# Appendix G – Cordon Results

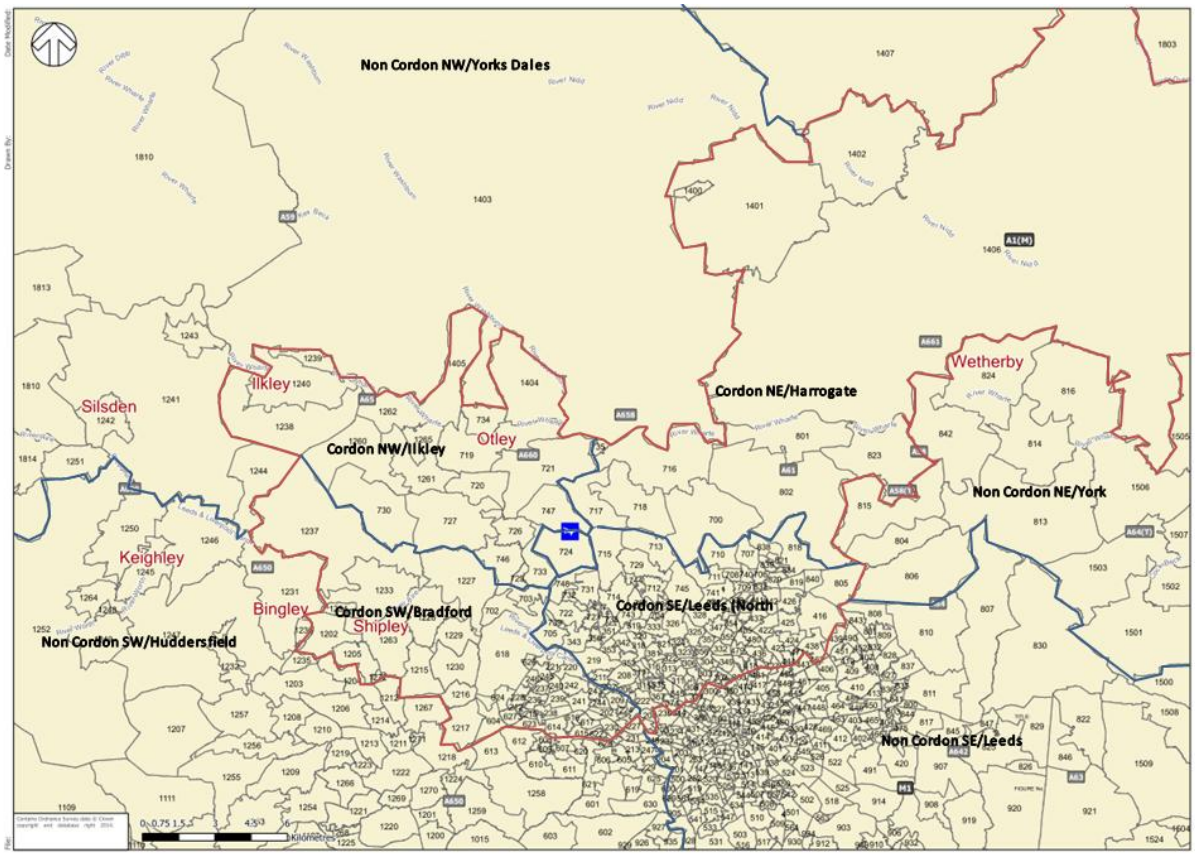
**This document is out of date. The latest information on the government's aviation and airports policy is available on GOV.UK.**

# Appendix G – Cordon Justification & Results

The model in its entirety produced BCR values less than 1, partly due to the concentration of benefits to users in the north of Leeds.

To determine the scale of benefits associated with the proposed schemes the full model has been cordoned to provided sectorised benefits. The model has been sectorised based on the zone plan as detailed below. The model cordon used to run the cordoned test of the results has been used as the started point for the sectors, with cordon sectors representing the area included within the cordon model. The non-cordon sectors represent the area outside the extents of the cordon area.

These areas have been split into quadrants to pick up the benefits associated with movements between the four key feeder areas of Bradford, Leeds, Harrogate and Otley/Ilkely. The sectors and corresponding sector numbers in TUBA are listed in the table below.




| TUBA Sector Name | TUBA Sector Number |
|---|---|
| Cordon NE Harrogate | 1 |
| Cordon NW Ilkley | 2 |
| Cordon SE Leeds North | 3 |
| Cordon SW Bradford | 4 |
| LBIA Airport | 5 |
| Non cordon NE York | 6 |
| Non cordon NW Yorkshire Dales | 7 |
| Non cordon SE Leeds | 8 |
| Non cordon SW Huddersfield | 9 |

Tables 1 and 2 below show the sectored benefits by time period. Trips originating in zones located in sector three are the only ones generating any benefit, with benefits constrained to movements between sector three and sectors one to three in the inter-peak and three to five in the PM Peak hour. These sectors lie within the cordon generated to run the cordoned model runs as part of the options assessment process.

### Table 1 – Inter-peak Sectored Benefits

| IP | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **3** | 12 | 21 | 35 | 0 | 0 | 0 | 0 | 0 | 0 |
| **4** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **6** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **8** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **9** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### Table 2 – PM Peak Sectored Benefits

| PM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **3** | 0 | 0 | 188 | 22 | -6 | 0 | 0 | 0 | 0 |
| **4** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **6** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **8** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **9** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Figures 1 to15 show flow and delay differences forecast in 2031 for each time period. Significant flow changes as a result of the scheme are focused around north west Leeds in the suburbs immediately adjacent to the airport. Other flow changes greater than 10 vehicles are shown in central Leeds, Bradford, Wakefield and Kirklees.

Changes exceeding 50 vehicles are noted on two links within Leeds centre, the first indicating a route switch between Armley Road and Canal Street on the approach to Armley Gyratory. The second is a lane switch on the on slip from Claypit Lane onto the Inner Ring Road westbound.

Delay changes are also shown with few changes away from the scheme area.

Figure 1 - AM Peak Flow Differences (All)

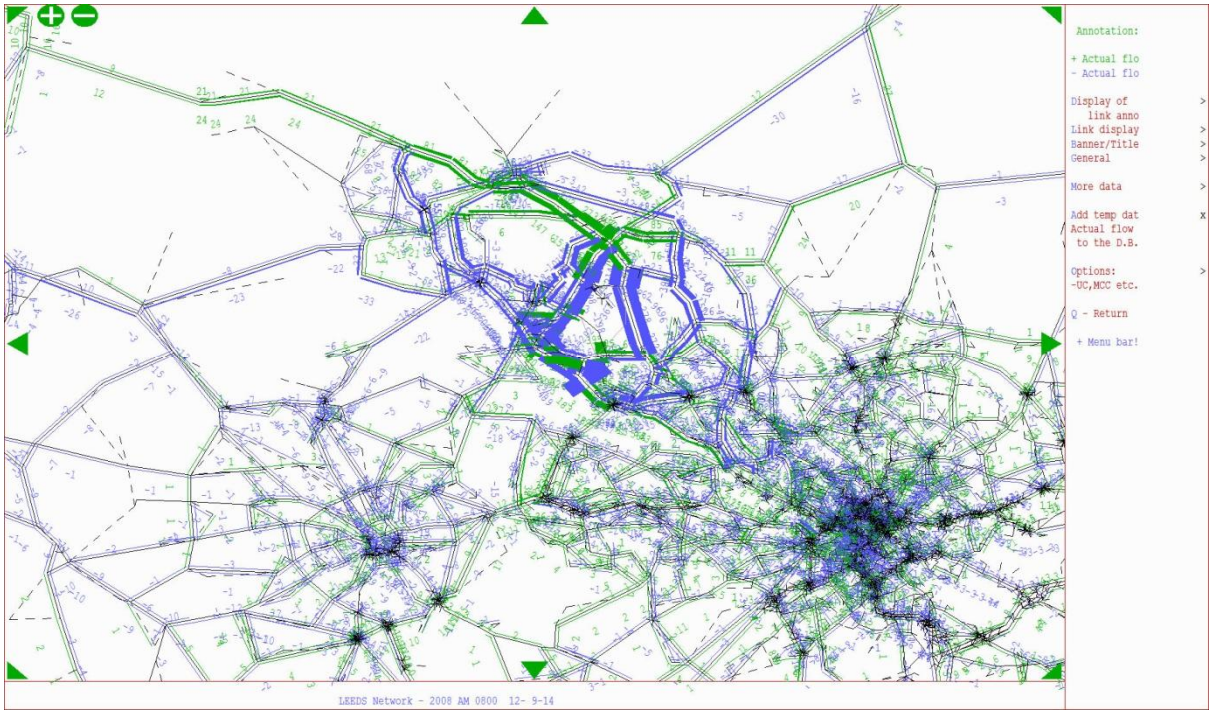



Figure 2 - AM Peak Flow Differences (Leeds Centre)

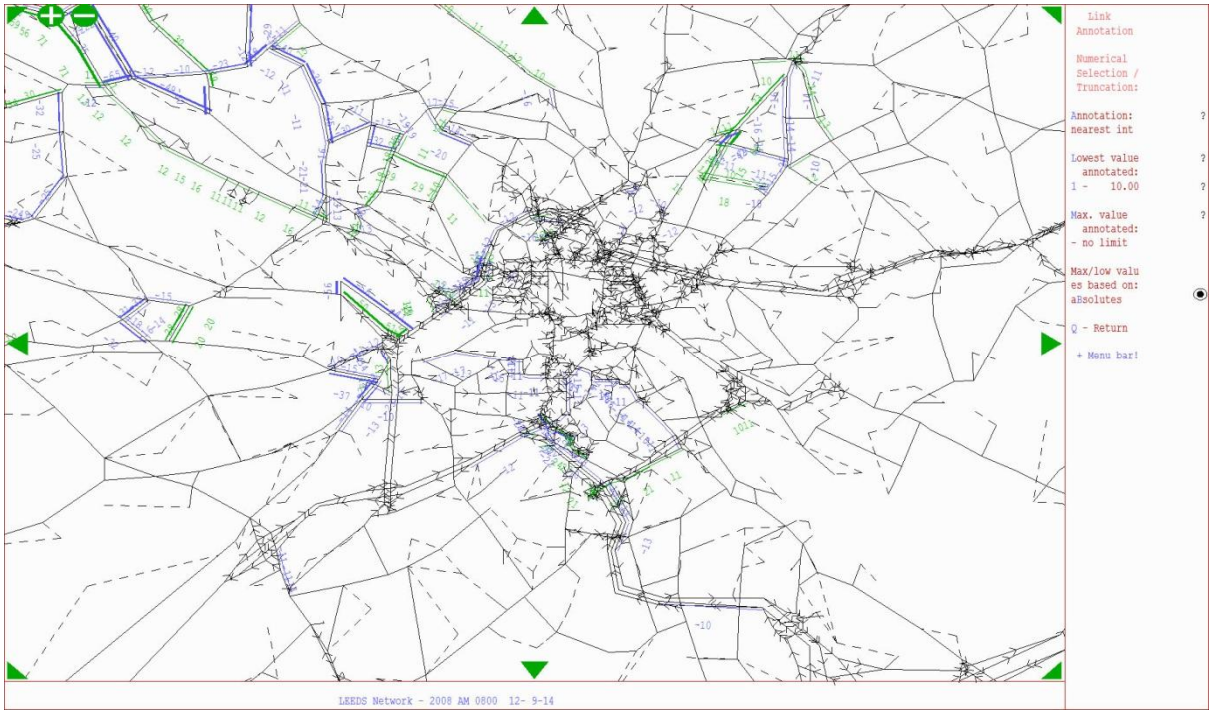


Figure 3 – AM Peak Flow Differences (Bradford)

