# Developing a new transport model for the city

Presentation to Cabinet

7 April 2011

Mark Prior, Lead Commissioner, City Regulation and Infrastructure



#### Why do we need a transport model?

- Illustrates current traffic flows and travel patterns
- Forecasts future year flows and patterns
- Evaluates impacts of changes proposed schemes or developments
- Supports justification of investment
- Better informed decisions



## What does the model consist of?

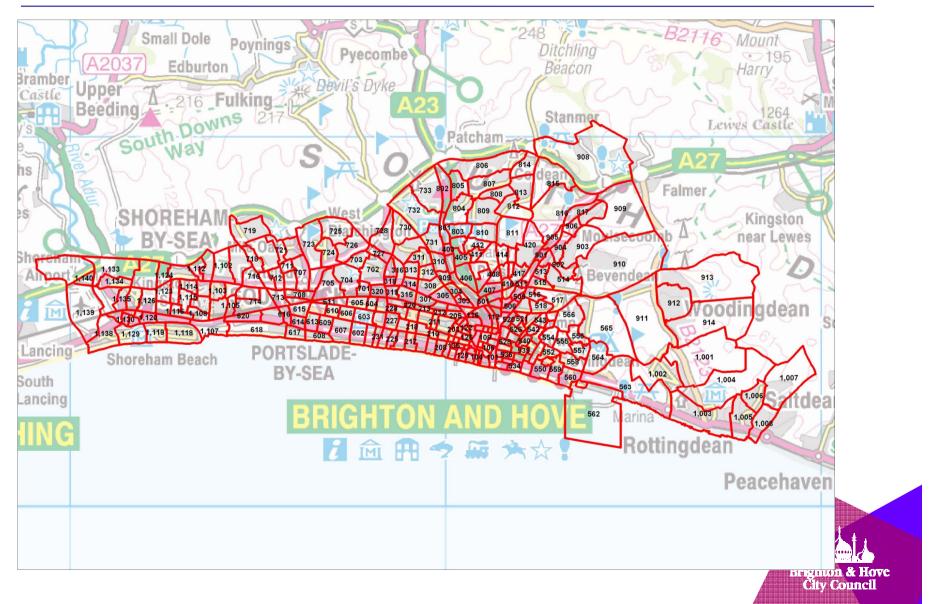
Road network

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- Public transport network
- Zones of activity (attractors and generators of movement)
- Movement between zones
- Different time periods
- Model has been built to latest DfT standards



#### **Citywide Model zones**



#### **Progress**

- Data collection
- Citywide Model
- Visual Model



#### **Data collection**

- Existing Data
  - Traffic counts
  - Pedestrian & Cycle counts
  - Rail, bus and taxi data



#### **Data collection**

New Data

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- Household interview Surveys
- Roadside interviews
- Car Park surveys
- Junction counts
- Automatic traffic counts
- Public transport surveys



#### Keeping the Model up to date

- Minimal updates required for first year
- Individual updates when changes made to road network or public transport services
- Full update required every 6 years to fulfill government requirements (estimated cost £100k)
- Model investment to secure other benefits

