



Worcestershire Streetworks Permit Scheme

Year 1 Evaluation Report
February 2018

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Service Area:	Network Control
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Authors:	Richard Pelham, Technical Consultant Jason Setford-Smith, Scheme Consultant
Project Lead:	Ed Dursley, Events & Open Highway Network Manager
SRO:	S. R. Everest, Network Control Manager
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1 EXECUTIVE SUMMARY

The Worcestershire County Council Permit Scheme (WPS) was introduced on 21st March 2016 and completed its first year of operation in April 2017. The purpose of this report is to evaluate the Permit Scheme in respect to these successes and give consideration to the fee structure, the costs and benefits of operating the scheme and whether the permit scheme is meeting key performance indicators where these are set out in the Guidance.

The Permit Scheme developed during 2015 and is a Common Scheme; part of the West and Shires Permit Scheme which had a strong influence over the scheme designed.

Roadworks are a necessity to enable Utilities and highways works to be carried out in order to renew, improve, maintain and install infrastructure. As these works take up valuable road space it is important that the impact is minimized, as they can create disruption and delay.

The Permit Scheme is not intended to prevent activities necessary for the maintenance or improvement of the road network or the services running underneath it. It is designed to make available the necessary resources to achieve an appropriate balance between the interests of the various parties and where possible, bring about effective co-ordination between all the different competing interests.

This is a first-year evaluation and there are a wide range of indicators and measures that the industry has been discussing and agreeing that should be reported on. Some of these are possible to report on and some require further work or system changes to prepare. This evaluation identifies all the indicators and measures agreed by the industry, through various representative groups whether data is available currently or not.

Over the coming years, more and more data will be available and can be analyzed along with benchmarking data from other Permit Schemes. This will allow the Worcestershire County Council Permit Scheme to continuously improve and understand the areas it is efficient and effective at and aspects that could be considered for change.

Although some data is not available currently, the requirement and format has been documented in this evaluation so that it can be identified easily and worked on.

When the Permit Scheme was being developed a Benefit to Cost Ratio was prepared using predicted costs and volumes of applications. Now there are actual costs and volumes, this has been rerun using the same network data but a more detailed methodology and the change is shown in Table 64. This indicates that the Permit Scheme is more beneficial to society than originally anticipated due to lower than anticipated costs and revenue.

The Benefit to Cost Ratio for the opening year was 10.23:1 which is better than the 6.25:1 which was based on anticipated Utility volumes and costs.

This indicates the Permit Scheme has been beneficial to society even though the time and resources available to co-ordinate works on Non-Traffic Sensitive Streets is minimal.

Table 64 Highway Authority Worcestershire Cost Benefit results		
Highway Authority Assessment	Opening Year Predicted (Mouchel 2015 CBA report)	Year 1 Actuals
5% reduction in works impact		
Net Present Value of Benefits	£94,828,902	£95,777,191
Net Present Value of Costs	£15,183,122	£9,362,752
Net Present Value of Permit Scheme	£79,645,780	£86,414,439
Benefit to Cost Ratio	6.25	10.23

1.1 SUMMARY FINDINGS

Traffic volume in Worcestershire has risen, during 2015 there were 4,143 million vehicle kilometres (mvkm) and in 2016 this increased to 4,228 mvkm. This is a 2.05% increase which is in line with the increase of 2.05% across all of England.

There was a slight decrease of 0.09% on journey times based on the assumption that all other network outcomes are equal. Comparison data for April –July 2015 was interpolated by comparing the difference between previous DfT journey time data to AGPS data for September 2015. Table 58(a) shows that traffic flows have increase by 1% which would have an effect on journey times.

The data indicates that the permit scheme has had some effect on reducing traffic delay on the network. If we look at the journey time pre-scheme there is a stable journey time April-Sept 2015 but fluctuates between October 2015-March 2016. In the post-scheme the journey time is reasonably stable April-June 2016 but fluctuates July 2016 – March 2017. In comparing pre and post scheme there are similar levels of stability and fluctuations and would indicate that the Permit Scheme has maintained journey time reliability even though there has been an increase in vehicle kilometres and traffic flows.

Road Traffic collisions have been analysed for 2015 pre-Permit Scheme and 2016 post-Permit Scheme. There has been a decrease of 6% in collisions compared to the 2015 collisions and is in line with predicted trends.

Due to the increases in traffic flow there has been a decrease in traffic speed of 1% and carbon emissions have increased by 1%, therefore it is not possible to conclude if the scheme has reduced any carbon output.

During the first year of operation; **26,919** Permit and PAA applications were received from all Promoters. This Utility total is in-line with the volume indicated by the historical Notice volumes.

During the first year of operation; **15,861** Permit and PAA applications were received from Utility Promoters. This Utility total is in-line with the volume indicated by the historical Notice volumes.

2,096 variations requests were received which is **more than double the number expected**. Managing this unexpectedly high volume of variations has been a considerable challenge, especially when considering the difficulties recruiting the required number of staff.

£395,475 of Permit fee income was received. This is circa 40% less than the budget anticipated. (It should be noted that no charges were applied for the first 6 weeks of operation of the Permit Scheme)

£368,187 of costs were incurred. This is circa 40% less than the budget anticipated.

1.2 FIRST YEAR ISSUES

Difficulties during the first year of operation have been in four key areas;

1. In line with the scheme design, no fees were charged for works on Non-Traffic Sensitive Streets greatly reducing the resources available to co-ordinate this large volume of works
2. Staff recruitment
3. Not enough staff to manage the volume of Permit applications
4. Not enough staff to effectively manage Non-Traffic Sensitive Permit Applications
5. The ability to produce reports consistent with the industry's agreed indicators and measures

The lower level of staff as meant that the team have had to work incredibly hard to cope with the volume of applications and it is a credit to them that they have achieved the results they have.

The industry has agreed on a range of reports that none of the system providers have been able to produce. There is a central government initiative to develop a new single central IT system and this may replace current providers and clarify KPI reporting requirements.

1.3 NEW STAFF

The budget following the Cost Benefit Analysis identified £604,267 of additional new staff costs. £294,797 of additional new staff costs were incurred.

Due to restructuring and recruitment programmes, initially only 3 new staff were able to be employed during the first year against a requirement of 5.

1.4 OPERATIONAL COSTS

The budget identified circa **£60,000** of potential operational costs. **£73,390** of operational costs were incurred.

1.5 CONCLUSIONS

This report provides evaluation findings of key indicators and measures for the Worcestershire Permit Scheme after its first year of operation.