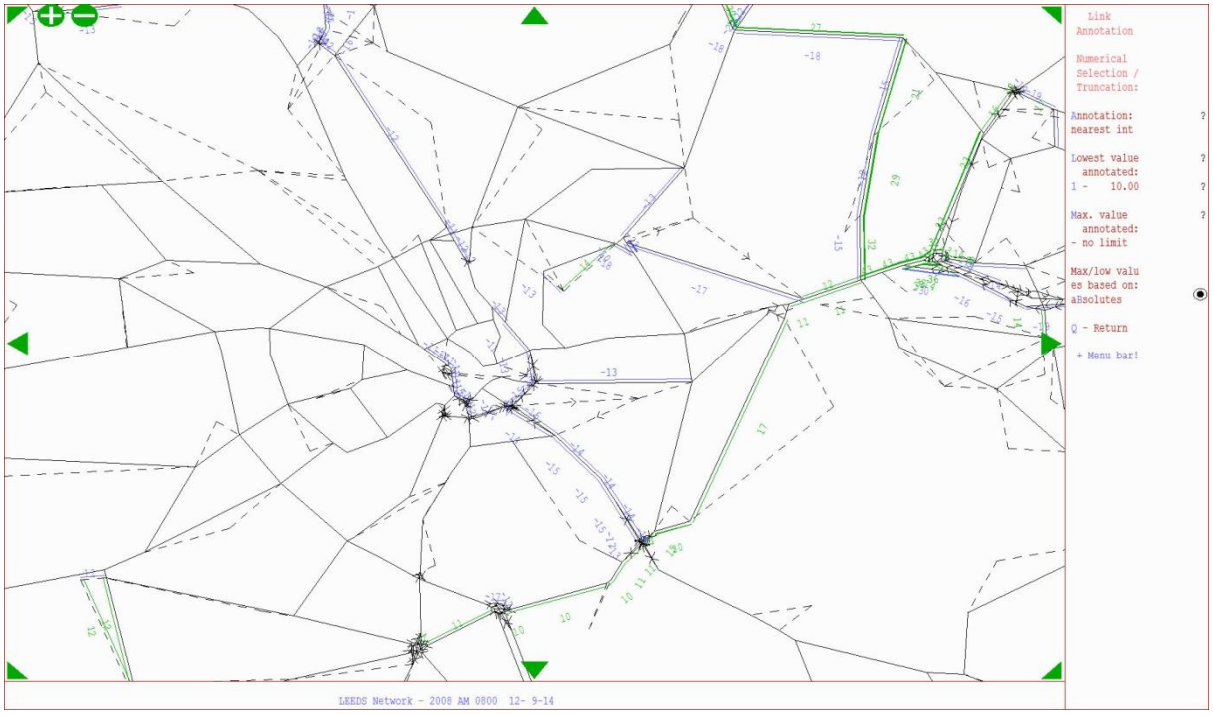



Figure 4 – AM Peak Flow Differences (Kirkless / Wakefield)

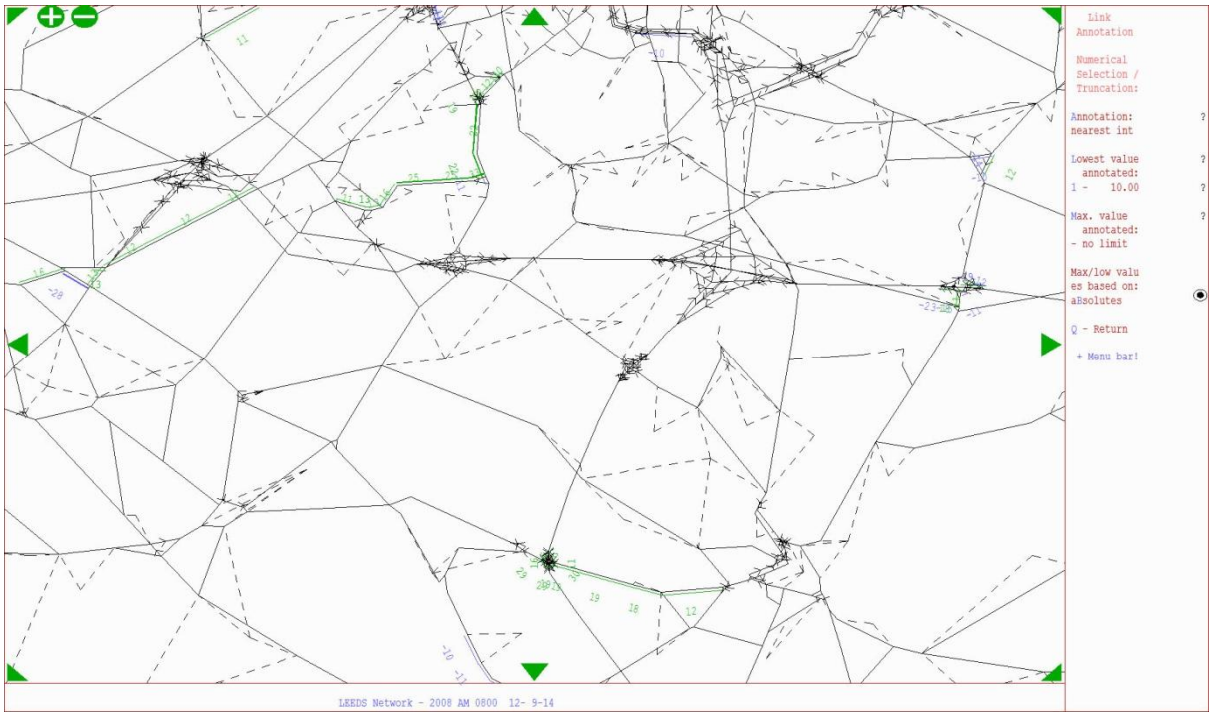


Figure 5 – AM Peak Delay Differences (All)

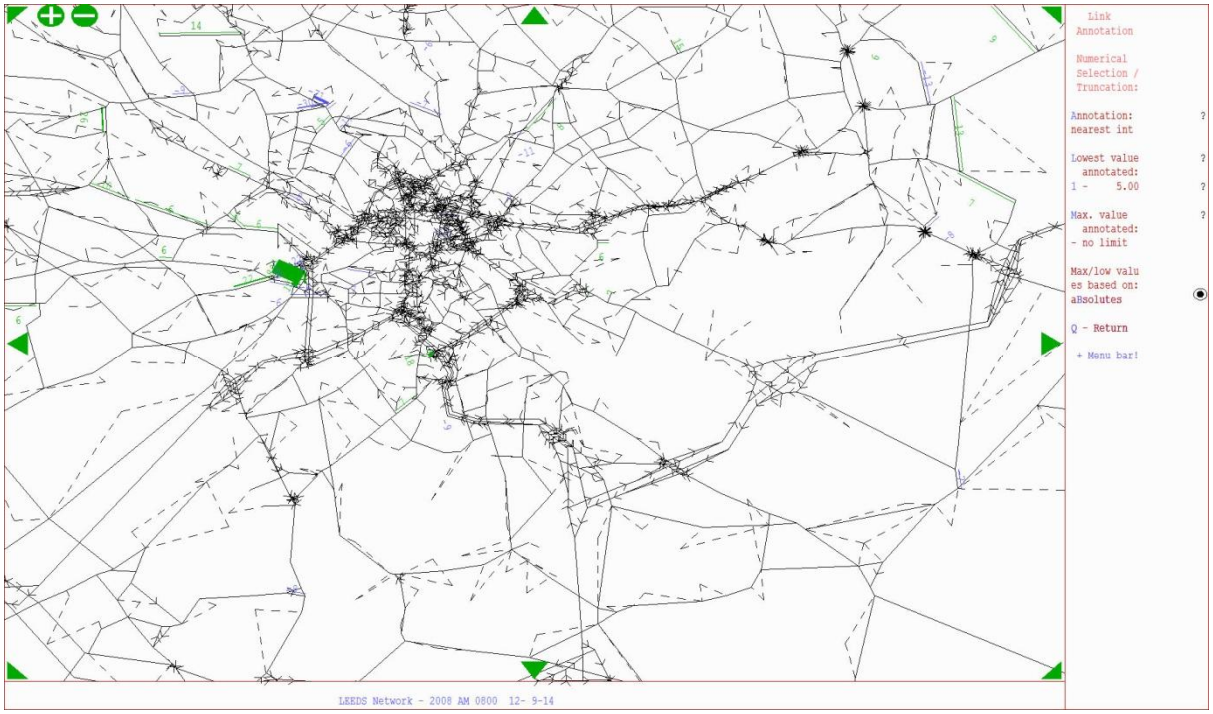



Figure 6 – Inter-peak Flow Differences (All)

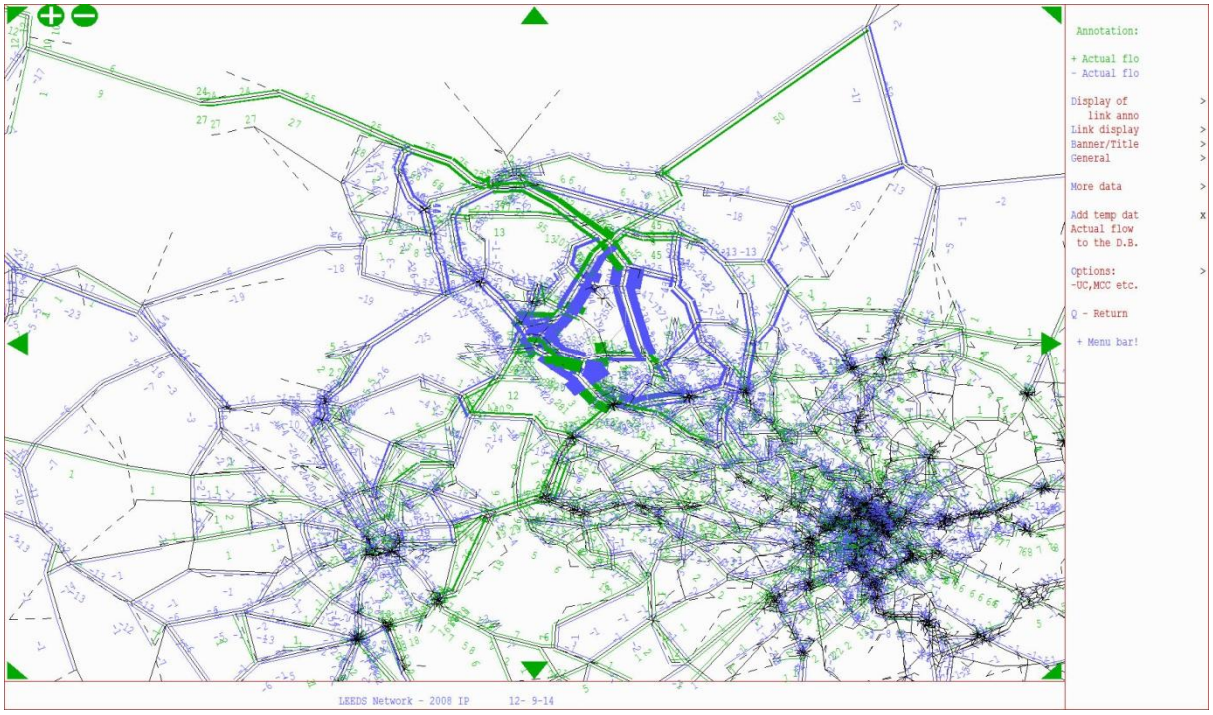


Figure 7 – Inter-peak Flow Differences (Leeds Centre)

