Our Case Number: ABP-314724-22

An Bord Pleanála

Metro South West Group
c/o Pauline Foster
39 Whitehall Road
Terenure
Dublin 12
D12 N265

Date: 08 October 2024

Re: Railway (Metrolink - Estuary to Charlemont via Dublin Airport) Order [2022]
Metrolink. Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin

Dear Sir / Madam,

An Bord Pleanála has received your recent submission in relation to the above mentioned case. The contents of your submission have been noted.

More detailed information in relation to strategic infrastructure development can be viewed on the Board's website: www.pleanala.ie.

If you have any queries in relation to the matter please contact the undersigned officer of the Board at laps@pleanala.ie

Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

Kevin McGettigan

Kevin McGettigan
Executive Officer
Direct Line: 01-8737263

RA03

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From: Laurence Foster <laurencefoster2482@hotmail.com>
Sent: Monday, October 7, 2024 3:48 PM
To: LAPS <laps@pleanala.ie>
Subject: REPLACEMENT - Metro South West Group - Supplementary Submission ABP MetroLink 314724-22.

Dear Eimear/Kevin,

Attached please find the REPLACEMENT Metro South West Groups Response to Further Information - Case No: 314724 - 22 MetroLink.

Kind regards,
Pauline Foster
Secretary
Metro South West Group
39 Whitehall Road
Terenure
Dublin D12 N 265
Phone: 01 455 5946

39 Whitehall Road
Terenure
Dublin S12 N265

An Bord Pleanála
64 Marlborough Street
Dublin 1

Case Number ABP-314724-22 *MetroLink*

Dear Sir / Madam

Please see herewith the observations / submission of the Metro South West Group on the Revised Application from Transport Infrastructure Ireland. The Revised Application has failed to address serious issues which emerged at the Oral Hearing and the Revised Application is worse than the Original Application. Our observations are attached

Yours sincerely,

Pauline Foster
Secretary
Metro South West Group
Phone 01-455 5946
Email: laurencefoster2482@hotmail.com

Note: As this document was too large to send by email they have been separated into doc 1 and doc 2.

Supplementary Submission ABP MetroLink 7 Oct 2024 Replacement doc 1
Continued on:
Supplementary Submission ABP Metrolink 7 Oct 2024 Replacement doc 2.

Overview

Metro South West Group submits that

- The south west city area with 355,000 people living between two Luas lines is seriously underserved by public transport. In light of the fact that the original plan to bring *MetroLink* to Sandyford had been shelved, any credible application would assess this issue.
- The Revised Application is based on a fatally flawed assumption as to the Benefit to Cost ratio of a metro extension to the south west city. The flawed assumption says it is not viable; uncontradicted evidence at the oral hearing says differently.
- South east Dublin, the area towards which *MetroLink* to Charlemont is directed, has arguably the best infrastructure in Dublin with two fixed rail lines and two wide four lane roads.
- The cost of extending *MetroLink* towards the south west and Rathmines rather than to Charlemont (which duplicates existing provision) is much the same, but Rathmines has far superior attractions. The Revised Application omits any comparison of the superior attractions of the Rathmines area even though they were clearly raised at the hearing, a serious omission in this application.
- Both applications ignore submissions which clearly show that buses on A, D and F corridors covering the south west city simply cannot meet NTA's own forecasts of passenger demands.
- Problematic assertions were made by the applicant in the oral hearing about how Portobello and Rathmines could be served by a *MetroLink* extension. The Revised Application seems to implicitly accept that these assertions are problematic and just evades the issue.
- A key rationale for Charlemont is the apparent ability asserted by the applicant to run more trams south of Charlemont, an ability challenged at the oral hearing. The Revised Application seems to suggest 30 trams an hour south of Charlemont with 20 north; notably it is silent on our challenges as to how this is to be done. We are sceptical that this is feasible.
- We contend that the stairway interchange between street and Luas is grossly inadequate and endangers public safety. We believe that it entails serious risk, and that injuries minor or serious are inevitable.
- We therefore contend that the Charlemont leg of *MetroLink* should be dropped: if it is to be revisited, the applicant needs to address the above points for the Board in a further application.

Main points

1 An unstated assumption underlying the Original Application to An Bord Pleanála derived from an NTA/Jacobs report[1] in which it was stated that the continuation of *MetroLink* to South West Dublin would have a Benefit to Cost ratio of 0.8 and that continuing *MetroLink* to South West Dublin would not be viable. At the Oral Hearing on 25 March 2024, Professor Austin Smyth demonstrated that the NTA/Jacobs study contained certain serious flaws and, that if the study had been carried out to contemporary standards, the Benefit to Cost ratio would likely lie in the range 1.6 – 2.2[2], i.e. at least double the NTA/Jacobs estimate and similar to the estimated Benefit to Cost ratio of the proposed *MetroLink* project. As **none of Professor Smyth's findings have been disputed by the Applicant, why have they not been addressed?**

Professor Smyth's findings regarding the possible viability of continuing *MetroLink* to South West Dublin are a game changer. Nevertheless, in the Revised Application, the Applicant has persisted with the assumption that continuing *MetroLink* to South West Dublin would not be viable and, in the Revised Application, the Applicant has completely ignored Professor Smyth's Audit of the NTA/Jacobs study and has continued to direct *MetroLink* towards South East Dublin.

The Revised Application shows that the Southern end of *MetroLink* was designed to facilitate the 'deferred' project of converting to metro the Luas Green Line from Ranelagh onwards[3]**.**

This 'deferred' project

- Has no benefit-cost appraisal
- Has no Government approval
- Has no Railway Order.

Accordingly, the proposed partial development of the Southern end of *MetroLInk* to Charlemont/Ranelagh is premature.

2 In the Original Application to An Bord Pleanála, and based on the flawed *Metro to Knocklyon Feasibility Study*, the Applicant had proposed to continue *MetroLink* from Saint Stephens Green towards South East Dublin (to Charlemont / Ranelagh) despite the fact that South East Dublin is relatively well served by public transport.

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[1] *Metro to Knocklyon Feasibility Study*, NTA/Jacobs, 2021 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.nationaltransport.ie/wp-content/uploads/2021/11/Metro-to-Knocklyon-Feasibility-Study-V3_noWM_opt.pdf

[2] https://knocklyonnetwork.com/metro-south-west-group-report-by-professor-austin-smyth-on-knocklyon-study/

[3] On Day 1 of the Oral Hearing, the Applicant submitted the *Metrolink Route Design Report,* Jacobs IDOM, 2019. **Paragraph 3.2.8 "Green Line Deferral"** states: "While the last station would be Charlemont, the bored tunnel would continue to, and terminate south of Ranelagh, aligned to facilitate a future connection onto the Luas line".

At the Oral Hearing on 25 March 2024, the Metro South West Group (MSWG) set out the relative populations and public transport opportunities in South East and South West Dublin as follows:

South East Dublin has the benefit of both the Coastal DART and the Green Luas Line. In addition, there are two wide roads with sufficient capacity for four lanes of traffic right into the city: Rock Road to Merrion Square and Stillorgan Road to Saint Stephens Green. By contrast, South West Dublin, with a far larger population over a wider area, has only corridors with long narrow stretches and the capacity for only one lane of traffic in each direction.

The Revised Application contains no evidence that there is a public transport deficit in South East Dublin. **However, in the Revised Application, and despite the relatively good opportunities for public transport in South East Dublin, the Revised Application has continued to direct *MetroLink* to Charlemont/Ranelagh in South East Dublin.**

3 The MSWG submission to An Bord Pleanála showed that the cost of continuing *MetroLink* to Portobello/Rathmines would be similar to continuing *MetroLink* to Charlemont/Rathmines, and did not dispute the Applicant's estimate of €650m. Yet the benefits would surely be higher as the greater Rathmines area has a large population; is rich in attractions; and *BusConnects* will fall far short from being able to meet the public transport needs along this corridor[4]. By contrast, Charlemont has few attractions and already has the Green Luas line.

In the Revised Application, material has been provided listing the merits of Charlemont[5]. However, the crucial analysis, which would compare Charlemont with Portobello/Rathmines, is absent from the material.

[4] For an updated analysis, see Annex 1 attached to this letter, sections 3 and 5.
[5] On Day 9, the Applicant submitted *TII Response to Submissions of the Elected Representatives,* TII/NTA, 2024.

The Revised Application has ignored the *a priori* superiority of providing <u>new</u> public transport to Portobello/Rathmines over <u>duplicating</u> good public transport at Charlemont. Instead, the Revised Application has persisted with bringing *MetroLink* to Charlemont / Ranelagh, thereby duplicating the Green Line from Saint Stephens Green at a cost, estimated by the Applicant, at €650m. The Applicant has provided no economic analysis to justify favouring Charlemont over Portobello/Rathmines.

4 The Original Application to An Bord Pleanála ignored the analysis of the Metro South West Group (MSWG), which demonstrated that the NTA's *BusConnects* proposals for corridors A, F and D featured passenger capacities which would fall far below meeting the NTA's own passenger demand forecasts[6]. This disconnect between the NTA's own passenger demand forecasts for South West Dublin and the proposed supply of public transport (only buses) in South West Dublin has been updated by MSWG – see Annex 1, which is attached to this letter.

In the Revised Application, and despite the MSWG analysis, the Applicant has ignored the inability of buses on their own to provide anything approaching sufficient public transport in South West Dublin.

5 in the course of the Oral Hearing on 25 March 2024, MSWG asked the Applicant to explain how, if the *Metrolink* tunnel goes to Ranelagh, could it then proceed from there in a Phase 2 project to serve Rathmines/Portobello as it makes its way through South West Dublin? The Jacobs representative, speaking on behalf of the Applicant, did not answer this question. Instead, he suggested that bringing *MetroLink* to Charlemont/Ranalegh would not prevent – at a future date – bringing in a new metro line from Tallaght to join up with *MetroLink* at Saint Stephens Green. However, there are two serious problems with this assertion.

i. According to the NTA/Jacobs *Metro to Knocklyon Feasibility Study*, this option would cost c. €1.5bn more than 'thru running' to South West Dublin[7].
ii. At the Oral Hearing on 25 March, MSWG put it to Jacobs/the Applicant that this new suggestion would necessitate the closure of part of the *MetroLink* line for an extended period. Was not the projected closure of part of the Green Luas Line for an extended period an important consideration in the decision of Government not to continue *MetroLink* to Sandyford? Surely similar considerations would thwart this new Jacobs/ Applicant suggestion? Neither the Applicant nor Jacobs responded to these MSWG questions at the Oral Hearing.

[6] MSWG submission to An Bord Pleanála, Appendix, Chapter 3.
[7] *Metro to Knocklyon Feasibility Study*, NTA/Jacobs, 2021, paragraph 5.2.

In the Revised Application, the Applicant does not repeat this impractical suggestion. Instead, it includes the *Metrolink Route Design Report*, which lays out clearly the Applicant's intention to extend *MetroLink* along the Luas Green Line. NO details have been provided (in either the Original or the Revised Applications) as to how *MetroLink* could be continued to South West Dublin via Portobello/Rathmines in the future.

6 The Original Application sent 30 trams per hour northwards to Charlemont during busy periods. Of these, 24 trams per hour would proceed to Saint Stephens Green, while 6 trams would not. No details were provided by the Applicant as to how these trams would change direction and proceed back towards Sandyford. Given the absence of any detail, it would appear that it was intended that these trams would reverse from Charlemont back towards Sandyford. The MSWG submission pointed out that this would be an impractical and dangerous arrangement[8]. The Applicant has not responded to these concerns. Instead, in the Revised Application, the Applicant has greatly increased the risks and dangers at Charlemont.

Under the Revised Application, 30 trams would come into Charlemont from Sandyford. 20 of these would proceed to Saint Stephens Green while 10 would go no further North than Charlemont. While (again) no details have been given, it would appear that these empty trams would reverse out from Charlemont in the direction of Sandyford[9].

The Revised Application includes a drawing for the proposed new stairway in front of the Carroll's Building, which links *MetroLink* to the South-bound Luas platform[10]. The Drawing shows that the stairway from ground level to the Luas platforms will have a railing bisecting the stairway, presumably seeking to separate ascending from descending passengers, and each half of the stairway will be 1.2 metres wide.

