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MetroLink Consultations  
Transport Infrastructure Ireland  
Parkgate Business Centre  
Parkgate Street  
Dublin 8, D08 DK10

Re: Metrolink Non-Statutory Consultation - May 2018

Dublin Cycling Campaign, the leading member of Cyclist.ie, the Irish Cycling Advocacy Network, welcomes the public consultation on the proposed MetroLink scheme. The addition of a Metro to the Dublin area public transport system has the potential to provide a sustainable transport option to tens of thousands of people and can potentially reduce traffic levels and congestion on our streets. By providing greater options for commuters/travellers on public transport we can reduce our dependence on cars and improve the liveability of our streets, through making them friendlier and safer for cyclists and pedestrians.

While we support the basic principle of an underground public transport system, we have a number of worries and issues in relation to the overall project, which we outline below

Our submission is outlined as follows:

1. Introduction: As stated above Dublin Cycling Campaign is supportive of the concept of a Metro system for Dublin City and environs. However, in general we are unhappy with the level and period of consultation and the present overall proposed alignment. We will also comment on the issue of value for money and the CBA results outlined.
2. Part I explores the opportunity to boost the business case for the MetroLink scheme by facilitating and encouraging cycling. Cycling can act in a feeder

role for the metro for people outside of walking distance. This can increase catchment areas of stations and increase ridership.

3. Part II discusses how upgrading the LUAS Green Line to metro standard impacts pedestrian and cycling permeability in the Beechwood to Windy Arbour section. Cyclists movements were not even considered as part of the Green Line Metro Upgrade Study. We will explore how Scenario 2 (60m HFV) and Scenario 3 (90m LFV) would differently affect cyclists. We wish to avoid any retrograde steps for pedestrian and cyclist permeability for the communities that live alongside the green line in South Dublin.
4. Part III discusses the permeability improvement opportunities that MetroLink has to offer North Dublin. Design goals should be set of improving permeability, convenience, and safety, for walking and cycling. This includes walking and cycling access to the public transport stations but also along and across the new infrastructure.

## Introduction: Outlining Alignment Issues, Consultation Issues, CBR and Disruption issues,

Dublin Cycling Campaign agrees that Dublin City needs a metro system badly. A metro system has been discussed for Dublin for decades. With growing levels of congestion, the need to change people's travel mode is becoming more stark. Dublin City, as our capital city needs to have room to breathe and grow. We believe that this need can only be met by improving public transport and active travel options. A major part of the improvement in public transport will need to be an underground system, as well as the agreed overground Bus Connects project.

### Alignment

The decision on a metro system as to which is the most appropriate alignment for the needs of both Dublin and the country overall needs to be considered carefully. Dublin Cycling Campaign accepts that any proposed system will involve some level of disruption, but we are not convinced that this present proposed alignment meets the necessary criteria for a Metro system, for the following reasons:

- This project is totally Dublin-centric, despite the proposed link up with national rail lines at Tara St and Phibsboro
- It is proposed to run only from South Dublin (Sandyford) to north of Swords (Estuary) with no onward links to national rail links, which could potentially influence a modal change by travellers and commuters from outside the City boundaries
- It misses the opportunity to establish a wider national network by lack of consideration of the proposed future DART underground system

- It will cause major disruption to travel along the present Green Luas Line during construction, which will necessitate unnecessary derailment of public transport for an approximate 6 year period
- The proposed final changes to the LUAS Green Line will involve major passenger disruption long term, with present passengers travelling between some locations potentially having to change twice on their journeys, which can at present be done without changing

TII and the NTA need to clearly demonstrate that other underground alignment links to major residential and employment areas as well as potential national transport links, have been fully tested, particularly in the area of South Dublin.

## Consultation

This proposed €3 - 4bn project for Dublin could be major game changer for both transport in the city and nationally. It requires time and proper consideration by the general populace. And, while realising that this period of consultation is non-statutory, the period allowed, which is less than that allowed for even a standard Part 8 Local consultation, is derisory. On top of that the notice on the availability of the consultation online links was deficient. The NTA, which has joint responsibility for this project did not initially advertise the project on its website pages, until prevailed upon to do so by Dublin Cycling Campaign. This link to the public consultation information was only provided on the NTA in mid April, shortening the real consultation period even more, down to a mere 4 weeks. The NTA site is the standard site that citizens and activists turn to when seeking information on major projects. This is unacceptable for a project of this importance and size.

