



**Wyre Forest**  
District Council

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**Regulatory Services**  
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# Air Quality Action Plan

## Technical Appendices

In fulfilment of Part IV of the Environment Act 1995

**Local Air Quality Management**

**2025 - 2030**

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## Table of Contents

<b>Appendix G: Source Apportionment Assessment .....</b>	<b>2</b>
Source Apportionment Approach .....	2
Emissions Factor Toolkit .....	2
Traffic and Speed Data .....	2
Bus Fleet Data .....	4
Monitoring Data .....	5
Background and Local Contributions .....	6
Source Apportionment Results – Welch Gate, Bewdley .....	7
Source Apportionment Results – Coventry Street, Kidderminster AQMA .....	9
Air Quality Improvements Required .....	12
<b>Appendix H: Traffic Data.....</b>	<b>15</b>
<b>Appendix I: Speed Data.....</b>	<b>19</b>
<b>Appendix J: Emissions Factor Toolkit – Source Apportionment.....</b>	<b>23</b>
<b>Appendix K: Modelled Measures .....</b>	<b>26</b>
Measures supporting transition to Electric Vehicle Parc.....	26
Bus Fleet Improvements .....	35
Bus Service Improvement Plan.....	40

## **List of Tables**

Table G.1 Local Bus Fleet .....	5
Table G.2 Highest Annual Mean NO <sub>2</sub> Monitoring Results in each AQMA in 2023 .....	6
Table G.3 The local contribution apportioned to each vehicle class calculated for monitoring location WG(B) in accordance with LAQM.TG22 Box 7-5.....	7
Table G.4 The local contribution apportioned to each vehicle class calculated for monitoring location (F)69COV in accordance with LAQM.TG22 Box 7-5.....	9
Table G.5 Box 7-6 Calculation for Welch Gate, Bewdley AQMA.....	13
Table G.6 Box 7-6 Calculation for Coventry Street, Kidderminster.....	13
Table G.7 Emission reduction required .....	14
Table K.1 Summary of Impact - Measures supporting transition to Electric Vehicle Parc .....	34
Table K.2 Summary of Impact – Bus Fleet Improvements .....	38
Table K.3 Summary of Impact - Bus Service Improvement Plan .....	43

## **List of Figures**

Figure G.1 Summary of vehicle proportions – Welch Gate, Bewdley .....	3
Figure G.2 Summary of vehicle proportions – Coventry Street, Kidderminster.....	4
Figure G.3 Total NO <sub>2</sub> sources in Welch Gate, Bewdley AQMA .....	8
Figure G.4 Local NO <sub>2</sub> sources in Welch Gate, Bewdley AQMA .....	9
Figure G.5 Total NO <sub>2</sub> sources in Coventry Street, Kidderminster .....	11
Figure G.6 Local NO <sub>2</sub> sources in Coventry Street, Kidderminster .....	11
Figure G.7 Defra's NOx to NO <sub>2</sub> Conversion Spreadsheet v8.1 for LAQM.TG22 Box 7-6 calculation at representative monitoring locations .....	12
Figure I.1 Location of Automatic Traffic Counter.....	19
Figure I.2 Welch Gate, Bewdley - Eastbound .....	20

## Wyre Forest District Council

Figure I.3	Welch Gate, Bewdley – Westbound .....	20
Figure I.4	Location of Automatic Traffic Counter – Coventry Street, Kidderminster.	21
Figure I.5	Coventry Street, Kidderminster – Eastbound Summary .....	22
Figure I.6	Coventry Street, Kidderminster – Westbound Summary .....	22
Figure K.1	Summary Forecast Data from NEVIS .....	26
Figure K.2	Vehicle Growth Factors, HGV Fleet Forecast, Local Taxi data.....	27
Figure K.3	Proportion of Vehicle Types for EFT (All Vehicles) including fleet growth by 2029 – Welch Gate, Bewdley.....	28
Figure K.4	Proportion of Vehicle Types for EFT (All Vehicles) including fleet growth by 2029 – Coventry Street, Kidderminster .....	29
Figure K.5	EFT Input – Measures supporting transition to Electric Vehicle Parc ...	30
Figure K.6	EFT Output - Measures supporting transition to Electric Vehicle Parc .	31
Figure K.7	Calculating Impact - Measures supporting transition to Electric Vehicle Parc .....	32
Figure K.8	EFT Input – Bus Fleet Improvements .....	35
Figure K.9	Bespoke Euro Fleet – Bus Fleet Improvements.....	35
Figure K.10	EFT Output – Bus Fleet Improvements .....	37
Figure K.11	Calculating Impact – Bus Fleet Improvements.....	38
Figure K.12	EFT Input - Bus Service Improvement Plan.....	40
Figure K.13	Bespoke Euro Fleet - Bus Service Improvement Plan .....	40
Figure K.14	EFT Output - Bus Service Improvement Plan .....	42
Figure K.15	Calculating Impact - Bus Service Improvement Plan .....	43

## Appendix G: Source Apportionment Assessment

This ‘Source Apportionment Assessment’ fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in the Environment Act (2021), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents.

Policy guidance (LAQM.PG22) requires a Local Authority to prepare an Air Quality Action Plan (AQAP) to ensure air quality standards or objectives are achieved in Air Quality Management Areas (AQMA). In order to develop an appropriate plan it is necessary to identify the sources contributing to the objective exceedances within the AQMA.

### Source Apportionment Approach

#### Emissions Factor Toolkit

The source apportionment assessment has been undertaken generally following the process outlined in technical guidance. LAQM.TG22 (paragraph 7.111) advises that ‘source apportionment may be undertaken using a simple spreadsheet approach. For example, where road traffic emissions are the principal concern, the percentage contribution to total NOx emissions may be calculated using the appropriate emission factors.’ This approach has been adopted for the source apportionment assessment utilising Defra’s Emissions Factor Toolkit (EFT) v12.0.1.

Copies of the EFT input and outputs are provided below in Appendix J: Emissions Factor Toolkit – Source Apportionment.

#### Traffic and Speed Data

Total Traffic Surveys Ltd (TTS) were commissioned to undertake traffic counts and speed averages within each AQMA for the purposes of this source apportionment assessment.

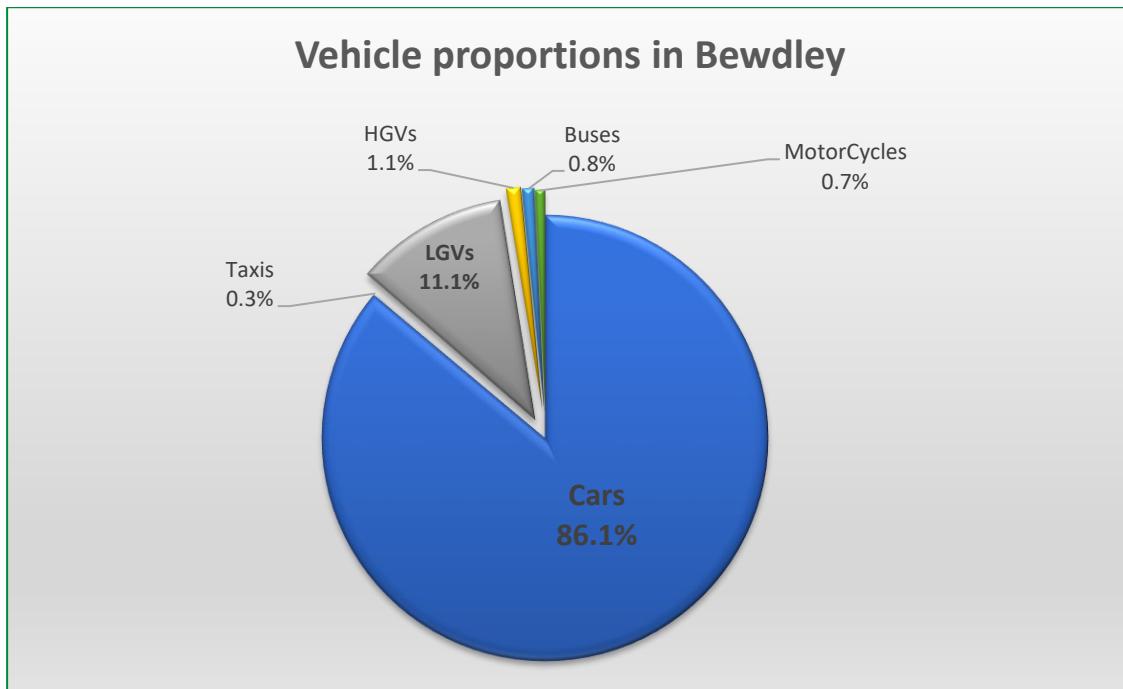
## Wyre Forest District Council

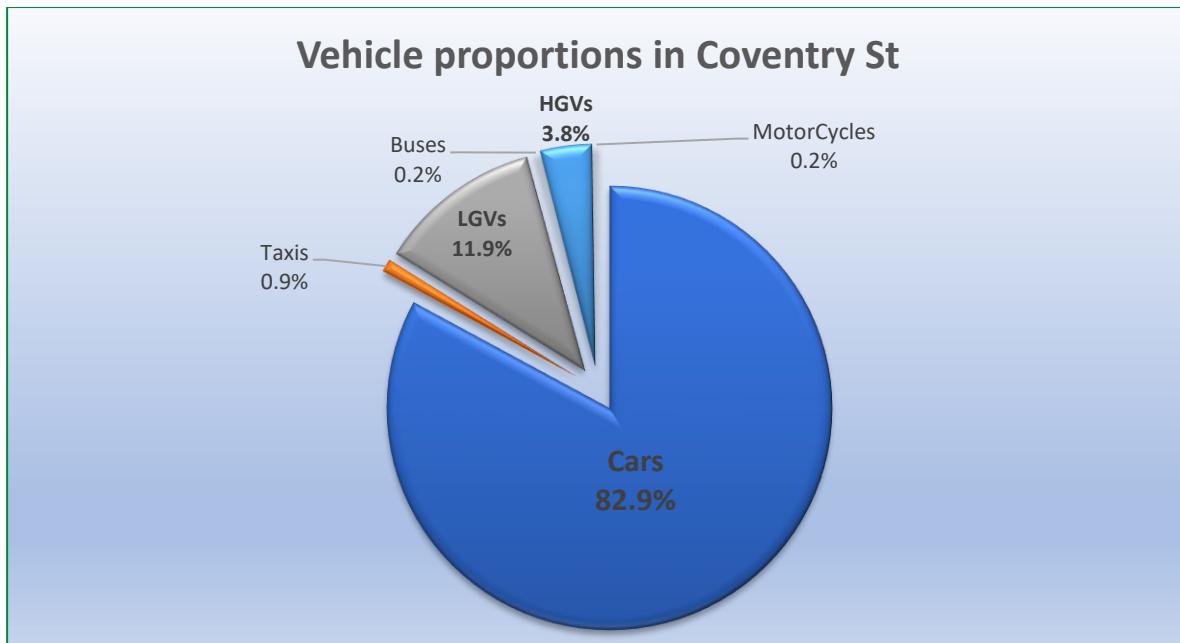
TTS undertook 24-hour road traffic counts at a single location within each AQMA in March 2023. NB PC (peddle cycles) have not been included in the assessment as do not contribute towards emissions of air pollution.

Speed data was also recorded in March 2023 over a weekly period to provide a mean average for Eastbound and Westbound traffic within each AQMA. The average speed data on each link (length of AQMA) has been incorporated into Emissions Factor Toolkit v12.0.1 to determine the percentage contribution from vehicles.

Appendix H: Traffic Data and Appendix I: Speed Data shows the traffic data and speed data recorded and utilised within this source apportionment assessment.

**Figure G.1 Summary of vehicle proportions – Welch Gate, Bewdley**



**Figure G.2 Summary of vehicle proportions – Coventry Street, Kidderminster**

### Bus Fleet Data

Worcestershire County Council provided WRS with local bus fleet composition for Diamond Bus Group who are the predominant service provider across the district. This data was used as a proxy for all bus services in the district and the generalised Euro code compositions assumed in the EFT were amended accordingly to reflect the local circumstances providing a more accurate EFT output. A copy of current fleet composition is provided below in Table G.1.

**Table G.1 Local Bus Fleet**

Diamond Buses	Numbers in fleet	Proportion of Fleet
1Pre-Euro I (Euro 1)		0%
2Euro I (Euro1)		0%
3Euro II (Coaches) (Euro 2)		0%
4Euro III (Euro 3)		0%
5Euro IV (Euro 4)	12	6%
6Euro V_EGR (Euro 5)	30	15%
7Euro V_SCR (Euro 5)		0%
8Euro VI (Euro 6)	157	79%
9Euro II SCRRF (Euro 2)		0%
10Euro III SCRRF (Euro 3)		0%
11Euro IV SCRRF (Euro 4)		0%
12Euro V EGR + SCRRF (Euro 5)		0%
Total	199	100%

### Monitoring Data

In 2023, Wyre Forest District Council monitored annual mean nitrogen dioxide concentrations using passive diffusion tubes located across the district supported by one low-cost sensor (Zephyr) located in Horsefair, Kidderminster. Eight diffusion tubes sites are located within the boundary of the Horsefair/Coventry Street AQMA and 1 tube is located within the Welch Gate, Bewdley AQMA. Plans showing the positions of diffusion tube monitoring locations is included in Figures 2.1 and 2.2 of the main report.

Table G.2 below shows the bias adjusted annual averages for nitrogen dioxide at the worst case scenario monitoring locations within each AQMA. These locations have been used for the purposes of the source apportionment exercise.

**Table G.2 Highest Annual Mean NO<sub>2</sub> Monitoring Results in each AQMA in 2023**

Site ID	Site Name	X OS Grid Ref	Y OS Grid Ref	Distance to Relevant Exposure (m)	NO <sub>2</sub> Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) in 2023
WG(B)	88 Welch Gate, Bewdley	378465	378465	0.0	38.6
(F)69COV	69 Coventry Street, Kidderminster	383552	383552	0.0	<b>40.8</b>

Notes: Exceedances of the NO<sub>2</sub> annual mean objective of 40 $\mu\text{g}/\text{m}^3$  are shown in **bold**.

### Background and Local Contributions

Technical guidance advises that determining ‘...the apportionment for NO<sub>2</sub> is not straightforward due to the non-linear relationship between the emissions of NO<sub>2</sub> and nitrous oxides (NOx). This is additionally complicated by the different proportions of NO<sub>2</sub> in the NOx emission for different sources, for example, petrol cars or diesel cars. The following advice therefore applies to NO<sub>2</sub> source apportionment:

Background contributions: the national maps will give the total background NO<sub>2</sub> concentration. This should be apportioned to regional and local background using the ratio of the background NOx concentrations attributable to these two sources, which are also available in the national maps; and

Local contributions: the local contribution to NO<sub>2</sub> is the difference between the total (measured or modelled) NO<sub>2</sub> and the total background NO<sub>2</sub>. This is then apportioned to the local sources, for example, buses, HGVs, taxis, cars, using the relative contributions of these sources to the local NOx concentration.’

Regional and Total Background contributions of NOx and NO<sub>2</sub> for 2023, available from Defra website, have been used to calculate the contribution of local nitrogen dioxide for each relevant receptor (monitoring location) in the AQMA following the procedure laid out in LAQM.TG22 Box 7-5. The local contribution has then been apportioned to each vehicle class according to the results of the EFT. Calculations are presented below in Table G.3 and Table G.4 and the results summarised in Figure G.3 to Figure G.6 below.