Overall, the Worcestershire Permit Scheme has been operationally designed and implemented well.

The team now attempt to co-ordinate all road and street works in Worcestershire and take the time to review each and every application and apply conditions to minimise the impact of the works on the users of the network. However, the fee income and the funding from internal budgets does not allow for sufficient resources to fully manage all applications and applications on Non-Traffic Sensitive Streets are not co-ordinated effectively. This reduces that ability of the team to minimax the impact of these works on society.

The Permit Scheme has delivered its core objectives and is an outstanding achievement by the team considering the reduced number of resources and lower than expected revenue.

- Volumes of Permit Applications were in-line with expectations
- Fee income was less than expected
- Costs were less than expected
- Costs and Income are well balanced
- Traffic is up 2.05%, in line with than the national trend
- Journey times have only decreased by 0.09%
- Collisions have decreased by 6%, which is better than the national trend
- The Societal Benefit to Cost Ratio was considerable higher than expected, however the lower the anticipated revenue and costs account for this
- Variations to granted Permits were greater than anticipated but were managed by the team effectively

There have been difficulties gathering accurate data from the IT system and this is a focus of development over the coming year. However, what has been gathered shows the objectives of the scheme are being met and that society is benefiting from the implementation.

The Permit team and Promoters will continue to work together and make improvements to minimise the impact of works on the highway network.

Future reports will contain more data and allow greater analysis of the impact of the Permit Scheme.

Now works are being Permitted and co-ordinated to the best of the team's ability, there has been a step change in the management of the network, therefore; the introduction of the Permit Scheme has led to a better control of the network and of the works undertaken on it.

Major works and those on Traffic Sensitive Streets are the focus of Permit team's activities.

An assessment of the impact of increasing the resources available, so that further co-ordination of works on Non-Traffic Sensitive Streets can be undertaken, may indicate that this is a desirable approach.

The introduction of the Permit Scheme has clearly led to a better control of the network and delivered an essential element of the Traffic Management Duty placed on Worcestershire County Council by the Traffic Management Act.

1.6 LOOKING FORWARD

The Permit Scheme will continue to be developed over the next year with a focus on five key areas.

- Assessing the impact of increasing the available resources so that further co-ordination of activities can be undertaken benefiting society and local stakeholders
- Analysis of the impact of full co-ordination of all applications on Non-Traffic Sensitive Streets
- IT system improvement and data recording and reporting
- Staff recruitment
- Staff training and development

1.7 RECOMMENDATIONS

1. An assessment should be made of the impact of increasing the available resources so that further co-ordination of activities can be undertaken.
2. A Cost Benefit Analysis of the societal impact of full co-ordination of all applications on Non-Traffic Sensitive Streets should be prepared.
3. IT system improvement work and increased data recording and reporting should be undertaken.
4. Staff training and development should be a focus to ensure the skills are available to deliver these opportunities.
5. Internally agreed budgets need to be defined and monitored to ensure full recovery of all overheads and operational costs. In addition to staff overheads, these are reasonable budget figures for on-going yearly operating costs. These are the 'Additional Operational Factors' within the fees matrix.

Defined as:

- KPI Production
- Invoicing
- IT support
- Unauthorised / Abandoned works

- Management Overhead

2 DEVELOPING THE PERMIT SCHEME

During the latter part of 2015 there was an initial high level financial assessment, consideration of the local needs and discussion with internal stakeholders, operational partners, consultants and neighboring Highway Authorities.

Worcestershire County Council decided that the most appropriate scheme for Worcestershire is one that would operate on all streets but did not charge a fee for Non-Major Permits on Non-strategically significant streets.

The Worcestershire Permit Scheme has been designed to assist the Council to manage the existing local road network for the benefit of all road users. The Permit Scheme will support existing activities and priorities of the Council and will provide a positive benefit. The Scheme will also encourage the undertakers, including those working for and on behalf of the Highway Authority to work in collaboration.

The Permit Scheme has been operationally and proactively focused on Strategically Significant Streets and to further the overall cultural shift to better management of the network. However, all activities on all streets will be Permitted to deliver effective and proactive management of the entire network and give consideration to the needs of all highway users and stakeholders such as local community bus operators.

No fees will be charged for activities that are not Major in classification on non-traffic sensitive streets and category 3 and 4 roads.

2.1 PERMIT SCHEME OBJECTIVES

The strategic objective of all Permit schemes is to provide a capability to manage and maintain the local highway network for the safe and efficient use of road space, whilst allowing Promoters access to maintain their services and assets.

The principle of the Permit Scheme is to improve the planning, scheduling and management of activities so that they do not cause unnecessary traffic disruption to any road user. It will help Worcestershire County Council to meet their network management duty under the TMA. Co-ordination of activities through the Permit Scheme will enable differences between those competing for space or time in the street, including traffic, to be resolved in a positive and constructive way.

2.2 Key Scheme Objectives

The scheme's primary objectives are:

- to increase the efficient running of the highway network by minimising the disruption and inconvenience caused by road works and other highway events and activities through proactive management of activities on the highway
- to improve the quality and timeliness of information received from all activity promoters to increase and improve the publicly available data for integration into the Council-wide travel information
- to encourage a proactive approach to planning and undertaking of works on the highway from promoters and thus lessen the impact of activities on road users
- to protect the structure of the street and the integrity of the apparatus in it
- to ensure safety of those using the street and those working on activities that fall under the Scheme, with particular emphasis on people with disabilities

- to ensure parity of treatment for all activity promoters particularly between statutory undertakers and highway authority works and activities

The successful performance of the Scheme will bring a number of subsidiary benefits. These include:

- maximising the safe and efficient use of road space
- providing reliable journey times
- improving the resilience of the network
- minimising inconvenience to all road users
- improving public satisfaction

3 APPENDIX 1 - EVALUATION BACKGROUND

3.1 PERMIT SCHEME EVALUATION

Swift Argent Ltd was commissioned by Worcestershire County Council (WCC) in 2017 to evaluate the performance of the first year of the Worcestershire Permit Scheme (WPS) as a requirement set out in The Traffic Management Permit Scheme (England) (Amendment) Regulations 2015 regulation 16A.

The WPS was implemented on 21st March 2016 and the purpose of this report is to evaluate the Permit Scheme in respect to these successes and give consideration to the fee structure, the costs and benefits of operating the Scheme and whether the Permit Scheme is meeting key performance indicators where these are set out in the Guidance.

