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## REFERENCE GROUP SUMMARY

### The Stockholm Trial – January

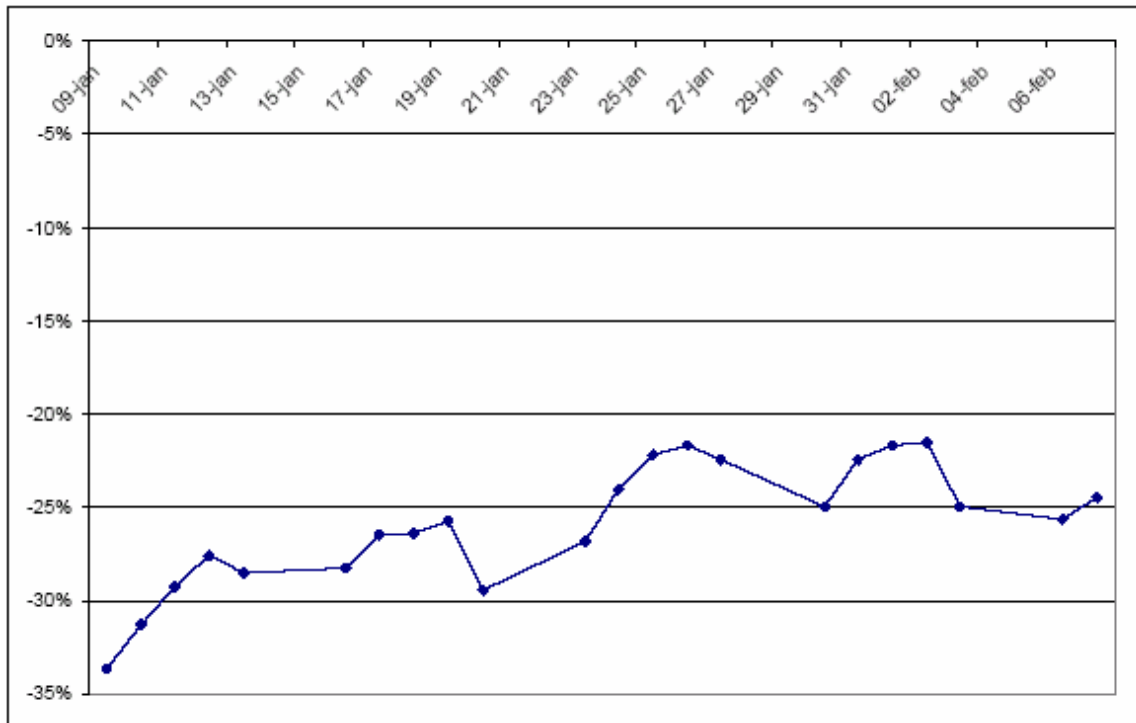
During the Stockholm trial, so-called ‘monthly indicators’ will be presented, covering measurements of, amongst others, traffic volumes, journey times, public transport, trade and walking and cycling flows. The undersigned have been asked by Stockholm City Council to analyse and summarise these measurements. The aim is to give an overview of what effects the Stockholm trial is having on traffic, accessibility, public transport use, etc. This picture is of necessity preliminary – partly because the trial hasn’t been going very long, and partly because time does not allow for more a comprehensive analysis of the data. The intention is more to give a first overview of the effects, in advance of the completion of the significantly deeper and more comprehensive evaluation which will go on throughout spring.

### Car traffic and travel times

- **Traffic to and from the inner city has reduced significantly**
  - Compared to an average autumn weekday in 2005, the number of passages over the charging cordon has fallen by around 25%. (Traffic over the charging cordon in January 2005 was only a couple of percentage points lower than an average autumn weekday day in 2005)
  - The reduction was largest in the first two weeks (9 Jan – 20 Jan), when the reduction compared to the average autumn weekday was 25-35%. Since then (23 Jan - 7 Feb) the traffic reduction has varied between 20-25% (see figure 1). The reduction is equivalent to some 100,000 fewer vehicle passages (n.b. it is still not possible to confidently translate this reduction to outward and return journeys).
  - The reduction appears to be the same from every direction – with the exception of Lidingö where traffic has reduced by just 8-10%. There is no real difference between, for example, northern and southern suburbs.
  - The percentage reduction is almost the same across the whole charging period – somewhat smaller in the morning peak, somewhat larger in the evening peak.
  - Traffic has reduced considerably even in the evening, after the charging period – presumably because there are fewer car trips during the charging period.