## Source Apportionment Results – Welch Gate, Bewdley

**Table G.3 The local contribution apportioned to each vehicle class calculated for monitoring location WG(B) in accordance with LAQM.TG22 Box 7-5.**

Box 7-5 calculation - Location: WG (B)	Local Source %	NO <sub>2</sub> µg/m <sup>3</sup>	Total %
<b>T-NO<sub>2</sub></b> (Total (Monitored) nitrogen dioxide)		<b>40.2</b>	
<b>TB-NO<sub>2</sub></b> (Total Background nitrogen dioxide <sup>1</sup> )		5.76467	
<b>TB-NOx</b> (Total Background nitrous oxides <sup>1</sup> )		7.276608	
<b>RB-NOx</b> (Regional Background nitrous oxides <sup>1</sup> )		5.997468	
Step 1: <b>LB-NOx</b> <sup>2</sup> = TB-NOx – RB-NOx		1.27914	
Step2: <b>RB-NO<sub>2</sub></b> <sup>3</sup> = TB-NO <sub>2</sub> × (RB-NOx / TB-NOx)		<b>4.7513105</b>	11.82%
Step2: <b>LB-NO<sub>2</sub></b> <sup>4</sup> = TB-NO <sub>2</sub> × (LB-NOx / TB-NOx)		<b>1.0133595</b>	2.52%
Step3: <b>L-NO<sub>2</sub></b> <sup>5</sup> = T-NO <sub>2</sub> – TB-NO <sub>2</sub>		<b>34.43533</b>	
<b><u>Step4: % of vehicles from EFT</u></b>			
Petrol Cars (%)	8.81%	3.03	
Petrol Hybrid Petrol Cars (%)	0.21%	0.07	
Plug in Hybrid Petrol Cars (%)	0.05%	0.02	
Diesel Cars (%)	59.16%	20.37	
Diesel Hybrid Diesel Cars (%)	0.38%	<u>0.13</u>	
<b>Total cars</b>	<b>68.61%</b>	<b>23.63</b>	58.77%
Petrol Taxis	0.00%	0.00	
Petrol hybrid Taxis	0.00%	0.00	
Diesel Taxis	0.23%	0.08	
<b>Taxis</b>	<b>0.24%</b>	<b>0.08</b>	0.20%
Petrol LGVs (%)	0.07%	0.02	
Diesel LGVs (%)	<u>18.45%</u>	<u>6.35</u>	
<b>Total LGVs</b>	<b>18.51%</b>	<b>6.37</b>	15.86%
Rigid HGVs (%)	5.81%	2.00	
Artic HGVs (%)	<u>0.12%</u>	<u>0.04</u>	
<b>Total HGVs</b>	<b>5.93%</b>	<b>2.04</b>	5.08%
Buses (%)	3.76%	1.29	
Hybrid Buses (%)	0.08%	0.03	
Biogas Buses (%)	0.00%	0.00	
Coaches (%)	2.74%	0.94	
Hybrid Coaches (%)	0.05%	0.02	
Biogas Coaches (%)	<u>0.00%</u>	0.00	
<b>Total Buses</b>	<b>6.64%</b>	<b>2.28</b>	5.68%

Box 7-5 calculation - Location: WG (B)	Local Source %	NO <sub>2</sub> µg/m <sup>3</sup>	Total %
Motorcycles (%)	<u>0.08%</u>	<u>0.03</u>	<u>0.07%</u>
	100.00%	34.44	100.00%

- 1) Data from Defra 2018 Background Maps for model year of 2023 for relevant local coordinates
- 2) Local Background nitrous oxides
- 3) Regional Background nitrogen dioxide contribution
- 4) Local Background nitrogen dioxide contribution
- 5) Local sources nitrogen dioxide contribution

**Figure G.3 Total NO<sub>2</sub> sources in Welch Gate, Bewdley AQMA**

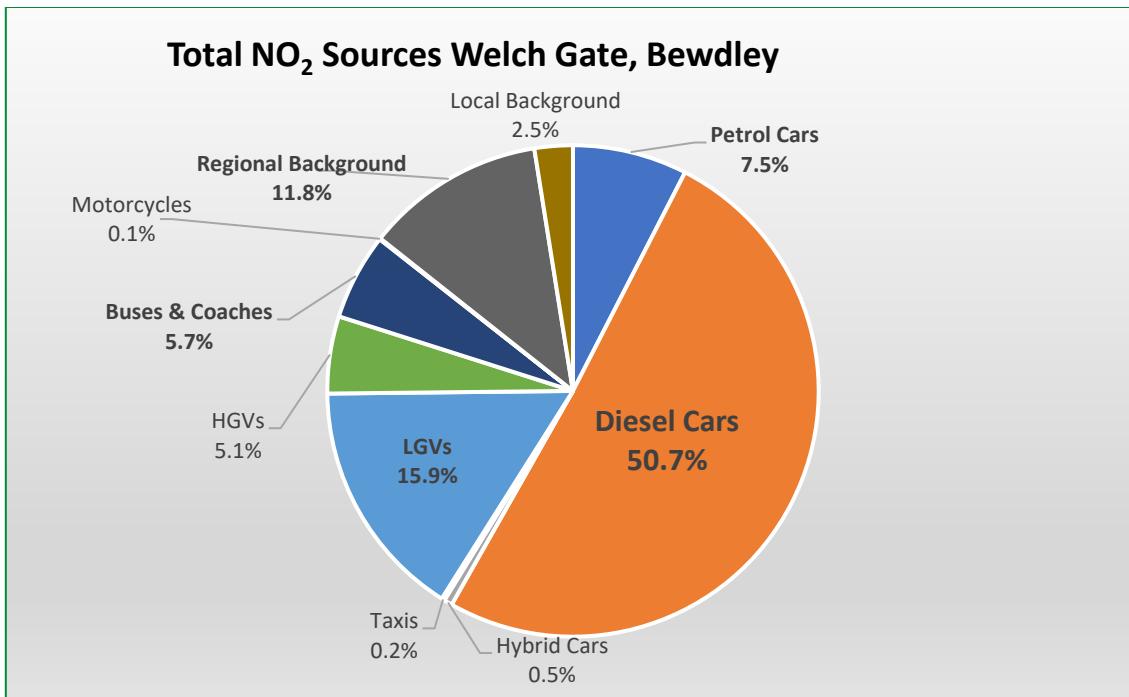


Table G.3 and Figure G.3 above demonstrates that the main contributors of total emissions within the Welch Gate, Bewdley AQMA are Cars with 58.77% of emissions followed by LGVs (15.9%) and Regional and Local Background totalling 14.3%.

As the Local Authority is unable to influence Regional Background concentrations and Local Background concentrations are predominately a result of traffic sources on other local roads, it is more useful to consider the source apportionment of the local traffic sources in isolation for future improvement actions. Figure G.4 below demonstrates the local traffic contribution (i.e. minus the Background contributions) broken down further into petrol and diesel classifications in the EFT.

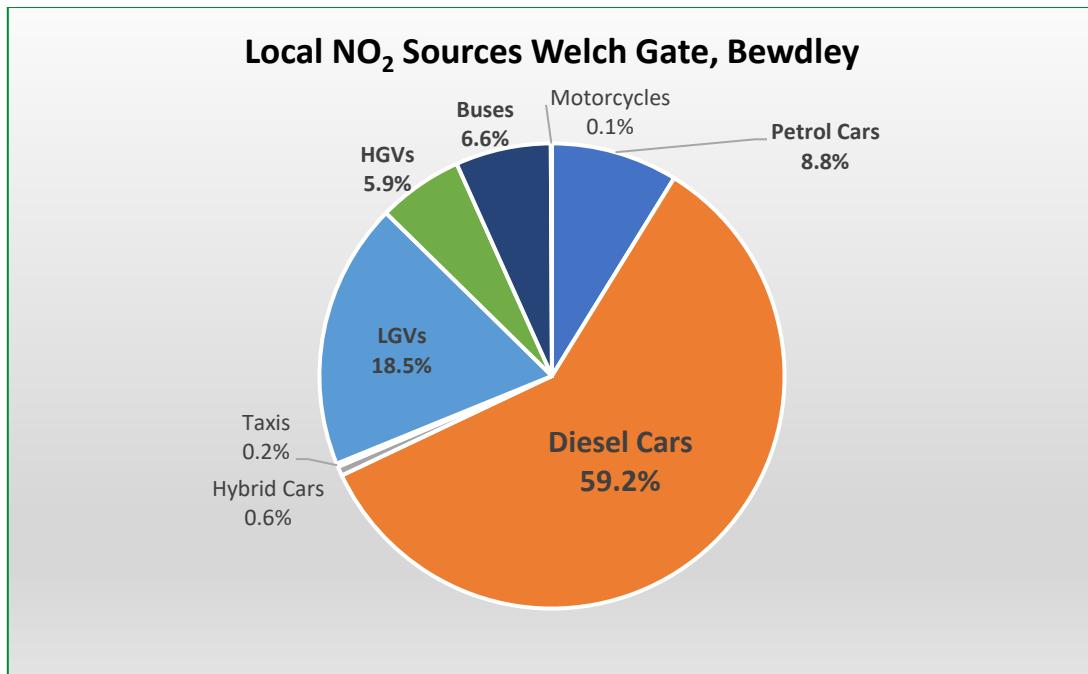
**Figure G.4 Local NO<sub>2</sub> sources in Welch Gate, Bewdley AQMA**

Table G.3 and Figure G.4 above demonstrate the main contributors of emissions from local sources within the Welch Gate, Bewdley AQMA are diesel cars with 59.2% of emissions followed by LGVs at 18.5%. Petrol Cars 8.8%, Buses 6.6% and HGVs 5.9% also make up sizeable contributions.

#### **Source Apportionment Results – Coventry Street, Kidderminster AQMA**

**Table G.4 The local contribution apportioned to each vehicle class calculated for monitoring location (F)69COV in accordance with LAQM.TG22 Box 7-5.**

Box 7-5 calculation - Location: (F)69Cov	Local Sources %	NO <sub>2</sub> µg/m <sup>3</sup>	Total Emissions %
T-NO <sub>2</sub> (Total (Monitored) nitrogen dioxide)		<b>38.6</b>	
TB-NO <sub>2</sub> (Total Background nitrogen dioxide <sup>1</sup> )		11.60365	
TB-NOx (Total Background nitrous oxides <sup>1</sup> )		15.44016	
RB-NOx (Regional Background nitrous oxides <sup>1</sup> )		10.412478	
Step 1: LB-NOx <sup>2</sup> = TB-NOx – RB-NOx		5.027682	
Step2: RB-NO <sub>2</sub> <sup>3</sup> = TB-NO <sub>2</sub> × (RB-NOx / TB-NOx)		<b>7.8252266</b>	20.27%
Step2: LB-NO <sub>2</sub> <sup>4</sup> = TB-NO <sub>2</sub> × (LB-NOx / TB-NOx)		<b>3.7784234</b>	9.79%
Step3: L-NO <sub>2</sub> <sup>5</sup> = T-NO <sub>2</sub> – TB-NO <sub>2</sub>		<b>26.99635</b>	
<b>Step4: % of vehicles from EFT</b>			
Petrol Cars (%)	8.33%	2.25	

## Wyre Forest District Council

Box 7-5 calculation - Location: (F)69Cov	Local Sources %	NO <sub>2</sub> µg/m <sup>3</sup>	Total Emissions %
Petrol Hybrid Petrol Cars (%)	0.20%	0.05	
Plug in Hybrid Petrol Cars (%)	0.05%	0.01	
Diesel Cars (%)	54.17%	14.62	
Diesel Hybrid Diesel Cars (%)	<u>0.35%</u>	<u>0.09</u>	
<b>Total cars</b>	<b>63.10%</b>	<b>17.03</b>	44.13%
Petrol Taxis	0.00%	0.00	
Petrol hybrid Taxis	0.02%	0.00	
Diesel Taxis	0.82%	0.22	
<b>Taxis</b>	<b>0.84%</b>	<b>0.23</b>	0.59%
Petrol LGVs (%)	0.07%	0.02	
Diesel LGVs (%)	<u>19.28%</u>	<u>5.21</u>	
<b>Total LGVs</b>	<b>19.35%</b>	<b>5.22</b>	13.53%
Rigid HGVs (%)	9.01%	2.43	
Artic HGVs (%)	<u>6.04%</u>	<u>1.63</u>	
<b>Total HGVs</b>	<b>15.05%</b>	<b>4.06</b>	10.53%
Buses (%)	0.93%	0.25	
Hybrid Buses (%)	0.02%	0.01	
Biogas Buses (%)	0.00%	0.00	
Coaches (%)	0.67%	0.18	
Hybrid Coaches (%)	0.01%	0.00	
Biogas Coaches (%)	<u>0.00%</u>	<u>0.00</u>	
<b>Total Buses</b>	<b>1.63%</b>	<b>0.44</b>	1.14%
Motorcycles (%)	<u>0.03%</u>	<u>0.01</u>	<u>0.02%</u>
	100.00%	27.00	100.00%

1) Data from Defra 2018 Background Maps for model year of 2023 for relevant local coordinates

2) Local Background nitrous oxides

3) Regional Background nitrogen dioxide contribution

4) Local Background nitrogen dioxide contribution

5) Local sources nitrogen dioxide contribution

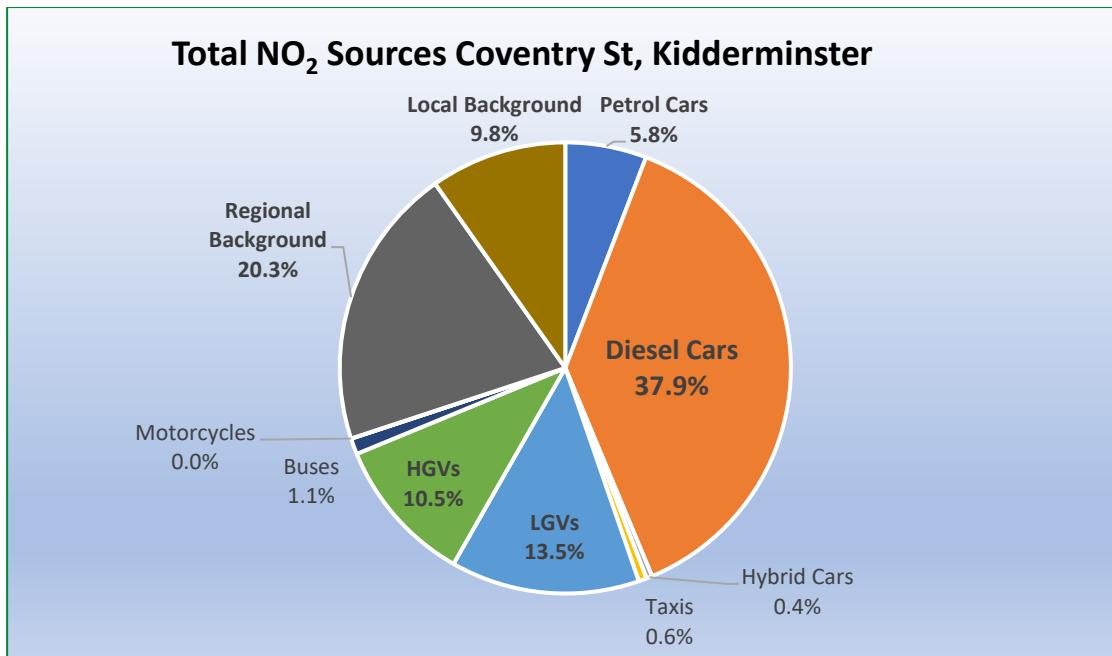
**Figure G.5 Total NO<sub>2</sub> sources in Coventry Street, Kidderminster**

Table G.4 and Figure G.5 above demonstrates that the main contributors of total emissions within the Coventry Street, AQMA are Cars with 44.13% of emissions followed by Regional and Local Background totalling 30.6% of emissions.

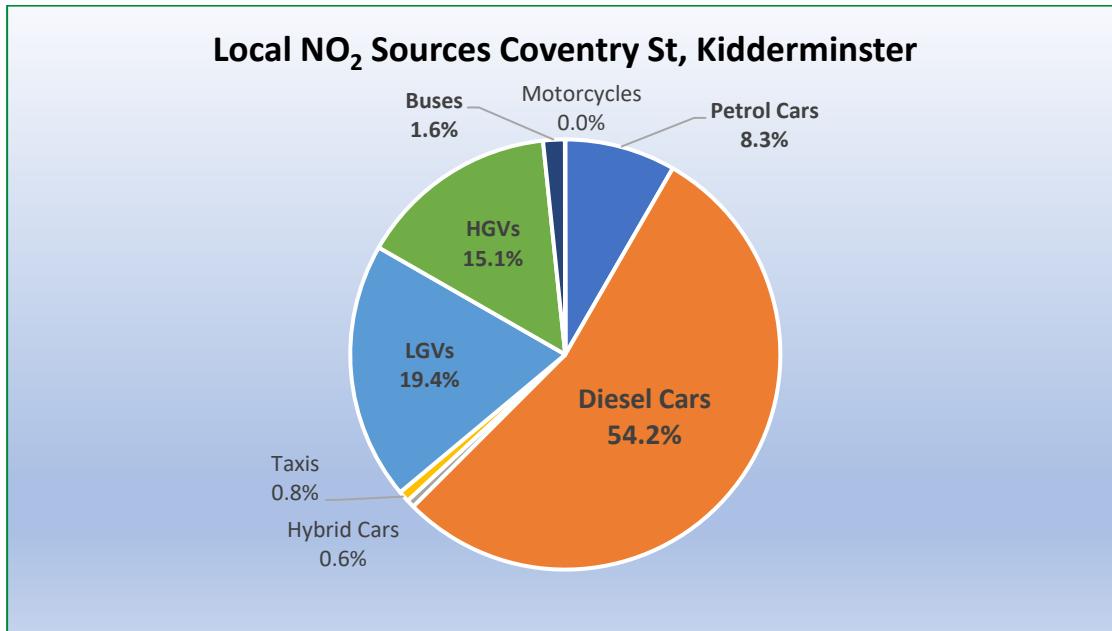
**Figure G.6 Local NO<sub>2</sub> sources in Coventry Street, Kidderminster**

Table G.4 and Figure G.6 above demonstrate the main contributors of emissions from local sources within the Coventry Street, Kidderminster are Diesel Cars at

## Wyre Forest District Council

54.2% of emissions followed by LGVs at 19.4% and HGVs at 15.1%. Petrol Cars at 8.3% also make up a sizeable contribution.

