Ruadhán MacEoin
20 Marlborough Road
Donnybrook
Dublin 4
28th October 2022

Re *DART West* planning application, SID no. 314232

Dear Sir or Madam,

I wish to make an observation on the DART West proposal.

In support of this observation, please find attached five documents:

1. A review of recent decisions, reports, and policies that relate to the current proposal. Essentially this review surmises the implications of the cancellation of the Galway ring road (2022), the OECD report; 'Redesigning Ireland's Transport for Net Zero' (2022), Department of Transport; 'National Sustainable Mobility Policy Action Plan (2022), International Transport Forum of the OECD; 'Benchmarking Accessibility in Cities: Measuring the Impact of Proximity and Transport Performance' (2019), Department of Environment; 'National Climate Action Plan' (2021).

2. A dissertation undertaken as part of a masters degree in University College Dublin in 2017, that reviewed current Dublin rail plans, previous plans, and delivery to date of proposed services. Two main findings of that research are that current rail plans for Dublin are based on assessment maps in which the five kilometre line between Broombridge and Docklands was omitted, and that 100,000 residents could be served if stations were open at logical places on Irish Rail's Dublin network.

3. A design response to the dissertation findings. As can be seen from this document, when the omitted line is included, it could be particularly useful to bring about the objectives of DART Expansion / DART Underground, and separately, for providing a potential pathway from the city centre as far as Glasnevin for the purpose of a rail link to Dublin Airport and Swords. Both of these objectives are national policy. Using existing lines better can be seen to be a logical way forward.

4. Correspondence received from the National Transport Authority, setting out the decision making process that has led to the current proposal which omits a DART station at Croke Park. Ultimately, when asked about specific criteria, the questions were not answered – but instead information was provided on the decision making process for Cross Guns Bridge, which had not been requested. As the questions were not answered, the evaluation process cannot be seen to be satisfactory.

5. A copy of the submission made last year by Ciarán Cuffe MEP, in which he said he was 'gravely concerned regarding the lack of stations being included in the DART proposals, the absence of which he asserted is 'at best deficient, and at worst casts the whole project in doubt'. Mr Cuffe was prescient in his assessment, as shown by the recent decision to cancel the Galway ring road, arising from the National Climate Action Plan. In Galway people would not have had 'sustainable accessibility' to sustainable transport; ditto the current DART plan in Dublin city, where little 'sustainable accessibility' would be provided – despite sustainable transport passing by.

In addition to the matters set out already, I wish to raise out the following three areas of concern:

1. Project Splitting

The DART West application follows last year's application for DART Southwest, and is concurrent to the application for Metro Link. The two DART applications essentially are regarding contiguous infrastructure belonging to the same ownership, where services are to meet and may overlap. The two applications therefore essentially form part of the one plan. In the normal course of development, it is usually incumbent on the applicant to file consent for the proposed development as one application. It is not understood why Irish Rail's scheme to electrify all lines in the Dublin region was split into two separate project applications, with this then accepted by the authorities.

The project-splitting results in two immediate deficiencies:

A. Firstly, that citizens wishing to fully comment on the DART electrification scheme must pay twice for planning charges – and again for Metro Link, should they wish to comment, with this obviously resulting in probable exclusion of observations and participation from many citizens.

B. Secondly, although DART Southwest has been excluded from the current DART West application, it seems reasonable that decisions regarding this application should be considered for application to that part of the scheme also. As with DART West element of this project, DART Southwest also failed to ensure adequate access to services in the most populated districts along that route. In view of the recent cancellation of the Galway ring road, and given the need for consistency in the decision making process, it is imperative that transport projects feature sustainable access. Hence it seems logical that the Bord can still consider the development of stations on the DART Southwest section of this project – whether that be by conditioning the current application, or rescinding consent for DART Southwest.

2. Policy is Based on Flawed Assessments and Inaccurate Maps

The current applications arise from policy that was effectively in place by 2017. For purpose of a dissertation, I conducted a review of current Dublin transport plans with a focus on rail, previous plans, and delivery to date of proposed services; please see attached Document 2.

Relevant to the current application, that research found that current rail plans for Dublin are based on assessment maps in which the five kilometre line between Broombridge and Docklands was omitted, and that 100,000 residents could be served if stations were open at logical places on Irish Rail's Dublin network. Moreover the proposal for an underground rail link to the airport was found to have been promoted in different guises over the past five decades, with no delivery to date. Please find the Abstract below, and the dissertation separately attached, as flagged already.

Accordingly, three major matters give cause for major concern:

A. Exclusion of a significant railway at conceptualisation stage of plans:

The failure to include the line between Broombridge and Docklands has resulted in a deficient sub-optimum end proposal that fails to utilise the line to achieve network integration as per the primary aim of DART Underground / DART Expansion, and that the scheme also fails to provide adequate service access to the populated communities living adjacent. As can be seen in the Design Response set out in the attached Document 3, the line along the Royal Canal could provide a pathway for integration of services, and create network capacity. Used properly, this line could be of great benefit to the network, and also the local community in terms of service access.

B. That 'Glasnevin Station' at Cross Guns Bridge is to be deferred until Metro Link is developed:

Under Policy MT07 on page 125 of the Dublin City Development Plan 2016 – 22, it states that:
'It is an Objective of Dublin City Council' to 'promote and seek the development of a new commuter rail station at Cross Guns serving the existing rail line infrastructure. Such a provision may be a stand-alone facility or form part of a larger mixed use development.'

This has been Policy of Dublin City Council since 2008, and is a very sensible provision. As the Bord will be aware, Cross Guns Bridge is at a nodal point on Irish Rail's Dublin network, from where lines lead off to four different destinations to; Maynooth / Sligo, Phoenix Park Tunnel and the south west, Spencer Dock and Connolly Station, to Docklands and also Connolly Station. Ergo, a station at this location could be very useful for passengers to interchange between services, as well as serving the sizeable local community. When ArcGIS was used with the census, it showed that over 16,000 residents were living within a 1 kilometre walk of the proposed station – please see appendices at the end of the attached dissertation for further detail.

Hence, the apparent proposal by Irish Rail is to upgrade the lines through this location without opening a station until the Metro Link is developed. This effectively denies the local community from equitable benefit of the infrastructure, and does not ensure sustainable accessibility to sustainable transport; nor is there any provision in the absence of Metro Link not being approved or developed. This last point is crucial, as it pre-supposes that consent for another application will be approved, which could potentially prejudice that process – and secondly, there is no apparent contingency plan in the event that the Metro Link is not opened.

As the airport underground rail project dates back five decades, and despite over €2 billion spent on the previous proposal of Metro North, the state has to date shown itself incapable of delivering an underground airport line – and hence it is of grave concern that a DART station at Cross Guns Bridge could potentially be deferred indefinitely.

Hence the proposal to upgrade the Irish Rail lines at Cross Guns Bridge without opening a station at the same time would amount to a breach of Dublin City Development Plan policy MT 07, undermine national policy seeking to ensure 'sustainable accessibility' arising from international climate action accords, and contrary to common sense wherein the benefit of a public utility should be maximised.

C. Absence of a station at Croke Park in the current plan:

As far back as the Dublin Transportation Office's 2001 report, 'Platform for Change', it was identified that a rail station should open at Croke Park. As Europe's third largest stadium with capacity for 82,300 spectators, the stadium is sandwiched between two railways sited at either end – and is an obvious candidate for a new station in any project seeking to upgrade these lines.

In 2008, the stadium was further developed and acquired air rights from Irish Rail so as to extend above the railway at the Royal Canal. Media reported that the stadium and the rail company were in negotiations, and that there was the prospect of the station being developed. However, when development was completed, no station was opened; instead, the railway company had secured two corporate boxes for their own use during events. After that became public knowledge, the corporate boxes were later sold off. Yet no station was opened. A station here is badly needed and overdue.

Ultimately, the current proposal envisages that both lines around Croke Park be electrified and upgraded to DART. This would result in the railway along the Royal Canal carrying DARTs without stopping for five kilometres between Docklands and Broombridge stations., in the event of no station being open at Cross Guns Bridge / Glasnevin – while the line between Connolly and Broombridge is little better, featuring only one stop in five kilometres at Drumcondra. Ergo, only one station in ten kilometres of lines is to be operable on the opening day of the project, which would be a derisory provision given the density of population living along the lines., and seems completely contrary to 'sustainable accessibility' as required by the national policies.

So as to better understand the decision making process that has led to the current scenario, I contacted the Minister of Transport's office, and later received correspondence from Eoin Gillard of the National Transport Authority on July 22nd 2021, who said constraints were present which deterred development; please see the forth document attached. Accordingly I requested a Detailed Options Assessment Report, so as to get an explanation as to what stage of the options assessment process that Croke Station was ruled out, and its ranking compared to other options under specific criteria, including e.g. CBR cost-benefit Ratio, disruption and impacts, value of time, and socio-economic inclusivity. However, no such documents were disclosed; instead, an extract form the MetroLink / New Metro North Options Assessment Study (ARUP 2018) was provided. That passage pertains to route options for metro to pass by Cross Guns Bridge or Drumcondra, with seemingly little relevance to a Croke Park station, which would be sited elsewhere, i.e. on the railway by the Royal Canal, between Ballybough Bridge and the south-east corner of the stadium. Mr. Gillard also noted 'This study did not consider the geometric and operational issues in detail on the heavy rail network', and also that 'The additional information provided in my earlier email on potential geometric and operational issues was undertaken subsequent to this and was for the purposes of a high level review of potential additional stations to be considered under DART+ Programme'. Hence, it appears the current application is being made without key documents, such as a Detailed Options Assessment Report that would provide rationale for station allocation.

The lack of a station at Croke Park in the current application is the culmination of a poor process, where the potential proper utility value of existing infrastructure has not been properly considered, and where explanations regarding station allocation are unsatisfactory. In the absence of such, the current application seems deficient, with sub-optimum provision for the adjacent community, by

way of no service access in the five kilometres between Docklands and Broombridge. Thus, the proposed development in this area would be contrary to European standards and Irish national policy, as set out in the Climate Action Plan, and the Sustainable Mobility Policy, which require 'sustainable accessibility', and that projects seeking to retrofit developments are of equal standard to that expected with a new development. Opening a Croke Park station should occur as part of any DART project occurring adjacent to the stadium.

3. Review of Recent Decisions, Reports, and Policy Announcements

As can be seen in the accompanying document, the Review of Recent Decisions, Reports, and Policies, it is clear that 'sustainable access' is considered to be of paramount importance in order for sustainable transport to be effective. The logic of Climate Action Policy, National Mobility Policy, and recent decisions (such as Galway ring road), is consistent: Modal shift is needed, sustainable access to sustainable transport is crucial, and it is logical that this should occur where a high quality transport service is being routed through populated areas.

In this respect, the proposal to upgrade 10 kilometres of lines through urban areas between Broombridge and Docklands, and Connolly, must have more than 1 station in order to adhere to established international practice, international climate action commitments, national policy, and local planning objectives.

Ultimately, the Galway ring road was cancelled because it would not have provided sustainable access to sustainable transport: As the current DART West proposal would not provide adequate service access in the most populated areas along its route, the same rationale must be applied.

As can be seen from the cited concerns and attached documents, the current application for DART West is grossly deficient by not providing adequate service access in populated areas along the route. The lack of service access would be in marked contrast to access provided elsewhere in the city, such as the line between Tara Street and Sydney Parade, where there are six stations in four kilometres. Consequently, if the scheme is developed as proposed, the application would result in discrimination, where the more affluent would most benefit – with little use in the less afflent areas.

The application puts the Bord in an invidious position: On one hand, the development would clearly benefit communities where stations already exist, with better services and network function improved, as would be in accordance with both objectives and national policy. However, by not harnessing the infrastructure so as to properly increase the utilitarian benefits, the proposal is clearly sub-optimum, and should not be permitted in its current form.

Hence the Bord has a choice of three prospects:
A) Refuse the current application as premature, so that a new application can address concerns.
B) Approve the current application, where the scheme would not properly adhere to national policy, and consequently result in a poor outcome, where a better result should be possible.

C) Condition the current application as part of the approval, so as to ensure service access at Croke Park, Cross Guns Bridge, and other populated areas along the DART routes.
As approval would result in a scheme that fails to provide sustainable accessibility, that would be contrary to national policy, and European standards; hence approval does not seem appropriate.

Refusing the application seems a better way forward, as a fresh application could comprehensively remedy the problems, and propose a properly thought out scheme that would provide proper service access, in line with national policy. However, the obvious disadvantage with this prospect is that the positive aspects of the current proposal would be delayed, where little issue otherwise is present. Nonetheless, this option would at least be legally correct, as it would allow the applicant return with a proposal that adheres with national policy and European standards.

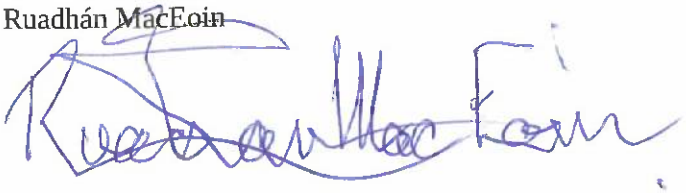
The third prospect of approval with conditions potentially offers another way forward, whereby positive elements of the application could proceed provided that outstanding concerns are addressed, so that there would be adequate service access from the day of opening, at Croke Park, Cross Guns Bridge, etc. Given the magnitude of conditions that are needed to ensure the application is of approval standard, this approach would not be desirable in the normal course of events. However, given the need to make progress with national policy, this approach seems to be the least worst way forward, as outstanding concerns can be rectified while development occurs with non-problematic elements. Consideration could be given the approval of the scheme so that development occurs, provided that the applicant also develops stations at Croke Park, Cross Guns Bridge etc., and that these occur within the construction timeline of the currently proposed scheme, or as close to that as is reasonably possible. As it is a concern that the applicant may wish to 'cherry pick' approval, it is suggested that this approach could be regulated by requiring the applicant return within a few months with appropriate applications, so as to be allowed to continue proceeding with other development works. It is also suggested that the Bord could further require the applicant to prepare proposals that make proper utility of existing pathways for purpose of service integration, as envisaged by DART Underground, as this would also clearly accord with national policy.

Finally, it is understood the applicant wishes to develop an underground station at Spencer Dock. Effectively this would replace the adjacent Docklands Station, so as to provide more platforms, which should create more network capacity if used properly – yet estimated to cost over €100 million. The station is envisaged to become part of the DART Underground scheme, which has been for many years been an aim of Irish Rail, and before them, CIE. As can be seen from the design response document, better use of the railway by the Royal Canal could largely resolve the aims of DART Underground, without city centre tunnels – while separately, the same benefits of the station proposal could be achieved by provision of additional platforms at ground level adjacent to the present Docklands Station. Hence there is good reason not to proceed with this element, as it would result in major works of little benefit at great cost that may prejudice another application at a later date. In view of the CO2 intensive concrete that would be used, there are further problems in terms of climate change policy compliance. The €100 million that would be spent here could be much better spent on ensuring service access at Croke Park, Cross Guns Bridge, and elsewhere. In particular, it is suggested that access to nearby Connolly Station should be improved, with the pedestrian entrance reopened underneath the bridge on Seville Place (R101), as this would reduce walking distance to the platforms by circa 800 metres for the community beside the Five Lamps.

Hence, in order to national policy and European standards, it is recommended that the Bord should either condition the application so that it is no longer sub-optimum and deficient, or alternatively, refuse the scheme, so that the applicant can address the concerns in a proper manner and re-apply with a properly considered application.

Yours sincerely,

Ruadhán MacEoin



Review of Decisions, Reports, and Policy

A number of reports, decisions, and policy documents have emerged in the recent period that have particular relevance to the current application.

1. An Bord Pleanála Decision 14 – 10 – 2022: Cancelling of Galway Ring Road Planning Consent

Reference: https://www.rte.ie/news/connacht/2022/1014/1329237-galway-ring-road/

Commentary

As reported in national media on 14th October 2022, An Bord Pleanála did not take into account the National Climate Action Plan when considering the application for the development – and hence has cancelled consent. The Climate Action Plan requires "a modal shift to transport modes with lower energy consumption", such as increased public and active travel. The implications of the Climate Action Plan are commented upon under its own heading in detail later in this document.

The over-arching logic of this decision is that making 'a modal shift' must be priority. In Galway that would not have been achieved by building a motorway, as it would not provide people with access to sustainable transport: In Dublin, this cannot be achived without providing service access to DART rail services that are proposed to be routed through populated areas.

2. OECD (2022), *Redesigning Ireland's Transport for Net Zero: Towards Systems that Work for People and the Planet*

OECD Publishing, Paris.
https://doi.org/10.1787/b798a4c1-en.

Executive Summary

Key Findings

The Irish transport system fosters growing car use and emissions by design, and is thus unfit to enable the country to meet its greenhouse gas reduction goals while improving well-being. Growing car use in Ireland is largely determined by car-dependent transport and urban systems, organised around increased mobility and characterised by three unsustainable dynamics: induced car demand, urban sprawl, and the sustainable modes low-attractiveness trap.

Aiming at decarbonising the system via private vehicle improvements is unlikely to lead to substantially different patterns of behaviour, rapid emissions reductions, and large well-being improvements.

Implemented policies and those expected to bring the highest emission reduction shares according to Ireland's Climate Action Plan 2021 are unlikely to help the country transform its car-dependent system. Most efforts in Ireland have been allocated to policies with a low to medium potential to transform the current system (e.g. electric vehicle incentives for private cars, increasing the budget allocated to public transport infrastructure compared to what is allocated to car infrastructure, carbon and road prices, infill/brownfield development targets).

Key recommendations

Redefine the goal of the transport system as sustainable accessibility. This calls for challenging ingrained mindsets and shifting away from identifying high/growing mobility with well-being. Revisiting measurement frameworks and models is also relevant. Setting sustainable accessibility as a goal for land-use/housing planning is also necessary, as ensuring proximity is key for delivering sustainable accessibility

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Implemented policies and those expected to bring the highest emission reduction shares according to Ireland's Climate Action Plan 2021 are unlikely to help the country transform its car-dependent system. Most efforts in Ireland have been allocated to policies with a low to medium potential to transform the current system (e.g. electric vehicle incentives for private cars, increasing the budget allocated to public transport infrastructure compared to what is allocated to car infrastructure, carbon and road prices, infill/brownfield development targets). Currently prioritised policies, such as electric vehicle incentives, also reinforce car dependency, further locking the country into a system that fosters growing car use and emissions by design.

4. Redesign

[This chapter] explains why a system focused on mobility is not fit for the purpose of achieving emission reductions and high well-being outcomes and calls for the redefinition of the transport system goal as sustainable accessibility.

2.2. Transport systems with sustainable accessibility as their goal

Transport policy literature suggests that transport systems' contribution to human well-being ought to lie in the provision of accessibility, meaning easy access to opportunities and places of interest (e.g. jobs, consumption, leisure or health services) (OECD, 2019[20]; ITF, 2017[16]). Transport systems whose goal is sustainable accessibility, meaning the provision of access via sustainable transport modes (active modes and micro-mobility, public transport and other shared services), can ensure this provision over time and thus support present and future well-being.

Accessibility-oriented transport systems can foster sustainable patterns of behaviour and help Ireland meet its reduction targets.

Several policy documents and decision-making processes are taking steps in the right direction. For example, the Irish well-being framework includes access to services and the environment as key components of better living (Department of the Taoiseach, 2021[27]). The new Sustainable Mobility Policy also reflects an effort to move away from a car-centric mentality. Sustainable mobility is defined by the SMP as "connecting people and places" (Department of Transport, 2022[22]), appropriately shifting attention towards access. At the same time, however, the focus on how to deliver such access is kept on mobility, even if via sustainable modes. The document states

that the support of: [s]afe, accessible, comfortable and affordable journeys to and from home, work, education, shops and leisure; [t]ravel by cleaner and greener public transport; [and a] shift away from the private car to greater use of active travel and public transport" (Department of Transport, 2022[22]) are the main ways in which it will connect people and places. Attention is therefore mostly directed throughout the document to the transport links between people and places rather than to the location and characteristics of places and the need to create proximity (land use).

The document also discusses the importance of encouraging the "15-minute city" model (Department of Transport, 2022[22])6.

As noted by the OECD (2021[4]), accessibility-based planning and accessibility indicators are indispensable for "15-minute city" strategies, among other things.

Commentary

Current policy is over-dependent on electric cars and is unlikely to address climate change needs. There is a clear need to adopt measures that are not car-dependent.

'Sustainable accessibility' is crucial and 'proximity is key for delivering sustainable accessibility'. Policy has been over-dependent on electric cars, which does not work. Modal shift is needed: surely the DART should have service access at the most populated areas along its routes – and so help address this issue?

Accessibility-oriented transport systems should be a priority. A core assertion of this observation is that it is logical that accessibility needs to be prioritised where populations are most concentrated, which the current application fails to do, by not stopping at Croke Park, Cross Gun's Bridge etc. Both the OECD and the Department of Transport agree about encouraging the '15 minute city'; however, the OECD asserts that 'accessibility-based planning' is vital for delivery, again indicating the need to facilitate access to public transport infrastructure routed through populated areas

[20] OECD (2019), *Accelerating Climate Action: Refocusing Policies through a Well-being Lens*, OECD Publishing, Paris, https://doi.org/10.1787/2f4c8c9a-en.
[16] ITF (2017), *Income Inequality, Social Inclusion and Mobility*, ITF Roundtable Reports, No. 164, OECD Publishing, Paris, https://doi.org/10.1787/g2g7ae77-en.
[27] Department of the Taoiseach (2021), *A Well-being Framework for Ireland*, Department of the Taoiseach, https://www.gov.ie/en/campaigns/1fb9b-a-well-being-framework-for-ireland-join-the-conversation/ (accessed on 10 June 2022).
[22] Department of Transport (2022), *National Sustainable Mobility Policy*, Department of Transport, https://www.gov.ie/en/publication/848df-national-sustainable-mobility-policy/ (accessed on 13 June 2022).
[4] OECD (2021), *Transport Strategies for Net-Zero Systems by Design*, OECD Publishing, Paris, https://doi.org/10.1787/0a20f779-en (accessed on 10 June 2022).

3. Department of Transport (2022) National Sustainable Mobility Policy Action Plan 2022 - 2025

People Focused Mobility

Goal 6: Take a whole of journey approach to mobility, promoting inclusive access for all

48. Promote the principle of 'Access for All' across sustainable mobility services through:

- Enhancement of rail station accessibility including platform access, lift reliability, information provision and signage. (Second bullet point)

Commentary

This aim of the Department of Transport emphasizes 'inclusive access for all', with the second measure specifying 'rail station accessibility' as priority. Again, it seems reasonable to achieve this aim by ensuring service access in the most populated areas along a public transport route.

4. ITF (2019), "Benchmarking Accessibility in Cities: Measuring the Impact of Proximity and Transport Performance", International Transport Forum Policy Papers, No. 68, OECD Publishing, Paris.

Access to services in European urban areas

Is public transport inclusive?
(Page 64)

Since the 1970s, policies have aimed at making public transport affordable to poor households in most European cities (Faivre d'Arcier, 2012). Better accessibility by public transport is recognised as a lever to improve access to opportunities for deprived neighbourhoods and has been shown to be crucial for upward economic mobility. For instance, Chetty, Hendren and Katz (2016) have shown that shorter commuting time is the strongest factor in the odds of against escaping poverty. Public transport brings wider social benefits through providing better access to services and opportunities to disadvantaged groups and thereby promoting social equity.

Reference: Faivre d'Arcier, B. (2012), "VIII. Le financement des services publics de transport dans la perspective d'une mobilité durable", Annuaire des Collectivités Locales, 32(1), pp.141-150.

Commentary

Throughout the 2022 OECD report, 'Redesigning Ireland's Transport for Net Zero', references are made to the document from which the above extract is copied. The cited section has particular relevance. On the DART network, in the more affluent parts of Dublin there tends to be relatively easy access – with 6 stations in 4 kilometres between Tara Street and Sydney Parade. Yet in the less affluent areas, there is less access to the Irish Rail network – despite being more populated, and with more railway lines present. For example, between Connolly and Park West stations, there is

only 1 stop in 15 kilometres at Drumcondra – while from Docklands to Broombridge, there is not one stop on the 5 kilometres of line by the Royal Canal.

5. National Climate Action Plan 2021

15 Transport

15.1 State of Play

Transport accounts for approximately 20% of Ireland's greenhouse gas (GHG) emissions. Road transport is responsible for 96% of those GHG emissions and is also directly responsible for a range of air pollutants that negatively impact both human health and the environment. The levels of noise, accidents, and congestion associated with road transport reduces quality of life, deters active travel, and costs society hundreds of millions of euro per annum in wasted time. Promoting cleaner, safer and more sustainable mobility is critical for climate policy, and it also represents an opportunity to improve our health, boost the quality of our lives, meet the needs of our growing urban centres, and connect our rural, urban and suburban communities.

Improved planning and radical redesign are required to shift our built environment from being "vehicle centered" to being "people centered". The concept of the "15-minute neighbourhood", which gained prominence during the COVID-19 pandemic, is representative of this broad ambition. Specifically, promoting and supporting communities in which people can live and access most of their daily needs within a 15 -minute journey, mainly by sustainable modes (public transport, cycling and walking).

15.2 Targets

To meet the required level of emissions reduction, by 2030 we will:
• Provide for an additional 500,000 daily public transport and active travel journeys (First bullet point)

15.3 Measures to Deliver Targets

15.3.1 Sustainable Mobility

Expanding sustainable mobility options to provide meaningful alternatives to everyday private car journeys is necessary to reduce transport emissions. Continued and enhanced investment in our walking, cycling and public transport infrastructure and services across the country is required on a scale not previously seen. We are committing to delivering an additional 500,000 daily sustainable journeys by 2030 (c. 14% increase on current levels) through the implementation of major transport projects such as:
• Expanding rail services and infrastructure in, and around, major urban centres (Third bullet point)

15.3.2 System Efficiency and Demand Management

Government planning policy will also continue to work to address low density/suburban sprawl (which increases the distance people must travel, locking in car-dependent patterns of development and behaviour) by promoting compact urban growth as a key mechanism to enable sustainable development as well as action on climate change and congestion. This will involve not just the

design of new developments, but also the addressing of issues within existing developments. Planning policy will work to:

- Reduce demand for travel by car, travel distances, and journey times
- Increase travel choices, reduce car dependency, and mitigate traffic congestion
- Reduce air pollution and promote cleaner and more active modes of transport
- Sustain economic and social activity at street level creating vibrant communities
- Increase access to shops, employment, transport services, and local amenities by sustainable modes

Commentary

In line with Ireland's international commitments, the National Climate Action Plan 2021 sets out ways for different sectors to reduce greenhouse gas emissions. Chapter 15 is devoted to transport, as this accounts for 20% of emissions, with road transport being responsible for 96% of transport emissions. In order to achieve the aims, 'improved planning' is stipulated so as to bring about 'communities in which people can live and access most of their daily needs within a 15 -minute journey, mainly by sustainable modes (public transport, cycling and walking).' Accordingly, the very first target of this policy is to provide for 1/2 million more public journeys by 2030.

The present application presents the Bord with a prime opportunity to ensure that "improved planning" happens, to bring about 500,000 journeys by public transport per annum. By contrast, if consent were to be granted to the current application in the absence of ensuring adequate service access from day one at Croke Park or Cross Guns Bridge, it would not align with policy.

Under 'Measures to Deliver Targets', 'Sustainable Mobility' is specified as a key priority, with 'expanding rail services and infrastructure in, and around, major urban centres' stipulated as the third bullet point. This statement is of relevance to the present application, and the logic is very clear; improving rail services and infrastructure must happen 'in' urban areas as primary priority – with improvements 'around' urban areas being a sensible extension of this logic. As the DART West proposal is to improve services around an urban area without improving services in the populated areas through which the services are to pass, it does not seem to align with national policy.

Section '15.3.2 System Efficiency and Demand Management' further details the philosophy of the planning approach being adopted, whereby 'compact growth' is prioritised. Notably it says 'This will involve not just the design of new developments, but also the addressing of issues within existing developments.' Thus, where an application is made to retrofit an existing development, in this case a railway, it is of equal importance to a new development. Hence it is logical the standards expected of a new development must also be applicable in an application seeking to retrofit an existing development. In this instance, it seems highly unlikely that the authorities would entertain an application for a scheme proposing 5 kilometres of new high-capacity twin track railway through an urban area unless stations were incorporated. Ergo, any project seeking to retrofit the line linking Docklands with Broombridge must include stations at logical points, such as Croke Park and Cross Guns' Bridge (with these operational from the first day of service), if the project is to adhere with national policy set out above, international obligations, and also local policy (DTO Platform for Change 2001, Dublin City Council Plan 2008 onwards).

The final part of the policy relevant sets out that:

'Planning policy will work to:

- *Reduce demand for travel by car, travel distances, and journey times*
- *Increase travel choices, reduce car dependency, and mitigate traffic congestion*
- *Reduce air pollution and promote cleaner and more active modes of transport*
- *Sustain economic and social activity at street level creating vibrant communities*
- *Increase access to shops, employment, transport services, and local amenities by sustainable modes'*

Notably this statement opens with the phrase that 'planning policy will work',with aims subsequently listed. This is important as it commits the system to utility and function, and is not left open to interpretation – in contrast to say, a phrase such as 'Planning policy should consider'. Thus, there is, inherently, a new onus on decision-makers to ensure that projects comply with policy. This is of particular importance in Ireland where proper planning is often more dependent on development control, rather than on forward planning.

The five bullet points provide a very useful metric by which the DART West application can be measured for the section of 5 kilometres of railway between Docklands and Broombridge, and wherein no stop is to feature on the first day of service.

1. Would the proposal 'Reduce demand for travel by car, travel distances, and journey times'?
Without adequate service access, there would be a little reduction of car travel in the Docklands – Broombridge section, although journey times should be better for people outside the area.

2. Would the proposal 'Increase travel choices, reduce car dependency, and mitigate traffic congestion'?

'Travel choices' cannot be increased by high quality public transport passing through built-up areas without stops and service access. Although the proposal should help relieve car dependency outside the area, the potential for traffic reduction in the area is vastly reduced without service access.

3. Would the proposal 'Reduce air pollution and promote cleaner and more active modes of transport' in the area?

Yes, replacing diesel powered trains with electric is progressive. However the lack of service access will deter citizens from relying on public transport.

4. Would the proposal 'Sustain economic and social activity at street level creating vibrant communities'?

No. There will be no advantage in this area, and the only likely difference will be increased noise from the increase of frequency of trains passing through the area.

5. Would the proposal 'Increase access to shops, employment, transport services, and local amenities by sustainable mode'?

No. Without service access, there would be no improvement.

When the above five metrics are applied, it appears that none can achieve a clear positive response, although part positive response can be attributed to three of the questions. In other words, out of a score of 5, the current proposal achieves 1 1/2 in terms of impact in this area. Ergo, the proposal cannot be seen to satisfactorily resolve the requirements of policy in its current form.

When this approach is applied to the nearby line linking Broombridge and Connolly, also 5 kilometres long, it appears there is a similar outcome, as there is only one station at Drumcondra.

Hence, the DART West project proposes to electrify the rail lines linking Broombridge to Docklands and Connolly stations through the north city centre, which are 10 kilometres in total; yet there is only 1 station that is to be operable from the opening day of service. Such allocation of service access is in marked contrast to the 4 kilometres of line between Sydney Parade and Tara Street stations, between which there are 4 stations.

Summary

As evident from the above recently published policies, reports, and decisions, there is a fresh focus on the Irish planning system so that there is sustainable access to sustainable transport, in order that there is compliance with both national policy and international law.

The recent decision by An Bord Pleanála to rescind consent for the Galway ring-road arises from the need to adhere with the National Climate Action Plan 2021, which follows from Ireland's international legal commitments. As consideration had not been given to section 15 of the Climate Action Plan, which emphasizes the need for 'modal shift', the Bord were obliged to cancel consent. In Galway that would not have been achieved by building a motorway, as it would not provide people with access to sustainable transport: In Dublin, this cannot be achieved without providing service access to DART rail services that are to be routed through populated areas.

With the second document, the OECD report on transport in Ireland, it is viewed that current policy is over-dependent on electric cars, and is unlikely to address climate change needs. Instead 'Sustainable accessibility' is crucial, and 'proximity is key for delivering sustainable accessibility'; the OECD also asserts 'accessibility-based planning' is vital for delivery of the '15 minute city'.

With the Department of Transport's 'National Sustainable Mobility Policy Action Plan 2022 – 2025', there is great emphasis on 'inclusive access for all', with the second measure specifying 'rail station accessibility' as priority.

"Benchmarking Accessibility in Cities: Measuring the Impact of Proximity and Transport Performance" (2019) by the International Transport Forum of the OECD, also emphasizes the need to ensure that public transport as accessible, particularly in less affluent neighbourhoods. Since the

1970s, better accessibility by public transport has been recognised as key to improving social opportunities and creating economic uplift.

The 'National Climate Action Plan' provides the final document reviewed above, on which there must be fresh emphasis, following the decision regarding the Galway Ring Road. It must be noted that the Plan mandates the DART West proposal as an action to address climate change – but equally it requires that developments are compliance with the standards which it sets out.

It is a core objective that 500,000 journeys by public transport are conducted by 2030 – and hence there is an onus on the Bord to ensure that any project proposing transport must maximise its utility. This logic is further refined by the emphasis on improving rail services and infrastructure 'in' urban areas, where existing populations are most concentrated, with this latter additionally supported by the statement that 'This will involve not just the design of new developments, but also the addressing of issues within existing developments.'