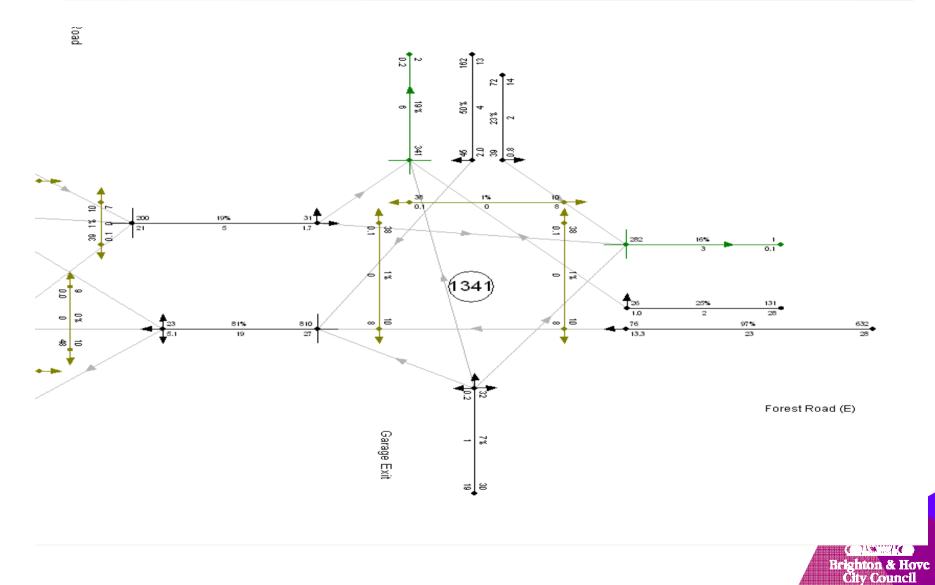


#### **Citywide Model output**

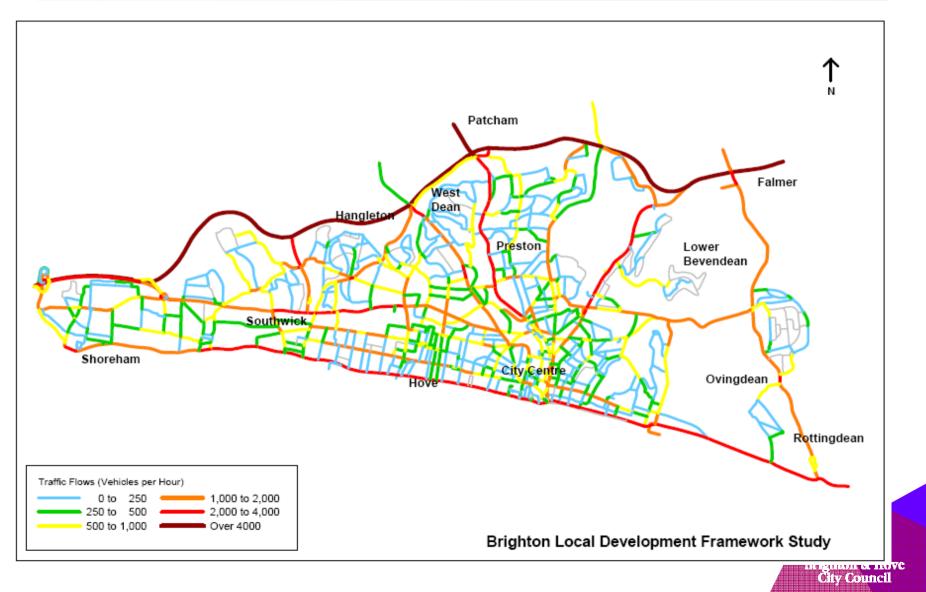
|                 |                  |              | `AM                    |              | `Off                   |              | `PM                    |              | `Sa<br>t               |
|-----------------|------------------|--------------|------------------------|--------------|------------------------|--------------|------------------------|--------------|------------------------|
| Road            | Movement         | Mod.<br>DoS% | Mod.<br>Queue<br>(PCU) | Mod.<br>DoS% | Mod.<br>Queue<br>(PCU) | Mod.<br>DoS% | Mod.<br>Queue<br>(PCU) | Mod.<br>DoS% | Mod.<br>Queue<br>(PCU) |
| Forest Rd WB    | Ahead/Right      | 87%          | 33                     | 61%          | 15                     | 61%          | 16                     | 81%          | 19                     |
| Forest Rd WB    | Ahead/Left       | 87%          | 33                     | 61%          | 15                     | 61%          | 16                     | 81%          | 19                     |
| Forest Rd EB    | Ahead            | 57%          | 18                     | 75%          | 20                     | 86%          | 20                     | 80%          | 21                     |
| Forest Rd EB    | Ahead/Left       | 57%          | 18                     | 75%          | 20                     | 86%          | 20                     | 80%          | 21                     |
| Fulbourne Rd SB | Ahead/left/Right | 73%          | 15                     | 47%          | 9                      | 54%          | 11                     | 21%          | 4                      |
| Wood St NB      | Ahead/left/Right | 96%          | 18                     | 78%          | 11                     | 90%          | 16                     | 80%          | 11                     |
|                 |                  |              |                        |              |                        |              |                        |              |                        |
| Forest Rd WB    | Ahead            | 79%          | 29                     | 62%          | 17                     | 63%          | 15                     | 72%          | 16                     |
| Forest Rd WB    | Ahead/Left       | 79%          | 29                     | 62%          | 17                     | 63%          | 15                     | 72%          | 16                     |
| Forest Rd EB    | Right            | 48%          | 6                      | 30%          | 3                      | 51%          | 6                      | 39%          | 4                      |
| Forest Rd EB    | Ahead            | 31%          | 11                     | 43%          | 14                     | 49%          | 17                     | 41%          | 13                     |
| Forest Rd EB    | Ahead            | 31%          | 11                     | 43%          | 14                     | 49%          | 17                     | 41%          | 13                     |
| Shernhall St NB | Right            | 76%          | 8                      | 53%          | 5                      | 72%          | 11                     | 63%          | 121                    |