### Air Quality Improvements Required

The degree of improvement required in order for the annual mean objective for nitrogen dioxide to be achieved is the difference between the highest measured or predicted concentration and the objective level.

LAQM.TG22 advises: 'Where NO<sub>2</sub> monitoring is completed using diffusion tubes, to account for the inherent uncertainty associated with the monitoring method, it is recommended that revocation of an AQMA should be considered following three consecutive years of annual mean NO<sub>2</sub> concentrations being lower than 36µg/m<sup>3</sup> (i.e. within 10% of the annual mean NO<sub>2</sub> objective).'

Therefore air quality improvements to achieve sustained compliance below current air quality objectives have been calculated to achieve 36µg/m<sup>3</sup> in each AQMA. The highest nitrogen dioxide concentration at a representative location in each AQMA in 2023 is 40.2µg/m<sup>3</sup> at WG(B) in Welch Gate, Bewdley and 38.6µg/m<sup>3</sup> at (F)69Cov in Coventry Street, Kidderminster, requiring a reduction of 4.2µg/m<sup>3</sup> and 2.6µg/m<sup>3</sup> for -10%AQO to be achieved in each AQMA respectively.

However technical guidance advises that in terms of the reduction in emissions required it is more useful to consider nitrogen oxides (NOx). Therefore the road NOx reduction required for compliance with -10%AQO in each AQMA has been calculated in accordance with LAQM.TG22 Box 7-6 utilising Defra's NOx to NO<sub>2</sub> Conversion Spreadsheet v8.1. Calculations are shown below.

**Figure G.7 Defra's NOx to NO<sub>2</sub> Conversion Spreadsheet v8.1 for LAQM.TG22 Box 7-6 calculation at representative monitoring locations**

Local Authority:		Wyre Forest District		
Site ID	Diffusion tube NO <sub>2</sub> , µg m <sup>-3</sup> µg m <sup>-3</sup>	Background µg m <sup>-3</sup>		Road NO <sub>x</sub> , µg m <sup>-3</sup>
		NO <sub>x</sub>	NO <sub>2</sub>	
WG B	40.02	7.276608	5.76467	70.37
36	36	7.276608	5.76467	60.92
Cov69	38.6	15.44016	11.60365	54.95
36	36	15.44016	11.60365	49.05

Year:	2023
Traffic Mix:	All other urban UK traffic
User defined local traffic mix fraction emitted as NO <sub>2</sub> (fNO <sub>2</sub> )	Notes

**Table G.5 Box 7-6 Calculation for Welch Gate, Bewdley AQMA**

Box 7.6 Calculation – WG(B)	NOx or NO <sub>2</sub> µg/m <sup>3</sup>	Reduction required %
<b>Step1 Total NOx</b>	77.65	
<b>Step2 TB-NOx (Total Background nitrous oxides<sup>1</sup>)</b>	7.28	
<b>Step3 Total Road NOx (Local Sources)</b>	70.37	
<b>Step4 NOx equivalent for NO<sub>2</sub> 36µg/m<sup>3</sup></b>	<b>60.92</b>	
<b>Step5 NOx reduction required for 36µg/m<sup>3</sup></b>	<b>9.45</b>	<b>13.43%</b>
Local NO <sub>2</sub> reduction required for 36µg/m <sup>3</sup>	<b>4.62</b>	

**Table G.6 Box 7-6 Calculation for Coventry Street, Kidderminster**

Box 7.6 Calculation – (F)69Cov	NOx or NO <sub>2</sub> µg/m <sup>3</sup>	Reduction required %
<b>Step1 Total NOx</b>	70.39	
<b>Step2 TB-NOx (Total Background nitrous oxides<sup>1</sup>)</b>	15.44	
<b>Step3 Total Road NOx (Local Sources)</b>	54.95	
<b>Step4 NOx equivalent for NO<sub>2</sub> 36µg/m<sup>3</sup></b>	<b>49.05</b>	
<b>Step5 NOx reduction required for 36µg/m<sup>3</sup></b>	<b>5.9</b>	<b>10.74%</b>
Local NO <sub>2</sub> reduction required for 36µg/m <sup>3</sup>	<b>2.90</b>	

**Table G.7 Emission reduction required**

Location	Emission Reductions Required to Meet -10% Objective (NO <sub>2</sub> )	All Vehicle Reduction to Meet -10% Objective (NOx)	Highest Roadside Contributor	2nd Roadside Contributor	Single Vehicle Reduction to Achieve Objective
Welch Gate Bewdley	4.62	13.43%	Diesel Cars – 50.67%	LGV – 15.86%	Cars 20% or LGV 75%
Coventry Street Kidderminster	2.90	10.74%	Diesel Cars – 37.88%	LGV – 13.53%	Cars 20% or LGV 60%

The assessment indicates:

- Reducing total vehicle emissions from all vehicle types by >13.5% or targeting a 20% reduction in cars or 75% of LGVs would be potentially effective measures for achieving -10%AQO in Welch Gate Bewdley.
- Reducing total vehicle emissions from all vehicle types by >10.8% or targeting a 20% reduction in cars or 60% of LGVs would be potentially effective measures for achieving -10%AQO in Coventry Street, Kidderminster.

## Appendix H: Traffic Data

										Job Title:	Worcestershire Counts										
										Job Number:	TTS-1529-Mar										
										Survey Date:	Tuesday 21st March 2023										
										Survey Type:	Manual Classified Counts										
Site:	9																				
Location:	B4190 Welch Gate, Bewdley																				
										Eastbound										Westbound	
Time	PC	MC	Car	Taxi	LGV	OGV1	OGV2	PSV	Total	PC	MC	Car	Taxi	LGV	OGV1	OGV2	PSV	Total			
00:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
00:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2		
00:30	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1		
00:45	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1		
H/Tot	0	0	1	0	1	0	0	0	2	0	0	5	0	0	0	0	0	0	5		
01:00	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0		
01:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:45	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1		
H/Tot	0	0	2	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2		
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
02:30	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0		
02:45	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0		
H/Tot	0	0	1	0	1	0	0	0	2	0	0	1	0	0	0	0	0	0	1		
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
03:30	0	0	2	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1		
03:45	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1		
H/Tot	0	0	3	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3		
04:00	0	0	2	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1		
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:30	0	0	7	0	0	0	0	0	7	0	0	1	0	0	0	0	0	0	1		
04:45	0	0	2	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0		
H/Tot	0	0	11	0	2	0	0	0	13	0	0	2	0	0	0	0	0	0	2		
05:00	0	0	3	0	2	0	0	0	5	0	0	2	0	1	0	0	0	0	3		
05:15	0	0	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0		
05:30	0	0	5	0	2	0	0	0	7	1	0	2	0	0	0	0	0	0	3		
05:45	0	0	14	0	4	0	0	0	18	0	1	4	0	0	0	0	0	0	5		
H/Tot	0	0	29	0	8	0	0	0	37	1	1	8	0	1	0	0	0	0	11		
06:00	0	0	20	0	5	0	0	0	25	0	0	8	0	0	0	0	0	0	8		
06:15	1	0	31	1	2	0	0	0	35	0	0	7	0	1	0	0	0	0	8		
06:30	0	0	38	0	4	0	0	0	42	0	0	12	0	0	1	0	0	0	13		
06:45	0	0	36	0	3	1	0	0	40	0	1	10	0	4	0	0	0	0	15		
H/Tot	1	0	125	1	14	1	0	0	142	0	1	37	0	5	1	0	0	0	44		
07:00	1	1	40	1	4	0	0	0	47	1	0	22	1	7	2	0	0	0	33		
07:15	0	1	49	0	8	1	0	1	60	0	0	14	0	6	0	0	0	0	20		
07:30	0	1	50	2	9	0	0	0	62	0	0	21	0	5	0	0	1	0	27		
07:45	1	0	66	0	6	3	0	2	78	1	0	23	0	13	2	0	1	0	40		
H/Tot	2	3	205	3	27	4	0	3	247	2	0	80	1	31	4	0	2	0	120		
08:00	1	0	65	0	9	0	0	1	76	0	0	38	0	7	4	0	0	0	49		
08:15	1	1	89	1	5	1	0	1	99	0	0	45	0	7	1	0	0	0	53		
08:30	0	0	68	1	7	1	0	0	77	0	0	63	0	15	0	0	1	0	79		
08:45	0	0	56	1	4	6	0	2	69	0	1	64	0	11	1	0	1	0	78		
H/Tot	2	1	278	3	25	8	0	4	321	0	1	210	0	40	6	0	2	0	259		
09:00	0	0	44	0	6	1	0	0	51	0	0	33	1	3	0	0	0	0	37		
09:15	0	0	49	0	7	2	0	1	59	0	0	32	0	6	2	0	0	0	40		
09:30	1	0	57	0	2	2	1	0	63	0	0	24	0	4	1	0	1	0	30		
09:45	0	0	47	1	7	1	0	1	57	0	0	35	0	9	1	0	1	0	46		
H/Tot	1	0	197	1	22	6	1	2	230	0	0	124	1	22	4	0	2	0	153		
10:00	0	0	47	0	11	0	0	0	58	0	0	34	0	8	2	0	0	0	44		
10:15	0	0	47	0	6	1	0	0	54	0	0	47	0	5	1	0	0	0	53		
10:30	1	2	50	0	10	2	1	1	67	0	2	36	0	3	0	0	1	0	42		
10:45	0	0	53	0	6	0	0	1	60	0	0	33	0	5	0	0	0	0	38		
H/Tot	1	2	197	0	33	3	1	2	239	0	2	150	0	21	3	0	1	0	177		
11:00	0	0	35	0	11	0	0	0	46	0	0	28	0	6	0	0	0	0	34		
11:15	1	0	37	0	3	0	0	1	42	0	1	36	0	4	0	0	0	1	42		

## Wyre Forest District Council

11:30	1	0	36	0	5	0	0	0	42	0	1	36	0	7	0	0	1	45
11:45	0	0	35	0	3	2	0	1	41	0	1	34	0	8	0	0	1	44
<b>H/Tot</b>	<b>2</b>	<b>0</b>	<b>143</b>	<b>0</b>	<b>22</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>171</b>	<b>0</b>	<b>3</b>	<b>134</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>165</b>
12:00	0	0	46	0	7	0	0	0	53	0	0	52	0	4	2	0	0	58
12:15	0	1	42	0	6	3	0	0	52	0	0	50	0	4	0	0	0	54
12:30	0	1	52	0	7	1	0	0	61	0	0	41	0	12	0	0	1	54
12:45	0	0	48	0	8	0	0	2	58	0	1	40	0	7	0	0	0	48
<b>H/Tot</b>	<b>0</b>	<b>2</b>	<b>188</b>	<b>0</b>	<b>28</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>224</b>	<b>0</b>	<b>1</b>	<b>183</b>	<b>0</b>	<b>27</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>214</b>
13:00	0	0	46	0	8	0	0	0	54	0	0	40	0	8	2	0	0	50
13:15	0	0	62	0	12	0	0	1	75	2	0	46	0	6	0	0	0	54
13:30	1	0	48	0	9	0	0	0	58	0	0	45	0	7	1	0	2	55
13:45	0	0	49	0	11	0	0	1	61	0	0	39	0	3	1	0	1	44
<b>H/Tot</b>	<b>1</b>	<b>0</b>	<b>205</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>248</b>	<b>2</b>	<b>0</b>	<b>170</b>	<b>0</b>	<b>24</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>203</b>
14:00	0	2	48	0	4	0	0	0	54	1	0	42	0	6	0	0	0	49
14:15	2	1	36	0	10	2	0	0	51	1	1	62	0	12	0	0	0	76
14:30	1	1	36	0	9	0	0	0	47	0	0	38	0	6	3	0	1	48
14:45	1	0	52	0	10	1	0	2	66	0	0	45	0	7	0	0	0	52
<b>H/Tot</b>	<b>4</b>	<b>4</b>	<b>172</b>	<b>0</b>	<b>33</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>218</b>	<b>2</b>	<b>1</b>	<b>187</b>	<b>0</b>	<b>31</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>225</b>
15:00	0	0	43	0	9	1	0	1	54	0	0	48	0	4	0	0	0	52
15:15	0	1	55	0	5	0	0	0	61	1	0	70	1	4	0	0	0	76
15:30	0	1	58	0	11	2	0	0	72	2	0	60	0	8	1	0	3	74
15:45	0	2	42	0	7	1	0	2	54	0	1	70	0	4	0	0	1	76
<b>H/Tot</b>	<b>0</b>	<b>4</b>	<b>198</b>	<b>0</b>	<b>32</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>241</b>	<b>3</b>	<b>1</b>	<b>248</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>278</b>
16:00	1	1	71	4	4	1	0	0	82	0	0	77	0	7	0	0	0	84
16:15	0	1	45	0	14	2	0	0	62	0	1	67	0	7	0	0	0	75
16:30	0	0	53	0	12	0	0	0	65	0	0	64	0	9	0	0	2	75
16:45	2	0	47	0	8	0	0	2	59	0	1	57	0	7	0	0	0	65
<b>H/Tot</b>	<b>3</b>	<b>2</b>	<b>216</b>	<b>4</b>	<b>38</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>268</b>	<b>0</b>	<b>2</b>	<b>265</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>299</b>
17:00	1	1	49	0	3	0	0	1	55	0	0	75	0	5	0	0	0	80
17:15	1	0	50	0	3	0	0	0	54	0	1	63	0	11	0	0	0	75
17:30	0	2	49	1	6	0	0	0	58	0	0	53	1	5	0	0	3	62
17:45	0	0	43	0	4	0	0	1	48	0	1	60	0	5	0	0	0	66
<b>H/Tot</b>	<b>2</b>	<b>3</b>	<b>191</b>	<b>1</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>215</b>	<b>0</b>	<b>2</b>	<b>251</b>	<b>1</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>283</b>
18:00	0	0	43	0	6	0	0	0	49	0	0	61	0	3	0	0	0	64
18:15	0	1	39	0	5	0	0	0	45	1	0	55	0	2	0	0	0	58
18:30	0	0	43	0	4	0	0	0	47	0	0	50	0	2	0	0	1	53
18:45	0	1	57	0	2	0	0	1	61	0	0	47	0	5	0	0	0	52
<b>H/Tot</b>	<b>0</b>	<b>2</b>	<b>182</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>202</b>	<b>1</b>	<b>0</b>	<b>213</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>227</b>
19:00	4	0	33	0	1	0	0	1	39	0	0	41	0	3	0	0	0	44
19:15	0	0	43	0	4	0	0	0	47	1	0	48	0	4	0	0	0	53
19:30	0	0	34	0	2	0	0	0	36	0	0	38	0	0	0	0	0	38
19:45	0	0	24	0	4	0	0	0	28	0	0	29	0	4	0	0	0	33
<b>H/Tot</b>	<b>4</b>	<b>0</b>	<b>134</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>150</b>	<b>1</b>	<b>0</b>	<b>156</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>
20:00	0	0	21	0	1	0	0	0	22	1	0	26	0	4	0	0	0	31
20:15	0	0	16	0	2	0	0	0	18	3	0	29	0	0	0	0	0	32
20:30	0	0	16	0	0	0	0	0	16	0	0	26	0	2	0	0	0	28
20:45	0	0	19	0	0	0	0	0	19	0	0	29	0	0	0	0	0	29
<b>H/Tot</b>	<b>0</b>	<b>0</b>	<b>72</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>4</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>
21:00	0	0	28	0	3	0	0	0	31	0	0	22	0	2	0	0	0	24
21:15	0	0	18	0	2	0	0	0	20	0	0	24	0	0	0	0	0	24
21:30	0	1	15	0	1	0	0	0	17	0	1	27	0	2	0	0	0	30
21:45	0	0	15	0	0	0	0	0	15	0	0	15	0	0	0	0	0	15
<b>H/Tot</b>	<b>0</b>	<b>1</b>	<b>76</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>1</b>	<b>88</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>93</b>
22:00	0	0	8	0	0	0	0	0	8	0	0	16	0	1	0	0	0	17
22:15	0	0	8	0	0	0	0	0	8	0	1	17	0	1	0	0	0	19
22:30	0	0	5	0	0	0	0	0	5	1	0	16	0	0	0	0	0	17
22:45	0	0	9	0	0	0	0	0	9	0	0	3	0	0	0	0	0	3
<b>H/Tot</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>1</b>	<b>52</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>
23:00	0	0	1	0	0	0	0	0	1	0	1	8	0	0	0	0	0	9
23:15	0	0	4	0	0	0	0	0	4	0	0	6	0	0	0	0	0	6
23:30	0	0	3	0	0	0	0	0	3	0	1	2	0	0	0	0	0	3
23:45	0	0	1	0	1	0	0	0	2	0	0	4	0	0	0	0	0	4
<b>H/Tot</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
<b>Total</b>	<b>23</b>	<b>24</b>	<b>2865</b>	<b>13</b>	<b>380</b>	<b>38</b>	<b>2</b>	<b>28</b>	<b>3373</b>	<b>17</b>	<b>19</b>	<b>2699</b>	<b>4</b>	<b>338</b>	<b>28</b>	<b>0</b>	<b>25</b>	<b>3130</b>
									<b>3350</b>									<b>3113</b>

