Transport – Air Quality and CO$_2$ Reductions

Emissions reduction in Greater Manchester

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Head of Logistics, Environment and Active Travel
PROTECTING OUR ENVIRONMENT

TRANSPORT IS RESPONSIBLE FOR A THIRD OF CARBON EMISSIONS

48% CARBON REDUCTION BY 2020

£20bn ECONOMIC COST IF WE DO NOT TACKLE CLIMATE CHANGE

13% INCREASE IN WINTER RAINFALL

AND ANNUAL MEAN TEMP RISE OF UP TO +2.3°C BY 2050

1000 DEATHS PER YEAR FROM AIR POLLUTION
Emissions in Greater Manchester

**NOx**
- Roads (75.2%)
- Rail (2.9%)
- Air (2.2%)
- Other (0.3%)
- Part As (2.5%)*

**CO₂**
- Roads (31.5%)
- Rail (1.8%)
- Air (0.8%)
- Other (0.6%)
- Part As (21.6%)*

**PM₁₀**
- Roads (81.4%)
- Rail (0.8%)
- Air (0.3%)
- Other (1.4%)
- Part As (4.6%)*
Breakdown of vehicle types on Greater Manchester roads.

79% 14% 6% 1%

- Cars
- LGV
- OGV
- Buses
Levels of key pollutants, and which vehicle types are responsible.

- LGV
  - CO₂: 15%
  - NOₓ: 15%
  - PM₁₀: 17%

- Bus
  - CO₂: 4%
  - NOₓ: 11%
  - PM₁₀: 3%

- OGV
  - CO₂: 29%
  - NOₓ: 23%
  - PM₁₀: 13%

- Car
  - CO₂: 58%
  - NOₓ: 43%
  - PM₁₀: 69%
Bus Priority Packages
Active travel

- Cycle Hubs

- Planned improvements through CCAG – cycle way expansion

- Oxford Road Corridor – Dutch Style Cycle Lanes

- Make walking more accessible
Goods Vehicles

- HGVs have a disproportionate impact on Carbon and AQ
- Potential impact of measures is high
- Improvements in the short to medium term:
  - Accelerating vehicle replacement
  - Operator engagement – forum and accreditation
  - Consolidation and DSPs
  - Encourage more mode shift to rail/water
Using intelligent transport systems data to improve information provision

- Pre-emptive knowledge of network conditions and accurate journey times
- Accurate data to enable faster and better decisions
- Integration of ITS and network control can improve reliability for all links in the logistics chain
- Interoperability of systems to maximise existing infrastructure capacity
GMEV Charging Network – Free to use
GMEV – Summary Statistics

- **324 public charging sockets** are available for use each month
  - Comprised of 160 dual headed 15kKW posts (7KWper unit) with 4 rapid chargers
- **1,422 Members** are now registered to GMEV, with membership growing monthly
- **88,109 Individual Charging Sessions** since installation, likely to reach 100,000 by April
- **680,000 KW/h** in total drawn from the GMEV Network (41,630KW/h in December 2016 alone)
- Members are accessing the network on average **41 times** each per year with an average power drawn per charging session of **7 KW/h**
Greater Manchester Shared Mobility Market

- **Regional Centre Car Share**
  - **Enterprise-City Car Club** (Commercial Car Club Operator) provide 42 vehicles (currently no EVs) in the Regional Centre within designated bays
  - **Co-Wheels** (Not for Profit Car Club Operator) provide 22 vehicles (incl. 4 fully electric Nissan Leafs) within designated car club bays in Salford.

- GM Car Share Market is currently small with capacity to grow (**358 members** Co-Wheels, **1626 active members** Enterprise-City Car Club) Total **1984 Members** and **64 vehicles**.

- **Carplus** grant award to TfGM allowed a detailed car club business case to be carried out for Oldham and outline business cases to be carried out for Manchester, Rochdale, Stockport, Trafford and Wigan.

- **GM RideShare** - [http://www.carsharegm.com/](http://www.carsharegm.com/) **59 employers** are registered with CarShare GM with **867 recorded members**

- **GM Bike Share** – a request for services for a 2 stage cycle hire feasibility study recently issued – responses by 29th March

- **GM ULEV Taxi Feasibility Study** – relevant to shared mobility, recently completed an exercise on capturing views from taxi operators and drivers as to what would encourage a transition to ULEVs
Car Club Operating Models

- **Point-to-Point**
  - Fully flexible
  - DriveNow
  - Locationless
  - No need to return car to same spot/area
  - Spontaneous use

- **Station-to-Station**
  - Semi flexible
  - AutoLib
  - Fixed locations
  - Return to a station
  - Reserve in advance or spontaneous use

- **Back-to-Base**
  - Traditional
  - ZipCar
  - Fixed locations
  - Return to same pick up spot
  - Reserve in advance or spontaneous use
GM Joint Tender - ULEV Shared Mobility Services

• Developing a GM Tender with potential for all GM Districts to access
• Will be offered as one tender with 2 Lots on a 10yr co-terminus basis;
  • Lot 1 – GMEV Network – Operation, Maintenance, plus Supply & Install (private finance) supported by introduction of a Customer Access fee
  • Lot 2 – ULEV Greater Manchester Car Share Service

• Timescales
  • By end of Jan 2017    Finalising of ITT Questions
  • March 2017           Approvals to formally issue
  • April 2017           Invitation to Tender issued
A new single AQMA declared in May 2016 for the whole of Greater Manchester.

- National Objective Annual Mean Concentration: 40 µg/m$^3$
- AQMA declared at 35 µg/m$^3$
Clean Air Zones Feasibility

- Study commenced in Feb 2016 after funding was awarded from the Defra Air Quality Fund. Completion expected July 2017.
- 2 geographical zones
- Traffic & emissions modelling
- Economic Analysis
- Health Impact Assessment

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<tr>
<th>Clean Air Zone class</th>
<th>Vehicles included</th>
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<tr>
<td>A</td>
<td>Buses, coaches and taxis</td>
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<td>B</td>
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<td>D</td>
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Questions