3.2 SCOPE OF WORK

In order to evaluate the performance of a Permit Scheme a number data items are required to enable analysis.

All data should be readily available within the street works IT system of the respective Highway Authority. Financial information should be available from the Authority finance department and certain data is collected from DfT statistics.

Ideally annual performance data should be collected monthly throughout the year to enable changes and trends to be observed time. This could also be useful to enable regular checks to be made internally against key targets so this can be managed and responded to quickly. The response can include further training of the Permit Team to ensure consistency and outcome focused activities.

The individual data items are set out later in this report for each indicator but will include the following categories.

- Number of Permits granted, modified and refused
- Conditions applied for
- Variations and extensions and early starts
- Location of roadworks
- Permit fees
- Operational costs
- Travel times and reliability
- Carbon Impacts

As part of the initial assessment for the introduction of a Permit Scheme and the subsequent application to the Secretary of State for Transport or preparation of a Local Order, the Highway Authority is required to conduct a Cost Benefit Analysis (CBA) on the likelihood of a Scheme to deliver value for money to society (as a benefit to cost ratio).

This CBA is based on the principles of the Department for Transport's New Approach to Transport Appraisals (NATA) framework and include broad assumptions on the costs and benefits of a Permit Scheme. This gives a base in order to make assessment of aims to be achieved.

3.3 KEY PERFORMANCE INDICATORS

A set of Key Performance Indicators (KPIs) and Objective Measures (OMs) are set out below to demonstrate parity of treatment between works for road purposes and street works undertaken by statutory undertakers.

Section 20.3 of the Permits Code of Practice states that every Authority that wants to run a Permit Scheme must explain how it intends to demonstrate parity of treatment for promoters in its application.

The Code contains seven KPIs that could be used for this purpose. The recording of KPIs 1 and 2 is a mandatory requirement of all Permit Schemes.

Authorities should select at least two others which they consider will demonstrate parity across their Permit Scheme. Authorities can also include their own KPIs.

- KPI 1 The number of Permit and Permit variation applications received, the number granted and the number refused. (breakdown of the data into applications granted and refused in relation to highway authority works for road purposes and works by utility promoters, and provide a comparison with the percentage of Permits granted Also, the data is further broken down by activity type into applications granted and refused.)
- KPI 2 The number of conditions applied by condition type.
- KPI 3 The number of approved extensions
- KPI 4 The number of occurrences of reducing the application period (early starts).
- KPI 5 The number of agreements to work in Section 58 and Section 58A restrictions. (Details of Section 58 and 58A restrictions will be provided as required under Section 8.3 of the TMA Code of Practice for Permits.)
- KPI 6 The proportion of times that a Permit authority intervenes on applications
- KPI 7 Number of inspections carried out to monitor conditions

The Statutory Guidance for Highway Authority Permit Schemes October 2015 set out Permit Indicators (TPI) for Permit Schemes are additional to the general TMA Performance Indicators (TPIs), which are already being produced. The TPIs focus on occupancy, co-ordination and inspections, and there for relate mainly to the stages of the works from works start to final conclusion. These additional Permit indicators focus more on the process of Permit applications and responses, prior to the works being carried out.

- TPI1 Works Phases Started (Base Data)
- TPI2 Works Phases Completed (Base Data)
- TPI3 Days Of Occupancy Phases Completed
- TPI4 Average Duration of Works Phases Completed
- TPI5 Phases Completed on time
- TPI6 Number of deemed Permit applications
- TPI7 Number of Phase One Permanent Registrations

In addition to DfT KPIs and HAUC TPIS. The authority can collate its own data. These measures should reflect the business case and objectives put forward in the Scheme submission documentation.

- AM 1 Average duration of works by Permit type
- AM 2 Inspections (% age of total undertaken and failures)
- AM 3 Days of Disruption Saved/ Number of collaborative works
- AM 4 Response Code – broken down by promoter
- AM 5 FPNs (Permit Breaches)
- AM 6 Levels of Customer Enquiries
- AM 7 Average Journey Times (as detailed below)
- AM 8 Journey time reliability (as detailed below)
- AM 9 Road Traffic Collisions (as detailed below)
- AM 10 Carbon Emissions (as detailed below)
- AM 11 Profit/Loss (as detailed below)

3.4 AVERAGE JOURNEY TIMES

A key benefit of the Permit Scheme will be to improve operation of the transport network through a reduction in journey times per unit distance travelled due to reduction in delay from roadworks. It is expected the level of delay in a dense urban network across 12 hours of operation, 10% is estimated to be due to road works, 10% unplanned incidents and 5% control devices with a non-recurrent delay on roads of 25% of total delay. A 5% reduction in road works would account for a 0.5% reduction in total delay or 10% reduction 1% reduction on total delay.

The DfT publish data quarterly statistical data on road congestion on locally managed 'A' roads and is measured by estimating the average speed achieved by vehicles during the weekday morning peak from 7am to 10am. Average speeds are presented at national, regional and local highway authority level. Analysis by TfL has determined that on average between 07:00 to 19:00 across the network, delay accounts for about one third of journey times, the remaining two thirds approximates to the free flow or unhindered journey component so that a 5% reduction in roadworks would see an expected improvement of 0.17%.

There are two ways to measure average journey times using this data (a) either comparing passed average journey times before the Permit Scheme and during the Permit Scheme for that authority; or (b) compare Permitted authority to non-Permitted authority local to the area with similar characteristics. The later assumes that all network outcomes are equal and any difference is attributable to the Permit Scheme.

3.5 JOURNEY TIME RELIABILITY

It is expected that a key benefit of a Permit Scheme will be an improvement in journey time reliability on the network. Journey time reliability is measured using ANPR (Automatic Number Plate Recognition) cameras with some authorities such as TfL, Essex, Bedfordshire that is an accurate mechanism for monitoring journey times to provide a meaningful measure of overall network performance. Although ANPR cameras are becoming more of a necessity for highway authorities to prove that traffic management measures are reducing congestion

as part of the TMA (Traffic Management Act) these are generally only used for major roads where there is the most congestion. A further method is to model the relationship between journey time and standard deviation. This method is suggested in WebTAG and would compare the standard deviation of variability between the Permitted and non-Permitted authorities.

