

METROLINK

Integrated Transport. Integrated Life.

A9.1

**Area of Influence
Note**

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1. Introduction

According to the TII Project Appraisal Guidelines for National Roads, Unit 5.1, the modelled transport network should be the area of influence within which impacts are expected and no larger. For MetroLink, to determine the area of influence, two model runs have been carried out; one without the MetroLink scheme, and one with the MetroLink scheme. The outputs of these two runs have been compared to identify the area of influence of the MetroLink scheme.

- Run AAA is the 2018 present day model, without the MetroLink alignment and stations (2018 Do Nothing).
- Run AAB is the 2018 present day model with the MetroLink alignment and stations (2018 Do Something).

2. Area of Influence

To identify the area of influence, the 2018 Do Nothing (2018 Present Year Base Model – AAA) was compared against the 2018 Do Something (2018 Base with MetroLink Scheme - AAB). From the results below, we can see that there is an impact on the Road and Public Transport Network in Dublin and the Greater Dublin Area.

2.1 Road Demand

The following plots show where the traffic has increased or decreased in the Do Something model run. In the following figures, the green lines mean a flow increase with the inclusion of the MetroLink Scheme, and the blue lines mean a flow decrease with the inclusion of the MetroLink scheme. Traffic Volumes have increased to the North of the MetroLink Scheme. This is likely to be due to location of the Park and Ride at Estuary . Arterial roads around Dublin experience both increases and decreases in traffic volumes as mode change occurs.

