the residents south of Albert College Park.



Furthermore if the Church station goes ahead and Albert College Estate is turned into a cul-de-sac, not only will residents have to exit the estate onto Collins Ave which would add up to 15 minutes onto a southward journey. Residents will also have to deal with additional traffic leaving the estate as TII are recommending parents dropping children to OLV school enter our estate via Collins Ave and park at the rear of the church. TII intend leaving a thin pedestrian walkway to north of the construction site for access to the school. Hundreds of additional parent's cars would then be exiting our estate and will cause severe congestion to our residents for this 6-8 year period. Should we fail to have the station relocated we will be strongly fighting these TII plans.

The below image is from Jacob Idom's report on the Intervention shaft (page 11) showing the need for a shaft because of the 1 km best practice distance between stations.

The Park Station suggested above meets the criteria of the 1km distance between the Park Station location and the next station at Griffith Park.



Figure 2 - Intervention Shaft Location Detail

The site area during construction.

This area does not necessarily need to impact large parts of the park as has been stated.

The previous Metro North Station site was to be constructed along the Ballymun Road on a thin strip of land as shown below.



We feel the delay in appointing the Independent Expert to assist residents has not been fair and this delay has given residents little time to prepare quality submissions for consideration during the railway order application stage with An Bord Pleanála. If ABP rule that TII evaluate suggestions of the residents like they did last time round it will lead to delays in the planning process.

We have heard reasons behind TII's decision that the Park station is unsuitable and we refute them all. The support of an independent expert, which was made available to us by the RPA during the previous application would show that TII are genuinely engaging with communities.

To date the TII have made all their decisions and presented finalised plans with no input in from the communities affected by these decisions. Yet the Minister stated that we had been consulted about station locations. Maybe residents around the Griffith Park station were consulted after the large media attention senior politicians gave the Na Fianna site but we have had no such engagement related to station location. We are asking for fairness and transparency in these decisions given the fact that we share many if not more of the same impacts which led to the re-evaluation and relocation of the Na Fianna / Griffith Park Station.

Seanad Questions to the Minister

We are very grateful to Senator Mary Fitzpatrick's for raising the issues we have at the Seanad when she called for a review of the stations along this part of the route and the appointment of an independent expert to assist residents during the planning process.

At this Seanad meeting the Minister cited three reasons why the Albert College Park was deemed not a suitable location for a station.

- 1. It would take a greater amount of land from the park.
- 2. It would cost more
- 3. It would take a longer timeframe.
- 1. In relation to the Park Station taking more permanent land from the park, we believe than is not the case if the design is similar to Charlemont and Griffith Park Stations.

The Church Station was designed showing a plaza around the station entrance. We do not want to create an architectural area for people to hangout. We want a functional, smart station entrance with minimum design impacts on our area and minimum upheaval for our residents. A simple design bordering the park can achieve this and the trees can be replanted afterwards.

2. The cost would be extra should an additional station be added to the route but we are not calling for an additional station, just the swapping of location with the already planned station at the Church and the relocation of the ventilation shaft north of Collins Avenue at the site beside the Ballymun library.

3. The timeframe should not differ for the construction a station at the Park site over the Church site, it is the same station a few hundred metres south of the current site location.

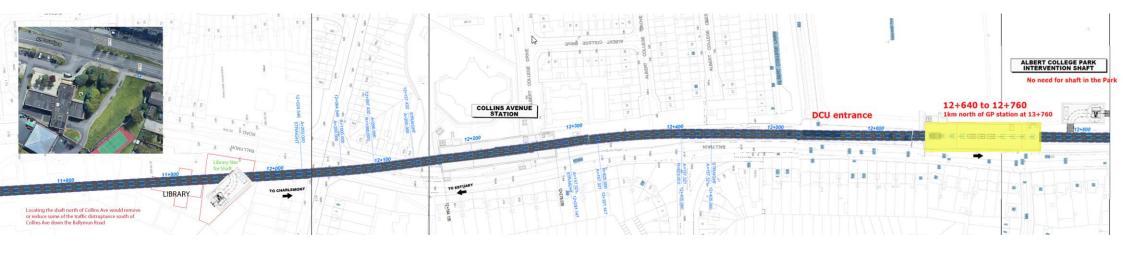
I hope you will support our residents with what we see as a fair and considered relocation of the station which we believe will better serve the communities for the future and reduce the considerable impacts which residents are being asked to shoulder during the construction of this significant project.

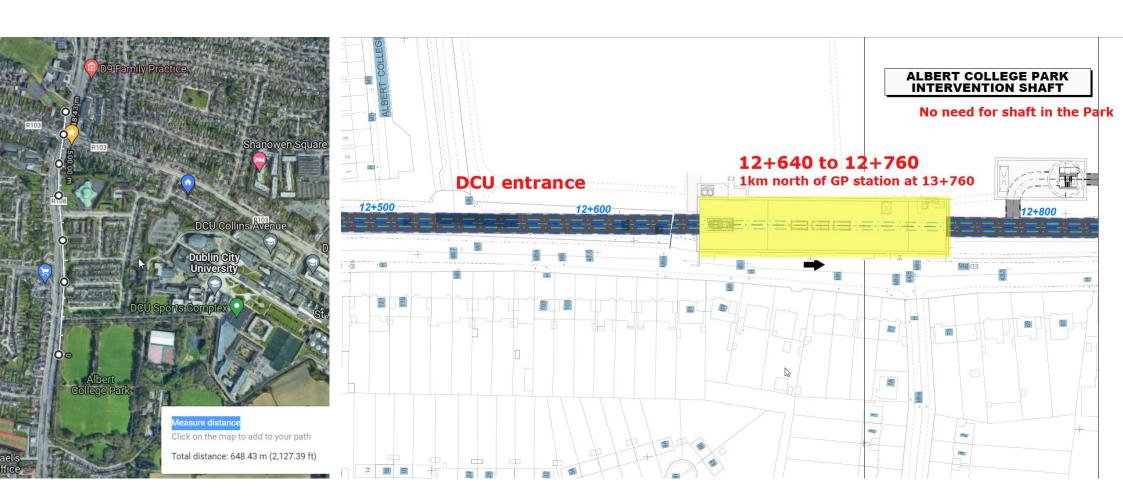
I look forward to hearing from you.

Your Sincerely

Phil Canny

Chairperson of Albert College Residents Association Albertcollegera@gmail.com





Re: Response to RFI Number 6

Dear XXXX

Thank you for your recent response to RFI6 relating to the Collins Avenue Station, and on behalf of Albert College Residents Association, and Ballymun Road (North) Area Associations, we are pleased to submit our response to same.

While the response is appreciated, it is very clear that a very significant weighting is being placed on the comparison between the estimated passenger footfall at the Collins Avenue Station Location and the Albert College Park Station locations, in justifying TII's stated preference to locate the station at Collins Avenue.

Given the importance of these metrics in justifying the station location, we are concerned that the modelling employed was generated much earlier in the EPR stage by ARUP - using a strategic modelling approach to look at different alignments, which is now outdated.

We are of the opinion that the strategic modelling employed does not accurately reflect the future passenger demands in the area. It shows an expected reduction in footfall from 17,250 passengers to 12,250 in a 24hr period if the station is moved 750 metres south of the proposed church location.

We do not believe that the strategic aggregated modelling employed accurately reflects both the current and *future* demands which will occur due to planned further development of the DCU Campus, as well as the future planned major apartment blocks to be built on the Eustace lands adjoining the park. This model would appear to be already outdated and grossly underestimates the future footfall to be expected due to these future developments.

Furthermore, TII also state that one of the reasons the park option was not considered was the impact which a station construction would have on the environs of the park, yet it must also be noted that the impact on the environs which will result from the construction of the proposed ventilation shaft on the park will also be very significant.

"Furthermore, environmental impacts of constructing the station within the environs of the park and the proximity of the DCU Collins Avenue station to orbital bus routes operating along Collins Avenue were also differentiating factors between the two MSZs."

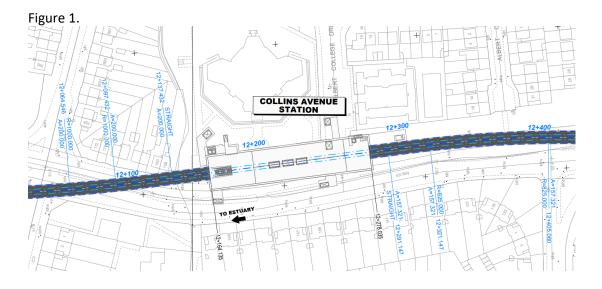
Nor does it compare the current selected church station location to either the location option (option 3 Metro North) or our proposed Park station location.

"While both station zones were not directly assessed against each other"

We wish for our proposed Park station option at 12+640-12+760 to be modelled against the current Collins Avenue Church location at 12+164-12+278 and an appropriate level of detail provided comparing the two. This we believe will show that the decision to locate the station at the church based purely on footfall may not be in the best interests of the Metrolink project or indeed for the wider area.

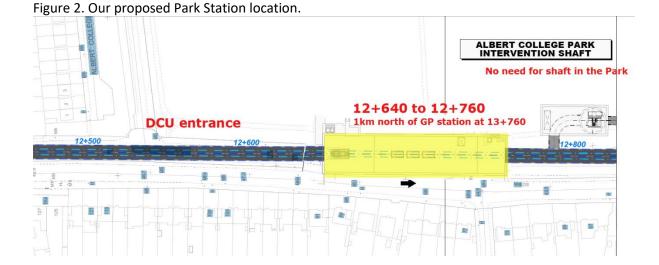
Our proposed Park Station would be approx. 550 metres south of Collins Ave at 12+640 and it would be only 100 metres south (1 minute walk) from the DCU main gate entrance and a 7minute walk north to Collins Ave.