The volume of documentation and background material alone demands major study by interested parties. Further background material on the alignment choice should also be provided. We demand that the consultation period be extended further, and in particular more on-site engagement take place with interested parties and local communities.

## Cost Benefit Analysis (CBA) and Disruption Issues

Dublin Cycling Campaign are very disappointed with, and critical of, the CBA methodology used, and the depth of the assessment. As can be seen from the very brief [CBA report](#) included in the documentation reference is made to the systems used to carry out the analysis, but no detailed figures are supplied for the different elements.

Even allowing for the above deficiency there are glaring omissions, or dearth of references, to the major period of disruption that would occur for present users of

the Green Line during the proposed construction phase. This level of disruption does not appear to have been costed in any way, although this will be a major factor in the proposed project.

Furthermore on site disruption and safety issues for a city based project need to be fully appraised and assessed. Collisions between HGVs and cyclists are the leading cause of cyclist deaths and serious injuries in Ireland. So far this year four of the six Irish cyclist deaths this year have involved HGVs. The MetroLink project will bring large numbers of HGV vehicles into close proximity of vulnerable roads users. MetroLink need to set high standards for HGV vehicles that work on the MetroLink project. The CrossRail project in the UK is a good example and has [set high standards for HGVs](#) to improve cyclist safety.

These issues also need to be costed in any CBA. It is also not clear that some of the potential benefits for this project, of commuters/travellers switching from private to public transport mode has been fully assessed. And, while the TUBA (Transport Users' Benefit Appraisal) method has been employed, once again the details of that assessment are not clearly outlined, or made clear for the general citizen's benefit.

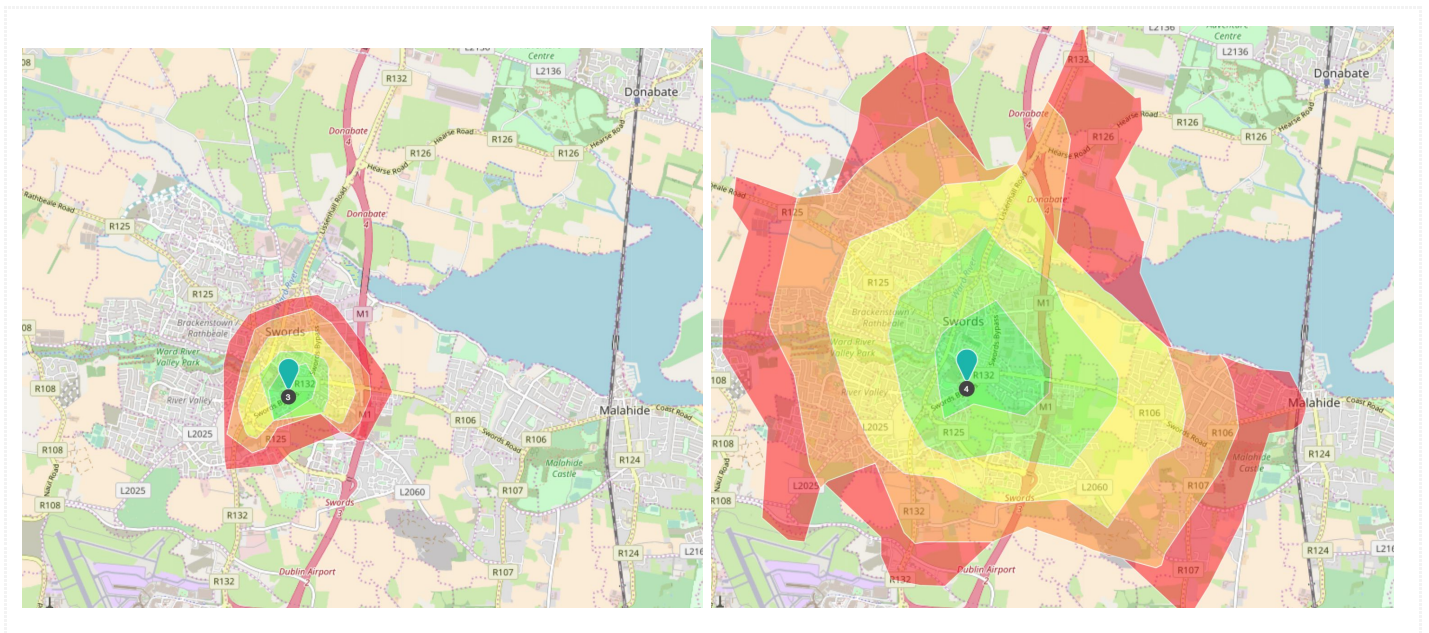
As outlined in the 'key facts' infographic the proposed project will potentially carry 15,000 passengers per hour at peak times, and overall the preliminary CBA is showing a highly acceptable greater than 2:1 ratio. But when similar transport investments in cycling are assessed they can provide a much higher rate of return, and can even have the potential to carry large numbers of commuters. For example, at this point in time, with very low levels of investment in city routes, over 12,000 cyclists are recorded as crossing the canal cordon on a daily basis during the morning peak. There is no doubt that for considerably less investment levels than MetroLink – approximately €0.5bn – this figure could easily be raised to 50,000, through provision of safe segregated routes. Furthermore cycling projects, mainly through the health benefits, reduction in carbon emissions, and journey time guarantees, regularly provide a very high Benefit:Cost ratio between 5:1 and 12:1. The potential role of cycling in supporting modal change and decreasing congestion can often be ignored by policymakers in favour of the more expensive and glamorous projects, although all are needed.

