Likely Emissions for England (urban) derived from the Emissions Factor Toolkit (EFT)

### 5kph

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>EFT NOx g/km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycle</td>
<td>0.176</td>
</tr>
<tr>
<td>Petrol Car</td>
<td>0.19</td>
</tr>
<tr>
<td>Diesel Car</td>
<td>1.073</td>
</tr>
<tr>
<td>Taxi</td>
<td>1.354</td>
</tr>
<tr>
<td>LDV</td>
<td>1.276</td>
</tr>
<tr>
<td>Rigid HGV</td>
<td>9.632</td>
</tr>
<tr>
<td>Artic HGV</td>
<td>15.51</td>
</tr>
<tr>
<td>Bus</td>
<td>15.31</td>
</tr>
</tbody>
</table>

### 32 kph

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>EFT NOx g/km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycle</td>
<td>0.123</td>
</tr>
<tr>
<td>Petrol Car</td>
<td>0.149</td>
</tr>
<tr>
<td>Diesel Car</td>
<td>0.7</td>
</tr>
<tr>
<td>Taxi</td>
<td>0.981</td>
</tr>
<tr>
<td>LDV</td>
<td>0.924</td>
</tr>
<tr>
<td>Rigid HGV</td>
<td>5.249</td>
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<tr>
<td>Artic HGV</td>
<td>7.64</td>
</tr>
<tr>
<td>Bus</td>
<td>7.24</td>
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</table>
Brighton & Hove Road Links Waited by Bus NOx emissions (National Park light green)
Variable Tailpipe Emissions of NO\textsubscript{x} in the Brighton & Hove AQMA by Traffic Type

- **Western Road B2066 EFT NO\textsubscript{x} g/km/time**

- **Lewes Road Elm Gr A2073 EFT NO\textsubscript{x} g/km/time**

- **Preston Road A23 NB EFT NO\textsubscript{x} g/km/time**

- **Trafalgar Road B2139 EFT NO\textsubscript{x} g/km/time**

- **New England Road A270 EFT NO\textsubscript{x} g/km/time**

- **Rottingdean High Street B2123 NO\textsubscript{x} g/km/time**

Brighton & Hove City Council Air Quality Action Plan Technical Appendix 3
Variable Tailpipe Emissions of $\text{NO}_x$ in the Brighton & Hove AQMA by Traffic Type

- **Grand Parade A23 SB EFT NOx g/km/time**
  - motorcycle: 0%
  - Petrol Car: 3%
  - Bus: 26%
  - Diesel Car: 26%
  - artic HGV: 20%
  - rigid HGV: 12%
  - LDV: 4%

- **Queens Road A2010 EFT NOx g/km/time**
  - motorcycle: 0%
  - Petrol Car: 22%
  - Bus: 22%
  - Diesel Car: 12%
  - artic HGV: 12%
  - rigid HGV: 8%
  - LDV: 6%

- **The Drove EFT NOx g/km/time**
  - motorcycle: 6%
  - Petrol Car: 29%
  - Bus: 14%
  - Diesel Car: 12%
  - artic HGV: 9%
  - rigid HGV: 7%
  - LDV: 7%

- **Wellington Road A259 EFT NOx g/km/time**
  - motorcycle: 0%
  - Petrol Car: 4%
  - Bus: 22%
  - Diesel Car: 26%
  - artic HGV: 12%
  - rigid HGV: 12%
  - LDV: 5%

- **Eastern Road near Hospital NOx g/km/time**
  - motorcycle: 4%
  - Petrol Car: 26%
  - Bus: 11%
  - Diesel Car: 25%
  - artic HGV: 11%
  - rigid HGV: 18%
  - LDV: 5%

- **Hollingdean Road EFT NOx g/km/time**
  - motorcycle: 4%
  - Petrol Car: 7%
  - rigid HGV: 15%
  - artic HGV: 15%
  - LDV: 7%
  - Diesel Car: 6%
  - Taxi: 60%
Emission rate vs cargo