TII's current proposed Church location at 12+164 is 125 metres south of Collins Ave (2 minute walk) and 360 metres north of the DCU main gate. Figure 1.



The location of park option (Option 3 from Metro North) used in the modelling is 750m south of Collins Ave approx. 9 minute walk north to Collins Ave.

Whilst our proposed Park Station Figure 2 below would be a further 400 metres (5minute walk) south of the current Church station location we would question the premise that an extra 5 minute walk would reduce footfall to such a degree given the vast majority of users of the station would be from DCU and the future housing developments located nearby.



RINA have validated our position, as did GWP Consultants who were the previous Independent Expert appointed during the Metro North Project, that a station location based in Albert College Park, coupled with a ventilation shaft north of Collins Avenue at Ballymun Library is a far better option, given that the major footfall for this station will be to and from DCU and the proposed residential developments at the Eustace lands. This location will also greatly reduce the expected severe traffic impacts and the negative impacts on the church goers, the OLV school children and

parents, local residents in close proximity to the Church including the elder residents of Albert College Court & Albert College Estate.

We would therefore respectfully request that a revision of the previous modelling be carried out to reflect not just current, but also future footfall demands, which will provide a more balanced set of metrics on which to base such an important decision affecting the lives of so many stakeholders in the area.

Submitted on behalf of:

Albert College Residents Association Ballymun Road (North) Area Association Please find below some questions that have arisen following our meeting in Ashley on Saturday the 13th. November. Please note that they are not in any particular order of importance, however we would refer to item no 6 which, as far as we are concerned, overrides all

1. INSURANCE AND POTENTCIAL CLAIMS

With particular reference to the houses on Ashley Avenue near the green area, what type of insurance cover will be in place so as to cover any damage that may arise due to the instillation of the train tracks

2. WORKS BOUNDARY

Where exactly will any works boundary fences be placed while the works are being completed

3. VIBRATION

What mitigation measures will be put in place so as to prevent any vibrations either during the construction phase or in the future operation of the Metro link, being felt in houses once the track is in use (for example floating track?)

4. VENTS

Are we correct in understanding that no venting for the track will be in place for the entire area of the Ashley Green?

5. TIME FRAMES

Is there any current estimate for the length of time the works in the Ashley estate may take?

Is there any idea on start dates for the work in the Ashley area even if only relevant to the start date of the project as a whole.

6. RESTORATION OF ASHLEY GREEN AREA

The matter of the proposed linear park is totally opposed by all the residents in Ashley and until resolved, we are totally against the track being placed within the estate. Opposition to the track will not be withdrawn until such time as this specific matter is concluded to the satisfaction of the residents and should be considered in all other questions / points raised in regards to any works.

7. NOISE

What noise reduction measures will be employed during all stages of construction

8. WORKS ACCESS

What access will be used to the works for the duration of construction.

Can the project provide cross section of the project proposals at Ashley Avenue and Chapel Lane, from the western boundary of the project (boundary with R132), to the houses at Ashley Avenue and Chapel Lane, and show how concerns of residents, already submitted, have been accounted for in the proposals?

Can the project detail the specific access locations for project traffic and how are anticipated to interact with existing traffic at these locations at Ashley Estate?

9. RESEDENT ACCESS

Will there be any reduction to the width of Ashley Avenue in the area adjacent to the works?

10. ASHLEY GREEN

Assuming point 6 is resolved as indicated, what planting and walls will replace the current trees and walls surrounding the estate (e.g., Height, style etc.)

11. DIMENSIONS

How deep will the "cover" over the track be? And what distance will the houses be from the track. This needs to be established for each house adjacent to the green

12. ROUTE

Why does the current preferred route of the project not take full account of the current Fingal Co. Co. Development Plan (2017..2023 ref. Map No.?)

13. BIODIVERSITY

Can the project detail the biodiversity compensation for the loss of current biodiversity at the Public Open Space at Ashley Estate (and R132 / Malahide Road), inclusive of all species surveyed and the possible negative impact on protected species?

14. CONSTRUCTION

Can the project detail the mechanisms of penalty on any contractor/ subcontractor who does not adhere to contractual conditions?

Will the project undertake to provide reasonable notice to residents of any changes to programme schedules including the reasons for changes, during the course of the project?

MEMO TO RINA.

17th FEBRUARY 2022.

PROVISIONAL LIST OF TECHNICAL ISSUES FOR CONSIDERATION.

Listed hereunder are some technical issues which might usefully be addressed by the RINA Technical Team, for future discussions with the resident's group at Dartmouth Road, Dartmouth Square West, and general Charlemont area.

- 1. CONSTRUCTION STAGE, DUST, NOISE, AND VIBRATION.
- 2. OPERATIONAL STAGE, NOISE, AND VIBRATION.
- 3. NOISE, AND ACOUSTIC CALCULATIONS.
- 4. TRAFFIC PROJECTIONS.
- 5. ANTI SOCIAL BEHAVOUR.

1. CONSTRUCTION STAGE, DUST, NOISE, AND VIBRATION.

Severe disruption from construction traffic, pile boring, excavation, tunnelling and on-going construction activities are a given, quite probably lasting for years.

What mitigating factors are available?

Will re-location be necessary/considered/duration?

Will compensation be paid for severe disruption? (Maybe not your remit)

Duration of TBM pass-through?

2. OPERATIONAL STAGE, NOISE, AND VIBRATION.

Noise and vibration from operational activities are a far more serious concern, in that this disruption will be permanent, and persistent.

Once established, it will be impossible to have remedied - for instance, noise from Luas, of which we all have bitter experience.

In this light, the following issues have some major relevance.

NOISE AND VIBRATION FROM TRAIN MOVEMENTS.

The problem of transmission of vibration and noise from passing trains in direct proximity to the Gate Theatre, and the Rotunda Maternity Hospital, is accepted as an issue in the Preferred Route Development Report 2019.

It is noted (Appendix L. O'Connell Street Station, Page 12) that 'with appropriate mitigation this is not envisaged to introduce significant impacts'

This would suggest that, under normal circumstance, significant impact could be expected.

It is acknowledged that the type of track support, amongst other things, chosen for the metro system can have a significant impact on the level of vibration transmitted to receptors - for example, High Density Floating Track Systems offer best practice and best protection.

This system is, however, more expensive to install.

The note that such measures would be implemented at the Gate Theatre and Rotunda Hospital, as mitigating measures, suggests that the remainder of the track, and ordinary receptors, would be afforded no such luxury.

Attending at the Gate Theatre in an optional leisure activity.

Trying to sleep in your own house is not.

It is anticipated trains will operate at up to 45 second intervals.

With this in mind, exactly what level of disturbance, and permanent property devaluation, can be expected?

NOISE FROM VENTILATION SHAFTS, EXTRACT FANS, AND FIXED PLANT.

What level on noise and nuisance can be expected from massive shaft excavation fans and fixed plant, located just below ventilation grills at ground level at Dartmouth Road and Dartmouth Square West?

These fans will presumable run continually day and night.

NOISE AND NUISANCE FROM ESCALATORS.

Escalators are noisy - they rattle and groan continually, and grow noisier with age, as parts naturally age with usage.

The escalator proposed for the Dartmouth Road exit/entry is exceptionally long, by any standard.

These escalators will run continuously from early morning, probably 0530am, to midnight, or later. The operation of roller shutter enclosures at escalator entrances is also a cause of concern, as such operations will always, by their nature, be very early in the morning, or very late at night.

They are located in direct proximity behind, in front of, and across the road from, residential properties at Dartmouth Road and Dartmouth Square West.

How is it proposed to mitigate this nuisance value in a residential area?

3. NOISE, AND ACOUSTIC CALCULATIONS.

Noise calculations, as presented by acoustic expert consultants, can, and do, use a combination of amplitudes, frequencies and time-frames to present a projected acoustic picture.

Projected maximum disturbance levels can be 'apparently mitigated' by use of carefully selected average timeframe intervals being presented.

Selectively chosen, these figures can be quite disingenuous, very confusing, and can very rarely be fully understood by non-expert receptors.

LUAS EXPERIENCE.

Many people in this area have suffered permanent disruption to their lives by the introduction of the Luas. Much legal wrangling ensued, but the experts could

produce calculations in court, proving their figures averaged out to non-disturbance levels, over selective timeframes.

The residents continue to live with the results.

Can you examine the acoustic scenario likely to be *really experienced* at Dartmouth Road and environs, to include the issues raised in the above paragraphs?

Can this evidence be presented in a *realistic way*, which can be fully understood by non expert receptors?

If genuine concerns are raised in this connection, what means do we have at our disposal to ensure proper mitigating measures are enforced?

TRAFFIC PROJECTIONS.

Again, this is a matter of great concern - experts predict one thing, residents live with the results.

Experts predict a great catchment area to be harvested by including the station located at Charlemont, and at the same time predict little or no traffic disruption.

A look at the map of South Dublin will reveal only one probable conclusion - everybody heading to the airport from South Dublin will descent on Dartmouth Road for passenger drop-off, private transport, taxis, and buses.

Foot passengers, with their rattling suitcases, will descent on the area, both day and night.

Taxis will loiter.

It is hard to image a more lucrative set-down area for a taxi to linger, day and night, than that proposed for Dartmouth Road. (There is ample space for a set down taxi bay, inset into the wide footpath at the office building entrance on Grand Parade, yet this location was not chosen for a set down bay!)

The experts predict this traffic generation will not materialise.

An interesting example to consider. Predicted passenger usage for the Luas, projected out over the 10 years following its introduction, actually took place in about 5 years.

The experts were wrong.

They were wrong by 100%.

There were no repercussions.

Nobody was responsible, or held to account. It was probably considered a successful outcome.

Where is the responsibility for this flawed expertise?

The only conclusion to come to is that this type of traffic engineering and projecting is highly unreliable, highly selective and just cannot be trusted.