## Part I: Boosting the business case for MetroLink by encouraging and facilitating cycling to Metro stations

Facilitating and encouraging cycling to Metro stops through strong integration could be a big win for TII/NTA and the Dublin Cycling Campaign. Cycling can play a key role in increasing the catchment area of each metro station with a sustainable mode of transport. By increasing the catchment area of metro stations we can increase ridership of the metro. There is a great opportunity here to increase the

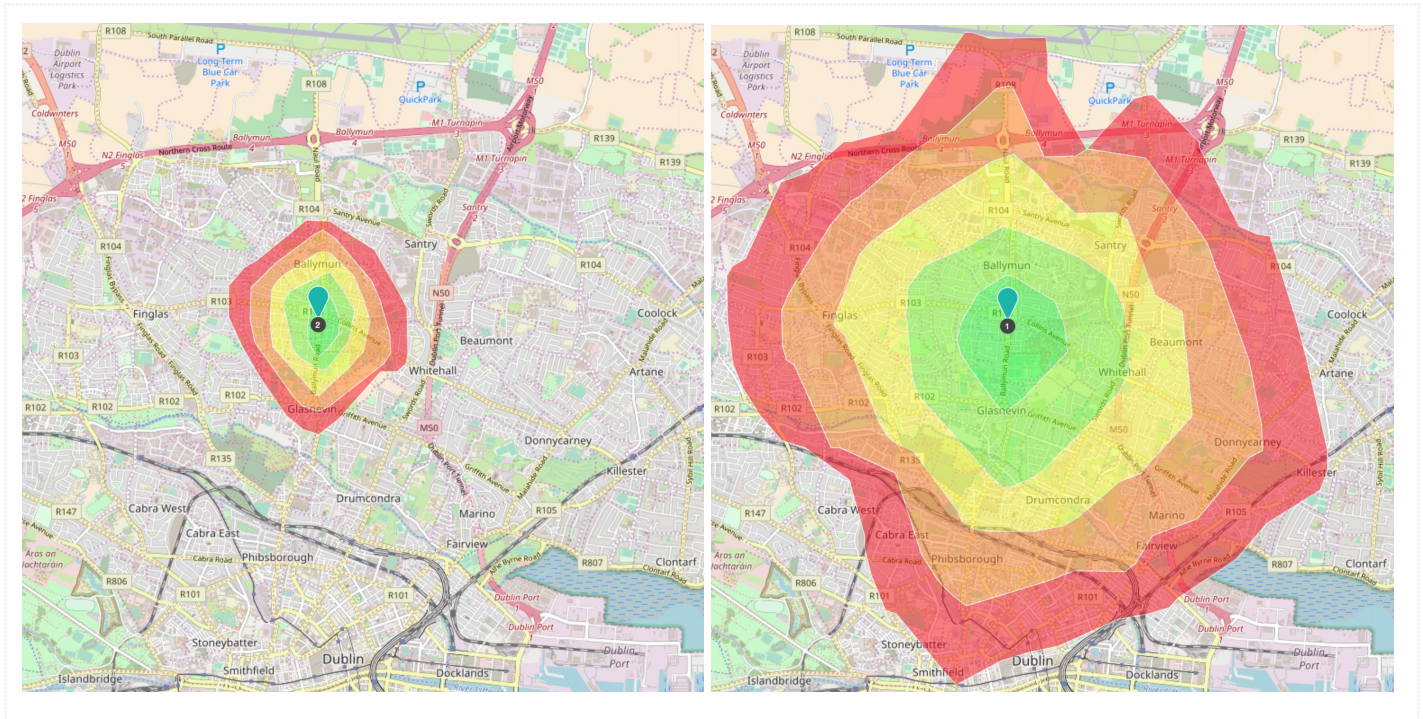
business case for the MetroLink scheme through strong integration with cycling. Cycling does not seem to have been considered in either the Transport Modelling, or the Economic Assessment Report (Systra) in determining station catchment areas.