## Wyre Forest District Council

 <b>TOTAL TRAFFIC SURVEYS LTD DATA COLLECTION</b>										<b>Job Title:</b> <b>Job Number:</b> <b>Survey Date:</b> <b>Survey Type:</b>				<b>Worcestershire Counts</b> <b>TTS-1529-Mar</b> <b>Tuesday 21st March 2023</b> <b>Manual Classified Counts</b>				
Site: 11																		
Location: A456 Coventry St, Kidderminster																		
<b>Northbound</b>										<b>Southbound</b>								
Time	PC	M C	Car	Taxi	LGV	OGV1	OGV2	PSV	Total	PC	M C	Car	Taxi	LGV	OGV1	OGV2	PSV	Total
00:00	0	0	7	0	1	1	1	0	10	0	0	7	0	0	0	0	0	7
00:15	0	0	5	0	0	0	0	0	5	1	0	6	0	1	2	0	0	10
00:30	0	0	3	0	0	1	0	0	4	0	0	5	0	0	0	1	0	6
00:45	0	0	5	0	1	1	3	0	10	0	0	7	0	0	0	1	0	8
<b>H/Tot</b>	0	0	20	0	2	3	4	0	29	1	0	25	0	1	2	2	0	31
01:00	0	0	3	0	2	0	1	1	7	0	0	2	0	0	0	0	0	2
01:15	0	0	6	0	0	0	0	0	6	0	0	10	0	0	0	2	0	12
01:30	0	0	7	0	0	1	1	0	9	0	0	4	0	1	0	0	0	5
01:45	0	0	4	0	0	1	0	0	5	0	0	3	0	1	2	2	0	8
<b>H/Tot</b>	0	0	20	0	2	2	2	1	27	0	0	19	0	2	2	4	0	27
02:00	0	0	5	0	1	1	0	0	7	0	0	2	0	1	0	1	0	4
02:15	0	0	6	0	0	1	0	0	7	0	0	5	0	0	0	0	0	5
02:30	0	0	1	0	1	0	0	0	2	0	0	2	0	0	0	0	0	2
02:45	0	0	1	0	0	0	1	0	2	0	0	2	0	0	0	1	0	3
<b>H/Tot</b>	0	0	13	0	2	2	1	0	18	0	0	11	0	1	0	2	0	14
03:00	0	0	2	0	1	0	1	0	4	0	0	2	0	0	0	0	0	2
03:15	0	0	4	0	0	0	4	0	8	1	0	3	0	1	0	1	0	6
03:30	0	0	1	1	0	0	3	0	5	0	0	1	0	1	0	1	0	3
03:45	0	0	2	0	0	0	1	0	3	0	0	3	0	1	0	0	0	4
<b>H/Tot</b>	0	0	9	1	1	0	9	0	20	1	0	9	0	3	0	2	0	15
04:00	0	0	9	0	3	0	0	0	12	0	0	4	0	1	1	1	0	7
04:15	0	0	11	0	1	1	0	0	13	0	0	6	0	0	1	2	0	9
04:30	0	0	9	0	4	0	0	0	13	0	0	4	0	2	2	3	0	11
04:45	0	0	14	0	5	0	2	0	21	0	0	10	0	3	0	0	0	13
<b>H/Tot</b>	0	0	43	0	13	1	2	0	59	0	0	24	0	6	4	6	0	40
05:00	0	0	22	0	2	1	5	0	30	0	1	7	0	4	0	2	0	14
05:15	0	0	23	0	8	0	3	0	34	1	0	15	0	3	5	2	0	26
05:30	1	0	25	0	4	1	2	0	33	0	0	26	0	8	1	0	0	35
05:45	0	0	40	0	11	1	0	0	52	0	1	40	0	5	1	0	0	47
<b>H/Tot</b>	1	0	110	0	25	3	10	0	149	1	2	88	0	20	7	4	0	122
06:00	1	1	72	0	22	6	1	0	103	0	0	19	0	5	0	0	0	24
06:15	0	0	81	0	19	2	2	0	104	0	1	41	0	8	1	1	0	52
06:30	0	0	99	0	24	2	4	0	129	1	1	39	1	13	8	2	0	65
06:45	0	0	97	1	32	4	3	0	137	1	0	61	3	21	4	2	0	92
<b>H/Tot</b>	1	1	349	1	97	14	10	0	473	2	2	160	4	47	13	5	0	233
07:00	0	0	131	2	30	1	1	0	165	0	0	57	1	17	2	1	0	78
07:15	0	1	124	1	27	5	3	1	162	0	0	81	0	26	6	4	0	117
07:30	0	0	134	2	22	3	3	1	165	0	1	99	1	23	7	6	1	138
07:45	0	1	137	4	26	5	5	0	178	0	0	130	2	28	6	2	0	168
<b>H/Tot</b>	0	2	526	9	105	14	12	2	670	0	1	367	4	94	21	13	1	501
08:00	0	0	134	5	25	3	5	1	173	1	0	112	1	22	6	4	2	148
08:15	0	1	121	4	17	6	5	0	154	0	0	138	3	17	1	0	0	159
08:30	1	0	104	3	20	2	1	0	131	0	2	137	1	30	4	4	0	178
08:45	0	1	103	2	21	5	2	1	135	0	0	150	2	18	2	2	0	174
<b>H/Tot</b>	1	2	462	14	83	16	13	2	593	1	2	537	7	87	13	10	2	659
09:00	0	0	125	6	22	0	4	1	158	0	0	149	0	23	2	0	1	175
09:15	0	0	108	1	26	6	6	0	147	0	0	107	0	13	4	5	0	129
09:30	0	0	100	7	22	5	5	1	140	0	0	133	0	23	3	1	0	160
09:45	0	0	114	1	17	7	9	0	148	0	0	126	0	21	4	1	0	152
<b>H/Tot</b>	0	0	447	15	87	18	24	2	593	0	0	515	0	80	13	7	1	616
10:00	0	0	110	3	20	5	5	0	143	0	0	128	2	29	2	2	1	164
10:15	0	0	104	2	17	4	3	0	130	0	0	126	0	24	7	4	3	164
10:30	0	0	89	2	16	1	5	0	113	0	0	129	0	19	0	6	0	154
10:45	0	0	113	3	14	3	2	0	135	0	1	134	1	18	4	4	0	163
<b>H/Tot</b>	0	0	416	10	67	13	15	0	521	0	2	517	3	90	13	16	4	645
11:00	0	0	112	4	26	6	2	0	150	0	0	119	0	22	1	4	0	146
11:15	0	0	119	2	20	2	9	0	152	0	0	115	0	30	5	3	0	153
11:30	0	0	114	4	17	8	2	0	145	0	0	111	0	23	4	3	0	141
11:45	0	0	127	5	25	7	3	0	167	0	1	145	0	20	5	3	0	174
<b>H/Tot</b>	0	0	472	15	88	23	16	0	614	0	1	490	0	95	15	13	0	614
12:00	1	1	122	7	24	0	4	0	159	0	0	112	2	16	0	2	1	133
12:15	0	0	121	5	23	1	4	0	154	0	0	132	0	19	5	2	0	158
12:30	0	0	127	2	21	3	7	0	160	0	0	145	3	19	3	0	1	171
12:45	0	0	134	3	26	3	1	2	169	0	2	124	2	11	1	2	0	142
<b>H/Tot</b>	1	1	504	17	94	7	16	2	642	0	2	513	7	65	9	6	2	604

Wyre Forest District Council Air Quality Action Plan 2025-2030 Technical Appendices

## Wyre Forest District Council

13:00	0	0	110	4	1	4	1	0	120	1	0	116	0	20	5	2	0	144
13:15	0	0	118	4	15	0	4	0	141	0	0	128	1	21	2	4	0	156
13:30	0	0	112	8	23	4	0	0	147	1	1	125	2	18	5	4	0	156
13:45	0	1	138	2	26	4	3	1	175	0	0	113	1	17	0	0	1	132
<b>H/Tot</b>	0	1	478	18	65	12	8	1	583	2	1	482	4	76	12	10	1	588
14:00	0	3	107	4	24	3	4	0	145	0	0	97	0	16	5	3	2	123
14:15	1	1	118	2	16	7	3	1	149	0	0	122	2	18	2	3	0	147
14:30	0	0	122	5	27	3	2	0	159	0	1	114	2	21	0	4	2	144
14:45	0	1	143	5	28	1	3	0	181	0	0	114	1	15	3	1	0	134
<b>H/Tot</b>	1	5	490	16	95	14	12	1	634	0	1	447	5	70	10	11	4	548
15:00	0	0	170	0	17	4	2	1	194	0	0	119	1	18	1	2	0	141
15:15	0	0	161	2	20	3	3	1	190	1	0	111	1	15	3	1	0	132
15:30	0	0	150	0	19	0	2	2	173	0	0	128	0	20	3	2	0	153
15:45	0	0	139	1	21	3	1	2	167	0	0	150	1	21	2	1	0	175
<b>H/Tot</b>	0	0	620	3	77	10	8	6	724	1	0	508	3	74	9	6	0	601
16:00	0	1	160	1	24	3	5	1	195	0	0	173	0	21	1	1	1	197
16:15	0	0	164	0	23	1	2	0	190	0	0	122	0	24	2	0	1	149
16:30	0	0	170	0	19	3	0	0	192	0	1	127	1	22	1	0	0	152
16:45	0	0	146	0	17	1	2	0	166	0	2	144	1	15	2	3	1	168
<b>H/Tot</b>	0	1	640	1	83	8	9	1	743	0	3	566	2	82	6	4	3	666
17:00	0	0	180	0	21	1	0	0	202	0	0	156	1	16	2	0	0	175
17:15	0	0	184	1	14	1	0	0	200	0	0	166	2	21	1	3	2	195
17:30	0	1	165	1	1	0	1	0	169	0	4	133	1	12	1	0	0	151
17:45	0	2	141	1	16	0	0	0	160	0	0	145	1	11	1	0	0	158
<b>H/Tot</b>	0	3	670	3	52	2	1	0	731	0	4	600	5	60	5	3	2	679
18:00	1	0	153	1	12	0	2	0	169	1	0	142	0	22	3	2	0	170
18:15	1	0	141	2	6	1	1	0	152	0	0	134	0	7	0	1	0	142
18:30	0	0	120	0	5	1	0	0	126	1	0	145	1	11	0	1	0	159
18:45	0	0	131	0	5	1	0	0	137	0	0	138	0	6	1	0	0	145
<b>H/Tot</b>	2	0	545	3	28	3	3	0	584	2	0	559	1	46	4	4	0	616
19:00	0	0	102	0	2	0	3	0	107	0	0	113	0	7	0	1	1	122
19:15	1	1	111	0	5	0	2	0	120	0	0	92	0	8	0	0	2	102
19:30	0	0	88	0	2	1	0	0	91	0	0	80	0	6	1	2	0	89
19:45	1	1	80	0	2	2	2	0	88	0	0	58	0	5	0	0	1	64
<b>H/Tot</b>	2	2	381	0	11	3	7	0	406	0	0	343	0	26	1	3	4	377
20:00	0	0	74	0	5	0	1	0	80	0	0	81	0	8	0	0	0	89
20:15	0	0	74	0	3	1	2	0	80	0	0	50	0	6	0	5	0	61
20:30	1	1	38	1	8	1	0	0	50	0	0	59	0	6	6	2	0	73
20:45	0	0	46	0	2	0	1	0	49	0	0	46	0	0	1	0	1	48
<b>H/Tot</b>	1	1	232	1	18	2	4	0	259	0	0	236	0	21	6	8	0	271
21:00	0	0	47	0	1	0	1	0	49	0	0	39	0	2	0	0	0	41
21:15	0	0	49	0	5	0	2	0	56	1	0	55	0	7	0	0	0	63
21:30	0	0	58	0	1	0	2	0	61	1	0	37	0	3	0	1	0	42
21:45	0	0	33	0	5	1	1	0	40	0	0	32	0	4	0	2	0	38
<b>H/Tot</b>	0	0	187	0	12	1	6	0	206	2	0	163	0	16	0	3	0	184
22:00	0	1	55	0	0	0	0	0	56	0	0	27	0	2	0	2	0	31
22:15	0	0	41	0	1	0	2	0	44	0	0	26	0	1	0	1	0	28
22:30	0	0	23	0	1	0	0	0	24	0	0	26	1	4	0	0	0	31
22:45	0	0	36	0	1	1	1	0	39	0	0	17	0	1	0	0	0	18
<b>H/Tot</b>	0	1	155	0	3	1	3	0	163	0	0	96	1	8	0	3	0	108
23:00	0	0	25	0	1	0	2	0	28	0	1	25	0	1	1	0	0	28
23:15	0	0	11	0	0	1	2	0	14	0	0	19	0	0	0	1	0	20
23:30	0	0	12	0	0	0	2	1	15	0	0	11	0	0	0	1	0	12
23:45	0	0	9	0	1	0	1	0	11	0	0	13	0	4	0	0	0	17
<b>H/Tot</b>	0	0	57	0	2	1	7	1	68	0	1	68	0	5	1	2	0	77
<b>Total</b>	10	20	7846	127	1112	173	202	19	9509	13	22	7343	46	1075	166	147	24	8836
									9499									8823

## Appendix I: Speed Data

Figure I.1 Location of Automatic Traffic Counter



## Wyre Forest District Council

**Figure I.2 Welch Gate, Bewdley - Eastbound**

*Virtual Week (1)		Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65
<--			1	2	3	4	5	6	7	8	9	10	11	10	15	20	25	30	35	40	45	50	55	60	65	
Mon	2977	1	15	1540	1320	86	4	1	5	0	1	4	166	771	1582	427	26	2	1	0	0	0	1	0	0	
Tue	3172	2	15	1631	1415	95	3	2	6	0	0	3	168	837	1647	488	28	2	1	0	0	0	0	0	0	
Wed	3137	1	16	1619	1368	99	2	1	6	0	0	5	135	802	1643	497	38	2	0	0	0	0	0	0	0	
Thu	3142	3	8	1725	1302	82	7	1	6	0	0	8	200	956	1527	429	29	1	0	0	0	0	0	0	0	
Fri	3139	3	23	1686	1323	72	4	1	6	0	0	21	392	931	1357	425	33	0	0	0	0	0	0	0	0	
Sat	2529	1	5	1376	1077	45	2	1	3	0	0	19	321	624	1207	353	22	2	0	0	0	0	0	0	0	
Sun	2598	3	25	1371	1178	11	1	2	2	0	1	4	200	681	1285	410	19	1	1	0	0	0	0	1	0	
--	20674	14	107	10948	8983	490	23	9	34	0	2	64	1582	5602	10248	3029	196	10	3	0	0	0	0	2	0	
Vehicles = 20674																										
Posted speed limit = 30 mph, Exceeding = 17 (0.082%), Mean Exceeding = 42.53 mph																										
Maximum = 86.8 mph, Minimum = 5.0 mph, Mean = 16.2 mph																										
85% Speed = 20.13 mph, 95% Speed = 22.26 mph, Median = 16.55 mph																										
10 mph Pace = 11 - 21, Number in Pace = 16518 (79.90%)																										
Variance = 16.43, Standard Deviation = 4.05 mph																										
* Grand Total	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	
<--		1	2	3	4	5	6	7	8	9	10	11	10	15	20	25	30	35	40	45	50	55	60	65		
--	20674	14	107	10948	8983	490	23	9	34	0	2	64	1582	5602	10248	3029	196	10	3	0	0	0	0	2	0	
Vehicles = 20674																										