5. ANTI SOCIAL BEHAVOUR.

The likely scenario of noisy inebriated passengers disgorging from the MetroLink station on Dartmouth Road, at midnight, is not hard to imagine.

Combined with taxis waiting for fares, this all paints a disquieting picture

How can this scenario be satisfactorily addresses, or tolerated.

Your thoughts on all of the above would be much appreciated.

With Thanks,

Michael A Doyle Carmel Smith Doyle

OUTLINE PROPOSAL

FOR A

NEW METROLINK TERMINUS STATION

AT

ST. STEPHEN'S GREEN WEST,

DUBLIN 2.

FEBRUARY 2022

OVERVIEW

THE PROPOSAL BEING PUT FORWARD IN THIS REPORT CONCERNS THE LOCATION OF THE TERMINAL STATION FOR METROLINK, THE PUBLIC TRANSPORT PROJECT CURRENTLY UNDER CONSIDERATION FOR DUBLIN.

THE PROJECT WILL SHORTLY BE SUBMITTED TO AN BORD PLEANALA, FOR A RAII WAY ORDER.

THE TERMINUS FOR THE METRO, UNDER CURENT PLANS, IS PROPOSED TO BE AT CHARLEMONT, RANELAGH.

THIS REPORT WOULD SUGGEST THAT CHARLEMONT IS UNSUITED FOR A TERMINUS STATION, AND ITS SELECTION WAS DRIVEN BY A FUTURE REQUIREMENT TO CONNECT WITH THE GREEN LUAS LINE.

THIS PROPOSITION LOOKS INCREASINGLY UNLIKELY TO BE ACHIEVED, AND IS CURRENTLY POSPONED INDEFINATELY.

IN REALITY, FOR MANY CONTENTIOUS REASONS, IT WILL PROBABLY NEVER MATERIALISE.

THE NEW EMERGED ROUTE OF THE METRO PROPOSES AN INTERCONNECTION STATION AT TARA STREET.

THE REQUIREMENT TO CONNECT TARA STREET WITH THE PROPOSED CHARLEMONT STATION PRECLUDES A CONNECTION TO ST STEPHEN'S GREEN WEST, AND THE LUAS STATION.

THE RESULT IS A PROPOSAL FOR AN UNSATISFACTORY STATION, AT STEPHEN'S GREEN EAST, 500m AWAY FROM THE LUAS STATION.

THIS REPORT ATTEMPTS TO SHOW HOW PROPER INTERCONNECTIVITY CAN BE ACHIEVED AT ST STEPHEN'S GREEN WEST LUAS STATION.

IN PROVIDING THIS ENHANCED CONNECTIVITY, IT AVOIDS THE DIFFICULTIES AND UNSUITABLILIY OF CONSTRUCTION AT CHARLEMONT, USING A SHORTER, AND THEREFORE CHEAPER, BORED TUNNEL,



PROPOSAL FOR ALTERNATIVE METROLINK TERMINUS AT STEPHEN'S GREEN WEST, DUBLIN 2.

ALL PROPOSED TRACK ALIGNMENTS IN COMPLIANCE WITH JACOBS' IDOM ENGINEER'S REPORT STANDARDS.

17 FEBRUARY 2022

Revision - 4

MICHAEL A DOYLE ARCHITECTS 34 DARTMOUTH ROAD RANELAGH DUBLIN 6



1. HISTORICAL CONTEXT

The original Metro North proposal was designed to connect to the Luas services at St. Stephen's Green West.

This plan is now abandoned. However, the logic of its strategic location remains valid.

The revised MetroLink Preferred Route of 2019 was rightly diverted to provide connectivity at Tara Street main line station.

This decision made a sensible connection to Stephen's Green west impossible, due to engineering constraints on track alignment, when coupled with a requirement to connect the bored tunnel to Charlemont.

The current seriously compromised proposal to provide some connectivity at St Stephen's Green East makes very little sense. The isolation from connectivity is startlingly obvious.

This is plainly and universally recognised as a seriously compromised solution.

In reality, no satisfactory alternative existed whilst the connection to Charlemont persisted as a major driving factor.

The Charlemont interconnector proposal now looks flawed and unsustainable. It will be vigorously and continuously resisted, by various influential pressure groups, for many years to come.

It will, most likely, never materialise for very may years, if ever.

The current 2019 proposal, to compromise seriously the excellent MetroLink connectivity with Luas, available at St Stephen's Green West, is now fatally flawed.

This report aims to provide a provisional outline study of a review of the southern terminus of the MetroLink proposal, proposing instead a terminus located at St Stephen's Green west, directly beside the Luas station.

2. PROPOSED ALTERNATIVE ROUTE TO STEPHEN'S GREEN WEST.

This proposal should be read in conjunction with attached drawing, indicating track plans and station locations.

ABANDON PROPOSED TUNNELL TO CHARLEMONT.

The proposal presented herewith envisages the abandonment of the proposed tunnel bore from Tara Street to St Stephen's Green East, the abandonment of the proposed tunnel bore to Charlemont, and the abandonment of the proposed Charlemont Station.

NEW TUNNELL TO ST STEPHEN'S GREEN WEST

Exiting the proposed new MetroLink station at Tara Street, the tunnel bore will swing gently to the South West, within established engineering design criteria, and pass diagonally under the North West corner of St Stephen's Green.

NEW METRO STATION AT ST STEPHEN'S GREEN WEST

As indicated on the attached drawing of this proposal, the new station at St Stephen's Green West is located diagonally across the North West corner of St Stephen's Green, parallel to, and some small distance behind, the Fusilier's Arch entrance gate to the Green.

The station is directly beside, and to the east of, the Luas Station, providing unparalleled connectivity.

The station is beside, and gives access to, all forms of established public transport services, taxis, and private transport.

The station provides direct access, at one end, to Stephen's Green Luas station, and at the other end, to St. Stephen's Green north, and the Grafton Street Shopping area.

3. MAJOR ADVANTAGES OF PROPOSED STEPHEN'S GREEN SITE.

STATION LOCATION.

Direct access to dense pedestrian zone

Direct connection to Luas Station

Direct connection to bus, taxis, and private transport.

Direct access to Grafton Street shopping area.

No disruption to Luas services

No disruption to Fusilier's Gate.

No traffic disruption.

No site acquisition costs.

No major services re-routing.

STATION BOX CONSTRUCTION.

The Stephen's Green site is practically a green-field construction site.

Availability of generous works compound, outlined in red on drawing.

Ease of access for construction traffic.

Ease of access from Stephen's Green North and West.

No on-street traffic disruption.

No major underground services to be disrupted or re-routed.

No close neighbours.

No legal wrangles concerning close adjacent neighbouring buildings

No adjacent buildings to be protected from vibration and noise issues.

COST CONSIDERATIONS.

The suggested tunnel bore from Tara Street to St Stephen's Green West is shorter by 0.77Km - a major cost factor.

No site acquisition costs.

No major service re-routing.

No major claims for re-location of residents, and for noise and vibration compensation.

No station required at Charlemont.

The omission of the Charlemont station is a major cost saving exercise. The current proposals involve the construction of a very deep station in a highly restricted site, surrounded as it is on all sides by listed protected Victorian housing stock, the Luas embankment, a protected office building, and a modern office building currently under construction.

It is envisaged that the station box construction here will involve major compensation claims from disturbed and re-located residents, foundation settlement compensation for fragile Victorian houses, and commercial disruption claims with respect to the office building site being commandeered for construction works for up to five years.

It is, in short, difficult, dangerous, and potentially, catastrophically expensive.

4. PROPOSED NEW TUNNEL EXTENSION WEST OF STATION.

TUNNEL BORING MACHINE ABANDONMENT.

The tunnel bore will exit the new station to the West, and curve gently to the South, to facilitate the Tunnel Boring Machine abandonment.

TRAIN STORAGE REQUIREMENTS.

The tunnel bore extension provides for the requirement of train storage, crossover, and turn-back facilities for Metro services.

POSSIBLE FUTURE EXTENSION OF METRO.

This configuration provides an excellent opportunity to extend the MetroLink directly south to Lower Rathmines, and Dublin South West, if and when such a requirement should arise.

POSSIBLE FUTURE CONNECTION TO GREEN LINE.

It would be prudent to consider that a connection to the Luas Green Line might someday become a reality. To this end, facilities to form such a connection could be provided now, in the form of a short mined spur branch tunnel to facilitate future reception of a TBM bored tunnel from the south.

5. POSSIBLE METROLINK EXTENSION TO RATHMINES.

POSSIBLE EXTENSION OF BORED TUNNEL.

This proposed alternative configuration, outlined in the enclosed drawings, indicates an excellent opportunity to extend the MetroLink directly south to Lower Rathmines, and Dublin South West, if and when such a requirement should arise in the future.

Having left the station box at St Stephen's Green West, the bored tunnel turns gently southwards, and provides a direct and straight connection to Lower Rathmines, passing under the canal just west of Portobello Bridge.

It could be argued that the proposed terminus for this current stage of MetroLink should be re-positioned at Lower Rathmines, adjacent to the centre of the Rathmines catchment area, and the Cathal Bruagh Barracks site, where extensive new housing developments are under consideration.

An excellent site exists in Lower Rathmines to provide for a top-down station box construction, with no disruption to any existing buildings, no traffic disruption, and no disruption of major underground services.

Having passed under the canal, and the deep drainage tunnel alongside it, there is the opportunity to raise the bored tunnel back to an acceptable level for any proposed station in Rathmines, thereby avoiding the very deep station construction proposed for Charlemont.

6. CONCLUSION.

This report is an attempt to present a realist alternative narrative to the MetroLink proposal to terminate the route at Charlemont, and by so doing, miss the opportunity to connect to the Green Line Luas station at St Stephen's Green West.