To demonstrate how significantly cycling can increase the catchment area of metro stops here are isochrones for walking and cycling 15 minutes from the Swords Central stop and the Collins Avenue stop. Each coloured bar of the isochrone is three minutes. The dark green is how far you can travel in 3 minutes, yellow is 9 minutes, and red 15 minutes. The walking pace is assumed to be 6km/h and the cycling max speed is assumed at 25km/h.



The Swords central stop is within 15 minutes cycle (right) of most of Swords and parts of Malahide. The 15 minute walking distance (left) from Swords Central has a much smaller catchment area that doesn't cover any of the residential hinterland of Swords.





For the Collins Avenue stop we're more interested in how much further east and west you can cycle (right) than walk (left) as there are metro stops directly north and south of the Collins Avenue stop. Cycling can provide for sustainable orbital movements necessary for people off the metro corridor to connect to the metro line.

Dublin Cycling Campaign want to highlight five areas where TII/NTA have a great opportunity to facilitate and encourage cycling to and from metro stations. These areas should be given close attention as this project move from concept designs into any detailed design phase. Getting the details right is important for strong metro-cycling integration. We particularly outline the following elements.

1. The Glasnevin interchange station is adjacent to the Royal Canal Greenway
2. The provision of significant covered, safe and secure cycle parking at all metro stops
3. The access to metro stations via segregated cycle lanes and prioritisation of cycling and walking traffic
4. Allowing bicycles to be taken on off-peak metro vehicles
5. Access to the Estuary stop for pedestrians and cyclists

## 1. Glasnevin Interchange Station

This proposed station is adjacent to the Royal Canal Greenway, which will be fully developed over the coming 3 to 5 years. This pedestrian and cycle path is one of the premium cycle routes in Dublin under the NTA's GDA Cycle Network Plan (Route N2, Sheet N1) and is part of Dublin City Council Development Plan 2016-2022. The points below need to be taken on board in this vicinity.