The final part of the Climate Plan referred to is the statement asserting that 'Planning policy will work' with five bullet points provided. As already discussed in detail, the phrase 'will work' refreshes the position of decision makers to ensure that proposals by developers are compliant with policy objectives. The five bullet points were then used to gauge the impact of the proposal for the five kilometres of railway between Docklands and Broombridge, and it appears that the current proposal only achieves 1 1/2 of the 5 metrics, primarily because there is an absence of service access along the route, and hence 'modal shift' cannot occur.

The logic of the above decisions and policy documents is clear: Modal shift is needed, sustainable access to sustainable transport is crucial, and it is imperative that this occurs where a high quality transport service is being routed through populated areas. In essence, the proposal to upgrade 10 kilometres of lines through urban areas between Broombridge and Docklands, and Connolly, must have more than 1 station in order to adhere to established international practice, international climate action commitments, national policy, and local planning objectives.

Ultimately, the Galway ring road was cancelled because it would not have provided sustainable access to sustainable transport: As the current DART West proposal would not provide adequate service access in the most populated areas along its route, the same rationale must be applied.

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Urban Design

'Democratic Accountability or a Speculator's Blank Cheque: What has been learned from Dublin's experience of Transport 21?'

Author **Ruadhán Mac Eoin**

Supervisor **Dr Luke Kelleher**

This dissertation is submitted as part of the completion of a

Masters of Science in Urban Design (MSc)

September 2017

Abstract

Transport 21 (T21) was the largest capital spending programme in the state's history, yet terminated prematurely, with numerous megaprojects unbuilt, including elaborate Dublin underground plans. This research has sought to evaluate that programme in hindsight, to gauge performance, and identify what if any lessons may have been learned from T21. This project identifies the value of application of the *Common Appraisal Framework* in assessing projects at planning stage – but finds that it does not appear to be consistently applied in preparation of current plans, despite initial official assertion. Moreover, the research uncovers new documentary evidence that suggests the Dublin underground plans date back at least 50 years, and that there appears to be a pattern of the project being promoted during times of prosperity, only to be deferred during recession, only to be rebranded, modified, and represented as a 'new' solution, only for the cycle to occur again – with Dublin transport policy perennially haunted by this zombie megaproject. Meanwhile, significant elements of railway infrastructure that could present another possible option, have been overlooked by policy makers, in an apparent case of *suppressio veri.* All the time, Dublin has gone from being a relatively compact city 50 years ago, to being regarded as a 'worst case example' of car-dependent sprawl. The project also identifies over 100,000 residents in Dublin city centre could be brought onto the Irish Rail network by way of new stations, as based on ArcGIS generated research. It is suggested this research may be of interest to people working in the sector, academia, and possibly others in wider civic society.

Acknowledgements

This research is uniquely indebted to particularly helpful direction by the project supervisor, Dr Luke Kelleher, and also the many who assisted research, including John Burns of the Sunday Times, and others.

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List of Abbreviations

AIE Access to Information on Environment

ArcGIS Geographical Information Systems

BRT Bus Rapid Transit

CAF Common Appraisal Framework

CIÉ Córas Iompair Éireann

CO2 Carbon Dioxide

CSO Central Statistics Office

DART Dublin Area Rapid Transit

DCC Dublin City Council

DTI Dublin Transportation Initiative

DTO Dublin Transportation Office

GDA Greater Dublin Area

LRT Light Rail Transit

HVV Hamburger Vikersund Verkehrsverbund (municipal transport council).

MCA Multi-Criteria Analysis

NDP National Development Plan

NGO Non-Governmental Organisation

NTA National Transport Authority

NSS National Spatial Strategy

NPF National Planning Framework

RPA Railway Procurement Agency

T21 Transport 21

UCD University College Dublin

Declaration

I hereby certify that the material which is now submitted in this dissertation towards the award of the MSc in Urban Design is entirely my own work and has not been submitted for assessment for any academic assessment other than part fulfilment for the award named above.

Reasonable care was taken to ensure that no information has been taken from other sources except where specifically cited and referenced within the text throughout this document.

The author confirms that the Library may lend or copy this dissertation upon request for academic purposes.

Student Name..... Ruadhán Mac Eoin

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Signature of candidate _____

Date..... September 2017

1.0 Chapter 1

1.1 Introduction

In September 2015, a €10 billion investment programme for transport was announced by the Irish government[i]. This was the largest fiscal commitment since the 2005 launch of *Transport21 (T21),* which had a €34.4 billion budget, and was to be "an integrated solution to Ireland's current and evolving transport needs"[ii]. Megaprojects envisaged by T21 including *DART Underground* and *Metro North* remain unbuilt. Yet the latest plan suggests they will now proceed.

Hence, it seems timely to assess how well T21 proceeded, what lessons may have been learned from the process – and any implications that these may have for policy after T21. It is quickly apparent that no appraisal framework was used at the outset of T21 by which metrics could be applied in later evaluation – an issue compounded by the absence of any official post-programme evaluation, despite its premature demise[iii]. The absence of any metrics in such an important plan makes any attempt to analyse T21 more difficult.

Despite such hurdles, research proceeded and unearthed stark new findings that may have implications for current policy-making. New documentary evidence establishes that *DART Underground* and *Metro North* plans pre-date T21 to 'at least 1966'. There is an apparent pattern of this megaproject being promoted during times of prosperity, only to be deferred during economic downturns, only to then re-emerge, rebranded and slightly altered, yet essentially the same – only for the cycle to repeat, with Dublin perennially haunted by this zombie project. Research work on the last unbuilt Metro North reportedly cost €200 million[iv].

Separately, flaws are apparent in the current evaluations that have led to the underground plans – again – becoming policy (see 4.20, 4.21). A central element of the existing Irish Rail network is being apparently overlooked. Implications of this are examined in this research, with seemingly less-expensive options identified (as per sections 4.31, 6.4).

Meanwhile, Dublin has become a 'worst case scenario' for sprawl[v], with 29% of Ireland's CO2 emissions generated by transport[vi]. Proportional share of public transport use in Dublin is shrinking, while separately Ireland is falling far short of the 20% 2020 CO2 targets[vii] - and will result in fines paid by Irish citizens. Despite railways adjacent at Phibsborough, Cabra, Dublin Zoo, Croke Park, Tolka Bridge and Dublin Ferry Port, there are no stations. Elsewhere, Kishogue Station was built in an undeveloped area and remains closed, as per figure 1.1.1.

By qualitative interviews with 10 authoritative individuals, despite inherent limitations, this research forms a rounded picture of T21: performance was regarded as poor, and pre-planning considered dismal, as per 5.3. Parallel, quantitative assessment has been conducted that estimates 113,146 residents are within prospective Irish Rail catchment areas in the city centre, as per 5.5.

Disturbingly, better practices used to inform planning adopted subsequent to T21, such as assessment by application of the *Common Appraisal Framework (CAF),* are not found to be consistently evident in preparation of the present *2016 – 2035 Greater Dublin Area Strategy.* There presents the potential danger of

repeating aspects of pre-planning of T21 regarding absence of clearly defined metrics that can be used to subsequently evaluate performance.

Institutional architecture to resolve transport needs appears strategically deficient by having a majority of board appointed by the Transport Minister, who also effectively has the right to veto, as per 5.3.7. Ministers are primarily representatives for geographical constituencies, and it is understandable where their primary interest is likely to lie – yet persons effected nationally and in Dublin have little opportunity for recourse or accountability of actions taken in their purported interest. Ultimately there appears little scope for accountability, except possibly the Public Accounts Committee. Meanwhile costly zombie megaprojects may be touted as an apparent solution, as Dublin forever sprawls.


Dublin's last 'ghost station' will cost €2 million to open

It cost around €6.3 million to build.

Jan 29th 2017, 7:30 AM 41,793 Views 19 Comments Share Tweet Email 1

A 'GHOST STATION' on the Dublin to Cork line will lie idle unless Irish Rail is given €2 million to open it – but a review of the station is due this year.

Figure 1.1.1 Kishogue Irish Rail, Co. Dublin; unopen and built in lands yet to be developed – while some built-up areas have railways but no stations.

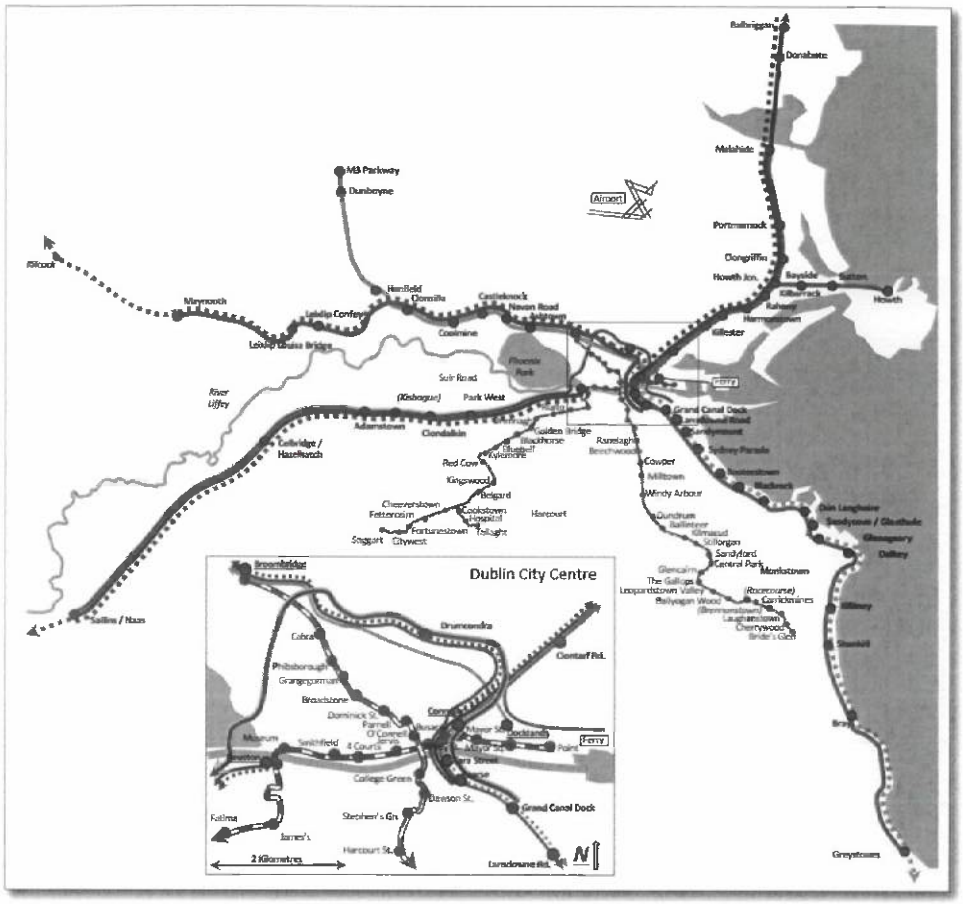
1.2 Background

Against a backdrop of transport issues being perceived as hindering the economy (Wickham 2006), T21 was launched to fund road, rail, and airport projects over a 10-year period[viii]. Notably, it was produced after the National Spatial Strategy (2002 - 2020) – which itself was launched after the 2000 – 2006 National

Development Plan, that had scheduled much motorway building across the island. Consequently, T21 was pulling together initiatives underway – while indicating circa €16bn to be spent on upgrading public transport, primarily within the Greater Dublin Area. Major schemes included[ix]:

- Several new Luas lines, and line extensions.
- Metro North, linking the City Centre to Dublin Airport and Swords.
- Metro West, orbital route
- DART Underground, joining Heuston to Docklands via St. Stephen's Green.
- Electrification of Irish Rail Dublin suburban network (see figure 1.2.1).

Ultimately, relatively little came to pass – except completion of motorways. In the 'National Planning Framework' issues discussion document, issued in February 2017, the network is praised as an example of 'joined-up thinking', and 'an example of successful implantation of an overall strategy, that set out to deliver high quality inter-urban motorways'[x]. Yet critics note the motorway network overly-focused on Dublin, and 'balanced regional development' sought by the NSS was compromised. Separately, less motorway construction was needed to connect the urban end destinations, had the network been planned strategically (see figure 1.2.2)[xi]. As with T21, the NSS was abandoned early; all zones indicated for growth had shrunk, while development occurred elsewhere[xii].



Existing Dublin Commuter & Mainline Rail Services (2017)

Legend

Existing Irish Rail Station
Existing Luas Station
Existing Rail / Luas Interchange Stations
Newly Built Stations Currently Closed (Luas & Irish Rail)
Irish Rail station not in commuter service
Air / Ferry Port
Landmark

Please note that the Green Luas Cross City extension has been included, as construction is nearing completion, with commencement of services anticipated for December 2017. For purpose of clarity of image, please note the northbound and southbound section between Parnell Street and College Green in the city centre are illustrated as one line only on both maps.

Kilometres
0 2 4 6 8 10

Passenger Services Available as of 2017

Southeast/ Northeast Dart (Howth / Malahide – Bray /Greystones)
Northeast commuter (Pearse / Connolly – Drogheda / Dundalk)
Southwest Heuston commuter (Heuston – Sallins)
Southwest Grand Canal Dock commuter (peak hour service only)
Northwest commuter (Pearse – Connolly – Maynooth)
Dunboyne / M3 commuter (primarily peak hour service)
Belfast mainline (Connolly – Belfast)
Rosslare mainline (Connolly – Rosslare)
Sligo mainline (Connolly – Northwest)
South / West mainlines (Heuston – Cork, Galway, Waterford etc.)
Irish Rail network not in passenger use (ferry terminal tramway)
Green Luas (Bride's Glen – Stephen's Green – Broombridge)
Red Luas (Point – Tallaght / Saggart)

Please Note: Southwest commuters are served by the Rosslare mainline

Please also note that the Green Luas Cross City extension has been included, as construction is nearing completion, with commencement of services anticipated for December 2017. For purpose of clarity of image, please note the northbound and southbound section between Parnell Street and College Green in the city centre are illustrated as one line only on both maps.

Figure 1.2.1: A regional map of Dublin commuter rail services: only the coastal *DART* service is electrified, despite the T21 scheme. Map was specifically prepared for this project.

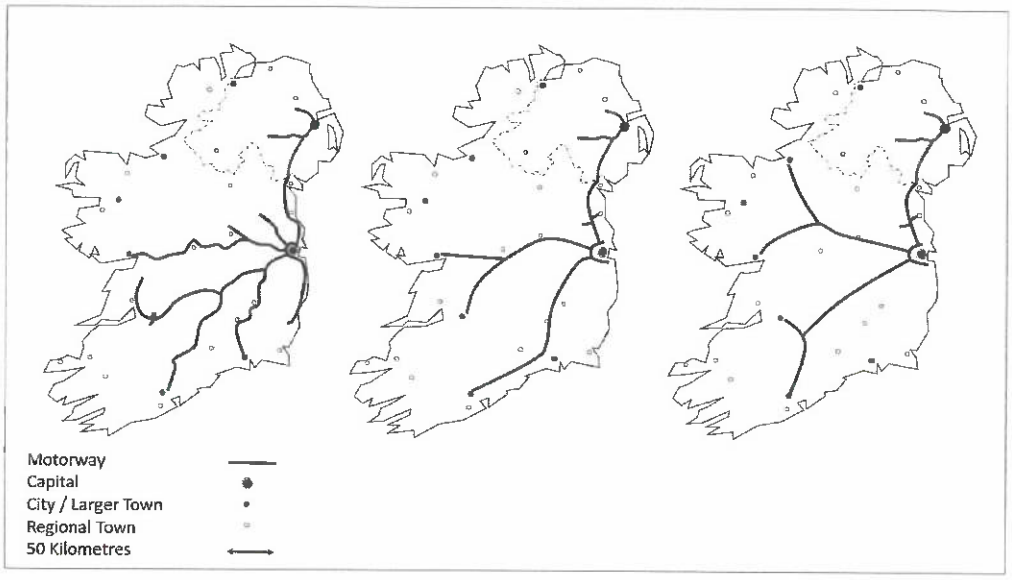


Figure 1.2.2 The motorway network (left) resulted in much more construction than other options, such as centre or right. Maps by author.

1.2.1 Relevance of Research

Although the non-delivery of T21 projects was regretted by some as delaying better sustainable transport[xiii], paradoxically, recessionary times in Ireland saw innovation with transport policy, such as 'Smarter Travel' that encourages cycling and walking[xiv], new use of existing resources (such as the Phoenix Park tunnel), and emphasis on achieving greater 'bang-for-buck' with new public transport schemes such as Bus Rapid Transit (BRT) initiated[xv], compared to more prestigious T21 projects such as Metro North.

With the economy recovering, megaprojects that were part of Transport 21, such as Metro North, are again being advanced by government. However, as per Literature Review, there appears to be a fifty-year pattern of underground railways being promised for Dublin, yet to date little delivery.

There appears to be a danger of megaprojects being advanced by government – until the next economic downturn, by when the scheme may well not to be built. A parallel danger is with emphasis on megaprojects, other cost-effective options may get overlooked. Given T21 proposed these projects, it seems useful to evaluate it in hindsight, identify any longer-term lessons, and potential implications for post-T21 policy.

1.2.2 What will your thesis contribute to planning literature and knowledge?

A partially subjective yet informed analysis of the performance of T21, and the development of subsequent transport policy, particularly affecting Dublin. Although contemporaneous assessment occurred [xvi], subsequent discourse appears relatively absent. It seems timely to probe the subject – particularly in terms of potential implications for the post T21 era.

1.2.3 Purpose of this Research

The purpose of this dissertation is to explore how Transport21 came about, evaluate how effective it was, and any lessons that may be learned subsequently.

1.3 Aims, Objectives, and Hypothesis

1.3.1 Aims

- To evaluate how successful the T21 programme was
- To identify what is any lessons can be learnt from the T21 process, and
- To establish whether such knowledge is now being applied in transport policy and development

1.3.2 Objectives

- To investigate the evolution, effectiveness, and outcomes of T21. This was done by way of interviews with parties considered likely to be knowledgeable or were involved with the programme. This was complemented by both policy and literature reviews.

- To investigate whether policy has evolved since T21, and to examine current mechanisms used when transport plans are assessed. This was first informed by policy and literature reviews, which provided a context. Again, interviews with commentators as well as sectoral and civic stakeholders likely to be knowledgeable on the area were of immense benefit. Ultimately the data collected was then tested and appraised, with a final reference to the NTA, who were unable to substantiate initial assertions of the CAF being appropriately applied.

- To assess the extent of prospective population catchments that could be served if service access along the existing Irish Rail network in the Dublin city centre area was improved by new stations, and by better pedestrian access at existing stations. This was considered useful given little official evaluation to date. This was done based on data created by ArcGIS, as is detailed in the methodology section.

- Arising from conclusions evaluating the performance of a past programme, to establish a series of recommendations for future

stakeholders and or other parties who may have further interest in the area of Irish transport policy at a later date.

1.3.4 Hypothesis

To be effective, Transport Planning needs to be based on clear strategic objectives and a robust appraisal framework with agreed clear metrics, substantiated by transparent participatory planning from the outset. The strategy process should also be well communicated to relevant stakeholders, wider civic society, and should include effective consultation mechanisms to facilitate stakeholder input. The hypothesis of this research is for the T21 programme to have been effective, it must have had clear strategic objectives and a robust appraisal framework.

1.4 Structure of Thesis

1.4.1 Chapter 1 - Introduction

Chapter 1 provides an outline of the report's topic, giving an introduction and definition to the research question. Aims, objectives, and hypothesis are defined, as too is research relevance – and this overview of contents.

1.4.2 Chapter 2 - Literature Review

Chapter 2 provides an overview of relevant literature available, looking at commentary on international practice of evaluating infrastructure and governance, global trends with megaprojects, and opinions regarding T21 and experience in Ireland, with focus on Dublin.

1.4.3 Chapter 3 - Research Methodology

Techniques used in the production of this report are explained in this chapter, with reasoning given why certain research methods were adopted, with others left unused.

1.4.4 Chapter 4 – Policy Review

This chapter reviews the relevant policy guiding transport policy and infrastructural development. New documentary evidence is presented outlining the origins of Dublin's unbuilt underground railway plans dating back to pre-1966. Separately, an analysis of the appraisal reports substantiating underground plans suggests that key elements of existing infrastructure are being overlooked.

1.4.5 Chapter 5 - Findings and Analysis

This section reports and analyses the samples procured during primary research, with qualitative data having been collected by way of semi-structured interviews. Separately ArcGIS generated quantitative data helps provide further analysis. Findings are contextualised by both Policy and Literature Reviews.

1.4.6 Chapter 6 - Conclusions and Recommendations

This gives an outline of the conclusions within each chapter, before setting out the final conclusion.

2.0 Literature Review

2.1 Introduction

This review assesses commentary relevant to evaluating 'Transport 21'. The purpose of this secondary research has been to inform and complement the primary research of the hypothesis. This method is frequently favoured by researchers as it is considered valuable to have other viewpoints when compiling a report on a topic. In this instance, themes identified as most relevant were governance architecture, the international experience of megaprojects – how policy has developed in Dublin, and performance of same. This helped inform the aims of this project; examining how successful T21 was; identifying lessons to be potentially learned from the process, and whether if such knowledge is now being applied. The literature review also assisted the first two objectives of this research; tracing T21, and comparing megaprojects in other cities with the experience of Dublin. The reader should find this section complements the Policy Review, which provides a chronological context of policies.

Helpfully, global commentary can assist when trying to understand the nature of bureaucratic governance structures, and how best regulatory structures may be evaluated. In this regard, The World Bank Handbook on Evaluating Infrastructure Regulatory Systems was found particularly insightful.

Commenting on successful megaprojects, Babalik-Sutcliffe defines characteristics of fruitful urban rail projects (2002). Yet, Flyvbjerg et al take a more critical perspective – providing commentary on the international experience of megaprojects that is particularly informative, with observations

relevant to Dublin. A comparable study assessing risks of megaprojects by Cohen-Blankshtain and Feitelson (2010) is found to complement Flyvbjerg.

Wickham's book 'Gridlock' was found to be particularly informative regarding Dublin transport and published contemporaneously to the launch of T21.It helps provides a benchmark by which progress can be measured. Commentary by Caulfield and Ahern, and separately Rock outline the car-dependent nature of new Dublin suburbs.

'Transport Investment Strategies and Outcomes in Dublin 1941 – 2006' by Leahy was found to have particular relevance for this project as it indicates a pattern of repeatedly failed public transport megaprojects in Dublin. It appears the more expensive a Dublin transport project is likely to be, the less likely it is to be built. Yet, based on new documentary sources (see 4.2), it is contended that these projects are actually not different projects – but are instead are effectively different manifestations of the same Dublin underground scheme, that consists of a Liffey tunnel and an airport connection. It appears the project gets promoted during times of economic prosperity – but never gets built, despite plans dating back to 'at least 1966'. Effectively, Dublin is haunted by an unaffordable zombie megaproject that has distracted from effective provision, with few apparent beneficiaries – other than hustling politicians, and possibly an institutional architecture that has grown alongside the aspirant projections.

An apparent institutional preference favouring prestige projects rather than maximising effectiveness of existing infrastructure was evident according to

commentary on rail policy preceding T21 (Barrett, 2003). Barrett (2011) also commented on the 2009 NTA Act; however, as body has a broader remit to that originally envisaged, with accountability essentially to the Transport Minister rather than a directly-elected Dublin mayor, it was only subsequently such corporate structures could be authoritatively commented upon (O'Connor 2011).

During the post 2008 period the Irish state was effectively bankrupt, with funding from the IMF and EU necessary[xvii]. Hence the contribution by Rau, Hynes, and Heisserer is of particular interest, as it assessed a policy response partially brought about by the downturn. *Smarter Travel* sought to inexpensively innovate by shifting focus to 'soft' measures for sustainable use, such as cycling and walking – with the prospects of continued policy emphasis assessed in the likelihood of economic recovery, and found unlikely.

The Literature Review is complemented by the Policy Review, wherein guidance documents concerning transport planning are evaluated – with that critique having been informed by the issues and themes raised in this section.

2.2 International Perspectives on Evaluating

The World Bank Handbook for Evaluating Infrastructure (2006), 'presents detailed, practical guidance on how to conduct quick, mid-level, and in-depth regulatory evaluations of existing national- and state- or province-level regulatory systems through structured case studies'. The mid-level appears most relevant for this current project, as;

'It reviews both the formal elements of the system and how these formal elements have actually been implemented. It requires extensive interviews with the regulator and government officials, executives in sector enterprises, and consumers. Individuals with widely different perspectives need to be interviewed to ensure that the evaluation will not just reflect what government officials or regulators want it to say'.

The Handbook advises that 'evaluation of regulatory effectiveness must look at both regulatory governance and regulatory substance';

Evaluation should take note of what is good, but focus on what is bad. To do this requires looking at weaknesses in governance and systematically examining bad decisions and their consequences arising from regulatory inaction (sins of omission), as well as bad decisions arising from regulatory actions (sins of commission).

Hence, adopting an agenda of critical analysis for this project appears the correct approach for this project. Accordingly, for example, where it has been found the NTA de-prioritised a long-standing City Council policy objective to develop a railway station at Cross Gun's Bridge in Phibsborough, this is explored further in the Policy Review section of this project. A copy of the World Bank Handbook is included in the Appendix.

2.3 Global Trends in Megaprojects

Megaprojects is a term first coined in the 1970s, of schemes typically exceeding €1 billion in today's money, and have become increasingly popular with governments worldwide. Babalik-Sutcliffe (2002) identifies 4 key factor behind seemingly successful Light Rail Transit (LRT) schemes:

1. Vibrant commercial business districts are more likely to generate trips
2. Planning factors – integrating urban renewal and bus services increased success
3. Operating policies – frequent service, customer friendly and active marketing
4. Active urban planning for enhanced areas, and regeneration etc.

Other external factors also mattered: deregulation of buses in the UK hindered integration, while US cities were found to have made better advantage for urban enhancement, partially as UK planning has become more fragmented.

Flyvbjerg et al has commented extensively on megaprojects. In his seminal work 'Rationality and Power', Flyvbjerg traced a much-lauded public transport plan in Aalborg that still had not been built some 25 years on. Various characteristics he identified that seem bizarre and unique – such as the original rationale of project elements having been forgotten arising out of generational change – are seemingly analogous to Dublin, where the apparent origins of the unbuilt underground project date back 51 years. Flyvbjerg has subsequently further commented on risks involved with megaprojects, which usually involve cost

overruns, delays, and lower-than-expected returns – and how these may be avoided. With 'Underestimating Costs in Public Works Projects: Error or Lie?' (2002), Flyvbjerg et al found;

• Cost underestimation has not decreased over the past 70 years. No learning that would improve cost estimate accuracy seems to take place.

• Cost underestimation cannot be explained by error and seems to be best explained by strategic misrepresentation, i.e., lying.

With 'What causes cost overrun in transport infrastructure projects?' (2004), Flyvbjerg et al found cost escalation highly dependent on the length of the project-implementation phase, with the average increase in cost escalation 4.64% per annum until operations commence; 'sluggishness quite simply may be extremely expensive'. Approaches to risk are conceptualised, as per figure 2.3.1.

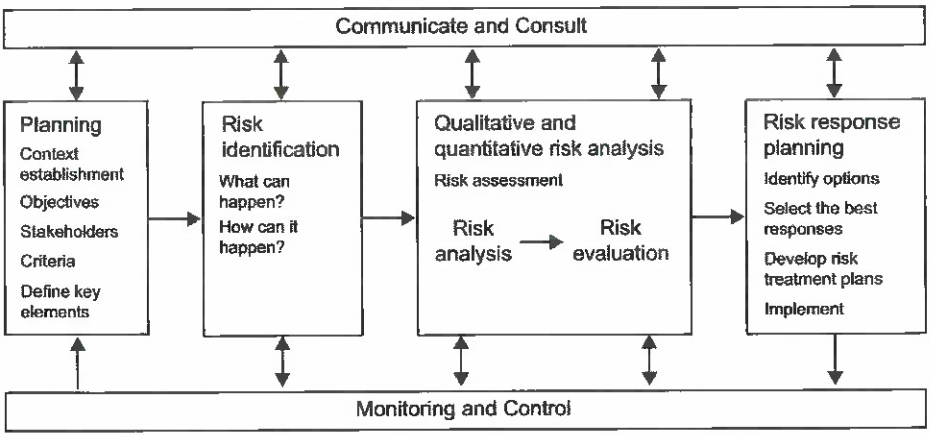


Figure 2.3.1 Risk management process as discussed by Flyvbjerg

Commenting on 'Cost Overruns and Demand Shortfalls in Urban Rail and Other Infrastructure' (2007), Flyvbjerg assessed 44 urban rail projects and found such schemes carry a 'double risk' in terms of exposure to higher construction costs, which averaged out at 44.7% more than anticipated - and lower passenger numbers than predicted, resulting in higher ongoing costs – typically carrying 50.8% less passengers than projected. It is asserted that 'assessment and management of such risk should therefore be central to all phases of the project development cycle in urban and other rail projects, from decision making to planning to construction'. Observations regarding Copenhagen may be relevant to revived Dublin proposals, where the high ridership forecasts provided to justify investment in a 'minimetro' have not yet occurred.

With 'Megaprojects and Risk' Flyvbjerg decries a 'democracy deficit', as 'project promoters often avoid and violate established practices of good governance, transparency and participation'. However, weaknesses of approach can be overcome by emphasizing risk, institutional issues, and accountability; while risk cannot be eliminated, it can be addressed in 'ways much more intelligent than those currently seen'. Yet if this is to occur, a 'high-trust democracy' could be a model for satisfactory megaproject delivery, but that this must be based on 'hard-nosed considerations about risk and democratic accountability'.

Again, a comprehensive overview is provided by Flyvbjerg, where different academic studies that had evaluated projects are perused, the most comprehensive of which was by Aalborg University, which assessed 258

projects in 5 continents and found 90% of transport infrastructure projects to have had costs underestimated, and that rail projects averaged out 45% higher than estimated. Observing that overrun had not decreased over 70 years, it seems no learning was occurring although this being a global phenomenon, such overrun 'cannot be explained by error and seem best explained by strategic misrepresentation, namely lying, with a view to getting projects started'. 'Spectacular' overruns included Suez Canal (1,900%), Sydney Opera House (1,400%), and Panama Canal (200%). Ultimately it is advised 'don't trust cost estimates' – as those frequently cited in media and decision making for transport infrastructure are 'highly, systematically, and significantly deceptive'. Better checks and balances should be developed to deter less deceptive cost estimates. Essentially it is advocated that more accurate, transparent, and accountable means of assessment would be used – and that in instances where costs turn out to be significantly higher than that forecast, the consultants involved would effectively be blacklisted by the state when considering future projects.

Commenting on the same area, Cohen-Blankshtain and Feitelson (2010) found two rationales usually underlie LRT schemes: servicing congested corridors and inducing development in underdeveloped areas. Yet of the U.S. 16 cities were surveyed, it was found that 'goals are only weakly correlated with the challenges'. They concur with Wachs (1995), that 'decisions are inherently political' which lead to such schemes getting sanctioned. Of separate interest, is that they sent surveys to 134 contacts in 16 cities yet received only 26 usable responses – which appears to substantiate the more qualitative approach taken with this research project.

2.4 Transport 21 – An Irish Solution to an International Problem?

2006 was a prosperous year in Ireland[xviii]; the government had launched T21 in November 2005, and an election beckoned. Serendipitously 'Gridlock' was published that year, whereby Wickham definitively set out how Dublin was emerging as the most car-dependent European city, with blame proportioned greatly to vested interests, weak political leadership, and dismal public transport management, with lack of maps, integration, transferable ticketing – and that services were focused on orbital routes, noting 'many areas between the canals have no public transport'. Wickham comprehensively rejected any notion this was unstoppable – and cited Helsinki as being low density with a bus system achieving the 'network effect' as popularised by Mees (2010). Societal damage is immense with obesity overwhelming and transport CO2 emissions rocketing, up 129.4% between 1990 – 2003. Separately Wickham observes the Dart 'notoriously serves primarily the richer suburbs', and asserts Dublin needs a transport authority, and praises participatory district councils such as the Verkehrsverbundes in Germany. Ultimately, Luas should be used to advance civic refurbishment, moving people around as opposed to in and out of Dublin. Wickham's concerns as to Dublin having become car dependent are further substantiated in commentary by Caulfield and Ahern (2014), and Rock.

Leahy provides a concise overview as to public transport projects proposed and delivered since 1946 in Dublin, finding the greatest 'success' by authorities was road-widening – although this irrevocably damaged urban fabric. Yet it is the 1972 An Foras Forbartha Transportation in Dublin and 1975 CIE Dublin Rapid Rail Transit Study that are particularly interesting to this research, as it is evident

that core components of T21 – namely an underground system involving a Liffey tunnel and Ballymun / airport link – were promoted, but not built. As is outlined in the Policy Review, this research has uncovered documentary evidence to suggest this scheme dates back further – yet seemingly only became public then.

Separately Barrett (2003) appraised national rail policy subsequent to publication of 'The National Strategic Rail Review', observing 'previous reviews have found policy to be producer rather than consumer dominated and with a propensity for regulatory capture by the producer interest'. Notably Barrett takes issue with underuse of the north city centre railways, observing; 'The line serves Croke Park, Phibsborough, and Cabra in addition to Drumcondra, the only station on the route now served by the Maynooth line and, apparently, doing well. The reluctance to have passenger trains on the Connolly-Heuston line is a producer rather than passenger decision and requires further analysis'. This research is in part a response.