The main contention of this outline study is summarized as follows;

- The loss of interconnectivity at St Stephen's Green Luas is unfortunate.
- That loss is driven by Tara Street to Charlemont tunnel alignment criteria.
- Connectivity at St Stephen's Green West is possible
- Connectivity at St Stephen's Green West is desirable.
- Connectivity at St Stephen's Green West is cheaper.
- The Charlemont proposal is unsuitable, in a residential area.
- The Charlemont proposal is expensive and very difficult to construct.
- The Charlemont proposal is no longer valid.
- The historical rational for its inclusion is no longer valid.
- The possibilities of connecting a future Green Line Metro tunnel, south of Tara Street, can be incorporated into the proposal herewith presented.

| Michael | Α | Doyle. |
|---------|---|--------|

METROLINK CHARLEMONT TECHNICAL SUBMISSION TO RINA.

MEMO TO RINA.

Revision D.

7th July 2022

REPRESENTATION OF COMMUNITY CONCERNS.

This document has been compiled to reflect the views and concerns of cross community residents groups in the neighbourhood of the proposed Charlemont MetroLink Station, on whose behalf I have prepared it, and submit it for your consideration

It is proposed that I should be the main point of contact in liaising with RINA in this connection.

LIST OF TECHNICAL ISSUES FOR CONSIDERATION.

Listed hereunder are some technical issues which might usefully be addressed by the RINA Technical Team, for future discussions with the resident's group at Dartmouth Road, Dartmouth Square West, and general Charlemont area.

- 1. TUNNEL DRIVING AND SECANT WALLS SETTLEMENT
- 2. CONSTRUCTION STAGE, DUST, NOISE, AND VIBRATION.
- 3. OPERATIONAL STAGE, NOISE, AND VIBRATION.
- 4. NOISE, AND ACOUSTIC CALCULATIONS.
- 5. TRAFFIC PROJECTIONS.
- 6. ANTI SOCIAL BEHAVOUR.
- 7. COST OF TUNNELLING TO CHARLEMONT.
- 8. CHARLEMONT URBAN METRO STOP OR LINE TERMINUS?
- 9. FUTURE SOUTHSIDE RAIL LINES.
- 10. CHARLEMONT ACCESSIBILITY ASSESSMENT.
- 11 LUAS CAPACITY AND SWITCH BACK AT CHARLEMONT.
- 12 RAILWAY ORDER SUMBISSION DETAILS, ECONOMIC UNCERTAINTY.
- 13. SUMMARY OF SPECIFIC QUESTIONS TO BE ADDRESSED;

1. TUNNEL DRIVING AND SECANT WALLS - SETTLEMENT

SCOPE OF PROJECTED EXCAVATIONS.

An excavation of unprecedented size, for Victorian Dublin, is proposed in a very tightly restricted site. 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.

SCOPE OF SECANT WALL CONSTRUCTION AND EXCAVATION.

The 30m deep piled wall will commence in the region of the north east corner on the site, continue along the line of the lane boundary wall directly to Dartmouth Road, continue across the road to the footpath at the new mews building behind No 11 Cambridge Terrace, turning west along the edge of the footpath outside No 34, 33 and 32 Dartmouth Road, and turn north along the boundary formed by the Luas embankment.

The 30m deep excavation will be within the boundary thus described.

This secant wall, and very deep excavation proposed, will be within 14m of the rear walls of three storey Victorian houses on Dartmouth Square West, and within 8m of the front elevations of Victorian two/three storey houses on Dartmouth Road.

Following the completion of the station box, it is proposed to drive a TBM (tunnel boring machine) 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.

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.

SETTLEMENT ZONE

The calculated size of the Settlement Zone is based on the centre line of the tunnel, or the secant wall, and extends for a distance of 1 to 2.5 times the depth of excavation, that is 30 to 75 metres, either side of the tunnel centre line.

Projected settlement will be at maximum values close adjacent to the tunnel/secant wall centre line, and will taper away to zero at the edges of the Settlement Zone, forming a Settlement Slump Trough.

Houses spanning the edge of the settlement zone, (which might appear to be at lesser risk) are apparently at increased risk, due to differential settlement, producing a hinge effect, and consequently, more serious cracking.

EXTENT OF SETTLEMENT

The maximum settlement to be expected is extremely difficult to predict accurately, and will be influenced by, amongst other things, construction methods adapted, secant wall deflection, ground conditions, soil composition, and inevitable changes to the existing water table.

Some engineering research would suggest that, even with the employment of modern best practice, settlement of 7mm to 15mm could be expected. Research by Moormann and Moormann, 2002, suggests little improvement has been made in the amount of settlement behind the wall, and that displacements in the range of 1% of the excavated depth should be expected. Other research (Peck, 1969) suggests settlement behind secant walls averaged at 0.2% to 0.4% of excavated depth, which in this instance is 90mm!

Compounding the alarming settlement projections caused by the 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 the expected. Expect the unexpected.

EFFECT OF SETTLEMENT ON VICTORIAN HOUSES

The compounding effects from very deep pile boring, very deep excavations, driving a TBM tunnel, and changing water tables, all in immediate proximity to Victorian houses without proper foundations, are likely to present enormous problems in accurately predicting settlement.

All of the buildings under consideration are dangerously close to the projected centre line of the Settlement Slump Zone, some no more than 7 meters away from the bored piles. Settlement of 10mm, probably the minimum disturbance to be expected, will have profound effects on old buildings, built without proper foundations. Greater displacements than 10mm are to be expected. This will result in cracks to internal walls, to brickwork in facades, over window openings, door openings, and structurally weak building fabric links.

The effects of settlement, following the driving of a TBM below residential property, have been well observed. The following periods of displacements have been documented.

Ahead of approaching TBM face, At TBM cutter face, At TBM cutter shield,

Slight upward rise/deformation. 6% of expected settlement, 30% of expected settlement,

At TBM ring build, slurry fill to gap, 46% of expected settlement.

Major settlement should be established by 10 days, to 8 weeks, but could be longer lasting, subject to local conditions.

As old, more flexible, brick-built housing respond to imparted stress and strain, deformation of building fabric could take years to manifest.

DESIGNERS' PROFESSION RESPONSIBILITY.

It is incumbent upon professionals involved with the design of tunnels and deep excavations in urban environments to prepare, in advance, engineering evaluations of expected disturbances.

TII should, therefore, be in possession of exact and comprehensive scientific information relating to all the issues hereunder addressed.

We would, therefore, request sight of such engineering data, in the form of a formal written response, including all drawings, graphs, calculations, and clear and precise explanations of the likely effects on the adjacent fragile building stock.

TII LEVEL SURVEY OF CONSTRUCTION SITE AND ENVIORNS.

TII has been conducting levelling surveys, on a weekly basis, in the vicinity of the Luas railway embankment, and the Dartmouth Road street frontage, for the duration of the piling and excavation process on the Hines building site.

This is, no doubt, in compliance with requirements to establish before and after levels, and subsequent deformation levels, due to deep construction projects adjacent an important public infrastructure, the Luas line.

We would, therefore, request sight of such engineering data, in the form of a written response, and clear explanations of expected, and realised, surface deformations.

SETTLEMENT, SUMMARY

Tunnel engineering and secant wall design is a sophisticated and vastly complex endeavour, demanding the services of teams of greatly skilled and experienced professional engineers, across many fields of speciality.

It is something we, as a community, know nothing about. What is obvious, however, is that this project will have an enormous impact on our lives, our properties, and our community. It has the potential to greatly disrupt and destroy our lives and our community, and cause great and permanent damage to our homes.

It is in this connection, then, we demand to be fully informed.

We request sight of engineering data, in the form of a formal written response, including all drawings, graphs, calculations, and clear and precise explanations of the following;

1.1 DEPTH OF PROPOSED EXCAVATIONS,

Depth of secant piles at east and south boundary, Depth of station box excavation at east and south boundary.

1.2 SOIL CONDITIONS,

Soil analysis of complete zone of excavation.

Soil analysis of zone of tunnel boring.

Soil analysis of proposed zone of ventilation tunnel.

1.3 PROJECTED SOIL SUBSIDENCE,

Engineering review of projected subsidence, Review of proposed remediation.

1.4 WATER TABLES,

Review of existing established water table, water courses. Projection of future water table, changes, and consequences.

1.5 PRECISE TUNNELLING SYSTEMS PROPOSED.

TBM proposed.

Shield procedure,

Ring erection,

Gap grouting and time scale.

Remediation procedures and face pressures.

1.6 PROJECTED SECANT WALL DEFORMATIONS.

Projected secant wall deformation at east boundary.

Projected wall deformation at south boundary.

Projected soil settlement in consequence thereof.

Remediation proposals.

1.7 ZONE OF SETTLEMENT.

Precise maps of projected zone of settlement.

Settlement slump trough graphs.

Precise indication of properties to be effected.

Scale of projected settlements.

1.8 RANGE OF PROJECTED SETTLEMENT.

Range of projected settlement for individual houses in slump zone.

1.9 CHARACTER OF ADJACENT BUILT ENVIRONMENT.

The existence of foundations.

Analysis of foundations for all effected properties.

Projections for settlement for all effected properties.

Remediation proposals for all effected properties.

1.10 PROJECTED DURATION OF SETTLEMENT,

Precise projections for duration of TBM pass.

Projections for settlement at shield pass,

Projections for settlement at ring erection.

Projections for duration of damage and settlement in future years.

1.11 EVALUATION OF DAMAGE, COMPENSATION DISTURBANCE, AND DEVALUATION OF PROPERTY.

Precise details for evaluation of damage to property.

Precise details of evaluation of compensation.

Precise details for evaluation of permanent devaluation of property Implications for house insurance/damage.

Caretaking of abandoned houses during re-locations.

Security of houses during re-locations.