1. If any section of the greenway needs to be temporarily closed to facilitate construction at the proposed Glasnevin stop, mitigation measures must be put in place to allow pedestrians and cyclists to continue to use the greenway, which has been shown to have major commuting and tourism potential. There are no pedestrian and cycle crossings of the canal anywhere between Broom Bridge and the interchange station at Cross Guns Bridge, which is a distance of 2.1km.
2. The final station design must not infringe on the path of the greenway or create any obstruction of the greenway route

## 2. Cycle parking

A key part of integrating metro and cycling will be sufficient and secure bike parking. Covered, safe and secure bike parking must be included at all stops in significant numbers designed to the highest international standard, in accordance with Policy 8.2 of the National Cycle Policy Framework. If people think they won't be able to park their bike or their bikes will be stolen or damaged at stations they will be less likely to cycle. Bike parking must be in well-lit areas covered by CCTV to prevent theft or damage. Bike parking provision to allow for substantial growth of multi-modal use of the proposed Metro, must be adequately assessed for future use and designed and costed appropriately

The NTA's National Cycle Manual (section 5.5) provides guidance on Irish standards for bike parking. The cycle manual recommends minimum bike parking quantities at public transport stations. A minimum of 2.5% of the number of daily boarders at each public transport station. Encouraging cycling will require much higher provision than the minimum recommendations. For example, using the expected daily boarder figures for Collins Avenue (17,250 boarders) at least 430 bike parking spaces should be provided here to comply with the National Cycle Manual. At Swords Central (13,000 boarders) at least 325 bike parking spaces should be provided.

We would like to highlight three locations that deserve special attention:

1. The Glasnevin stop is adjacent to the Royal Canal Greenway, a premier cycle route of the GDA Cycle Network. This greenway connects the Glasnevin stop straight down into the high-employment zones in the Docklands. We ask that given the station is a major public interchange station adjacent to great cycling infrastructure that significant amount (think 100s) of high-quality and high-density cycle parking spaces are provided at this stop.
2. High-capacity bike parking should be provided inside the park and ride facility at the Estuary stop. The NTA's National Cycle Manual recommends that at least a minimum of 10% of car parking spaces, or a minimum of 300 bike parking spaces, must be provided at the Estuary Park and Ride. An Irish example to follow here is the Drury Street bike parking facility in Dublin city

center. The Drury St. facility has its limitations because it is retrofitted into a car park, it lacks its own segregated entrance and the ceiling is too low for double height bike racks. For the Estuary P&R, a well sign-posted separate cycle entrance should be provided to remove conflicts with motor vehicle traffic. The cycle parking should also be closer to the platforms than any non-disabled car parking spaces in accordance with the National Cycle Manual guidelines.

3. Under the proposed project Tara Street Station will become a future multi-modal transport hub. Providing a high-density bike parking station here can encourage metro passengers to use a combination of metro and cycling to complete journeys off the north-south axis of the metro line in the city center. Tara Street Station is the only station in the city center with the space to facilitate a high-density bike parking station within the proposed public plaza there.

TII should also investigate and increase the amount of cycle parking provided at old green line Luas stops to reflect the increase in service level to metro standard, in particular at the outlying stations. There are a myriad of examples of high quality safe and secure bike parking facilities throughout Europe, as seen in some of the images below. These are the kind of levels of bike parking that need to be provided here in Dublin at any future major Metro stations.



The bike parking facility at Drury Street in Dublin City Center. This facility is below international standards as it is mostly constrained as it is retrofitted into an existing car park facility.





A new high-quality bike parking station in Utrecht. High ceiling height, strong lighting and good wayfinding systems make this a gold standard bike parking station.



High-capacity well-lit covered cycle parking in Malmö, Sweden. The two level bike racks greatly increase capacity. The green area is for large bikes like cargo bikes or bikes with child seats, etc.

### 3. Cycle lanes to all new metro stations

As part of this scheme, roads will be realigned and new access roads constructed. As was indicated in the concept designs, we would like to see segregated cycle

paths constructed on all new/realigned roads and priority given to access and egress of pedestrians and cyclists. It's been demonstrated that segregated safe cycle lanes will encourage people of all ages and abilities to cycle to metro stops.

TII should highlight with local authorities how providing segregated cycle paths to stations will increase ridership of the metro, encourage sustainable transport and decrease vehicle traffic in their area.

#### 4. Bikes on off-peak metro vehicles

Policy 8.5 of the National Cycle Policy Framework states that bikes should be permitted at off-peak times on any future Dublin metro lines. The design of stations and metro vehicles needs to be configured so that bicycles can be accommodated on off-peak vehicles, that bike users will be able to get their bikes from ground level to the platform level and that bikes can be safely placed on the carriages. The Copenhagen metro is an example of a metro that does a great job of accommodating bikes at off-peak times.