Brighton & Hove City Council

#### **Citywide Model output**



#### **Citywide Model output**



#### **Brighton & Hove Visual Model Area**





#### **Visual Model – City Centre**





#### Visual Model – Aquarium Roundabout



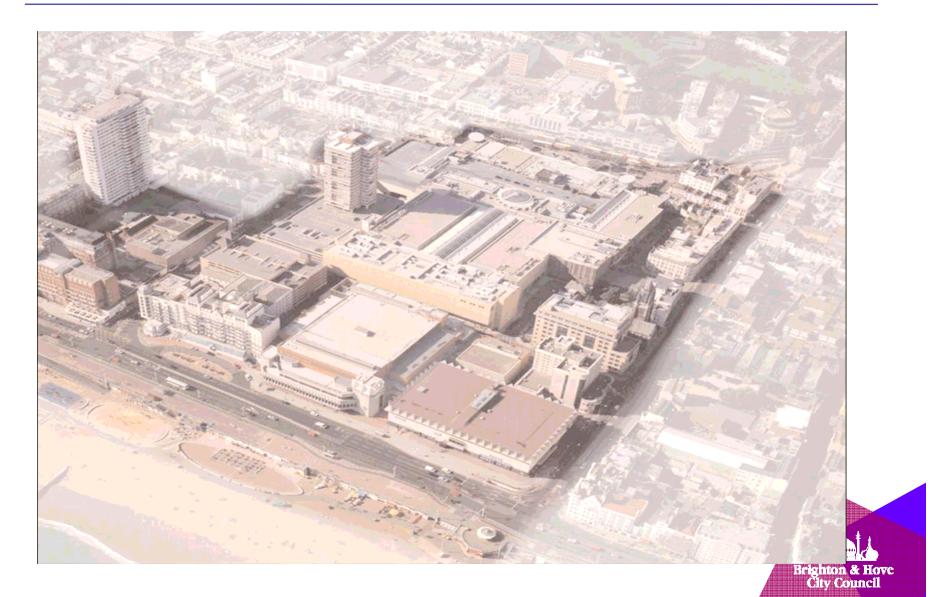


#### How will we use the model?

- Assess citywide effects
  - Spatial / land use strategies
  - Transport strategies
- Assess localised effects
  - Proposed developments
  - Transport Schemes



## **Brighton Centre**



#### **Sackville Trading Estate**



Brighton & Hove City Council

#### **Brighton Station Gateway**





#### **Brighton Station Gateway - Surrey Street scenario**



- Completion of 2010 'base year' model by mid-May
- Use model to assess traffic and network management implications of events, roadworks and schemes.
- Develop protocol for use of model by external organisations.



#### **Summary**

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- Technical analysis and easy to understand visuals
- Better informed decisions
- Assists planning for the short term & long term
- Will support council projects and developer proposals



# Thank you