The following <u>risks</u> would accompany the proposed arrangements at Charlemont:

I. Many South-bound passengers entering the Luas at Charlemont (either those transferring from *MetroLink* or walk ups) would access the Luas South-bound platform via the new proposed stairway on Canal Road (in front of the Carrolls Building) which leads to the South-bound Luas platform. Having reached that platform, however, they would see on the opposite platform a tram arriving into that North-bound platform from Sandyford and decanting all of its passengers. They would realise that this tram will shortly reverse Southwards from the opposite platform. They could be tempted to make for one of these empty trams in preference to waiting for a (possibly) crowded tram coming down from Saint Stephens Green. They might walk or run across the

[8] MSWG submission to An Bord Pleanála, Appendix, paragraphs 7.22-7.24 and MSWG presentation at the Oral Hearing on 25 March 2024.

[9] On Day 9 of the Oral Hearing, the Applicant submitted *TII Response to Submissions of the Elected Representatives at Charlemont Station, 4 March 2024.*
chromextension://efaidnbmnnnibpcajpcglclefindmkaj/https://downloads.metrolink.ie/oh/TII%20Response%20to%20Submissions%20of%20the%20Elected%20Representatives%20at%20Charlemont%20Station%204%20March%202024.pdf

[10] On Day 17 of the Oral Hearing, the Applicant submitted *Charlemont Luas Stairs and Lift Connection*, NTA/TII, 2024. This document clearly shows a stairs divided in two, with each part being 1.2 metres wide.

tracks to gain access[11]. Some of these passengers will have luggage, having come from the Airport.

II. Other 'canny' South-bound passengers (either those transferring from *MetroLink* or walk ups) would do a quick calculation. On the South-bound Luas platform there will be a Luas tram (probably crowded at busy periods) every 3 minutes. However, on the North-bound platform, there will be an empty tram heading towards Sandyford every 6 minutes. They could be tempted to go for one of these empty trams. The obvious way of doing this is to ascend the stairway leading to the 'North-bound' Luas platform to access an empty tram. Several passengers might do this. Having reached this platform, they see that they will have to wait six minutes. However, they then notice a South-bound tram coming into the South-bound Luas platform and it appears – to their surprise – that it is not crowded at all. They could be tempted to cross the tracks to catch this tram. They might walk or run across the tracks to gain access[12]. Some perhaps with luggage, having come from the Airport.

III. Many passengers transferring from *MetroLink* to Luas and *vice versa* will have luggage, particularly those coming to or from the Airport. The width of stairway which will be available to passengers is 1.2 metres. Passengers with luggage will take up practically the full width as they make their way slowly up or down. If following passengers are in a hurry, they be tempted to try and pass out these slow passengers, even though there isn't sufficient room. Alternatively, if passengers, who are in a hurry, are ascending, they may be tempted to use the 'descending' half of the stairway, where they may encounter descending passengers on a 1.2 metre stairway width; if they are descending they might be tempted to use the 'ascending' half of the stairway where they may encounter ascending passengers on a 1.2 metre stairway width[13].

While being clearly aware of this risk, it appears that the Applicant has chosen to rely on the unproven hope that very few passengers with luggage will use the stairs[14].

The dangers that would accompany the proposed arrangements at Charlemont are as follows:

If the above risky behaviours are recurrent, several injuries, minor and serious, are inevitable and possibly some deaths.

[11] Of course, it would be possible to prohibit people from crossing the Luas tracks in such a manner. But how effective is such a prohibition likely to be?

[12] Of course, it would be possible to prohibit people from crossing the Luas tracks in such a manner. But how effective is such a prohibition likely to be?

[13] Of course, it would be possible to prohibit these risky behaviours. But how effective is such a prohibition likely to be?

[14] On Day 21 the Applicant submitted *Carroll's Building Stairs and Lift*, Jacobs IDOM, 2024, wherein it is stated:
"If the lifts are not easily visible and not co-located with the stairs, those with luggage might use stairs when it may be less safe to do so, which could be a cause of accidents. Given the connection to the Airport, we anticipated that people using luggage would be a common feature at Metrolink stations".

Even if there were no other reasons as to why *MetroLink* should not continue from Saint Stephens Green to Charlemont/Ranelagh, these risks and dangers present a compelling basis for refusing permission to bring *MetroLink* to Charlemont/Ranelagh.

Conclusion

7 There are two key reasons as to why the *MetroLink* terminus and its interchange with Luas should be located at Saint Stephens Green rather than Charlemont:

I. An interchange with Luas at Saint Stephens Green would be **SAFE**;
Charlemont would **NOT BE SAFE**.

II. There are two main options for continuing *MetroLink* South of Dublin as a Phase 2 project:

A. Saint Stephens Green to Portobello/Rathmines *en route* to South West Dublin

OR

B. Duplicating the Luas Green Line from Saint Stephens Green as far as Ranelagh and replacing the Luas Green Line from there.

Prima facie, Option A would appear to offer the prospect of much greater Transport User Benefits than Option B. *Explanation:* Option A involves the provision of new public transport to serve a large population which has a severe deficit of public transport, whereas Option B involves the duplication and replacement of good quality public transport for a much smaller population. However, both of these options require evaluation, which is competent and objective. These evaluations have not been carried out.

Locating the terminus at Saint Stephens Green would preserve both of these options as a possible Phase 2 project.

Recommendations of the Metro South West Group

8 When Government decided to shelve the continuation of *MetroLink* to Sandyford, NTA/the Applicant **should have reviewed the options for South Dublin.** Some options that should have been examined seem to offer *a priori* substantial Transport User Benefits and they have the distinction of having been previously approved by An Bord Pleanála[15].

Instead of evaluating such options, NTA/the Applicant simply brought *MetroLink* as far South as they thought was possible along the Sandyford line and shoehorned Charlemont into the dangerous and unsuitable roles of interchange and terminus.

We believe that An Bord Pleanála should neither approve nor reject the *MetroLink* Application in its entirety. Rather, it should approve the Application subject to modifications to the southern end of *MetroLink.*

Three possible decisions for An Bord Pleanála on modifying the southern end of the *MetroLink* Application are outlined as a hierarchy, starting with the most flexible and finishing with the least flexible. **All of these would enable early Government approval to commence the project at Estuary.**

[15]The MSWG presentation at the Oral Hearing on 25 March 2024 outlined the main options which should have been examined. The Revised Application took no notice of these options.

9 Recommendation 1

Grant a Railway Order as far South as Parnell Square East. In the meantime, the Applicant could then review all the options for the southern end of *MetroLink,* including reaping the benefits of incorporating most of the Metro North Option as far as Saint Stephens Green. Continuing to Portobello/Rathmines or Charlemont should also be examined.

Both *MetroLink* and Metro North had stations at the Mater Hospital.

Metro North had three further stations, at Parnell Square, O'Connell Bridge and Saint Stephens Green West. All of these station locations were approved previously by An Bord Pleanála, together with the route linking them together. On Map 1, these are shown in red.

MetroLink has four stations: at O'Connell Street, Tara Street, Saint Stephens Green East and Charlemont. On Map 1, the *MetroLink* proposal is shown in black.

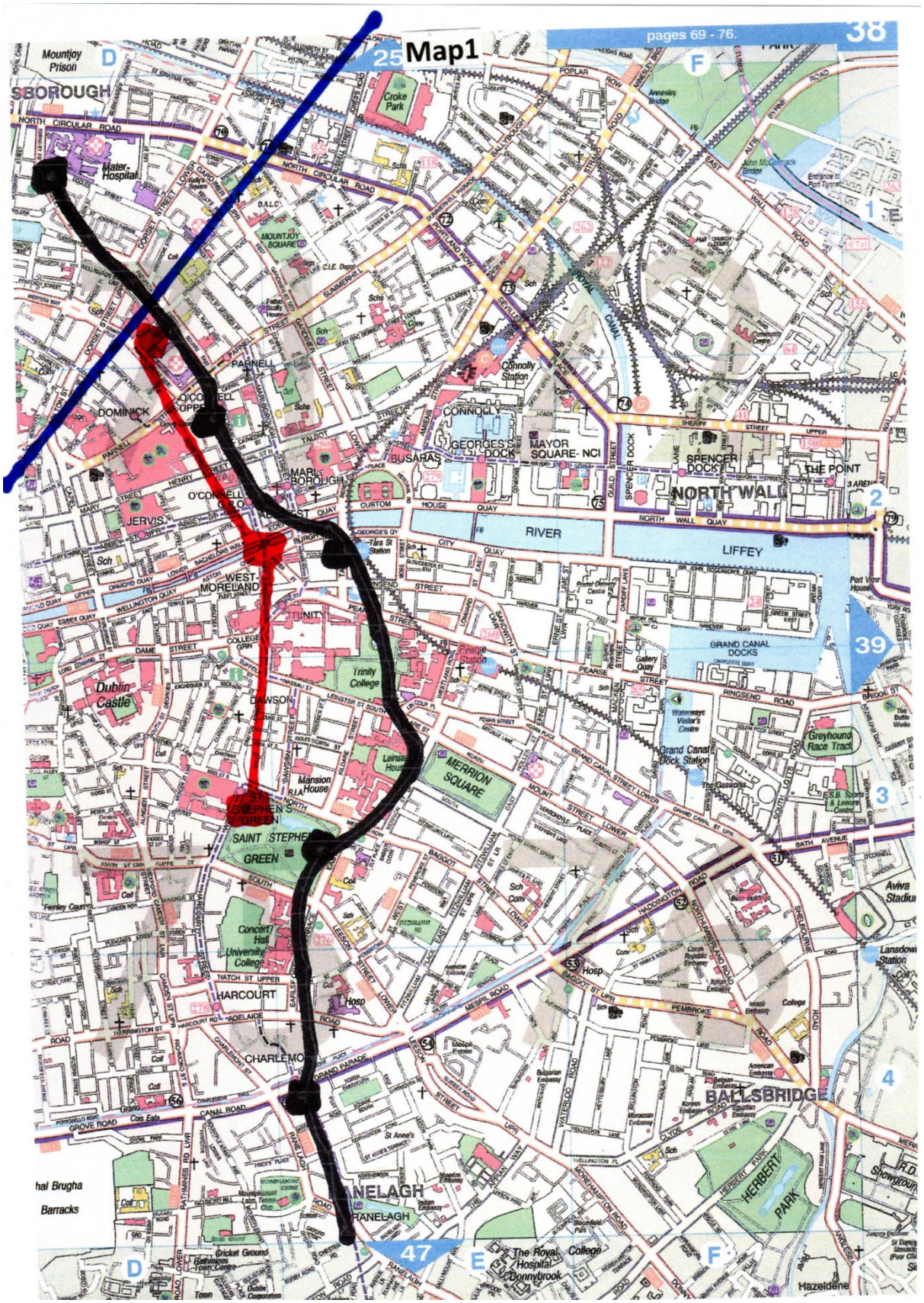
The Metro North Business Case concluded that the interconnection with DART would involve a 'a 'short walk' of around 200m from O'Connell Bridge to the Tara Street DART station. However, this 'short walk' would require passengers to cross three busy streets, Westmoreland Street, D'Olier Street and Tara Street.

The following could be a solution. On exiting Tara Street DART station, there could be METRO signage above an escalator – bringing passengers below street level, to a pedestrian tunnel leading directly to the *MetroLink* station under O'Connell Bridge. This 200m pedestrian tunnel could be located under Burgh Quay. If a 200m walk underground is considered to be too long, travellators could be installed. This pedestrian tunnel could also facilitate switching from both DART and *MetroLink* to the Luas Green Line on Westmoreland Street and vice versa.

From a passenger perspective, this type of pedestrian underground interconnection is comparable to many interconnections, to be seen in metro systems across Europe.

Recommendation 1 would approve *MetroLink* as far as Parnell Square East: the final station would be at the Mater Hospital, with a run-off to Parnell Square East. This is shown by the thick blue line on Map 1.

Map 1 (overleaf) shows Recommendation 1.