Designated areas on the Copenhagen metro for stowing your bicycle. This space turns into a high-capacity standing area during peak times





Carriages and platform marked to give passengers an indication where bike storage will be on the metro vehicle

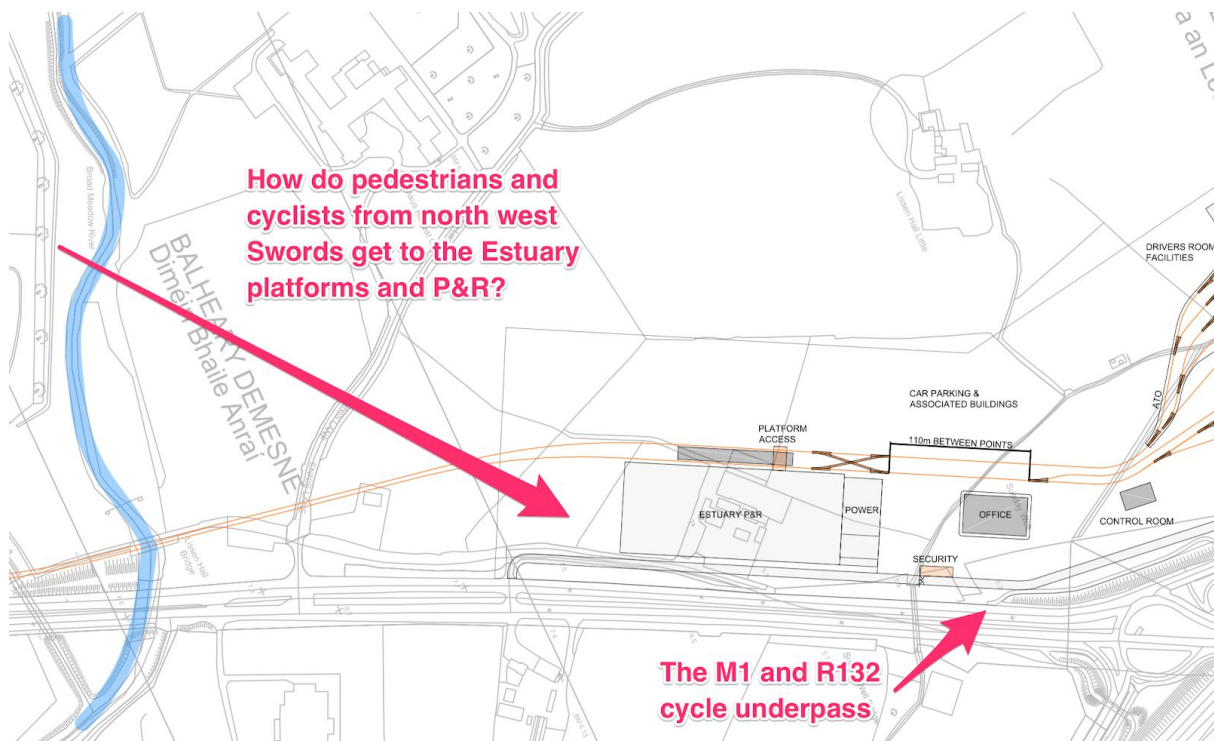


Providing a small ramp on shallow gradient steps can provide cyclists easy access down into an underground stations or to bike parking within the underground station box

## 5. Access to the Estuary stop for pedestrians and cyclists

From the concept engineering drawings it is not clear if there is any access to the Estuary stop for pedestrians and cyclists. The Swords by-pass road (R132) has no footpaths and no cycling facilities. The Broad Meadow River and the metro tracks will create an impermeable barrier that could make it impossible for pedestrians and cyclists to access the station. This is particularly damaging for the areas of north west Swords such as Thornleigh, Applewood and the large and growing hinterland around them. They won't be able to access their nearest station without a private car under the existing proposals.