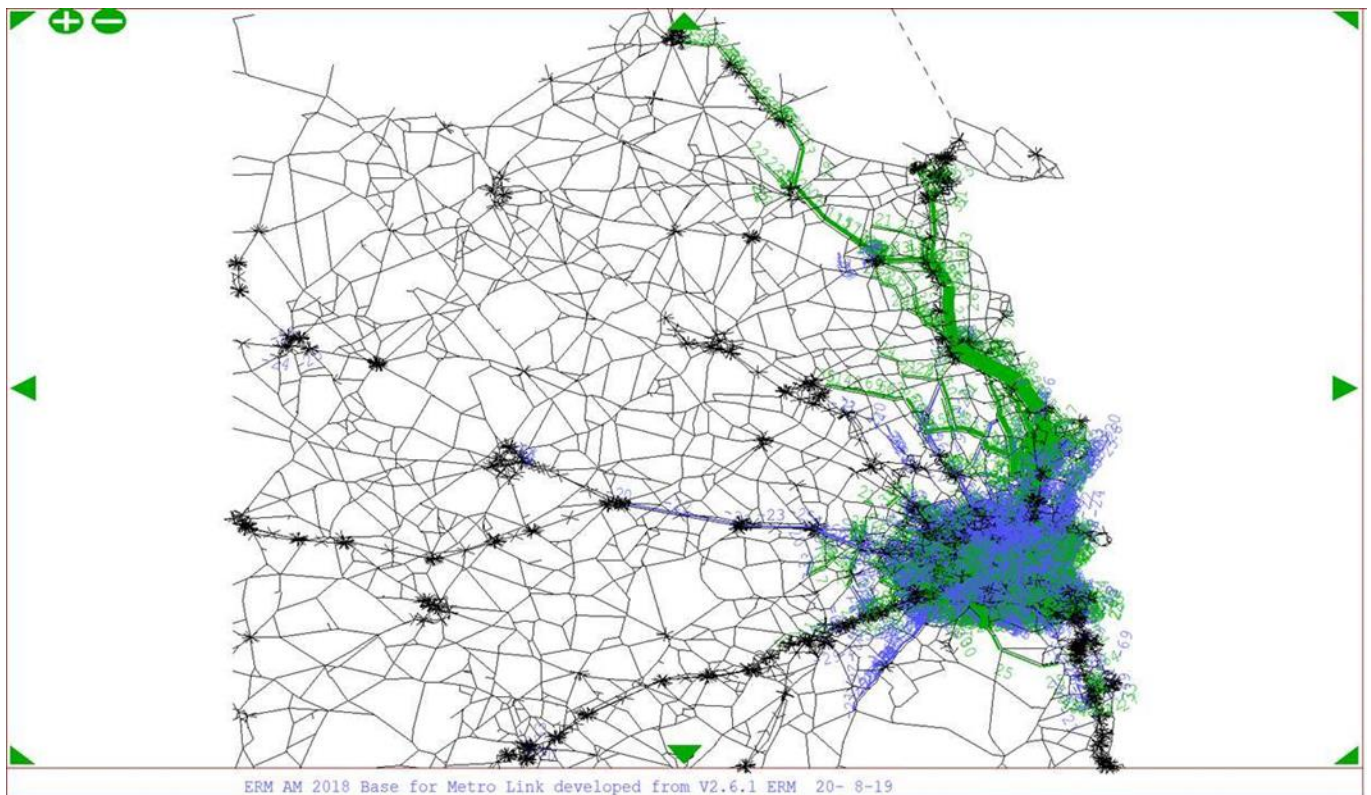


Figure 1: PCU Flows from 2018 Do Something Model Run (with MetroLink Scheme)

If we look at the area in more detail, as seen in Figure 2, an increase in flows towards the Park and Ride at Estuary, and a subsequent reduction in road traffic between Swords and Dublin can be seen. The large green lines on approach to Swords total +750 PCUs in the AM Peak, with +1,100 accessing the Park and Ride zone.