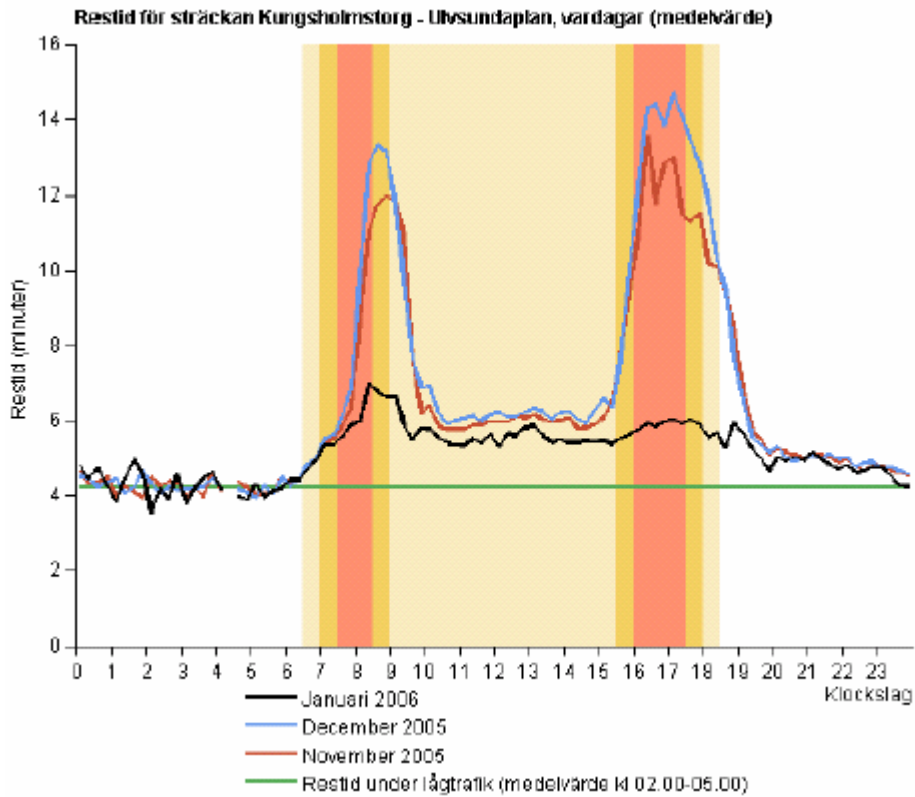
- Traffic has increased somewhat before the charging period, but relatively insignificantly (maybe a couple of 1000 vehicles).

**Figure 1: Traffic crossing the charging cordon (weekdays 06:00-19:00) – reduction compared to the average autumn weekday 2005**



- **Queues have reduced over a wide area, in many cases far from the inner city**
  - Accessibility improvements are naturally largest in and around the inner city. On many larger radials and through routes (for example Tranebergsbron, Liljeholmsbron, Stadsgårdsleden) the queues have been all but eliminated – that is to say journey times during peak hours are more or less the same as during the day (see the example in figure 2). Queuing problems remain on, for example, Lidingöbron in the morning (note that a large proportion of traffic from Lidingö is bound for other parts of the county and so will be charge free).
  - The clear reduction in traffic bound for the inner city has had implications even at a relatively long distance: queues have reduced markedly (on the ‘outer’ inbound radials, like Drottningholmsvägen, Huddingevägen etc.).
  - Fears that orbital routes would see increased congestion have not been realised: journey times on these routes are unchanged.

**Figure 2: Journey time Kungsholms Torg – Ulvsundaplan [a key radial crossing the charge cordon] over an average weekday in November 05, December 05 and January 06.**



X-axis: Time (midnight-midnight); y-axis: journey time (minutes)  
Green: Journey time off-peak (average 02:00-05:00)

- **Traffic on Essingeleden is largely unchanged**

- Traffic on Essingeleden [the uncharged through route] during peak hours has in fact been a couple of percent lower than in January 2005, but within normal variations. Traffic can thus be said to be unchanged. There is no discernable difference between north- and southbound traffic.
- Compared to September 2005, traffic has been 3-7% lower, but this difference is to be expected – January traffic is always lower than September traffic.
- Traffic on Södra Länken [the southern by-pass route] was higher than in January 2005 (ca 15-20% depending on monitoring site). It should be borne in mind that traffic on Södra Länken has increased steadily since it opened in October 2004. The increase January 2005 – September 2005 was, for example, 17% (averaged over all the monitoring sites).