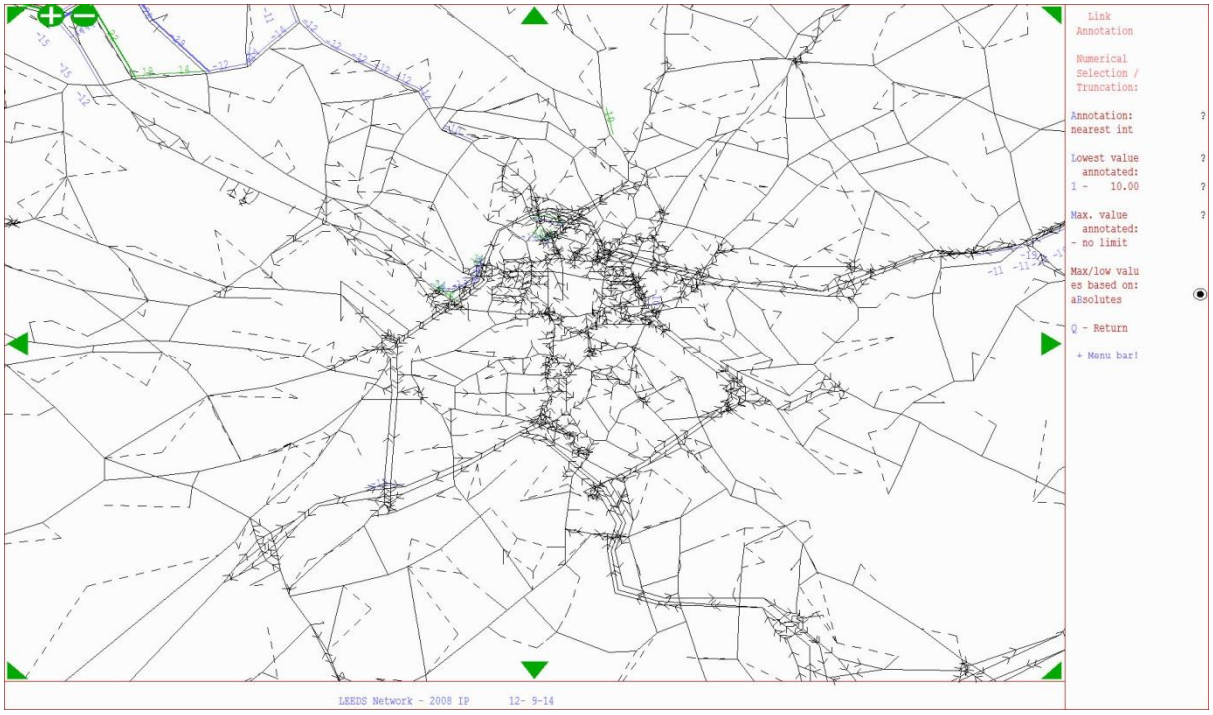



Figure 8 – Inter-peak Flow Differences (Bradford)

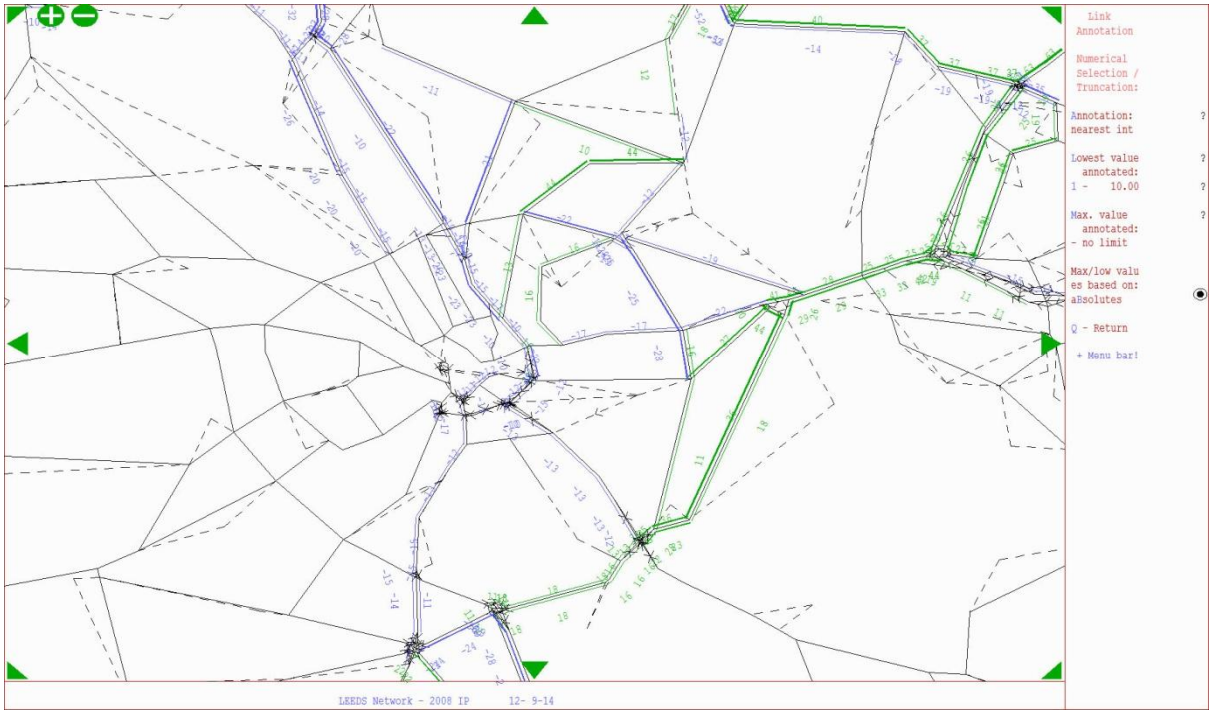


Figure 9 – Inter-peak Flow Differences (Kirkless / Wakefield)

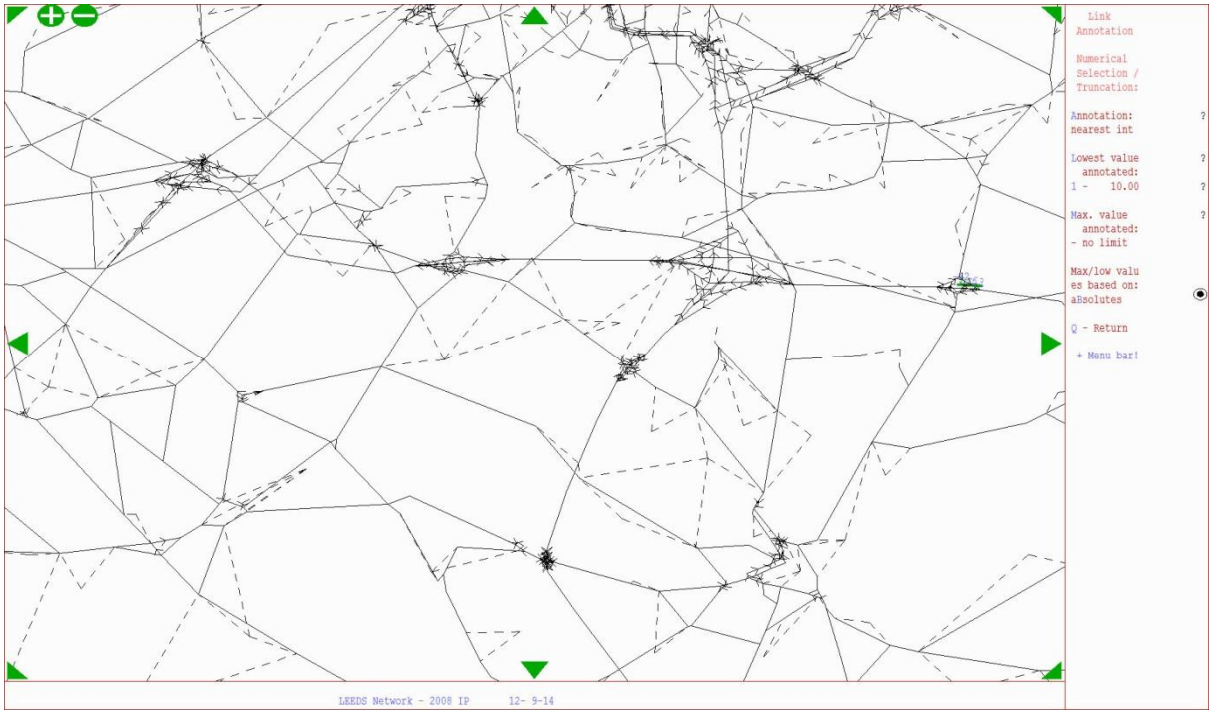



Figure 10 – Inter-peak Delay Differences (All)

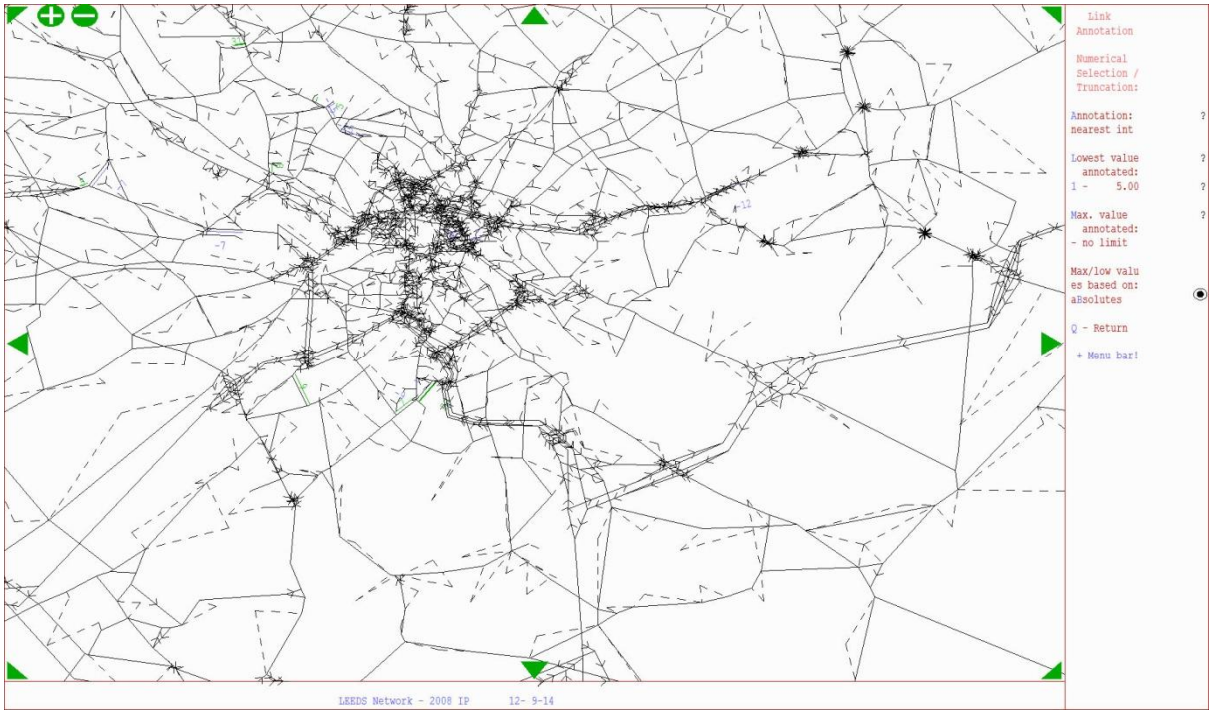


Figure 11 - PM Peak Flow Differences (All)

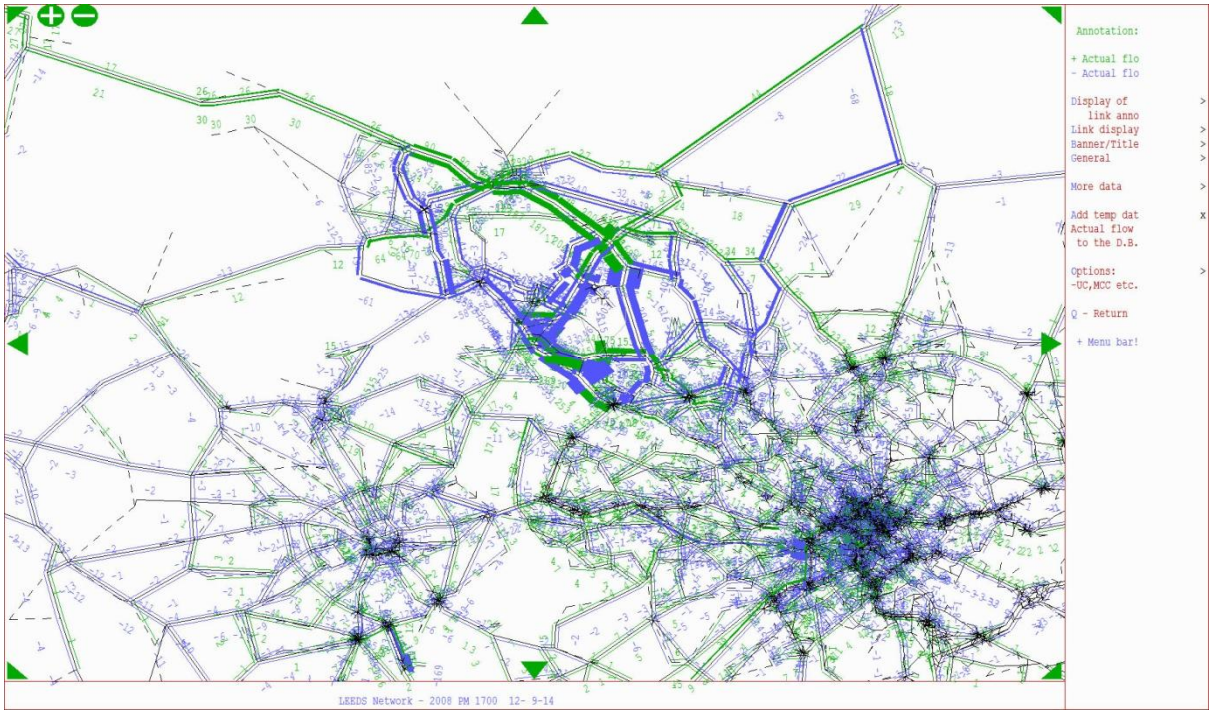



Figure 12 - PM Peak Flow Differences (Leeds Centre)