**Figure I.3 Welch Gate, Bewdley – Westbound**

*Virtual Week (1)		Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65
<--			1	2	3	4	5	6	7	8	9	10	11	10	15	20	25	30	35	40	45	50	55	60	65	
Mon	2927	4	21	2217	604	64	1	0	4	0	1	1	32	443	1674	727	38	1	0	0	0	0	1	0	0	
Tue	3114	7	20	2346	663	71	3	1	3	0	0	0	39	523	1761	728	50	3	0	0	0	0	0	0	0	
Wed	3149	14	20	1282	645	70	2	0	2	0	0	2	64	506	1818	715	44	1	0	0	0	0	0	0	0	
Thu	3262	9	21	2513	651	55	4	0	6	0	0	3	68	654	1799	695	44	2	0	0	0	0	0	0	0	
Fri	3384	11	19	2620	667	47	3	0	7	0	1	9	121	797	1807	606	47	9	2	0	0	0	0	0	0	
Sat	3036	11	12	2380	586	36	2	1	6	1	0	1	177	827	1451	542	37	2	0	0	0	0	0	0	0	
Sun	2592	13	27	2058	480	9	0	2	3	0	0	0	74	498	1399	552	62	5	1	0	0	0	0	1	0	
--	21453	69	150	16517	4296	352	15	4	31	1	4	14	575	4242	11709	4575	322	23	3	0	0	0	0	2	0	
Vehicles = 21453																										
Posted speed limit = 30 mph, Exceeding = 30 (0.140%), Mean Exceeding = 37.81 mph																										
Maximum = 86.8 mph, Minimum = 5.1 mph, Mean = 17.5 mph																										
85% Speed = 20.92 mph, 95% Speed = 22.93 mph, Median = 17.67 mph																										
10 mph Pace = 12 - 22, Number in Pace = 18159 (84.65%)																										
Variance = 13.26, Standard Deviation = 3.64 mph																										
* Grand Total	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	
<--		1	2	3	4	5	6	7	8	9	10	11	5	10	15	20	25	30	35	40	45	50	55	60	65	
--	21453	69	150	16517	4296	352	15	4	31	1	4	14	575	4242	11709	4575	322	23	3	0	0	0	0	2	0	
Vehicles = 21453																										

**Figure I.4 Location of Automatic Traffic Counter – Coventry Street, Kidderminster**



## Wyre Forest District Council

**Figure I.5 Coventry Street, Kidderminster – Eastbound Summary**

*Virtual Week (1)		Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	Vbin 70	Vbin 75
<--			1	2	3	4	5	6	7	8	9	10	11	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Mon	9667	7	29	6519	2753	214	33	5	36	0	58	13	191	759	1823	3561	2825	447	56	4	0	0	0	0	0	0	0	0
Tue	9454	11	16	6140	2967	191	22	2	26	0	67	12	157	783	1638	3454	2887	489	39	4	1	0	0	0	0	0	0	0
Wed	9635	9	28	6382	2888	196	35	4	23	1	49	20	116	624	1729	3607	3016	495	40	3	1	0	0	2	0	0	0	0
Thu	9621	8	27	6516	2737	195	41	3	29	1	41	23	177	606	1610	3729	2930	512	46	5	2	2	0	0	0	1	0	0
Fri	10559	12	22	7840	2439	117	53	6	18	0	44	8	140	656	1873	4182	3156	503	41	5	0	1	0	0	0	2	0	0
JSat	9235	4	13	6812	2292	51	17	4	12	0	24	6	221	559	1375	3512	3120	406	30	5	3	0	2	1	0	0	0	0
JSun	7932	3	28	5318	2475	58	15	2	17	0	16	0	71	357	878	2740	3227	587	58	6	5	0	2	0	0	0	0	0
--	<b>66103</b>	<b>54</b>	<b>163</b>	<b>45527</b>	<b>18551</b>	<b>1022</b>	<b>216</b>	<b>26</b>	<b>161</b>	<b>2</b>	<b>299</b>	<b>82</b>	<b>1073</b>	<b>4344</b>	<b>10926</b>	<b>24785</b>	<b>21161</b>	<b>3439</b>	<b>310</b>	<b>32</b>	<b>12</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	
Vehicles	<b>66103</b>																											
Posted speed limit = 30 mph, Exceeding = 3814 (5.770%), Mean Exceeding = 32.30 mph																												
Maximum = 99.8 mph, Minimum = 5.0 mph, Mean = 23.0 mph																												
85% Speed = 27.85 mph, 95% Speed = 30.31 mph, Median = 23.71 mph																												
10 mph Pace = 19 - 29, Number in Pace = 46700 (70.65%)																												
Variance = 27.33, Standard Deviation = 5.23 mph																												
* Grand Total	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	Vbin 70	Vbin 75	
<--		1	2	3	4	5	6	7	8	9	10	11	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	
--	<b>66103</b>	<b>54</b>	<b>163</b>	<b>45527</b>	<b>18551</b>	<b>1022</b>	<b>216</b>	<b>26</b>	<b>161</b>	<b>2</b>	<b>299</b>	<b>82</b>	<b>1073</b>	<b>4344</b>	<b>10926</b>	<b>24785</b>	<b>21161</b>	<b>3439</b>	<b>310</b>	<b>32</b>	<b>12</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	
Vehicles	<b>66103</b>																											

**Figure I.6 Coventry Street, Kidderminster – Westbound Summary**

*Virtual Week (1)		Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	Vbin 70	Vbin 75
<--			1	2	3	4	5	6	7	8	9	10	11	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Mon	8979	22	35	5109	3459	196	60	18	12	1	40	27	830	1917	2098	2307	1433	346	38	7	0	0	0	0	0	0	2	0
Tue	8922	16	36	4673	3839	223	28	7	32	0	46	22	757	1774	2083	2430	1500	320	46	6	3	1	0	0	0	0	0	0
Wed	9125	10	55	4827	3885	212	43	9	25	3	35	21	802	1995	2158	2246	1502	366	41	7	2	2	1	1	0	0	0	0
Thu	9172	15	31	5174	3607	195	51	16	17	0	46	20	950	1858	1962	2427	1597	356	42	6	5	2	1	0	1	1	3	0
Fri	9948	14	36	6562	3121	122	35	6	19	2	21	10	997	2158	2034	2683	1615	384	65	6	4	0	0	0	0	0	2	0
JSat	9101	13	23	5452	3435	70	57	7	12	1	22	9	1098	1807	1475	2303	1862	479	60	8	6	0	1	0	0	0	0	0
JSun	7214	8	35	3756	3304	44	38	5	12	1	10	1	583	1074	1211	1826	1951	511	51	4	1	0	1	0	0	0	0	0
--	<b>62461</b>	<b>98</b>	<b>251</b>	<b>35553</b>	<b>24650</b>	<b>1062</b>	<b>312</b>	<b>68</b>	<b>129</b>	<b>8</b>	<b>220</b>	<b>110</b>	<b>6017</b>	<b>12583</b>	<b>13021</b>	<b>16222</b>	<b>11420</b>	<b>2762</b>	<b>343</b>	<b>44</b>	<b>21</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>7</b>		
Vehicles	<b>62461</b>																											
Posted speed limit = 30 mph, Exceeding = 3198 (5.120%), Mean Exceeding = 32.77 mph																												
Maximum = 99.8 mph, Minimum = 5.0 mph, Mean = 19.5 mph																												
85% Speed = 26.84 mph, 95% Speed = 30.09 mph, Median = 19.91 mph																												
10 mph Pace = 17 - 27, Number in Pace = 29902 (47.87%)																												
Variance = 47.78, Standard Deviation = 6.91 mph																												
* Grand Total	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Vbin 5	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 55	Vbin 60	Vbin 65	Vbin 70	Vbin 75	
<--		1	2	3	4	5	6	7	8	9	10	11	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	
--	<b>62461</b>	<b>98</b>	<b>251</b>	<b>35553</b>	<b>24650</b>	<b>1062</b>	<b>312</b>	<b>68</b>	<b>129</b>	<b>8</b>	<b>220</b>	<b>110</b>	<b>6017</b>	<b>12583</b>	<b>13021</b>	<b>16222</b>	<b>11420</b>	<b>2762</b>	<b>343</b>	<b>44</b>	<b>21</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>7</b>		
Vehicles	<b>62461</b>																											

# Appendix J: Emissions Factor Toolkit – Source Apportionment

**Figure J.1 EFT Input – Source Apportionment**

Primary Inputs		Pollutants	Selected	Standard Outputs		Selected	Additional Outputs		Selected				
Area	England (not London)	NO <sub>x</sub>	Y	Air Quality Modelling (g/km/s)			Breakdown by Vehicle		Y				
Year	2023	PM <sub>10</sub>		Emissions Rates (g/km)		Y	Source Apportionment		Y				
Traffic Format	Detailed Option 2	PM <sub>2.5</sub>		Annual Link Emissions			PM by Source						
<i>All must be selected</i>		CO <sub>2</sub>					Primary NO <sub>x</sub> Fraction						
							Export Outputs						
SourceID	Road Type	Traffic Flow	% Car	% Taxi (black cab)		% LGV	% Rigid HGV		% Artic HGV				
Coventry St Eastbound	Urban (not London)	9499	82.59816823	1.33698284		11.70649542	1.821244342		2.1265396				
Coventry St Westbound	Urban (not London)	8823	83.22566021	0.521364615		12.18406438	1.88144622		1.6660999				
Coventry St combined	Urban (not London)	18322	82.90033839	0.944220063		11.93646982	1.850234691		1.9048138				
Bewdley Eastbound	Urban (not London)	3350	85.52238806	0.388059701		11.34328358	1.134328358		0.0597014				
Bewdley Westbound	Urban (not London)	3313	86.70093158	0.128493415		10.85769354	0.899453903						
Bewdley combined	Urban (not London)	6463	86.09005106	0.263035742		11.10939192	1.021197586		0.0309453				
Advanced Options	Selected	Click the button to:											
Bespoke Base Fleets		 Run EFT											
Bespoke Euro Fleet	Y												
Fleet Projection Tool		 Clear Input Data											
% Bus and Coach	% Motorcycle	Speed(kph)	No of Hours	Link Length (km)	% Gradient	Flow Direction	% Load						
0.200021055	0.210548479	23	24										
0.272016321	0.249848294	19.5	24										
0.234690536	0.229232617	21.25	24										
0.835820896	0.71641791	16.2	24										
0.803083842	0.61034372	17.5	24										
0.820052607	0.6653257	16.85	24										

Figure J.2 Bespoke Euro Fleet – Source Apportionment

		OK																	
Populate with Defaults																			
Default Euro Proportions 2023 - England (not London)										User Euro Proportions 2023 - England (not London)									
Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6 d alt/c	Euro 6 d temp	Euro 6 d	Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4				
Conventional Petrol	-	-	-	0.02	0.10	0.23	0.31	0.16	0.19	Conventional Petrol	-	-	-	0.02	0.10				
Hybrid Petrol				0.00	0.02	0.11	0.23	0.21	0.43	Hybrid Petrol				0.00	0.02				
Plugin Hybrid Petrol				0.00	0.02	0.16	0.14	0.68		Plugin Hybrid Petrol				0.00					
Conventional Diesel	-	-	-	0.01	0.10	0.34	0.37	0.09	0.08	Conventional Diesel	-	-	-	0.01	0.10				
Hybrid Diesel				0.00	0.00	0.01	0.10	0.23	0.65	Hybrid Diesel				0.00	0.00				
LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_1	Euro 6_2	Euro 6_3	LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4				
Petrol LGV	-	-	-	0.03	0.08	0.12	0.07	0.21	0.50	Petrol LGV	-	-	-	0.03	0.08				
Diesel LGV	-	-	-	0.01	0.06	0.19	0.12	0.26	0.36	Diesel LGV	-	-	-	0.01	0.08				
Petrol Taxi	-	-	-	0.03	0.08	0.12	0.07	0.21	0.50	Petrol Taxi	-	-	-	0.03	0.08				
Diesel Taxi	-	-	-	0.01	0.06	0.19	0.12	0.26	0.36	Diesel Taxi	-	-	-	0.01	0.06				
Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V_EGR	Euro V_SCR	Euro VI	Euro II SCRPF	Euro III SCRPF	Euro IV SCRPF	Euro V SCRPF to EGR	Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V
Rigid HGVs	-	-	0.01	0.03	0.02	0.03	0.08	0.84	-	-	-	-	Rigid HGVs	-	-	0.01	0.03	0.02	-
Artic HGVs	-	-	0.00	0.00	0.00	0.01	0.03	0.96	-	-	-	-	Artic HGVs	-	-	0.00	0.00	0.00	-
Conventional Buses	-	-	0.01	0.03	0.04	0.05	0.15	0.72	-	-	-	-	Conventional Buses	-	-	-	-	-	0.06
Hybrid Buses						-	0.20	0.59	0.21				Hybrid Buses						-
Conventional Coaches	-	-	0.01	0.03	0.04	0.05	0.15	0.72	-	-	-	-	Conventional Coaches	-	-	0.01	0.03	0.04	-
Hybrid Coaches						-	0.20	0.59	0.21				Hybrid Coaches						-
Default Vehicle Size Classes 2023 - England (not London)										User Vehicle Size Class 2023 - England (not London)									
	<1400	1400-2000	>2000								<1400	1400-2000	>2000						
Petrol Car	0.59	0.32	0.09								Petrol Car	0.59	0.32	0.09					
Diesel Car	0.11	0.60	0.28								Diesel Car	0.11	0.60	0.28					
N1 (I)		N1 (II)	N1 (III)								N1 (I)	N1 (II)	N1 (III)						
Petrol LGV	0.17	0.21	0.62								Petrol LGV	0.17	0.21	0.62					
Diesel LGV	0.06	0.26	0.68								Diesel LGV	0.06	0.26	0.68					
3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	26-28 t	28-32 t	>32 t				3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	>26 t			
Rigid HGV	0.23	0.05	0.02	0.12	0.18	0.11	0.23	0.06			Rigid HGV	0.23	0.05	0.02	0.12	0.18			
	14-20 t	20-28 t	28-34 t	34-40 t	40-50 t						14-20 t	20-28 t	28-34 t	34-40 t	40-50 t				
Artic HGV	0.01	0.02	0.01	0.10	0.86						Artic HGV	0.01	0.02	0.01	0.10	0.86			
	Midi <=15 t	Standard 15-18 t	Articulated >18 t								Midi <=15 t	Standard 15-18 t	Articulated >18 t						
Buses	0.31	0.69	-								Buses	0.31	0.69	-					
	Standard <=18 t	Articulated >18 t									Standard <=18 t	Articulated >18 t							
Coaches	0.50	0.50									Coaches	0.50	0.50						

## Wyre Forest District Council

**Figure J.3 EFT Output – Source Apportionment**

Source Name	Pollutant Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)
Coventry St Eastbound	NOx	3,050.25512	2,550.18777	500.06735	257.15642	6.18826	1.4255
Coventry St Westbound	NOx	3,031.54512	2,516.96460	514.58053	249.71346	6.01415	1.3869
Coventry St combined	NOx	6,079.20471	5,065.71543	1,013.48927	506.84047	12.20074	2.8119
Bewdley Eastbound	NOx	1,177.53849	1,017.57774	159.96075	101.28703	2.44303	0.5641
Bewdley Westbound	NOx	1,108.87867	980.88246	127.99621	99.95493	2.40927	0.5560
Bewdley combined	NOx	2,216.79101	1,937.89621	278.89479	195.13797	4.70504	1.0861

Petrol Taxis (g/km)	Petrol Hybrid Taxis (g/km)	Diesel Taxis (g/km)	Electric Taxi (g/km)	Petrol LGVs (g/km)	Petrol Hybrid LGVs (g/km)	Petrol Plugin Hybrid LGVs (g/km)	Diesel LGVs (g/km)	Electric LGVs (g/km)	Rigid (g/km)
0.00918	0.72450	36.34625	-	2.17904	-	-	583.87674	-	20
0.00351	0.27830	13.72203	-	2.14998	-	-	588.75556	-	28
0.01284	1.01571	50.48562	-	4.32753	-	-	1,171.35932	-	54
0.00105	0.08355	4.07848	-	0.77765	-	-	218.99031	-	7
0.00034	0.02670	1.30711	-	0.72916	-	-	202.85252	-	5
0.00136	0.10792	5.27473	-	1.46225	-	-	409.19046	-	12

Conventional Buses (g/km)	Hybrid Buses (g/km)	Electric Buses (g/km)	Biogas Buses (g/km)	Conventional Coaches (g/km)	Hybrid Coaches (g/km)	Electric Coaches (g/km)	Biogas Coaches (g/km)	TfL Conventional Buses (g/km)	TfL Buses (g/km)
23.05699	0.50752	-	0.01603	16.43238	0.32409	-	0.00623	-	-
33.54532	0.73278	-	0.02024	24.03702	0.47769	-	0.00787	-	-
55.90373	1.22485	-	0.03627	39.88854	0.78950	-	0.01411	-	-
45.42018	0.99161	-	0.02362	33.22418	0.66574	-	0.00918	-	-
40.60782	0.88602	-	0.02244	29.39175	0.58706	-	0.00873	-	-
83.35863	1.81911	-	0.04471	60.62631	1.21291	-	0.01739	-	-