By 2011, the institutional architecture conceived subsequently and in part to oversee T21 was in place, allowing O'Connor scope for structural appraisal. However, it was found to have 'little or no public representation', 'lack of accountability, an 'unclear relationship' with other transport agencies and an overly 'broad geographic remit'. What had begun as a Dublin Transport Authority to be answerable to a directly elected Mayor has ended up consisting of a board mostly appointed by the transport minister who also gets to veto. By comparison, the public transport federation or German "verkehrsverbund" model (see figure 2.3.1), has increased democratic involvement, combined with

greater powers over operational agencies, and is demonstrably effective at creating sustainable transport networks. It is noted 'Experience from cities like Zürich, which boast an efficient and easy-to-use transport system, suggests that accountability is not just an end in itself but is fundamental to delivering socially accessible and mobile urban environments'.

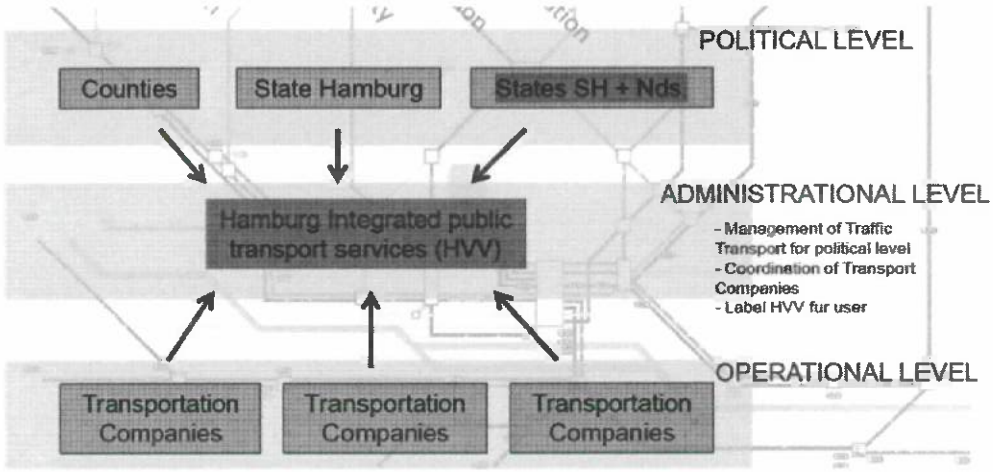


Figure 2.4.1 Organisational Structure of the Hamburger Vikersund Verkehrsverbund (HVV). Image courtesy of O'Connor (2011).

A policy initiative subsequent to T21, *Smarter Travel* was the focus for Rau et al. This represented a mind-shift away from hard engineering to inexpensive 'soft' approaches that sought to 'greening' existing structures and institutions without radical re-engineering, and emphasis on walking and cycling. Yet as observed, many vested car-centric interests are present. Commenting on the institutional architecture governing transport policy, it was noted that 'Transport policy-making in Ireland continues to be opaque', and policy governance remains 'firmly embedded in traditional institutional structures and powerful pro-car networks of policy actors that remain closed to promoters of sustainable

transport'. As confirmed by subsequent policy, they correctly forecast that Smarter Travel would lose significance during economic recovery, with 'business-as-usual' car-centric and engineering-focused decisions again evident.

2.5 Conclusion

That megaprojects typically end up over budget and under-performing is global. Moreover, there appears to be certain indicators of the likelihood of such scenarios occurring – namely where a past record of non-delivery exists (Aalborg), where there is a lack of accountability – including clear metrics agreed at outset – absence of contingency (including phasing) – and an absence of opportunity for the public to meaningfully engage. Vested interests – be it motor related or bureaucratic – also present challenges as they seek to prosper, be that by project promotion or by regulatory capture

Dublin policy developments appear to indicate, that despite innovation that occurred amidst recession, policy guidance has reverted to T21 – and with dates set far into the horizon. However, despite underground projects being presented as 'new', the outline provided by Leahy combined with a new document outlined in the Policy Review indicates that the Dublin underground has been considered for 51+ years, gets publicly advanced during prosperous times – only to be deferred in downturns, before being rebranded and relaunched. Yet Barrett observes that city centre lines are being overlooked. Moreover, as is illustrated in the Policy Review, it appears the basis of the underground's apparent need is partially justified by excluding from both evaluation and readers vision the existence of present infrastructure. A reasonably obvious alternative is never

considered – despite Dublin becoming a worst-case example of unsustainable urban sprawl since the underground was conceived.

The prognosis is not good. With underground railways, you usually expect platforms. Yet to date, the only platform visible is the one being used by politicians seeking re-election. Exchanges in the Dáil suggest €200 million was spent planning Metro North the last time. Such preparations are no longer valid. Meanwhile, contractors and consultants profit preparing evaluations. Dublin looks set to be haunted by an unaffordable zombie project that distracts from achievable objectives – even though the rationale appears part based on *suppressio veri*, as outlined in the Policy Review. One potential maybe the development of 3 BRT routes (see 4.26), and the upgrading of the city bus network; yet reports suggest the Airport – city centre BRT is being deferred until the metro route is finalised (again)[xix].

3.0 Chapter 3 - Research Methodology

3.1 Introduction

This research was conducted to evaluate the process by which Transport 21 (T21) was developed, and its outcomes. The research seeks to identify what if any lessons were gleaned from that experience, and assess any implications for post T21 policy. In preparation, a literature review of methodology used elsewhere when evaluating the performance of comparable programmes helped inform how this process be best conducted.

Normally a policy can logically be reviewed by judging it in comparison to the original criteria that were identified as strategic aims at outset. However, it became evident during the research, that T21 was initiated as a programme – without an attendant framework for policy appraisal outlining evaluation criteria by it could be later measured.

Hence, it became necessary to construct a theoretical framework with relatively objective metrics by which T21 could be measured – with this first informed by literature review, discussions with my supervisor, and peers. Subsequent Irish policy has been informed by appraisal methodology elsewhere, notably the United Kingdom – and hence it seems appropriate to incorporate such criteria when evaluating the outcomes of T21.

Having formalised the theoretical framework, appropriate primary and secondary research techniques were chosen to progress an academically credible research project. Accordingly, this evaluation of T21 consists primarily of a

review by a policy audit and qualitative interviews. The project was further informed by desktop research, with data generated by quantitative ArcGIS used to further analyse circumstance. Lastly, in preparation, Access to Information on the Environment (AIE) Requests were asked of state bodies where appropriate. Although this approach strives to adhere to practice set out by the World Bank Handbook, inevitably the research is restricted by T21 itself having lacked clear metrics at the outset by which it could be later judged – and latterly an absence of any rigorous in-depth evaluation as to the performance of the programme when concluded. Hence, while strenuous efforts are made to objectively evaluate T21, arising from limited empirical evidence, some subjective assessment becomes necessary – and the outcome has had to be partially based on a non-objective conclusion. Nonetheless, it is hoped this provides the grounding for further research in this area, with conclusions and recommendations posited.

3.2 Research Objectives

In attempting to evaluate T21, the following objectives emerged as critical areas to investigate:

1. To assess how effective T21 in terms of outcome. In 2016 the Department of Transport issued the Common Appraisal Framework for Transport Projects and Programmes, which provides criteria on how projects can be best when appraised, which are economy, society, environment, safety, social inclusion and accessibility, and integration. Accordingly, it was considered that these criteria represented the most appropriate metrics by which a previous programme could be measured.

In conducting this assessment, it was considered worthwhile to also ascertain the plan making process led to T21, and whether alternatives were considered.

2. To investigate whether policy has evolved since T21, and to examine current mechanisms used when transport plans are assessed.

3. To assess the extent of prospective population catchments that could be served if service access along the existing Irish Rail network in the Dublin city centre area was improved by new stations and also by better pedestrian access at existing stations. This was considered a worthwhile exercise as there has been little apparent evaluation to date.

3.3 Research Methods

3.3.1 Primary Research

In accordance with objectives, the primary research in this work consists of:

1) Policy review of documents guiding public transport provision in Dublin.
2) Semi-structured interviews with representatives of academic, transport, and civic sectors.
3) An assessment of the effectiveness in serving relevant populations using quantitative data such as size of potential catchments along the Irish Rail network in Dublin city centre, as assisted by ArcGIS.

3.3.1.1 Policy Review

As outlined in the World Handbook, a documentary audit is essential when gauging the effectiveness of official policies / programmes. Accordingly, policies, prior, during and subsequent to T21 are synopsised, analysed, and critiqued accordingly, with commentary as to the effectiveness to date, and any prospective effects. Both this section and the literature review were central to identifying questions later asked of interviewees.

3.3.1.2 Semi Structured Interviews

In conducting research, the best route to gather primary data is often by surveys or interviews. Given this research seeks to evaluate a government programme launched 12 years prior, it was decided that interviews with parties that either had direct contemporaneous engagement or were subsequently involved, would be an effective way by which T21 could be best examined. Accordingly, stakeholders were asked questions directly arising from the research objectives so that fresh data could be generated which could then be analysed so as to attain an informed perspective as to the performance of T21.

Interviews can range from the unstructured where a subject is primarily observed, to the very closely structured - which can result effectively in a questionnaire. Resulting data will latterly range from very qualitative in the first instance, to more likely quantitative data in the second case (Newton, 2010). The attributes of these two types of data is that qualitative methods tend to depend more on the researcher's analytical skills when the data is being collected, while quantitative data can be definitive but lack nuances and be limited in scope.

A semi-structured interview can allow researchers to collect quantitative as well as qualitative data; the relatively limited amount in the first instance being appropriately compensated by good qualitative information gleaned. The format of an interview with planned questions, where may have follow up queries may be included can help ensure the interviewer should be get some information - and may also be positioned to prompt or seek clarification if suitable.

In this instance, primary research was primarily conducted by qualitative data collected by way of semi-structured interviews with 10 parties considered most likely to have an informed viewpoint on the subject, and representative of transport, academic, and voluntary sectors. In some instances, the interviewees had significant experience in two sectors – which allowed them to contribute twice, with 15 samples total. Such data could be later triangulated with data harnessed by policy review, information arising from the quantitative assessment of potential Irish Rail catchments in Dublin's city centre – with the three strands complemented by secondary research in the form of a literature review.

Interviews with the ten parties occurred face-to-face in Dublin and by telephone, with the interview questions having been forwarded prior. One set of nine questions were prepared to best reflect the key viewpoints, with both quantitative and qualitative questions asked. By this means it is intended that sampling methods are scientifically credible, with samples selected and thematically analysed on an equally stratified basis, as detailed in Findings and Analysis. As per UCD policy, viewpoints have been anonymised to protect confidentiality of interviewees, while transcripts were confidentially filed with the supervisor.

Interviewee profiles sampled included persons with extensive senior expertise. It was estimated that interviews would last circa 20 – 30 minutes; ultimately interviews ranged from 14 to 37 minutes.

3.3.1.3 Quantitative Research

As a third probe complementing the research pathways of qualitative research and policy review, it was decided to assess the scale of potential populations residing beside railways in Dublin city centre, but are beyond 1-kilometre walking distance from railway platforms – and effectively without access. This has been done as a method to assess the effectiveness of T21. Arising from a team project work previously conducted in the UCD ArcGIS multi-disciplined masters class (November 2016), certain sites potentially suitable for stations were previously identified, and 1-kilometre catchments quantified by using Dublin City Council (DCC) map data combined with Central Statistics Office (CSO) data. By using ArcGIS, a realistic number of residents living within 1-kilometre actual walking distance was estimated, and contrasting with the 'Euclidian Method', which is criticised for not accounting for obstructions to permeability (O'Connor). As previous research was based on the 2011 census, it seemed appropriate to revise the figures in line with 2016 census trends evident in city centre.

3.3.2 Secondary Research

Secondary research by way of a literature review should inform a researcher what other commentators think about a subject, as well as getting a broad overview, and should complement the data being gathered by primary research. As with the review of policy or programme documents, relevant academic

commentary is sourced, reviewed, analysed, and discussed accordingly. However, a literature review will differ from a policy review, by being thematic rather than chronological. In this instance, international perspectives on megaprojects by commentators such as Flyvbjerg, has been essential – while the experience at home as assessed by Barrett, Leahy and others has also been invaluable. The reader should find this section complements the Policy Review.

3.4 Findings, Analysis, and Conclusion

The penultimate element in the methodology is collate and triangulate the data, analyse, and evaluate the findings, and hence form an overall judgement regarding the research hypothesis. The findings and analysis section is followed by the conclusions and recommendations. Hence, despite the limited empirical evidence project outset – and the resulting conclusion inevitably partially subjective, it nonetheless is intended to provide a rigorous, robust academic work – that if desired at a later date, could be tested, replicated, and built upon.

4.0 Chapter 4 – Policy Review

4.1 Introduction

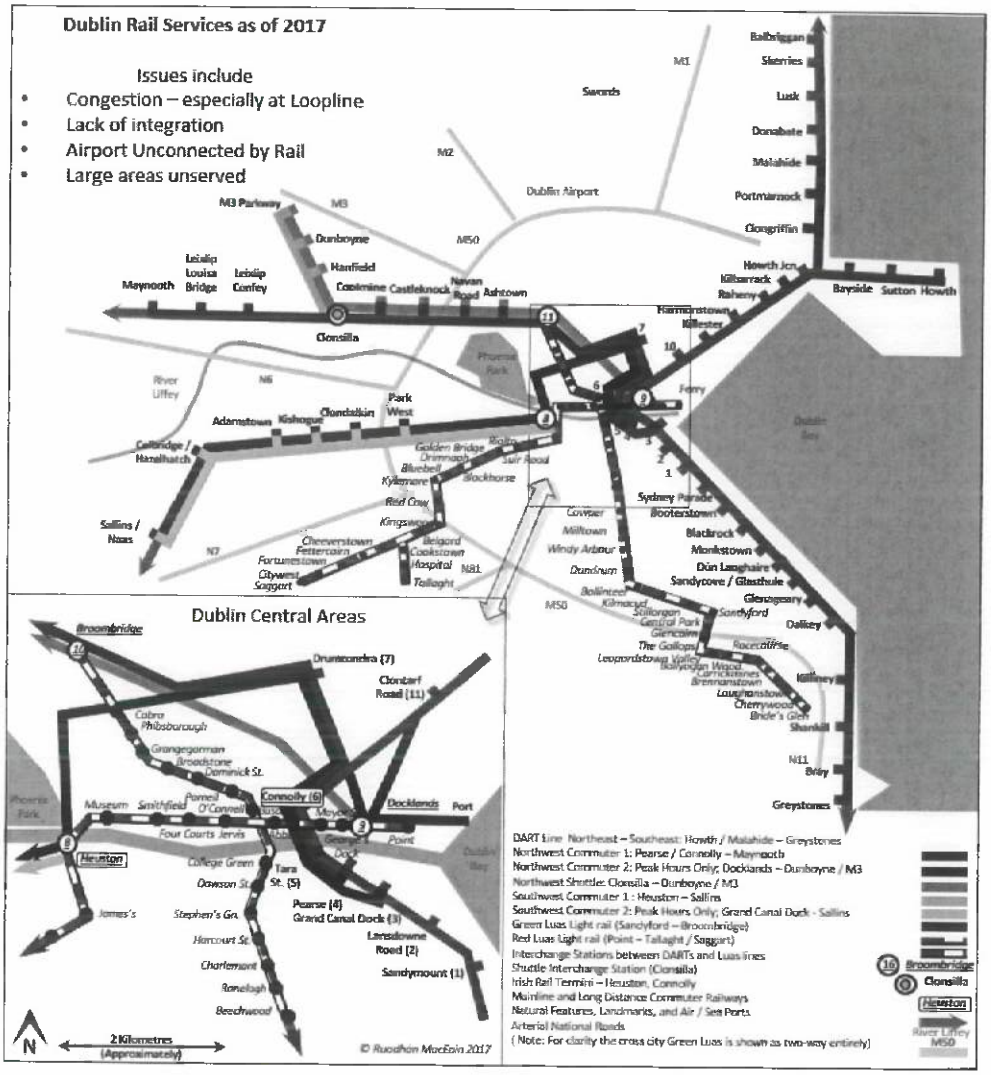


Figure 4.1.1 Dublin rail services, 2017. Schematic map was prepared for this project.

This section reviews documents published prior to Transport 21, T21 itself, and subsequent policy documents. Following discussion with my supervisor and other peers, reports have been methodically viewed, tracing apparent origins of DART Underground and Metro North type schemes as far back as 1966, a fact hitherto not widely known.

It appears T21 did not gestate in isolation, with ideas incorporated from previous plans. Commentary by Leahy (as per Literature Review) provides a good overview regarding delivery of transport infrastructure in Dublin since 1946. Separately, policy documents have been issued by advocacy groups, and Irish Rail itself. As much of the 'big spend' projects in Transport 21 largely relate to railway projects in the Dublin region, appropriate focus is thus accorded.

4.2 UCD School of Architecture *Dublin City Quays* (UCD 1985)

Although not formal policy, this publication provided critical impetus encouraging the urban regeneration of Temple Bar. Much property had become vacant as CIE land-banked for an intended central depot at the heart of an underground rail system – and subsequently it was the abandonment of the depot scheme that enabled 'Temple Bar' to happen. In a paper provided by CIE Senior Architect John Clancy in the book, *The Dublin Transportation Centre Development* provides the earliest documented indication of CIE championing underground railway plans for central Dublin 'at least as far back as 1966'. With tunnels under the Liffey and destinations including Ballymun – this is closely comparable to 'DART Underground' and 'Metro North'. Reasoning given by CIE included the plan being designed to serve areas identified for development by Myles Wright Report, as discussed following.

4.3 Myles Wright *Dublin Regional Plan* (Government Publications, 1967)

The Myles Wright Report was an official plan for the Dublin region. Never formally adopted, it nonetheless was of major consequence – with development occurring broadly in line with its recommendations – including the low-density

suburbs at Tallaght, Clondalkin, and Blanchardstown. It did not envisage any railway or underground development, with Dublin suburban services curtailed to today's DART line (see Myles Wright sections 17:11 – 17:13).

4.4 An Foras Forbartha *Transportation in Dublin* (Government Publications, 1972)

This study recommended an underground to 'more effectively connect up the four existing rail links into the city'[xx], latterly adopted by CIE.

4.5 CIE *Dublin Rapid Rail Transit Study* (CIE, 1975)

The *Study* advanced the *Dublin Area Rapid Transit (DART)* plan, advocating electrifying the Dublin network, with new links to Tallaght, Blanchardstown, and Clondalkin – and new tunnels under the city centre, to link east – west, and southeast – northwest. Ultimately, the only element completed was electrification of the existing coastal corridor in 1984.

4.6 Dublin Transportation Initiative *Final Report* (DTI 1995)

Formed by the Dublin City Business Association and others, this NGO promoted an integrated transport strategy for Dublin, primarily by buses, light rail, and cycling/walking[xxi]. The Final Report of the Dublin Transportation Initiative (DTI) was published in August 1995. Three Luas lines were proposed – the two since built and one to Dublin Airport. Subsequently, the Dublin Transport Office was initiated by government to advance the strategy.

4.7 Irish Rail and Córas Iompair Éireann The Dublin Suburban Rail Strategic Review (Arup's, 2000)

This report recommended major projects, including;

- New rail links to Dublin Airport, Navan, Blanchardstown, and Tallaght West
- A new city centre east -- west tunnel to ease congestion and link Heuston, later branded *DART Underground*.
- Upgrading the approach corridors into Connolly and Heuston Stations to three or four tracks.
- Regional electrification
- New stations at Adamstown, Leixlip, and Docklands

Other recommendations were less dramatic but of significant utilitarian consequence;

- Lengthening station platforms to accommodate longer trains
- Upgrading of signalling
- New through platforms at Pearse and Connolly Stations
- Removing level crossings

Transport 21 effectively adopted these recommendations, apart from the Tallaght and airport links which instead were to be served by light rail. Addressing capacity needs in the central network, sections 5.83 – 5.99 outline the option later known as *DART Underground*. Although the Phoenix Park Tunnel (option A22) was assessed, capacity was found too restricted at

Connolly; routing such traffic to Docklands Station was not seemingly examined, despite being little used, having apparent scope – and also direct access to the north-eastern corridor. This appears to provide much justification for *DART Underground.*

Separately, it indicates the Phoenix Park Tunnel was already funded £3 million under the National Development Plan, and was due to open (points 1.5 and 2.30, with costs printed on page 73). However, responding to an Access to Information on the Environment (AIE) Request querying what occurred, given the tunnel was only opened in 2016 following latter investment, Irish Rail stated they have 'no knowledge or recollection of any monies being allocated to these works under the 2000 NDP.'

Separately, although it is indicated that additional 'through' platforms should be built at Connolly and Pearse Stations to relieve congestion, despite refurbishments subsequently occurring, not only did such platforms not get developed – but platforms at Pearse were taken out. The absence of such platforms means that other traffic cannot overtake – which in turn further concentrates congestion on the Loop Line Bridge.

4.8 Dublin Transportation Office *Platform for Change* (D.T.O. 2002)

Published in 2002 by the Dublin Transportation Office (DTO) *Platform for Change*, included light rail proposals – and *DART Underground.* The DTO report rejected Phoenix Park Tunnel, stating among other reasons, that the Drumcondra line lacks capacity to accommodate additional traffic coming from

the Phoenix Park. However, although existing traffic could be rerouted along the little-used Royal Canal line to Docklands Station, this was not considered.

4.9 Department of Transport *Strategic Rail Review* (Booz Allen Hamilton, 2003)

The Strategic Rail Review, evaluated the national railway network, providing observations and recommendations. Use of the Phoenix Park Tunnel was discounted as *offering no real opportunities for passenger services*, arising from perceived congestion issues on the Drumcondra line. In contrast, Dart Underground was praised. As per Literature Review, Barrett (2003) was critical of the apparent under-valuing of the Phoenix Park / Royal Canal railways.

4.10 RailUsers Ireland *D-Connector* Proposal (Dublin, 2004)

RailUsers Ireland is a Non-Governmental Organisation (NGO), that in 2004 published *the D-Connector* plan, which proposed extending Kildare services via the Phoenix Park Tunnel, with new stations open at Cross Guns Bridge and Docklands, as per figure 4.10.1.

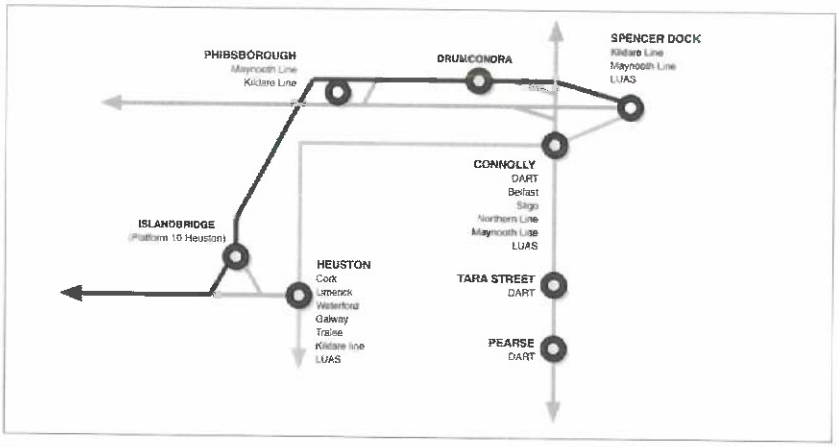


Figure 4.10.1 The *D-Connector* proposal noted Docklands was underused, and suggested extending southwest Kildare commuter services through the Phoenix Park tunnel.

4.11 Department of Transport *Transport 21* (Government Publications, 2005)

In November 2005, *T21* was launched amid fanfare setting out a very ambitious programme, as per figure 4.11.1. Although much of Ireland's motorway network was already under construction, the programme was to oversee this – and also development of primarily public transport in Dublin, for which approximately half of the €34.4 billion budget was earmarked. As per figure 4.11.2, prestige projects were central of T21, including *Metro North,* and *DART Underground* – while a DTO orbital tram route proposal was upgraded to *Metro West*. Yet the Dublin proposals were less extensive than conceived by the DTO, although growth – and sprawl – had exceeded forecasts (Wickham, 2006). Interestingly, the Phoenix Park tunnel appears excluded from maps. *Annual Progress Reports* published subsequently were generally favourable in commentary.

	Completion Dates for Selected Major Projects
2006	Introduction of hourly services on Dublin-Cork rail route Dublin Port Tunnel
2007	New Portlaoise train depot Delivery and introduction to service of 120 intercity railcars M1 Motorway M50 Upgrade (Phase 1)
2008	Joining of the Tallaght and Sandyford Luas Lines in City Centre Luas extension from Connolly to Docklands Luas extension Tallaght to Citywest (subject to developer contributions) Cork commuter rail service to Midleton Ennis – Athenry rail line (Western Rail Corridor)
2009	Dublin City Centre rail resignalling project M3 Motorway Phase 1 of Navan Rail Link Opening of new Dublin City Centre rail station Limerick Southern Ring Road Waterford City Bypass Galway – Athenry commuter rail services
2010	Metro West Phase 1 Tallaght to Clondalkin Kildare rail upgrade Sandyford Luas line extension to Cherrywood Dublin- Cork Inter-Urban Motorway Dublin-Limerick Inter-Urban Motorway Dublin-Galway Inter-Urban Motorway Dublin-Waterford Inter-Urban Motorway M50 Upgrade (Phase 2)
2011	Metro West Phase 2 Clondalkin to Lucan Athenry – Tuam rail line (Western Rail Corridor)
2012	Metro North Luas extension from city centre to Liffey Junction Metro West Phase 3 Lucan to Blanchardstown
2013	Lucan to city centre Luas Rail Safety Programme completed
2014	Metro West Phase 4 Blanchardstown to Ballymun Tuam – Claremorris rail line (Western Rail Corridor)
2015	Interconnector completed Extend Electrification to Balbriggan, Maynooth, Navan, Hazelhatch. Phase 2 of Navan rail link Luas extension Cherrywood to Bray

Note: The 2011-2015 road programme will involve the development of approximately 150 km of dual carriageway, 400 km of 2+1 roads and 300 km of single carriageway. The sequencing of projects for implementation post-2010 will be decided by the National Roads Authority at a later date.

Figure 4.11.1: T21 scheduled megaprojects and ambitious time-lines

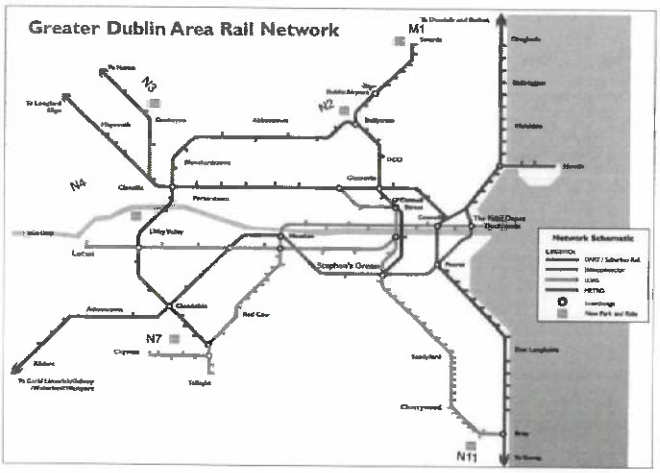


Figure 4.11.2 – T21 Dublin Rail Plans: The blue lines represent the proposed *Metro North* and *Metro West*, while the purple line indicates the *DART Underground* (briefly branded *Interconnector* as above). Phoenix Park tunnel is not apparent.

4.12 Dáil Éireann *Dublin Transport Authority Act* (Irish Statute, Dublin, 2008)

When initially envisaged, the Dublin Transport Authority was conceived to be accountable to a directly elected Dublin Mayor. However, as per Literature Review (O'Connor), the mayoral office did not occur – with this body ending up being answerable to the national transport minister instead. Additionally, the body now has a national policy remit on top of having specific powers to coordinate transport matters in Dublin. As set out by the Act, the NTA must produce and update strategy at regular intervals for the Dublin region, setting out a multi-year vision – such as the *Strategy for the Greater Dublin Area 2016 - 25*. For adoption to occur, the Strategy must be consistent with Regional Planning Guidelines, secure ministerial approval, and be passed by Dáil Éireann having first been presented for 30 days.

4.13 Department of Transport *Smarter Travel* (Dublin, 2009)

By 2009, Ireland's economy crashed, with the International Monetary Fund and European Union funding the country. Nonetheless *Smarter Travel* innovated as it encouraged cycling and walking, on top of T21. Crucially, tax incentives were introduced for cycling to work; today, cycling has grown to circa 7.5% of modal share in Dublin city and suburbs[xxii].

4.14 Chartered Institute of Logistics and Transport (Ireland) *T21 Midterm Review* (Dublin, 2010)

A midterm review was conducted in 2010 appraising the performance of T21. By then the €3 billion annual spend associated with T21 was impossible. The report noted the motorway network had been largely completed within time and budget. With finances clearly limited, the report stated, 'priority should be given to DART Underground and Luas Cross-City over Metro North', with BRT suggested as an alternative to Metro North. Separately, cycling and walking were encouraged, while road user charging was suggested for Dublin.

4.15 Irish Rail *The Business Case for DART Underground* (Buchanan Associates, 2010)

In 2010, Irish Rail commissioned Buchanan Associates to produce *The Business Case for DART Underground*. As with previous reports, using the Phoenix Park Tunnel was disregarded as the Drumcondra line *'does not have the capacity to facilitate the additional traffic'*.

4.16 National Transport Authority *Draft Dublin Strategy 2011 – 2030* (N.T.A., 2012)

As indicated in section 4.12, the NTA has responsibility for coordinating Dublin transport – and previous policy objectives of Dublin local authorities can be overridden, with a new rail station at Cross Guns Bridge to no longer be 'priority' (see *Draft Phibsborough Local Area Plan 2015*). The *Draft Strategy* continued with many of the larger schemes of T21 – even *Metro West.* As with T21, the

Phoenix Park tunnel did not even feature on the maps. The *Draft* was not subsequently approved by then Transport Minister, Leo Varadkar.

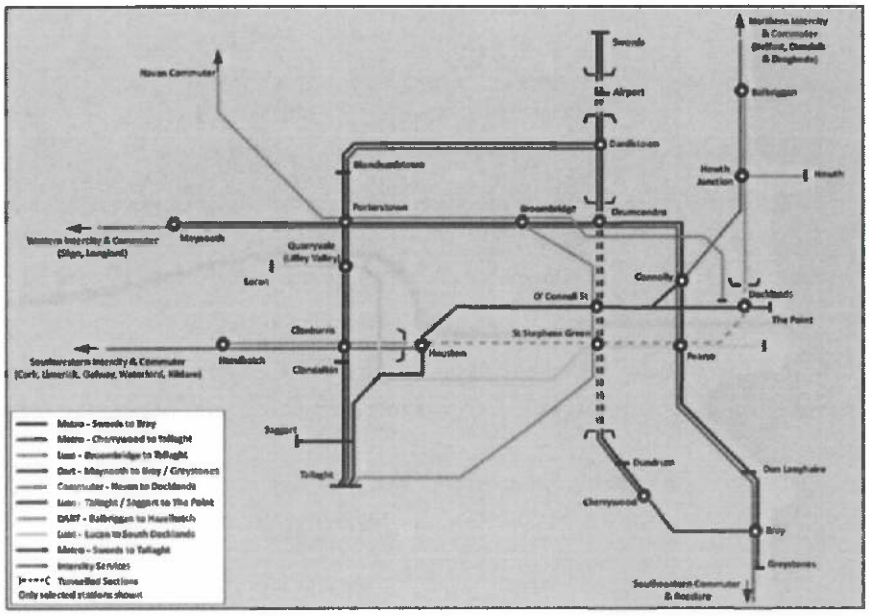


Figure 4.16.1 NTA 2011 Dublin Strategy: Despite the economic crash, Dublin rail plans appeared to be the same as T21, including *Metro West.*

4.17 National Transport Authority *Dublin Implementation Plan 2013* (N.T.A., 2012)

By 2013 all T21 Luas extensions to Cherrywood, Docklands, and Saggart had opened. The *Implementation Plan* seemingly attempted to prioritise and innovate with limited assets – so Luas Cross City was commenced, while Metro North and DART Underground were deferred. Moreover, the Phoenix Park Tunnel was prioritised to be opened to Kildare commuter trains; separately BRT planning began – and other cost-effective bus improvements also occurred.

4.18 National Transport Authority *Planning and Development of Large Scale Rail Focused Residential Areas in Dublin* (Brady Shipman Martin & OMK 2013)

This non-statutory report identifies areas suitable for development around Dublin. However, despite national policy apparently encouraging city-centre living, such sites were excluded purportedly as such lands may be suited to greater development density and are already served by public transport. (See Section 1, page 3, Brady Shipman Martin & OMK 2013).