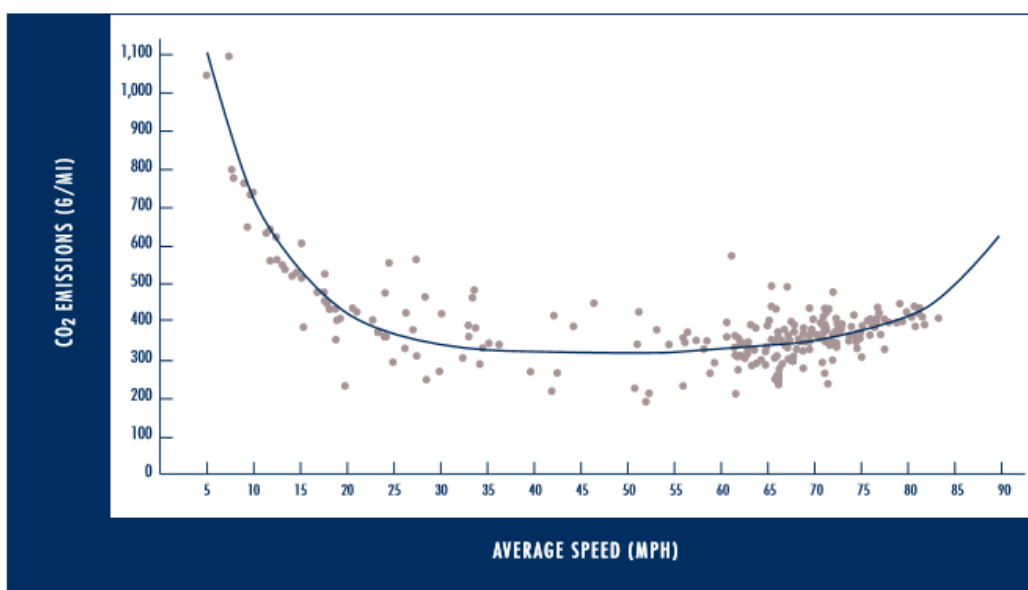
3.6 ROAD TRAFFIC COLLISIONS

The presence of roadworks in itself has a higher rate of collisions due to queuing traffic and driver frustration causing erratic behaviour. There are a number of measures that are used to minimise confusion and risk to drivers that can result from better management through a Permit Scheme in addition to the reduction in roadworks themselves. This may include approval of traffic management plans, better signage, diversion routes, average speed cameras, reduced duration and disruption. Accidents on the public highway in Great Britain, reported to the police and which involve personal injury or death are recorded by police officers onto a STATS 19 report form with information relating to that accident. The DfT is responsible for collection of STATS 19 data and forms the basis for annual statistics and is updated quarterly for all local authorities. To measure the effectiveness of a Permit Scheme on road traffic collisions data can be analysed for the Permitted authority before and after the Scheme start and compare trends with non-Permitted authorities.

3.7 CARBON EMISSIONS

An outcome of reduced congestion is the reduction in fuel consumption and CO₂ emissions. The fuel consumption that causes CO₂ emissions is very sensitive to several factors and include driver behaviour, vehicle, road types and traffic conditions. Due to multiple variables a comprehensive carbon model is used as a methodology to accurately estimate how congestion reduction will reduce CO₂. A typical driving trip consists of idling, accelerating, cruising, and decelerating. An average trip would produce about 330 grams per mile (g/mi) of CO₂ emissions. The figure below shows a typical speed emission curve and shows at lower speeds with high accelerating and decelerating in congestion has much higher emissions. As speed increases congestion decreases. On motorways with speeds above 65mph emissions increase as engines are under strain.

AVERAGE SPEED OVER CO₂ EMISSIONS



Source: TRAFFIC CONGESTION AND GREENHOUSE GASES BY MATTHEW BARTH AND KANOK BORIBOONSOMSIN

The National Transport Model (NTM) is the Department for Transport's main strategic policy testing and forecasting tool used to forecast traffic levels and the subsequent congestion and emissions impacts on the national road network of Great Britain (GB).

Curves for 'ultimate' CO2 emissions can be derived directly from the fuel consumption by converting the units from litre/100km to g fuel/km and applying a simple conversion factor based on the carbon content of petrol and diesel fuels. To calculate fuel consumption as set out in WebTAG the following

Fuel consumption is estimated using a function of the form: $L = a/v + b + c.v + d.v^2$

Where:

L = consumption, expressed in litres per kilometre;

v = average speed in kilometres per hour; and

a, b, c, d are parameters defined for each vehicle category.

The revised fuel consumption aggregated equation for WebTAG vehicle groups was derived (TRL unpublished report "Fuel Consumption Equations" dated 29 September 2008) using the results from the New UK Road Vehicle Emission

Parameters for each vehicle category are set out in Table A 1.3.8 of WebTAG as shown on Table 1 below.

Table 1 - WebTAG – Fuel consumption parameter values				
Fuel consumption parameter values (litres per km, 2010)				
Parameters				
Vehicle Category	a	b	c	d
Petrol Car	0.96402	0.04145	0.00005	2.01346E-06
Diesel Car	0.43709	0.05862	0.00052	4.12709E-06
Petrol LGV	1.55646	0.06425	0.00074	1.00552E-05
Diesel LGV	1.04527	0.05790	0.00043	8.02520E-06
OGV1	1.47737	0.24562	0.00357	3.06380E-05
OGV2	3.39070	0.39438	0.00464	3.59224E-05
PSV	4.11560	0.30646	0.00421	3.65263E-05
Energy consumption parameter values (kWh per km, 2011)				
Electric Car	0.12564			
Electric LGV				
Electric OGV1				
Electric OGV2				
Electric PSV				

The DfT have developed a carbon tool to allow local authorities to assess the potential effects of transport interventions on carbon emissions in their area. The tool will output

results on the total change in carbon emissions. The Scheme details are entered into the tool and include the time period, type of road, type of area, region and year affected. Affected modes are selected and default vehicle mix is used based on speed curves from national derived data. For each affected mode the daily distance and number of vehicles is entered. The vehicle speeds before and after intervention are recorded. This will generate the CO₂ emissions before and after intervention.

3.8 PROFIT / LOSS

The Scheme profit / loss is made up of the staff and operational costs and Permit fee. The maximum charge per Permit type is shown on Table 2 below. The Authority sets their own fee structure reflecting on the potential number of Permits and operational costs.

The operational cost includes the initial start-up costs, additional staff administering and co-ordinating Permit Applications which includes Street Work Officers, Street Work Co-ordinators and Manager(s).

