

## Appendix A

### Fuel types

Petrol Emissions of Carbon Dioxide, Nitrogen Dioxide and Particulate Matter increase with engine size. Particulate Matter emissions are much lower, (around 2 orders of magnitude) than from vehicles than run on Diesel. Therefore these are good in terms of Air Quality

Diesel Emissions of Carbon Dioxide, Nitrogen Dioxide and Particulate Matter increase with engine size. MPG is higher for diesel than petrol, so Carbon Dioxide emissions are typically around 2/3 lower (although DfT data suggests that for heavier vehicles the difference is minimal).

LPG Emissions of Carbon Dioxide and Nitrogen Dioxide are low and Particulate Matters are very low so they are good in terms of Air Quality however a limited range of vehicles are available.

Hybrid Petrol/Electric Emissions of Carbon Dioxide and Nitrogen Dioxide are low and Particulate Matters are very low so this fuel is good in terms of Air Quality however a limited range of vehicles are available.

### Emissions

Emissions at 30 kph of carbon dioxide, nitrous oxides and particulate matter by vehicle type and Euro standard (proxy for age), in g/km. Figures taken from DfT website: Road Vehicle Emission Factors 2009)

| Car type                         | CO2 g/km |     |     |     | NOx g/km |      |      |      | PM g/km |       |       |       |
|----------------------------------|----------|-----|-----|-----|----------|------|------|------|---------|-------|-------|-------|
|                                  | Eu3      | Eu4 | Eu5 | Eu6 | Eu3      | Eu4  | Eu5  | Eu6  | Eu3     | Eu4   | Eu5   | Eu6   |
| Car <2.5t, Petrol, 1400 - 2000cc | 194      | 182 | 161 | 145 | 0.08     | 0.05 | 0.04 | 0.04 | 0.001   | 0.001 | 0.001 | 0.001 |
| Car <2.5t, Petrol, >2000cc       | 276      | 264 | 236 | 213 | 0.09     | 0.10 | 0.08 | 0.08 | 0.005   | 0.005 | 0.005 | 0.005 |
| Car <2.5t, Diesel, 1400 - 2000cc | 160      | 154 | 138 | 124 | 0.52     | 0.34 | 0.24 | 0.10 | 0.039   | 0.029 | 0.003 | 0.003 |
| Car <2.5t, Diesel, >2000cc       | 222      | 209 | 188 | 169 | 0.68     | 0.34 | 0.24 | 0.10 | 0.030   | 0.008 | 0.002 | 0.002 |
| Car <2.5t, LPG All               | 165      | 158 | 158 | 158 | 0.35     | 0.19 | 0.14 | 0.14 | 0.001   | 0.001 | 0.001 | 0.001 |
| Car 2.5t - 3.5t, Petrol, All     | 280      | 280 | 280 | 280 | 0.12     | 0.07 | 0.06 | 0.06 | 0.001   | 0.001 | 0.001 | 0.001 |
| Car 2.5t - 3.5t, Diesel, All     | 299      | 299 | 299 | 299 | 0.68     | 0.34 | 0.24 | 0.10 | 0.030   | 0.008 | 0.002 | 0.002 |
| Car (taxi), Diesel, All          | 225      | 225 | 225 | 225 | 0.68     | 0.34 | 0.24 | 0.10 | 0.021   | 0.010 | 0.002 | 0.002 |