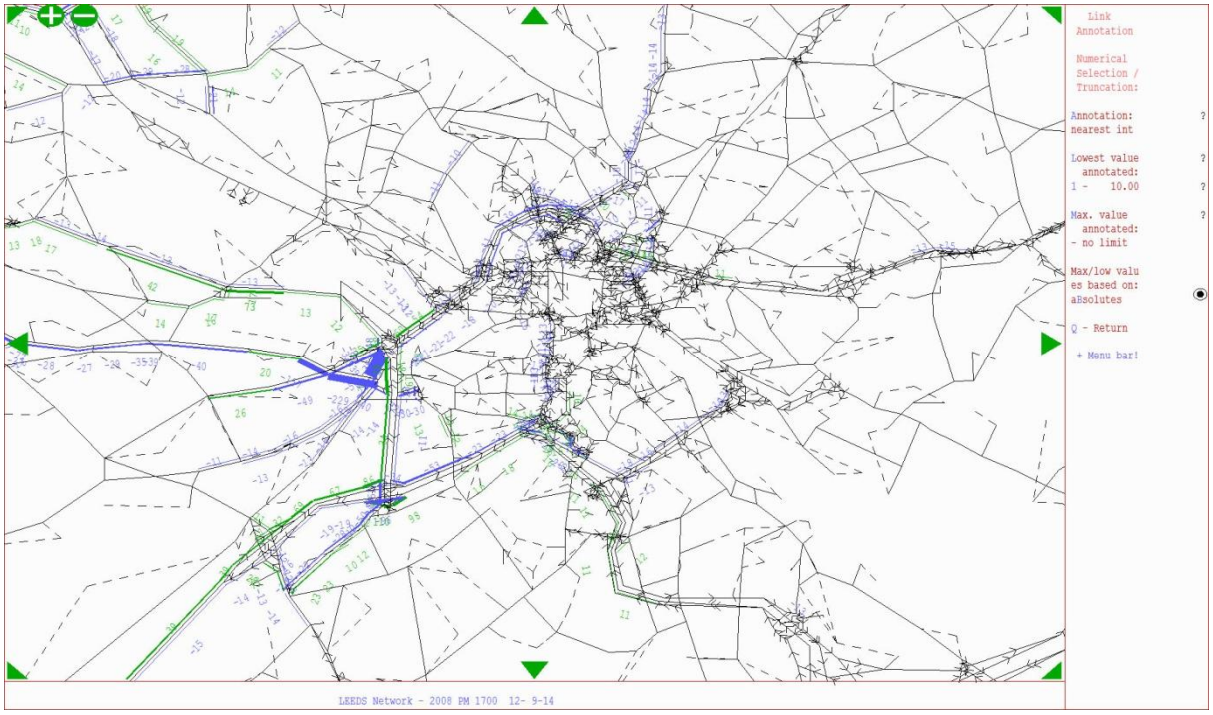


Figure 13 – PM Peak Flow Differences (Bradford)

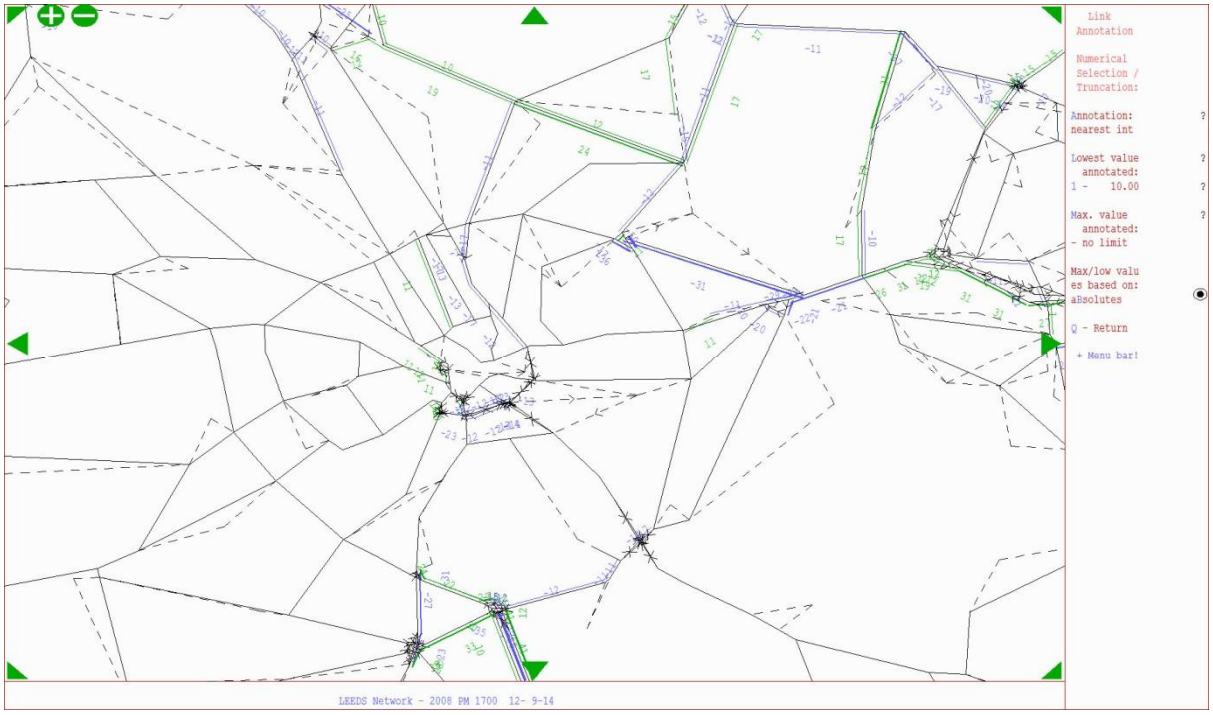



Figure 14 – PM Peak Flow Differences (Kirkless / Wakefield)

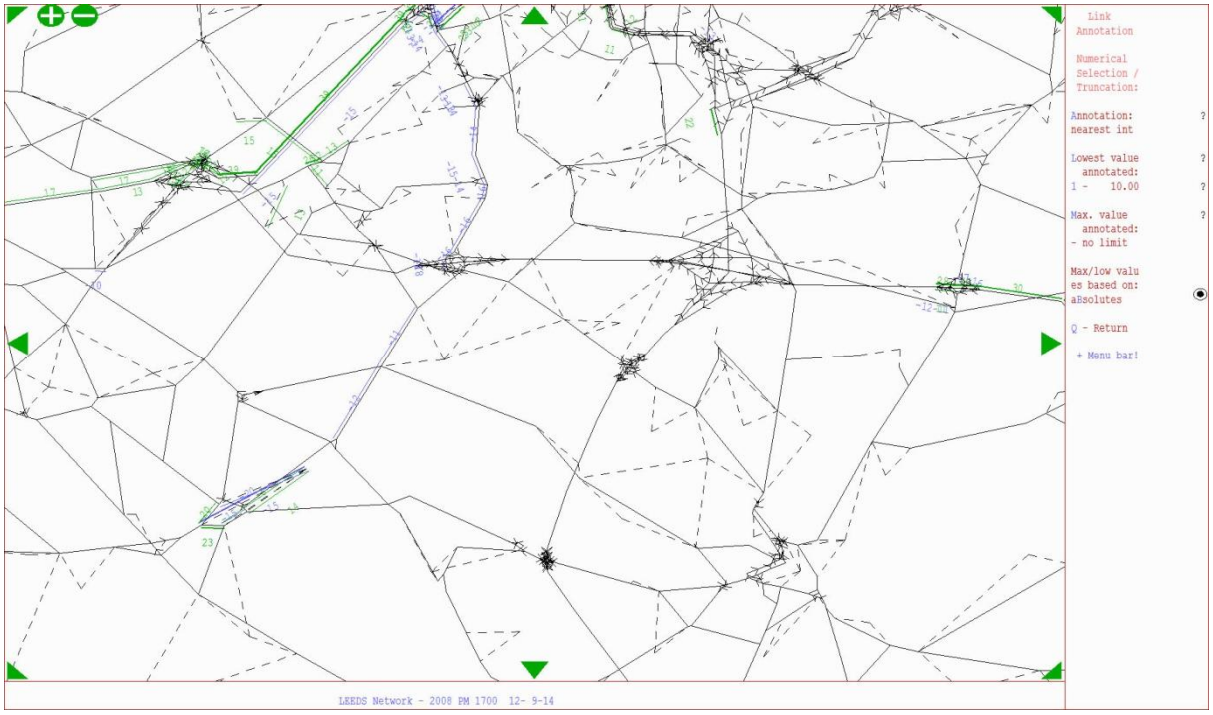
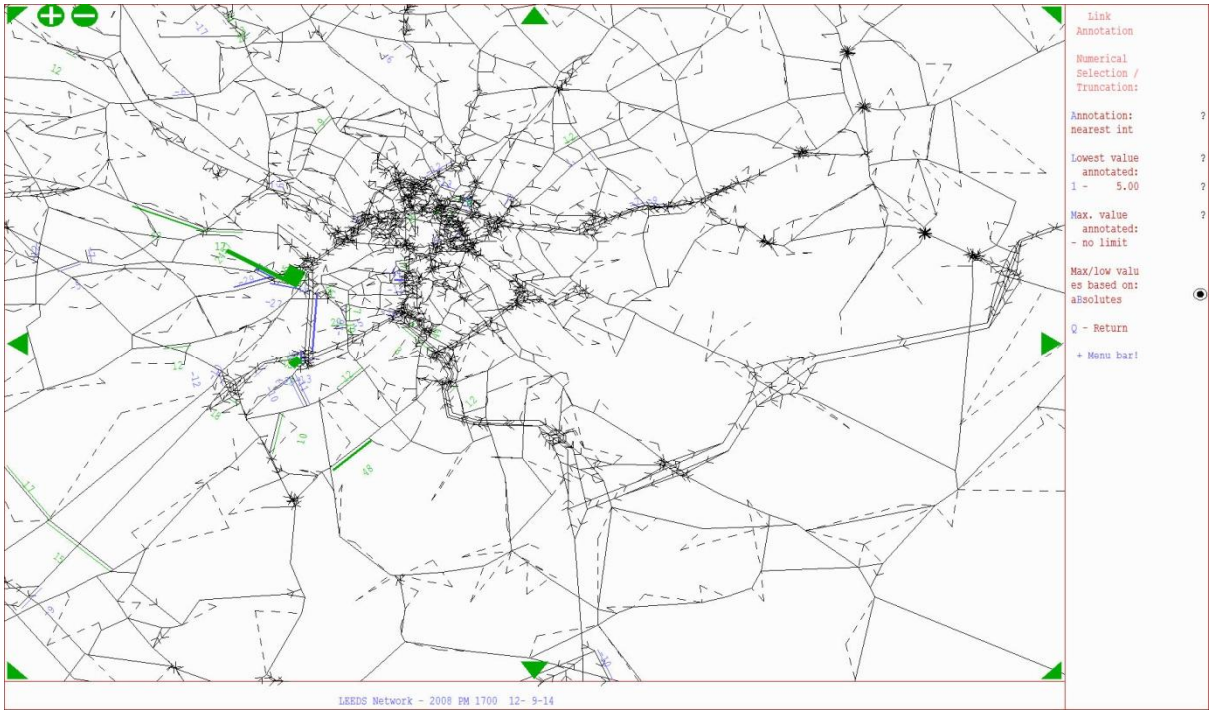
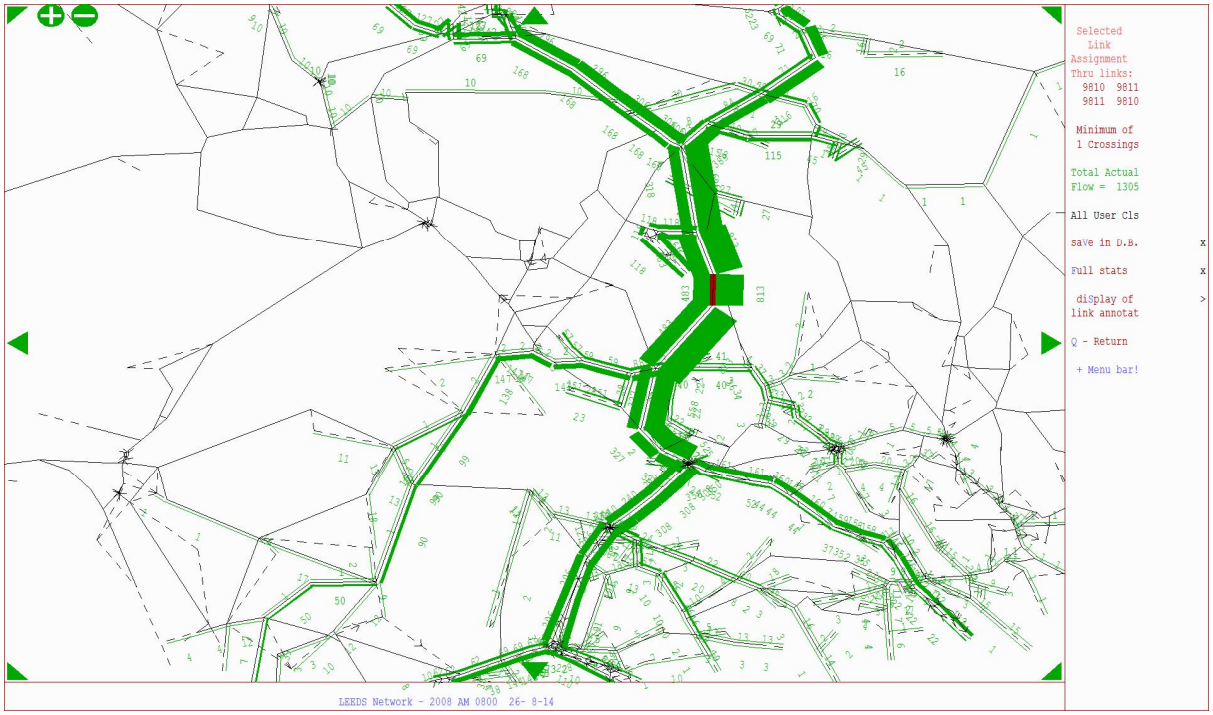