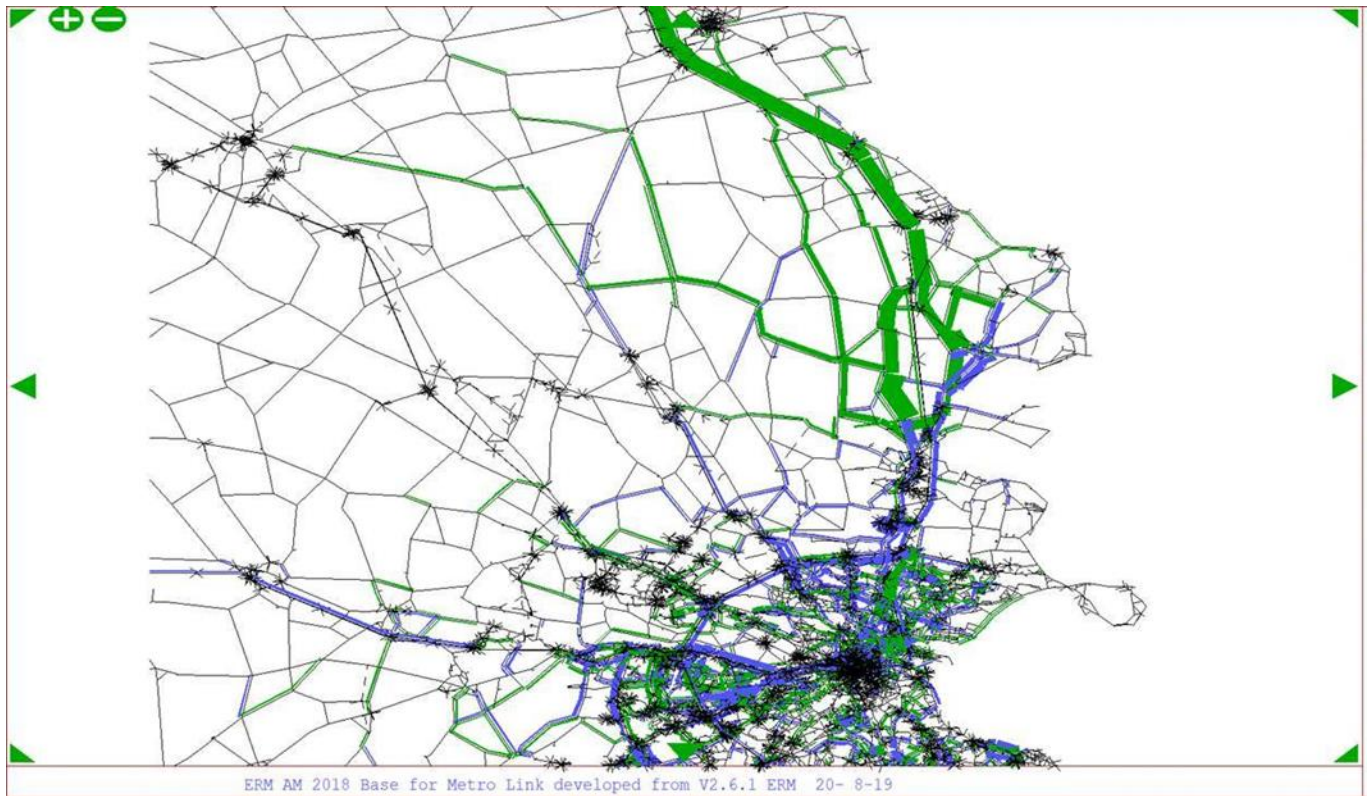


Figure 2: Dublin PCU Flows

It is important to note that it is difficult to identify differences in the city centre traffic volumes against model noise or convergence issues, however, there is an increase in traffic on the N1 as traffic can now more reliably get there to travel into the City Centre instead of travelling around the M50 to a different junction.

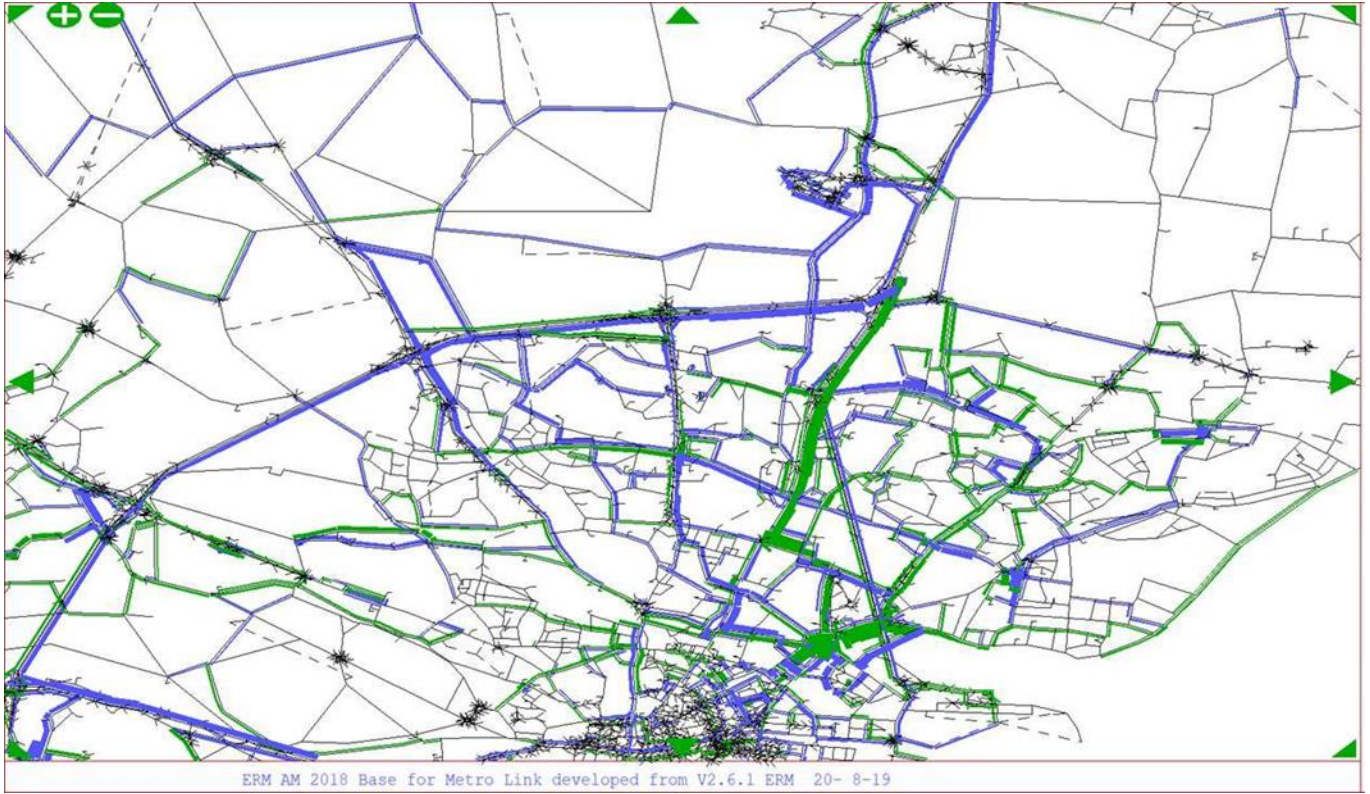


Figure 3: North City PCU Flows

2.2 Public Transport Demand

The following figures show the PT flows / area of influence. As the bandwidths are quite wide, some of the increases and decreases have been separated into separate figures to show the increases or decreases in detail. This can be seen in Figure 5 to Figure 8. These results exclude the PT demand arising from the Park and Ride at Estuary. The green lines demonstrate an increase in the PT flows, and the blue lines indicate a decrease in PT flows.