2. CONSTRUCTION STAGE, DUST, NOISE, AND VIBRATION.

Severe disruption from construction traffic, pile boring, excavation, tunnelling and on-going construction activities are a given, quite probably lasting for years.

What mitigating factors are available?

Will re-location be necessary/considered/duration?

Will compensation be paid for severe disruption? (Maybe not your remit)

Duration of TBM pass-through?

In particular, the following issues should be directly addressed;

2.1 MANAGEMENT OF INTERACTIONS WITH IMPACTED PROPERTIES.

How will this issue be addressed?

Who is responsible?

When will process be initiated?

Who will be appointed to mediate between parties?

Can RINA provide reference information, including international precedence, in this regard?

2.2 MONITORING AND SURVEYING OF IMPACTED PROPERTIES.

Can RINA provide reference information in this regard?
What is precedence in other countries for impacted properties?
What monitoring and surveying of properties will take place during construction - frequency etc and mitigation, if issues arise, particularly secant/boring implications?

If Dartmouth road is to close for 2-5 years, how do resident access their properties - NTA state the footpath will remain open, but what about driveways and vehicular access for deliveries? How will residents be able to park close to their homes?

What is the international precedence on this? Can RINA establish what has happened on this in other projects, and what was the outcome?

2.3 RELOCATION - SECURITY OF ABANDONED PROPERTIES.

If impacted residents need to be relocated what is the proposal regarding security, insurance, maintenance, and upkeep of existing properties.

2.4 INCREASES IN PESTILENCE.

What is the evidence of the increase in vermin infestation, disturbed by vast excavations, and from tunnel driving? Underground culverts, access areas, additional passengers, and litter all point to more rats, seagulls and other disease carriers.

What measures can be put in place to project the extent of infestation, and deal with this problem?

What is the international experience?

3. OPERATIONAL STAGE, NOISE, AND VIBRATION.

Noise and vibration from operational activities are a far more serious concern, in that this disruption will be permanent, and persistent.

Once established, it will be impossible to have remedied - for instance, noise from Luas, of which we all have bitter experience.

In this light, the following issues have some major relevance.

NOISE AND VIBRATION FROM TRAIN MOVEMENTS.

The problem of transmission of vibration and noise from passing trains in direct proximity to the Gate Theatre, and the Rotunda Maternity Hospital, is accepted as an issue in the Preferred Route Development Report 2019.

It is noted (Appendix L. O'Connell Street Station, Page 12) that 'with appropriate mitigation this is not envisaged to introduce significant impacts'

This would suggest that, under normal circumstance, significant impact could be expected.

It is acknowledged that the type of track support, amongst other things, chosen for the metro system can have a significant impact on the level of vibration transmitted to receptors - for example, High Density Floating Track Systems offer best practice and best protection.

This system is, however, more expensive to install.

The note that such measures would be implemented at the Gate Theatre and Rotunda Hospital, as mitigating measures, suggests that the remainder of the track, and ordinary receptors, would be afforded no such luxury.

Attending at the Gate Theatre in an optional leisure activity.

Trying to sleep in your own house is not.

It is anticipated trains will operate at up to 45 second intervals.

With this in mind, exactly what level of disturbance, and permanent property devaluation, can be expected?

NOISE FROM VENTILATION SHAFTS, EXTRACT FANS, AND FIXED PLANT.

What level on noise and nuisance can be expected from massive shaft excavation fans and fixed plant, located just below ventilation grills at ground level at Dartmouth Road and Dartmouth Square West?

These fans will presumable run continually day and night.

NOISE AND NUISANCE FROM ESCALATORS.

Escalators are noisy - they rattle and groan continually, and grow noisier with age, as parts naturally age with usage.

The escalator proposed for the Dartmouth Road exit/entry is exceptionally long, by any standard.

These escalators will run continuously from early morning, probably 0530hr, to midnight, or later.

The operation of roller shutter enclosures at escalator entrances is also a cause of concern, as such operations will always, by their nature, be very early in the morning, or very late at night.

They are located in direct proximity behind, in front of, and across the road from, residential properties at Dartmouth Road and Dartmouth Square West.

How is it proposed to mitigate this nuisance value in a residential area?

4. NOISE, AND ACOUSTIC CALCULATIONS.

Noise calculations, as presented by acoustic expert consultants, can, and do, use a combination of amplitudes, frequencies and time-frames to present a projected acoustic picture.

Projected maximum disturbance levels can be 'apparently mitigated' by use of carefully selected average timeframe intervals being presented.

Selectively chosen, these figures can be quite disingenuous, very confusing, and can very rarely be fully understood by non-expert receptors.

LUAS EXPERIENCE.

Many people in this area have suffered permanent disruption to their lives by the introduction of the Luas. Much legal wrangling ensued, but the experts could produce calculations in court, proving their figures averaged out to nondisturbance levels, over selective timeframes.

The residents continue to live with the results.

Can you examine the acoustic scenario likely to be *really experienced* at Dartmouth Road and environs, to include the issues raised in the above paragraphs?

Can this evidence be presented in a *realistic way*, which can be fully understood by non expert receptors?

If genuine concerns are raised in this connection, what means do we have at our disposal to ensure proper mitigating measures are enforced?

5. TRAFFIC PROJECTIONS.

Again, this is a matter of great concern - experts predict one thing, residents live with the results.

Experts predict a great catchment area to be harvested by including the station located at Charlemont, and at the same time predict little or no traffic disruption.

A look at the map of South Dublin will reveal only one probable conclusion - everybody heading to the airport from South Dublin will descent on Dartmouth Road for passenger drop-off, private transport, taxis, and buses.

Foot passengers, with their rattling suitcases, will descent on the area, both day and night.

Taxis will loiter.

It is hard to image a more lucrative set-down area for a taxi to linger, day and night, than that proposed for Dartmouth Road. (There is ample space for a set down taxi bay, inset into the wide footpath at the office building entrance on Grand Parade, yet this location was not chosen for a set down bay!)

The experts predict this traffic generation will not materialise.

An interesting example to consider. Predicted passenger usage for the Luas, projected out over the 10 years following its introduction, actually took place in about 5 years.

The experts were wrong.

They were wrong by 100%.

There were no repercussions.

Nobody was responsible, or held to account. It was probably considered a successful outcome.

Where is the responsibility for this flawed expertise?

The only conclusion to come to is that this type of traffic engineering and projecting is highly unreliable, highly selective and just cannot be trusted.

Traffic studies, like acoustic studies, as presented by expert consultants, and can be selectively chosen, and can very rarely be fully understood by non-expert receptors. Again, projected maximum disturbance levels can be 'apparently mitigated' by use of carefully selected average timeframe intervals being presented.

Selectively chosen, these figures can be quite disingenuous, very confusing, and can very rarely be fully understood by non-expert receptors.

Can RINA assess how comprehensive the Traffic study is? Are there modes of transport missing?

Is the catchment area incorrect?

Given the lack of a set down area, what additional implications will this have? Can RINA make a presentation to Residents on the likely full implications of the Traffic Study?

6. ANTI SOCIAL BEHAVOUR.

The likely scenario of noisy inebriated passengers disgorging from the MetroLink station on Dartmouth Road, at midnight, is not hard to imagine.

Combined with taxis waiting for fares, this all paints a disquieting picture

How can this scenario be satisfactorily addressed, or tolerated.

7. COST OF TUNNELLING TO CHARLEMONT.

It is our contention that tunnelling from St Stephen's Green to Charlemont is a serious mistake, and that MetroLink should be terminated at St Stephen's Green. The current proposal will be seriously resisted at planning stage. To this end, we wish to be informed of the actual costs involved in progressing the tunnel from Stephen's Green to Charlemont.

Can we see a breakdown of the cost to tunnel south from SSG to Charlemont, and also the cost to build out the Charlemont station?

We really want the cost split out between tunnelling cost and station cost.

8. CHARLEMONT - URBAN METRO STOP OR LINE TERMINUS?

Can RINA to give a view on the implications of Charlemont being a terminus station, as opposed to what the NTA say it is - an urban metro stop?

From RINA experience and international precedence in other cities, what are the implications of having a terminus so close to the city centre? In most other cities, the terminus end of a metro line is placed far outside the city boundary, usually in an outer suburb.

9. FUTURE SOUTHSIDE RAIL LINES.

In light of the NTA statement that 'southside rail connection would not be built until after 2042, and would likely be a Luas rather than a metro line', how does RINA assess the decision to tie in to the Green Line Luas at Charlemont, place a terminus in this location, as it is future-proofed for future south rail lines, yet Luas is the most likely south side solution.

Can RINA assess how a Luas line could be integrated to the metro terminus at Charlemont, and where could such a proposed Luas line be placed?

10. CHARLEMONT ACCESSIBILITY ASSESSMENT.

NTA claim that Charlemont provides a 'seamless link' to Green Line Luas. Yet we know the on-the-ground experience is that it will be far from seamless.

Drawings issued for the Charlemont Metro Station show two lines about 200 metres apart, one well below ground level in a tunnel, and one elevated on an adjacent bridge. They are 'seamlessly' connected by three flights of escalators, a walk in the open air, and three flights of stairs, apparently two-way!

We want RINA to complete an assessment of the Accessibility of Charlemont based on the current Luas to Metro interchange.

Based on international best practise, how does this rate on the Accessibility scale?

11 LUAS CAPACITY AND SWITCH BACK AT CHARLEMONT.

NTA are proposing to add additional capacity in the form of more Luas trains, at higher frequencies, from Sandyford/Cherrywood into Charlemont, to support passengers intending to transfer to Metro at Charlemont. This will result in a large volume of additional trams going towards the city centre - with fewer passengers.

Given the existing constraints on volumes of trams that can be on the line at a given time, the NTA mentioned turning some of these trams back before SSG.