Table 2 - Statutory Permit Fee rates		
Revised maximum fee structure for each category of works and for a hierarchy of main and minor roads - Road category refers to the reinstatement category of the street under the New Roads and Street Works Act 1991		
Work Type	Road Category 0-2 or Traffic-sensitive	Road Category 3-4 and non traffic-sensitive
Provisional Advance	£105	£75
Major works – over 10 days <u>and</u> all major works requiring a traffic regulation order.	£240	£150
Major works – 4 to 10 days	£130	£75
Major works – up to 3 days	£65	£45
Activity Standard	£130	£75
Activity Minor	£65	£45
Immediate Activity	£60	£40
Permit Variation	£45	£35

The profit loss is the Permit fee revenue minus the operational cost. The result will enable the authority to understand if they are applying the correct fee structure or need to review staff levels.

3.9 REPORT STRUCTURE

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- APPENDIX 2b - PERMIT APPLICATIONS DATA
- APPENDIX 2c - AUTHORITY MEASURES
- APPENDIX 3 – COSTS, INCOME and DISCOUNTS

4 APPENDIX 2 - KEY PERFORMANCE INDICATOR DATA

4.1 KPI 1

The number of Permit and Permit variation applications received, the number granted and the number refused.

Table 3 below shows a breakdown of Permit applications received granted and refused. This excludes Provisional Permit Applications (PAAs)

Data is further broken down into Permit applications received, granted and refused related to Highway Authority works and Utilities works on Table 4 below.

Table 3 KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded										
Year 1	Applications Received (ex PAAs)	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
Total	27,765		19,788		4,840	6,823	875			
Percentage			71%		21%	17%	3%			

Table 4 KPI 1 Permit Applications by Promoter			
Year 1			
<u>Promoters</u>	Total Permit Applications	Total Applications Granted	Total Applications Refused
Highway Authority	5,678	3,927	533
Utility	22,087	15,861	4,307

Table 5(a) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
BT	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	3,674	No Data	2,678	No Data	996	No Data	No Data	No Data	No Data	No Data
Table 5(b) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
National Grid Gas	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	2,322	No Data	1,782	No Data	540	No Data	No Data	No Data	No Data	No Data
Table 5(c) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
Western Power	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	1,808	No Data	1,491	No Data	317	No Data	No Data	No Data	No Data	No Data
Table 5(d) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										

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Promoter										
Virgin Media	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	1,117	No Data	929	No Data	188	No Data	No Data	No Data	No Data	No Data
Table 5(e) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
Severn Trent Water	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	8,056	No Data	6,564	No Data	1,492	No Data	No Data	No Data	No Data	No Data
Table 5(f) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
W.C.C	Year 1									
	Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
	3,905	No Data	3,444	No Data	461	No Data	No Data	No Data	No Data	No Data
Table 5(g) KPI 1 The number of permit and permit variation applications received, the number granted and the number refused, deemed and superseded by Promoter										
Promoter										
Total	Year 1									

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Applications Received	Variations Received	Applications Granted	Variations Granted	Applications Refused	Variations Refused	Applications Deemed	Variations Deemed	Applications Superseded	Variations Superseded
20,882	No Data	16,888	No Data	3,994	No Data	No Data	No Data	No Data	No Data

NO DATA AVAILABLE																		
Table 6 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 0-2 and Traffic Sensitive Streets for Utility Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 7 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 3-4 Non Traffic Sensitive Streets for Utility Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 8 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Utility Works by Activity type																		
Year 1																		

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Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE

Table 9 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 0-2 and Traffic Sensitive Streets for Highway Works by Activity type

Year 1

Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE

Table 10 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 3-4 Non Traffic Sensitive Streets for Highway Works by Activity type

Year 1

Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 11 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Highway Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 12 KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 0-2 and Traffic Sensitive Streets for All Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 13(a) KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for Category 3-4 Non Traffic Sensitive Streets for All Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

NO DATA AVAILABLE																		
Table 14(a) KPI 1 The number of permit and permit variation granted, number refused, deemed superseded and cancelled for All Works by Activity type																		
Year 1																		
Activity Type	Permit App Granted		Permit App Refused		Variation Granted		Variation Refused		Deemed Permit Applications		Superseded Applications		Deemed Permit Variations		Superseded Variations		Cancelled /Aborted	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%

4.2 KPI 2

The number of conditions applied by condition type.

NO DATA AVAILABLE										
Table 15 KPI 2 The number of conditions applied by condition type										
Number	Condition	Year 1			Year 2			Year 3		
		Utility Works	Highway Authority Works	Total	Utility Works	Highway Authority Works	Total	Utility Works	Highway Authority Works	Total
1	Date Constraints									
2	Time Constraints									
3	Out of Hours Work									
4	Material and Plant Storage									
5	Road Occupation Dimensions									
6	Traffic Space Dimensions									
7	Road Closure									
8	Light Signals and Shuttle Working									
9	Traffic Management Changes									
10	Work Methodology									
11	Consultation and Publicity									

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12	Environmental									
13	Local									
	Total									

4.3 KPI 3

The number of approved extensions

Data cannot be broken down at this time.

4.4 KPI 7

Number of inspections carried out to monitor conditions

This KPI is broken down by promoter and shown as the number of sample permit condition checks carried out as a percentage of the number of permits issued.

This information is not available at this time.

5 APPENDIX 2a - HAUC TPI MEASURES

5.1 TPI 1 Works Phases Started (Base Data)

Data cannot be broken down at this time.

5.2 TPI 2 Works Phases Completed (Base Data)

This information is not available at this time.

5.3 TPI 3 Days of Occupancy Phases Completed

This information is not available at this time.

5.4 TPI 4 Average Duration of Works Phases Completed

Table 27 TPI 4 Average Duration of Works Phases Completed by Promoter by Activity Type						
Activity Type	Year 1		Year 2		Year 3	
	Highway Authority	Utility	Highway Authority	Utility	Highway Authority	Utility
Major	7	8				
Standard						
Minor						
Immediate - Urgent						
Immediate - Emergency						

5.5 TPI 5 Phases Completed on time

This information is not available at this time.

5.6 TPI 6 Number of deemed Permit applications

This information is not available at this time.

5.7 TPI 7 Number of Phase One Permanent Registrations

This information is not available at this time.

6 APPENDIX 2b - PERMIT APPLICATIONS DATA

6.1 Number of PAA applications submitted

This information is not available at this time.

6.2 Number of PAA applications granted

This information is not available at this time.

6.3 Number of PAA applications deemed

This information is not available at this time.

6.4 Number of “initial” permit applications submitted for a works phase

This information is not available at this time.

6.5 Number of Permit applications granted on first application submission

This information is not available at this time.

6.6 Number of “modified” applications submitted prior to Permit being granted or deemed

This information is not available at this time.