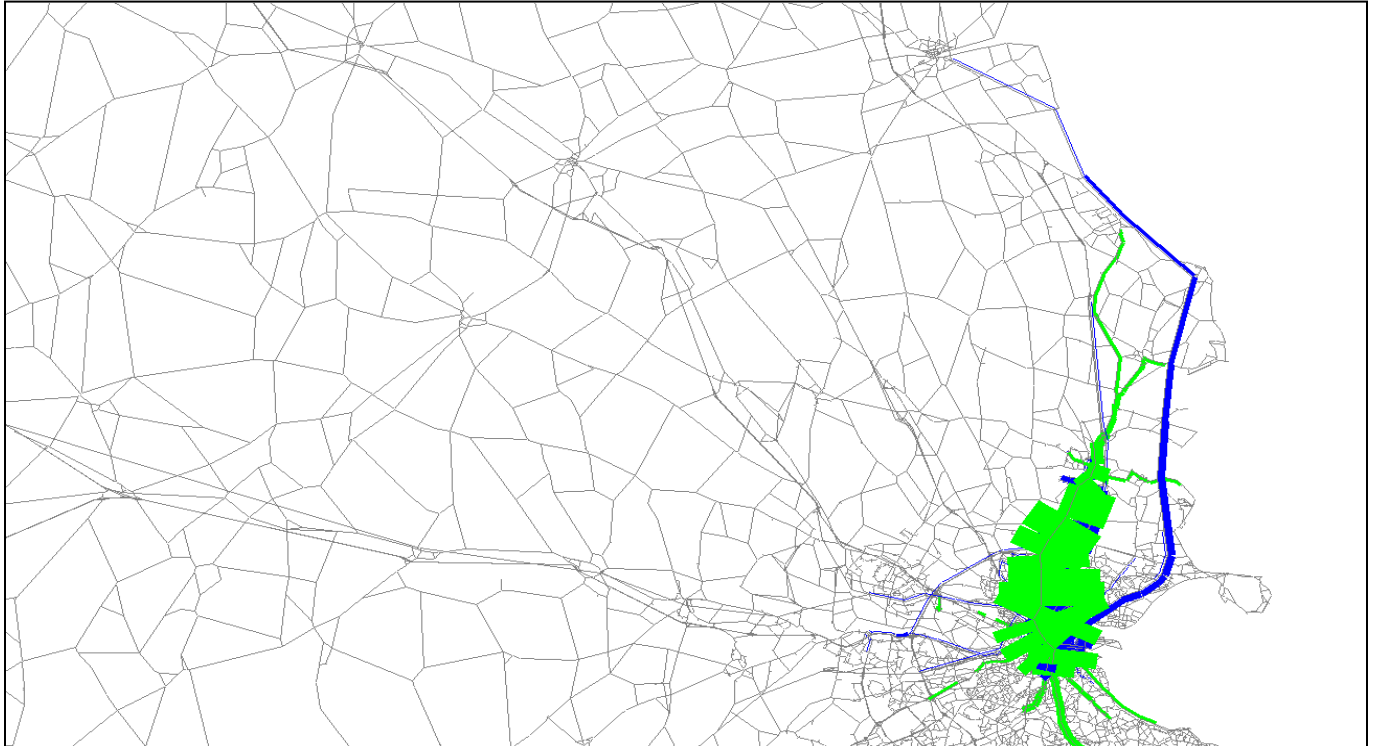


Figure 4: Overview of changes

Metro Flow Levels

The Southbound flows from Estuary indicate 600+ passengers, with 3000 passengers South of the Airport, and increasing to 7000 passengers in the City Centre. There is an increase in patronage on the LUAS Greenline. This is likely to be due to opportunities for interchange between the LUAS and MetroLink.