4.19 Department of Transport & Department of Environment *Design manual for Urban Roads and Streets* (DoT & DoE 2013)

This design guidance was issued as urban streets were being designed with the same criteria as non-urban roads, primarily to move motor traffic. *DMURS* encouraged priority reorientation, with streets not simply being 'transport corridors', but instead environments conducive to walking and cycling, and complementary to *Smarter Travel*

4.20 National Transport Authority *Fingal North Dublin Transport Study Appraisal and Evaluation Reports* (Aecom, 2014 - 15)

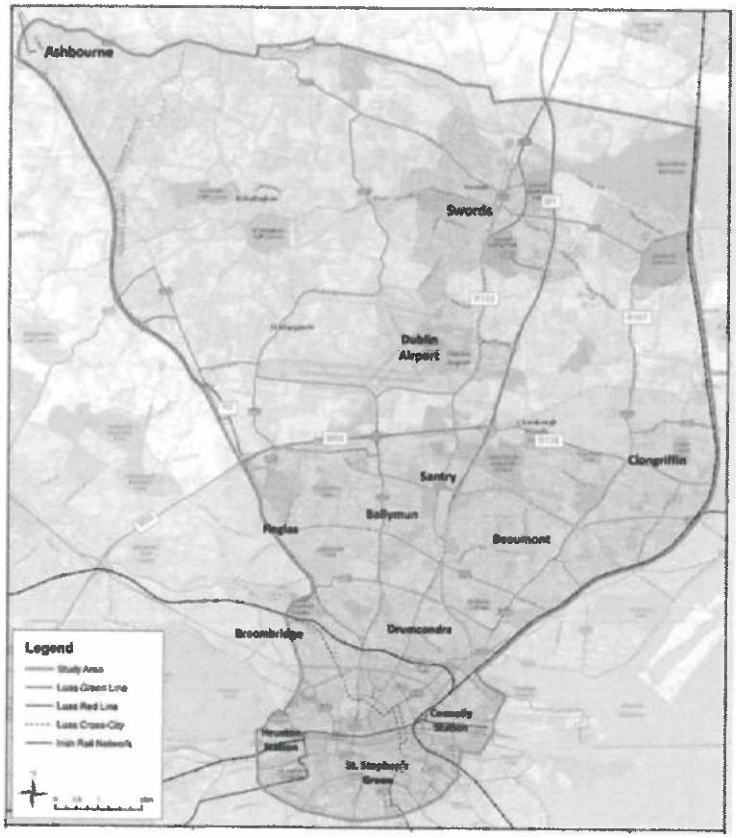


Figure 4.20.1, reproduced from page 1 of the Aecom Fingal / North Dublin Transport Study Appraisal Report, Stage 1 Assessment. Phoenix Park and Royal Canal railways are not apparent, while the ferry port was excluded.

Produced in November 2014 and June 2015, 25 potential modes and routes to connect Dublin city centre, the airport, and Swords, were assessed. Section 6.3 notes study was conducted using the Common Appraisal Framework (CAF) as issued by the Department of Transport. The CAF provides a framework of clear metrics by which potential projects that require public capital investment can be judged (see 4.24).

The 'Multi-Criteria Analysis' (MCA) uses these headings:

- Economy;
- Safety;
- Environment;
- Accessibility and Social Inclusion; and
- Integration

However, separately without apparent explanation, Dublin Port was excluded from the study area, despite 1.8 million passengers p.a[xxiii]. (see figure 4.20.1). The report seemingly ignores the Royal Canal railway, although perceived capacity restraints on the Drumcondra line were cited in rejecting the possibility of a DART link ('HR8' option) to the airport from Cross Guns Bridge. Separately the 'LR4' option of extending the Luas from Broadstone to Dublin Airport and Sword was modelled with the Luas stop removed from the Cross Guns Bridge railway bridge (see figure 4.20.2), despite a Dublin City Council objective to develop a station there[xxiv], while the former Royal Canal Broadstone Branch / Old Ballymun Road corridor was not considered when the Phibsborough Road was found too congested; lastly, rail capacity on O'Connell Street at peak hours was an issue – yet this was based on operating Broombridge trams end-to-end, with shuttle service not considered. There appears to be a possible over-focus on connecting the airport with the city centre, given only 23% of travellers at Dublin Airport seemingly originate their journey from the city centre. The ultimate recommendation was that *Metro North* should be slightly redesigned and advanced.

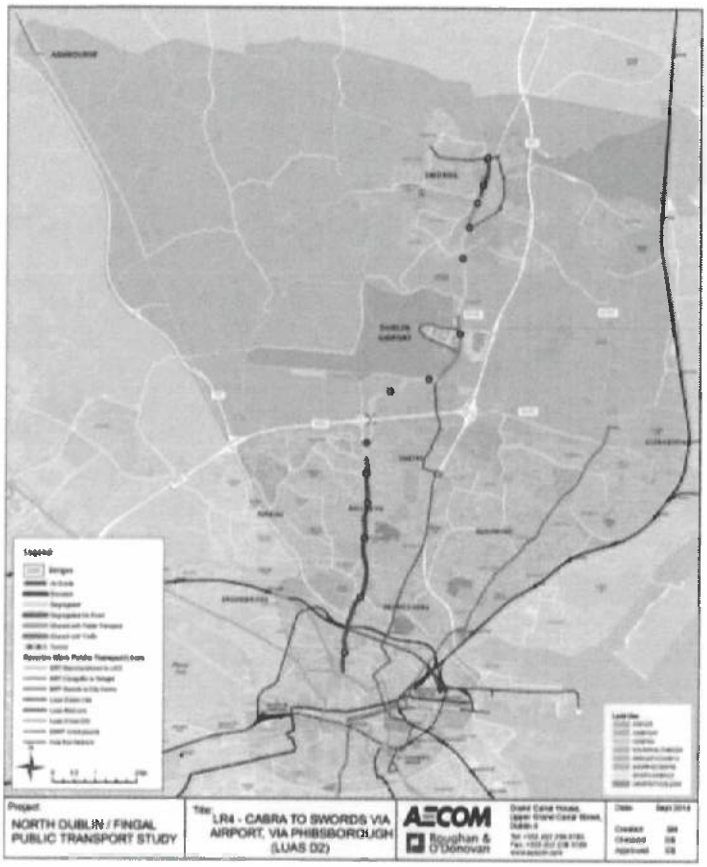


Figure 4.20.2 LR4 Overland Luas option with stop circa 600 metres away from Cross Guns Bridge, despite a Dublin City Council objective to develop a rail station at the location. Map courtesy of Fingal / North Dublin Transport Study Appraisal Report, Stage 1 Assessment (2014).

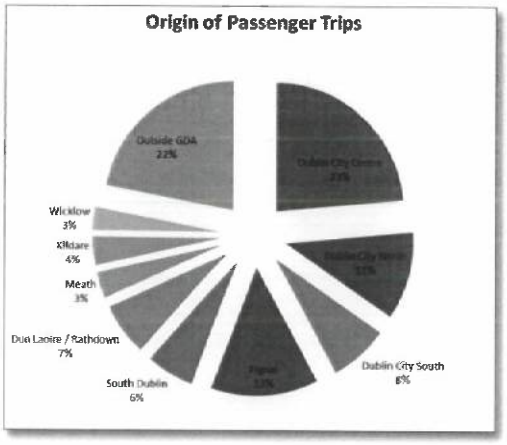


Figure 4.20.3 Dublin Airport Passenger Origins, from 'Dublin Airport Passenger Survey', by the NTA 2011. Only 23% originated in the city centre – suggesting a benefit for passengers to be able disperse at a nodal point such as Cross Guns' Bridge, rather than firstly coming into the city centre.

4.21 Irish Rail *Dart Expansion Programme Business Case* (Aecom / Volterra Partners, April 2015)

Contemporaneously to producing the North Dublin / Fingal evaluations for the NTA regulator, Aecom in conjunction with Volterra were also working for Irish Rail, producing the *Dart Expansion Business Case*. Again, the Phoenix Park Tunnel was examined as an alternative to *DART Underground*, yet, 'the possibility of reduced capacity on the Sligo Line' was a critical issue. Yet with the map used to illustrate this issue, the Royal Canal line is not obvious, as per figure 4.21.1. It is not known why this is not shown. However, the conclusion is effectively the same flawed finding in the North Dublin Fingal Transport Study – albeit in this case blighting a different prospect. Diverting traffic or using Docklands Station is not assessed – with Docklands seemingly not indicated.

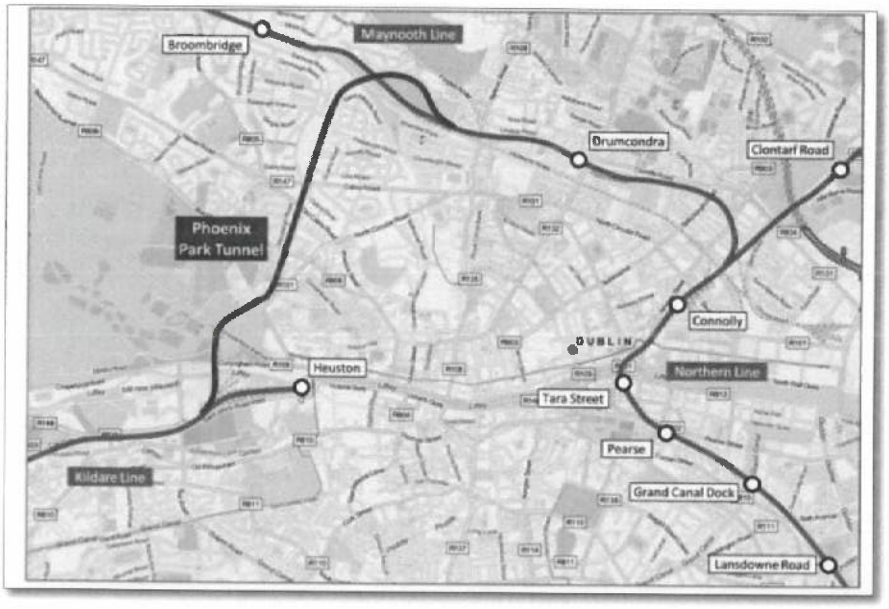


Figure 4.21.1 – The Royal Canal line and Docklands Station appear absent from the map used to indicate the (parallel) Drumcondra line lacks capacity to accommodate Phoenix Park traffic. Map courtesy of *Dart Expansion Programme Business Case.*

Showing traffic modelling for *DART underground,* it seems evident Irish Rail envisage little use for the Royal Canal or Phoenix Park lines, with zero services, as per figure 4.21.2. Hence *DART Underground* effectively proposes a new tunnel between Heuston and Docklands – while abandoning a line between Heuston and Docklands. When previously disused, the line was closed by Irish Rail, as per figure 4.21.3.

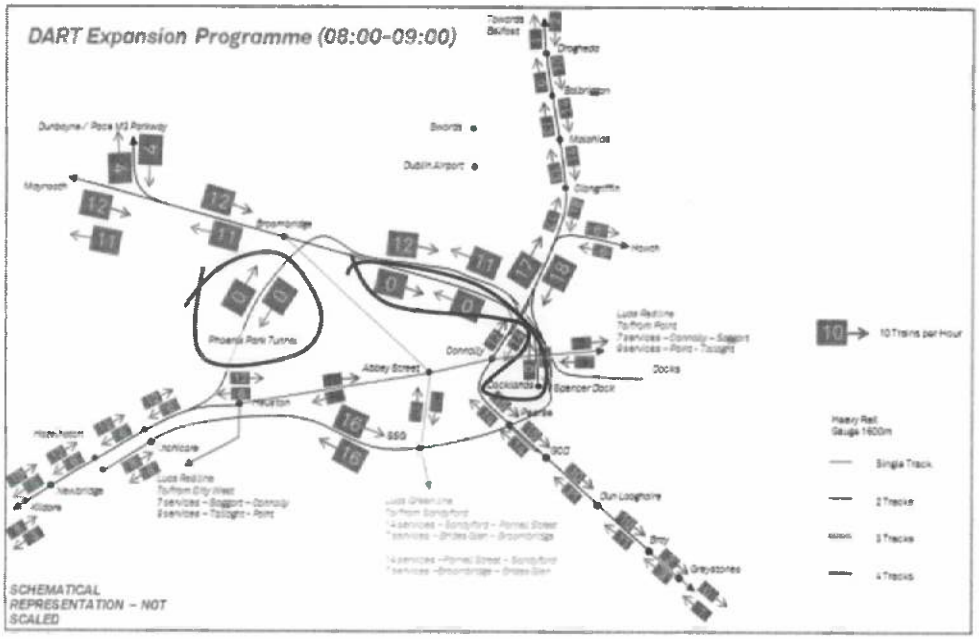


Figure 4.21.2 – Zero services are envisaged by Irish Rail on the Royal Canal and Phoenix Park lines that already link Heuston Station with Docklands in the event of *DART Underground* opening. Courtesy of *DART Expansion Business Case.*

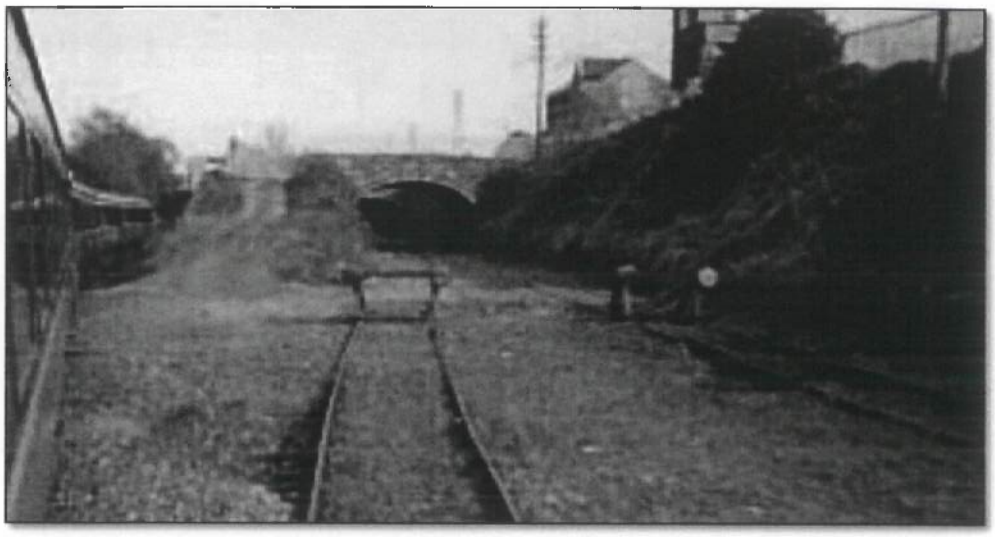


Figure 4.21.3 View east at Glasnevin Junction where the Royal Canal railway was closed when previously disused during the 1990s. Photo courtesy of RailUsers Ireland.

4.22 National Transport Authority *Western Corridor Study* (Jacob's & SYSTRA, September 2015)

As with the *North Dublin Study, the Western Corridor Study* was prepared in advance of the *Transport Strategy for the GDA 2016 – 35* following. In total, the GDA was divided into 8 geographic study areas in advance of *Strategy,* with a further 5 thematic reports, including Park-and-Ride, Core Bus Network, Demand Management, Transport Modelling, and Transport User's Benefits Assessment.

Unlike the *North Dublin Study,* there appears to be no reference to the CAF in the *Western Corridor Study* – and it is not clear why the same criteria were not applied for a comparable study, with both used to inform the *Strategy,* with a metro recommended and a Luas to Lucan in this instance. Moreover, there does not appear to reference to the CAF in the NTA's other background technical reports, except one reference in the User Benefit's Assessment Report.

This study ultimately recommends a Luas from outside Lucan to Trinity College. It is not understood why Trinity as terminus was chosen, as there is seemingly only one reference in the document, and it was outside the study area. Such a location choice for terminus seems sub-optimum given proximity of Irish Rail stations at Pearse (750 metres), and Docklands (2 kilometres), as has been measured on Google Maps. The proposal appears the same as the previous T21 project, Luas Line F, including terminating short of Lucan village, as per figure 4.22.1.

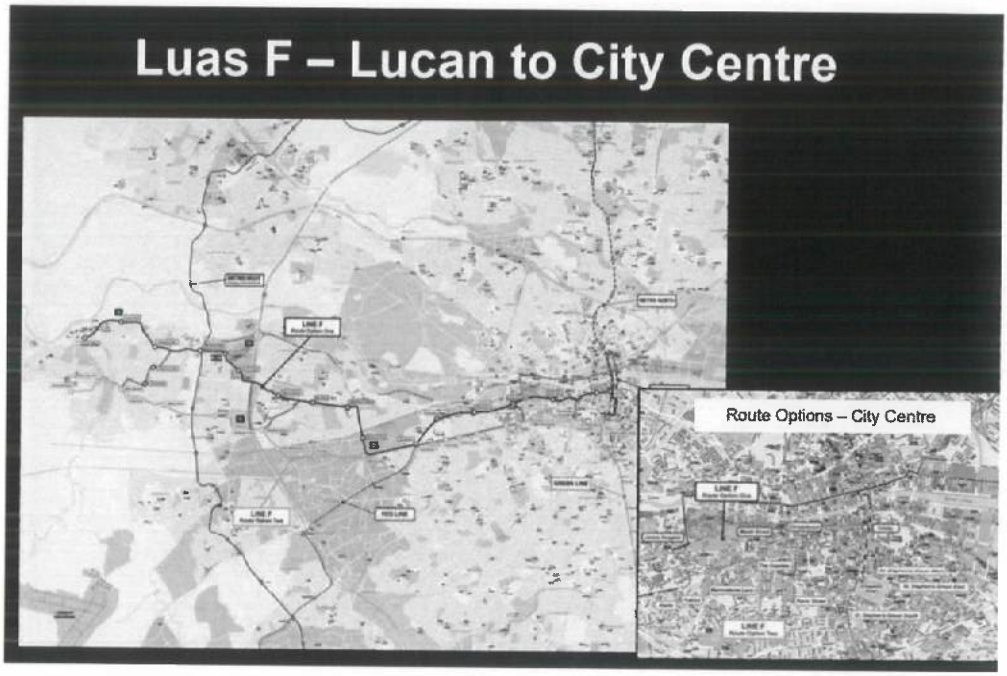


Figure 4.22.1 A presentation previously given by the RPA outlined the 'Luas F' project as envisaged under T21, with route options 1 and 2 indicated by navy and orange lines. The Luas recommended by the *Western Corridor Study* appears to be effectively the same scheme.

4.23 National Transport Authority *Transport Strategy for the Greater Dublin Area 2016 - 2035* (N.T.A., 2015)

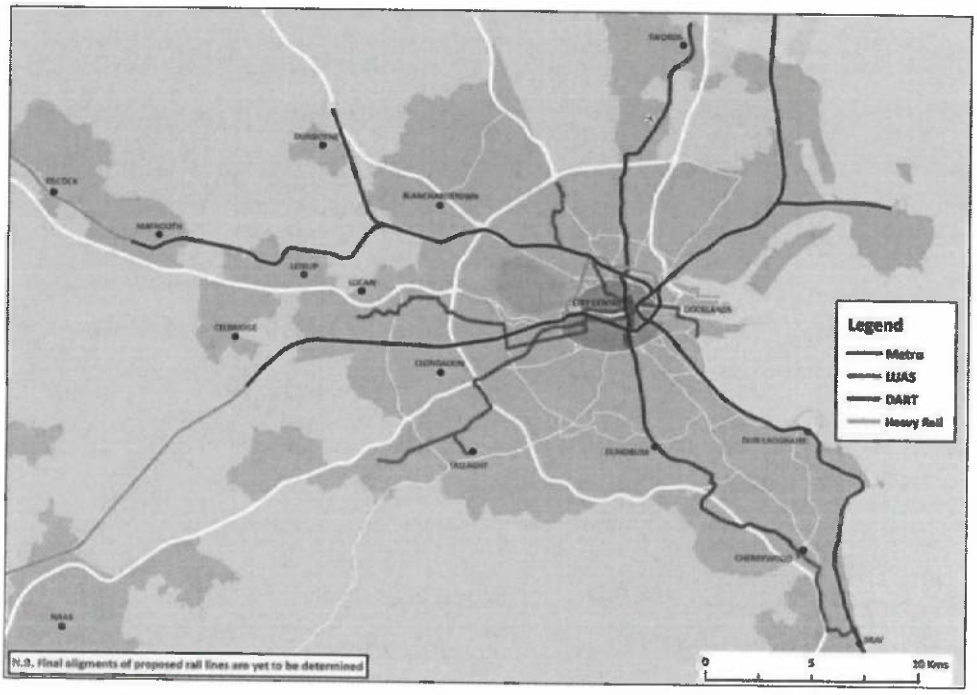


Figure 4.23.1 Overall metropolitan light and heavy railway network as envisaged by the NTA for 2035. Map courtesy of National Transport Authority Transport *Strategy for the Greater Dublin Area 2016 - 2035*

The Strategy provides a vision for the next 2 decades. Excluding *Metro West* and the Navan railway, much of T21 is back on the agenda – and a Poolbeg Luas extension. As per figure 4.23.1. *DART Underground* is a 'cornerstone', yet little indication is given of any new Irish Rail stations, except 2 in suburbia – with no commitment to a Ballyfermot Irish Rail station, despite the Lucan Luas due to intersect there. There does not appear to be reference to CAF in the Strategy; the word 'contingency' is not apparent, and while 5.12 sets out 'Delivery and Phasing', specific dates are notably absent, as per figure 4.23.2.

Commensurate with the 2015 North Dublin Fingal Study (as per 4.20), *New Metro North* would be a modified version of *Metro North*, with new test bores and planning permission needed, as the design is being revised. Previously €200 million was spent preparing the last metro plans[xxv] – and it seems likely similar costs will again be incurred to get the scheme to the point where the previous scheme was abandoned. One benefit of the *North Dublin Fingal Study* is cost estimates per element of infrastructure were provided, including kilometre of Luas – and, it appears such money would almost be enough to afford an overland extension to the airport, by extending a route from Broadstone.

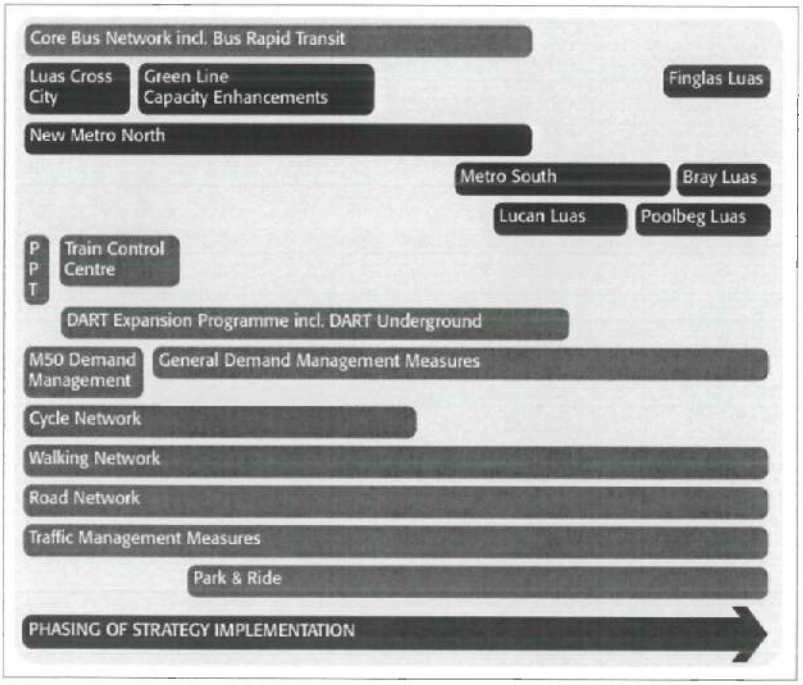


Figure 4.23.2: Phasing of Strategy Implementation, from *2016 – 35 GDA Strategy*. Actual dates are absent with no clear timeline apparent.

A challenge in evaluating official intentions is that maps provided either lack essential details – such as stations – or show one area without context. Accordingly, maps have been prepared for this project, as per conclusion of this review. These show NTA plans, the network today, and lastly, apparent potential value of the overlooked link in facilitating strategic aims.

4.24 National Transport Authority, September 2015, *Options for Dart Underground.*

In 2015, central government suspended *Dart Underground*, and requested review of cost reductions. In September 2015, an NTA illustrates the options considered – and notably using the north city lines does not feature.

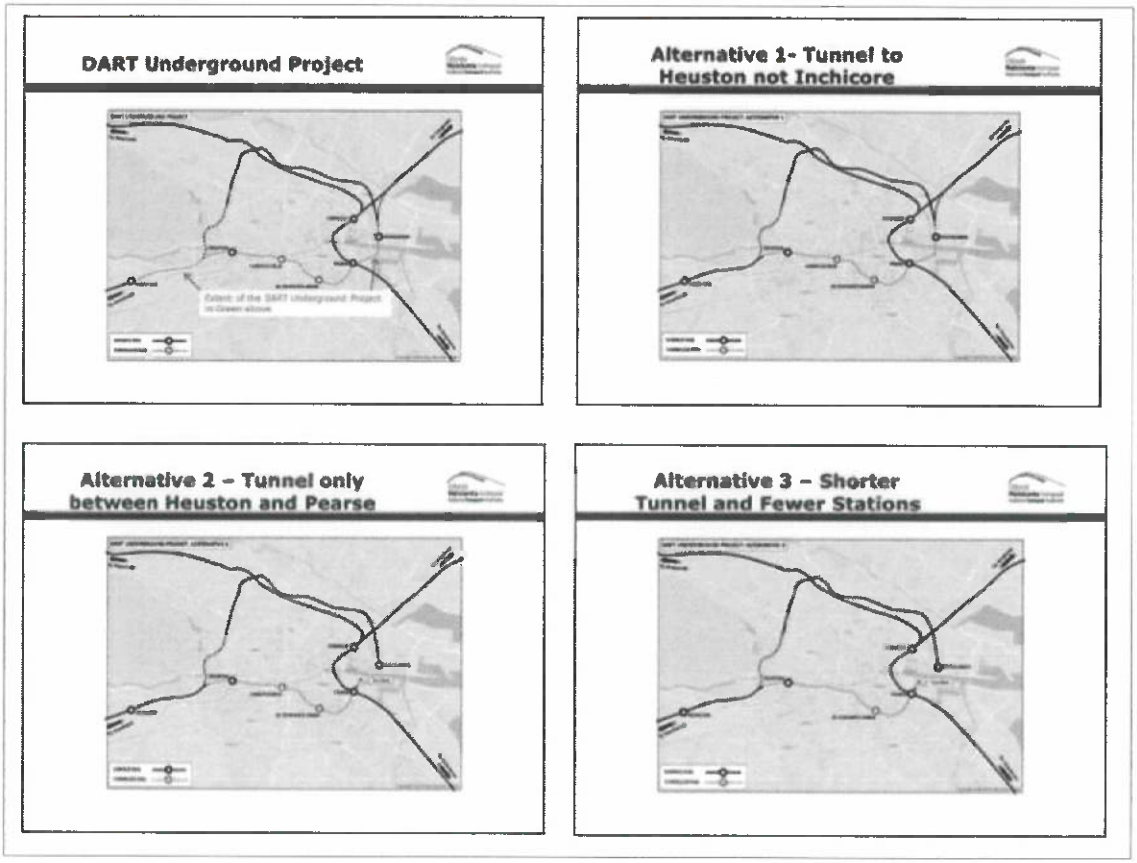


Figure 4.24.1 NTA presentation outlining alternatives to *DART Underground* – using the northside railways is not considered.

4.25 Department of Transport, Tourism, and Sport, *Common Appraisal Framework for Transport Projects (CAF)* (Dublin, 2016)

As with the predecessor 2009 document, the CAF provides appraisal guidance for decision makers when considering projects. Clear criteria are set out in section 4.2.3, 'Economic Appraisal: Multi-Criteria Analysis'. by which projects and alternatives can be judged. The metrics are; safety, economy, safety, integration, environment, accessibility and social integration, and physical activity (where applicable). This approach is in line with best practice elsewhere, such as the U.K., and offers a rigorous method of appraisal. However, application is limited to projects, rather than policy – and it is not understood to be used by the NTA in preparation of the Strategy for Dublin 2016 - 2035.

4.26 Dublin City Council, *Dublin City Development Plan 2016 – 2022* (D.C.C. 2015)

The Development Plan is a statutory Plan that is renewed every 6 years providing planning guidance for the city. The current Plan reiterates commitments 'to maximise the use of public transport infrastructure and minimise car dependence', encourages higher densities at public transport nodes, and reaffirms NTA policy of *Metro North* and *DART Underground*.

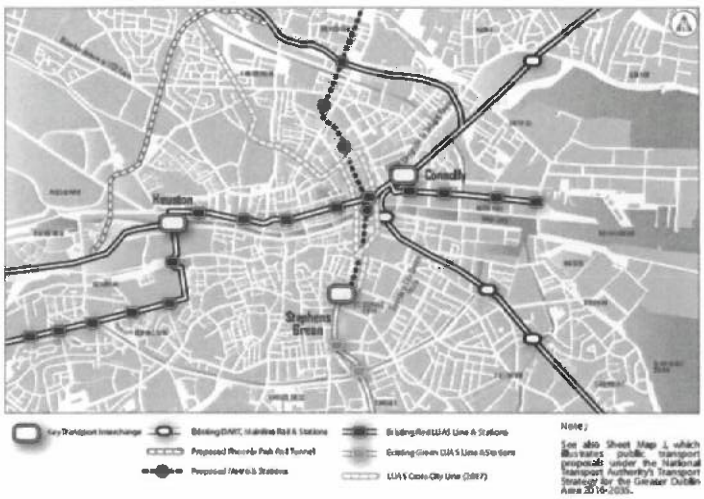


Figure 4.26.1: City centre integrated transport, as per the *City Development Plan 2016 – 2022.* Unlike other cities where locally elected representatives set policy, DCC transport direction is subordinate to the unelected NTA.

4.27 National Transport Authority, *Bus Connects* (Dublin, May 2017)

Bus Connects promises to 'transform' the network by upgrading the busiest bus lanes, introducing 3 BRT routes, redesign the network, and speed up services by ensuring cashless payment on board. Bicycle lanes are also to be incorporated along the new bus lanes. The programme envisages €1 billion being spent, with €300 million presently allocated[xxvi].

4.28 Department of Housing, Planning, Community and Local Government, March 2017, *Rebuilding Ireland.*

Rebuilding Ireland releases state lands suitable for residential development. However, it does not include the derelict lands around Docklands Station, despite it being sufficient to accommodate circa 2,500 apartments, as has shown in a design provided in the appendix. Other major CIE / state-owned lands are

excluded – including marshalling yards, where development could occur overhead. As can be seen from image 4.28.2, much open lands are present.

Figure 4.28.1 A screengrab of the *Rebuilding Ireland* map that purportedly shows land suitable for residential development close to the central railway network in Dublin city. Image courtesy of *RebuildingIreland.ie*

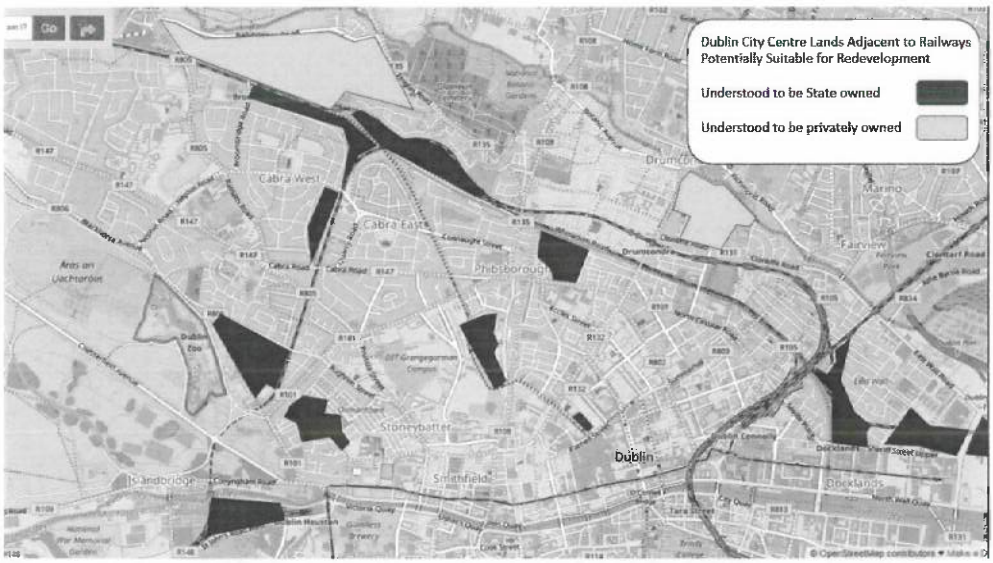


Figure 4.28.2: A relatively basic analysis conducted by desktop research for this project appears to indicate substantially more state-owned land potentially suitable for residential development. One such site at Docklands Station has been quantified as capable of accommodating circa 2,500 apartments, as further outlined in the appendices.

4.29 Department of Communications, Climate Action and Environment, *National Mitigation Plan* (Dublin, July 2017)

Noting transport's role with growth and social inclusion, the *Plan* states 'developing further cost-efficient measures for the sector will be challenging'. *Metro North* is indicated to commence operations in 2026/7; tax incentives for bicycles are continued, and low emissions vehicles are encouraged.

4.30 Department of Communications, Climate Action and Environment, *National Planning Framework consultation* (Dublin, 2017)

Presently a new national planning framework is being produced to replace the abandoned *National Spatial Strategy (NSS).* The *NSS* failed as the urban areas identified for growth had shrunk, while other areas grew[xxvii]. Crucially there was little collegiality between the *NSS* and the *National Development Plan* with motorways planed which preceded. The *NPF* will seek to deter sprawl, encourage urban and regional growth while reducing carbon emissions.

4.31 Conclusion

Rather than being a new plan, core elements of T21, such as Dublin underground railway plans, dated back to 'at least 1966'. Much of the motorways subsequently opened as T21 projects were under way prior to T21. No clear systematic appraisal occurred prior to T21 for the projects that were included; accordingly, appraisal in hindsight is harder given the absence of metrics by

which it could later be judged. Additionally, no official post-programme assessment of T21 was ever published, despite previous indication.