There is a good opportunity to connect the Estuary stop to high-quality segregating walking and cycle routes in the Balheary Demesne and along the River Ward. With the current designs pedestrians and cyclists will need a new bridge over the river to replace the existing Lissenhall Bridge, which will be used for the metro tracks. They will also need a way to possibly cross under the metro tracks as they gain elevation from the Lissenhall Bridge up to the Estuary stop.



The other access point to consider for the Estuary stop is the cycle underpass at the junction of the M1 and R132. Linking this path to the P&R will provide cycle access to the Estuary stop for cyclists coming from the Lusk and Donabate areas. Maintaining cycle access from Swords to the M1/R132 cycle underpass is recommended as it is Route F1 (Sheet N9) of the GDA Cycle Network Plan. This route will also require a new bridge over the Broad Meadow river and a method for cyclists to cross over/under the tracks.

The issue of inter-modality and cycling/metro links needs to be properly considered in the design of all stations along any proposed route, to ensure that the full benefit of the Metro project is realised.

## Part II: Permeability concerns of Green Line Metro Upgrade

Permeability and movement of people and traffic is a hugely important consideration in the design of any area to encourage active travel (walking and cycling). Without short direct easy to access routes people will not choose active travel modes. The current Green Line does act as a barrier to permeability in some areas, particularly between Ranelagh and Windy Arbour. Without the existing permeability links the green line would bisect local communities and cause huge damage. There is a need to consider the effects of breaking existing connections, which are proposed along the new Metro/Green Line alignment.

### Green Line Metro Upgrade Study

We understand that vehicle/carriage choice has not yet been made and is part of the public consultation. We are disappointed that the Green Line Metro Upgrade Study did not mention cyclist movements at any stage. Scenario 2 (60m HFV) and Scenario 3 (90m LFV) of the upgrade study affect cyclists in significantly different ways.

Scenario 2 (60m HFV) requires full segregation of the line from motor traffic, bicycles and pedestrians. Full segregation of the green line is not our preferred option without detailed engineering solutions that provide the same (or better) level of permeability and accessibility for pedestrians and cyclists.

It was suggested in the report that full segregation would be done by closing roads and providing footbridges for pedestrians. Lifts would also be included for disability/mobility impaired access. Footbridges do not work for cyclists, and will discourage cycle use. Lifts would need to be large enough to take bicycles and be in good working order on an ongoing basis. But for instance, in recent weeks the lifts at Ranelagh Luas stop have been out-of-order. At locations like Cowper and Beechwood significant numbers of cyclists pass through these locations during peak times. This would probably require more than one lift on each side of the line.

If suitable engineering solutions to achieve full segregation and good permeability for cyclists and pedestrians crossing the line are not achievable then the preferred scenario of the Dublin Cycling Campaign is Scenario 3, 90m low floor vehicles. This will allow pedestrians and cyclists to cross the tracks at-grade at the ends of each platform essentially retaining almost all existing permeability links for pedestrians and cyclists.



## Areas of Concern

### Dunville Avenue

Dunville Avenue is of particular concern as it is the main permeability link in the area. Without this crossing point of the Green Line cyclists will be cut off from their community on the other side of the tracks. Cyclists in particular would be forced to cycle to Ranelagh or down as far as Milltown if suitable options are not provided for them at Dunville Avenue or Cowper. Ranelagh is a busy village that is unfriendly to cyclists and the Milltown area contains many steep hills. These detours would add 10 minutes to most cycle journeys and would be an unacceptable loss of permeability.

### Cowper Stop

At the Cowper stop suitable permeability links must be retained to provide the same level or better for pedestrians and cyclists. A feeder route of the GDA Cycle Network Plan (sheet N7) passes through the Cowper Luas stop. Cyclist permeability at Cowper would also support the development of the proposed Kimmage to Ballsbridge Quietway, which is being considered by Dublin City Council. The goal of the Quietway is to encourage more inexperienced cyclists, particularly children cycling to school.

In Scenario 3 (90m LFV) we ask that cyclist access is considered when deciding what direction to extend the platforms. Placing the current permeability link in the middle of the platforms, as suggested in the upgrade study, would be very negative to wheelchair users, pram users and cyclists. Cyclists were not considered in the upgrade study.