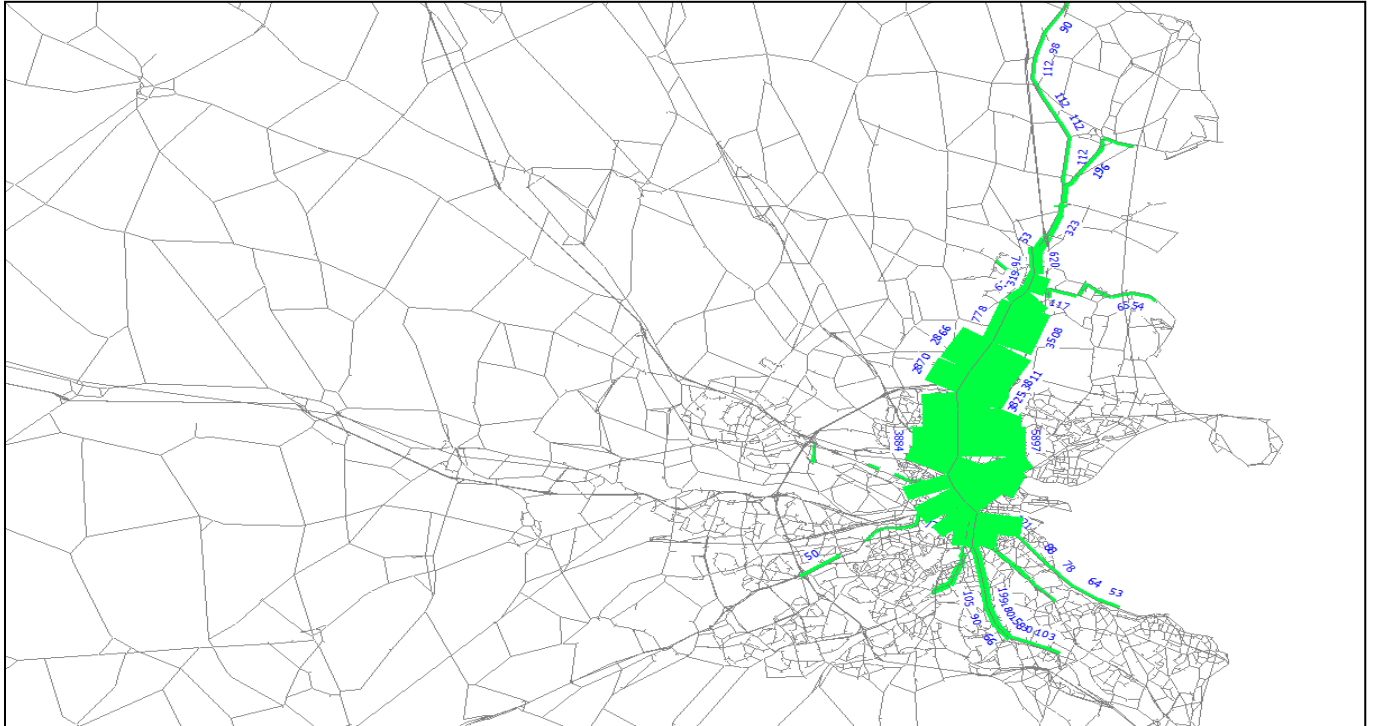


Figure 5: Southbound PT Flows (increases)