Map1
pages 69 - 76.
Mountjoy Prison
Croke Park
Water Hospital
NORTH CIRCULAR ROAD
MOUNTJOY SQUARE
PARNELL
DOMINICK
O'CONNELL
JERVIS
Connolly Station
CONNOLLY
GEORGES'S DOCK
MAYOR SQUARE- NCI
BUSARAS
MARLBOROUGH
CUSTOM HOUSE QUAY
SPENCER DOCK
THE POINT
NORTH WALL
NORTH WALL QUAY
RIVER
LIFFEY
WEST-MORELAND
GRAND CANAL DOCKS
Trinity College
Dublin Castle
DAWSON
MERRION SQUARE
ST STEPHEN'S GREEN
SAINT STEPHEN'S GREEN
Concert Hall
University College
HARCOURT
CHARLEMONT
BALLSBRIDGE
HERBERT PARK
RANELAGH
The Royal Hospital Donnybrook
Barracks
Cricket Ground
Aviva Stadium
Lansdowne Station
Greyhound Race Track
Grand Canal Dock Station
Waterways Visitor's Centre
Gallery Quay
Tara St Station
Pearse Station
Mansion House
Leinster House
Hazeldene

There is no evidence that the Metro North Option was examined by the Applicant. There are many reasons why it should have been examined

If the approved Metro North Scheme is followed by *MetroLink*, it will continue to **St Stephens Green West,** where the station will be adjacent to the Green Luas stop. An Bord Pleanála has previously given its approval to both the Metro North station at St Stephens Green West and the route to it. The interconnection between *MetroLink* and the Green Luas stop would then be very straightforward at St Stephens Green West. A short 'run off' beyond this *MetroLink* station for the trains would mark the end of the project – pending a full review of the options for the south of Dublin, including continuing *MetroLink* to South West Dublin via Portobello/Rathmines.

For passengers, this simple interface between ***MetroLink* and the Green Luas Line** would be far safer and more convenient compared to the proposed interchange at Charlemont.

Benefits from a passenger perspective

The Metro North Option appears to have many benefits from a passenger perspective. The substitution of the previously approved and modified Metro North proposal would offer passengers the following six interchange benefits:

(i) A good interchange with the Luas Red Line on Abbey Street, with a 100m walk on the surface; this is currently sadly lacking in the present plan and is an obvious defect.
(ii) Good interchange with DART at Tara Street (c.200m uninterrupted walk underground).
(iii) Good interchanges with numerous buses along both quays and O'Connell Street - lacking in the current plan.
(iv) Good interchange with the Green Luas Line on St Stephens Green West.
(v) Good interchanges with the Green Luas Line on Westmoreland Street and O'Connell Street.
(vi) Eliminate the unsafe, cumbersome and convoluted proposed interchange with the Green Luas at Charlemont.

Other benefits

There are many other benefits from the Metro North Option:

(i) It eliminates the demolition of apartments etc. and other disruption adjacent to Tara Street.
(ii) It avoids the disruption and damage at Trinity College.
(iii) It avoids the disruption along the route from St Stephens Green to Manders Terrace, including around Charlemont.
(iv) Locating the *MetroLink* station at St Stephens Green West would facilitate its future integration with DART Underground.

Cost reductions

The additional **capital** cost arising from the proposed 200m pedestrian tunnel under Burgh Quay would be far outweighed by:

(i) One fewer station to be excavated.
(ii) Saving on tunnelling, tracks etc. due to reducing the length of *MetroLink* by c. 1.2kms.
(iii) The proposed demolition of apartments adjacent to Tara Street, and subsequent compensation, is avoided as are all other landowner issues south of the Liffey.

Conclusion

On the face of it, this variant of the Metro North proposal compared with *MetroLink* would appear to:

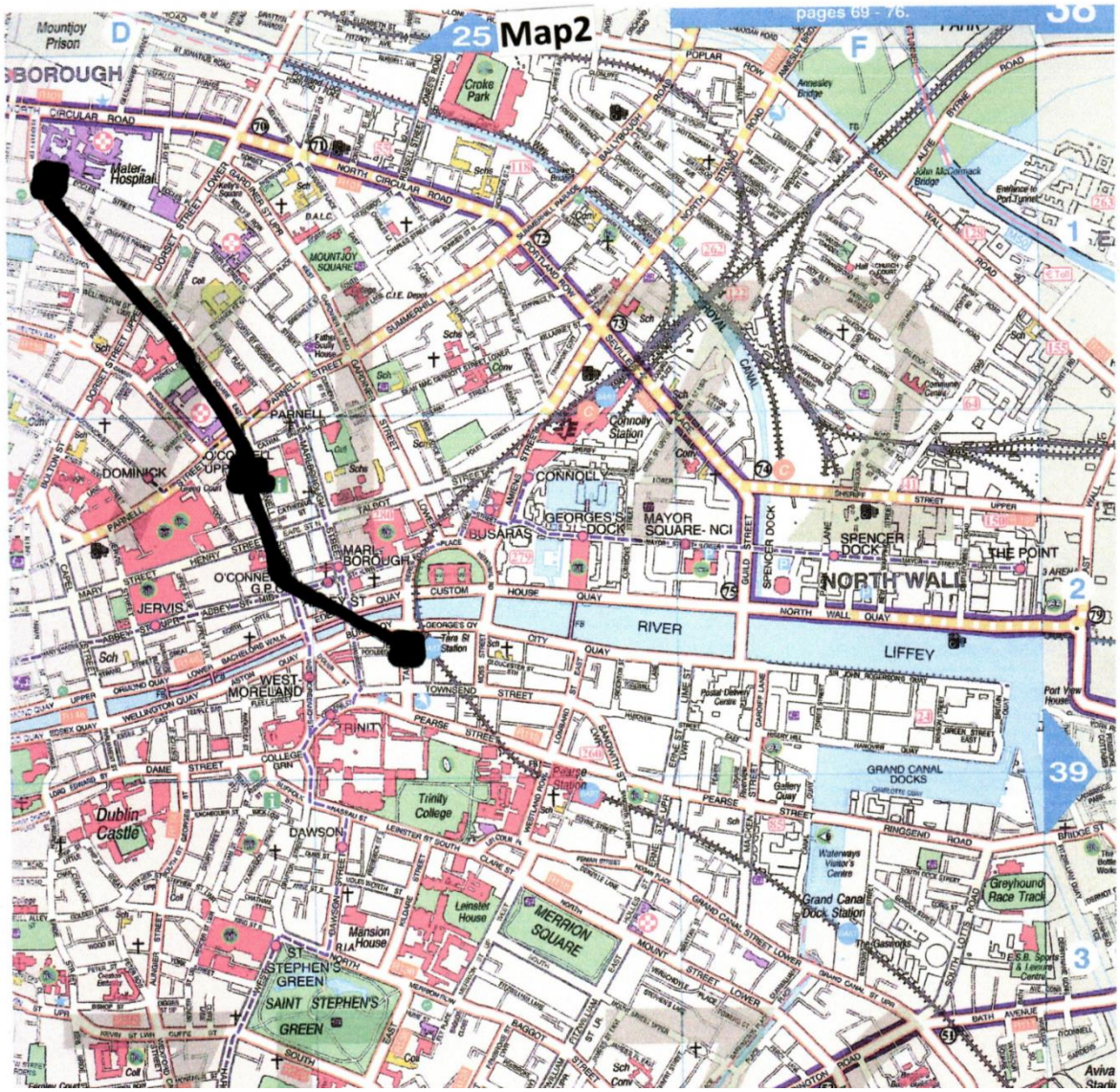
- Be much better for passengers,
- Be much less costly for the Exchequer,
- Entail less damage and disruption, and
- Ensure that the future extension of *MetroLink* towards South West Dublin is not compromised without proper evaluation.

Our Recommendation 1 would enable the examination of this Metro North option to occur. This offers the prospect of avoiding the serious issues of passenger safety, and the adverse implications of demolition, compensation, cost and inconvenience for passengers, which are inherent in the current configuration of the Southern tail of *MetroLink*.

10 Recommendation 2.

Grant a Railway Order as far south as Tara Street. The Applicant could then review all the options from Tara Street, including terminating at Tara Street., and either Saint Stephens Green West or East. Continuing to Portobello/Rathmines or Charlemont should also be examined.

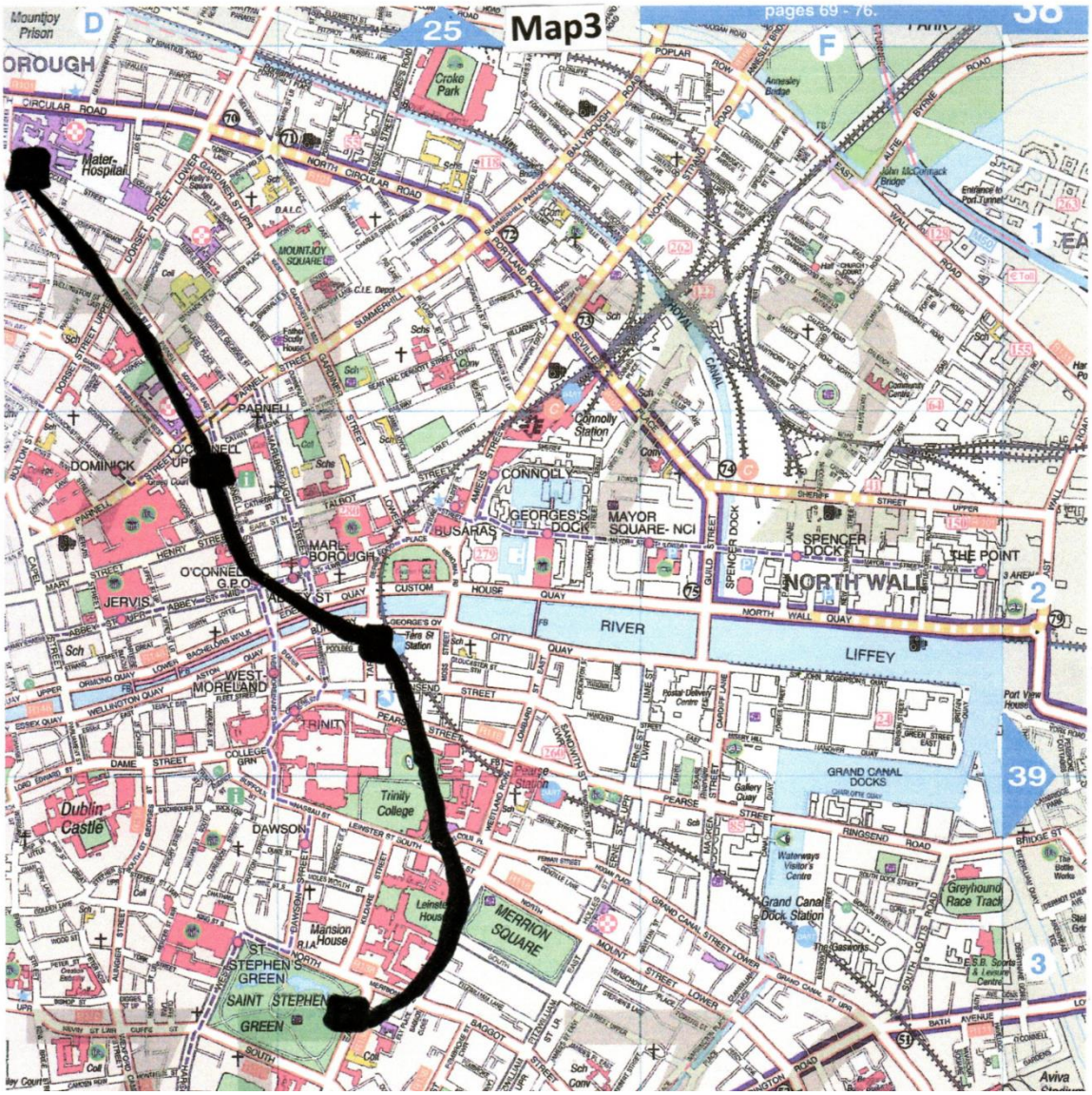
On Map 2, the *MetroLink* proposal is shown in black as far as Tara Street. This is significantly less flexible than Recommendation 1. At the Oral Hearing on 25 March 2024, the Jacobs representative conceded for the first time that 'curvature' was no longer a compelling barrier preventing the routing of *MetroLink* from Tara Street to the West side of Saint Stephens Green. Recommendation 2 would allow different locations in Saint Stephens Green and Portobello/Rathmines to be evaluated.