Figure 15 – PM Peak Delay Differences (All)

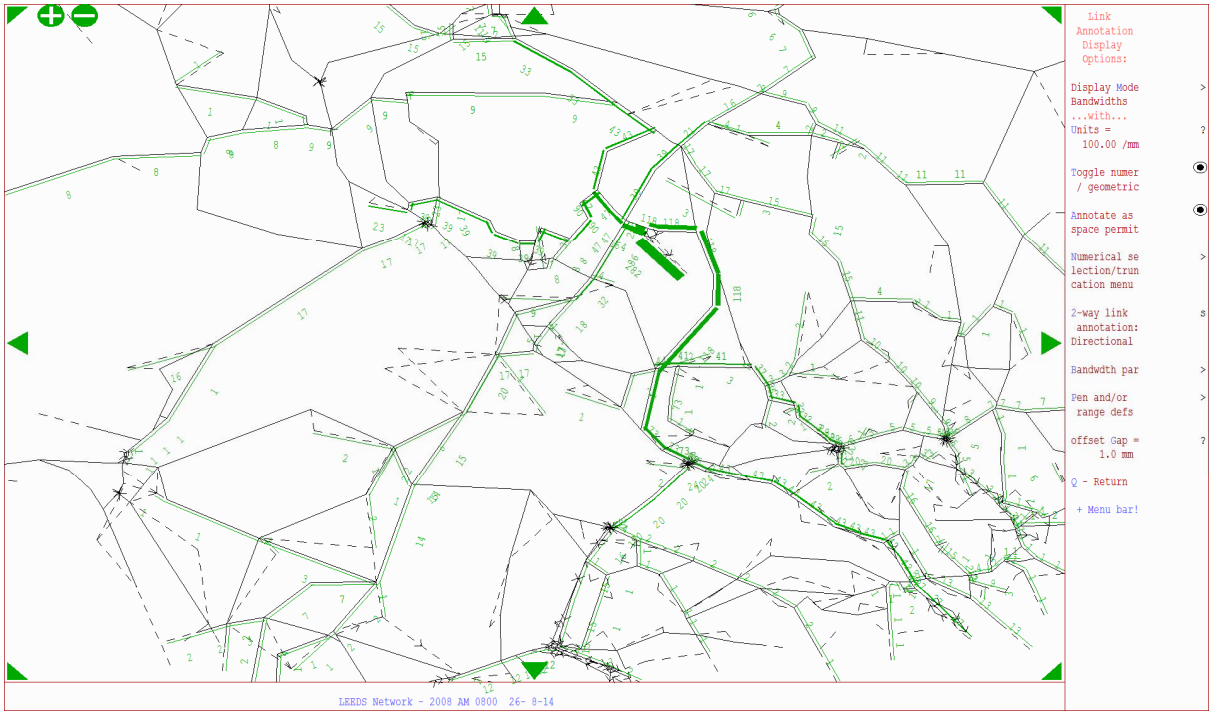


# 2021

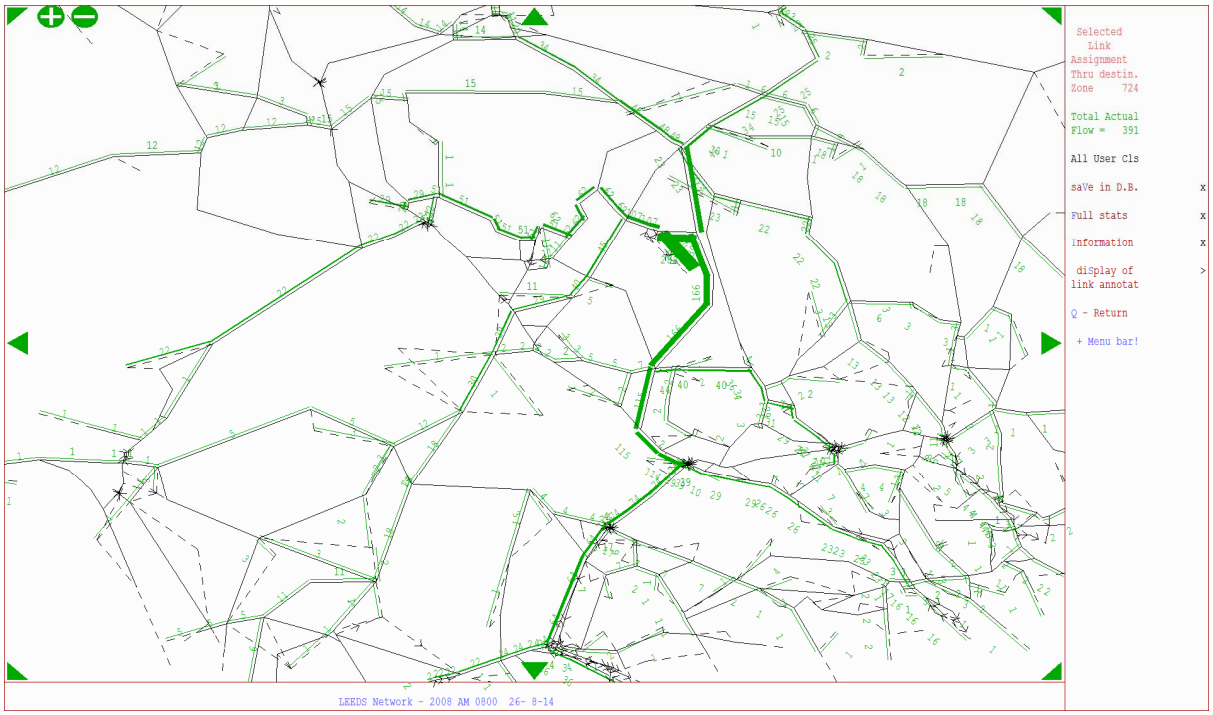
## AM – Link Road Distribution



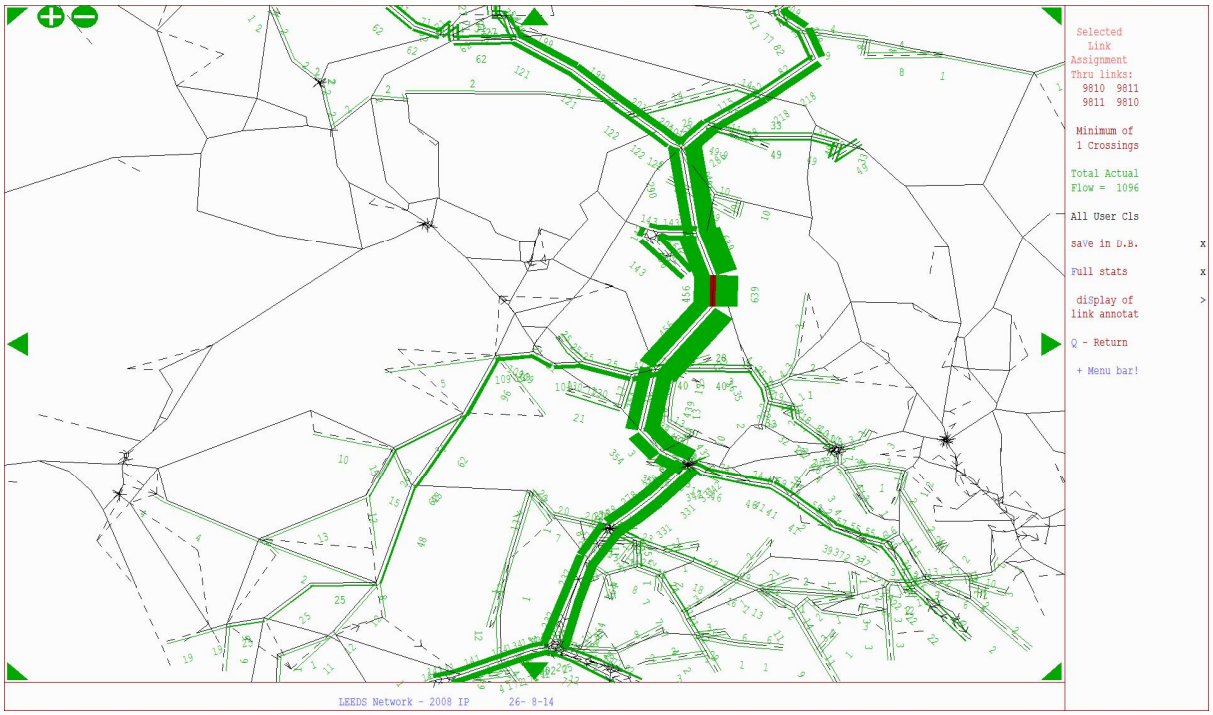

## AM – Airport Origin



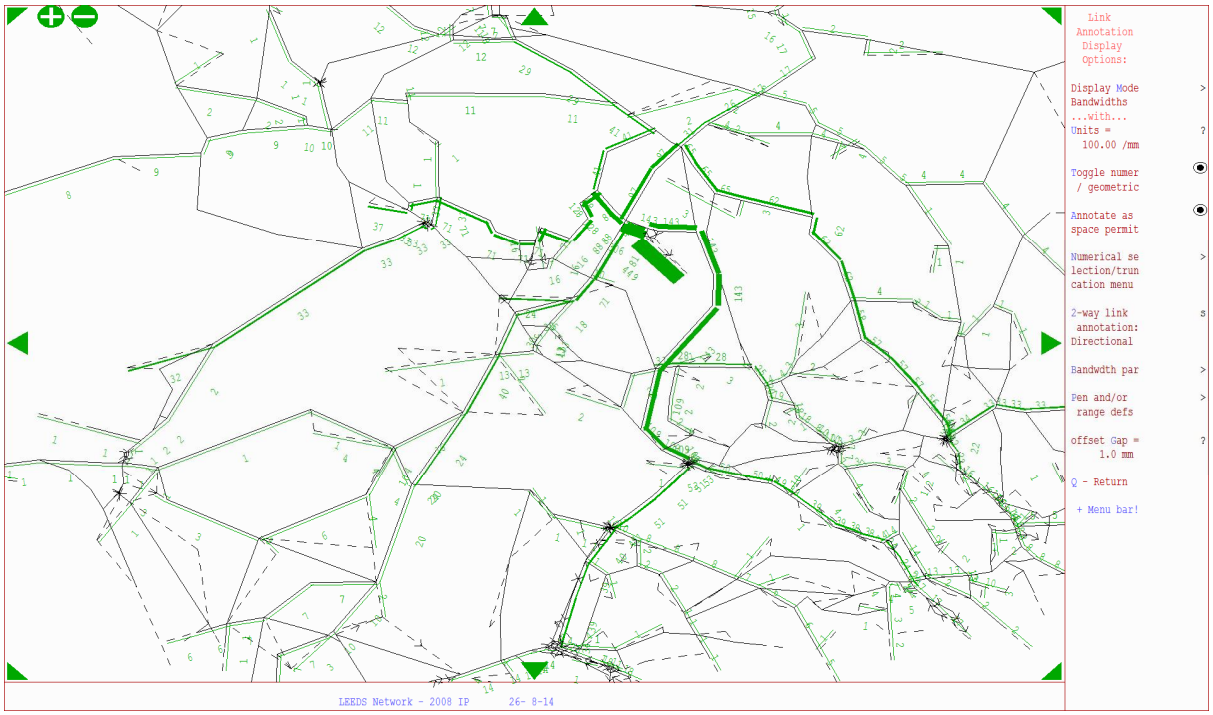
## AM – Airport Destination



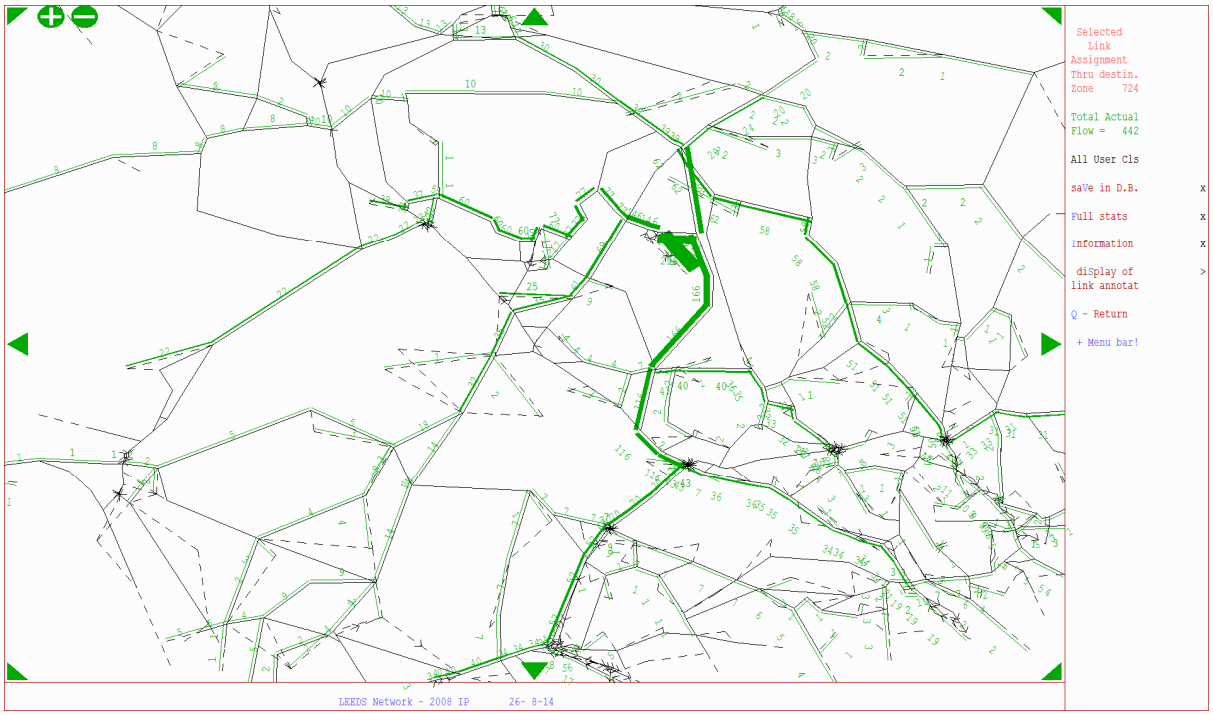