Subsequently the value of systematic appraisal became apparent; in 2009, the *Common Appraisal Framework* (CAF) was issued by Department of Transport, which provides clear criteria when assessing projects or strategies (see 4.25). Although the CAF was clearly applied in the North Dublin Fingal Study, there appears to be no reference in other NTA Dublin area reports, including the *West Corridor Study*, which provides basis for the Western Luas in the *GDA Strategy*. There is apparently no reference the CAF in the GDA Strategy itself. That questions arise regarding universal application of CAF is concurrent with opinions later collected in interviews.

Innovative approaches emerged during recession, including *Smarter Travel* and *DMURS*, emphasizing non-car cost-effective modes. Post-recession, megaprojects appear again to dominate – with the Swords BRT scheme seemingly hindered by planning of Metro North first being finalised[xxviii]. Innovations do not appear properly capitalised upon. Despite the Phoenix Park tunnel being brought into use, services travel non-stop through Heuston and heavily populated areas. Major trip generators with Irish Rail lines present are omitted for station consideration in the *GDA Strategy*, including Dublin Ferry Terminal, Croke Park, Dublin Zoo – and suburbs of Phibsborough, East Wall, Ballybough, Ballyfermot, and Cabra. Accordingly, there is merit in assessing the potential population catchments in these areas, as is quantified in Findings.

Disturbingly, evaluations leading to current much of the Dublin underground plans are seemingly based on a key link in the existing Irish Rail network having been overlooked, as per 4.20, 4.21, and illustrated in maps following. It is noted the same firm of consultants was working for both the NTA and Irish Rail at the same time when the comparable miscalculation appeared in each assessment.

Separately it appears there is a disconnect between transport and land use, as per 4.18 and 4.28. Sizable state-owned under-utilised lands are being seemingly overlooked in assessments. It has been estimated the Irish Rail Docklands Station site could accommodate development of circa 2,500 apartments.

That the Dublin underground plan(s) date back 50 years – but are not yet built, seems analogous to Flyvbjerg's commentary on Aalborg. However, there the zombie plans lasted only 25 years, before being terminated.

It is possible that current NTA plans may be realised, particularly the bus plans[xxix], – and it is encouraging to see €300 million committed to the €1 billion BRT scheme launched earlier this year. However, it also likely Dublin will continue to be haunted by zombie megaprojects that are ultimately unaffordable amid economic downturns – only to then again re-emerge, forever undead.

The following maps indicate NTA's Dublin railway plans, and an apparent option hitherto not considered, as per sections 4.21 and 4.22.

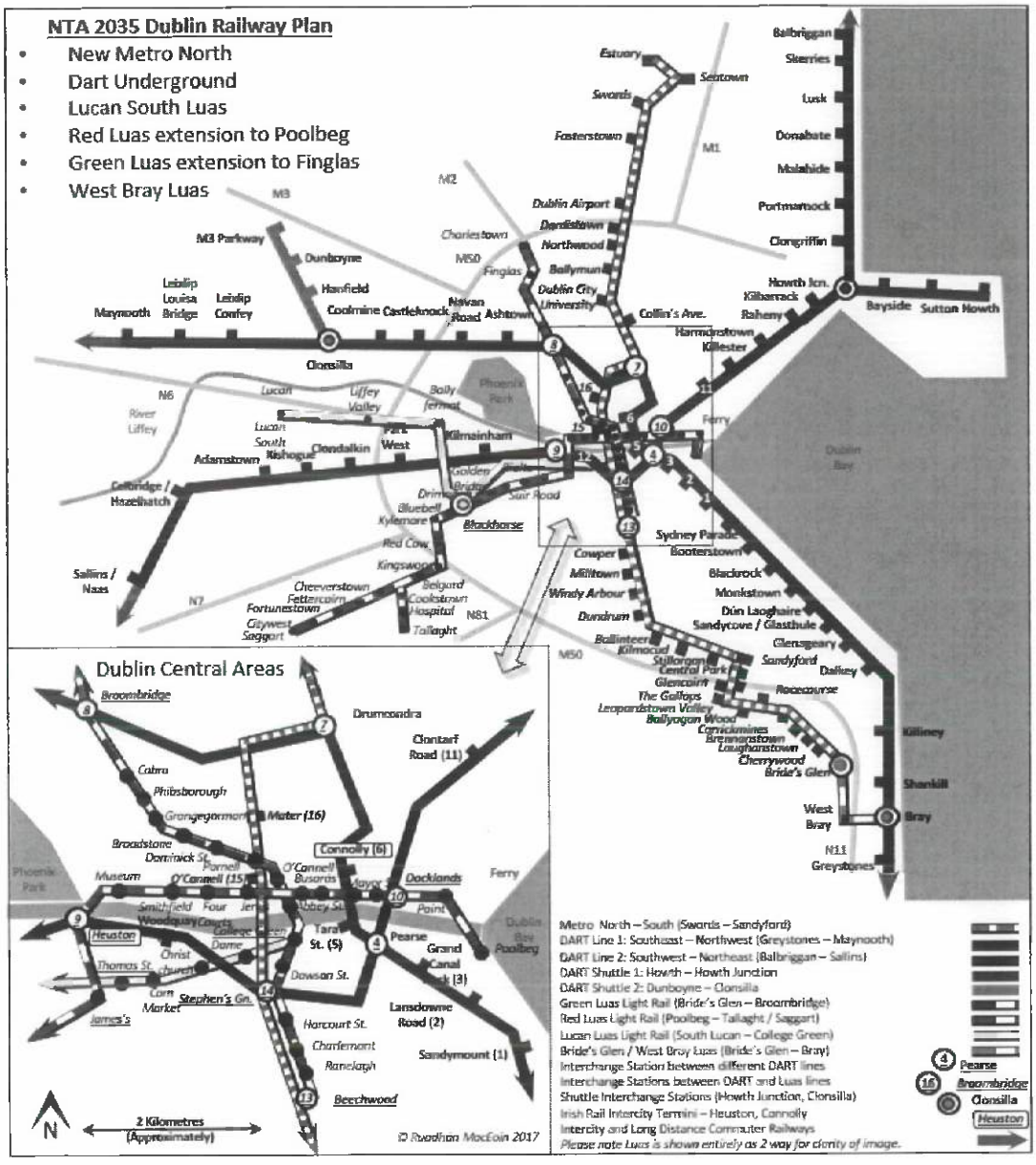


Figure 4.31.1 NTA's plans for Dublin metropolitan railway network in 2035. Schematic map prepared specifically for this project as official plans lack details.

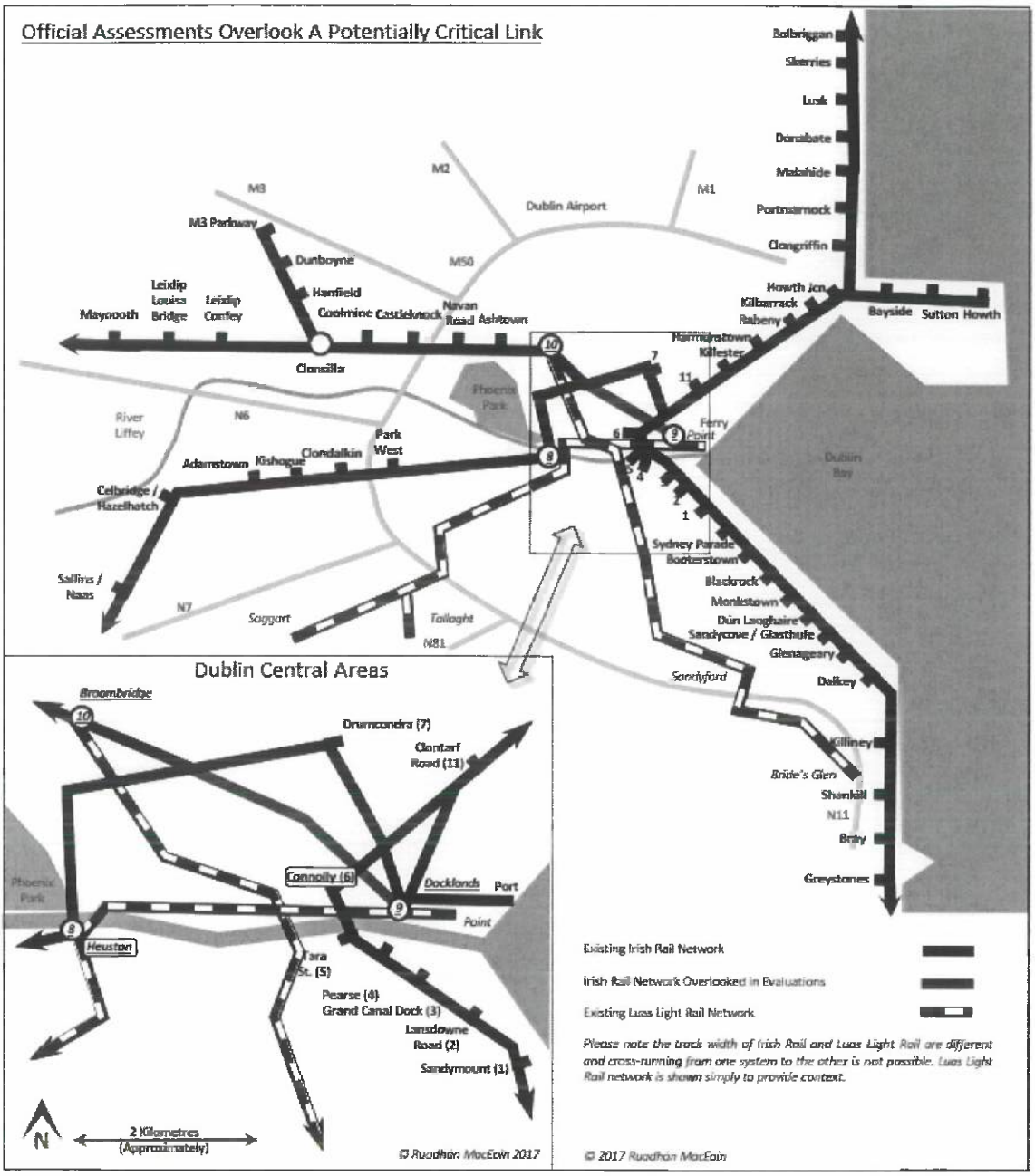


Figure 4.31.2 This schematic map illustrates the network as assessed as per 4.20, and 4.21, with the overlooked Royal Canal railway shown in red. Map was specifically prepared for this project.

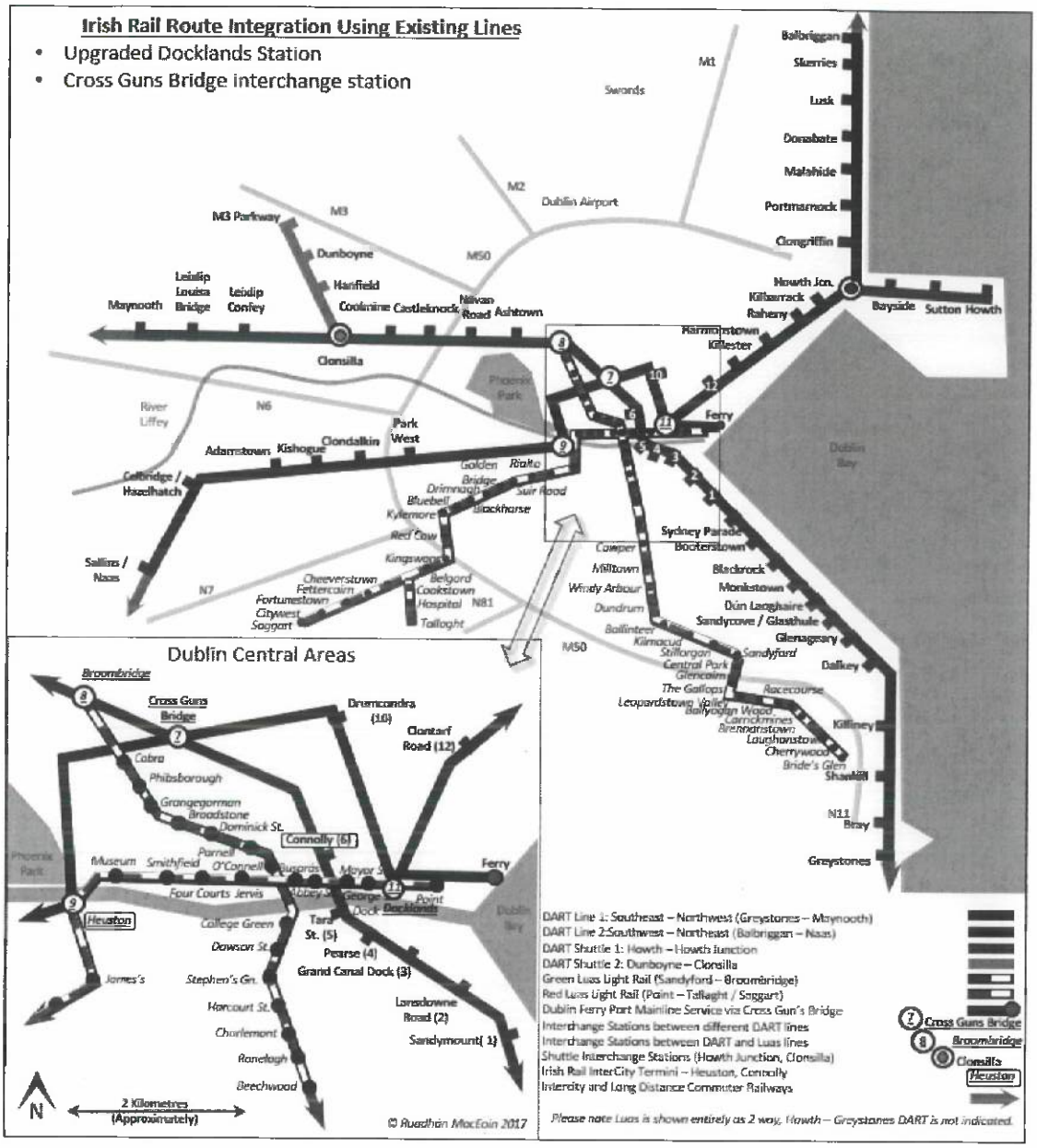


Figure 4.31.3 This map illustrates how the existing Irish Rail network could be used in a manner comparable to *Dart Underground* when the overlooked Royal Canal railway is included during evaluation – yet this option has not been considered. Map created specifically for this project.

5.0 Chapter 5 - Findings & Analysis

5.1 Introduction

This section of the dissertation deals with the content gathered primarily by way of semi-structured interviews. Separately, ArcGIS generated quantitative data has been used as a method to assess the effectiveness of T21 along the Irish Rail network in Dublin City Centre.

As stated in the methodology, 10 persons were selected based on parties representing academic, sectoral, and civic society interests – with these agreed with the Project Supervisor. The project was fortunate as persons with extensive experience were amenable. In several instances, interviewees had experience in more than one sector – with 15 data pools generated from which to sample. To enable straightforward coordination of responses, the same nine questions were asked of all respondents, with these provided before the interviews. Answers were then individually thematically analysed so as to best manage and harness the data. Views were stratified, with those calculated to be most representative provided here – and also, particularly insightful perspectives. Likert scale questions were found to be beneficial, and the criteria currently used in the Common Appraisal Framework (CAF) provides values by which T21 could be judged. Hence, despite the absence of clear metrics at the launch of T21 – or of an official post-completion evaluation – interviewees were able in to appraise T21 in hindsight, and this has generated a reasonably robust means of quantifying the programme's performance.

5.2 Profile of Respondents

In accordance with UCD protocol, interviewees' details have been anonymised, with transcripts confidentially filed with the project supervisor. However, in line with academic practice, profile of the interviewee's experience and relevance is broadly outlined.

Person A – Academic and Sectoral

Person B – Civic

Person C – Academic and Sectoral

Person D – Civic

Person E – Sectoral

Person F – Academic and Sectoral

Person G – Civic

Person H – Academic and Sectoral

Person I – Civic

Person J – Academic and Sectoral

5.3 Interview Responses

5.3.1 Question 1A: T21 Plan Making Process

Please indicate how good you rated the plan making process that led to Transport 21? Kindly indicate your reasons.

Respondents unanimously indicated an absence of awareness of T21 except only after its launch, with the plan making process unapparent, other than at closed senior government meetings. Respondents overwhelmingly regarded the process as essentially non-transparent, and very poor.

5.3.2 Question 1B: Likert Scale Responses on Plan Making Process of T21

Interviewees were invited to assign a score of 1 – 5 as to how well they rated the plan-making process, with 5 being very good and 1 being very poor. Results shown as per Table 5.3.2.1, indicate it was collectively considered dismal.

	Person 1 (x2)	Person 2	Person 3 (x2)	Person 4	Person 5	Person 6 (x2)	Person 7	Person 8 (x2)	Person 9	Person 10 (x2)	Score Spectrum	Score
Safety	1		3	1	3.5	1	1	1	1	1	15 – 75	19.5

Table 5.3.2.1: The collective impression of the T21 plan-making process appropriates a dismal score of 19.5 out of 75 – and barely above the minimal score of 15.

5.3.3 Question 2: Likert Scale responses regarding performance of T21

This question was central to the research, as it sought to evaluate opinions regarding the performance of T21. Hence it was decided to seek qualitative views on relevant values as set out by the CAF, with interviewees also asked to assign Likert Scale values. Accessibility was attributed a category independent of social inclusion, as accessibility was specifically emphasized in contemporaneous approach – and hence separate valuing seemed appropriate.

As with question 1, all interviewees were asked to assign a value from 1 to 5, and the same process was again conducted with appropriate weightings. Interviewees were asked to explain their reasoning primarily so that the Likert Scales would induce a considered response. Person B did not feel appropriately familiar enough with the scheme's effect to pass judgement; accordingly, the sample size was reduced by 1 overall. Separately no response was provided by Person F regarding 2 criteria, with sample sizes also accordingly reduced in those instances. The multi criteria assessment results generated are represented by Table 5.3.3.1.

	Person A (x2)	Person B	Person C (x2)	Person D	Person E	Person F (x2)	Person G	Person H (x2)	Person I	Person J (x2)	Criteria Score Spectrum	Score
Safety	1		3	3	4	3	3	4.5	2	3	14 - 70	**41**
Economy	2		3	3	3.5	4	1	2	1	3	14 - 70	**36.5**
Accessibility	1		2	3	3		4	2	2	4	12 – 60	**30**
Social Inclusion	1		2	3	3.5		2	1	1	2	12 – 60	
Integration	1		2	2	2	4	1	1	1	1	14 – 70	
Environment	1		1	1	2	2	1	1.5	1	1	14 – 70	
Personal Approval Score Spectrum	(12 – 60)		(12 – 60)	(6 – 30)	(6 – 30)	(8 – 40)	(6 – 30)	(12 – 60)	(6 – 30)	(12 – 60)		
Overall Score				**15**	**18**	**26**				**28**		**171**

Table 5.3.3.1: Overall results are coded by traffic light colours, with green being 'good', yellow being 'neutral / mixed', and red being 'poor'. Overall performance of T21 appears poor: not one person rated it as good overall – and not even one category was collectively considered 'good'.

When the samples are totalled and appropriately weighted, and classifications of criteria have a score spectrum of 14 – 70, the maximum possible variation is 56. Accordingly, overall satisfaction ratings can be broadly classified particular regarding each criterion as; good, mixed, or poor, and as represented by score bandwidths of 70 – 52, 51 – 33, 32 – 14.

Where a spectrum of 12 – 60 arises, after samples are totalled and appropriately weighted, the maximum variation is 48. Accordingly, overall satisfaction ratings can be broadly gauged as good, mixed, or poor, with bandwidths being 60 – 44, 43 – 28, 27 – 12. The same applies in gauging personal approval. Where score spectrum is 12 – 60, bandwidths are 60 – 44, 43 – 28, 27 – 12. Where a score spectrum is 30 – 6, bandwidths are 30 – 23, 22 – 14, 13 – 6. As Person 6 declined to comment on two criteria, their spectrum available ranged 8 – 40, with bandwidths of 40 – 28, 27 – 16, 15 – 8. Person B did not participate as they considered themselves insufficiently aware of the outcomes of T21 to comment.

In terms of overall approval rating, T21 attained a relatively poor rating, with a score of 171 on a spectrum that ranges from 70 to 400, with bandwidths being 70 – 179; 180 – 290, 291 – 400. When assessed by person, 5 of the 9 interviewees appear to rate the outcomes of T21 as sub-standard, and notably not one person seemingly regards it positively overall. In terms of satisfaction by category, again it is notable that not one criteria achieved a performance rating overall as good; outcomes in 3 categories appear to be considered as mixed, while performance in 3 categories is seen as poor.

Safety appears to be regarded reasonably satisfactorily (41 on a score range of 14 – 70), while performance relating to economy and accessibility appears to be regarded as mediocre – with each scoring halfway on the scales. However, social inclusion, integration, and particularly environment, were regarded as having

fared poorly under the T21 programme – with each scoring only a few points above the minimal scores available.

5.3.4 Question 3: T21 Alternatives

Do you believe that there were viable alternatives? If so, were these thought of – and if not, why not?

This solicited a variety of responses, with Person D among many, expressing the opinion 'there are always alternatives'. A number of respondents, such as Person C, asserted that significant lobby groups had commercial interest that profited by large construction, motor interest etc, influenced government approach. Person E suggested the proposed Lucan Luas would benefit the city-centre if extended east beyond College Green. Potential implications of this idea are teased out further in the Conclusion, as per figure 6.2.3.

5.3.5 Question 4: T21 Continuation

Why did the next administration proceed with the same plan, although it had effectively been declared discredited?

This solicited a variety in responses, partly as the immediately subsequent administration continued to have the same major party as the senior government partner. The recession was frequently cited; however, others such as Person H asserted it was 'unaffordable' from the outset. Despite subsequent demise, and separately the scores interviewees assigned in the Likert Scales, there was not total consensus as to T21 being regarded as 'discredited'.

5.3.6 Question 5: Policy Developments Post T21

Has transport policy significantly developed or changed since T21? Please discuss.

Certain policies such as *Smarter Travel* and *DMURS,* were praised – and the emerging *Bus Connects.* However generally, most believed little progress seems apparent – with Person E noting an absence of post-implementation research on infrastructure, and the increase in car usage, saying 'we've gone backwards.'

5.3.7 Question 6: Accountability

In your opinion, are there enough checks and balances to ensure accountability and that public finances are spent responsibly? Please elaborate as to your considered opinion.

Person J emphasized clear metrics agreed at the outset, rather than 'checks and balances'. Commensurate with Flyvbjerg, this appears a crucial aspect in order to be able to gauge success or otherwise – hence the relevance of CAF, particularly with contemporary decision making. Person F asserted the Public Accounts Committee in Dáil Éireann is effective, and that state bodies have to answer to it. However, Person H observed that the majority of board of the NTA is by ministerial appointment, who also has effective veto.

5.3.8 Question 7: Public Participation

How engaged do you consider the public involvement in shaping transport policy and provision in Dublin? Please explain your reasons.

This elicited an almost universally despondent response. Person H noted models of participatory transport councils elsewhere, such as Germany and the U.S.

5.3.9 Question 8: Incrementalism versus Megaprojects

To which would you ascribe priority; increasing efficiencies and service access on Dublin's existing bus and railway network – or would you favour development of new lines such as Metro North and DART Underground? Please give reasons for your answers.

Although this question was aimed at allowing respondents to compare inexpensive local interventions with capital intensive projects, and to feed into section 5.5, regrettably a false dichotomy was unintentionally posed – with the results of only limited value. Nonetheless, ongoing improvements were favoured – yet also, it is important to develop well-planned megaprojects where needed, with Person G observing, 'if you do something good to start with, it'll last centuries'. Nine interviewees responded, *DART Underground* seemed to attract support – with 5 favourable, and 1 against; *Metro North* was supported by 2, with qualified support by another, and one person against. BRT and buses 2 and qualified support of another.

5.3.10 Question 9: Other Reflections on T21 and subsequently

Please elaborate on any outstanding aspects that you consider to be important in reflections of then and now regarding Transport 21.

Not a lot of data emerged that was not already covered. However, Person A raised an interesting point relating to lands belonging to state-owned bodies – like Irish Rail, that may be relevant in considering lands apparently omitted in current state considerations, as per sections 4.18 and 4.28. It was observed that where sales occur, all monies automatically return to the Department of Finance. It was asserted this is a massive barrier in coordinating land and transport. It was

suggested that companies should be entitled to ring-fence such monies in an accountable manner, and be incentivised to optimise both land and infrastructure.

5.4 Summary of Respondents' Views

Respondents were under-whelmed by the outcomes of T21, with pre-planning notably considered dismal. Safety is regarded as better – with economy and accessibility believed to have benefitted to a mediocre extent. However, social inclusion, integration, and environment are all perceived to have fared poorly. Opinions were divided as to subsequent apparent demise – while reticence and some confusion is expressed regarding more recent policy developments.

There appears to be a general perceived lack of accountability of decision makers, matched by a belief that demonstrable opportunities for meaningful engagement by ordinary citizens to shape and or inform transport policy are few and fragmented. Nonetheless, it is apparent that clearly agreed metrics applied in transparent appraisal is of potential great value. However, there was little perception of this visibly occurring. As it has not been immediately identifiable that universal application of the CAF has occurred with all current *GDA Strategy* projects, (and indeed, the Strategy itself), further clarification of this was sought from the NTA. The NTA initially asserted CAF was applied both for the *Strategy* and projects within (see appendices).

However, following further questioning seeking release of documented details of this, particularly meeting reports or minutes regarding application, no further relevant information was made available prior to this project being completed (as per appendices). Consequently, it was not possible to see if and how the CAF is being applied, as was initially stated. However, should it later transpire the CAF is being applied, it would seem apparent that there is in any case a dissonance between how application of CAF is said to occur by officialdom – and how such application is seemingly perceived by knowledgeable persons.

5.5 Quantitative Research

As a means of examining the impact of T21, it was decided to assess the scale of potential populations residing beside railways in Dublin city centre, but are beyond 1-kilometre walking distance from railway platforms – and lacking access. Team project work conducted in the UCD ArcGIS multi-disciplined masters class (November 2016), identified sites potentially suitable for stations, with 1-kilometre residential catchments then quantified by using DCC map data combined with CSO data. In total, 107,964 persons were living within 1-kilometre, and of these, 45,064 people resided within 500 metres; catchment totals are seen in table 5.5.1, while Figure 5.5.2 provides a map prepared for this research indicating the catchment zones.

Station	Population within 500m	Population within 1000m
Heuston	3169	12160
Zoo	3334	8862
Cabra	8108	15926
Crossguns Bridge	5125	16471
Croke Park	6029	15992
Tolka Park	5196	9255
Docklands	2575	5364
Connolly	11468	24134

Table 5.5.1: Residential catchments along city centre railways presently unserved, (as per 2011 census).

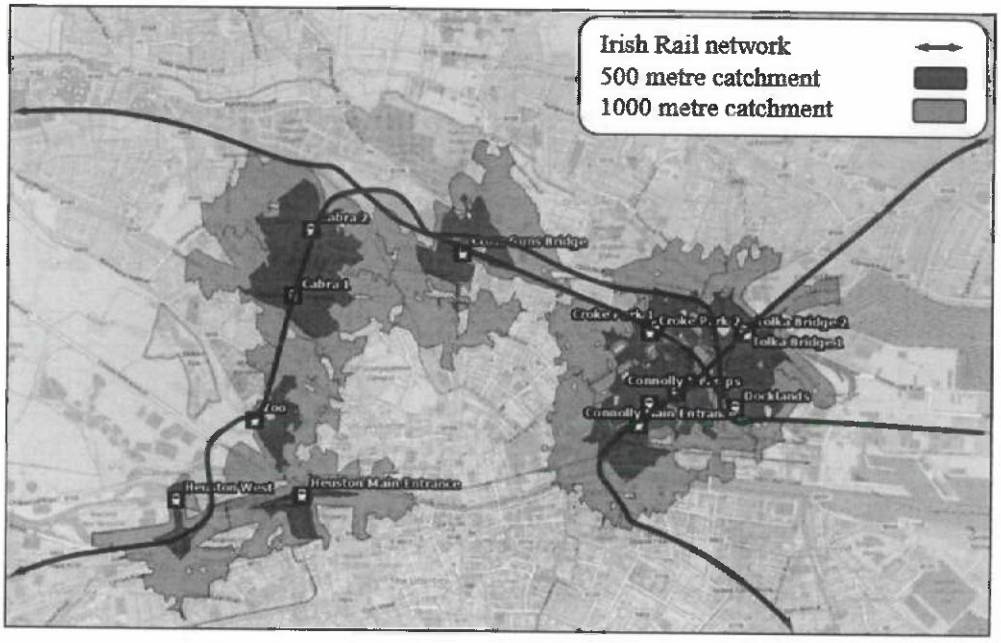


Figure 5.5.2 Residential catchment zones along the Irish Rail's Dublin city centre network that could be serviced in the event of stations and / or better access being provided.

However, as this research was based on the 2011 census, it seemed appropriate to revise the figures in line with the 2016 census trends evident in city centre, where growth has been announced as being 4.8% in the Dublin City Council area[xxx]. Accordingly, the total amount of people estimated to be living within the 1-kilometre catchments is 113,146 – with 47,227 estimated to now be residing within 500 the metre catchments.

ArcGIS analysis has also been conducted as to modes of transport to work. With the map generated, it becomes very evident that people will use railways where accessible. Equally, where railways are present but service is inaccessible, car use is notably high – such as in Cabra, as per figure 5.5.3. Separately, complementing this probe, secondary research has been accessed from Pobál and utilised, whereby the city centre railway network is now presented on top of their deprivation index. A correlation between stations and affluence seems apparent; where there are lines and no stations it possibly indicates or determines poverty.

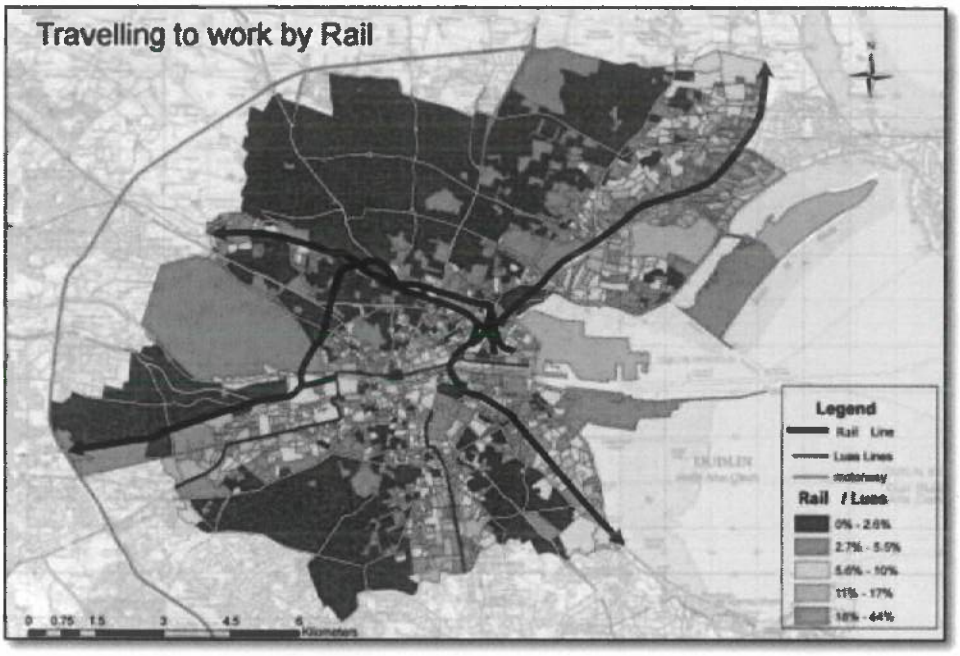


Figure 5.5.3: Residents use railways to commute provided service access is available, such as along the Luas and DART lines. In contrast, areas such as Phibsborough and Cabra have railways but no stations – with car usage significantly greater.

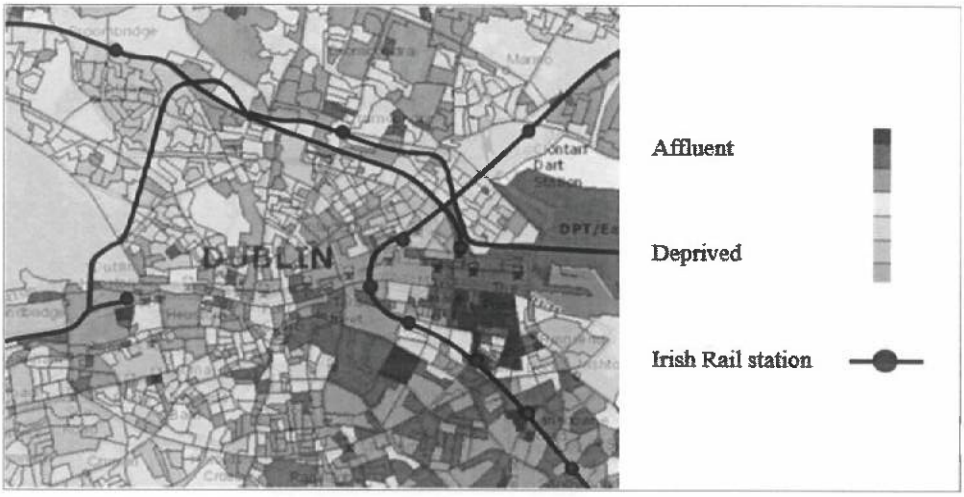


Figure 5.5.4: Affluence and service access appear to correlate. Base map courtesy of Pobal[xxxi].