## Appendix K: Modelled Measures

### Measures supporting transition to Electric Vehicle Parc

**Figure K.1 Summary Forecast Data from NEVIS**

	Diesel			Petrol			Artic			Full Hybrid			Plug-In Hybrid	
	Petrol Cars (g/km)	Cars (g/km)	Taxis (g/km)	LGVs (g/km)	LGVs (g/km)	HGVs (g/km)	HGVs (g/km)	Buses/Coach es (g/km)	Motorcycle s (g/km)	Petrol Cars (g/km)				
2023 Q1 Wyre Forest	58.47%	35.18%	0.00%	3.58%	95.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.21%
2023 Q1 County	57.88%	34.97%	0.00%	3.66%	95.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.31%
2023 Avg	<b>58.17%</b>	<b>35.07%</b>	<b>0.00%</b>	<b>3.62%</b>	<b>95.11%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.26%</b>
2029 Low	49.85%	29.99%	0.00%	3.35%	74.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.41%
2029 Medium	45.02%	27.08%	0.00%	3.10%	69.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.11%
2029 High	40.81%	24.54%	0.00%	2.87%	64.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.45%

						Full		Plug-In						
						Hybrid	Petrol	Petrol	Battery	FCEV	E85			LPG
Full Hybrid Diesel Cars (g/km)	Battery EV Cars (g/km)	FCEV Cars (g/km)	E85 Bioethanol Cars (g/km)	LPG Cars (g/km)	LGVs (g/km)	EV LGVs (g/km)	LGVs (g/km)	EV LGVs (g/km)	LGVs (g/km)	Bioethanol LGVs (g/km)	LGVs (g/km)	LPG (g/km)		
0.00%	1.92%	0.00%	0.00%	3.23%	0.00%	0.07%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	2.18%	0.00%	0.00%	3.66%	0.00%	0.06%	1.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	<b>2.05%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.45%</b>	<b>0.00%</b>	<b>0.07%</b>	<b>1.04%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
0.00%	15.70%	0.00%	0.00%	2.05%	0.00%	3.33%	18.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	22.95%	0.00%	0.00%	1.85%	0.00%	0.00%	27.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	24.52%	0.00%	0.00%	1.68%	0.00%	5.06%	27.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

## Wyre Forest District Council

**Figure K.2 Vehicle Growth Factors, HGV Fleet Forecast, Local Taxi data**

									DfT avg increase in mil	
					Low	Medium	High		B Road	A Road
Vehicle Growth	2023	2029_L	2029_M	2029_H	Δ2023-202	Δ2023-202	Δ2023-2029		Δ2023-2029	
Cars Wyre Forest	60,797	63,161	63,301	63,167		3.89%	4.12%	3.90%		4.03%
LGVs Wyre Forest	9,669	11,194	11,189	11,186		15.77%	15.72%	15.69%		21.46%
Cars County	365,708	369,090	369,910	369,160		0.92%	1.15%	0.94%		Avg DfT vs Med Nevis
LGVs County	54,975	57,459	57,388	57,339		4.52%	4.39%	4.30%		
				Avg Cars		4.81%	5.27%	4.84%		4.65%
				Avg LGVs		10.15%	10.05%	9.99%		15.76%

			Taxis 2023 - Wyre Fo	Totals	%			
HGV EV 12/2023%	0.95%		HCVEH	DIESEL	43	100.0%	PHVEH	DIESEL
HGV Diesel 12/2023%	99.05%		HCVEH	ELECTR	0	0.0%	PHVEH	ELECTR
HGV EV 2029%	4.11%		HCVEH	HYBRID	0	0.0%	PHVEH	HYBRID
HGV Diesel 2029%	95.89%		HCVEH	LPG	0	0.0%		
			HCVEH	PETROL	0	0.0%	PHVEH	PETROL
					43			

## Wyre Forest District Council

**Figure K.3 Proportion of Vehicle Types for EFT (All Vehicles) including fleet growth by 2029 – Welch Gate, Bewdley**

Source Apportionment Volumes		Growth scenario 1		Growth scenario 2		For EFT All Vehicles	
Area	Welch Gate, Bewdley	AADT	Δ2023-2029 Medium NEVIS	AADT	Δ2023-2029 DfT avg increase in miles	Nevis Med	
AADT	6463					% Petrol Car	2630
Year	2023					% Petrol Hybrid Car	
<b>No. vehicles</b>		<b>No. vehicles</b>		<b>No. vehicles</b>		% Petrol Plugin Hybrid Car	181.
Cars	5564	Cars	5857.091	Cars	5788.229	% Diesel Car	1580
Taxis	17	Taxis	17	Taxis	17.6851	% Diesel Hybrid Car	
LGVs	718	LGVs	790.1935	LGVs	872.0828	% Electric Car	1342
HGVs - Rigids (OGV1)	66	HGVs	66	HGVs	66	% Petrol Taxi (black cab)	5.95
HGVs - Artics (OGV2)	2	Arctic	2	Arctic	2	% Petrol Hybrid Taxi (black cab)	0.43
Buses	53	Buses	53	Buses	53	% Diesel Taxi (black cab)	10.6
Motorcycles	43	Motorcycle	43	Motorcycle	43	% Electric Taxi (black cab)	
<b>% vehicles</b>		<b>% vehicles</b>		<b>% vehicles</b>		% Petrol LGV	24.4
Cars	0.860900511	Cars	0.857769	Cars	0.845985	% Petrol Hybrid LGV	
Taxis	0.002630357	Taxis	0.00249	Taxis	0.002585	% Petrol Plugin Hybrid LGV	
LGVs	0.111093919	LGVs	0.115724	LGVs	0.12746	% Diesel LGV	545.
HGVs - Rigids (OGV1)	0.010211976	HGVs - Rig	0.009666	HGVs - Rig	0.009646	% Electric LGV	217.
HGVs - Artics (OGV2)	0.000309454	HGVs - Art	0.000293	HGVs - Art	0.000292	% Rigid HGV (Diesel)	63.2
Buses	0.008200526	Buses	0.007762	Buses	0.007746	% Rigid HGV Electric	2.71
Motorcycles	0.006653257	Motorcycle	0.006297	Motorcycle	0.006285	% Artic HGV (Diesel)	1.91
						% Artic HGV Electric	0.08
						% Conventional Bus	
						% Motorcycle	
						% LPG Car	
						% LPG LGV	2.94

## Wyre Forest District Council

**Figure K.4 Proportion of Vehicle Types for EFT (All Vehicles) including fleet growth by 2029 – Coventry Street, Kidderminster**

Source Apportionment Volumes		Growth scenario 1		Growth scenario 2		For EFT All Vehicles	
Area	Coventry St Kiddy	Δ2023-2029 Medium NEVIS	Δ2023-2029 DfT avg increase in miles	Coventry Street	Nevis Med		
AADT	18322	AADT	19342	AADT	19548.84	% Petrol Car	7197
Year	2023					% Petrol Hybrid Car	
<b>No. vehicles</b>		<b>No. vehicles</b>		<b>No. vehicles</b>		% Petrol Plugin Hybrid Car	496.
Cars	15189	Cars	15989.1	Cars	16047.18	% Diesel Car	4329
Taxis	173	Taxis	173	Taxis	182.7745	% Diesel Hybrid Car	
LGVs	2187	LGVs	2406.899	LGVs	2545.887	% Electric Car	3668
HGVs - Rigids (OGV1)	339	HGVs	339	HGVs	339	% Petrol Taxi (black cab)	60.6
HGVs - Artics (OGV2)	349	Arctic	349	Arctic	349	% Petrol Hybrid Taxi (black cab)	4.43
Buses	43	Buses	43	Buses	43	% Diesel Taxi (black cab)	107.
Motorcycles	42	Motorcycle	42	Motorcycle	42	% Electric Taxi (black cab)	
<b>% vehicles</b>		<b>% vehicles</b>		<b>% vehicles</b>		% Petrol LGV	74.5
Cars	0.829003384	Cars	0.826652	Cars	0.820876	% Petrol Hybrid LGV	
Taxis	0.009442201	Taxis	0.008944	Taxis	0.00935	% Petrol Plugin Hybrid LGV	
LGVs	0.119364698	LGVs	0.124439	LGVs	0.130232	% Diesel LGV	1667
HGVs - Rigids (OGV1)	0.018502347	HGVs - Rig	0.017527	HGVs - Rig	0.017341	% Electric LGV	661.
HGVs - Artics (OGV2)	0.019048139	HGVs - Art	0.018044	HGVs - Art	0.017853	% Rigid HGV (Diesel)	325.
Buses	0.002346905	Buses	0.002223	Buses	0.0022	% Rigid HGV Electric	13.9
Motorcycles	0.002292326	Motorcycle	0.002171	Motorcycle	0.002148	% Artic HGV (Diesel)	334.
						% Artic HGV Electric	
						% Conventional Bus	
						% Motorcycle	
						% LPG Car	295.
						% LPG LGV	8.9

## Wyre Forest District Council

**Figure K.5 EFT Input – Measures supporting transition to Electric Vehicle Parc**

Area	England (not London)	NO <sub>x</sub>	Y	Air Quality Modelling (g/km/s)		Breakdown by Vehicle	Y	Bespoke Base Fleet					
Year	2029	PM <sub>10</sub>		Emissions Rates (g/km)	Y	Source Apportionment	N	Bespoke Euro Fleet					
Traffic Format	All Vehicle Types	PM <sub>2.5</sub>		Annual Link Emissions	Y	PM by Source		Fleet Projection To					
<i>All must be selected</i>		CO <sub>2</sub>					Primary NO <sub>2</sub> Fraction	Y					
							Export Outputs						
SourceID	Road Type	Traffic Flow	% Petrol Car	% Petrol Hybrid Car	% Petrol Plugin Hybrid Car	% Diesel Car	% Diesel Hybrid Car	% Electric Car					
Welch Gate NEVIS IV	Urban (not London)	6828.284348	38.61487905		0 2.665219128	23.22718646	0	19.682					
Welch Gate DFT	Urban (not London)	6841.9971	38.08440289		0 2.628605386	22.90810043	0	19.411					
Coventry Street NEV	Urban (not London)	19341.99868	37.21405443		0 2.568553348	22.38457824	0	18.968					
Coventry Street DFT	Urban (not London)	19548.8397	36.95404769		0 2.550587679	22.22818192	0	18.839					
% Electric Taxi (black cab)	% Petrol LGV	% Petrol Hybrid LGV	% Petrol Plugin Hybrid LGV	% Diesel LGV	% Electric LGV	% Rigid HGV (Diesel)	% Rigid HGV Electric	% Artic HGV (Diesel)	% Artic HGV Electric	% Conventional Bus			
0 0.35852691	0 0.39488873	0 0.38552838	0 0.40347626	0 7.99011613	3.180636546 0.926866784	0.03970105	0.028086872 0.001203062	0.02803058 0.001200651	0.02803058 0.001200651	0.77618 0.7746			
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 8.800474108	3.503216864 0.925009155	0.03962148	0.02803058 0.001200651	0.02803058 0.001200651	0.02803058 0.001200651	0.7746 0.7746			
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 8.59186964	3.420177396 1.680673413	0.07198931	1.7302508 0.074112884	1.7302508 0.074112884	0.22223 0.22223				
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 8.991855541	3.579400335 1.662890659	0.07122761	1.711943481 0.073328716	1.711943481 0.073328716	0.21996 0.21996				
% Hybrid Coach	% Electric Coach	% Biogas Coach	% Motorcycle	% Biomethane Car	% LPG Car	% Biomethane LGV	% LPG LGV	% Biodiesel Rigid HGV	% Biodiesel Artic HGV	% Biodiesel Bus	% Biomethane Bus	% Biodiesel Coach	Speed(kph)
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 1.58734897	0 0.043078326	0 0	0 0	0 0	0 0	0 0	0 0	0 0	20
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 1.56554259	0 0.047447332	0 0	0 0	0 0	0 0	0 0	0 0	0 0	20
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 1.52976501	0 0.046322651	0 0	0 0	0 0	0 0	0 0	0 0	0 0	20
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 1.51907686	0 0.048479156	0 0	0 0	0 0	0 0	0 0	0 0	0 0	20

## Wyre Forest District Council

**Figure K.6 EFT Output - Measures supporting transition to Electric Vehicle**

### Parc

Source Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)	Electric Cars (g/km)	Petrol Taxis (g/km)
Welch Gate NEVIS	940.18268	843.26619	96.91650	154.06217	-	1.05110	549.03389	-	-	0.15
Welch Gate DfT	945.66194	848.74544	96.91650	152.25086	-	1.03874	542.57892	-	-	0.15
Coventry Street NE	2,917.67735	2,361.67273	556.00462	420.56978	-	2.86937	1,498.79148	-	-	1.52
Coventry Street Df	2,949.44858	2,393.44395	556.00462	422.09745	-	2.87979	1,504.23565	-	-	1.61

Petrol Hybrid LGVs (g/km)	Petrol Plugin Hybrid LGVs (g/km)	Diesel LGVs (g/km)	Electric LGVs (g/km)	Rigid HGVs (g/km)	Rigid Electric HGVs (g/km)	Artic HGVs (g/km)	Artic Electric HGVs (g/km)	Conven tional Buses (g/km)	Hybrid Buses (g/km)	Electric Buses (g/km)	Biogas Buses (g/km)
-	-	130.79003	-	53.39747	-	1.41879	-	42.10024	-	-	-
-	-	144.34406	-	53.39747	-	1.41879	-	42.10024	-	-	-
-	-	398.38134	-	274.26881	-	247.57902	-	34.15680	-	-	-
-	-	421.38616	-	274.26881	-	247.57902	-	34.15680	-	-	-

TfL Conven tional Buses (g/km)	TfL Hybrid Buses (g/km)	TfL Electric Buses (g/km)	TfL Biogas Buses (g/km)	Motorcyc les (g/km)	Bioethan ol Cars (g/km)	LPG Cars (g/km)	Bioethan ol LGVs (g/km)	LPG LGVs (g/km)	Biodiesel Rigid HGVs (g/km)	Biodiesel Artic HGVs (g/km)	Biodies elane Buses (g/km)
-	-	-	-	1.00253	-	3.36390	-	0.06834	-	-	-
-	-	-	-	1.00253	-	3.32435	-	0.07543	-	-	-
-	-	-	-	0.97922	-	9.18301	-	0.20817	-	-	-
-	-	-	-	0.97922	-	9.21637	-	0.22020	-	-	-

## Wyre Forest District Council

**Figure K.7 Calculating Impact - Measures supporting transition to Electric Vehicle Parc**

### Source Apportionment

Source Name	Pollut	All Vehicles (All LDVs (g/kr	All HDVs (g/km)	Total Cars	Total Petrol	Total C	Total diesel	Total LGVs	Total Taxis	Total HGVs	Petrol Cars (g Petrol	Hyp Petrol
Bewdley combined	NOx	2,225.40110	1,937.89621	287.50488	1,520.06110	200.92913	1,319.13198	410.65271	5.38400	131.81574	195.13797	4.70504
Coventry St combined	NOx	6,085.76242	5,065.71543	1,020.04699	3,836.91681	521.85319	3,315.06362	1,175.68685	51.51417	915.63228	506.84047	12.20074

### % change 2023-2029

Source Name	Pollut	All Vehicles (All LDVs (g/kr	All HDVs (g/km)	Total Cars	Total Petrol	Total C	Total diesel	Total LGVs	Total Taxis	Total HGVs	Petrol Cars (g Petrol	Hyp Petrol
Welch Gate NEVIS Med		-57.75%	-56.49%	-66.29%	-53.46%	-22.80%	-58.38%	-67.83%	-50.95%	-58.41%	-21.05%	-100.00%
Welch Gate DfT		-57.51%	-56.20%	-66.29%	-54.00%	-23.71%	-58.87%	-64.49%	-48.98%	-58.41%	-21.98%	-100.00%
Average		<b>-57.63%</b>	<b>-56.34%</b>	<b>-66.29%</b>	<b>-53.73%</b>	<b>-23.26%</b>	<b>-58.62%</b>	<b>-66.16%</b>	<b>-49.97%</b>	<b>-58.41%</b>	<b>-21.51%</b>	<b>-100.00%</b>
Coventry Street NEVIS Med		-52.06%	-53.38%	-45.49%	-49.66%	-18.86%	-54.79%	-65.77%	-47.84%	-43.01%	-17.02%	-100.00%
Coventry Street DfT		-51.54%	-52.75%	-45.49%	-49.48%	-18.56%	-54.62%	-63.80%	-44.89%	-43.01%	-16.72%	-100.00%
Average		<b>-51.80%</b>	<b>-53.07%</b>	<b>-45.49%</b>	<b>-49.57%</b>	<b>-18.71%</b>	<b>-54.71%</b>	<b>-64.78%</b>	<b>-46.36%</b>	<b>-43.01%</b>	<b>-16.87%</b>	<b>-100.00%</b>