11 Recommendation 3

Grant a Railway Order as far south as Saint Stephens Green East. In the meantime, the Applicant could then review all the options from Saint Stephens Green East, including terminating at Saint Stephens Green East, Portobello/Rathmines or Charlemont.

On Map 3, the *MetroLink* proposal is shown in black as far as Saint Stephens Green East. This is the least flexible of the recommendations. Nonetheless, it provides that the option of going from Saint Stephens Green to Portobello/Rathmines rather than Charlemont would be evaluated.



12 At a minimum, the approval of An Bord Pleanála should be modified so that *MetroLink* comes no further South than Saint Stephens Green pending a proper evaluation of continuing *MetroLin*k from there to South West Dublin.

Annex 1

Assessment of the Passenger Capacity of the *BusConnects* Corridors in South West Dublin

1 Introduction

1.1 South West Dublin is the area between the Red and Green Luas lines. It has a large population. From Census 2022, the population is c. 355,000. Unlike other areas of Dublin, it has no high capacity, high speed public transport. The 'corridors' into the city have long extended sections where only one vehicle can pass in each direction.

Figure 1: Population and Public Transport

1.2 The original case for continuing *MetroLink* to South West Dublin was based on the inability of buses ***on their own*** to provide sufficient capacity to provide for the transport needs of those living in South West Dublin[1].

The *BusConnects* proposal was devised by a US-based consultant, Jarret Walker, on behalf of the National Transport Authority. Walker did not carry out a demand analysis and the scope of his analysis was confined to buses. As a result,

> ***"The service frequency levels proposals in both the 2018 and the 2019 proposals are reflecting the current passenger demand level"*** (NTA letter to Minister Murphy, 2 December 2019)

[1] *The Case for Continuing MetroLink to South West Dublin,* Metro South West Group, August 2020 https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:eb90ca39-fff8-4acd-9fe5-c1e92f4fb93e

1.3 Walker's final proposal for South West Dublin is summarised in Table 1.

Table 1: Summary of Four Bus Corridors identified by the NTA/Walker
Number of Buses and Passenger Capacity in-bound to the City in the 7am to 8am Peak Hour
from Specific Locations on the Corridors in South West Dublin

Bus corridor	**Current**	**Current maximum**	***BusConnects***	***BusConnects* max.**
	No. of Buses	**Passenger Capacity**	**No. of Buses**	**Passenger Capacity**
Kimmage-City Centre (at Mount Argus)	**9** (3X54a; 6X9)	**720**	**18** (6XF1; 6XF2; 6XF3)	**1,440**
Tallaght-Terenure (at Terenure College)	**19** (12X15; 4X49; 2X65; 1X65b)	**1,520**	**10** (5XA1; 5XA3)	**800**
Rathfarnham-City Centre (at junction with Rathdown Park)	**12** (6X15b; 6X16)	**960**	**18** (5XA2; 5XA4; plus 2X74; 6X85))	**1,440**
Greenhills-City Centre (at Crumlin Hospital)	**23** (6X27; 1X56a; 5X77a; 1X77x; 6X123; 4X151)	**1,840**	**24** (4XD1; 4XD2; 4XD3; 2XD4; 2XD5 plus 2X72; 6X73)	**1,920**
Totals	**63**	**5,040**	**70**	**5,600**

Sources: New Dublin Area Bus Network, NTA, September 2020 and contemporaneous bus timetables

This table was produced by the Metro South West Group (MSWG), representing 40 residents associations in South West Dublin. The proposal to provide only 7 additional buses in the peak morning hour would do little to address the need to promote much greater use of public transport in South West Dublin.

Walker projected that 32 buses would enter Terenure Road East in the period which he regarded as the peak morning hour (7-8am). MSWG pointed out that this was far higher than the then current inflow of buses (19) and would present considerable difficulty. The limited potential of some city centre streets – such as Dean Street and Dawson Street – to absorb increased numbers of buses was highlighted.

1.4 In response to the MSWG analysis, the NTA asserted – without either evidence or analysis – that the proposed bus corridors could carry 'multiples' of the numbers of buses that were proposed by Jarret Walker[2]. Neither the size of the multiples nor where they might be applied were specified.

1.5 In the *Transport Strategy for the Greater Dublin Area 2022-2042*, the only provision for public transport in South West Dublin for the next 20 years is buses. MSWG's primary concern with *BusConnects* is **that its corridors cannot provide sufficient public transport capacity in South West Dublin.**

[2] Letter NTA to Minister Eoghan Murphy, 2 December 2019

In addition, MSWG noted that previous studies of Luas On-Street for South West Dublin had concluded that this option would not be possible because of narrow streets[3].

1.6 In the below analysis, MSWG asks the question:

How many buses are required to pass in-bound through 3 narrow roads in the peak morning hour to meet the NTA's passenger demand forecasts?

2 Methodology

2.1 In the submissions for *BusConnects* to An Bord Pleanála, the applicants - the National Transport Authority and Transport Infrastructure Ireland - show the numbers of passengers which they forecast will be on the buses at various points on the corridors during the peak hours of the day in 2028 and 2043. However, NTA/the applicant are silent on the numbers of buses which they propose will carry these passengers on the different corridors. Now that all of the corridors have been submitted to An Bord Pleanála, it is appropriate to ask: How many buses are required to serve the NTA/the applicant passenger forecasts? In Sections 3-5, we tease out the answers and pose the question: How could the required number of buses travel through the following corridors:

- Terenure Road East
- Dawson Street
- Bachelors Walk.

2.2 In their applications to An Bord Pleanála, the applicants propose standard double deck buses with seating for c. 80 passengers[4]. In this MSWG analysis, it is assumed that the capacity of these buses is 90 passengers, including some standees.

2.3 Walker had counted the number of buses which he intended to put onto the corridors throughout the day, including in the peak morning hour, which he regarded as 7-8am. He indicated that the numbers of buses could vary depending on passenger demand. Walker's numbers are shown in the analysis with reference to three narrow roads: Terenure Road East, Dawson Street and Bachelors Walk (part of the North Quays).

2.4 The applications to An Bord Pleanála by NTA/the applicant do not detail the numbers of buses on the corridors[5]. However, forecasts are supplied showing the numbers of passengers which are forecast to be on board buses during the peak hour at defined points on each corridor. These forecasts relate to 2028 and 2043 and they assume the morning peak is from 8-9am rather than the 7-8am peak, which was assumed by Walker. In estimating the numbers of buses that will be required to service these passengers, it is necessary to make assumptions regarding the average occupancy of buses during the morning peak.

2.5 While the theoretical capacity of a conventional double deck bus is approximately 90 passengers, in reality assuming an average load of 90 passengers per bus is unrealistic. In all

[3] MSWG submission to An Bord Pleanála, Appendix, paragraphs 4.14-4.17.

[4] *BusConnects Templeogue/Rathfarnham Core Bus Corridor Scheme, EIAR Volume 2 of 4, Main Report, Chapter 3, page 6.*

[5] However, see Section 6: Sensitivity Analysis.

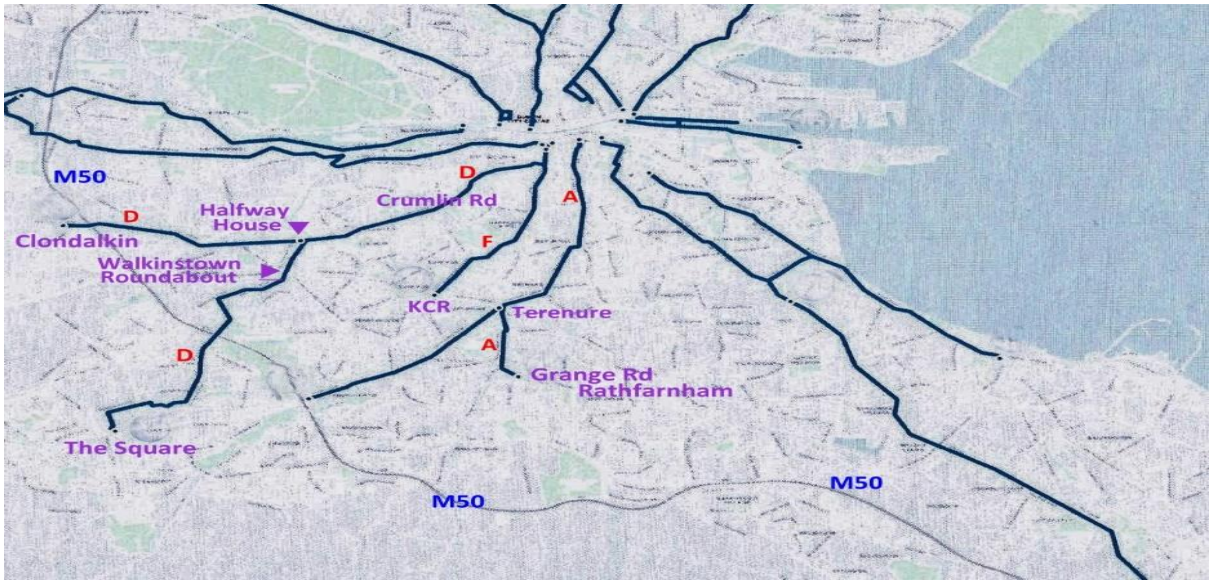
likelihood such a number would prevent efficient operation of services with headways of 1 minute or less. This is not least because of the dwell times that would become evident with people trying to board and alight from already very crowded vehicles including the challenge of sustaining efficient use of the stairs to/from the upper deck. Buses would bunch and speeds and punctuality would inevitably suffer. Moreover, this takes no account of intending passenger behaviour. Finally, a significant number of bus users avoid travelling in the upper deck which causes even more crowding on the lower deck and extended dwell times[6].

2.6 Based on observation of bus operating practice and travel patterns in the real world in Ireland and the UK, where double deck operation is widespread in urban areas, a more realistic assumption would be to anticipate average peak hour bus loadings to lie close to 50% and typically not higher than 75%.

2.7 In the analysis, we use two assumptions for average bus occupancy: 75 per cent and 50 per cent. We apply these factors to the highest patronage shown by NTA/the applicant on each corridor for 2028 and 2043.

2.8 The applications to An Bord Pleanála do not show how buses will make their way through the city centre streets.

Figure 2: The 'Hole in the Middle' of Dublin



[6] Similar points were made 23 years ago by the Dublin Transportation Office, a forerunner to the NTA, in *A Platform for Change*, Dublin Transportation Office, 2001, page 25.

2.9 For example, the Rathfarnham/Templeogue Application to An Bord Pleanála finishes at the bottom of South Great Georges Street. The Swords Application finishes in Parnell Square. But how do buses go over and back between these two places? The applications to An Bord Pleanála do not tell us, as the north side and south side applications are separate. As we all know, the city centre is the most congested and contested part of the city. It is not at all clear, that driving unknown numbers of buses on unknown routes is possible or viable in the city centre.

2.10 For our analysis, some estimation informed by professional and local knowledge is required as to how it is intended that the various corridors join up. In the estimation, some clues contained in Walker are followed. Also, it is assumed that the *Dublin City Centre Transport Plan* (NTA, Dublin City Council) will be implemented. This Plan provides, *inter alia*, that Dame Street, from South Great Georges Street to College Green, will be closed to traffic. The Plan also provides that Parliament Street will be closed to traffic and that the two bus lanes on Bachelors Walk will be reduced to one.

2.11 The number of buses for the south west city under the current *BusConnects* proposal is a minimal increase from 63 to 70 in the peak morning hour – see Table 1 above. NTA forecasts provide for much greater numbers of passengers per hour than will be accommodated on these buses. NTA are silent on the important issue of the average number of passengers on a bus at peak, but we would submit that a figure of 50% to 75% is reasonable – see paragraphs 2.5-2.6 above.

2.12 There are three sample "choke points" we have identified: Terenure Road East, Dawson Street and Bachelors Walk, all of which are relevant to south west city services. Bachelors Walk also has the additional issue of many long distance services. Our analysis set out below in sections 3, 4 and 5 below is that each of these will struggle to deal with either the numbers of buses in the current *BusConnects* proposal or with any greater forecasts. The Applicant has failed completely to deal with this. We believe that a bus only solution for the south west city simply will not work because these choke points will not be able to cope and therefore a rail option is needed.