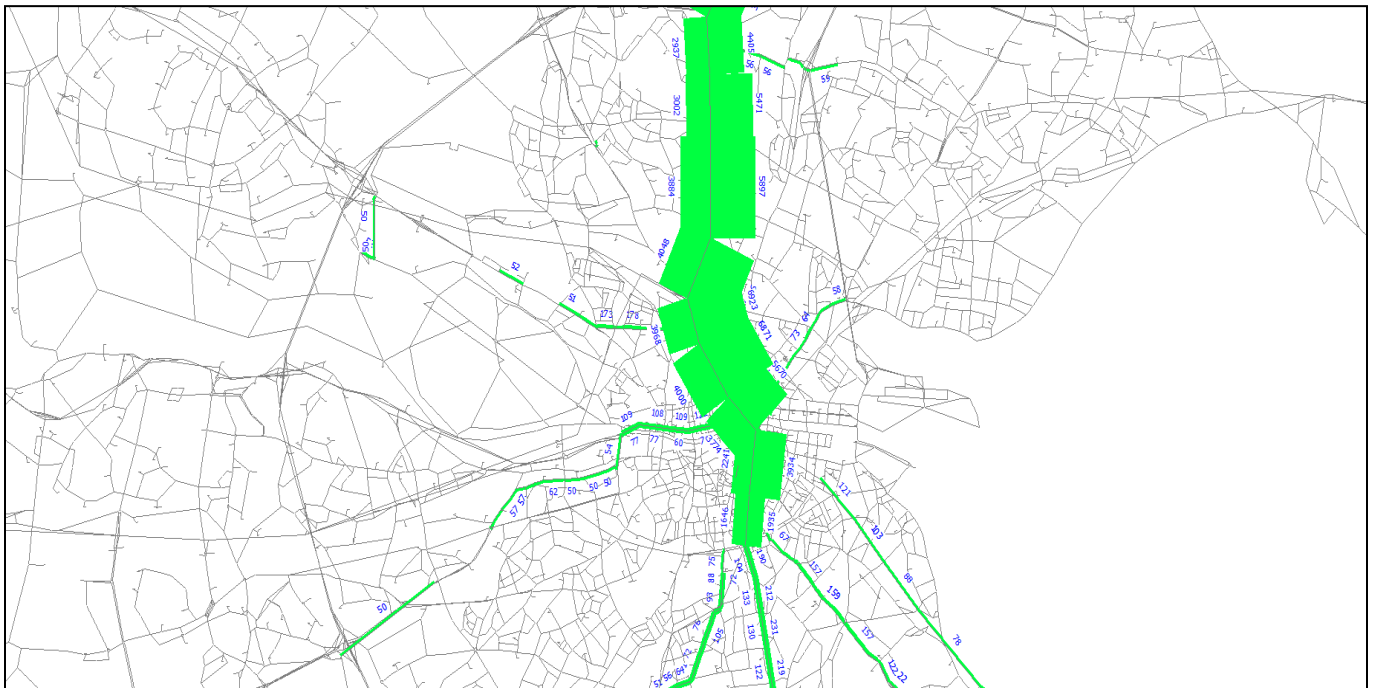


Figure 6: City Centre Flows (increases)

Flow decreases (absolute differences)

As expected, the below figures show a substantial abstraction from the Airport Bus, the Ballymun Bus Corridor and the Drogheda rail line. This is expected as passengers transfer to the Metro.