We want RINA to find out more information on this?

Will trams have a destination of Charlemont only to service metro?

What additional volumes are proposed? What frequency?

What are the detailed proposals from NTA/TII of the physical space and engineering requirements to facilitate the proposed additional trains to turn back just north of Charlemont?

How to they propose to find space, deal with the gradient and turning, as the Luas approaches Adelaide road?

12. PROJECT TIMELINE UPDATE.

What is the current situation on the Project update and timeline for the Railway Order submission, given no Cabinet decision appears to have been made? Are there implications of uncertainty for the project, given the current economic uncertainty?

13. SUMMARY OF SPECIFIC QUESTIONS TO BE ADDRESSED;

It would be much appreciated if RINA could address the questions as set out above in a clear and logical manner. Listed below is a summary of the main points raised in this document, separated out into their respective paragraphs.

It would be much appreciated if the numbering system listed throughout, and summarized below, were to be followed in compiling replies and explanations to the issues raised.

SECTION 1. TUNNEL DRIVING AND SECANT WALLS - SETTLEMENT

- 1.1 DEPTH OF PROPOSED EXCAVATIONS,
- 1.2 SOIL CONDITIONS,
- 1.3 PROJECTED SOIL SUBSIDENCE.
- 1.4 WATER TABLES,
- 1.5 PRECISE TUNNELLING SYSTEMS PROPOSED,
- 1.6 PROJECTED SECANT WALL DEFORMATIONS.
- 1.7 ZONE OF SETTLEMENT.
- 1.8 RANGE OF PROJECTED SETTLEMENT.
- 1.9 CHARACTER OF ADJACENT BUILT ENVIRONMENT.
- 1.10 PROJECTED DURATION OF SETTLEMENT
- 1.11 EVALUATION OF DAMAGE, COMPENSATION DISTURBANCE, DEVALUATION OF PROPERTY.

SECTION 2. CONSTRUCTION STAGE, DUST, NOISE, AND VIBRATION.

- 2.1 MANAGEMENT OF INTERACTIONS WITH IMPACTED PROPERTIES.
- 2.2 MONITORING AND SURVEYING OF IMPACTED PROPERTIES.
- 2.3 RELOCATION SECURITY OF ABANDONED PROPERTIES.
- 2.4 VERMIN INFESTATION

SECTION 3. OPERATIONAL STAGE, NOISE, AND VIBRATION.

- 3.1 NOISE AND VIBRATION FROM TRAIN MOVEMENTS.
- 3.2 NOISE, VENTILATION SHAFTS, EXTRACT FANS, FIXED PLANT.
- 3.3 NOISE AND NUISANCE FROM ESCALATORS.

SECTION 4. NOISE, AND ACOUSTIC CALCULATIONS.

- 4.1 ACOUSTIC CALCULATIONS EXPLAINED.
- 4.2 REAL LIFE EXPECTATIONS, RESULTS.

SECTION 5. TRAFFIC PROJECTIONS.

- 5.1 REALISTIC EXPERCIATIONS.
- 5.2 DARTMOUTH ROAD SET-DOWN.
- 5.3 INDEPENDENT VERIFICATION OF PROJECTIONS.

SECTION 6. ANTI SOCIAL BEHAVOUR.

- 6.1 POLICING OF PUBLIC SPACE,
- 6.2 LATE NIGHT BEHAVOUR.
- 6.3 INTERNATIONAL EXPERIENCE.

SECTION 7. COST OF TUNNELLING TO CHARLEMONT.

- 7.1 PROJECTED COSTS FOR SSG TO CHARLEMONT
- 7.2 CHARLEMONT STATION BOX COSTS.

SECTION 8. CHARLEMONT - URBAN METRO STOP OR LINE TERMINUS?

- 8.1 CHARLEMONT AS TERMINUS,
- 8.2 INTERNATIONAL EXPERIENCE.

SECTION 9. FUTURE SOUTHSIDE RAIL LINES.

9.1 GREEN LINE TIE-IN, IMPLICATIONS

SECTION 10. CHARLEMONT ACCESSIBILITY ASSESSMENT.

- 10.1 SERIOUS VERTICAL SEPERATION, LUAS -METRO
- 10.2 INDEPENDENT STUDY.
- 10.3 INTERNATIONAL EXPERIENCE.

SECTION 11 LUAS CAPACITY AND SWITCH BACK AT CHARLEMONT.

- 11.1 INCREASED TRAM USAGE,
- 11.2 TRAM TURN-BACK ARRANGEMENTS.
- 11.3 FREQUENCY, INCREASED TRAFFIC.

SECTION 12 SUBMISSION TIMELIME.

- 12.1 RAILWAY ORDER SUBMISSION TIMELINE.
- 12.1 ECONOMIC UNCERTAINTY.

Your thoughts on all of the above, and a comprehensive itemized written response, would be much appreciated.

With Thanks.

Michael A Doyle.

Dear Residents,

Metro North

On 21st January a meeting of residents from Lower Dorset Street, Broadstone Basin and surrounding areas was held in the Dorset Point Student accommodation building. The purpose of the meeting was to discuss the impact of proposed works on the Four Masters site on Berkeley Rd and Eccles Street.

Many issues were raised with some residents against the Metro and some resident in favour. Some suggested the possibility to relocate the local site from the Four Masters Park to other more suitable locations.

However the purpose of the meeting was to highlight the impact the works would have on the locality should the Metro North proceed to be located at the Four Masters site.

Impact of Metro North on our Locality

Proposed works

A hole the size of Croke Park pitch will be opened on the Four Masters site The hole will be dug down 6 stories in depth

Thereafter digging of the tunnel in both directions will commence
The soil from digging the hole 6 stories down and the soil from the tunnelling in
either direction will be removed at the Four Masters site by large trucks
Works expected to last a minimum of 3 years with potential to take 6 years

Impact on Locality

Eccles St to be closed

Berkeley to become a one way street

Nelson St to become 2 way with no parking

300 workmen to attend site daily taking valuable local parking spaces

Large volumes of truck traffic daily removing soil from the site

Noise impact

Potential Structural damage to local properties

Disruption and possible closure of a number of facilities within the Mater which service both the local and wider community

In order to mitigate the impact of these works, the local resident associations propose to join forces as one body and seek information from Metro North and the NTA on how works are to be carried out, get clarification and agreed terms of work methods, working hours, and compensation to mitigate impact on local businesses and residents.

During our meeting of 21st January we asked the attendees to list a series of considerations that should be raised in our next meeting to be held in the Mater Auditorium. We propose the meeting be held post elections between 8th and 20th February, inviting Metro North, NTA and local politicians to attend and answer specific queries.

We ask local residents to assist us by emailing any further points that should be considered and presented at this February meeting:

Considerations/Questions to ask Metro North and the NTA

The below are bullet points only and will be expanded fully at the proposed February meeting:

- Resident parking only to be applied to all surround areas for the duration of the works
- Rates free period for local businesses during the works
- Working hours to be advised and agreed with residents
- Engineers report on existing properties
- NTA map of how soil to be removed
- Bus connect and metro North is that being thought about ie linked up
- Single point of contact for issues. Community liaison officer 24 hrs?
- Truck direction
- Small tight site how will this be managed
- Musgrave site to hold parking for working?
- Existing station under Mater can it be used? Clarification why not going ahead with existing station. Ask for engineers report
- If Four Masters site used ask for Metro North to provide guarantee in writing that it will be reinstated
- Can Four Masters tunnel spoils be removed elsewhere via another site station like Des Kellys location to reduce truck traffic in our locality?
- Traffic management during works?
- · Weekend work?
- Noise disturbance how is it level agreed and monitored?
- Time frame
- Full roads resurfacing
- Landscaping

New Points Raised at Metro North Meeting April

Mary Fitzpatrick - Independent Experts to be appointed by May 17th - we need to prepare questions for that person

Community Gain - Pauline Cadell raise this as a normal part of large works

Ciaran Perry to be updated

One further thing we need to raise at today's meeting is the fact that since last year's meeting work has begun on the Mater extension and will inevitably add to the issues of traffic, noise and parking and we'll need to know how the two are going to be coordinated.

In addition, the proposed work on the Phibsborough Shopping Centre/ Bohemians re-development will also overlap with these works as perhaps also will any works on the build-to-rent apartments at Crossguns and on the cinema site in North Circular Road should these get planning permission. Phibsborough could potentially be turned into a building site for years to come unless these projects are coordinated.

Questions for RINA

- 1. See below some of the issues that have been raised already which we would be grateful if you could address. We will no doubt have many others.
- 2. What is the shallowest depth of the tunnel within our area--is this in keeping with best international practice-to minimise impacts during construction and eliminate impacts during operational phase?
- 3. What is the deepest point within our area?
- 4. How will tunnel be secured into rock-is this in keeping with best international practice-is there a better method
- 5. What is the zone of influence around the tunnel -is this from the center of tunnel or from exterior of tunnel (including rock bolts) is this in keeping with best international practice-to minimise impacts during construction and eliminate impacts during operational phase
- 6. If one house on a terrace is within the zone of influence should the full terrace not be included- (Stella avenue comes to mind)
- 7. What is the zone of influence around the station box and Shaft box- is this in keeping with best international practice-to minimise impacts during construction and eliminate impacts during operational phase?
- 8. Who monitors the compliance of the actual work area around the tunnel/ shaft-we have a fear that as the Shaft site is in a park that spoil and machinery will spill out into the full park?
- 9. Given the importance of the park and wild life will the shaft be a dark site at night.
- 10. Will small cross over tunnels be required (will these need to be blasted and drilled by hand)
- 11. Where will electricity substation be will they be above ground- will they be part of RO
- 12. Will residents have to be moved out of their homes in our area because of construction impacts and what /who make this decision.
- 13. What is the margin of deviation- both vertical and horizontal- is this within best practice guideline- who will monitor this deviation
- 14. Will construction methodology be part of the application and conditions of granting RO (this is important as this may impact hugely on residents).
- 15. Part of ToR for the independent expert group- is to review published EPR and PR we would welcome your input with regards to the changes made from EPR to PR which necessitated the need for a shaft. We would like you to show us how/why the PR is deemed to be better than the EPR. We know that one group mounted a very large successful public campaign to move the station from their property and indeed this was supported by TDs including the Tanaiste, and Minister for Finance from the Dail floor (included in official record of proceedings) . The movement of this station now requires the building of a shaft- we want to

know if this move was made for technical reasons that have improved the project or indeed just a response to lobbying. (We all support the movement of the launch site of the TBMs from the Mobhi road site but not the movement of the station).