## IP – Link Road Distribution



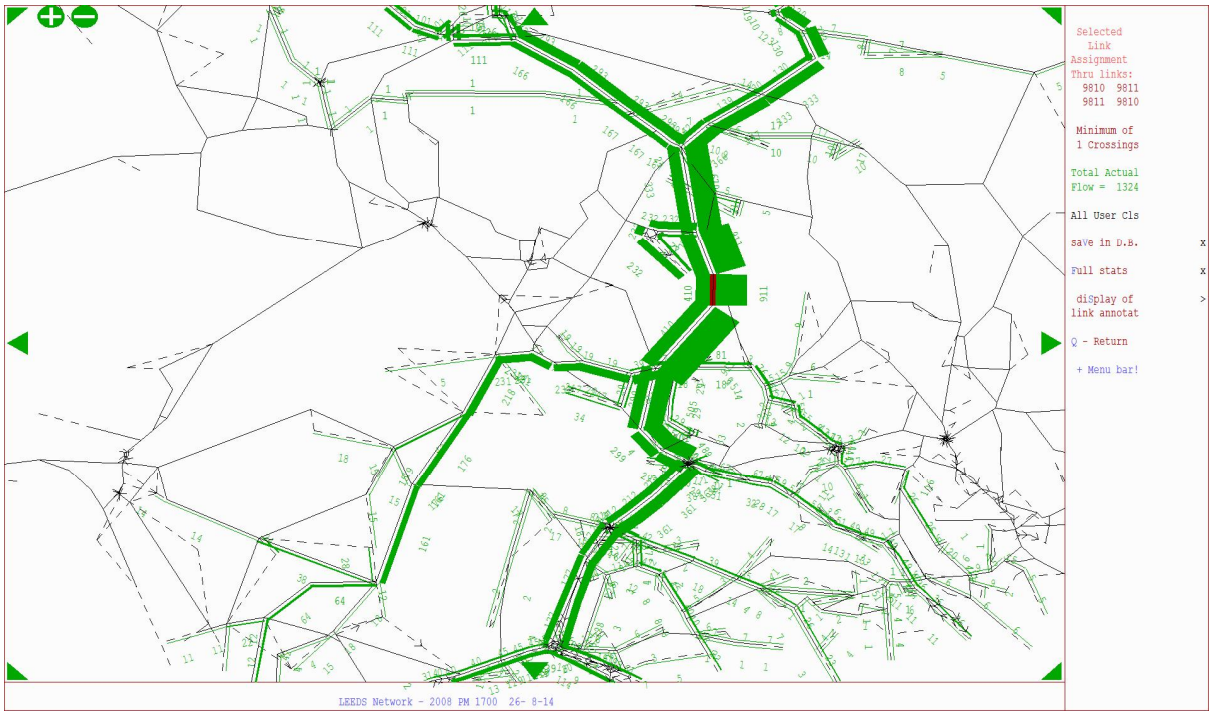
## IP – Airport Origin



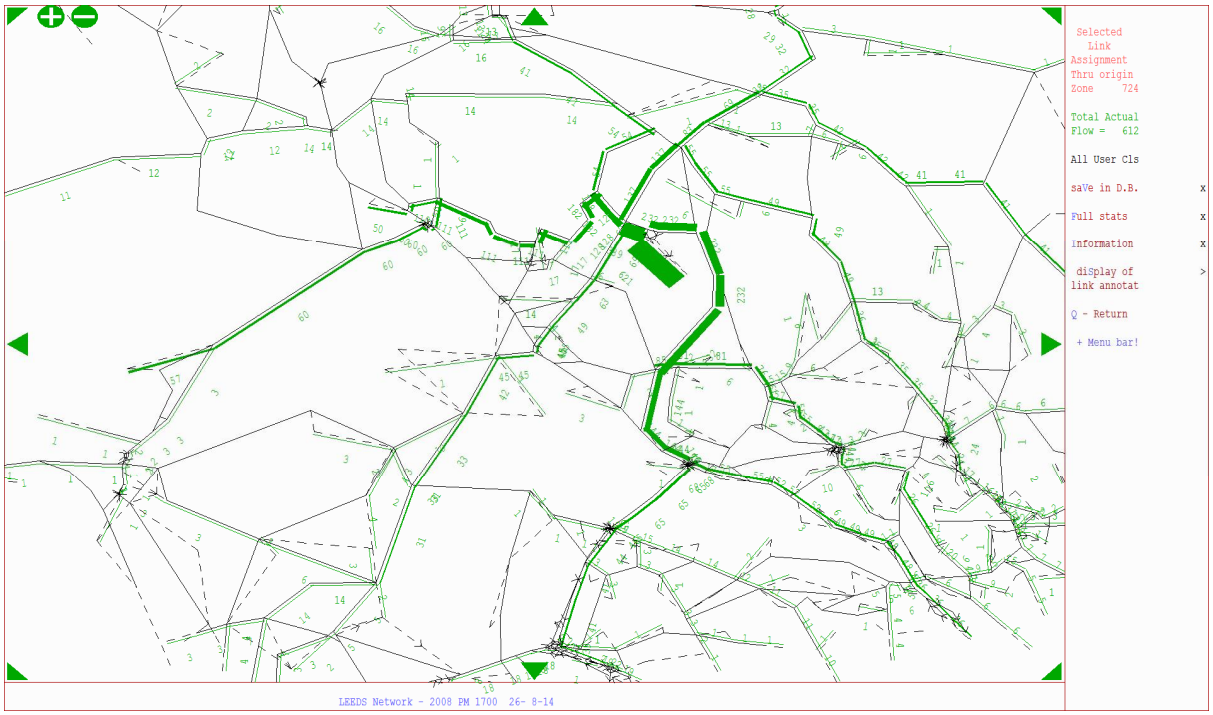

## IP – Airport Destination



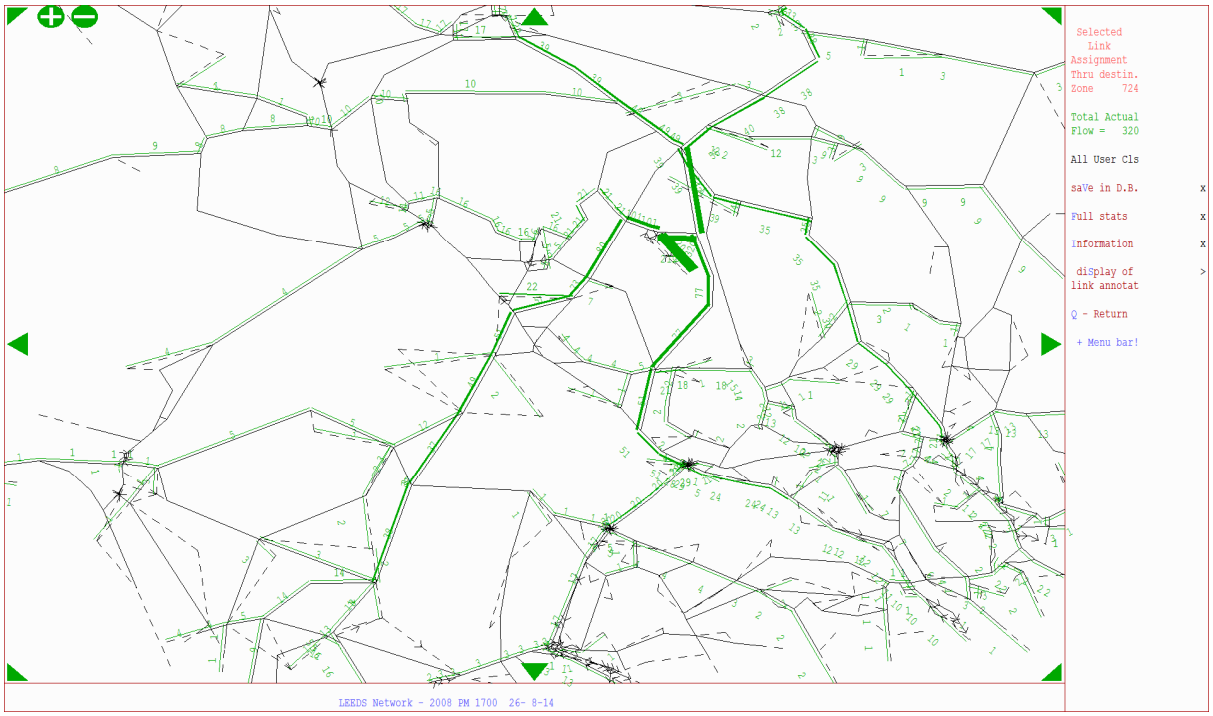
## PM – Link Road Distribution




## PM – Airport Origin

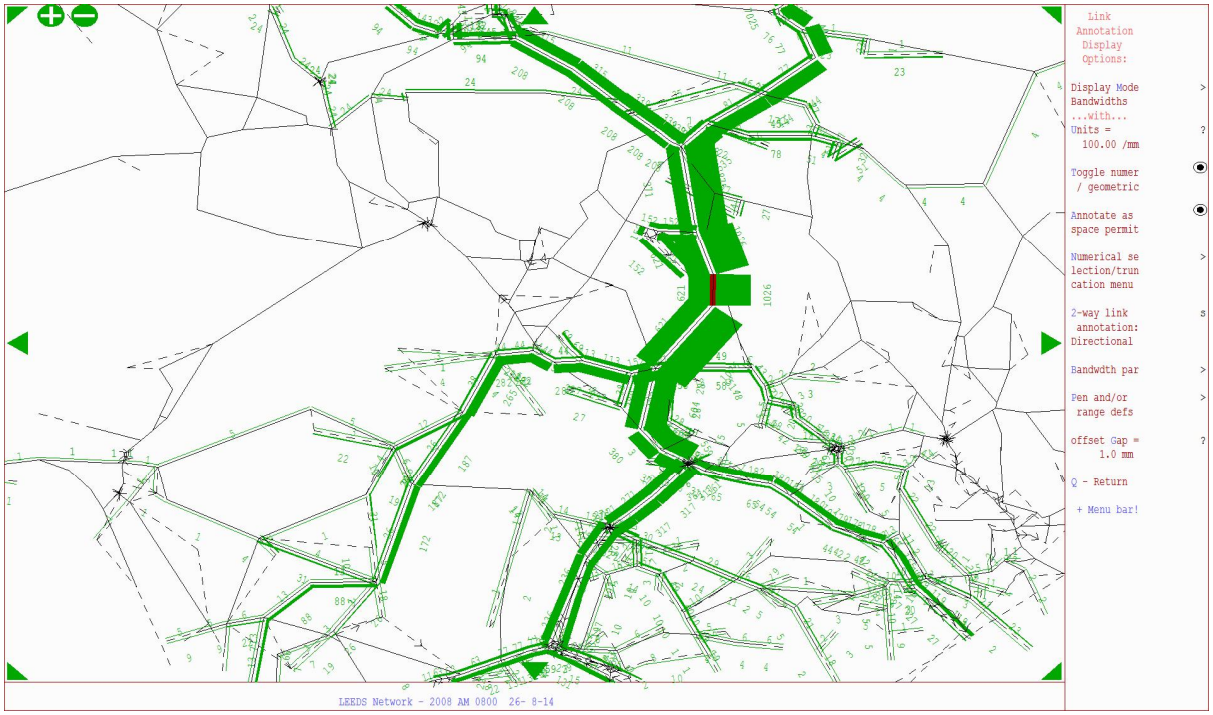