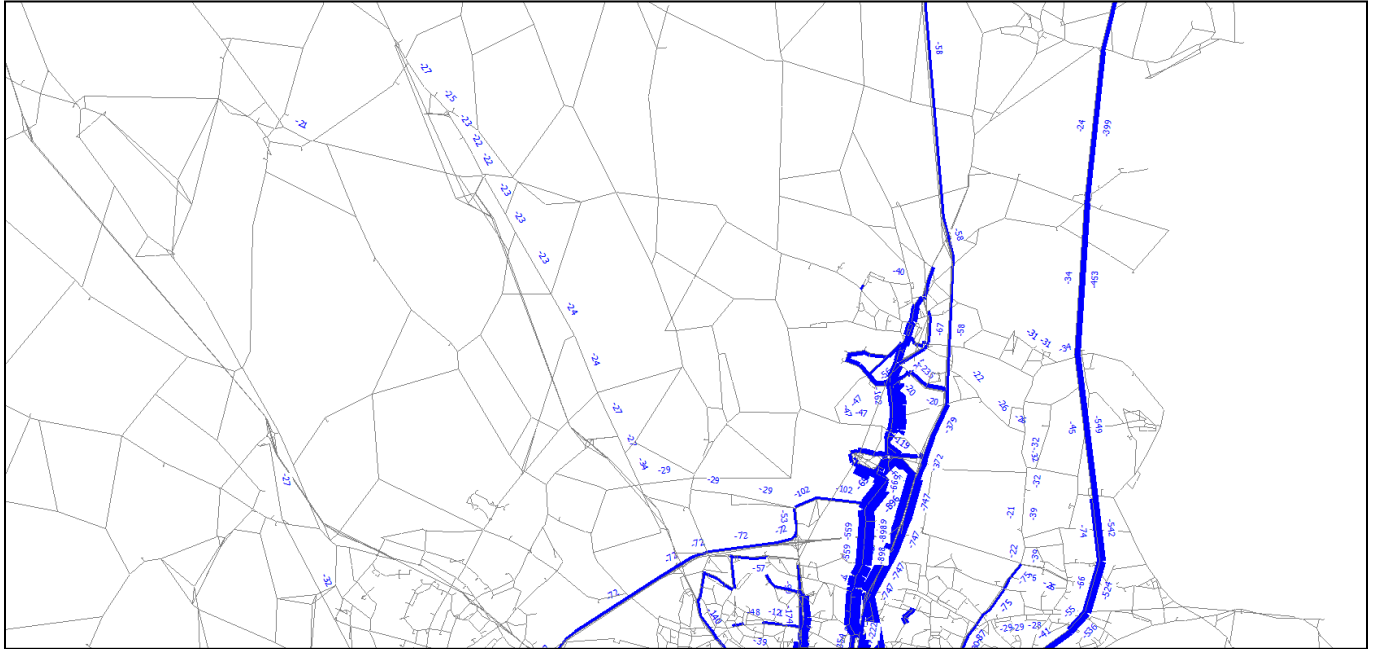


Figure 7: North City (Decreases)

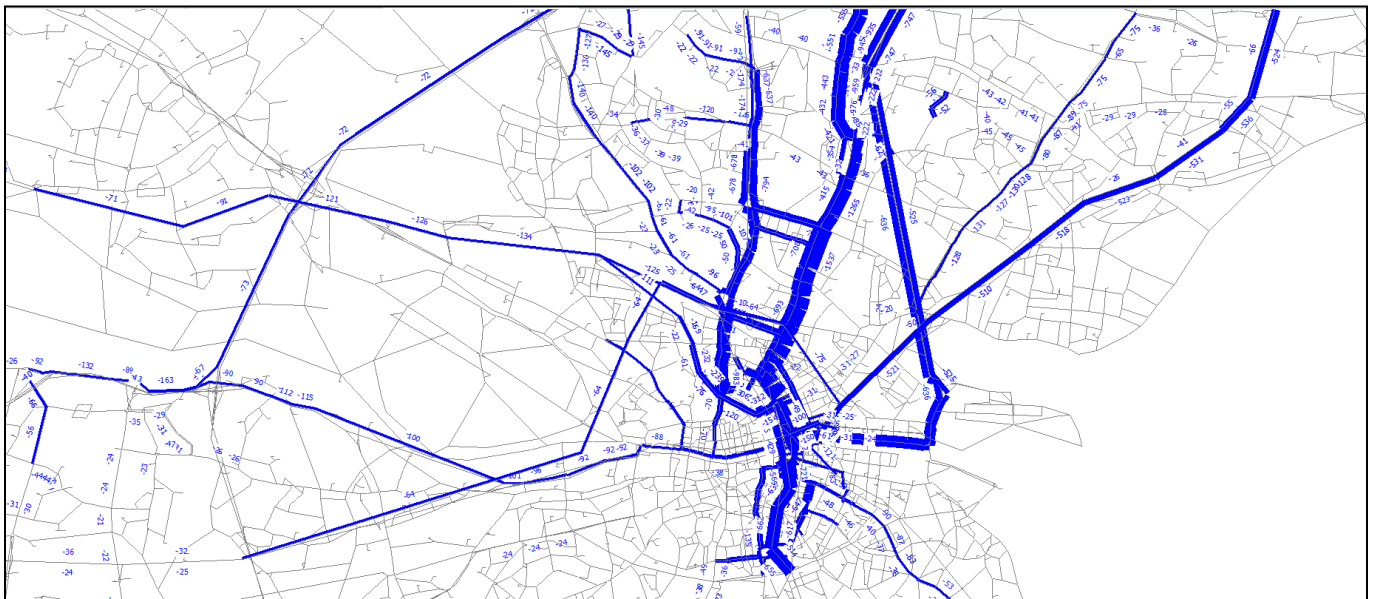


Figure 8: City Centre (Decreases)

2.3 Area of Influence Map

The area of influence for the MetroLink scheme can be seen in the below map. The main area of influence is to the North of Dublin due to the walking catchment, and due to the proximity of the MetroLink Scheme to the counties in the North of Leinster. The area of influence also extends to the West and South of Dublin along major radial corridors, and the M50 due to opportunities to combine Luas Green Line trips with MetroLink, and to access the Park and Ride Stations.



Figure 9: Area of Influence