### Alexandra College

At Richmond Ave access to Alexandra College for pedestrians and cyclists should be provided. Without a good option for cyclists here the only other access point to the school grounds is via a hilly route and a busy main road. Encouraging active travel for school children is an objective of the NTA and the National Smarter Travel Policy.

### Windy Arbour

At Windy Arbour, between St Columbanus Road and Churchtown Road Lower there is the only pedestrian and cycle permeable point in this area. This pedestrian and cycle link is also directly beside a national school in a residential neighbourhood. Without a high-quality pedestrian and cycle link here it will discourage children from active travel and encourage more parents to drive their kids to school. Route 11B

(Sheet N7) of the GDA Cycle Network Plan uses the permeability point at Windy Arbour.

Further studies examining permeability of the green line

If MetroLink opts for Scenario 2 (60m HFV) and full segregation then there needs to be a multi-criteria analysis of all possible engineering solutions for achieving grade separation with the same level of permeability for cyclists and pedestrians at the four locations mentioned above. This should include all options from raising/lowering the track, to raising/lowering pedestrian and cycle movements, or a combination of the two. This report will need to include a traffic survey, and assessment of expected future movements, to demonstrate that any proposed engineering solution has the capacity to handle the volume of pedestrians, cyclists and mobility impaired people who cross the track during peak periods. A reevaluation of the Green Line Tie-in Study should be undertaken with an additional criteria of assessing the permeability each option provides.

We look forward to seeing more details on how to upgrade the green line to Metro standard and retain the same level of permeability for cyclist and pedestrians.

Bisecting the existing communities isn't a feasible option. The green line upgrade should only go ahead if it leads to conditions for walking and cycling which are at least as good as at present, and ideally improved.

## Part III: Permeability concerns for proposed new section of MetroLink

### M50 crossing

Fingal County Development Plan recognises the barrier to walking and cycling created by the M50 motorway and its interchanges. It includes the following objective:

#### Objective MT15

Investigate and avail of the opportunities provided by New Metro North and any other public transport infrastructure to provide new cycle and pedestrian links including crossings of the M50 which currently represents a major barrier to active transport modes.

It appears from the documentation that the MetroLink design team aren't aware of this objective, as there is no reference to it, or any concrete proposal. The MetroLink alignment will cross the M50 connecting the Santry/Ballymun area and the zoned development area at Dardistown, giving onward connection to the Airport. The opportunity to provide a quality walking and cycling link alongside the rail alignment needs to be taken on board..

## Swords "Bypass" (R132)

The R132 is hostile to pedestrians and cyclists. It forms a serious barrier to east-west walking and cycling at the moment. The bypass itself is also hostile and dangerous for active travel modes. The MetroLink design proposal will require large alterations to the R132. This is a great opportunity to fundamentally redesign this road and its junctions to improve permeability and access for active travel modes.

We recommend that the MetroLink design team consult with Fingal County Council to realise a new public space such as Metro Plaza from the [Swords Masterplan](#). The Metro Plaza would provide a high-quality permeable public space over the metro line and R132 for pedestrians and cyclists.

The concept elevated stations indicate there are underground concourses under the road. The design of accesses to these concourses should consider how bicycles could be wheeled down into the concourse and back up again.

## Conclusion

The current Metrolink proposal documents indicate a poor level of understanding of the importance of cycling to this project within the MetroLink design team. If the value of potential cyclists' access to this proposed Metro system was understood, then cyclist movements would have been more seriously considered within the context of the project, and within the context of national policy. We are disappointed in the number of issues that we have raised above not being addressed adequately, and we strongly recommend that a full independent walking and cycling assessment around the design of the metro alignment be carried out. This will help MetroLink comply with Irish planning policies regarding active travel.

Getting the details of the metro-cycling integration right are important in order to ensure the full benefits of the project are realised. The MetroLink design team need to engage with active travel groups to bring about a metro system that benefits pedestrians, cyclists and public transport users. Dublin Cycling Campaign, as always, are available to meet with the project designers/proposers to discuss any of the issues raised above in our submission.

Yours,  
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