3 Terenure Road East

3.1 Here is a photo of the Southern entrance to Terenure Road East, which is located 5kms from the city centre. This shows that the road is very narrow, with room for only one lane of traffic in each direction.

Figure 3: Terenure Road East

3.2 Under *Busconnects*, some buses would turn right from Rathfarnham Road into Terenure Road East. That road would also receive buses and general traffic from Terenure Place, which is right opposite Terenure Road East. Terenure Place would receive buses from Templeogue Road, which would only contain buses and bikes. General traffic which now uses Templeogue Road would be diverted at Spawell, Templeogue Bridge and Templeville Road to Kimmage Road West or the KCR. There they could go to town via Crumlin (Stannaway and Clogher Roads) or they could access Terenure via Terenure Road West: no doubt, many motorists would choose this option. Some 130m beyond the entrance to Terenure Road East, there is a large ALDI supermarket on the left hand side with parking for c. 100 cars. A signalised pedestrian crossing links this supermarket with a school and church on the Eastern side of the road.

3.3 Table 2 shows the current number of buses entering the southern end of Terenure Road East from 8-9am.

Table 2: Number of in-bound buses entering Terenure Road East 8-9am[7]
Current Situation (2024) and Walker Proposal (2020)

Current situation		***BusConnects* Walker 2020**	
Route	**Quantity of buses**	**Route**	**Quantity of buses**
15	7	A1	5
65	1	A2	5
65b	1	A3	5
15a	4	A4	5
S4	6	S4	6
		81	4
Total	**19**	**Total**	**30**

Currently, Terenure Road East receives 19 in-bound buses in the 8-9am peak hour and is highly congested.

Under Walker's *BusConnects* proposal, in addition to receiving 20 'A' buses in the peak hour, Terenure Road East would be expected to also receive 6 'S4' orbital buses and 4 '81' buses via Terenure Road West, giving a total of 30 buses in the peak hour. This is a bus every 2 minutes, in addition to cars, vans, taxis, bikes etc. To increase the number of buses in the peak hour, as proposed in Walker's *BusConnects*, would be a very formidable challenge and may not be practical.

3.4 In their application to ABP, NTA/the applicant have provided forecasts for the numbers of passengers which are forecast to want to be on board in-bound buses in Terenure Road East from 8-9am. The forecasts are[8]:

Year	**Passengers**
2028	3,750
2043	4,250.

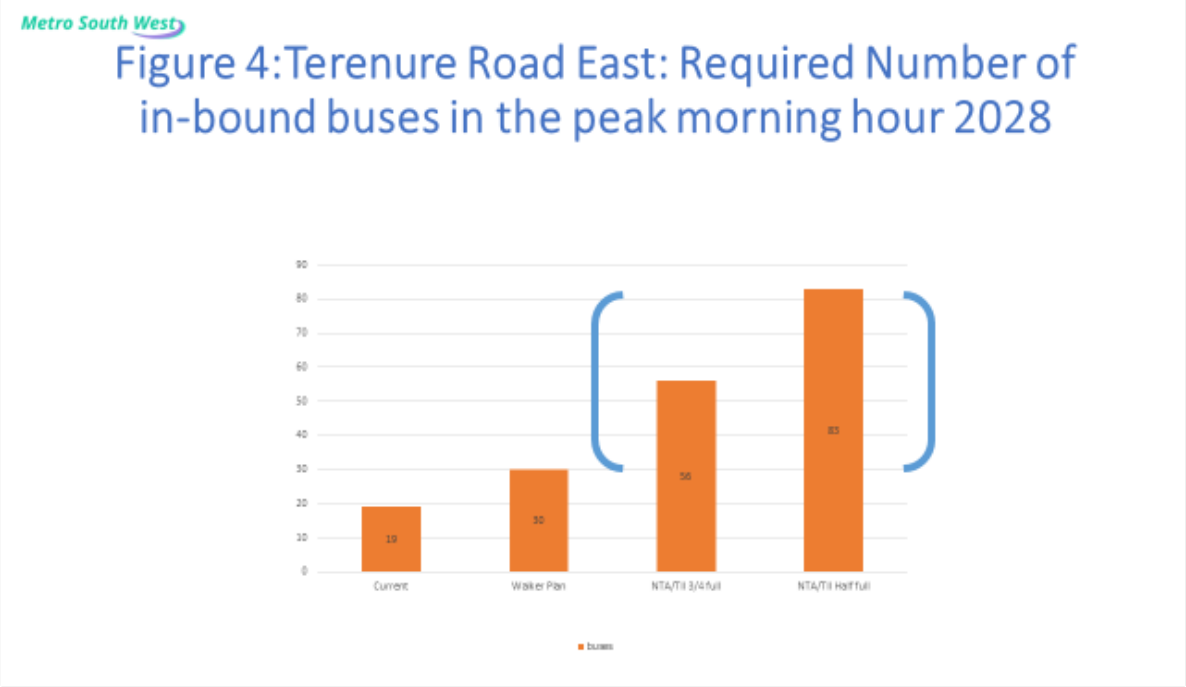
3.5 For our analysis, these passenger forecasts are translated into numbers of buses which will be required to serve this demand, assuming 50 per cent and 75 per cent average bus occupancy (see para. 2-4-2.7 above). Table 3 shows the results.

Table 3: Number of Buses Implied by Passenger Forecasts for Terenure Road East, Peak Hour 8-9am in-bound 2028 and 2043

Year	**No. of passengers**	**50% occupancy**	**75% occupancy**
2028	3,750	83	56
2043	4,250	94	63

The minimum projection in Table 3 is that the required number of buses would be almost treble the current situation. Figure 4 shows the data in diagrammatic form for 2028.

[7] Walker's peak morning hour is 7-8am whereas the NTA/the applicant peak is 8-9am. The 8-9am period is shown here to facilitate comparison with NTA/the applicant.
[8] EIAR, Vol 2 of 4, Main Report, Chapter 6: Traffic and Transport, Diagrams 6.11 and 6.15



Excess buses shown in blue

If Walker's projected number of buses in the peak hour (30) was difficult and challenging, what are we to make of the fantastic figures in the last two columns – at a minimum almost three times the current number of buses – which are required to serve the passenger forecasts which have been supplied to An Bord Pleanála? And these buses will be mixed with cars, vans, lorries and bikes on the corridor. Is it the case that the buses which are in excess of Walker (shown in blue on Figure 4) are simply impractical?

3.6 In this analysis, it is assumed – optimistically – that it is just about possible to implement Walker's throughput of buses, and also that all buses which arrive at Terenure Road East are full (90 passengers).

Metro South West

Figure 5 The systematic under provision of public transport has consequences

In 2028, 3,750 people will want to be on buses serving Terenure Road East (NTA).
But buses which fit on the road (30) will hold a maximum of 2,700 passengers.

Consequences for passengers:

Excluded	1,050 …over one in four of potential passengers.
Discouraged	All passengers who have difficulty getting a bus.

Result: The suppression of passenger demand, so that

Passenger demand will SHRINK to meet insufficient supply.

Conclusion of Section 3: Terenure Road East

3.5 Under the NTA/the applicant *BusConnects* proposal, the 'A' corridor falls far short from being capable of supplying sufficient buses to meet the demand for public transport in South West Dublin

4 Dawson Street

4.1 Similarly when we get to Dawson Street we get a similar result. Dawson Street is narrow with Luas tracks in both directions and general traffic is not permitted on part of the street. Buses, trams etc. must pass through 4 sets of traffic lights on Dawson Street[9]. There is a Luas stop at Hodges Figgis bookshop and there is a bus stop also. A feature to note is that if a vehicle stops, any other vehicles which are close behind must stop also. For cyclists heading towards the city centre, the gap between the kerb and the Luas rail is very narrow in some places; this means that many cyclists occupy the space between the Luas tracks. Here is a picture of Dawson Street.

Figure 6: Dawson Street

[9] Traffic lights are at the junctions with St Stephens Green, South Anne St, Duke St and Nassau St.

4.2 Currently 44 in-bound buses enter the Southern end of Dawson Street in the peak morning hour and all of them proceed onto Nassau Street[10].

4.3 For Dawson Street, Walker sends in buses from the 'F' corridor (Kimmage) and the 'E' corridor (Bray/Stillorgan) , in all 34 buses in-bound in the peak morning hour[11], which is fewer than the current inflow of buses. The reason for this is unknown.

4.4 In their application to ABP, NTA/the applicant have provided forecasts for the numbers of passengers which are forecast to want to be on board in-bound buses which serve Dawson Street from 8-9am. The forecasts are[12]:

Year	**Passengers**
2028	6,750
2043	6,850.

4.4 However, for 2028, depending on the assumptions used, the NTA/the applicant passenger demand projections would require 100 to 150 buses in the peak hour to serve this demand. The details are in the attached Data Sheet. To these numbers of buses must be added Luas trams (projected to increase to 24 long trams in the peak hour), provincial buses, hop-on hop-off, tour buses, taxis, bicycles. The minimum requirement for 2028 is that the number of buses would be more than double the current level. This appears to be impractical.

4.5 For 2043, depending on the assumptions used, NTA/the applicant are *implicitly* proposing 101 to 152 buses in the peak hour. The details are in the Data Sheet. To these numbers must be added approximately 24 long Luas trams, provincial buses, hop-on hop-off, tour buses, taxis, bicycles.

4.6 What is the maximum number of buses which can travel down Dawson Street? Walker is of little help as he sends in fewer than the current number of buses.

4.7 In this analysis, it is assumed – optimistically - that it is just about possible to implement the current throughput of buses plus 50 per cent (i.e. 66 buses) and that all buses are full. Any required buses in excess of 66 are regarded as being impossible. These are shown in blue in Figure 7.

[10] 3X155; 6X145; 8X46a; 1X46e; 2X39; 6X39a; 2X70; 2X11; 3X37; 2X38; 3X38a; 1X7b; 5X26.
[11] Details are in the attached Data Sheet.
[12] EIAR, Vol 2 of 4, Main Report, Chapter 6: Traffic and Transport, Diagrams 6.11 and 6.15

Figure 7: Dawson Street. Number of in-bound buses in the peak morning hour 2028

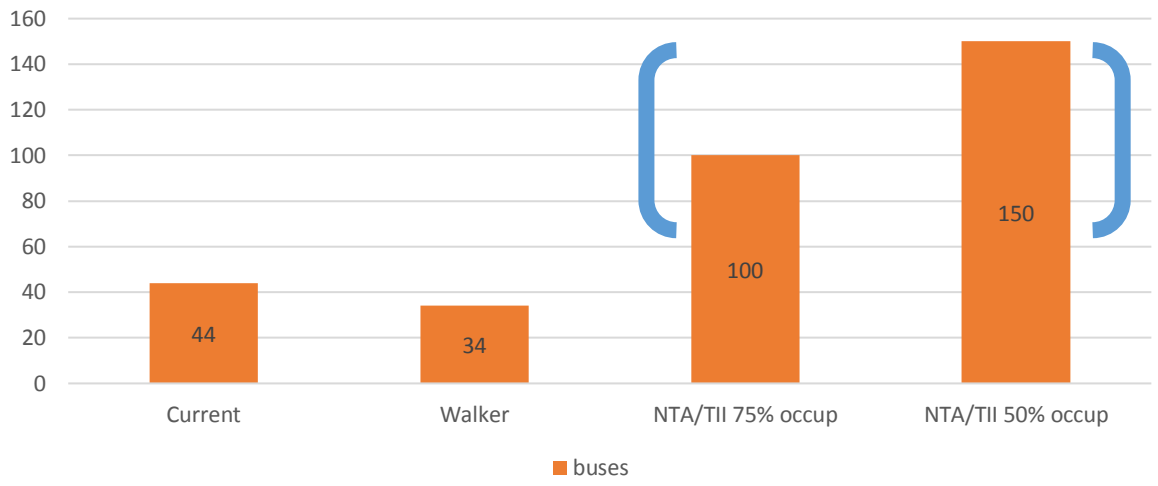


Figure 8 shows the consequences of underproviding public transport on buses serving Dawson Street.

Metro South West

Figure 8 The systematic under provision of public transport has consequences

In 2028, 6,750 people will want to be on buses serving Dawson Street (NTA).
But buses which fit on the road (60) will hold a maximum of 5,400 passengers.