5.6 Summary of Quantitative Research

Car usage declines where rail stations are provided. There appears to be 113,146 persons residing in the city centre who could be brought into service catchment of Irish Rail, by better pedestrian entrances at Connolly, Docklands, and Heuston Stations, and new stations at Croke Park, Cabra, Cross Gun's Bridge, Zoo Station, and Tolka Bridge. Other significant trip generators such as Dublin Ferry Port etc suggest further latent demand, with only residential interest above. Implications of these findings have been amalgamated with findings from 4.31, and 5.3.4, with one possible scenario presented in figure 6.4.2. It is not suggested the emergent design option is necessarily better than current offering of the *GDA Strategy,* however, the apparent absence of such a scenario having been considered during official evaluation would seem to substantiate the notion that plausible options were not assessed in the preparation of *GDA Strategy*.

6.0 Chapter 6 - Conclusions & Recommendations

6.1 Introduction

Despite being the largest ever capital programme in the state's history, T21 was embarked upon without a plan-making process that involved clear metrics. Consequently, as there was no definitive measuring stick by which to gauge success, it was never going to be possible to provide a definitively objective evaluation as to its success or otherwise. Nonetheless, by rigorous academic approach, it became possible to create a research framework that has facilitated retrospective assessment, that is hopefully academically robust.

Ultimately, it is deemed T21 was not a good programme regarding preparation and delivery. However, one benefit from that experience is the value apparent with accountable planning, based on assessment using a framework with clear metrics of value at outset – such as available with the *Common Appraisal Framework (CAF)*. However, it is not evident the CAF has been universally applied in the evaluation of all megaprojects now proposed by the *GDA Strategy* – or indeed, in choosing the *Strategy* itself. Other evaluations have used the CAF, such as *DART Underground*, but are found to have not considered all options, as per 4.20 and 4.21.

Figure 4.31.3 illustrates initial consideration of possible services that arise as one option. Subsequent to interviews (see 5.4.4), and the quantitative assessments, another design option emerges as possibly better. It is not suggested the option

is necessarily better than current *Strategy*: However, as the option would seemingly cost less and serve more than 100,000 residents and numerous trip generators not currently serviced, it is suggested that this seemingly viable option demonstrates the absence of comprehensive planning whereby alternative options are not being properly considered. Instead, as per Policy Review, the origins for the unbuilt underground in Dublin date back 50+ years, and continue to be offered as the primary solution.

6.2 Summary of Section Conclusions

The literature review is immensely helpful; giving international experience of evaluating infrastructure regulatory governance, the demonstrable tendency of megaprojects to end up sizably over-budget – as occurred in Dublin previously with the Port Tunnel and Luas[xxxii]. Flyvbjerg was comprehensively informative and emphasizes the importance of common agreed metrics of appraisal when considering projects, strategies, programmes, policies, etc. Barrett, Leahy, and O'Connor are particularly relevant regarding Dublin.

New documentary evidence outlines in the Policy Review that the unbuilt underground in Dublin dates back far longer than previously understood, to 'at least 1966' (section 4.2). It is observed the scheme 'comes alive' during prosperous times, but has repeatedly proved unaffordable. Yet never properly terminated, it inevitably re-emerges, re-branded and modified – as the perennial zombie project forever haunting Dublin, and forever undead. The Review also outlines significant oversights in the latest assessments that have again

sanctioned the underground, as per 4.20 and 4.21. Separately, application of the CAF is not found to be evident in evaluations sanctioning projects under the *GDA Strategy*, or the *Strategy* itself. Cost effective approaches such as *Smarter Travel* are found to have 'lost steam'; however, the recent launch of *Bus Connects* offers some encouragement. Separately, there appears to be a dissonance hindering the optimisation of sizable state-owned city centre land banks with (primarily state-owned) transport infrastructure.

The methodology set out the rationale as to why certain research techniques were chosen. The purpose and means was outlined regarding the approach of gathering qualitative data while generating quantitative data that could then be used to evaluate the effectiveness of T21. The methodology also outlined the value of secondary research, such as the Literature Review and the Policy Review, and how these greatly assists forming an overview on the topic.

The findings and analysis section reported the substance of the samples collected, with these critically analysed. The specifically created questions were found to be reasonably good, with question 2 harnessing insightful knowledge, modelled on evaluation values, as set out by the CAF. Overall, T21 was collectively regarded as having a poor outcome following a dismally poor planning process. While values were harvested from a relatively select number of 15 samples, it is suggested the relative consistency of opinion found would be replicated if other knowledgeable parties were interviewed on T21. The quantitative assessment of people living alongside Irish Rail's city centre

network in the event of more stations being opened, and better access, provides an interesting foil to the qualitative and secondary research.

6.3 Limitations

Inevitably limited by time and resources, this research can only reflect the data from select number of samples gathered. As stated at outset, the research was also limited by the absence of any clear metrics at time of launch of T21 – and this was compounded by an absence of official post-implementation research. In attempting to evaluate the effectiveness of such a massive investment programme, the end-product was always going to be partly subjective in its findings, as it would have been impossible in this instance to have evaluated every single T21 project, built or otherwise.

Equally it was not possible to evaluate as many catchment areas as desirable. Application of ArcGIS to the catchment areas of Dublin Bus in the city centre would have merit – as too would assessing potential Irish Rail stations at Ballyfermot and Inchicore. In hindsight, it would have been better had question 8 given interviewees a better choice, as per 5.3.9. Separately, despite repeated efforts made to contact Irish Rail's Communications Director, Barry Kenny, no response was forthcoming. As every effort was made to identify and engage with the opinions of parties' most knowledgeable for this research, it is hoped that the dissertation provides an original, objective, reasoned analysis that is both academically robust and credible.

6.4 Overall Conclusion

It is impossible to give a definitively objective perspective regarding effectiveness of T21. Had clear strategic objectives and a robust framework been in place at outset, it would have enabled retrospective appraisal. Despite such absence, evaluation has been conducted. Potentially, lessons may be of assistance to further policy development.

Four key observations emerge: that agreed metrics at outset is crucial for later evaluation; that megaproject preference continues despite repeated non-delivery; that such non-delivery dates much further back than previously understood; and that plausible alternatives do not seem to be given equitable consideration (see 4.31). Original justification of the Dublin underground appears to be based on non-truths (see 4.03), while contemporary policy may represent *suppressio veri.* Objective evaluation of T21 and contemporary *Strategy* is obstructed by a lack of clearly defined metrics then – and also seemingly inconsistent application of the *CAF* (see 5.4). Institutional cognitive dissonance seems apparent. Effective recourse for accountability appears absent. As a majority of the NTA board are chosen by national ministerial appointment – with ministerial veto also – little connection or accountability appears available at key local level. Nor can ministers be held thematically accountable, as their constituency is a geographic elected area – with local issues deciding parochial elections. Inertia prevails.

One innovation that may prove worthwhile is *Bus Connects.* However, as implementation is yet to occur, it is too early to comment. Separately, reports suggest BRT development is being delayed by Metro plans taking priority.

Yet, under-appreciated assets represent potential opportunities by which both state and civic society might prosper. Apparent opportunities for better use offer prospective means to alleviate CO2 taxes, harness state-owned lands, and help others also realise better opportunities – feeding back into state interest (see Appendix 2). Station opportunities are apparent at Croke Park, Cabra, Cross Gun's Bridge, Tolka Bridge, and Dublin Zoo, as found in 5.6, while better access routes at Connolly, Heuston, and Docklands could also increase the catchment area. Dublin Ferry Port carries circa 2 million passengers per annum, and it seems plausible 20% of those would travel by rail, going by experience of other European cities[xxxiii]. As per figure 6.4, the NTA estimates a station cost of €9 - €14 million. This suggests a likely bandwidth of €54 - €84 million if stations were to be considered at all these places, although this excludes upgrade costs at Connolly, Heuston, and Docklands. 113,146 residents plus workers and visitors (not calculated here) would benefit. Another basic calculation suggests economic uplift of property values likely exceeding €1 billion in the event of such stations being developed, based on economic precedent of 6% added worth[xxxiv], and on dwellings in the catchments have 2.4 occupants as is typical.

Mode	Type	Cost Min (€m)	Cost Max (€m)	Unit
BRT	Tunnelled	n/a	n/a	per km
	At grade	€6.4	€8.3	per km
LRT	Tunnelled	€70	€130	per km
	At-grade	€28	€40	per km
	At-grade Station	€1.3	€2.6	per station
	Underground Station	€44.6	€118.9	per station
Heavy Rail	Tunnelled	€ 145	€ 170	per km
	At-grade (greenfield site)	€ 17	€ 25	per km
	At-grade Station	€ 9	€ 14	per station
	Underground station	€ 120	€ 145	per station

Table 6.4.1: NTA cost estimates per infrastructural unit, as per 4.20

Better use of existing resources offers pathways alternative to new construction. Yet experience of the last 50 years suggests this is not imminent, while instead institutional cognitive dissonance prospers. Instead, based on established trends, it seems Dublin will continue to sprawl out as one of Europe's most car dependent unsustainable cities – while officialdom touts 50-year-old plans that have not yet worked as the 'new' solution.

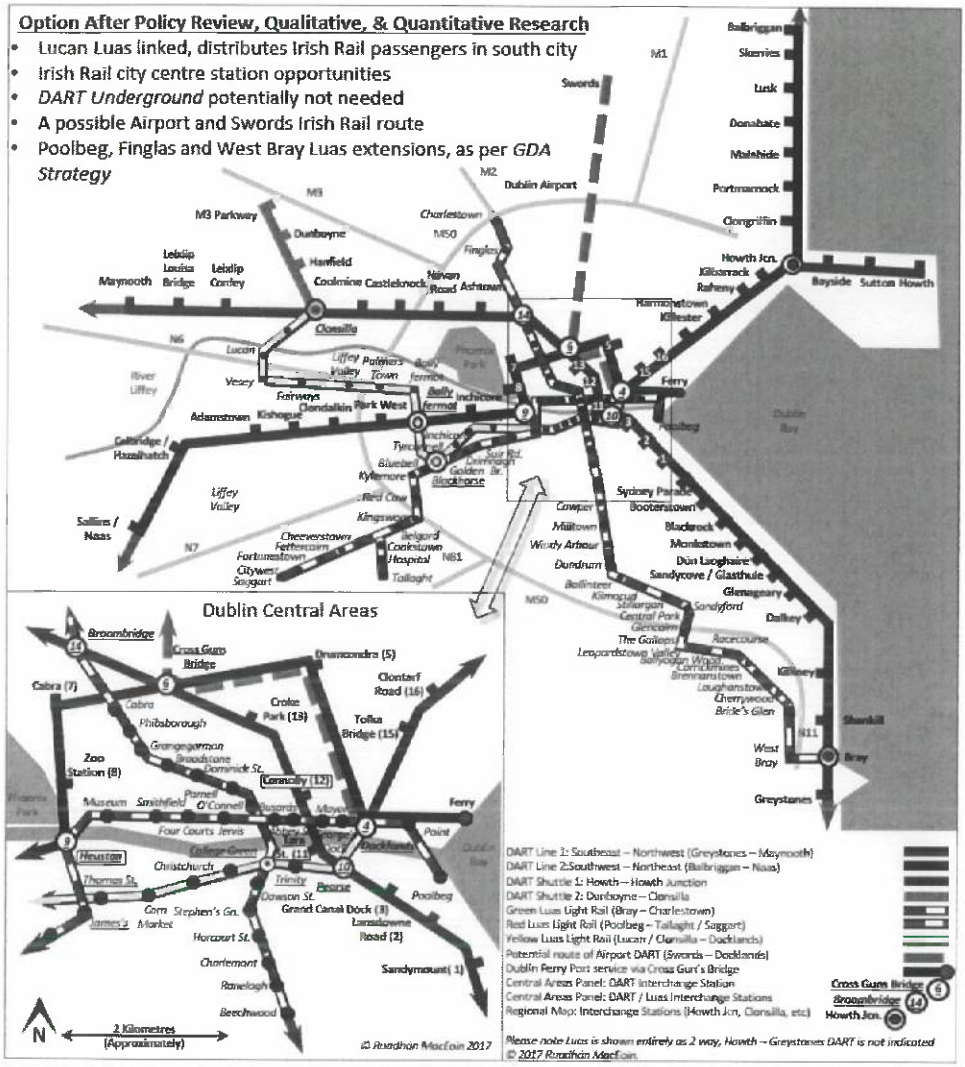


Figure 6.4.2: An apparent option subsequent to policy review, qualitative, and quantitative research. 113,146 residents plus others could avail of Irish Rail services in the event of stations being opened Croke Park, Cabra, Cross Gun's Bridge, Dublin Zoo, and Tolka Bridge, and Connolly, Docklands, and Heuston being improved. The value of the linking Lucan Luas is apparent, complementary to *DART Underground* objectives. A potential pathway from Docklands to Dublin Airport via Cross Gun's Bridge is apparent. In this scenario, no underground stations, (each costing €44.6 – €145 million) do not appear necessary. Schematic map prepared by author.

6.5 Recommendations

Given the capital associated with T21, it merits further study so that lessons may be learned that may have later use. It is disconcerting that the NTA robustly claimed the CAF has been applied to significant projects when evaluated – only to not substantiate this when further questioned, and when release of reports, minutes etc was sought (see Appendix 3). It is not clearly evident from numerous reports used to compile the GDA Strategy that the CAF has been applied. It is a notable coincidence that significant projects in the GDA Strategy, such as the Lucan Luas, appear to be the same as T21 projects – and also that application of the CAF does not appear evident. It is suggested clearer application of the CAF would be of benefit. Separately, it is observed that the same firm of consultants was contracted to both the regulator, the NTA, at the same time as a major operator, Irish Rail – and that this should not be an acceptable practice as however innocent, it could nonetheless lead to a perception of a conflict of interests. On this occasion, it has been demonstrated the resulting reports did not provide all plausible options, and it is not known why this has occurred. As cost implications that arise out of such decisions are potentially immense, it is suggested that the Public Accounts Committee may wish to peruse such issues further. One such probe might examine how much money has been spent to date on the unbuilt Dublin underground, as reports suggested €200 million spent on Metro North. Ultimately, however, that such issues may end up at the Public Accounts Committee suggests that the rest of the institutional architecture is suboptimal. With infrastructural planning, this research finds that established practices elsewhere of having clear metrics at outset, all plausible options published and considered, and sequencing and contingency built-in to be

preferable. A functioning democracy in which decision makers can be held accountable offers a solid long-term way ahead.

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Design Response: Using Dublin's Forgotten Line – Better alternatives to official rail plans

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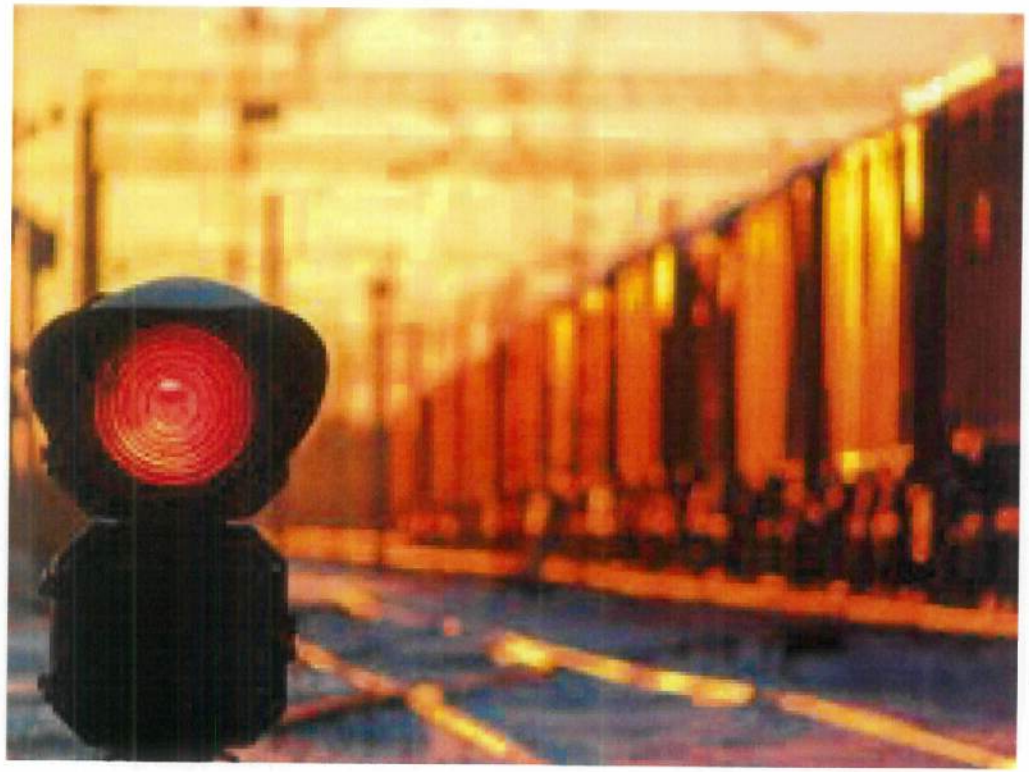

Using Dublin's Forgotten Line: Better alternatives to official rail plans

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For: An Bord Pleanála

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This document outlines an apparent oversight in current Dublin rail plans, with two alternative options set out. Estimated costs are at 2020 prices.

Please note that every effort reasonably possible has been made in good faith to ensure that the contents of this presentation are fair and accurate; yet in the event of mistake or inaccuracy, the author bears no responsibility. All copyright belongs to the author unless otherwise stated.

Executive Summary

Using Dublin's Forgotten Line
Page 2 of 19

State Policy Aims:
1. Rail from Dublin Airport + Swords to central Dublin and later to Sandyford.
2. Organise Irish Rail's suburban services into two main corridors, from N.E. to S.W., and N.W. to S.E.
3. Provide access to quality public transport in populated areas.

Top Left 1A: Existing Irish Rail network. Shown in orange, the Royal Canal line has been forgotten in assessments prior to current plans. For ease of legiblity, Luas lines are not shown.

Top Right 1B: MetroLink and *DART Underground* schemes. The Royal Canal railway and Phoenix Park tunnel shown in black would be unsused.

Bottom Left 1C: Swords *DART* and integrated services using the forgotten line + seven new stations on existing railways serving 150,000 residents. At a later date, the dashed lines could link Docklands (19) to Grand Canal Dock (23); to Charlemont (30) and on to Sandyford, and to Heuston (2).

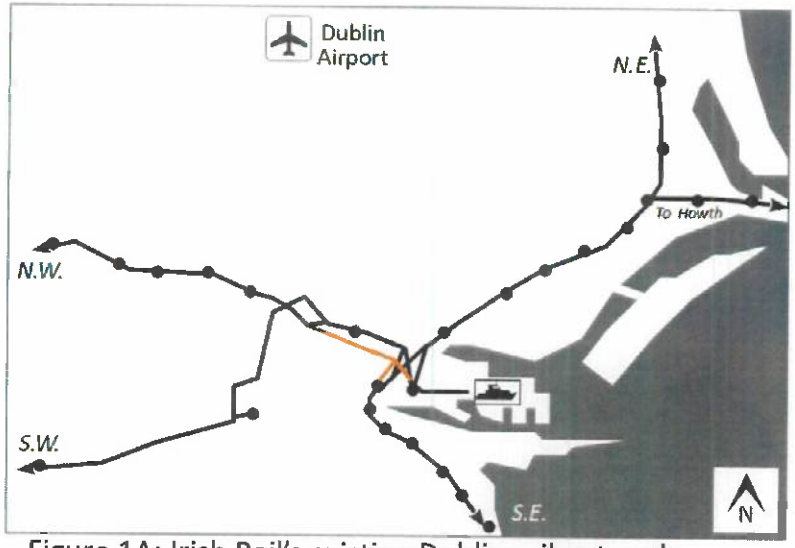
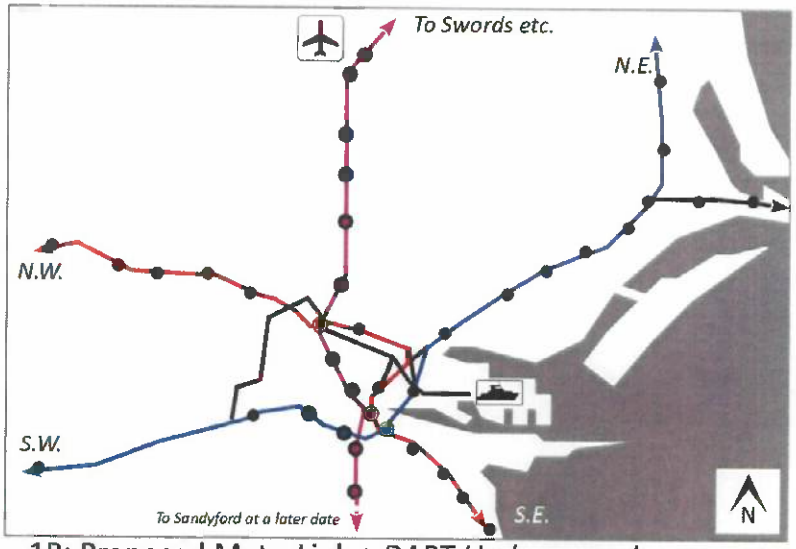
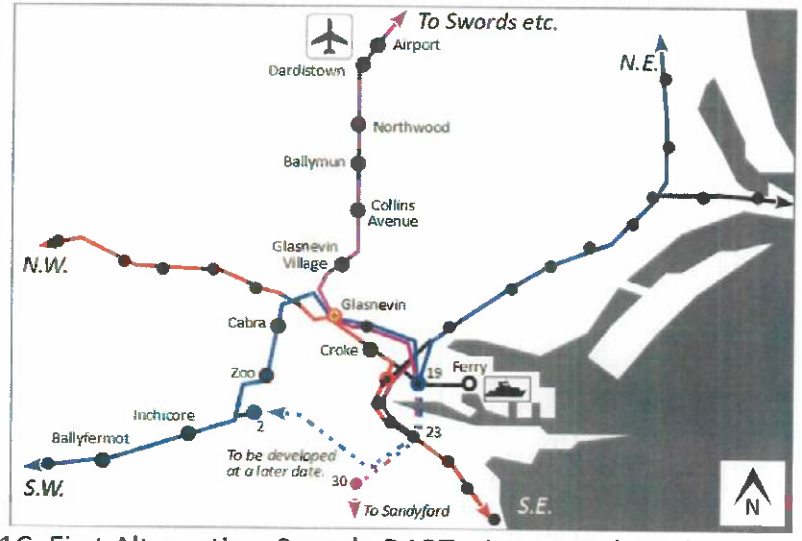


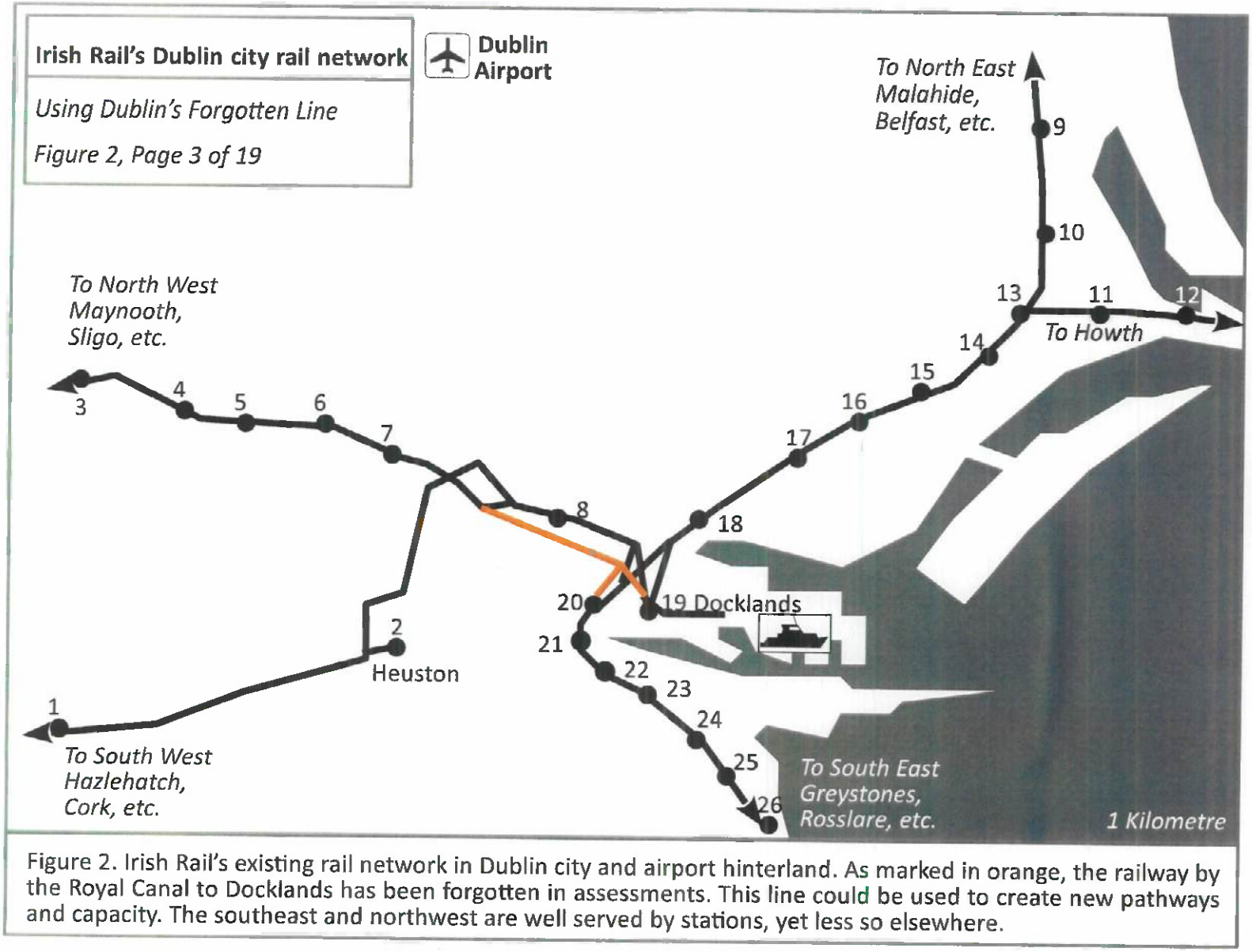
Figure 1A: Irish Rail's existing Dublin rail network. The forgotten line is marked in orange.



1B: Proposed MetroLink + *DART Underground*. 2022 Estimated cost of MetroLink: €8 – 23 Billion



1C: First Alternative: Swords *DART* + Intergated services . No need for tunneling in the city centre at this time.



Existing Irish Rail stations

1.Park West	14 Kilbarrack
2 Heuston	15 Raheny
3 Castleknock	16 Harmonstown
4 Navan Rd. Parkway	17 Killester
5 Ashtown	18 Clontarf Road
6 Pelletstown	19 Docklands
7 Broombridge	20 Connolly
8 Drumcondra	21 Tara Street
9 Portmarnock	22 Pearse
10 Clongriffin	23 Grand Canal Dock
11 Bayside	24 Lansdowne Road
12 Sutton	25 Sandymount
13 Howth Junction	26 Sydney Parade

Please note: For purpose of visual clarity and ease of explanation, the Green and Red Luas lines are not shown on maps except where relevant.

Figure 2. Irish Rail's existing rail network in Dublin city and airport hinterland. As marked in orange, the railway by the Royal Canal to Docklands has been forgotten in assessments. This line could be used to create new pathways and capacity. The southeast and northwest are well served by stations, yet less so elsewhere.

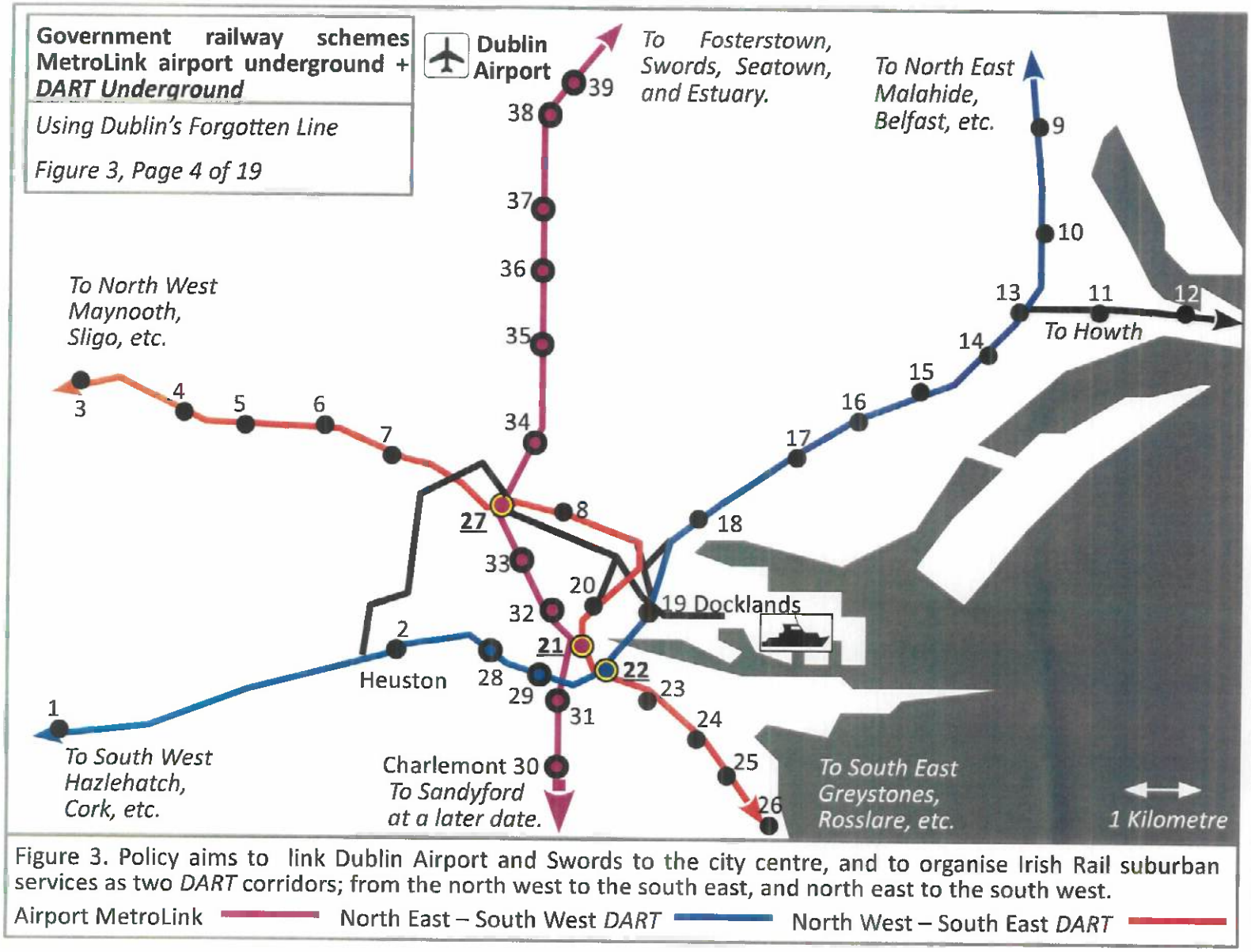


Figure 3. Policy aims to link Dublin Airport and Swords to the city centre, and to organise Irish Rail suburban services as two *DART* corridors; from the north west to the south east, and north east to the south west.

Proposed Irish Rail Stations

Upgrades

22 Pearse: New interchange with existing railway to the south east.

21 Tara Street: New interchange with Irish Rail's south east line and MetroLink.

19 Docklands (underground station)

New Irish Rail stations

27 Glasnevin: Interchange with MetroLink airport underground.

28 Woodquay

29 Stephen's Green

Docklands and Heuston are already present and thus are shown as standard.

Proposed MetroLink stations
(Excluding Tara Street & Glasnevin)

30 Charlemont
31 Stephen's Green
32 O'Connell Street
33 Mater
34 Griffith Park
35 Collins Avenue
36 Ballymun
37 Northwood (To be confirmed)
38 Dardistown
39 Dublin Airport

Four other stations are to be built to the north of this map, and hence are not shown; Fosterstown, Swords Central, Seatown and Estuary.