6.7 Number of Permit applications deemed

This information is not available at this time.

6.8 Number of applications cancelled prior to grant / deemed

This information is not available at this time.

6.9 Number of granted / deemed Permits for which and Actual Start never occurred

This information is not available at this time

6.10 Number of Authority imposed variations / revokes

This information is not available at this time.

6.11 Number of Duration variations after works started

This information is not available at this time.

6.12 Number of Duration variations refused

This information is not available at this time.

6.13 Number of Permit applications with “Collaboration indicator” set

This information is not available at this time.

7 APPENDIX 2c - AUTHORITY MEASURES

7.1 AM 1 - Average duration of works

This information is not available at this time.

7.2 AM 2 - Inspections

This information is not available at this time.

7.3 AM 3 - Days of Disruption Saved/ Number of collaborative works

This information is not available at this time.

7.4 AM 4 - Response Code

Table 49(a) AM 4 Response Code – broken down by promoter																		
Promoter																		
BT	Year 1																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC30	RC31	RC32	RC33	RC40	RC41	RC42	RC43	RC44	RC50
		34	164	202	18	1	25	36	20	115	37	16	4	74	2	2	16	134
	Year 2																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC30	RC31	RC32	RC33	RC40	RC41	RC42	RC43	RC44	RC50
	Year 3																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC30	RC31	RC32	RC33	RC40	RC41	RC42	RC43	RC44	RC50
	Table 49(b) AM 4 Response Code – broken down by promoter																	
Promoter																		

National Grid Gas	Year 1																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
		10	106	71	11	-	16	14	6	24	10	2	6	88	-	2	12	103
	Year 2																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Year 3																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Table 49(c) AM 4 Response Code – broken down by promoter																	
Promoter																		
Western Power	Year 1																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
		11	92	12	7	-	5	16	9	29	11	2	1	31	-	2	19	58
	Year 2																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Year 3																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Table 49(d) AM 4 Response Code – broken down by promoter																	
Promoter																		
Vir	Year 1																	

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No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
3	25	13	2	-	3	10	3	9	2	1	1	48	-	-	5	59		
Year 2																		
No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
Year 3																		
No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
Table 49(d) AM 4 Response Code – broken down by promoter																		
Promoter																		
Severn Trent Water	Year 1																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	24	207	93	40	-	42	64	34	133	61	8	3	180	1	2	18	232	
	Year 2																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Year 3																	
No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
Table 49(e) AM 4 Response Code – broken down by promoter																		
Promoter																		
W. & P.	Year 1																	

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No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
	10	70	65	17	-	24	19	6	27	19	1	6	46	1	1	9	84	
Year 2																		
No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
Year 3																		
No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50	
Table 49(f) AM 4 Response Code – broken down by promoter																		
Promoter																		
Total	Year 1																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
		92	664	456	95	1	115	159	78	337	140	30	21	467	4	9	79	670
	Year 2																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50
	Year 3																	
	No	RC10	RC11	RC12	RC20	RC21	RC22	RC23	RC3 0	RC3 1	RC3 2	RC3 3	RC4 0	RC4 1	RC42	RC43	RC4 4	RC50

7.5 AM 5 – FPNs (Permit Breaches)

Table 50 below shows the number of fixed penalty notices. Under section 74 (7B) failure to give a notice under regulation 74 (charge for occupation of the highway where works unreasonably delayed); under section 19 (1) working without a Permit and under 20 (1) Permit breaches.

The Permit Authority will continue to work with Promoters to reduce the number of FPN's.

This information is not available at this time.

Permit Breach Code Descriptions	
Code	Description
70(6)	Failure to comply with requirements to give notice of completion of reinstatement
74(7B)	Failure to give a notice under regulation 74 (charge for occupation of the highway where works unreasonably delayed)
19(1)	Works without a permit
20(1)	Permit breaches

7.6 AM 6 - Levels of Customer Enquiries

This information is not available at this time.

7.7 AM 7 Average Journey Time and AM8 Journey Time Reliability

One of the anticipated key benefits of the Permit Scheme is an increase in traffic speeds as a result of a reduction in delay to traffic caused by road works.

As set out in the scope in Section 3.4 of this Evaluation, for a 5% reduction in delay, there is an expected improvement of 0.17% in journey time savings.

Since September 2015 DfT purchases data about vehicle speeds and journey times from Trafficmaster.

This data is generated through in-vehicle GPS units as part of the satellite navigation and stolen vehicle tracking services Trafficmaster provides to their customers. The specific raw data used to derive the Department's journey time statistics consist of 10-second GPS location reports for these vehicles for the period during which their ignition is on.

As part of the service provided to the Department, Trafficmaster map these GPS location reports to the Ordnance Survey ITN (described earlier) and then use this information to reconstruct the routes taken by their customers as they move through the road network.

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These reconstructed journeys, combined with the time stamps on the associated GPS location reports, allow Trafficmaster to estimate the time taken by these vehicles to traverse each ITN link. The data also allows journey times to be associated with a particular link direction if the ITN link in question can be traversed in either direction. Where the 10-second GPS location reports don't fall exactly on the start and end of each link, interpolation is used to estimate the time taken by the vehicles to complete each link.

The individual link journey times were then averaged for each ITN link and for all relevant journeys made during each month. ITN links were then matched for the representative period from September 2015 to March 2017. This process resulted in a single average journey time, in minutes, for each link.

The complete network for England consists of around 3.4 million separate 'links' and gives an extremely accurate dataset. In Worcestershire there are over 257,000 links with live data collected continuously. Due to the huge amount of data collected the data is aggregated to every 15 minutes AGPS (Aggregated Global Positioning System Data). For analysis data for A roads has been used as has the greatest impact with the most traffic flow.

For Year 1 Table 52 shows a slight decrease of 0.09% on journey times based on the assumption that all other network outcomes are equal. Comparison data for April –July 2015 was interpolated by comparing the difference previous DfT journey time data to AGPS data for September 2015. Table 58(a) shows that traffic flows have increased by 1% that would have some effect on journey times.

The data indicates that the Permit Scheme has had some effect on reducing traffic delay on the network. If we look at the journey time pre-scheme there is a stable journey time April-Sept 2015 but fluctuates between October 2015-March 2016. In the post-scheme the journey time is reasonably stable April-June 2016 but fluctuates July 2016 – March 2017.

In comparing pre and post scheme there are similar levels of stability and fluctuations and would indicate that the Permit Scheme has maintained journey time reliability.