Consequences for passengers:

Excluded	1,350 … one in five of potential passengers.
Discouraged	All passengers who have difficulty getting a bus.

Result: The suppression of passenger demand, so that

Passenger demand will SHRINK to meet insufficient supply.

4.8 Buses serving South West Dublin constitute the majority (53 per cent) of the buses in-bound on Dawson Street in the peak morning hour[13]. However, as both the 'E' and 'F'

[13] Based on Walker's presumed bus routes and numbers of buses through the city. The NTA/the applicant applications to ABP don't identify the numbers of buses which will be required or provided on the different routes and corridors.

corridors enter Dawson Street, we don't know how the lack of service will be apportioned between them.

Conclusion of Section 4: Dawson Street

4.7 Under the NTA/the applicant *BusConnects* proposal, Dawson Street falls far short from being able to supply sufficient capacity to meet the forecast demand for public transport in South West Dublin.

5 Bachelors Walk

5.1 Currently, there are two bus lanes on Bachelors Walk, together with a lane for general traffic.

Here is a picture of Bachelors Walk at its junction with O'Connell Street after the *Dublin City Centre Transport Plan* (NTA, Dublin City Council) is implemented.

Figure 9: Bachelors Walk per *Dublin City Centre Transport Plan 2023*

There will be two cycle lanes, coloured pink, on the southern side of the street and one bus lane, coloured grey, on the northern side for buses and taxis. According to the *Plan*, general traffic will not be permitted to enter Bachelors Walk.

5.2 Currently, 67 in-bound buses enter Bachelors Walk in the peak morning hour[14].

5.3 In Walker's plan for Bachelors Walk, which was produced in 2020, he sent 88 buses in-bound along this corridor in the peak morning hour[15]. To these must be added, provincial buses, hop-on hop-off buses, tour buses and taxis. The junction of Bachelors Walk and O'Connell Street is very busy. Firstly, there are large numbers of pedestrians crossing over and back the mouth of Bachelors Walk. Secondly, there will be approximately 24 Luas trams heading northwards to O'Connell Street. Thirdly, large number of buses which we saw heading northwards in Dawson Street will be passing by[16]. Fourthly, many cyclists turning left from the cycle lane on Bachelors Walk to O'Connell will require protection from traffic signals.

[14] 5X26; 5X37; 4X39;8X39a; 3X70, 6X145; 3X151; 1X51d; 5X83; 1X25; 1X30; 1X69; 1X52; 4XC1; 4XC2; 1XC3; 2XC4; 1X60; 5XG2; 5XG1, 1X25.

[15] Details are in the attached Data Sheet.

[16] No doubt much fewer than the exaggerated numbers, 100-150, which would be required to meet the passenger demand forecasts by the NTA/the applicant.

Fifthly, traffic and pedestrians on the Eastern carriageway of O'Connell Street need to be catered to.

It is most likely impossible to send Walker's 88 buses along only one bus lane on the Bachelors Walk corridor[17].

5.4 If Walker were to update his proposal in 2024, he would have to take account of the following development:

The proposed pedestrianisation of Dame Street from South Great Georges Street to College Green[18].

Walker's 2020 proposal appeared to have all of the 'A' buses turning right at the bottom of South Great Georges Street. Also, his buses 73 and 85 would use this part of Dame Street. No doubt, in 2024, Walker would have to redirect these buses by some alternative route to the North side of Dublin. This would most likely mean that these re-directed buses would travel along Bachelors Walk. This supposed updating of Walker's proposal to 2024, would increase the throughput of buses from 88 (his original proposal) to 120 (Walker's proposal updated to 2024)[19].

5.5 For 2028, depending on the assumptions used, the NTA/the applicant passenger demand forecasts would require 166 to 249 buses in the peak hour, plus provincial buses, hop-on hop-off, tour buses, taxis. The minimum forecast for 2028 is that the number of buses would be two and a half times the current level. This appears to be impractical.

Figure 10 shows the data in diagrammatic form for 2028.

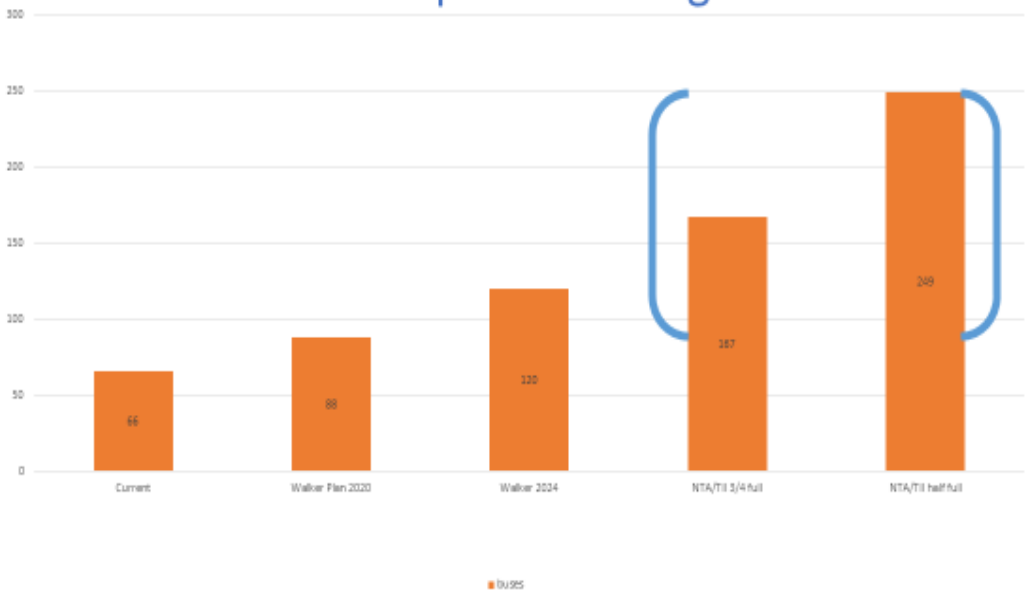
[17] It is worth noting that Jarret Walker may not have been aware of the intention to restrict Bachelors Walk to one bus lane.

[18] As proposed by the NTA and Dublin City Council. Not only is this proposal contained in the *Dublin City Centre Transport Plan* (NTA, Dublin City Council) but a planning application for this is currently being prepared and an international architecture competition (co-funded by the NTA and DCC) is underway to decide the best design.

[19] The details are in the attached Data Sheet. If as an alternative, Walker in 2024 would redirect the 'A' buses via Dawson Street, this alternative would come up against the inability of Dawson Street to take any of these buses. (See Section 4 above.)

Metro South West

Figure 10: Bachelors Walk: Required number of in-bound buses in the peak morning hour



In this analysis, it is assumed – optimistically – that it is just about possible to implement Walker's throughput of buses (despite the proposed elimination of one of the bus lanes!) and also that all buses are full (90 passengers). The excesses, shown in blue in Figure 10, are simply impractical.

5.6 For 2043, the NTA/the applicant passenger demand forecasts would require 160-238 buses in the peak hour to serve this demand. In addition, there would be provincial buses, hop-on hop-off, tour buses, taxis. This appears to be impractical.

5.7 Figure 11 shows the implications for passengers of systematically under-supplying public transport.

Metro South West

Figure 11 The systematic under provision of public transport has consequences

In 2028, 11,200 people will want to be on buses serving Bachelors Walk (NTA).
But buses which fit on the road (88) will hold a maximum of 7,920 passengers.

Consequences for passengers:

Excluded	3,280 …almost one in three of potential passengers.
Discouraged	All passengers who have difficulty getting a bus.

Result: The suppression of passenger demand, so that

Passenger demand will SHRINK to meet insufficient supply.

5.8 Buses serving South West Dublin, including the 'A' and 'D' corridors, constitute the majority (54 per cent) of the buses in-bound on the Bachelors Walk corridor in the peak morning hour.

5.9 Under *BusConnects*, many corridors and other buses enter Bachelors Walk; we don't know how the lack of service will be apportioned between the several passengers on these corridors and bus routes.

Conclusion on Section 5: Bachelors Walk

5.10 Under the NTA/the applicant *BusConnects* proposal, several corridors feed into Bachelors Walk, including two from South West Dublin, the 'D' and 'A' corridors. The analysis shows that the corridors fall far short from being capable of supplying sufficient capacity to meet the forecast demand for public transport in South West Dublin.

6 Sensitivity Analysis

6.1 In the *BusConnects* Templeogue/Rathfarnham application to ABP, some resilience testing is carried out[20]. This is one place in the *BusConnects* Templeogue/Rathfarnham application to An Bord Pleanála where the number of buses is quantified.

6.2 This section of the application to ABP shows what would happen if the projected number of buses on Aungier St[21] were increased by 10 from 46 per hour to 56 in 2028. (While not specified, presumably this relates to in-bound buses in the peak hour.) The results of this sensitivity analysis show only a slight increase in bus journey times and the conclusion is:

> *"This highlights the benefit that the Proposed Scheme infrastructure improvements can provide in protecting bus journey time reliability and consistency, as passenger demand continues to grow into the future*."

6.3 However, this resilience analysis has a strange feature. The main problem lies with the assumption that the base case involves just 46 buses in-bound on this corridor in the peak morning hour. In Rathmines Rd Lower, the NTA's projections for in-bound peak morning bus passengers are 4,000 for 2028 (page 116) and 4,500 for 2043 (page 120). According to our calculations this would require the supply of 67- 100 buses in 2028, depending on occupancy, and 75 to 113 buses in 2043[22].

6.4 We know from Walker (September 2020) that approximately 79% of buses on Lr Rathmines Road enter Aungier St[23]. For 2028, this would imply 53-79 buses entering Aungier Street in the peak morning hour from Lr Rathmines Road. For 2043, this would imply 59-89 buses entering Aungier St in the peak morning hour from Lr Rathmines Road. In addition, Walker shows a further 10 buses entering Aungier St from Merrion Square and Lower Kevin St[24]. Thus, based on the NTA/the applicant passenger forecasts, the range of buses which will be required in-bound in 2028 will be 63-89 depending on occupancy. For 2043 there will be a requirement for 69-99 buses.

Conclusion on resilience testing

6.5 We think that the resilience testing is wholly unreliable. It is based on a maximum of 56 buses an hour, but the passenger figures they themselves project suggest bus numbers in a range from 63 to 99. Why are they keeping the number as low as 56, if not to (vainly) seek to support their fallacious hypothesis that the passenger demands from a section of south Dublin can all be accommodated on buses? We think the resilience testing is inappropriate

[20] In EIAR, Vol 2 of 4 Main Report, Chapter 6, page 148.

[21] It is strange that Aungier Street was chosen for resilience testing, given that the *Dublin City Centre Transport Plan* (NTA, Dublin City Council) envisaged that part of Dame Street could be closed to general traffic; this could result in Aungier Street not being a continuing route for many buses.

[22] Assumed occupancy levels of 75% and 50%.

[23] Total on Lr Rathmines Rd 6X80+20XA+4X81+3X82=33 buses
Of these entering Aungier St 6X80+20XA=26 or 79%

[24] From Merrion Square 3X23+3X24=6 buses. From Upper Kevin St 2X71+2X72=4 buses.

and irrelevant. It does nothing to support the hypothesis that buses on their own are capable of providing sufficient passenger capacity for South West Dublin.

7 Conclusion

7.1 All of the *BusConnects* bus corridors that are proposed by the NTA for South West Dublin will fall very far short from being able to serve the passenger demand which is forecast by the NTA.