Supporting Documents 1:
Map in DART Expansion Business Case where link is missing

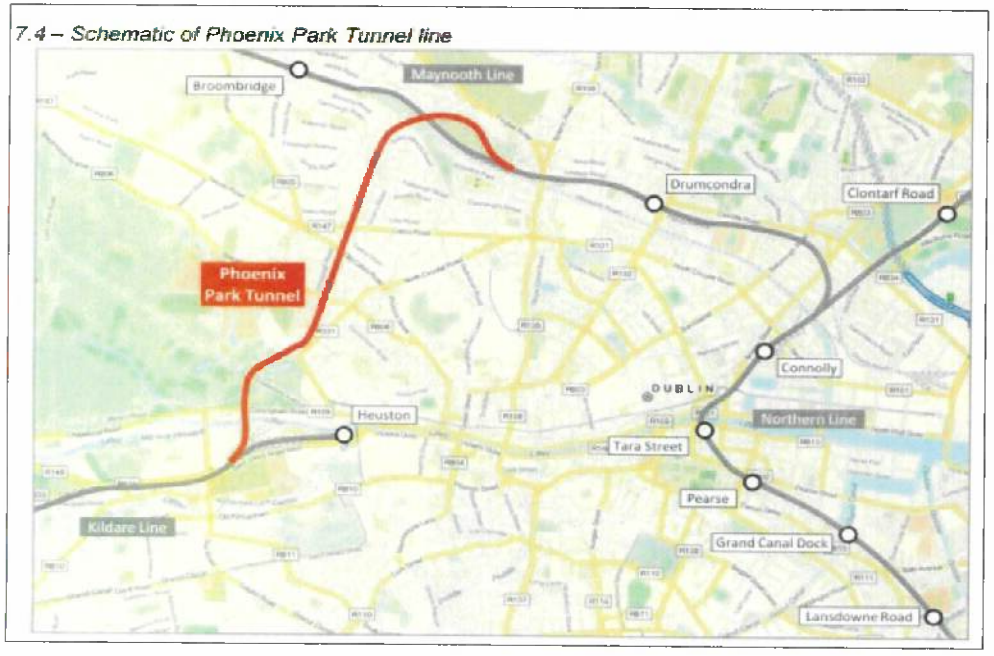
Using Dublin's Forgotten Line

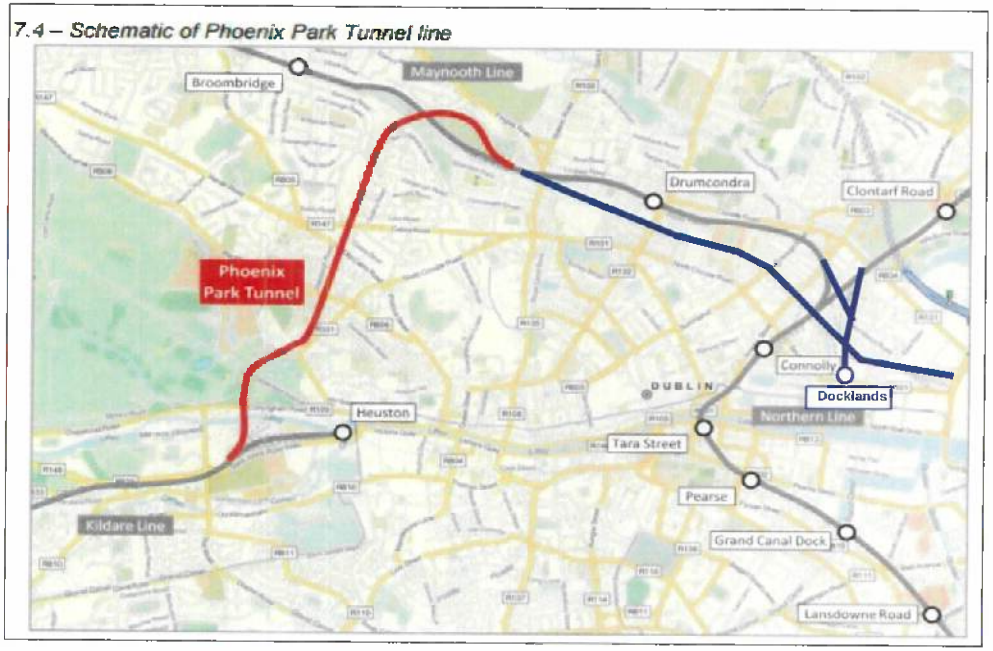
Below left is a graphic from page 53 of the *DART* Expansion Business Case (2015) with the Phoenix Park tunnel highlit in red so as to show it cannot be used for more traffic to the south west because of insufficient network capacity.

A core argument for *DART Underground* is that the Drumcondra line is already congested with northwest traffic, and that services from two lines will not fit on the one route through Drumcondra. By using second line present, for north west traffic to be rerouted to Connolly or Docklands, this would leave the Drumcondra line free for use.

Below left: Graphic from DART Expansion Business Case.

Below right: Graphic amended so as to show in blue the railway by the Royal Canal for this presentation.





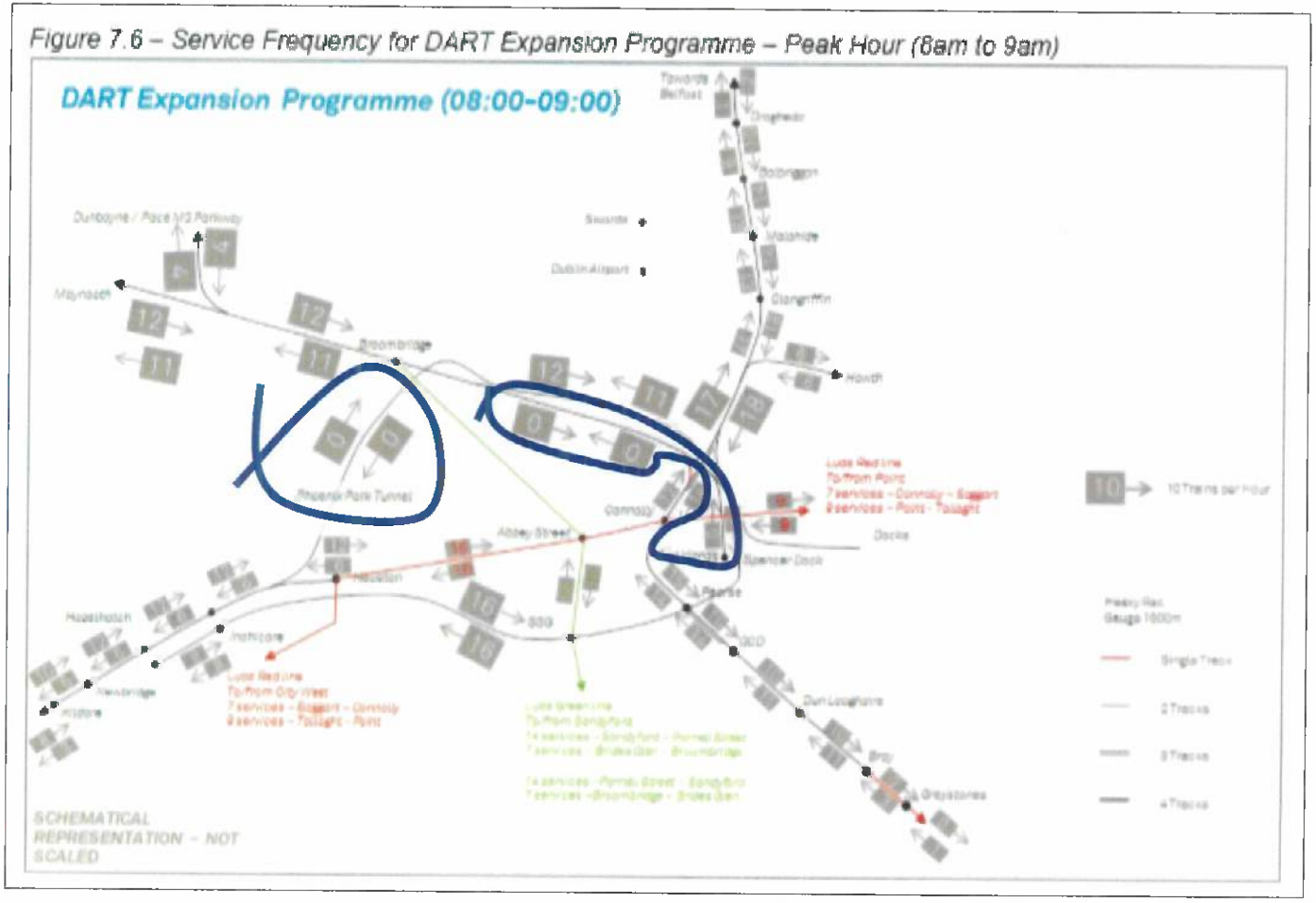
Right: Figure 7.6 on page page 55 of the DART Expansion Business Case (2015) indicating future service frequency when the underground link opens.

For purpose of this presentation, blue loops indicate volumes forecast for the Phoenix Park tunnel and Royal Canal lines, with zero trains per hour shown.

Heuston and Docklands are already linked – yet the official plan is for a new underground line while leaving existing links idle.

Ergo the new line is a duplication.

Figure 7.6 – Service Frequency for DART Expansion Programme – Peak Hour (8am to 9am)



Supporting Documents 3:
Map with links missing in Fingal / North Dublin Transport Study

Using Dublin's Forgotten Line

Image on the right is figure 1.1 from the first page of the Study.

In this graphic, Irish Rail's city centre network is indicated by heavy dark lines, with the Red and Green Luas routes also evident.

Less obvious are the Royal Canal, Phoenix Park tunnel, and Docklands lines, which are shown for purpose of this presentation by the blue lines below right.

The option of diverting Maynooth and Sligo traffic via the Royal Canal line so as to leave free the Drumcondra route for airport *DART* traffic was not recorded. Hence the 'HR8' option of linking Swords and the airport by *DART* to Cross Guns Bridge and into the city by Drumcondra was discounted.

Figure 1.1 Study Area for the Fingal/North Dublin Transport Study

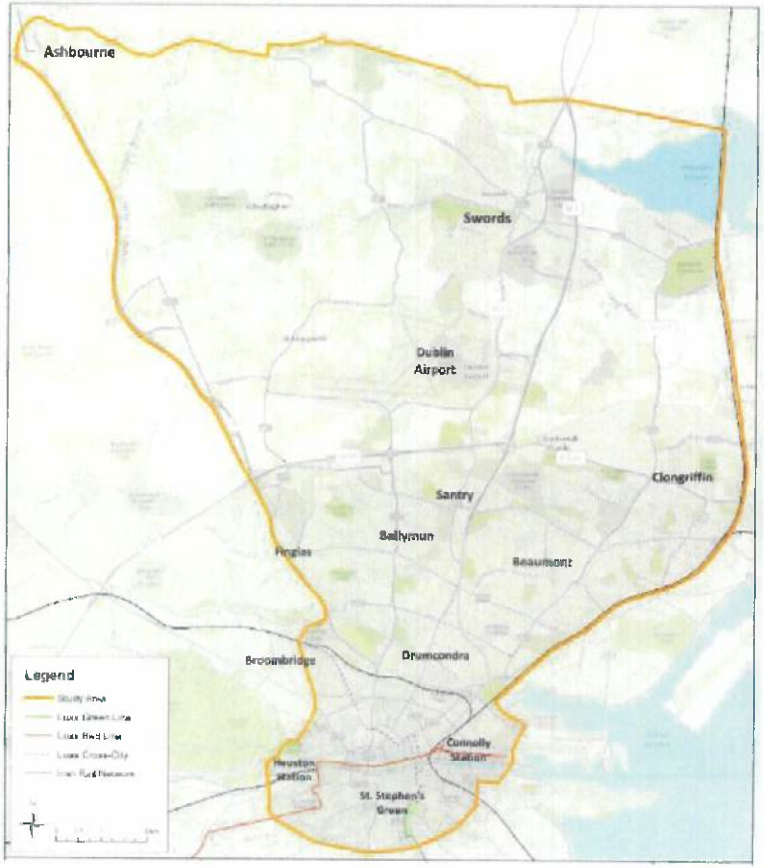
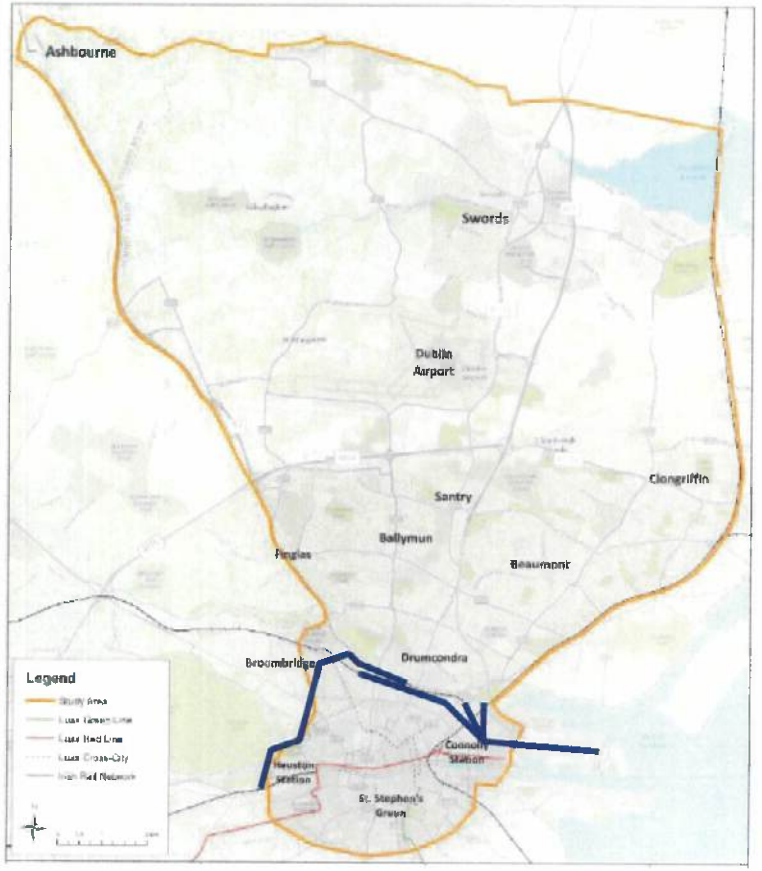


Figure 1.1 Study Area for the Fingal/North Dublin Transport Study

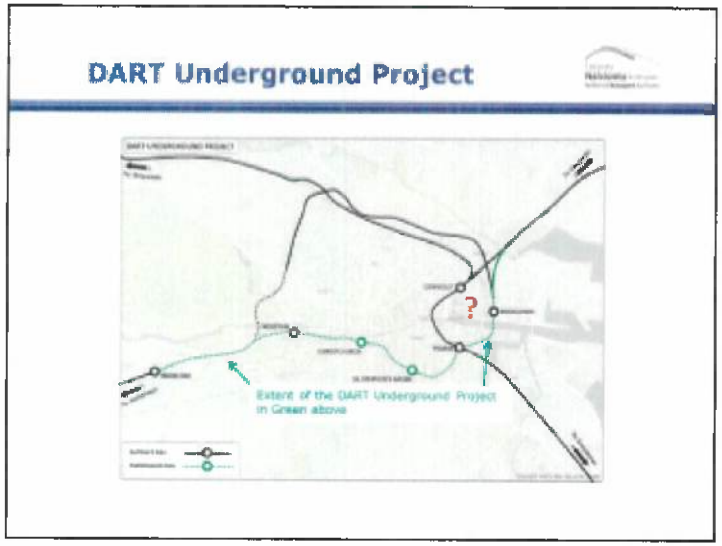


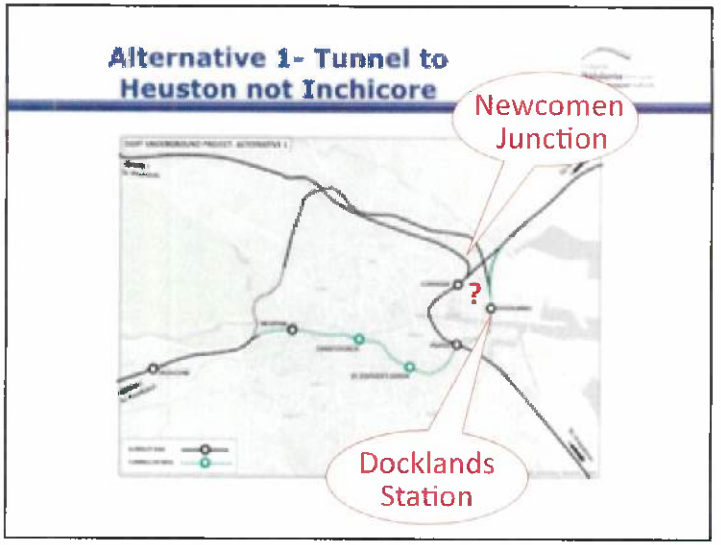
Right: Slides showing lower cost alternatives to DART Underground considered by the National Transport Authority in 2015.

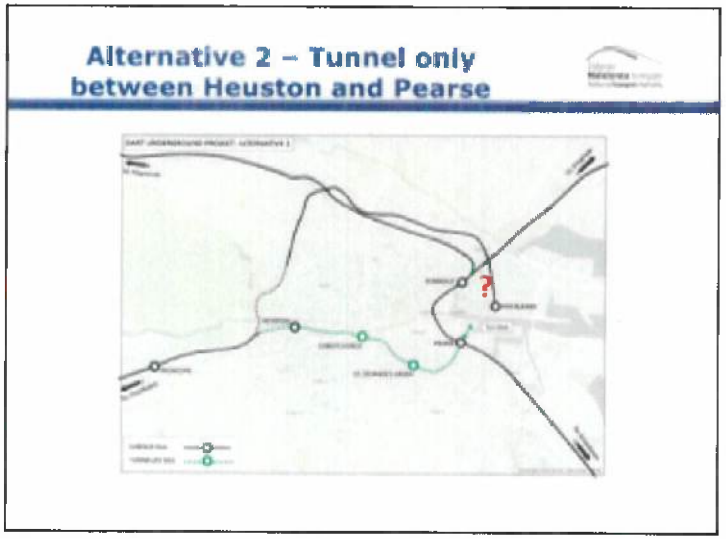
In this instance the Royal Canal line is shown. However the railway is not shown in its totality, with the link between Docklands Station to Newcomen Junction missing, as illustrated for this presentation by the red labels in the slide top right.

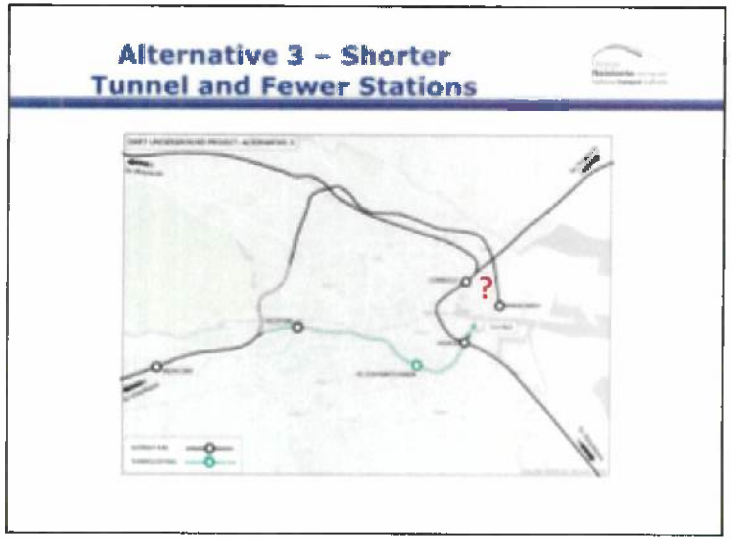
As with other assessments, the railways on the north side are not fully considered. Instead four variants of an underground tunnel on the south side are outlined.

The option of diverting Maynooth and Sligo traffic via the Royal Canal line so as to leave free the Drumcondra route for airport *DART* traffic was not addressed.









DART Underground map showing network benefits

Using Dublin's Forgotten Line

Figure 4, Page 9 of 19

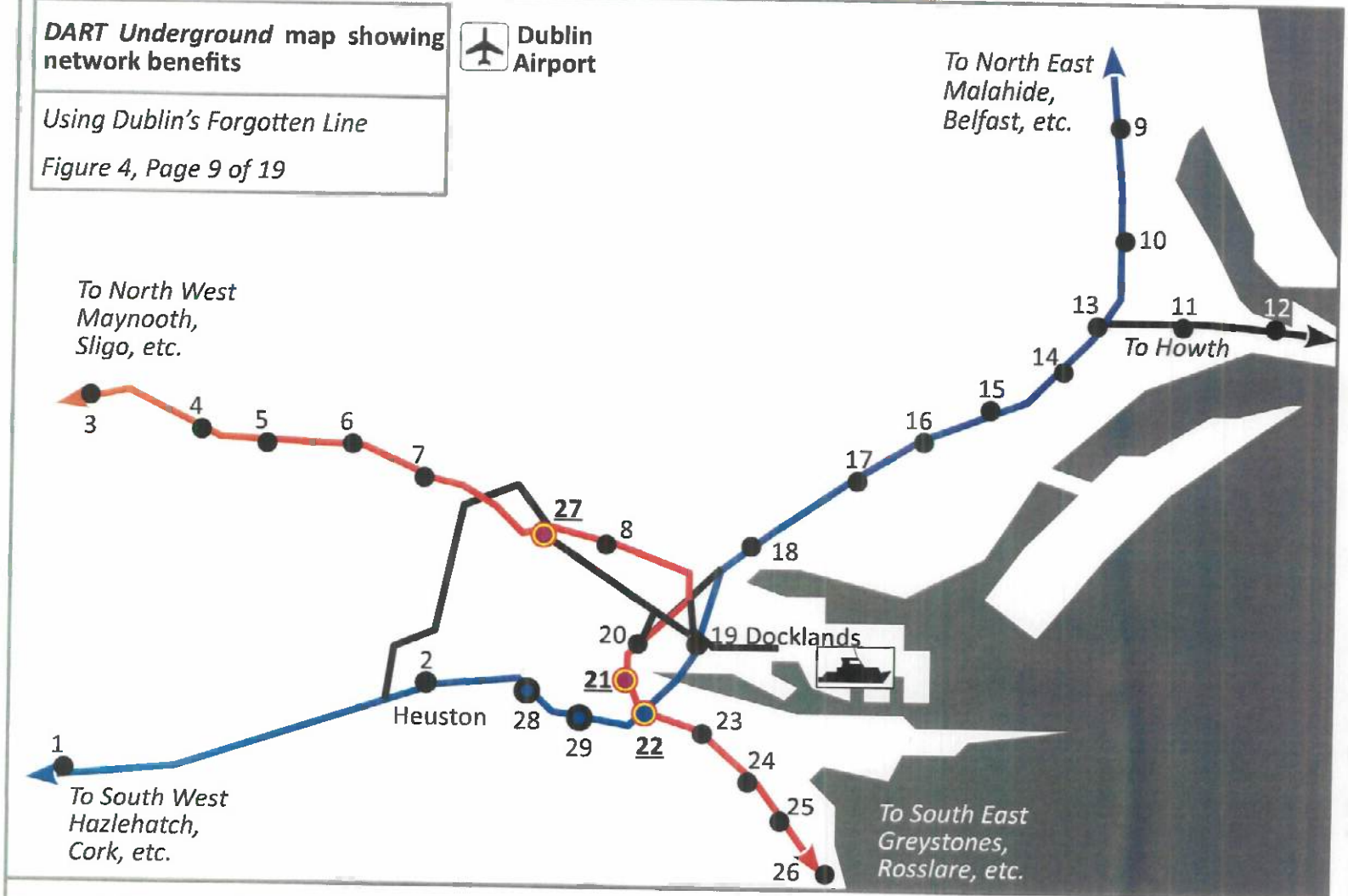


Figure 4. By separating *DART* services into two main corridors, network capacity would be greatly increased. Circa 5 kilometres of tunneling is envisaged, from Docklands (19) to Heuston (2). Three new stations would be opened.
North East – South West *DART* North West – South East *DART*

Proposed Irish Rail Stations

Upgrades
- 2 Heuston (underground station)
- 19 Docklands (underground station)
- **21** Tara Street (new interchange with the new airport underground line)
- **22** Pearse (new interchange with existing north west – south east lines)

New Irish Rail stations
- **27** Glasnevin (new interchange with airport underground).
- 28 Woodquay
- 29 Stephen's Green

Docklands and Heuston are already present and thus are shown as standard

Existing Irish Rail Stations

1.Park West
2 Heuston
3 Castleknock
4 Navan Rd. Parkway
5 Ashtown
6 Pelletstown
7 Broombridge
8 Drumcondra
9 Portmarnock
10 Clongriffin
11 Bayside
12 Sutton
13 Howth Junction
14 Kilbarrack
15 Raheny
16 Harmonstown
17 Killester
18 Clontarf Road
19 Docklands
20 Connolly
21 Tara Street
22 Pearse
23 Grand Canal Dock
24 Lansdowne Road
25 Sandymount
26 Sydney Parade

First Alternative to *DART Underground* using existing lines

Using Dublin's Forgotten Line: First alternative
Figure 5, Page 10 of 19

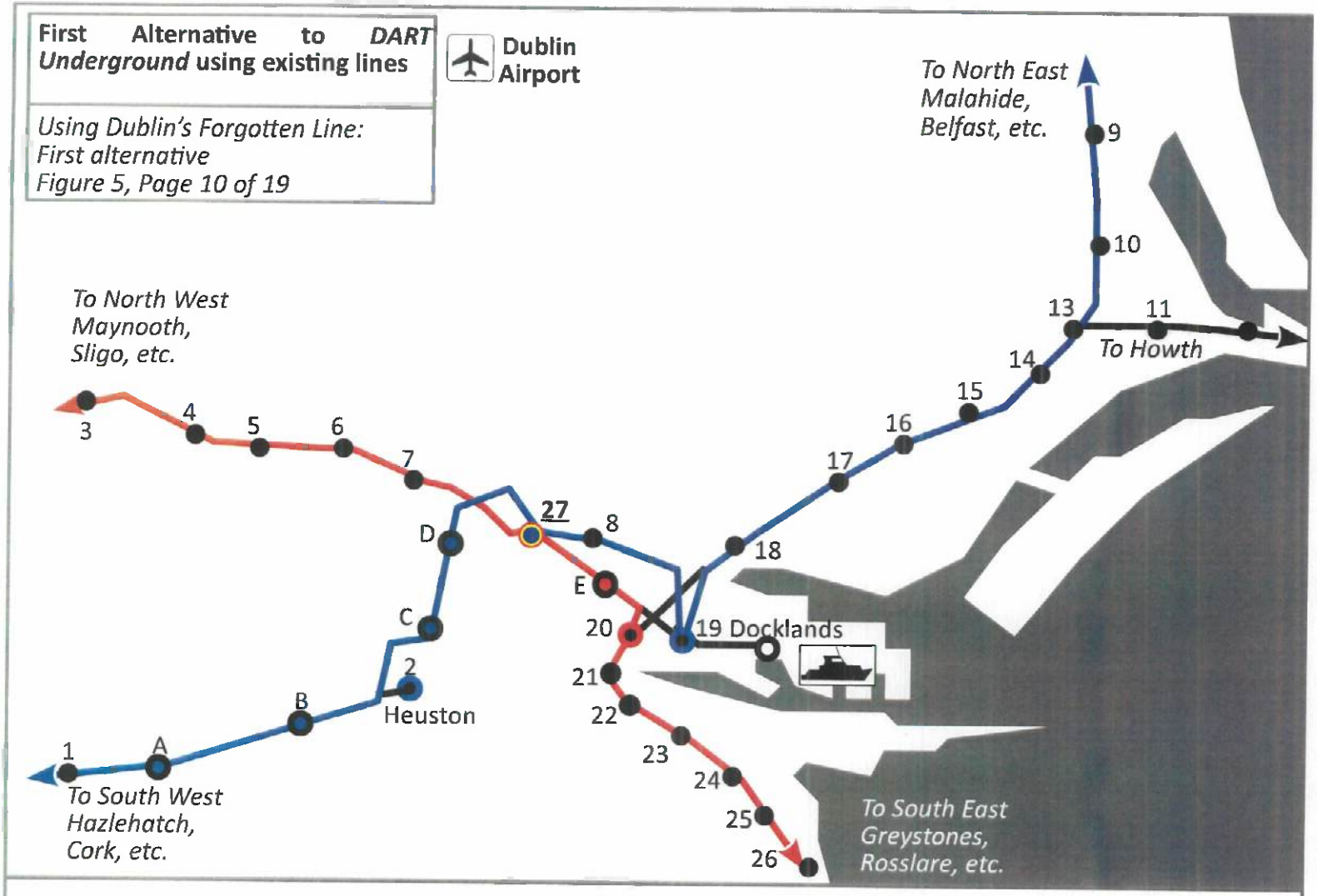


Figure 5. By using the Royal Canal line, north west – south east traffic could be rerouted, so that the Drumcondra (8) line is free for north east – south west traffic using the Phoenix Park tunnel. Services are separated as per *DART Underground*. Six new stations and better pedestrian access at three others would serve circa 150,000 residents.

Alternative Network Use with Stations

New Irish Rail stations

27 Glasnevin Interchange: Nodal point for north east – south west and north west – south east services.

- A Ballyfermot
- B Inchicore
- C Dublin Zoo
- D Cabra
- E Croke Park
- Ferry (*Intercity Terminus*)

Upgraded Irish Rail stations

Better pedestrian access & permeability

- 2 Heuston *(platform & access)*
- 19 Docklands *(platforms & access)*
- 20 Connolly *(platform & access)*

Existing Greystones – Howth DART services could operate at less frequency.

Existing Irish Rail Stations

1.Park West
2 Heuston
3 Castleknock
4 Navan Rd. Parkway
5 Ashtown
6 Pelletstown
7 Broombridge
8 Drumcondra
9 Portmarnock
10 Clongriffin
11 Bayside
12 Sutton
13 Howth Junction
14 Kilbarrack
15 Raheny
16 Harmonstown
17 Killester
18 Clontarf Road
19 Docklands
20 Connolly
21 Tara Street
22 Pearse
23 Grand Canal Dock
24 Lansdowne Road
25 Sandymount
26 Sydney Parade

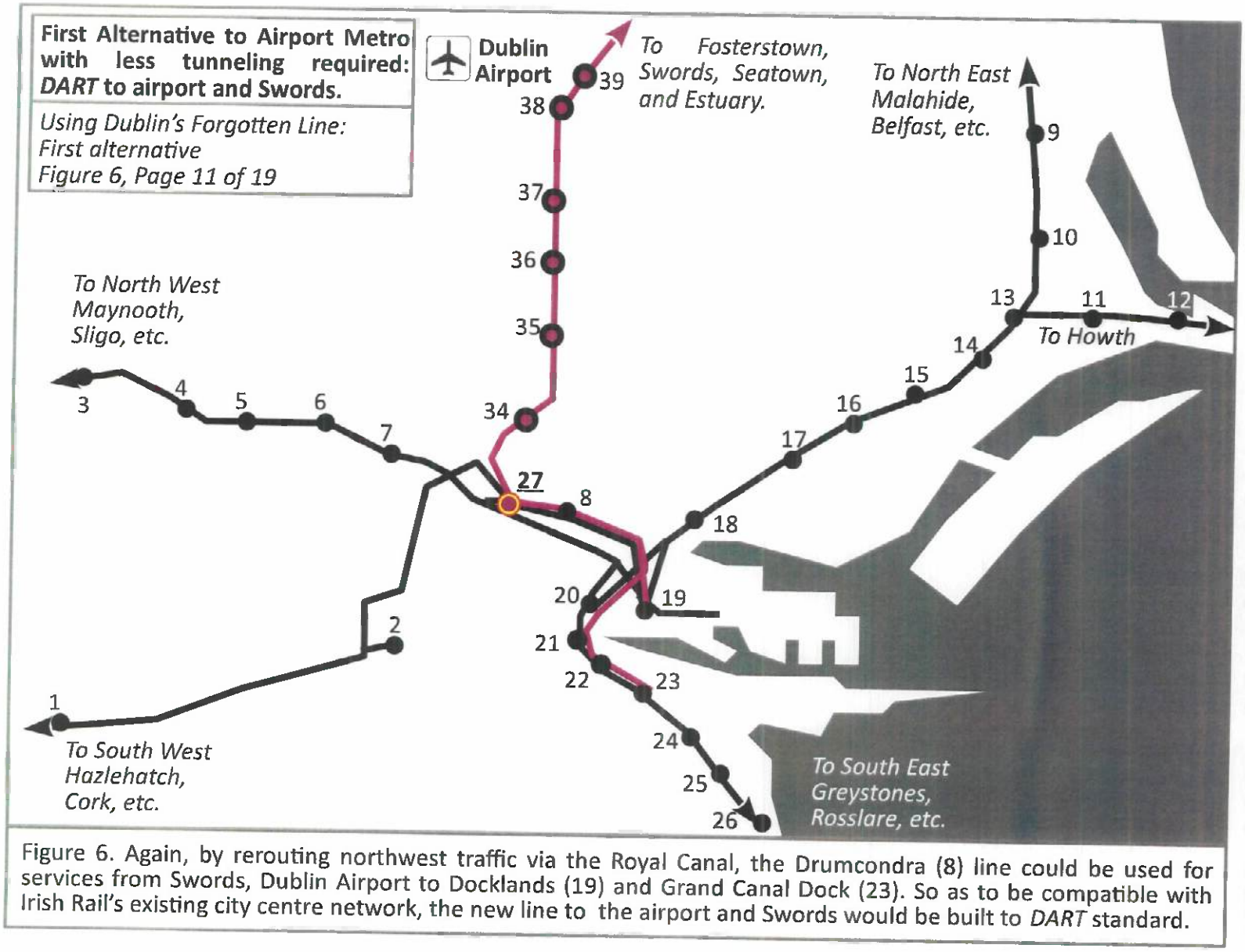


Figure 6. Again, by rerouting northwest traffic via the Royal Canal, the Drumcondra (8) line could be used for services from Swords, Dublin Airport to Docklands (19) and Grand Canal Dock (23). So as to be compatible with Irish Rail's existing city centre network, the new line to the airport and Swords would be built to *DART* standard.

New Airport *DART* Stations

- **27** Glasnevin Interchange
- 34 Glasnevin Village
- 35 Collins Avenue
- 36 Ballymun
- 37 Northwood
- 38 Dardistown
- 39 Dublin Airport

Fosterstown, Swords, Seatown and Estuary are not shown on this map.