Table 52(a) AM 7 Average Journey Times & AM 8 Journey Time Reliability														
Year 1														
Average journey time (minutes per mile) (Source Trafficmaster AGPS) Average journey times all vehicles on locally managed 'A' roads:														
Local Authority	ONS area code		Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16
		Pre-scheme												
Worcestershire	E100000 34 (47)	AJT (mpm)	2.27	2.27	2.27	2.27	-	2.27	2.28	2.33	2.29	2.30	2.28	2.27
		% Compare	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00

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% Average Journey Time increase/decrease			-	-	-	-	-	-	-	-	-	-	-	-
Local Authority	ONS area code		Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
			Post-scheme											
Worcestershire	E10000034 (47)	AJT (mpm)	2.26	2.27	2.27	2.19	2.25	2.30	2.29	2.35	2.32	2.29	2.27	2.28
		% Compare	0.99	1.00	1.00	0.96	-	1.01	1.00	1.01	1.01	1.00	1.00	1.00
% Average Journey Time increase/decrease			0.01	0.00	0.00	0.04	-	0.01	0.00	0.01	0.01	0.00	0.00	0.00
Total Average			0.09%											

Table 52(b) AM 7 Average Journey Times & AM 8 Journey Time Reliability														
Year 2														
Average journey time (minutes per mile) (Source Trafficmaster AGPS) Average journey times all vehicles on locally managed 'A' roads:														
Local Authority	ONS area code		Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
			Post-scheme											
Worcestershire	E10000034 (47)	AJT (mpm)	2.26	2.27	2.27	2.19	2.25	2.30	2.29	2.35	2.32	2.29	2.27	2.28
		% Compare	0.99	1.00	1.00	0.96	-	1.01	1.00	1.01	1.01	1.00	1.00	1.00
% Average Journey Time increase/decrease			0.01	0.00	0.00	0.04	-	-0.01	0.00	-0.01	-0.01	0.00	0.00	0.00
Local Authority	ONS area code		Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
			Post-scheme											
Worcestershire	E10000034 (47)	AJT (mpm)												
		% Compare												
% Average Journey Time increase/decrease														
Total Average														

7.8 AM 9 - Road Traffic Collisions

Road Traffic collisions have been analysed for 2015 pre-Permit Scheme and 2016 post-Permit Scheme.

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To estimate the predicted collisions post-scheme compared to the actual data collected, trends were analysed from reported collision statistics from 2009-2014 PIA that shows an annual average reduction of 72 collisions or 5.97 per month.

The actual data as shown on Table 53 below shows that there has been a decrease of 6% in collisions compared to the 2015 collisions and the predicted trends. From this analysis, in the first year of the scheme and without further analysis with a control site looking at number of roadworks and a non-permitting authority, it is not possible to show whether the scheme has contributed to reducing collisions.

With increased resources, the Highway Authority will look to reduce disruption of road works in future years with the Permit Scheme by improved traffic management, signage and diversion routes and less variable speeds reducing the risks to drivers.

Table 53(a) AM 9 Road Traffic Collisions							
Year 1							
Previous Year		Predicted*		Actual			
Month-Year	Total	Month-Year	Total	Month-Year	Total	% Diff	
Jan-15	84	Jan-16	78	Jan-16	101		
Feb-15	93	Feb-16	87	Feb-16	77		
Mar-15	86	Mar-16	80	Mar-16	80		
Apr-15	88	Apr-16	82	Apr-16	98	120%	
May-15	109	May-16	103	May-16	81	79%	
Jun-15	85	Jun-16	79	Jun-16	75	95%	
Jul-15	90	Jul-16	84	Jul-16	89	106%	
Aug-15	85	Aug-16	79	Aug-16	89	113%	
Sep-15	99	Sep-16	93	Sep-16	110	118%	
Oct-15	94	Oct-16	88	Oct-16	80	91%	
Nov-15	97	Nov-16	91	Nov-16	72	79%	
Dec-15	89	Dec-16	83	Dec-16	80	96%	
Total	1,099	Total	1,027	Total	1,032	100%	

Table 53(b) AM 9 Road Traffic Collisions							
Year 2							
Previous Year		Predicted		Actual			
Month-Year	Total	Month-Year	Total	Month-Year	Total	% Diff	
Jan-16	101	Jan-17		Jan-17			
Feb-16	77	Feb-17		Feb-17			
Mar-16	80	Mar-17		Mar-17			
Apr-16	98	Apr-17		Apr-17			
May-16	81	May-17		May-17			

	Jun-16	75		Jun-17			Jun-17		
	Jul-16	89		Jul-17			Jul-17		
	Aug-16	89		Aug-17			Aug-17		
	Sep-16	110		Sep-17			Sep-17		
	Oct-16	80		Oct-17			Oct-17		
	Nov-16	72		Nov-17			Nov-17		
	Dec-16	80		Dec-17			Dec-17		
	Total	1,032	Total			Total			

*Data predicted form Average PIA 2005-2015

7.9 AM 10 - Carbon Emissions

The result of reduced congestion is a reduction in fuel consumption and CO2 emissions.

Data has been collected from the DfT on traffic flow sites on major and minor roads in Worcestershire that identifies 249 locations as shown on Table 54 and 55 with traffic flows by vehicle type. The data show that traffic levels have increased by 1% from 2015 to 2016.

The average traffic speed from the DfT on Table 56 has been used for comparison. The DfT carbon tool has been used using the traffic flow and average speed to predict carbon emissions that is summarized in Table 57.

Table 58 compares output pre-Permit Scheme and post-Permit Scheme.

The summary shows that there has been decrease in traffic speed of 1% and carbon emissions have increased by 1%. Due to the increases in traffic flow this will affect the carbon emissions and traffic speed and therefore it is not possible to conclude if the scheme has reduced any carbon output.

As the Permit Scheme progresses the Highway Authority will continue to work with Utilities to reduce disruption wherever possible and monitor these elements.