### Absolute Difference

Source Name	Pollut	All Vehicles (All LDVs (g/kr	All HDVs (g/km)	Total Cars	Total Petrol	Total C	Total diesel	Total LGVs	Total Taxis	Total HGVs	Petrol Cars (g Petrol	Hyp Petrol
Welch Gate NEVIS Med		-1285.21841	-1094.63003	-190.58839	-812.55004	-45.81586	-770.09808	-278.54070	-2.74342	-76.99948	-41.07581	-4.70504
Welch Gate DfT		-1279.73916	-1089.15077	-190.58839	-820.86823	-47.63952	-776.55306	-264.84967	-2.63700	-76.99948	-42.87111	-4.70504
Average		<b>-1282.47879</b>	<b>-1091.8904</b>	<b>-190.58838</b>	<b>-816.709134</b>	<b>-46.7276883</b>	<b>-773.325572</b>	<b>-271.695184</b>	<b>-2.69020813</b>	<b>-76.9994808</b>	<b>-41.9814594</b>	<b>-4.70504</b>
Coventry Street NEVIS Med		-3168.08507	-2704.04270	-464.04237	-1905.50317	-98.41404	-1816.27214	-773.27882	-24.64232	-393.78445	-86.27069	-12.20074
Coventry Street DfT		-3136.31385	-2672.27148	-464.04237	-1898.48755	-96.87595	-1810.82797	-750.04148	-23.12406	-393.78445	-84.74302	-12.20074
Average		<b>-3152.19946</b>	<b>-2688.15709</b>	<b>-464.042366</b>	<b>-1901.99536</b>	<b>-97.644991</b>	<b>-1813.55006</b>	<b>-761.66015</b>	<b>-23.8831913</b>	<b>-393.78447</b>	<b>-85.5068565</b>	<b>-12.2007</b>

### Source Apportionment

Petrol Taxis (g Petrol	Hyp	Diesel Tax	Electric Ta	Petrol LGV	Petrol Hyp	Petrol Plu	Diesel LGVs	Electric LGVs (g/km)	Rigid HGVs (g	Rigid Elec	Artic HGVs (
0.00136	0.10792	5.27473	-	1.46225	-	-	409.19046	-	129.19884	-	2.61690
0.01284	1.01571	50.48562	-	4.32753	-	-	1,171.35932	-	545.78324	-	369.84903

### % change 2023-2029

Petrol Taxis (g Petrol	Hyp	Diesel Tax	Electric Ta	Petrol LGV	Petrol Hyp	Petrol Plu	Diesel LGVs	Electric LGVs	Rigid HGVs (g	Rigid Elec	Artic HGVs (	
10975.83%	-94.92%	-52.89%	-	-14.27%	-	-	-68.04%	-	-	-58.67%	-	-45.78%
11422.19%	-94.72%	-50.99%	-	-5.38%	-	-	-64.72%	-	-	-58.67%	-	-45.78%
<b>11199.01%</b>	<b>-94.82%</b>	<b>-51.94%</b>	<b>0.00%</b>	<b>-9.82%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-66.38%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-58.67%</b>	<b>0.00%</b>	<b>-45.78%</b>
11800.15%	-94.51%	-49.91%	-	-11.76%	-	-	-65.99%	-	-	-49.75%	-	-33.06%
12472.51%	-94.20%	-47.08%	-	-6.67%	-	-	-64.03%	-	-	-49.75%	-	-33.06%
<b>12136.33%</b>	<b>-94.35%</b>	<b>-48.50%</b>	<b>0.00%</b>	<b>-9.21%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-65.01%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-49.75%</b>	<b>0.00%</b>	<b>-33.06%</b>

### Absolute Difference

Petrol Taxis (g Petrol	Hyp	Diesel Tax	Electric Ta	Petrol LGV	Petrol Hyp	Petrol Plu	Diesel LGVs	Electric LGVs	Rigid HGVs (g	Rigid Elec	Artic HGVs (	
0.14879	-0.10244	-2.78977	0.00000	-0.20862	0.00000	0.00000	-278.40043	0.00000	0.06834	-75.80137	-	-1.19811
0.15485	-0.10222	-2.68963	0.00000	-0.07870	0.00000	0.00000	-264.84640	0.00000	0.07543	-75.80137	-	-1.19811
<b>0.151819708</b>	<b>-0.10233</b>	<b>-2.7397</b>	<b>0</b>	<b>-0.14366</b>	<b>0</b>	<b>0</b>	<b>-271.62341</b>	<b>0</b>	<b>0.071886</b>	<b>-75.80136982</b>	<b>0</b>	<b>-1.19811</b>
1.51516	-0.95993	-25.19754	0.00000	-0.50902	0.00000	0.00000	-772.97798	0.00000	0.20817	-271.51443	-	-122.27000
1.60149	-0.95678	-23.76877	0.00000	-0.28852	0.00000	0.00000	-749.97316	0.00000	0.22020	-271.51443	-	-122.27000
<b>1.558321188</b>	<b>-0.95836</b>	<b>-24.4832</b>	<b>0</b>	<b>-0.39877</b>	<b>0</b>	<b>0</b>	<b>-761.47557</b>	<b>0</b>	<b>0.214185</b>	<b>-271.5144334</b>	<b>0</b>	<b>-122.27000</b>

### Source Apportionment

Conventional	Hybrid	Buses	Electric Buses	Biogas Buses	Conventional	Hybrid	Coaches	Electric Coaches	Biogas Coaches	Motorcycles	TfL Conven	TfL Hybrid	TfL Electri	TfL Biogas	Bioethanol	Bioethanol	Biodiesel	Biodiesel
91.96872	1.81911	-	0.04471	60.62631	1.21291	-	0.01739	1.79840	-	-	-	-	-	-	-	-	-	-
62.46145	1.22485	-	0.03627	39.88854	0.78950	-	0.01411	1.59761	-	-	-	-	-	-	-	-	-	-

### % change 2023-2029

Conventional	Hybrid	Buses	Electric Buses	Biogas Buses	Conventional	Hybrid	Coaches	Electric Coaches	Biogas Coaches	Motorcycles	TfL Conven	TfL Hybrid	TfL Electri	TfL Biogas	Bioethanol	Bioethanol	Biodiesel	Biodiesel
-54.22%	-100.00%	-	-100.00%	-100.00%	-100.00%	-	-100.00%	-	-100.00%	-44.25%	-	-	-	-	-	-	-	-
-54.22%	-100.00%	-	-100.00%	-100.00%	-100.00%	-	-100.00%	-	-100.00%	-44.25%	-	-	-	-	-	-	-	-
-54.22%	-100.00%	0.00%	-100.00%	-100.00%	-100.00%	0.00%	-100.00%	-	-100.00%	<b>-44.25%</b>	-	-	-	-	-	-	-	-
-45.32%	-100.00%	-	-100.00%	-100.00%	-100.00%	-	-100.00%	-	-100.00%	-38.71%	-	-	-	-	-	-	-	-
-45.32%	-100.00%	-	-100.00%	-100.00%	-100.00%	-	-100.00%	-	-100.00%	-38.71%	-	-	-	-	-	-	-	-
-45.32%	-100.00%	0.00%	-100.00%	-100.00%	-100.00%	0.00%	-100.00%	-	-100.00%	<b>-38.71%</b>	-	-	-	-	-	-	-	-

## Wyre Forest District Council

### Absolute Difference

Conventic	Hybrid Bu	Electric Bu	Biogas Bu	Conventic	Hybrid Co	Electric Co	Biogas Co	<b>Motorcycl</b>	TfL Conve	TfL Hybrid	TfL Electri	TfL Biogas	Bioethanc	Bioethanc	Biodiesel	Bi
-49.86848	-1.81911	0.00000	-0.04471	-60.62631	-1.21291	0.00000	-0.01739	<b>-0.79587</b>								
-49.86848	-1.81911	0.00000	-0.04471	-60.62631	-1.21291	0.00000	-0.01739	<b>-0.79587</b>								
-49.8685	<b>-1.81911</b>	0	<b>-0.04471</b>	<b>-60.6263</b>	<b>-1.21291</b>	0	<b>-0.01739</b>	<b>-0.79587</b>								
-28.30465	-1.22485	0.00000	-0.03627	-39.88854	-0.78950	0.00000	-0.01411	<b>-0.61839</b>								
-28.30465	-1.22485	0.00000	-0.03627	-39.88854	-0.78950	0.00000	-0.01411	<b>-0.61839</b>								
-28.3046	-1.22485	0	-0.03627	-39.8885	-0.7895	0	-0.01411	<b>-0.61839</b>								

## Wyre Forest District Council

**Table K.1 Summary of Impact - Measures supporting transition to Electric Vehicle Parc**

Total Cars and LGV Δ	Total Reduction	% Change 2023-29		
Welch Gate, Bewdley	-1088.40432	-48.91%		
Coventry Street Kidderminster	-2663.65551	-43.77%		
	Total/Road NOx Ratio	% Change 2023-29 Total NOx	Banding	Compliant
Total EV Δ Bewdley	91%	-44.32%	Very Large	Y
Total EV Δ Coventry St	78%	-34.17%	Very Large	Y

## Bus Fleet Improvements

Figure K.8 EFT Input – Bus Fleet Improvements

Primary Inputs		Pollutants		Selected		Standard Outputs		Selected		Additional Outputs		Sel	
Area	England (not London)	NO <sub>x</sub>		Y		Air Quality Modelling (g/km/s)				Breakdown by Vehicle			
Year	2029	PM <sub>10</sub>				Emissions Rates (g/km)		Y		Source Apportionment			
Traffic Format	Detailed Option 2	PM <sub>2.5</sub>				Annual Link Emissions				PM by Source			
All must be selected		CO <sub>2</sub>								Primary NO <sub>2</sub> Fraction			
										Export Outputs			
SourceID	Road Type	Traffic Flow		% Car		% Taxi (black cab)		% LGV		% Rigid HGV		% Art	
Coventry St Eastbou	Urban (not London)	9499		82.59816823		1.33698284		11.70649542		1.821244342		2.12	
Coventry St Westbo	Urban (not London)	8823		83.22566021		0.521364615		12.18406438		1.88144622		1.66	
Coventry St combined	Urban (not London)	18322		82.90033839		0.944220063		11.93646982		1.850234691		1.90	
Bewdley Eastbound	Urban (not London)	3350		85.52238806		0.388059701		11.34328358		1.134328358		0.09	
Bewdley Westbound	Urban (not London)	3313		86.70093158		0.128493415		10.85769354		0.899453903			
Bewdley combined	Urban (not London)	6463		86.09005106		0.263035742		11.10939192		1.021197586			
<b>Advanced Options</b>		Selected		Click the button to:									
Bespoke Base Fleets				 Run EFT									
Bespoke Euro Fleet		Y											
Fleet Projection Tool				 Clear Input Data									
% Bus and Coach	% Motorcycle	Speed(kph)		No of Hours		Link Length (km)		% Gradient		Flow Direction		% Load	
0.200021055	0.210548479	23		24									
0.272016321	0.249348294	19.5		24									
0.234690536	0.229232617	21.25		24									
0.835820896	0.71641791	16.2		24									
0.803083842	0.61034372	17.5		24									
0.820052607	0.6653257	16.85		24									

Figure K.9 Bespoke Euro Fleet – Bus Fleet Improvements

Populate with Defaults	OK																		
<b>Default Euro Proportions 2029 - England (not London)</b>																			
Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6 a/b/c	Euro 6 d temp	Euro 6 d	Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6		
Conventional Petrol	-	-	-	-	-	0.00	0.06	0.20	0.12	Hybrid Petrol	-	-	-	-	-	-	-		
Hybrid Petrol						-	0.00	0.02	0.09	0.10	0.79								
Plugin Hybrid Petrol						-	0.00	0.04	0.05	0.91									
Conventional Diesel	-	-	-	-	-	0.01	0.13	0.32	0.10	0.44	Conventional Diesel	-	-	-	-	-	-	0.01	
Hybrid Diesel						-	0.00	0.05	0.14	0.80	Hybrid Diesel								
LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6	Euro 6_d	Euro 6_3	LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6		
Petrol LGV	-	-	-	-	-	0.00	0.01	0.01	0.03	0.94	Petrol LGV	-	-	-	-	-	-	0.00	
Diesel LGV	-	-	-	-	-	0.00	0.05	0.05	0.11	0.79	Diesel LGV	-	-	-	-	-	-	0.00	
Petrol Taxi	-	-	-	-	-	0.00	0.01	0.01	0.03	0.94	Petrol Taxi	-	-	-	-	-	-	0.00	
Diesel Taxi	-	-	-	-	-	0.00	0.05	0.05	0.11	0.79	Diesel Taxi	-	-	-	-	-	-	0.00	
Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V_EGR	Euro VI	Euro II SCR6	Euro III SCR6	Euro IV SCR6	Euro V SCR6 to EGR	Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V	Euro VI
Rigid HGVs	-	-	-	-	-	0.00	0.01	0.97	-	-	-	Rigid HGVs	-	-	-	-	-	-	0.01
Artic HGVs	-	-	-	-	-	0.00	0.00	0.00	1.00	-	-	Artic HGVs	-	-	-	-	-	-	0.00
Conventional Buses	-	-	-	-	-	0.01	0.01	0.03	0.95	-	-	Conventional Buses	-	-	-	-	-	-	-
Hybrid Buses						-	0.18	0.54	0.27			Hybrid Buses							-
Conventional Coaches	-	-	-	-	-	0.00	0.01	0.03	0.95	-	-	Conventional Coaches	-	-	-	-	-	-	-
Hybrid Coaches						-	0.18	0.54	0.27			Hybrid Coaches							-

## Wyre Forest District Council

Default Vehicle Size Classes 2029 - England (not London)								
	<1400	1400-2000	>2000					
Petrol Car	0.59	0.32	0.09					
Diesel Car	0.11	0.60	0.28					
	N1 (I)	N1 (II)	N1 (III)					
Petrol LGV	0.17	0.21	0.62					
Diesel LGV	0.06	0.26	0.68					
	3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	26-32 t	>32 t	
Rigid HGV	0.23	0.05	0.02	0.12	0.18	0.11	0.23	0.06
	14-20 t	20-28 t	28-34 t	34-40 t	40-50 t			
Artic HGV	0.01	0.02	0.01	0.10	0.66			
	Midi <=15 t	Standard 15 - 18 t	Articulated >18 t					
Buses	0.31	0.69	-					
	Standard <=18 t	Articulated >18 t						
Coaches	0.50	0.50						

User Vehicle Size Class 2029 - England (not London)						
	<1400	1400-2000	>2000			
Petrol Car	0.59	0.32	0.09			
Diesel Car	0.11	0.60	0.28			
	N1 (I)	N1 (II)	N1 (III)			
Petrol LGV	0.17	0.21	0.62			
Diesel LGV	0.06	0.26	0.68			
	3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	26-
Rigid HGV	0.23	0.05	0.02	0.12	0.18	
	14-20 t	20-28 t	28-34 t	34-40 t	40-50 t	
Artic HGV	0.01	0.02	0.01	0.10	0.86	
	Midi <=15 t	Standard 15 - 18 t	Articulated >18 t			
Buses	0.31	0.69	-			
	Standard <=18 t	Articulated >18 t				
Coaches	0.50	0.50				

## Wyre Forest District Council

**Figure K.10 EFT Output – Bus Fleet Improvements**

Source Name	Pollutant Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)		
Coventry St Eastbound	NOx	1,428.36592	1,152.92309	275.44283	213.68471	9.66846	3.44833		
Coventry St Westbound	NOx	1,419.40063	1,141.13550	278.26513	207.41678	9.38628	3.34863		
Coventry St combined	NOx	2,846.87959	2,293.15500	553.72459	421.03147	19.05152	6.79583		
Bewdley Eastbound	NOx	522.44067	461.85816	60.58251	84.17229	3.80972	1.35951		
Bewdley Westbound	NOx	492.16515	446.75734	45.40782	83.03970	3.75819	1.34103		
Bewdley combined	NOx	983.60253	881.04667	102.55586	162.13679	7.33820	2.61863		
Petrol Taxis (g/km)	Petrol Hybrid Taxis (g/km)	Diesel Taxis (g/km)	Electric Taxi (g/km)	Petrol LGVs (g/km)	Petrol Hybrid LGVs (g/km)	Petrol Plugin Hybrid LGVs (g/km)	Diesel LGVs (g/km)	Electric LGVs (g/km)	Rigid (g/km)
0.00053	0.93129	4.81159	-	1.84895	-	-	243.03820	-	13
0.00020	0.35774	1.81427	-	1.82170	-	-	244.76783	-	14
0.00075	1.30562	6.67833	-	3.66914	-	-	487.21677	-	27
0.00006	0.10740	0.53927	-	0.65839	-	-	91.04753	-	4
0.00002	0.03432	0.17279	-	0.61748	-	-	84.32068	-	2
0.00008	0.13872	0.69735	-	1.23812	-	-	170.10185	-	6
Conventional Buses (g/km)	Hybrid Buses (g/km)	Electric Buses (g/km)	Biogas Buses (g/km)	Conventional Coaches (g/km)	Hybrid Coaches (g/km)	Electric Coaches (g/km)	Biogas Coaches (g/km)	TfL Conventional Buses (g/km)	TfL Hybrid Buses (g/km)
4.85437	0.02120	-	0.00758	3.83700	0.01675	-	0.00295	-	-
7.06427	0.03085	-	0.00957	5.58418	0.02438	-	0.00372	-	-
11.77703	0.05143	-	0.01715	9.29698	0.04060	-	0.00667	-	-
9.54533	0.04168	-	0.01117	7.68350	0.03355	-	0.00434	-	-
8.54015	0.03729	-	0.01061	6.80186	0.02970	-	0.00413	-	-
17.52320	0.07652	-	0.02114	14.02066	0.06122	-	0.00822	-	-