Existing Irish Rail stations

1. Park West
2. Heuston
3. Castleknock
4. Navan Rd. Parkway
5. Ashtown
6. Pelletstown
7. Broombridge
8. Drumcondra
9. Portmarnock
10. Clongriffin
11. Bayside
12. Sutton
13. Howth Junction
14. Kilbarrack
15. Raheny
16. Harmonstown
17. Killester
18. Clontarf Road
19. Docklands
20. Connolly
21. Tara Street
22. Pearse
23. Grand Canal Dock
24. Lansdowne Road
25. Sandymount
26. Sydney Parade

Advantages

Eliminates need for 4 kilometres of tunnelling in the city centre. Less cost, disruption, and environmental impact.

Disadvantages

Costs remain high as 80% of the metro line presently envisaged would be built.

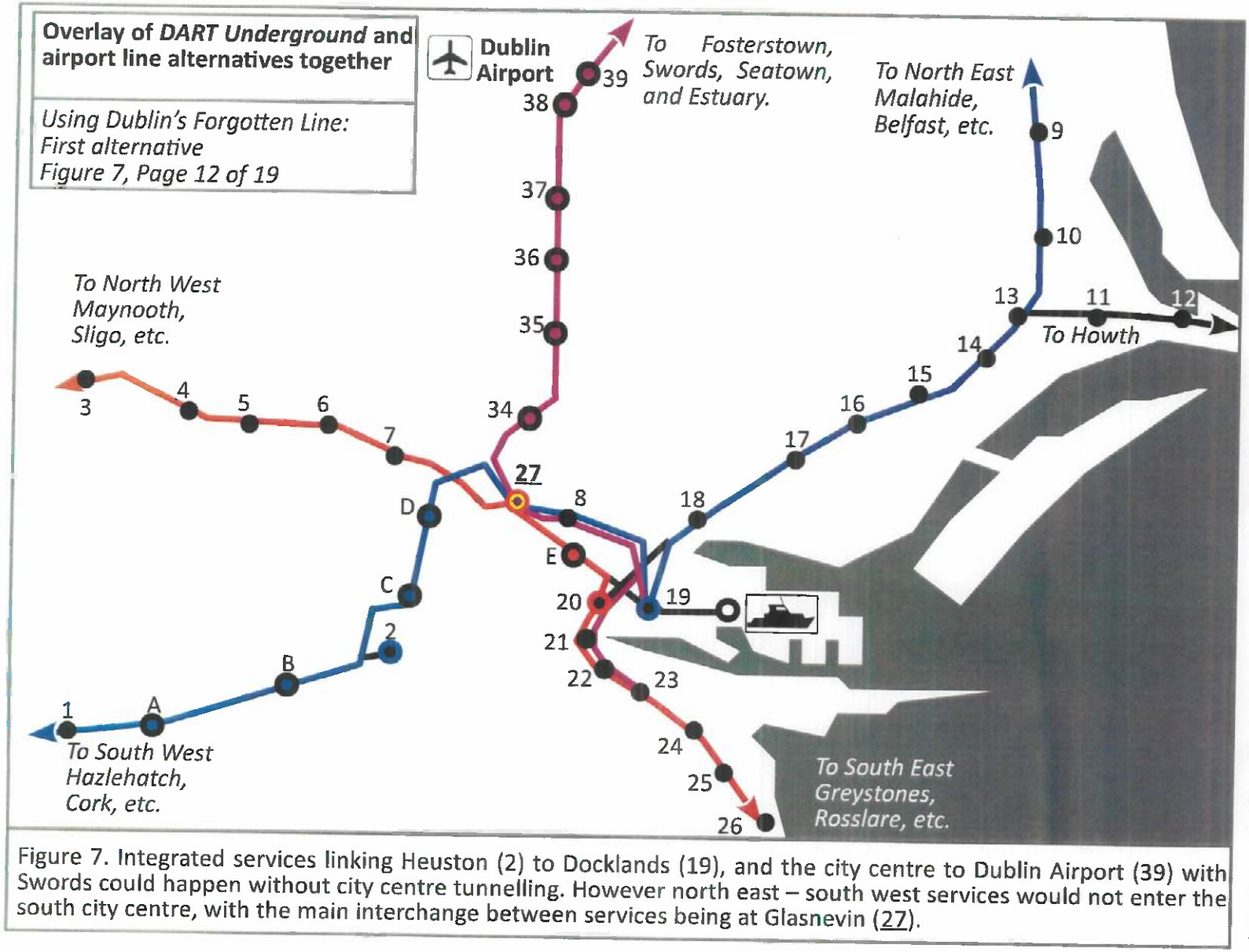


Figure 7. Integrated services linking Heuston (2) to Docklands (19), and the city centre to Dublin Airport (39) with Swords could happen without city centre tunnelling. However north east – south west services would not enter the south city centre, with the main interchange between services being at Glasnevin (27).

New and better *DART* Rail Stations

- 27 Glasnevin Interchange
- A Ballyfermot
- B Inchicore
- C Dublin Zoo
- D Cabra
- E Croke Park
- Ferry (*Intercity Terminus*)
- 2 Heuston *(platform & access)*
- 19 Docklands *(platforms & access)*
- 20 Connolly *(platform & access)*

City Centre – Dublin Airport – Swords

- 34 Glasnevin Village
- 35 Collins Avenue
- 36 Ballymun
- 37 Northwood
- 38 Dardistown (Subject to review)
- 39 Dublin Airport

Fosterstown, Swords, Seatown and Estuary are not shown on this map.

Existing Irish Rail stations

1.Park West	14 Kilbarrack
2 Heuston	15 Raheny
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4 Navan Rd. Parkway	17 Killester
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9 Portmarnock	22 Pearse
10 Clongriffin	23 Grand Canal Dock
11 Bayside	24 Lansdowne Road
12 Sutton	25 Sandymount
13 Howth Junction	26 Sydney Parade

Further Development 1: Linking Docklands to a second network interchange at Grand Canal Dock

Using Dublin's Forgotten Line:
First alternative
Figure 8, Page 13 of 19

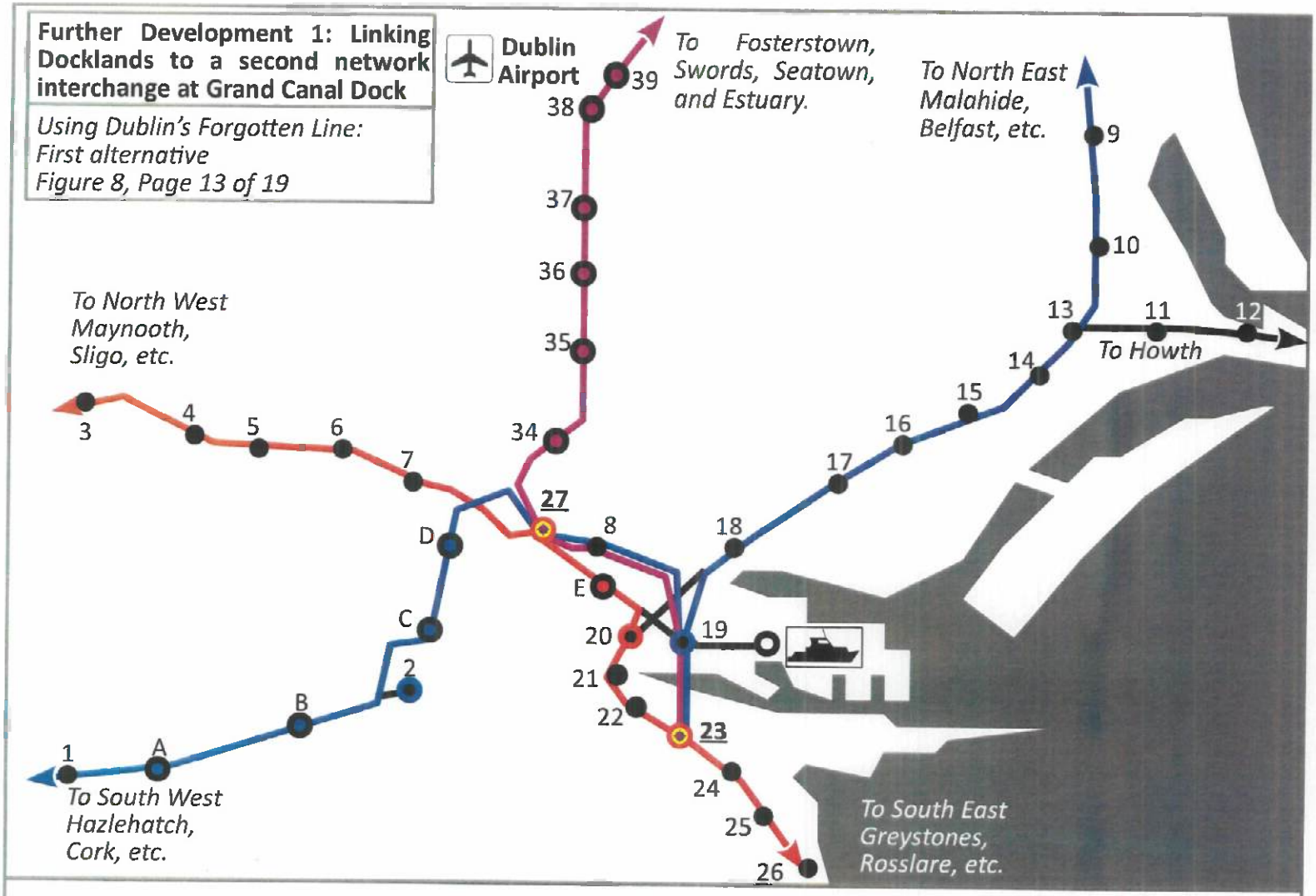

Figure 8. One kilometre link from Docklands (19) to Grand Canal Dock (23) would enable trains from the north east and south west to access the south east city centre. A second interchange station at Grand Canal Dock would give passengers two options for switching between north east – south west and north west – south east services.

New and better *DART* Rail Stations

- 23 Grand Canal Dock Interchange
- 27 Glasnevin Interchange
- A Ballyfermot
- B Inchicore
- C Dublin Zoo
- D Cabra
- E Croke Park
- Ferry *(Intercity Terminus)*
- 2 Heuston *(platform & access)*
- 19 Docklands *(platforms & access)*
- 20 Connolly *(platform & access)*

City Centre – Dublin Airport – Swords

- 34 Glasnevin Village
- 35 Collins Avenue
- 36 Ballymun
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Fosterstown, Swords, Seatown and Estuary are not shown on this map.

Existing Irish Rail stations

1.Park West	14 Kilbarrack
2 Heuston	15 Raheny
3 Castleknock	16 Harmonstown
4 Navan Rd. Parkway	17 Killester
5 Ashtown	18 Clontarf Road
6 Pelletstown	19 Docklands
7 Broombridge	20 Connolly
8 Drumcondra	21 Tara Street
9 Portmarnock	22 Pearse
10 Clongriffin	23 Grand Canal Dock
11 Bayside	24 Lansdowne Road
12 Sutton	25 Sandymount
13 Howth Junction	26 Sydney Parade

Further Development 2: Linking Grand Canal Dock to Charlemont Luas station and onto Sandyford

Using Dublin's Forgotten Line: First alternative
Figure 9, Page 14 of 19

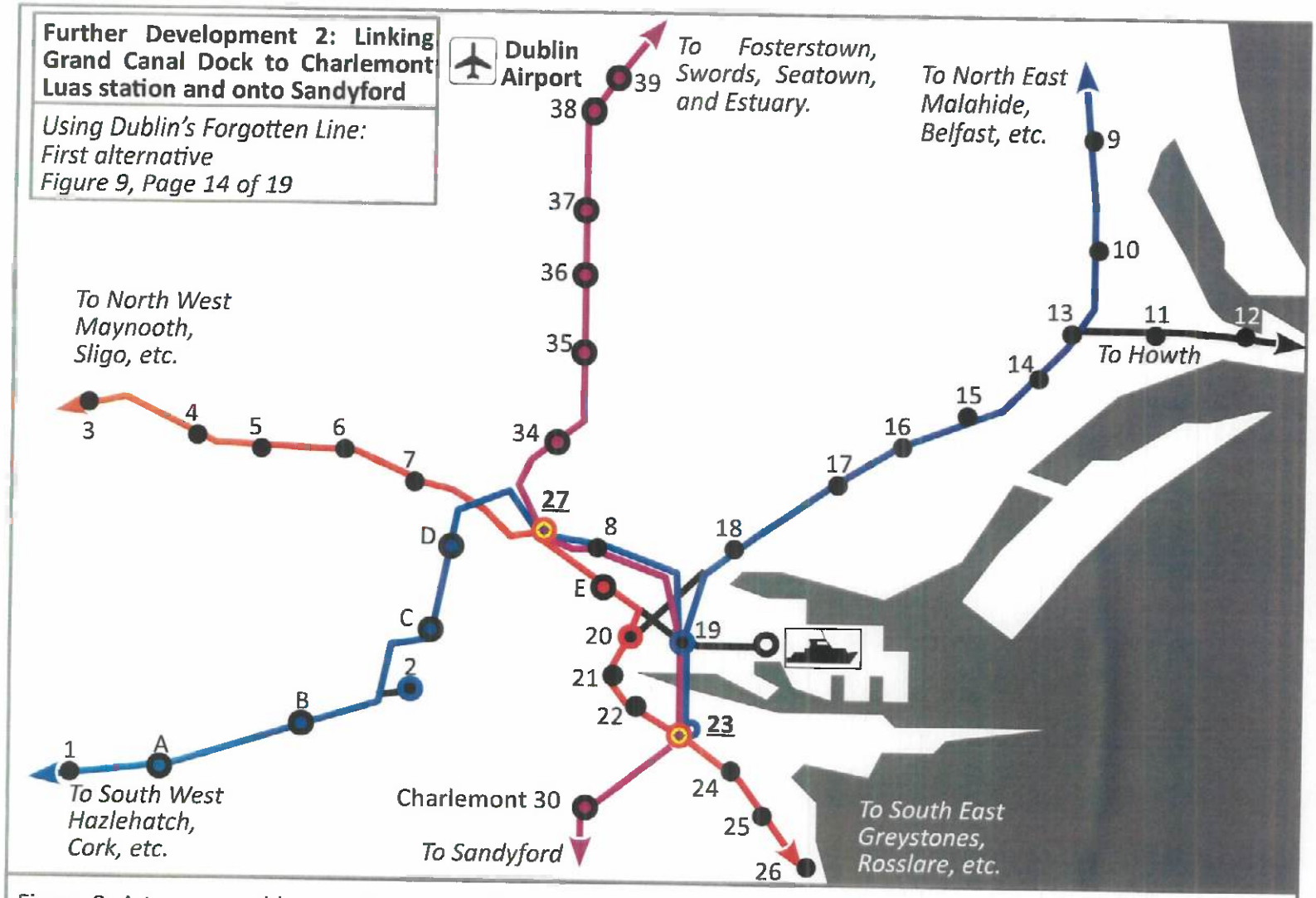

Figure 9. A turnaround loop at Grand Canal Dock (23) could enable north east – south west trains proceed without having to reverse, and maximise network capacity. Extending the line two kilometres to Charlemont (30) would link the *Airport DART* to the Green Luas corridor, enabling the prospect of *DART* services from Swords to Sandyford.

New and better *DART* Rail Stations

- 23 Grand Canal Dock Interchange
- 27 Glasnevin Interchange
- A Ballyfermot
- B Inchicore
- C Dublin Zoo
- D Cabra
- E Croke Park
- Ferry *(Intercity Terminus)*
- 2 Heuston *(platform & access)*
- 19 Docklands *(platforms & access)*
- 20 Connolly *(platform & access)*

Sandyford – Dublin – Airport – Swords

- 30 Charlemont
- 34 Glasnevin Village
- 35 Collins Avenue
- 36 Ballymun
- 37 Northwood
- 38 Dardistown (Subject to review)
- 39 Dublin Airport

Swords etc. are not shown on this map.

Existing Irish Rail stations

1. Park West
2. Heuston
3. Castleknock
4. Navan Rd. Parkway
5. Ashtown
6. Pelletstown
7. Broombridge
8. Drumcondra
9. Portmarnock
10. Clongriffin
11. Bayside
12. Sutton
13. Howth Junction
14. Kilbarrack
15. Raheny
16. Harmonstown
17. Killester
18. Clontarf Road
19. Docklands
20. Connolly
21. Tara Street
22. Pearse
23. Grand Canal Dock
24. Lansdowne Road
25. Sandymount
26. Sydney Parade

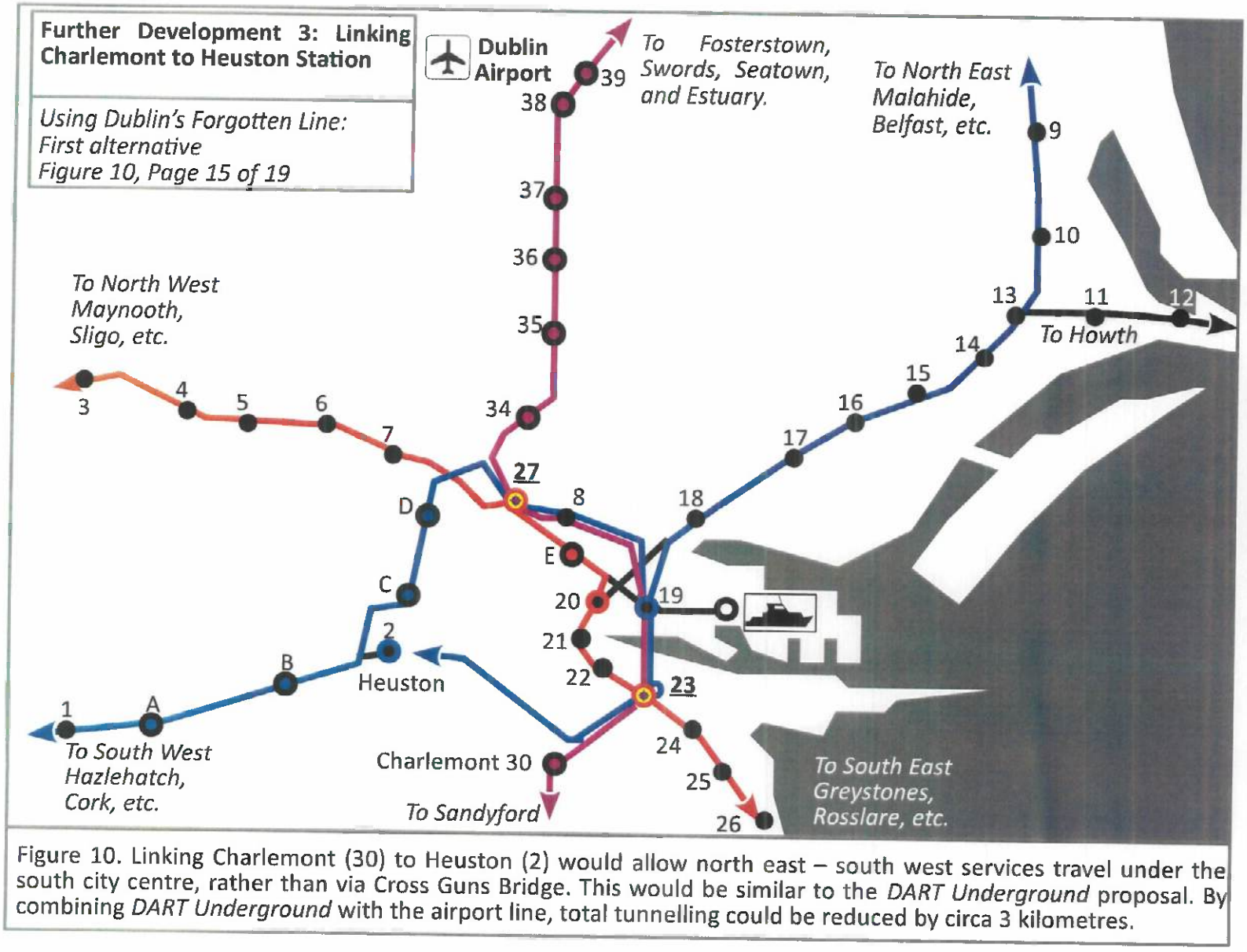

Figure 10. Linking Charlemont (30) to Heuston (2) would allow north east – south west services travel under the south city centre, rather than via Cross Guns Bridge. This would be similar to the *DART Underground* proposal. By combining *DART Underground* with the airport line, total tunnelling could be reduced by circa 3 kilometres.

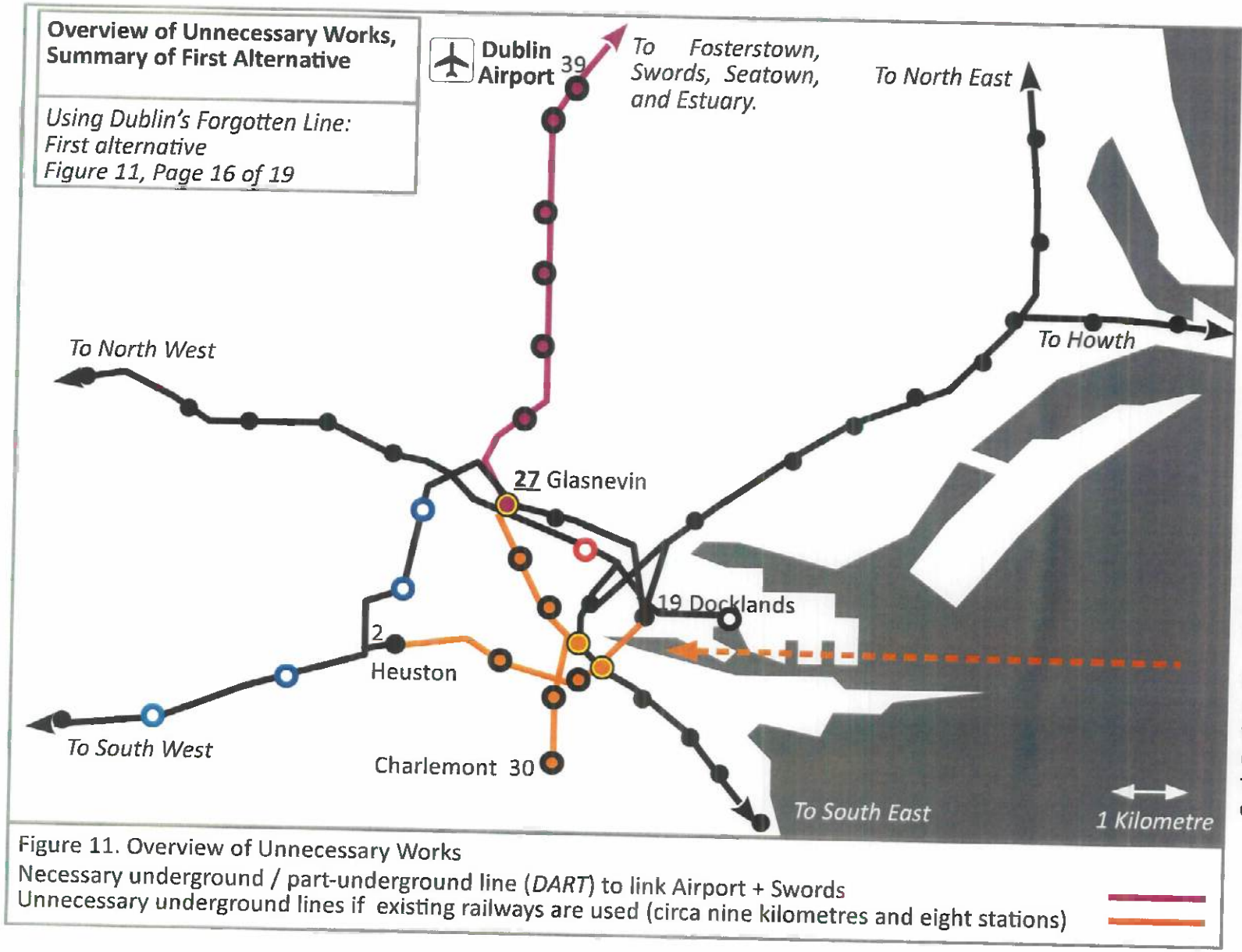

Figure 11. Overview of Unnecessary Works
Necessary underground / part-underground line (*DART*) to link Airport + Swords
Unnecessary underground lines if existing railways are used (circa nine kilometres and eight stations)

Summary of First Alternative

Existing lines could be used to achieve government policy without the need for city centre tunnelling, by using the Royal Canal railway. In total, circa nine kilometres and eight underground stations seem unwarranted at this stage.

Six new stations in populated areas, with the potential to significantly increase population catchments at three others, and a Intercity terminus at the ferry port.

Circa 150,000 residents live within one kilometre walk of the potential stations. Major trip generators include Dublin Zoo, Croke Park stadium, and the ferry port.

Development could be phased so as to resolve policy aims sooner and with less cost. This could enable network development to be phased, with the risk of project non-delivery greatly reduced.

By combining the airport and *DART Underground* schemes, the total length of tunnelling could be reduced from nine to circa six kilometres in the city centre in the event of a second line being constructed from Heuston to Docklands.

Eoin Gillard <Eoin.Gillard@nationaltransport.ie>

Thu, 22 Jul 2021, 14:43

Dear Mr. MacEoin,

I refer to you email to Minister Ryan below which has been forwarded to NTA for reply. Thank you for this email regarding the on-going development of the transport network in Dublin.

The Transport Strategy for the Greater Dublin Area 2016-2035 sets out the integrated transport network required to serve transport demand in the medium to long-term. The DART+ Programme is a key element of the Strategy and sets out the proposals for the provision of high frequency electrified rail services on the Dublin Commuter routes extending to Drogheda to the north, Maynooth and Celbridge to the west and Greystones to the south. As noted by you in your email, consultation on the DART+ West proposal was undertaken and the submissions received have been considered by Iarnród Éireann in developing the project further. A second round of public consultation on the preferred route is scheduled for later this summer.

As part of the early development of the DART+ Programme the opportunities for additional stations in the environs of Croke Park / Ballybough were considered. However, various physical and operational constraints were identified on the existing lines in this area that would reduce the potential for a station or stations to be provided in there. These are outlined further in the following sections. However, the implementation of the DART+ Programme infrastructure will provide the operational flexibility to provide enhanced services across the expanded DART network to Drumcondra station, which is within 500m of the stadium, to service Croke Park during major events. In addition the existing Connolly and future Glasnevin station, which are between 1km and 1.25km from the stadium will provide additional flexibility and resilience whilst also giving the opportunity for better crowd management and dispersion in the environs the stadium.

On the Great Southern and Western Railway line (GSWR), which is the more northern line crossing the Ballybough Road running behind Hill 16, the railway is in a restricted area heading east of Ballybough Road towards Connolly and is elevated on a series of bridges and arches and not suited for the location of a station. West of Ballybough Road the current gradient and tight curvature of the existing track geometry is not in accordance with standards for the provision of a station. Siting stations and platforms on tight curves introduces large stepping gaps and creates accessibility issues. Furthermore, the elevated nature of the existing railway, which is on a 4 metre high embankment in this area, would raise issues regarding overlooking and visual impact on adjacent residential properties.

On the Midland Great Western Railway line (MGWR), which is the line adjacent to the Royal Canal and running under the Davin Stand, the railway east of Ballybough Road is in a tight cutting parallel to the Royal Canal alongside Clonmore Terrace where there is limited space to the railway boundary and is not a suitable place to locate a station. West of Ballybough Road and towards Croke Park there is again a steep gradient issue identified. Impacts on surrounding properties would also be an issue with limited space available.

From a timetable viewpoint the addition of a station on the route taking into account acceleration, deceleration and station dwell time has a journey time impact of approximately 3 minutes in each direction. The impact therefore to accommodate a new station would result in a reduction of turnaround time at Maynooth of 6 minutes, this could not be accommodated in today's timetable and most definitely would not be possible based on future service level enhancements with DART+.

This is also a highly congested area with services from the Sligo line, Maynooth line, M3 Parkway line and Phoenix Park tunnel lines all converging on the city centre and would be particularly disruptive to place a suburban stop in this area on the approach to the city. While some trains currently get held here on approach to the station to stop all suburban services so close to Connolly, an area where we have capacity issues would cause operational disruption impacting on other movements around the Connolly area for example on the northern line.

I hope this sets out some of the considerations around the provision of a new DART station at Croke Park.

Regards,

Eoin Gillard

Ruadhan Mac Eoin <ruadhan.maceoin@ucdconnect.ie>

30 Jul 2021, 14:56

Dear Mr. Gillard,

Thank you for your email received last week.

It is disappointing to learn of the apparent difficulties regarding the option of a Croke Park DART station, but nonetheless much appreciated to get a better understanding of the matter as there is much interest throughout the community.

With interest I note your points as to the option of a DART station on the MGWR line by the Royal Canal, west of Ballybough Bridge, particularly the issues of gradient, impact on surrounding properties, and network turn around times.

I would be grateful if you could kindly assist me a little more to better understand certain aspects of this matter. It would be helpful to know at what options assessment stage that this option was discounted, i.e. whether this occurred initially by way of a "pass-fail" assessment, or if the option was shortlisted and brought forward to a detailed options assessment and comparison?

Moreover, if there is a Detailed Options Assessment Report that sets out the ranking of the various station options that have been or are under consideration, I would be much appreciative if it is possible to be forwarded a copy, or else - if it can be indicated when such a report is likely to be publicly available?

I request that report as I am particularly interested in having a better understanding of the consideration given to the MGWR option, and its ranking compared to other options under specific criteria, including e.g. CBR cost-benefit Ratio, disruption and impacts, value of time, and socio-economic inclusivity.

I am very grateful for your assistance with this matter.

Yours sincerely,

Ruadhán MacEoin

13 Aug 2021, 10:37

Dear Mr. Gillard,

I wonder if you got my email sent a fortnight ago?

It would be very helpful to have the information requested as the second phase of public consultation is currently underway, and it is vital in order to make an informed observation as recommended by the Minister's advisor.

Yours sincerely,

Ruadhán MacEoin

Eoin Gillard <Eoin.Gillard@nationaltransport.ie>

13 Aug 2021, 11:18

Dear Mr. MacEoin,

I did get your email and apologies for not replying sooner.

In respect of your queries, the main consideration of stations in this areas was undertaken in the consideration of the wider transport strategy and the MetroLink project. I have attached an extract form the MetroLink / New Metro North Options Assessment Study which was undertaken by ARUP in 2018 on behalf of TII and NTA. You will note this assessment considered the a heavy rail station at Glasnevin serving both lines and an additional station at Drumcondra east of Binns Bridge allowing connectivity between Metro and both heavy rail lines. This study did not consider the geometric and operational issues in detail on the heavy rail network.

The additional information provided in my earlier email on potential geometric and operational issues was undertaken subsequent to this and was for the purposes of a high level review of potential additional stations to be considered under DART+ Programme.

I trust this is of assistance in preparing your submission to the consultation process.

Regards,

Eoin Gillard

Supporting Document
Submission by Ciarán Cuffe M.E.P. on *DART* plans

On the right is the submission by Ciarán Cuffe M.E.P. for Dublin, filed with Irish Rail on 23rd of July 2021. Mr. Cuffe asserts that he is 'gravely concerned' at the absence of stations proposed under the DART Expansion plans, and that such lack renders the proposal 'at best deficient, and at worst casts the whole project in doubt'. Accordingly six new stations are suggested, which are the same as already depicted in this presentation.

Unless an individual independently publishes their submission, It is impossible to know what submissions were inputted as individual observations are not being publicly disclosed by Irish Rail.

The text can also be read on Mr. Cuffe's Twitter account at: https://twitter.com/ciarancuffe/status/1407749810422157313?s=21

European Parliament

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Green Party *Comhaontas Glas*
12-14 Mount Street Lower, D02 W710
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Irish Welcome - *Cuirim Fáilte Roimh Ghaeilge*

23 June 2021

Community Liaison Officer
By email: DARTSouthWest@irishrail.ie
DART+ South West,
Iarnród Éireann,
Inchicore Works,
Inchicore Parade,
Dublin 8,
D08 K6Y3

Re. Submission on the DART+ South West Emerging Preferred Option

Dear Madam/Sir,

I welcome the opportunity to make my views known on the DART+ South West Emerging Preferred Option. I welcome the proposal, but believe it is severely compromised in scope without incorporating an appropriate number of new rail stations into the proposal. I am at a loss to understand how and why this occurred.

I therefore request that you consider the following issues before you proceed further with the proposal.

1. I am gravely concerned that the proposal at this stage does not appear to entail the provision of new stations at Ballyfermot, Inchicore, Heuston (Platform 10), Dublin Zoo/North Circular Road, Cabra and Croke Park.

2. Proposing such a project without incorporating the provision of new stations is at best deficient, and at worst casts the entire project in doubt. It is a matter of extreme concern that the construction of new stations is not an integral part of the DART+ South West Project.

3. It is curious to suggest that the project will link good quality public transport to sustainable land use management and assist in local regeneration, economic development when the most obvious new station improvements have been left out of the proposal.

4. I am pleased to see that the Metrolink Glasnevin Station appears to be incorporated into the project.

5. I suggest that all stations are designed in a manner that will integrate all transport modes into their design. This includes walking, cycling and cycle parking, bus, rail and Luas integration, car drop-off and pick-up ('kiss and ride'), and shared mobility services.

I wish you well in your work and look forward to the further development of the DART+ South West Emerging Preferred Option.

Sincerely,

Ciarán Cuffe

Ciarán CUFFE, MEP for Dublin