- 16. Is this in keeping with best international practice- to put in shaft rather than a station
- 17. Can shaft be avoided in any way
- 18. Have TII demonstrated in their documents why the Collins are station cannot be moved to the North West corner of Albert College Park which would eliminate the need for a shaft within the park- this site we know is suitable for a station as a station was situated here in the successful RO for Metro North.
- 19. What is the cost difference of a shaft V a station?
- 20. By moving Collins Ave station slightly to North West corner of Albert College and eliminating the need for the shaft how much could this save potentially.
- 21. Are shafts used as access points for maintenance during operational phase
- 22. Is a single bore tunnel instead of a twin bore in line with Best international practice- does it make fire safety more difficult or access in emergency, evacuation air quality etc
- 23. Will the shaft site be used for extraction spoil from the TBM tunnel esp from some of the tighter station boxes
- 24. Routes of spoil extraction
 - a) are they dependant on NTA CBC implementation?
 - b) Will they be part of RO or decided at a later stage by DCC
 - c) Will spoil /construction traffic routes be part of RO
 - d) We are the only area which will have a CBC directly above a Metrolink have TII adequately referenced this in their decision making on PR.
- 25. Do TII have a public health expert preparing the human health section of EIA/EIS (they didn't the last time)
- 26. Will air quality/ Noise be monitored around station and shaft (given proximity of these residents may be experiencing issues from both at the same time. Will residents have access to real time information on these readings will it be actionable- who will have responsibility.
- 27. Vermin issues need to addressed for the whole community much larger than zone of influence.
- 28. Water/drainage/ flooding pollution- is it planned to use the Tolka river
- 29. Security issues at site need to be in line with best international practice-to minimise impacts during construction and eliminate impacts during operational phase
- 30. Parking. Vehicles idling when waiting to enter site- etc
- 31. Road cleaning again well outside the zone of influence will be required will this be addressed in application

- 32. Hours of works and hours of tunnelling will they be part of RO or left to DCC.
- 33. Shaft- will the fans ventilate tunnel passively all the time will they be actively turned on when pm10s rise in tunnel will there be monitoring of this around the shaft ongoing in operational phase.
- 34. Will homes on Hampstead need to be evacuated if incidence in the tunnel and fans need to clear smoke.

Thanks

GADRA

26/11/2021

Resident Seatown Villas , Swords , Co. Dublin

e: seatownmetro2021@gmail.com

25/10/21

Re: MetroLink Update Meeting 13/10/21

Linda,

With regard to the meeting attended online above, fellow residents and I have several major concerns which I have collated below, we would like to issue this letter so that there is no ambiguity with regard to our very strong feelings on the matter.

I realise you have already done up your draft but in hindsight it might have been prudent to get all residents views prior to this?

Then we could have discussed in detail all points pertaining to our estate.

Unfortunately the first I became aware of this draft was the circular delivered by Alan Farrell TD on the 10/09/21,

The only correspondence from TII that I received was on the 01/10/21 inviting me to the online meeting to showcase this draft

Environment:

At the meeting your architect was speaking with glowing reference to this "linear park" that will run alongside the Metro, we would like to know as to how this would be of benefit to the Seatown Residents? what is of great concern to us is as below

 Removal of all mature trees which have lined the Swords Bypass for over 30 + years now, as per your proposal it seems that these will be removed all the way down the bypass, this will have a catastrophic environmental impact on the local community:

- 1. How to you propose to compensate for the loss of absorption of CO2 from the atmosphere , particularly at a time when our Rainforest etc are being decimated . A few token trees here and there will not come close to negating what you propose to remove. How do you intend to reimburse the planet for this loss ?
- 2. These tress have acted as an acoustic barrier and also absorbed a lot of the pollutants from the Bypass traffic, what do you propose will compensate for this if these are all cut down?

• <u>Environmental impact statement</u>

It is our understanding from listening at the meeting that Councillor Anne Graves has asked repeatedly for this? if this is not the case could we please be issued with it for review/comment.

• <u>Site Survey Report</u>

Again can we get a copy of same, as we believe that our estate and Estuary court are built on an old quarry and we would have great concern on stresses, subsidence / damage etc to our homes — as alluded to by councillor Graves (if memory serves) this is happening to homes where the Tunnel is built under.

Piling

With regard to Piling for the underground portion of the Track- I myself have worked on several major construction projects in a managerial capacity (Clancy Quay Phase 1, London 2012 Olympic Games to name 2 of many) And have 1st hand knowledge of piling for underground carparks etc, and I have yet to come across this acoustic barrier that your colleague spoke of that will shield us residents of the noise pollution that will be ongoing for 2 years during construction .if you could share the proposal for this please and maybe if there is a "live project " we could visit to witness this barrier.

Seatown Estate

There are several aspects to your proposal that we vehemently oppose please see below:

• Green Area

- 1. You propose to take at least half of our green for the Metro I fail to see how this will benefit the residents of Seatown Villas
- 2. You propose to bring 2 no. paths into our estate from the Metro which will bring I would think at least an extra 1,000 people per day (conservative estimate) through our estate ,As previously stated we have a very broad demographic of people in our community and we fail to see how the opening of walkways will benefit us
 - elderly will be less secure in their homes due to the inevitable rise of foot traffic through same and with that antisocial behaviour
 - our children will not be safe to play on our greens due to the proximity of the Metro and also the potential of strangers coming through which could lead to assault or even abductions.
- 3. Construction of Metro you plan on us losing our Green area for 2 years, this is a substantial amount of time in the life of both Elderly and Young to be without their recreational space.

Do you plan on using our estate as a through Traffic area for Heavy goods/Materials for this project?

Traffic

As pointed out at the meeting this will bring increased traffic through our estate, in the form of parking (even for construction) and during use, not to mention the "drop offs" that will occur daily.

As was pointed out at above meeting residents are already gridlocked every morning and afternoon due to close proximity to St. Colmcilles National schools and Fingal Community College.

Your colleague pointed out that public transport is not in your remit, I would also deduce form that this would mean the traffic planning /management after construction would not be part of your brief either?

Suffice it to say we already have 2 traffic routes and 4 pedestrian routes into our estate, we do not want nor need any more.

Linear Park

An aside to environmental reservations outlined above , we have made the following observations also :

Nearly all (if not all) examples you have shown as far we can gather have been in cities and heavily urbanised areas , the residents of these areas are what we would term" city dwellers" in that they have chosen to live or were born in these densely populated areas , and it would seem this is their choice for their way of life.

We as residents of Seatown Villas, have bought these homes due to the local amenities and green areas surrounding them, where we can raise our children with a sense of security allowing them to play on our green areas, not to have a rail track adjacent to our homes and a rail station- with constant noise and light pollution.

We have not chosen to live beside a Metro Station.

Alternative locations:

We would like to know what other alternatives have been discussed prior to this draft that seems to be the most obtrusive, environmentally impacting route? it is impacting on both sides of the Bypass through Swords destroying hundreds of trees on this Avenue from Carlton Court, Swords Demesne and Seatown /Estuary court.

You intend to take down Footbridges thereby endangering pedestrians as they will now have to cross the roads.

Road traffic will be heavier in the locality due to more traffic restrictions (lights where once there was roundabouts) , which in turn will create heavier pollution .

Could the Metro not traverse down the median strip of Bypass? this would save all ecosystem either side of bypass (as has been done for Luas on the Naas Rd.?

There could be a station built in the County Councils Carpark? (as they already have another carpark behind the Courthouse) negating the one for Seatown Villas.

There could be a station opposite to Fingallians which is less than 100 mts further down the road from proposed stop.

We questioned why it must go underground and it was somewhat dismissed that you had tried alternatives but they will not work, if we could have the proposals and reasons as to why they won't work it would be much appreciated

Looking forward to hearing from you on all of the above, thanks.

Regards,

Thomas Lowndes

Thomas Lowndes

Seatown Resident

The Senior Executive Ofiicer,
Planning and Strategic Infrastructure Dept.
Fingal Co. Council, County Hall,
Main Street Swords,
Co. Dublin K67 X8Y2

25/04/2022

To Whom it may concern,

Please find below my submission pertaining to the "Fingal Development Plan 2023-2029" (draft). My concerns of same being the specific zoning of lands for the Metro North route and the redesign of residential estates along same, as indicated below.

1. Balheary Park



Fig. 1

As indicated on above excerpt from Draft plan ref. MP8:B it is indicated that all this area is now zoned for Metro North and as I am led to believe there is to be a carpark put on these pitches and the pitches are to be removed .

I would strongly urge this to be reconsidered for the following reasons, noting particular reference to <u>your objectives</u> in your written statement as below.

2.4.2 Masterplans:

- Subject to a public consultation :
- To make provision for sport and recreational infrastructure

To date I have not seen any public consultation with regard to this masterplan.

These football pitches and public parks have been on these lands since I played football on them over 35 years ago.

They are ideally situated in that they are accessible to all of the greater Swords Community , they are within walking distance form Swords Manor 10-12 mins , Millers Glen 10 mins ,Swords Demesne 10 minutes .