## Wyre Forest District Council

**Figure K.11 Calculating Impact – Bus Fleet Improvements**

Welch Gate Bewdley Combined										
Source Name	Pollutant Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Total Buses	Petrol Cars (g/km)	Diesel Cars (g/km)	Hybrid Cars	Electric Cars (g/km)	
Source Apportionment	NOx	2216.791008	1937.896213	278.8947949	147.07906	195.13				
2029 Forecast	NOx	983.60253	881.04667	102.55586	31.71095628	162.				
% diff		-56%	-55%	-63%	-78%					
Coventry St combined										
Source Name	Pollutant Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Total Buses	Petrol Cars (g/km)	Diesel Cars (g/km)	Hybrid Cars	Electric Cars (g/km)	
Source Apportionment	NOx	6,079.20471	5,065.71543	1,013.48927	97.85700	506.				
2029 Forecast	NOx	2,846.87959	2,293.15500	553.72459	21.18984	421.				
% diff		-53%	-55%	-45%	-78%					
Welch Gate Bewdley Combined										
Diesel Cars (g/km)	Diesel Hybrid Cars	Electric Cars (g/km)	Petrol Taxis	Petrol Hyb	Diesel Tax	Electric Ta	Petrol LGV	Petrol Hyt	Petrol Plu	Diesel LGV: Ele
1310.705003	8.426972651	0	0.00135565	0.10792	5.274726	0	1.462247	0	0	409.19046
526.84451	8.85470	-	0.00008	0.13872	0.69735	-	1.23812	-	-	170.10185
-60%	5%	0%	-94%	29%	-87%	0%	-15%	0%	0%	-58%
Coventry St combined										
Diesel Cars (g/km)	Diesel Hybrid Cars	Electric Cars (g/km)	Petrol Taxis	Petrol Hyb	Diesel Tax	Electric Ta	Petrol LGV	Petrol Hyt	Petrol Plu	Diesel LGV: Ele
3,293.88328	21.18034	-	0.01284	1.01571	50.48562	-	4.32753	-	-	#####
1,324.18186	22.25539	-	0.00075	1.30562	6.67833	-	3.66914	-	-	487.21677
-60%	5%	0%	-94%	29%	-87%	0%	-15%	0%	0%	-58%
Welch Gate Bewdley Combined										
Conventional	Hybrid Bu	Electric Bu	Biogas Bu	Conventional C	Hybrid Co	Electric Cc	Biogas Co	TfL Conve	TfL Hybrid T	
83.3586336	1.819106	0	0.044706	60.62631185	1.212912	0	0.017386	0	0	
17.52320	0.07652	-	0.02114	14.02066	0.06122	-	0.00822	-	-	
-79%	-96%	0%	-53%	-77%	-95%	0%	-53%	0%	0%	
Coventry St combined										
Conventional	Hybrid Bu	Electric Bu	Biogas Bu	Conventional C	Hybrid Co	Electric Cc	Biogas Co	TfL Conve	TfL Hybrid T	
55.90373	1.22485	-	0.03627	39.88854	0.78950	-	0.01411	-	-	
11.77703	0.05143	-	0.01715	9.29698	0.04060	-	0.00667	-	-	
-79%	-96%	0%	-53%	-77%	-95%	0%	-53%	0%	0%	

**Table K.2 Summary of Impact – Bus Fleet Improvements**

Total Bus Δ	Total Reduction	% Change 2023-29	Banding	Compliant
Welch Gate, Bewdley	-115.36810	-5.20%		
Coventry Street Kidderminster	-76.66715	-1.26%		
Total/Road NOx Ratio	Total NOx	% Change 2023-29 Total NOx	Banding	Compliant
Welch Gate, Bewdley	91%	-4.72%	Small	N
Coventry Street Kidderminster	78%	-0.98%	Small	N



## Bus Service Improvement Plan

Figure K.12 EFT Input - Bus Service Improvement Plan

Primary Inputs		Pollutants		Selected	Standard Outputs		Selected	Addit...
Area	England (not London)	NO <sub>x</sub>		Y	Air Quality Modelling (g/km/s)			Breakd...
Year	2023	PM <sub>10</sub>			Emissions Rates (g/km)		Y	Source...
Traffic Format	Detailed Option 2	PM <sub>2.5</sub>			Annual Link Emissions			PM by...
<i>All must be selected</i>		CO <sub>2</sub>						Primar...
								Export
SourceID	Road Type	Traffic Flow		% Car	% Taxi (black cab)		% LGV	
Bewdley	Urban (not London)	6431.2852		86.02145649	0.264332858		11.16417602	
Coventry St	Urban (not London)	18235.4227		82.81915341	0.948702988		11.99314124	
Advanced Options	Selected	Click the button to:  <b>Run EFT</b>   <b>Clear Input Data</b>						
% Bus and Coach	% Motorcycle	Speed(kph)		No of Hours		Link Length (km)	% Gradient	Flow Direction
0.824096558	0.668606642	16.85		24				
0.235804789	0.230320957	21.25		24				

Figure K.13 Bespoke Euro Fleet - Bus Service Improvement Plan

Populate with Defaults		OK																											
<b>Default Euro Proportions 2023 - England (not London)</b>																													
Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_a/b/c	Euro 6_d temp	Euro 6_d	Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_a/b/c	Euro 6_d temp	Euro 6_d	Cars	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_a/b/c	Euro 6_d temp	Euro 6_d
Conventional Petrol	-	-	-	0.02	0.10	0.23	0.31	0.16	0.19	Conventional Petrol	-	-	-	-	-	-	0.02	0.10	0.19	Conventional Petrol	-	-	-	-	-	-	0.02	0.10	0.19
Hybrid Petrol				0.00	0.02	0.11	0.23	0.21	0.43	Hybrid Petrol							0.00	0.02	0.43	Hybrid Petrol							0.00	0.02	0.43
Plugin Hybrid Petrol				0.00	0.02	0.16	0.14	0.14	0.68	Plugin Hybrid Petrol							0.00	0.02	0.68	Plugin Hybrid Petrol							0.00	0.02	0.68
Conventional Diesel	-	-	-	0.01	0.10	0.34	0.37	0.09	0.08	Conventional Diesel	-	-	-	-	-	-	0.01	0.10	0.08	Conventional Diesel	-	-	-	-	-	-	0.01	0.10	0.08
Hybrid Diesel				0.00	0.00	0.01	0.10	0.23	0.65	Hybrid Diesel							0.00	0.00	0.65	Hybrid Diesel							0.00	0.00	0.65
LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_1	Euro 6_2	Euro 6_3	LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_1	Euro 6_2	Euro 6_3	LGVs	Pre-Euro 1	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6_1	Euro 6_2	Euro 6_3
Petrol LGV	-	-	-	0.03	0.08	0.12	0.07	0.21	0.50	Petrol LGV	-	-	-	-	-	-	0.03	0.08	0.50	Petrol LGV	-	-	-	-	-	-	0.03	0.08	0.50
Diesel LGV				0.01	0.06	0.19	0.12	0.26	0.36	Diesel LGV							0.01	0.06	0.36	Diesel LGV							0.01	0.06	0.36
Petrol Taxi	-	-	-	0.03	0.08	0.12	0.07	0.21	0.50	Petrol Taxi	-	-	-	-	-	-	0.03	0.08	0.50	Petrol Taxi	-	-	-	-	-	-	0.03	0.08	0.50
Diesel Taxi	-	-	-	0.01	0.06	0.19	0.12	0.26	0.36	Diesel Taxi	-	-	-	-	-	-	0.01	0.06	0.36	Diesel Taxi	-	-	-	-	-	-	0.01	0.06	0.36
Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V_BER	Euro V_SCRR	Euro VI	Euro II SCRRF	Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V	Euro II SCRRF	Euro III SCRRF	Euro IV SCRRF to EGR	Heavy Duty Vehicles	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Euro V	Euro II SCRRF	Euro III SCRRF	Euro IV SCRRF to EGR
Rigid HGVs	-	-	-	0.01	0.03	0.02	0.03	0.08	0.84	Rigid HGVs	-	-	-	-	-	-	-	-	-	Rigid HGVs	-	-	-	-	-	-	0.01	0.03	0.84
Artic HGVs	-	-	-	0.00	0.00	0.01	0.03	0.96	-	Artic HGVs	-	-	-	-	-	-	-	-	-	Artic HGVs	-	-	-	-	-	-	0.00	0.00	0.96
Conventional Buses	-	-	-	0.01	0.03	0.04	0.05	0.15	0.72	Conventional Buses	-	-	-	-	-	-	-	-	-	Conventional Buses	-	-	-	-	-	-	-	-	0.06
Hybrid Buses				0.00	0.00	0.01	0.02	0.20	0.59	Hybrid Buses							0.00	0.00	0.59	Hybrid Buses							-	-	-
Conventional Coaches	-	-	-	0.01	0.03	0.04	0.05	0.15	0.72	Conventional Coaches	-	-	-	-	-	-	-	-	-	Conventional Coaches	-	-	-	-	-	-	0.01	0.03	0.72
Hybrid Coaches				0.00	0.00	0.01	0.02	0.20	0.59	Hybrid Coaches							0.00	0.00	0.59	Hybrid Coaches							-	-	-

## Wyre Forest District Council

Default Vehicle Size Classes 2023 - England (not London)								
	<1400	1400-2000	>2000					
Petrol Car	0.59	0.32	0.09					
Diesel Car	0.11	0.60	0.28					
	N1 (I)	N1 (II)	N1 (III)					
Petrol LGV	0.17	0.21	0.62					
Diesel LGV	0.06	0.26	0.68					
	3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	26-32 t	>32 t	
Rigid HGV	0.23	0.05	0.02	0.12	0.18	0.11	0.23	0.06
	14-20 t	20-28 t	28-34 t	34-40 t	40-50 t			
Artic HGV	0.01	0.02	0.01	0.10	0.66			
	Midi <=15 t	Standard 15 - 18 t	Articulated >18 t					
Buses	0.31	0.69	-					
	Standard <=18 t	Articulated >18 t						
Coaches	0.50	0.50						

User Vehicle Size Class 2023 - England (not London)						
	<1400	1400-2000	>2000			
Petrol Car	0.59	0.32	0.09			
Diesel Car	0.11	0.60	0.28			
	N1 (I)	N1 (II)	N1 (III)			
Petrol LGV	0.17	0.21	0.62			
Diesel LGV	0.06	0.26	0.68			
	3.5-7.5 t	7.5-12 t	12-14 t	14-20 t	20-26 t	26-
Rigid HGV	0.23	0.05	0.02	0.12	0.18	
	14-20 t	20-28 t	28-34 t	34-40 t	40-50 t	
Artic HGV	0.01	0.02	0.01	0.10	0.66	
	Midi <=15 t	Standard 15 - 18 t	Articulated >18 t			
Buses	0.31	0.69	-			
	Standard <=18 t	Articulated >18 t				
Coaches	0.50	0.50				

## Wyre Forest District Council

**Figure K.14 EFT Output - Bus Service Improvement Plan**

Source Name	Pollutant Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)	Electric Cars (g/km)
Bewdley	NOx	2,208.12666	1,929.23186	278.89479	194.02569	4.67822	1.07992	1,303.23398	8.37894	
Coventry St	NOx	6,057.33428	5,043.84501	1,013.48927	503.95148	12.13120	2.79595	3,275.10814	21.05961	
Petrol LGVs (g/km)	Petrol Hybrid LGVs (g/km)	Petrol Plugin Hybrid LGVs (g/km)	Diesel LGVs (g/km)	Electric LGVs (g/km)	Rigid HGVs (g/km)	Rigid Electric HGVs (g/km)	Artic HGVs (g/km)	Artic HGVs (g/km)		
1.46225	-	-	409.19046	-	129.19884	-	2.61690			
4.32753	-	-	1,171.35932	-	545.78324	-	369.84903			
Electric Buses (g/km)	Biogas Buses (g/km)	Conventional Coaches (g/km)	Hybrid Coaches (g/km)	Electric Coaches (g/km)	Biogas Coaches (g/km)	TfL Conventional Buses (g/km)	TfL Hybrid Buses (g/km)			
-	0.04471	60.62631	1.21291	-	0.01739	-	-			
-	0.03627	39.88854	0.78950	-	0.01411	-	-			

## Wyre Forest District Council

**Figure K.15 Calculating Impact - Bus Service Improvement Plan**

Welch Gate Bewdley Combined											
Source Name		Pollut	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Total Cars	Petrol Cars (g/				
Source Apportionment		NOx	2216.791008	1937.896213	278.8947949	1,520.06110	195.1379				
EfT Less cars (BSIP)		NOx	2208.126659	1929.231864	278.8947949	1,511.39675	194.0256				
			-0.39%	-0.45%	0.00%	-0.57%	-0.				
Coventry St combined											
Source Name		Pollut	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Total Cars	Petrol Cars (g/				
Source Apportionment		NOx	6,079.20471	5,065.71543	1,013.48927	3,836.91681	506.84				
EfT Less cars (BSIP)		NOx	6057.33428	5043.845007	1013.489273	3,815.04638	503.9514				
			-0.36%	-0.43%	0.00%	-0.57%	-0.				
Welch Gate Bewdley Combined											
Diesel Cars (g/km)	Diesel Hybrid Cars	Electric Cars (g/	Petrol Taxis	Petrol Hybri	Diesel Tax	Electric Ta	Petrol LGVs	Petrol Hy	Petrol P		
1310.705003	8.426972651	0	0.00135565	0.10792031	5.274726	0	1.46224713	0			
1303.233984	8.378938907	0	0.00135565	0.10792031	5.274726	0	1.46224713	0			
-0.57%	-0.57%		0.00%	0.00%	0.00%		0.00%				
Coventry St combined											
Diesel Cars (g/km)	Diesel Hybrid Cars	Electric Cars (g/	Petrol Taxis	Petrol Hybri	Diesel Tax	Electric Ta	Petrol LGVs	Petrol Hy	Petrol P		
3,293.88328	21.18034	-	0.01284	1.01571	50.48562	-	4.32753	-			
3275.108143	21.05961306	0	0.01284013	1.01571002	50.48562	0	4.3275341	0			
-0.57%	-0.57%		0.00%	0.00%	0.00%		0.00%				
Welch Gate Bewdley Combined											
Artic HGVs (	Artic Elect	Conventiona	Hybrid Bu	Electric Bu	Biogas Bu	Conventional C	Hybrid Co	Electric Cc	Biogas Co	TfL Conve	TfL H
2.61690191	0	83.3586336	1.819106	0	0.044706	60.62631185	1.212912	0	0.017386	0	
2.61690191	0	83.3586336	1.819106	0	0.044706	60.62631185	1.212912	0	0.017386	0	
0.00%		0.00%	0.00%		0.00%	0.00%	0.00%		0.00%		
Coventry St combined											
Artic HGVs (	Artic Elect	Conventiona	Hybrid Bu	Electric Bu	Biogas Bu	Conventional C	Hybrid Co	Electric Cc	Biogas Co	TfL Conve	TfL H
369.84903	-	55.90373	1.22485	-	0.03627	39.88854	0.78950	-	0.01411	-	
369.849031	0	55.90372821	1.224851	0	0.036271	39.88853802	0.789504	0	0.014105	0	
0.00%		0.00%	0.00%		0.00%	0.00%	0.00%		0.00%		

**Table K.3 Summary of Impact - Bus Service Improvement Plan**

Total BSIP Δ		Total Reduction		% Change 2023-29			
Welch Gate, Bewdley		-8.66435		-0.39%			
Coventry Street Kidderminster		-21.87043		-0.36%			
		Total/Road NOx Ratio		% Change 2023-29 Total NOx	Banding	Compliant	
Welch Gate, Bewdley		91%		-0.35%	Small	N	
Coventry Street Kidderminster		78%		-0.28%	Small	N	