Data sheet

1

How many buses are required to pass through Dawson Street in the peak morning hour according to the Walker *BusConnects* proposals (2020)

How many buses are required to pass through Bachelors Walk in the peak morning hour according to the Walker *BusConnects* proposals (2020)

How many buses are required to pass through Bachelors Walk in the peak morning hour according to the Walker *BusConnects* proposals *as updated to 2023*

2

How many buses are required to pass through Dawson Street and Bachelors Walk in the peak morning hour in 2028 and 2043 according to the NTA/the applicant *BusConnects* proposals that are with An Bord Pleanála

How many buses are required to pass through 2 narrow roads
In the peak morning hour (8-9am) in Walker's BusConnects

Description in ABP application	Bus spine/ route	Dawson St In-bound Walker Sep 20 8-9am	Bachelors Walk Walker Sep 20 8-9am	Bachelors Walk Walker 2024 8-9am
Temp/Rath-city	A			20
Belfield-city	B		16	16
Lucan-city	C		20	20
Tal/Clon-city	D		16	16
Bray-city	E	16		
Kimmage-city	F	18		
Liffey val-city	G		10	10
Howth-city	H			
Radials	6			
	8			
	10			
	19			
	20			
	21			
	22			
	23		3	3
	24		3	3
	34			
	35			
	36			
	37			
	48			
	52		1	1
	58		1	1
	60		1	1
	71		2	2
	72		2	2
	73			6
	74		2	2
	80		4	4
	81		4	4
	82		3	3
	85			6
	86			
	87			
	88			
	98			
Totals		**34**	**88**	**120**

How many buses are required to pass in-bound through 2 narrow roads in the peak morning hour (8-9am) in NTA/TII applications to ABP

Dawson Street

Description in ABP application	Bus Spine/ Route	ABP Peak Passengers 8-9am	<<<<<<<<<<<<<2028>>>>>>>>>>>>> 75% occup Buses req'd 8-9am	50% occup Buses req'd 8-9am	ABP Peak Passengers 8-9am	<<<<<<<<<<<<<2043>>>>>>>>>>>>> 75% occup Buses req'd 8-9am	50% occup Buses req'd 8-9am
Temp/Rath-city	A		0	0		0	0
Belfield-city	B		0	0		0	0
Lucan-city	C		0	0		0	0
Tall/Clon-city (2)	D		0	0		0	0
Bray-city	E	4500	67	100	4500	67	100
Kimmage-city	F	2250	33	50	2350	35	52
Liffey Val-city	G		0	0		0	0
Howth-city	H		0	0		0	0
TOTALS			**100**	**150**		**101**	**152**

Bachelors Walk

Description in ABP application	Bus Spine/ Route	ABP Peak Passengers 8-9am	<<<<<<<<<<<<<2028>>>>>>>>>>>>> 75% occup Buses req'd 8-9am	50% occup Buses req'd 8-9am	ABP Peak Passengers 8-9am	<<<<<<<<<<<<<2043>>>>>>>>>>>>> 75% occup Buses req'd 8-9am	50% occup Buses req'd 8-9am
Temp/Rath-city	A	4000	59	89	4500	67	100
Belfield-city	B	900	13	20	1250	19	28
Lucan-city	C	3400	50	76	2600	39	58
Tall/Clon-city (2)	D	1800	27	40	1600	24	36
Bray-city	E		0	0		0	0
Kimmage-city	F		0	0		0	0
Liffey Val-city	G	1100	16	24	575	9	13
Howth-city	H		0	0		0	0
TOTALS			**166**	**249**		**156**	**234**

Annex 2

Metro South West Group Submission to the Oral hearing of An Bord Pleanála

into the *MetroLink* proposal from Transport Infrastructure Ireland 25 March 2024

Good morning Inspector. I am Seán Ward and I am joined by our transport expert, Professor Austin Smyth to my immediate left, and by Brendan Heneghan and Pauline Foster to my right.

The Metro South West Group represents over 40 residents' associations between the Red and Green Luas lines. This area has a population of 355,000 according to the 2022 Census, but no fixed rail link[25].

We welcome the opportunity to make this presentation to An Bord Pleanála about the southern part of *MetroLink*.

South West Dublin is characterised by a large population and narrow streets. The three bus corridors which have been identified by the NTA each have long narrow stretches with room for only one vehicle in each direction. The contrast with South East Dublin is significant, where there is not only a Coastal DART and Green Luas but also two wide roads with room for four lanes of traffic all the way into the city.

It is a serious concern to us that TII simply failed to address many of our points in its reply to our submission. This will become clear today in our oral presentation.

The Metro South West Group presents two core propositions to An Bord Pleanála, together with some other observations.

[25] See Annex 1.

First is that the Southern stump of *MetroLink* should not be pointed towards Charlemont, Manders Terrace and South East Dublin. Rather, it should come no further south than St Stephens Green to facilitate possible future extensions, including a future extension to South West Dublin.

Second is that, once the continuation of *MetroLink* to Sandyford was shelved, TII should have evaluated all the feasible options for a south city terminus, rather than simply going as far as they could along the Green Luas Line.

1 Our first core proposition:

MetroLink should come no further south than St Stephens Green

In support of our contention that the future continuation of *MetroLink* to the South West should have been examined, we explained in our submission why buses and Luas could not provide the solution for South West Dublin and we highlighted the numerous flaws in a metro feasibility study which was conducted by the NTA. Accordingly, our submission to An Bord Pleanala included:

- Firstly, an analysis which showed that buses on their own would fall far short from being able to provide sufficient public transport capacity in South West Dublin due to the narrow road infrastructure[26].
- Secondly, our submission also included the results of previous studies of Luas On-Street solutions, which reported that the narrow streets in South West Dublin made Luas On-Street impractical[27].

None of this analysis has been disputed by TII in their response to our submission. Moreover, our analysis is consistent also with that produced by the Dublin Transportation Office in a document entitled *A Platform for Change,* that was published in 2001. That report recommended a metro solution for South West Dublin. Why has all of this analysis been ignored?

In advance of the *Transport Strategy for the Greater Dublin Area 2022-2042*, the NTA carried out what the Metro South West Group have always considered a very poor quality feasibility study. In our submission to An Bord Pleanála, we listed several flaws in the NTA/Jacobs *Metro to Knocklyon Feasibility Study[28].* Remarkably, all of these flaws had a similar effect – of reducing the estimated Transport User Benefits and the Benefit to Cost Ratio. None of our critique has been disputed by TII in their response. A key deficiency is that the NTA failed utterly to consult with any of the local interest groups, despite being fully aware of our desire to participate. It is clear from other witnesses here that, like the NTA, TII has also failed to engage with communities.

[26] MSWG submission to An Bord Pleanala, Appendix, Chapters 3-4.
[27] Ibid. Paragraphs 4.14-4.16.
[28] Ibid. Chapter 5.

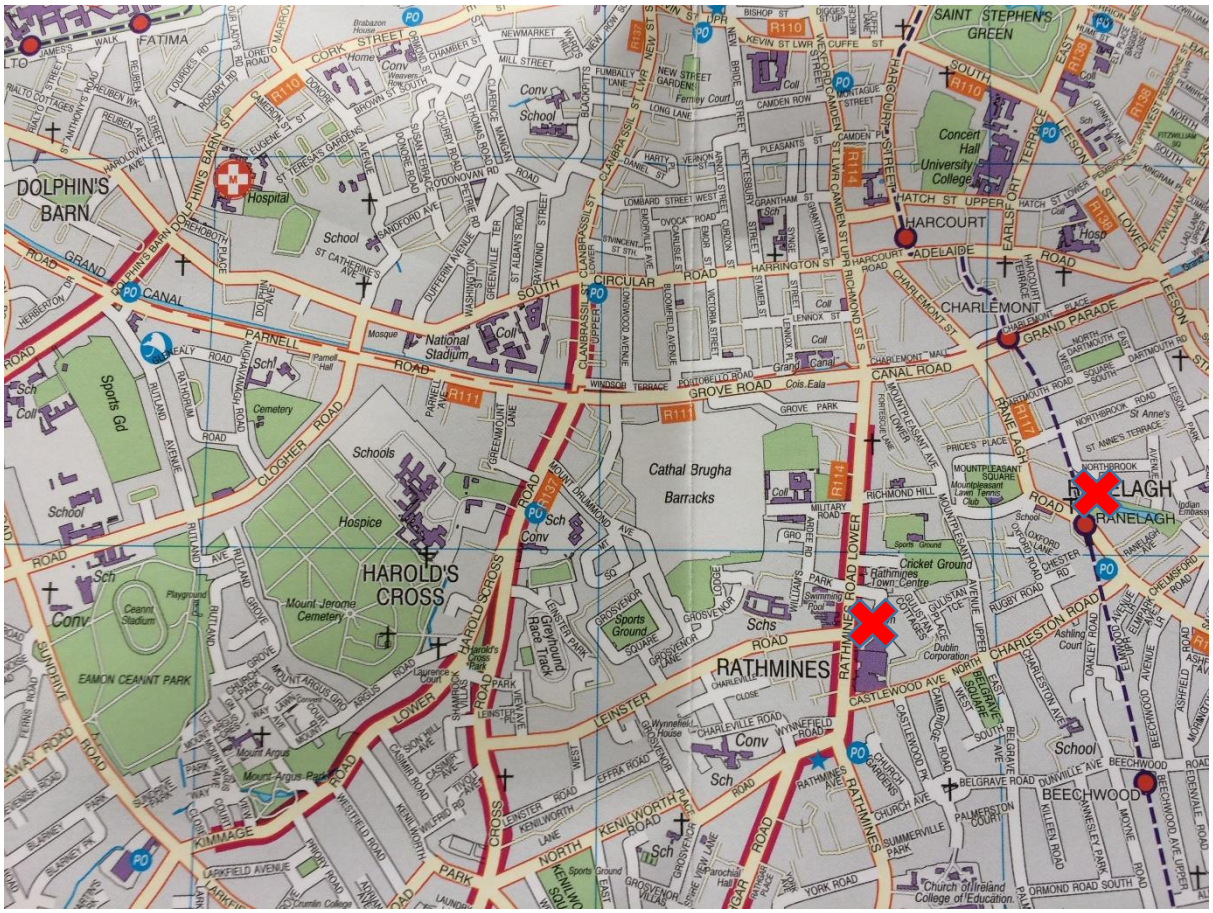
Notwithstanding the flaws in the *Feasibility Study*, however, TII has persisted with its plan to point the southern stump of *MetroLink* towards Charlemont, Manders Terrace and South East Dublin.

We believe that the flawed *Metro to Knocklyon Feasibility Study* has played an important role in diminishing the perceived importance of continuing *MetroLink* to South West Dublin in the eyes of TII. It would appear that the dismissal of a metro to South West Dublin has been central to the TII decision not to 'future proof' its plans. To address the indifferent approach of TII towards the possible continuation of *MetroLink* to South West Dublin, the Metro South West Group felt obliged to ask Professor Austin Smyth to carry out an audit of the *Metro to Knocklyon Feasibility Study*. Profesor Smyth has confirmed our concerns about serious flaws in the *Feasibility Study*. Professor Austin Smyth will now address the Bord.

PROFESSOR SMYTH SPEAKS HERE.

It is clear from Profesor Smyth's report that there is a need to revisit continuing *MetroLink* to South West Dublin before a decision is made by An Bord Pleanála to allow *MetroLink* to head towards Charlemont and Manders Terrace and thereby compromise the economic benefits of subsequently continuing *MetroLink* to South West Dublin.

As Professor Smyth has reported, the optimum route for serving South West Dublin – subject to further evaluation – would serve Portobello/Rathmines to Tallaght. However, TII proposes to send *MetroLink* to Manders Terrace.



Looking at this map, we say that any sensible metro route to the South West should serve Portobello/Rathmines. The red 'X' on the right is Manders Terrace, below which TII proposes to park the Tunnel Boring Machine. The red 'X' on the left is the clock on the Rathmines Town Hall, in the middle of Rathmines.

If *MetroLink* goes to Charlemont and the Tunnel Boring Machine is entombed under Manders Terrace, it may well be possible in a Phase 2 project to continue *MetroLink* to Terenure and beyond. **However, it would not be possible in the future to 'double back' and serve Portobello and Rathmines.**

The importance? Portobello and Rathmines are densely populated and they have many attractions, including third level colleges, schools, library, cinemas, swimming pool, etc. A feasibility study for the conversion of Cathal Brugha Barracks to housing is currently underway.

Duplicating the Luas Green line – by bringing *MetroLink* to Charlemont – would provide negligible Transport User Benefits, as residents in that area already have the Luas. Moreover, the Charlemont area has few trip attractors. However, bypassing Portobello/Rathmines (as is now proposed by TII) would reduce significantly the potential Transport User Benefits of continuing *MetroLink* to South West Dublin as a Phase 2 project.