- For example, traffic over Gröndalsbron [part of Essingeleden] was 140,000 vehicles per day (24h) in January 2005 and January 2006. Traffic at Fredhällstunneln [also part of Essingeleden] was 145 000 vehicles per day January 2005 and 144,000 January 2006. Comparisons with October – December 2005 are not meaningful because of the Lodbrok accident [a barge collided with the bridge causing extended lane closures].
  
- **Will the effects of congestion charging reduce over time?**
  - It is not yet possible to draw any conclusions regarding the charge's long-term effects on traffic. It is to be anticipated that it will take a certain amount of time before the traffic system becomes stable.
  - How long this will take is difficult to determine. Two examples of a fast and a slow stabilisation: when congestion charging was implemented in London, stability was achieved quickly – already after a week the effects were stable. When Södra Länken opened a traffic increase began which is in some ways still on-going.
  - Traffic in May and early June is usually ca. 10% above the annual average. This should be borne in mind and we should be wary of being deceived by comparisons between January, March and May 2006 which may appear to show a decrease in the impact of congestion charging, but in fact could be a seasonal trend.
  - It is anticipated then that there will be a slow increase of traffic during spring up to a maximum in May and early June. This means that even if the percentage reduction compared to the same month last year remains the same as so far experienced, the absolute traffic levels will increase and it is likely that some queuing will return.
  
- **We can only draw conclusions on weekday traffic**
  - There is no reason to believe that congestion charging (which only applies on weekdays) should have any tangible effect on weekend traffic, but we are unable to check this assumption before spring.
  - This is because we have no access to traffic counts for weekends in January 2005. It would be unsuitable to compare weekend traffic in January with autumn 2005 as there is reason to believe that the New Year and Epiphany holidays have completely different travel patterns than ordinary weekends.

## **Public transport**

- **Public transport use has increased markedly**
  - The number of public transport trips over the charging cordon has increased by 65,000 per day compared to January 2005, an increase of 8%.

- Buses and commuter trains have seen the biggest relative increases (11% and 16% respectively compared to January 2005).
- This increase is not just as a result of congestion charging, but also of background factors like fuel price changes and general economic trends. Public transport use has increased since last year in general; for example the number of journeys over the charging cordon increased by 15-20,000 (about 2%) between autumn 2004 and autumn 2005. Ridership in January 2005 was also unusually low, according to information from SL [the public transport operator]. For a more precise appraisal of the impacts of congestion charging one must take into account factors like the weather and how public holidays fall, something which has not been possible. It is therefore risky to say exactly what impacts congestion charging has had, but it seems clear that it has played a major role.
- The availability of seats – an indicator of crowding on buses and trains – appears unchanged. Crowding on buses and trains does not appear to be measurably worse, at least not as an average across the whole county's public transport. Since there has been an increase in the number of passengers, this must be explained by the increased capacity. Crowding can of course have become worse on certain lines at certain times without showing up in the rather coarse measures.

### **Commentary on the traffic and public transport data**

A comparison between traffic and public transport figures shows that some former car drivers and passengers have changed their behaviour in a way other than switching to public transport. This is probably a combination of:

- increased car-sharing
- a change of route (other than the Essingeleden corridor)
- changes to travel patterns (e.g. working from home)

Springs travel behaviour surveys will give clearer answers on the travel changes among Stockholm county residents.

### **Park & ride**

- The number of vehicles using park and ride sites has not changed significantly.
- The availability of park and ride has increased markedly. This should have increased the number of people parking and riding, but it is not possible to separate this increase from the normal variation.

### **Opinions and attitudes**

- Since congestion charging was implemented, the number of Stockholmers who think that congestion is a problem has fallen significantly, from 80-90% in autumn to 60-70% in January. The number who thinks there is a 'big' problem

with congestion has reduced even more, from ca 50% in autumn to ca 25% in January.

## **Trade**

- Figures on trade in January will be ready next month. It is therefore not possible to say anything quantitative.