# PM – Airport Destination

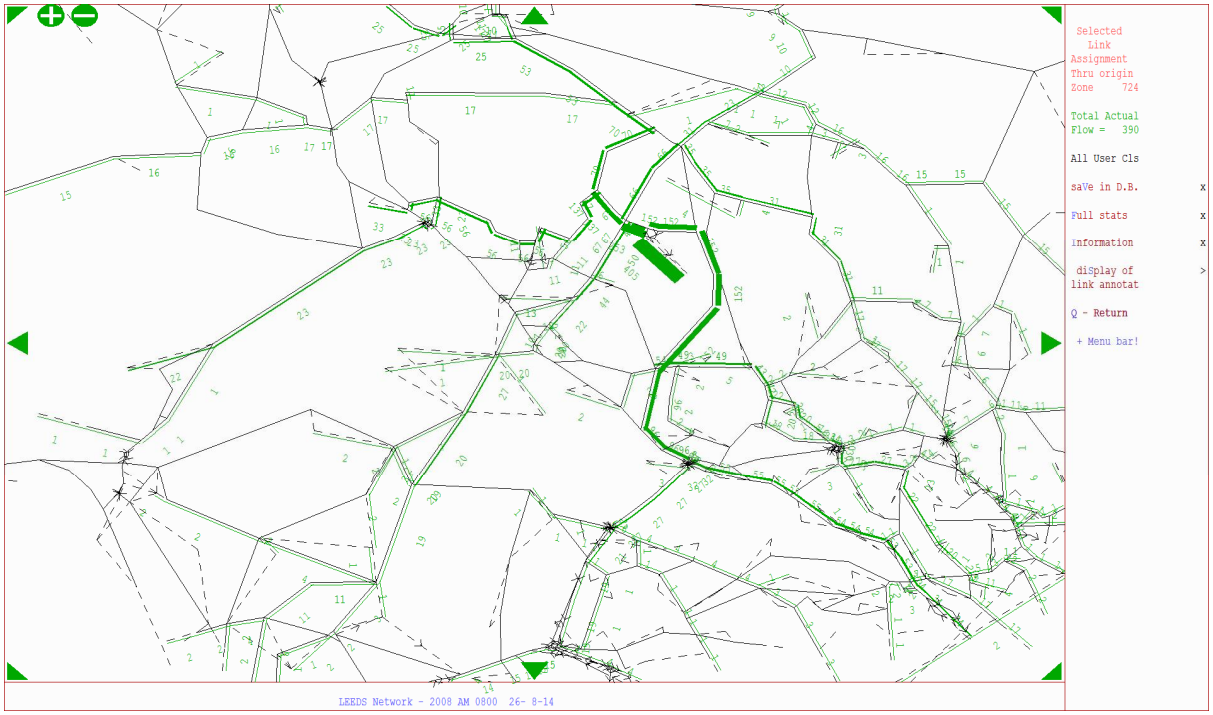


# 2031

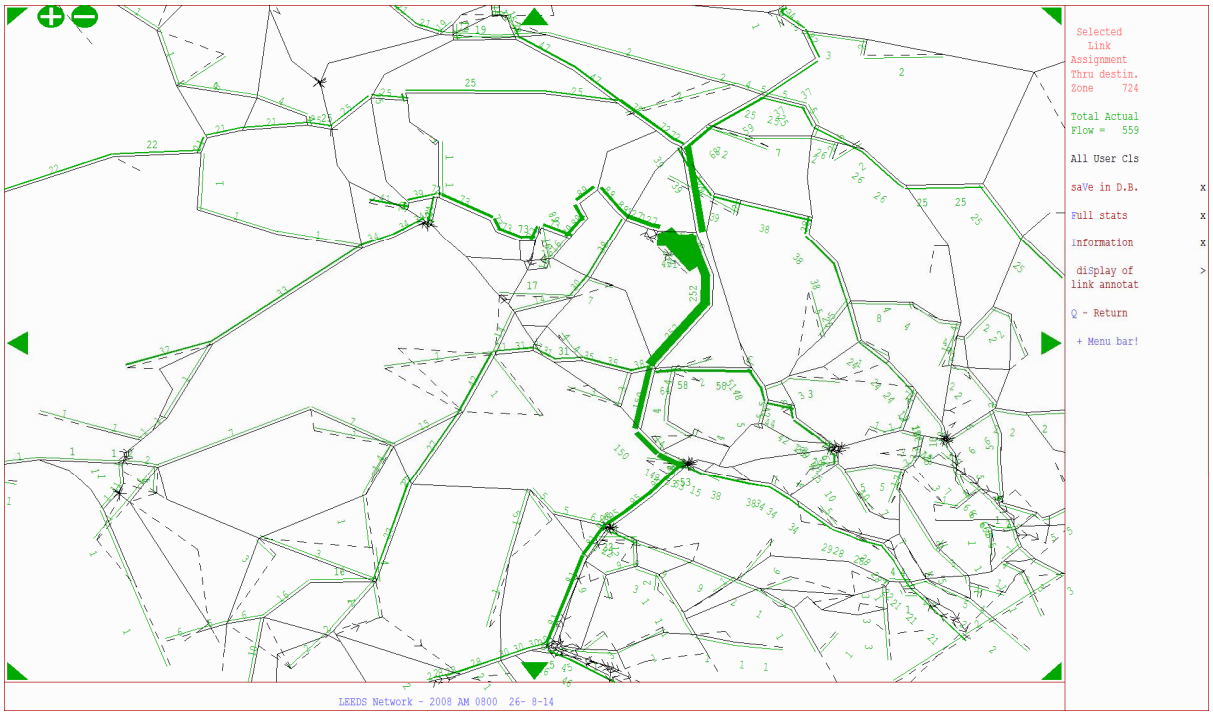
## AM – Link Road Distribution



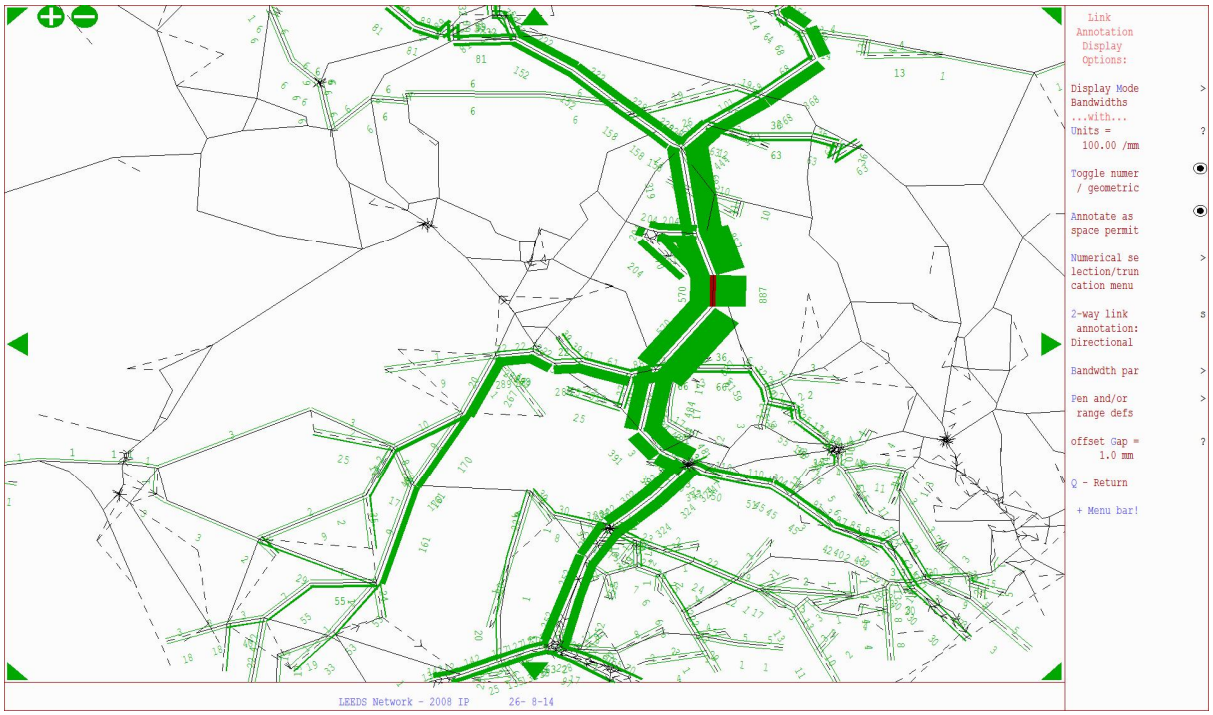

## AM – Airport Origin



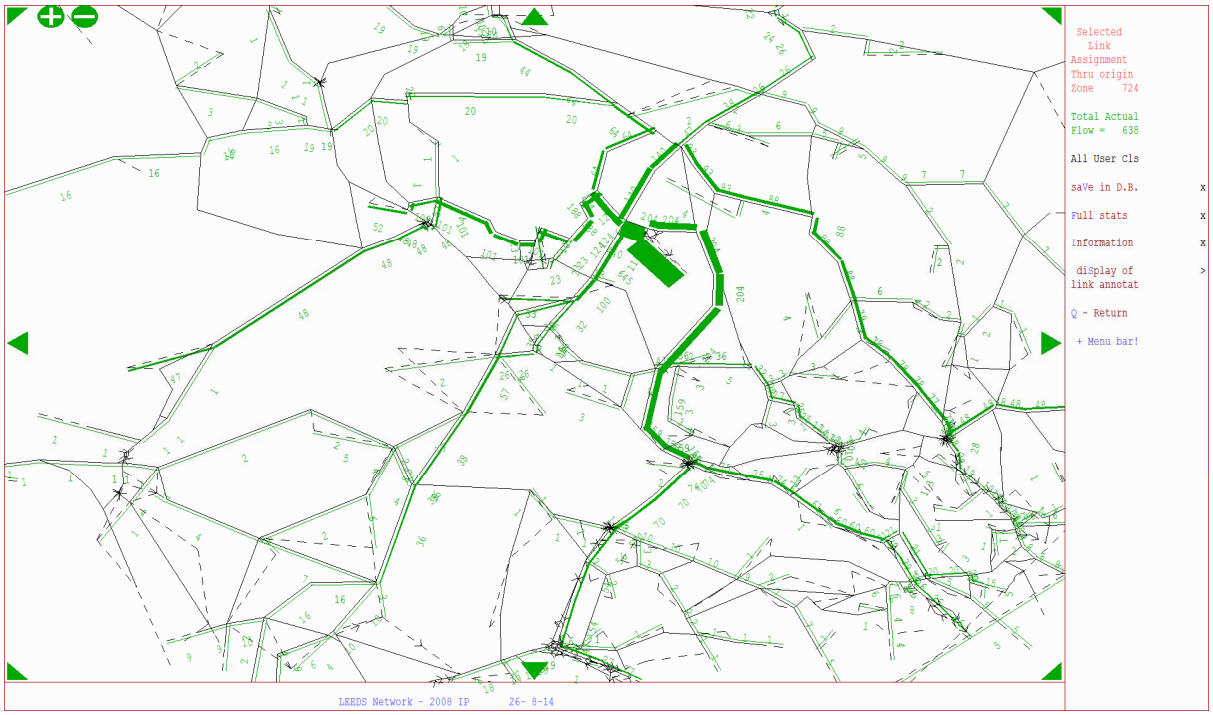