These football pitches/ public green areas are catering for all social demographics of Swords In that they are easily accessible from most residential areas of Swords and you do not need either public or private transport to access them , which in turn cuts down on traffic (less omissions) and creates social inclusion for the entire social spectrum (if these were to be removed and new green areas allocated elsewhere in my opinion there would be a substantial fall off in numbers of children enjoying outdoor activities in the area)

To remove these pitches would have a detrimental effect on the community in terms of both environmental (as per above) and community and would in my opinion be against the "General Settlement Objective " namely :

The Creation of healthy communities – both in body and mind.

Objective CS017 - Tree Lined approaches

"Retain existing tree-lined approaches to all towns and villages to preserve their special character" (Pic. 1)

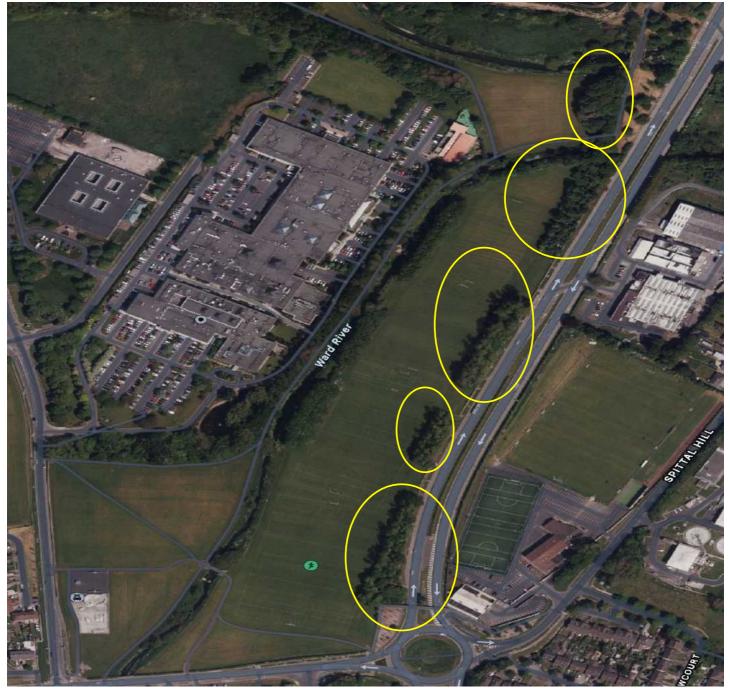
3.5.15.12 Fingals Greenbelts

- Preserve Greenbelts
- Safeguard valuable countryside, ensure that citizens can enjoy the country's natural amenities and to consolidate and strengthen greenbelts around key settlements

The above 2 paragraphs are somewhat contradictory with the proposal for the "Metro North "route in the area indicated on the above (Fig 1) if the tracks were to go ahead as indicated it would result in the <u>loss of over 980 + Trees</u> as personally counted on the East side of pitches (**Pic. 2**).



Tree Lined Approach Pic. 1



Tree area Loss due to Metro proposal Pic .2

2. Alternatives

Whilst not dismissing the need for an eco-friendly transport system for Swords and surrounding areas there must be priority given to the preservation and enhancement of our local amenities . Locations should be chosen not by their ease of construction but by their "betterment /enhancement of the local community"

Having looked into alternatives for this location with my limited knowledge I have pinpointed some areas as below for the different aspects.

Metro Carpark

Option 1 – the old <u>Motorola plant / National Museum Archive</u> (**Pic 3**) which already has a substantial Carpark although overrun with Grass and weeds etc , the infrastructure (hardcore , lighting

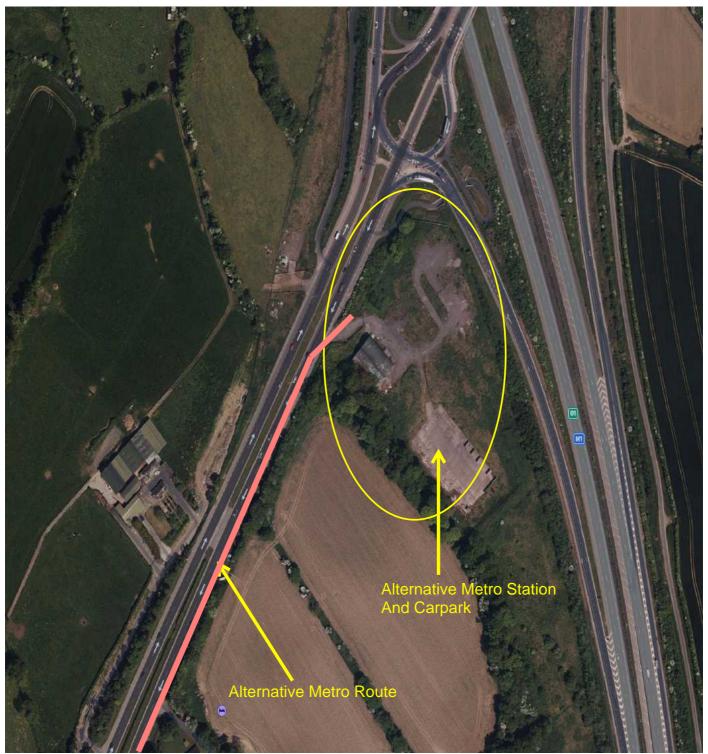
ducts, lighting etc) are already in place, it would take far less public money to return this carpark to operation, and is only 200 metres away from our green areas / football pitches.



Option 2- The Old farm situated to the North of Swords , that I believe was originally bought by the State for the original Metro North Route which runs parallel with the M1 turnoff (Northbound)for Donabate /Lusk) (**Pic 4**)

This location is ideally situated in that by moving the Carpark and Metro terminus (as shown below) we would be minimising excess traffic into Swords therefore cutting down on congestion and pollution into the greater Swords area .

We would then be able to use either the median strip or reduce the Dual Carriageway to one lane (either inbound or outbound from Swords) for the Metro North track as all the traffic from outlying areas travelling into Dublin City will be parking almost immediately after coming off the M1.



Old Farm North of Swords Proposed Carpark /Metro Terminus . Pic 4

3. **Summary**

In summation these green areas form an integral part of our community and play a significant part in all aspects of our local environment from :

Carbon Absorption – resulting in better air quality to less pollution ,and better wildlife habitat for birds and small animals .

Enhancing the communities sense of pride and ownership.

Our green areas should not be turned into Carparks or All- Weather pitches (as is the case with Rivervalley football pitches)

The Earth's soils contain about 2,500 gigatons of carbon—that's more than three times the amount of carbon in the atmosphere and four times the amount stored in all living plants and animals.

One tree can take in more than one Ton of Carbon Dioxide in its lifetime.

I would urge you to please carefully consider the above observations when making final decisions on our Town and its surrounding landscape as this will have a broad range of consequences for generations of people as well as wildlife in the area.

Yours Sincerely,

Thomas Lowndes

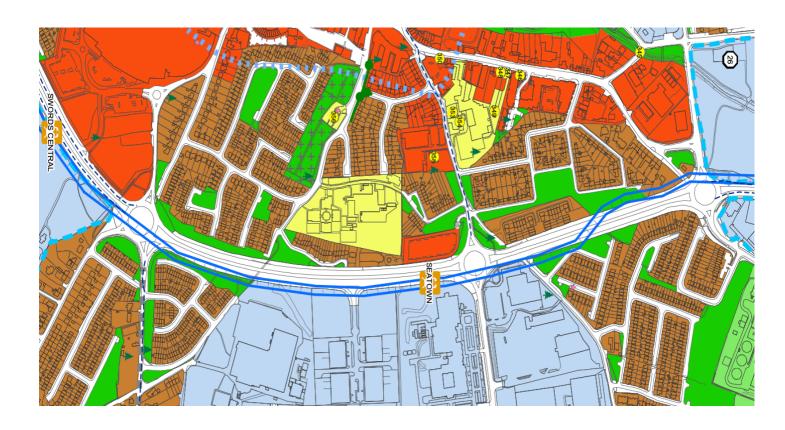
The Senior Executive Ofiicer,
Planning and Strategic Infrastructure Dept.
Fingal Co. Council, County Hall,
Main Street Swords,
Co. Dublin K67 X8Y2

09/05/2022/

To Whom it may concern,

Please find below my submission pertaining to the "Fingal Development Plan 2023-2029" (draft). My concerns of same being the redesign of residential estate boundaries to facilitate proposed route and greenways.

Metro North proposed Route



Above proposal shows the "Metro North" route from just beyond Pavilions roundabout down to Seatown Roundabout in the extreme north of Swords.

Concerns:

As a resident of Seatown Villas and in discussion with my neighbours and also residents from both Estuary Court and Ashley Estate, we have raised serious concerns with TII regarding below:

Route – which cuts directly through the 3 no. housing estates impacting on

- Green areas considerably reducing them in all estates.
- Tree coverage route will result in huge swathes of trees along the Bypass having to be cut down, resulting in considerably less carbon dioxide absorption and greater pollution in the locality.
- Proposed green belt which intends to open all estates to create a "green corridor" effectively creating extra access points to housing estates - encouraging anti-social behaviour (there are already 4 pedestrian access points to Seatown Villas)
- Removal of footbridges in particular the "Woodies" roundabout bridge which is used by many special needs children and adults getting to Prosper Fingal daily.
- Security there is huge concern regarding the "Greenways" as mentioned above as Children playing on the green areas in estates will be under risk of abduction due to the open nature of proposed Estates.
 Hundreds of people passing through estates every day to access Metro.
- Construction- TII Propose to use Seatown Villas green for 2 years as a parking bay/ depot for machinery, resulting in the loss of this amenity to our neighbourhood.

The above are to name a few concerns to which I have raised many to TII.

Yours Sincerely,

Thomas Lowndes