<table>
<thead>
<tr>
<th>Type</th>
<th>EFT NOx g/km</th>
<th>tonnes carried</th>
<th>NOx per kg load</th>
</tr>
</thead>
<tbody>
<tr>
<td>motorcycle</td>
<td>0.167</td>
<td>0.08</td>
<td>2.1</td>
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<tr>
<td>Petrol Car</td>
<td>0.187</td>
<td>0.11</td>
<td>1.7</td>
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<tr>
<td>Diesel Car</td>
<td>1.073</td>
<td>0.11</td>
<td>9.8</td>
</tr>
<tr>
<td>Taxi</td>
<td>1.354</td>
<td>0.3</td>
<td>4.5</td>
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<tr>
<td>LDV</td>
<td>1.276</td>
<td>0.4</td>
<td>3.2</td>
</tr>
<tr>
<td>rigid HGV</td>
<td>9.632</td>
<td>4</td>
<td>2.4</td>
</tr>
<tr>
<td>artic HGV</td>
<td>15.51</td>
<td>10</td>
<td>1.6</td>
</tr>
<tr>
<td>Bus</td>
<td>15.31</td>
<td>4</td>
<td>3.8</td>
</tr>
</tbody>
</table>
Emission of NOx per passenger travelling up St James Street

![Bar chart showing emission levels of NOx per passenger for different vehicles.](chart.png)
Model Verification Modelled vs Monitored

Nitrogen Dioxide typically monitored 2008 to 2013 (excluding 2010)
Brighton Central (16km²) Key AQMA Streets Above NO₂ Legal Limit

- Beaconfield Rd-Viaduct Terrace -Grand Parade A23 southbound
- Marlborough Place-London Road A23 northbound
- The Drove under the railway
- New England Rd below railway A270
- Severn Dials
- Queens Road-Terminus Rd A2010
- North Street-Western Rd B2066
- Pavilion Parade A23
- Kingsway A259
- Hollingdean Road
- Lewes Road A2073-A270
- Edward Street
- Old Steine-St James Street B2118
- Eastern Road

Legend
- 15.4 - 16
- 16.1 - 20
- 20.1 - 24
- 24.1 - 29
- 29.1 - 32
- 32.1 - 35
- 35.1 - 40
- 40.1 - 44
- 44.1 - 48
- 48.1 - 52
Portslade & Hove (9km²) Key AQMA Streets Above NO₂ Legal Limit

Legend

- 16.4 - 16
- 16.1 - 20
- 20.1 - 24
- 24.1 - 28
- 28.1 - 32
- 32.1 - 36
- 36.1 - 40
- 40.1 - 44
- 44.1 - 48
- 48.1 - 92

Old Shoreham Road
A270, Hangleton

Station-Boundary Road
B2194 nr railway

Trafalgar Road-
Southern Cross B2139

Church Road B2139

Wellington Road A259

Indicative contribution from shipping and industry

Kingsway A259

Wharf Road Haulage Route

Sackville Road-Old Shoreham
Road Hove A2023

Church Road Hove B2066

Brighton & Hove City Council Air Quality Action Plan Technical Appendix
Rottingdean Key AQMA Streets Close to NO₂ Legal Limit

- Near Miss Vicarage Lane
- Rottingdean High Street B2123
- Near Miss Marine Drive A259

Legend
µg/m³
- 15.4 - 15
- 16.1 - 20
- 20.1 - 24
- 24.1 - 28
- 28.1 - 32
- 32.1 - 36
- 36.1 - 40
- 40.1 - 44
- 44.1 - 48
- 48.1 - 52

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Traffic Source Apportionment NO$_2$ Environmental Contribution at Monitors

Brighton & Hove City Council Air Quality Action Plan Technical Appendix
Traffic Source Apportionment Environmental Contribution

<table>
<thead>
<tr>
<th>NO₂ µg/m³ Traffic Contribution</th>
<th>New England Rd A270</th>
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<table>
<thead>
<tr>
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<th>The Drove</th>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<table>
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<th>NO₂ µg/m³ Traffic Contribution</th>
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<tr>
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</table>

<table>
<thead>
<tr>
<th>NO₂ µg/m³ Traffic Contribution</th>
<th>Rottingdean High St B2123</th>
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<tr>
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<td>E23</td>
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</table>

Brighton & Hove City Council Air Quality Action Plan Technical Appendix 12
Brighton AQMA Photographs

From Left to Right Top Row:
North Street B2066, Western Road B2066, adjoining Queens Road A2010.

Middle Row:
Terminus Road A2010, St James Street B2118, New England Road A270 under the railway.

Bottom Row:
Grand Parade A23 Southbound
London Road A23 mostly Northbound
Brighton, Hove, Portslade and Rottingdean AQMA Photographs

From Left to Right
Top Row:
Lewes Road South of Vogue A2073, Lewes Road Coombe Terrace A270, adjoining Hollingdean Road.

Middle Row:
Trafalgar Road B2139, The Drove under the Railway, Wellington Road A259

Bottom Row:
Rottingdean High Street B2123