## AM – Airport Destination



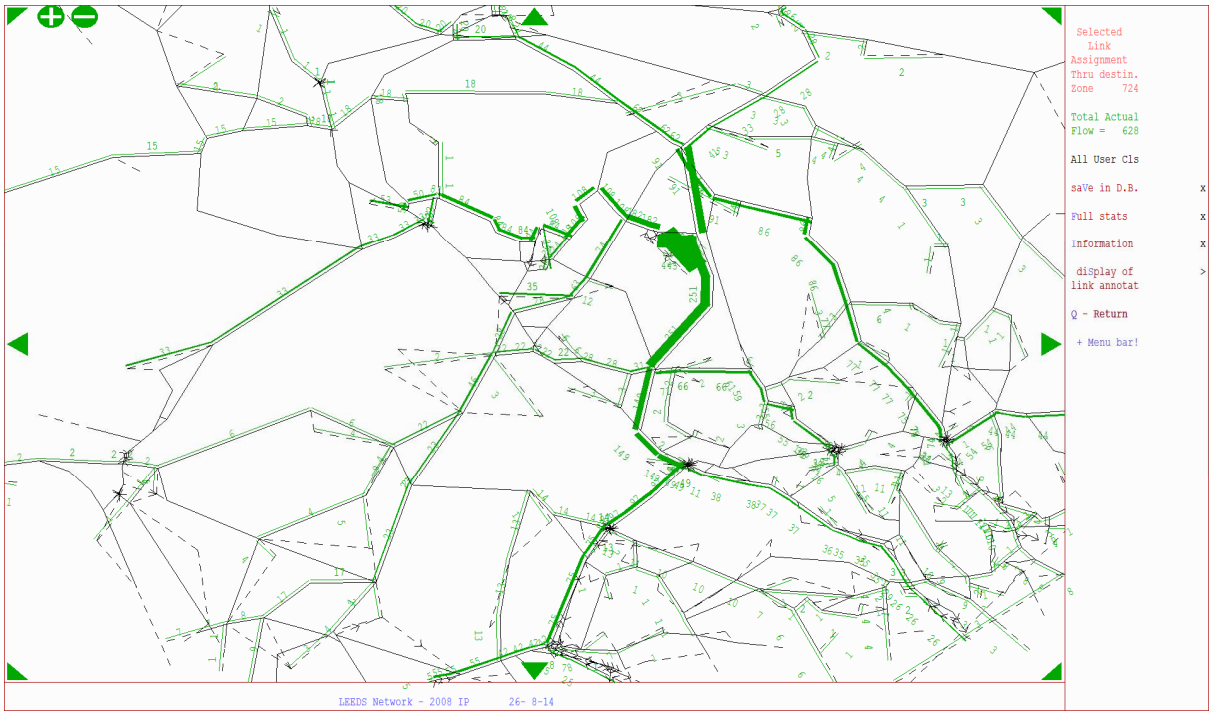

## IP – Link Road Distribution



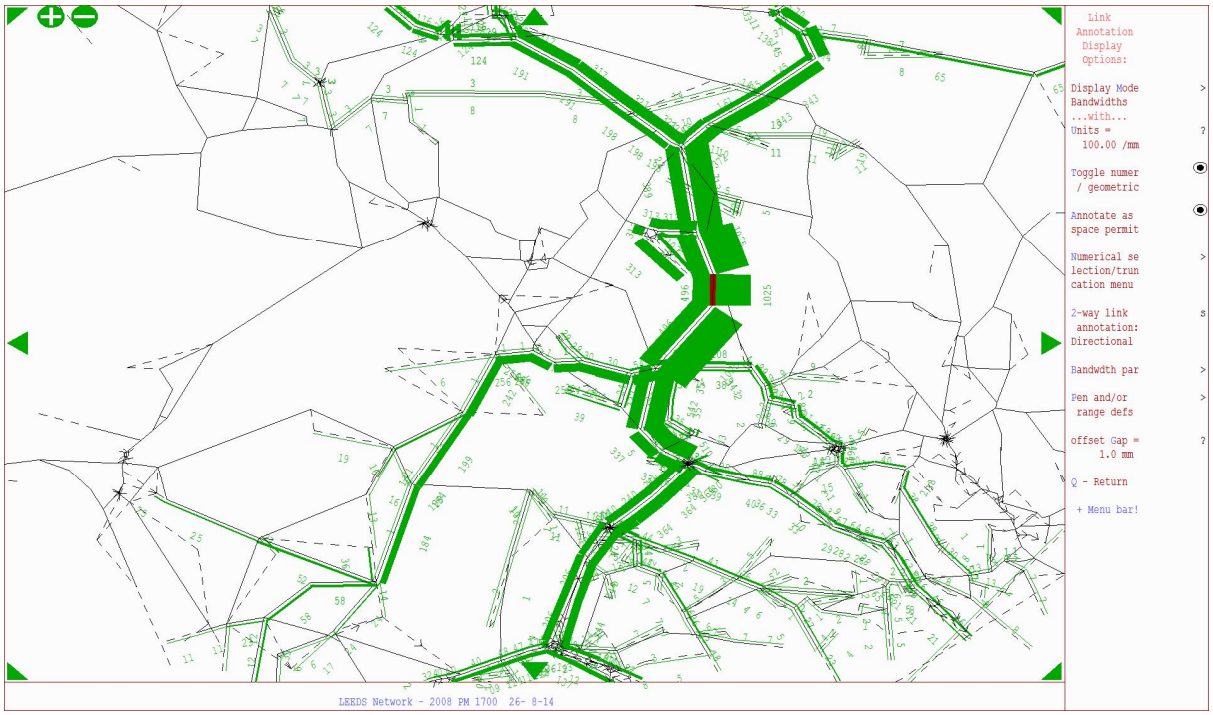
## IP – Airport Origin



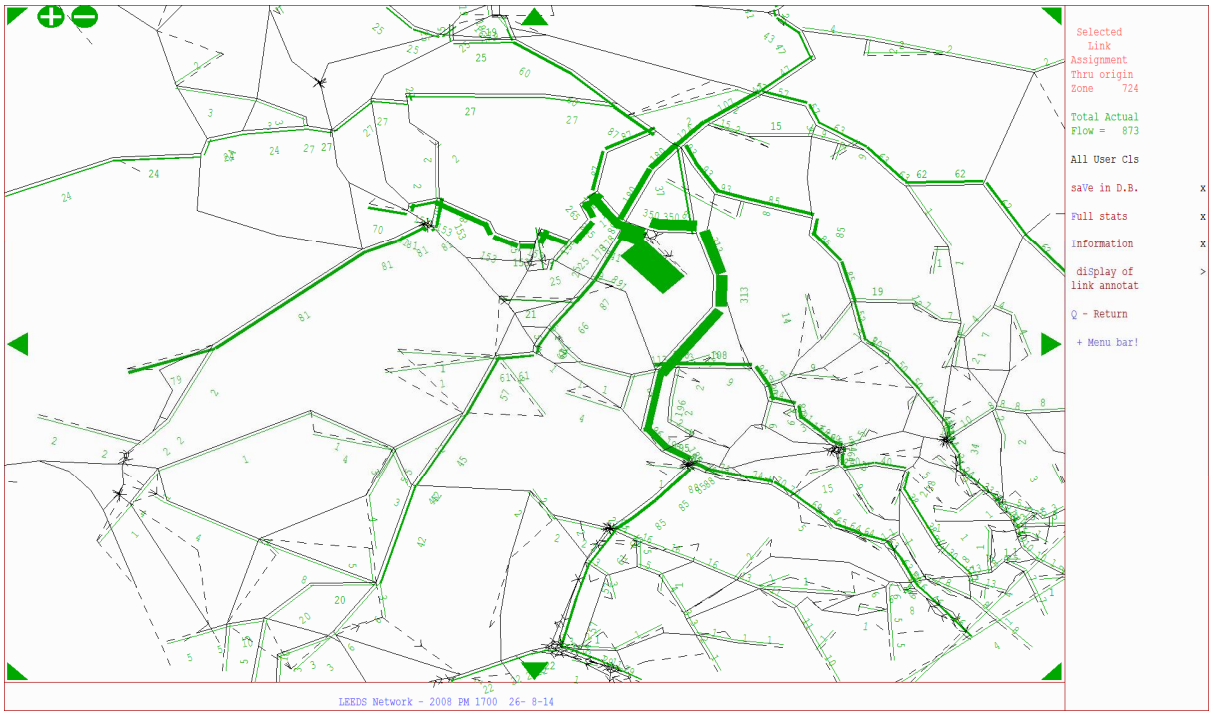

## IP – Airport Destination



## PM – Link Road Distribution




## PM – Airport Origin



# PM – Airport Destination