Our submission explained how continuing *MetroLink* to Charlemont and entombing the Tunnel Boring Machine under Manders Terrace would deplete the benefits of the future continuation of *MetroLink* to South West Dublin[29]. TII has not disputed this analysis.

We wholly reject the contention that a Charlemont terminus keeps all the options for the south city open. Indeed, TII might explain to An Bord Pleanála how connectivity to Portobello, Rathmines or Harold's Cross can be achieved from Manders Terrace.

Now we move on to our second core proposition., which will be explained by Pauline.

[29] Ibid. Chapter 6.

2 Our <u>second</u> core proposition:

Once the continuation of *MetroLink* to Sandyford was shelved, TII should have evaluated <u>all</u> the feasible options for a south city terminus.

It has been argued by persons in their submissions to An Bord Pleanála that a city centre terminus should not be at Charlemont. Various alternative solutions have been proferred: terminate at O'Connell St North, Tara Street, St Stephen's Green East, St Stephen's Green West.

We believe all of these should have been examined in great detail along with the proposition of terminating at Charlemont, a place which is not in the city centre. We believe that the Aarhus Convention applies to this project, and that it requires the assessment of alternatives; this simply has not been done.

We would like to address one particular variant. In assessing the city centre, particular attention should have been given to the Metro North configuration for the South City terminus. Call this the Metro North Option.

Deputy Jim O'Callaghan stated, that the Metro North O'Connell Street station Option, located under O'Connell Bridge, had the significant advantage of having been previously approved by An Bord Pleanála; accordingly, it deserves – and did deserve prior to the application for a Railway Order – particular attention and scrutiny, as it would provide an entry and exit north and south of the quays, on Bachelors Walk and Aston Quay

The Metro North Business Case concluded that the interconnection with DART would involve a 'a 'short walk' of around 200m to the Tara Street DART station. However, this 'short walk' would require passengers to cross three busy streets, Westmoreland Street, D'Olier Street and Tara Street.

The following could be a solution. On exiting Tara Street DART station, there could be al METRO signage above an escalator – bringing passengers below street level, to a pedestrian tunnel leading directly to the *MetroLink* station under O'Connell Bridge. This 200m pedestrian tunnel could be located under Burgh Quay. If a 200m walk underground is considered to be too long, travellators could be installed. This pedestrian tunnel could also facilitate switching from both DART and *MetroLink* to the Luas Green Line on Westmoreland Street and vice versa.

From a passenger perspective, this type of pedestrian underground interconnection is comparable to many interconnections, to be seen in metro systems across Europe.

Furthermore, as proposed under the approved Metro North Scheme, *MetroLink* would continue to **St Stephens Green West,** where the station would be adjacent to the Green Luas stop. An Bord Pleanála has previously given its approval to both the Metro North station at St Stephens Green West and the route to it. The interconnection between *MetroLink* and the Green Luas stop would be very straightforward at St Stephens Green West. A short 'run off' beyond this *MetroLink* station for the trains would mark the end of the project – pending a

full review of the options for the south of Dublin, including continuing *MetroLink* to South West Dublin via Portobello/Rathmines.

Again, for passengers, this simple interface between ***MetroLink*** **and the Green Luas Line** would be far superior to the proposed interchange at Charlemont.

Benefits from a passenger perspective

We say that this Metro North Option has many benefits from a passenger perspective. The substitution of the previously approved and modified Metro North proposal would offer passengers the following six interchange benefits:

(i) A good interchange with the Luas Red Line on Abbey Street, with a 100m walk on the surface; this is currently sadly lacking in the present plan and is an obvious defect.
(ii) Good interchange with DART at Tara Street (c.200m uninterrupted walk underground).
(iii) Good interchanges with numerous buses along both quays and O'Connell Street - lacking in the current plan.
(iv) Good interchange with the Green Luas Line on St Stephens Green West.
(v) Good interchange with the Green Luas Line on Westmoreland Street and O'Connell Street.
(vi) Eliminate the cumbersome and convoluted proposed interchange with the Green Luas at Charlemont.

Other benefits

There are many other benefits from the Metro North Option:

(i) It eliminates the demolition of apartments etc. and other disruption adjacent to Tara Street.
(ii) It avoids the disruption and damage at Trinity College.
(iii) It avoids the disruption along the route from St Stephens Green to Manders Terrace, including around Charlemont.
(iv) Locating the *MetroLink* station at St Stephens Green West would facilitate its future integration with DART Underground.

Cost reductions

The additional **capital** cost of the proposed 200m pedestrian tunnel under Burgh Quay and a short escape shaft would be far outweighed by:

(i) Two fewer stations to be excavated, at Tara Street and Charlemont.
(ii) Saving on tunnelling, tracks etc. due to reducing the length of *MetroLink* by c. 1.2kms.
(iii) The proposed demolition of apartments adjacent to Tara Street, and subsequent compensation, is avoided as are all other landowner issues south of the Liffey.

Conclusion

This variant of the Metro North proposal would:

- Be much better for passengers,
- Be much less costly for the Exchequer,
- Entail less damage and disruption, and
- Ensure that the future extension of *MetroLink* towards South West Dublin is not compromised without proper evaluation.

Accordingly, this variant of the Metro North Option should have been considered and evaluated by TII and the results of this evaluation should have been presented to An Bord Pleanála.

I'll now hand you over to Brendan, who will speak about some other issues in our submission which have not been adequately addressed in the TII response.

3 <u>Other issues</u> which have not been addressed adequately by TII's response

We outline now two other issues of concern which are contained in our written submission to An Bord Pleanála and which have not been addressed adequately if at all by TII in their response:

1) The precise location of a station in St Stephens Green, and
2) The serious drawbacks with Charlemont.

The adequacy of St Stephens Green as an interchange

Our submission argued that locating a *MetroLink* station at Tara Street would not preclude having a final terminus at St Stephens Green West. We disputed the NTA assertion, which was made to the Oireachtas Committee on Transport, that:

> *"The curves involved in coming through Tara Street Station, which was a critical connection for us, and then getting down to Charlemont would not allow us to go to the other side of St. Stephen's Green"*

but without giving any measurement for this curvature[30]. In its submission to An Bord Pleanála, TII stated that:

> *"The eastern side of St. Stephen's Green was identified as the optimum location for the MetroLink station as it would best serve passenger demand from the retail, commercial and cultural trip attractors in the vicinity. Further, the alignment from Tara Station (where MetroLink interchanges with DART and Irish Rail services) towards its terminus at Charlemont imposes turning constraints on the tunnel boring machine (TBM) that favour the eastern side of St. Stephen's Green as an appropriate location."*[31]

But, TII has continued to avoid providing their estimate for the radius of this curvature from Tara St to St Stephens Green West.

In our submission, we quoted an eminent railway engineer who estimated that the radius of curvature from the proposed *MetroLink* station at Tara Street to a possible location on the west side of St Stephens Green would be approximately 500m, which would be completely unremarkable as many metro systems around the world have stretches of tunnel with a radius of curvature much smaller than this. The BART in San Francisco and the Central Line of the London Underground (between White City and Shepherds Bush) are just two examples[32].

In its response to our submission, TII still has not given An Bord Pleanála its estimate for this radius of curvature.

[30] Oireachtas Committee of Transport, 4 May 2022.
[31] TII submission to An Bord Pleanála, Paragraph 2.2.2, Appendix A7.5
[32] MSWG submission to An Bord Pleanala, Appendix, Paragraphs 7.1-7.4.

The drawback of Charlemont as an interchange for passengers

Our submission to An Bord Pleanála went into great detail regarding the unsuitability of Charlemont. In our view the response of TII is entirely inadequate. In the short time available to us here, we will deal with only one aspect: the TII proposal that 30 North-bound Luas trams will arrive in Charlemont, but only 24 will proceed to St Stephens Green, due to a lack of road space in Adelaide Road and Harcourt St.

In our submission, we queried the necessity for this arrangement and pointed out that TII had supplied insufficient detail as to how this arrangement could operate safely, if at all. We set out hypothetical ways in which the turn back of 6 trams per hour could be implemented[33]. In their response, TII still has not provided any detail as to how or where the turn back is proposed to occur. As well as practical problems with this proposal, there are very serious safety issues, which are set out in our submission. For example, if 6 in-bound trams per hour simply reverse southwards from Charlemont, they will be departing from the wrong platform. Many south-bound passengers transferring from *MetroLink* will surely seek to cross the Luas tracks to access these empty trams. Similarly, many south-bound Luas passengers on crowded trams may elect to leave the crowded tram at Charlemont and transfer to a reversing and empty south-bound tram. **These are highly dangerous prospects**.

Several other contributors to this oral hearing will deal with the TII response to other shortcomings in the its proposal to bring *MetroLink* to Charlemont. We will not detain you Inspector, save to say that we support the analysis of these contributors.

I now hand you back to Seán, who will speak about the possible decisions which are open to An Bord Pleanála.

[33] Ibid. Paragraphs 7.22-7.23.

4 Different decisions which are open to An Bord Pleanála

We would finally like to address what you, the Bord, can consider. There are many different decisions which are open to An Bord Pleanála. Either grant or refuse a Railway Order for the *MetroLink* proposal as submitted; or alternatively, approve the project with modifications. We are absolutely clear that all of this project should proceed largely as proposed on the North side of Dublin. Therefore, we believe that An Bord Pleanála should neither approve nor reject the *MetroLink* proposal in its entirety. Rather, it should approve the project with modifications to the southern end of *MetroLink.*

Three possible decisions on modifying the southern end of the *MetroLink* proposal are outlined as a hierarchy, starting with the most flexible and finishing with the least flexible. All of these would enable early Government approval to commence the project at Estuary.

I. Grant a Railway Order as far south as Parnell Square East. In the meantime, TII could then review all the options for the southern end of *MetroLink*, including reaping the benefits of incorporating most of the Metro North Option, which we have alluded to earlier. Continuing to Portobello/Rathmines or Charlemont could also be examined.
II. Grant a Railway Order as far south as Tara St. Similarly, TII could then review all the options from Tara St., including terminating at Tara St., and either St Stephens Green, West or East. Continuing to Portobello/Rathmines or Charlemont could also be examined.
III. Grant a Railway Order as far south as St. Stephens Green East. In the meantime, TII could then review all the options from St Stephens Green East, including terminating at St Stephens Green East, Portobello/Rathmines or Charlemont.

Thank you, Inspector, for your attention.

Data sheet

POPULATION BETWEEN THE RED AND GREEN LUAS LINES 2022 CENSUS

The following electoral divisions are wholly or predominantly between the Green Luas and Red Luas lines

In Dublin City (132,713)

Crumlin A to F 19,287

Kimmage A to E 15,207

Merchants Quay A to F 18,460

Rathfarnham 5,768

Rathmines East C 3,484

Rathmines West A to F 22,667

Royal Exchange A and B 7,276

St Kevins 5,732

Terenure A to D 10,391

Ushers B to E 10,221

Walkinstown A to C 7,442

Wood Quay A and B 6,778

In South Dublin (154,106)

Ballyboden 5,246

Bohernabreena 5,672

Edmondstown 5,685

Firhouse Village/Knocklyon/Ballycullen 26,286

Rathfarnham 17,508

Tallaght (all divisions except Fetter cairn and Belgard) 68,052

Templeogue 13,147

Terenure 12,510

In Rathdown (67,886)

Ballinteer 15,659

Churchtown 8,515

Dundrum 19,171

Glencullen 23,596

Tibradden 945

Ballinteer consists of Broadford, Ludford, Marley, Meadowbroads, Meadowmount and Woodpark divisions

Churchtown consists of Castle, Landscape, Nutgrove and Orwell divisions. Other divisions split by Luas not included

Dundrum consists of Balally, Sandyford, Sweetmount divisions. Other divisions not included

Rathfarnham consists of Ballyroan, Butterfield, Hermitage, St Enda's and Village divisions.

Tallaght consists of Avonbeg, Glenview, Jobstown, Killinardan, Kilnamanagh, Kiltipper, Kingswood, Millbrook, Oldbawn, Springfield and Tymon divisions. Divisions largely to the north of Luas Red are Belgard (1.635) and Fettercairn (11,335) not included in these figures

Templeogue consists of Cypress, Limekiln, Orwell , Osprey and Village divisions

Terenure consists of Cherryfield, Greentrees, Kimmage Manor and St James divisions