Table 54(a) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_km
1	6393	West Midlands	Worcestershire	A38	PR	397020	275000	A38 Birmingham Rd	M5	1.0
2	6394	West Midlands	Worcestershire	A38	PR	393800	268000	M5	B4094	4.0
3	6396	West Midlands	Worcestershire	A38	PR	386785	240436	LA Boundary	A4104	3.3
4	6467	West Midlands	Worcestershire	A44	PU	385958	254123	A38	A4440	2.5
5	7099	West Midlands	Worcestershire	A44	PR	390428	253830	A4440	A4538	2.6
6	7147	West Midlands	Worcestershire	A38	PU	390000	263900	A442	B4065	1.4

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7	7159	West Midlands	Worcestershire	A449	PR	384760	279640	B4189	LA Boundary	3.3
8	7161	West Midlands	Worcestershire	A449	PR	384920	259360	A449 (principal)	A4133	3.7
9	7164	West Midlands	Worcestershire	A450	PR	387420	275000	A448	A456	6.4
10	7165	West Midlands	Worcestershire	A451	PU	383482	277547	A456	A449	1.2
11	7206	West Midlands	Worcestershire	A491	PR	395000	276120	B4551	B4091	1.5
12	7643	West Midlands	Worcestershire	A4104	PR	380000	239900	A449	A38	11.3
13	7675	West Midlands	Worcestershire	A4538	PR	388280	260000	M5	A38	3.2
14	7836	West Midlands	Worcestershire	A442	PR	385000	272500	A450	A449	1.2
15	7838	West Midlands	Worcestershire	A449	PR	384320	273000	A450	A442	1.2
16	7999	West Midlands	Worcestershire	A38	PR	385080	257600	CHECKETTS LANE	A38(T)	0.7
17	8160	West Midlands	Worcestershire	A451	PU	383480	276590	A448	A456	0.4
18	8174	West Midlands	Worcestershire	A449	PU	377535	246422	B4211 mid-junction	B4503	1.1

Table 54(b) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_km
19	8373	West Midlands	Worcestershire	A38	PU	384974	255472	A38 The Tything	A449	0.6
20	8388	West Midlands	Worcestershire	A44	PU	384534	254804	A443/A44 Tybridge St	A44 New Road	0.2
21	8454	West Midlands	Worcestershire	A435	PR	407832	274878	M42	Maypole Lane/Druids Lane roundabout	6.0
22	16443	West Midlands	Worcestershire	A44	PU	384500	254620	A449	A44 Hylton Rd	0.4
23	17107	West Midlands	Worcestershire	A442	PR	380352	279997	Honeybrook Lane, Kidderminster	LA Boundary	6.1
24	17108	West Midlands	Worcestershire	A443	PR	380000	263400	A451	A4133	7.4
25	17121	West Midlands	Worcestershire	A449	PU	384000	277670	A456	A451	0.8
26	17122	West Midlands	Worcestershire	A449	PR	384000	273800	FREDERICK ROAD (ROAD 1)	LA Boundary	0.5
27	17123	West Midlands	Worcestershire	A449	PR	385100	259100	A449 (principal)	A449 spur to A4536	2.3
28	17126	West Midlands	Worcestershire	A451	PU	382175	274628	A4535	WALTER NASH ROAD WEST	2.1
29	17141	West Midlands	Worcestershire	A456	PR	374247	273874	A4117	B4190	3.4

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30	1758 8	West Midlands	Worcestershire	A402 5	PU	38200 0	270500	Sandy Lane	A4025 Gilgal	1.3
31	1764 3	West Midlands	Worcestershire	A453 8	PR	39000 0	254830	A422	B4636	2.4
32	1782 9	West Midlands	Worcestershire	A38	PU	38522 0	254800	A44	A38 St Nicholas St	0.7
33	1786 2	West Midlands	Worcestershire	A38	PU	39634 0	270000	Stoke Rd/ Charford Rd	A448	1.6
34	1790 8	West Midlands	Worcestershire	A449	PU	37800 0	247300	B4503	Richmond Rd/Pickersleigh Ave	1.3

Table 54(c) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_k m
35	1790 9	West Midlands	Worcestershire	A456	PU	38250 0	276600	A4535	A442	0.6
36	1791 0	West Midlands	Worcestershire	A453 5	PU	38210 0	276700	A456	A442	0.8
37	1800 8	West Midlands	Worcestershire	A444 0	PR	38500 0	251600	A449	A38	2
38	1814 4	West Midlands	Worcestershire	A413 3	PR	38447 6	264000	A4133 School Bank/Holt Fleet Rd	A449	1
39	1839 5	West Midlands	Worcestershire	A449	PR	38467 0	264000	A4133	A4133	1
40	1847 5	West Midlands	Worcestershire	A44	PR	41200 0	236830	B4632	LA Boundary	3.7
41	1850 1	West Midlands	Worcestershire	A418 4	PU	40394 0	245000	B4084	A4184	3
42	1850 2	West Midlands	Worcestershire	A456	PR	37800 0	274420	B4190 Long Bank	B4195 Stourport Rd	3
43	2639 8	West Midlands	Worcestershire	A38	PR	38814 0	260000	Sling Lane, Worcester	A4538	1
44	2639 9	West Midlands	Worcestershire	A38	PR	38536 4	250000	A4104	A38 principal	11
45	2716 9	West Midlands	Worcestershire	A441	PR	40566 0	258000	A422	B4090 Salt Way	3
46	2717 9	West Midlands	Worcestershire	A448	PR	39000 0	272740	A450	Whitford Rd, Bromsgrove	9

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47	2718 4	West Midlands	Worcestershir e	A449	PU	38367 0	275030	A442	A448	2
48	2718 5	West Midlands	Worcestershir e	A449	PR	38440 0	265000	A4133	A4025	4
49	2718 6	West Midlands	Worcestershir e	A449	PR	38000 0	249600	B4208 Townsend Way	A4440	6
50	2718 8	West Midlands	Worcestershir e	A451	PR	38690 0	280000	Park Gate Rd, Kidderminster	LA Boundary	4
51	2720 5	West Midlands	Worcestershir e	A456	PU	38291 6	276776	A442	A451	1
52	2770 3	West Midlands	Worcestershir e	A410 3	PR	38000 0	252620	LA boundary	A44/A4440	8

Table 54(d) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
53	2770 5	West Midlands	Worcestershire	A410 4	PR	390000	242670	A38	B4080	7.4
54	2785 1	West Midlands	Worcestershire	A449	PU	384050	278000	A451	A451	0.4
55	2794 7	West Midlands	Worcestershire	A442	PU	382540	276800	A456	A4535	0.4
56	2794 8	West Midlands	Worcestershire	A451	PU	382700	275750	A4535	A442	0.7
57	2802 4	West Midlands	Worcestershire	A453 6	PR	386950	258700	A449 spur	A38	0.5
58	2818 8	West Midlands	Worcestershire	A456	PU	383400	276900	A451 Blackwell St	A451 The Ringway	0.2
59	2820 4	West Midlands	Worcestershire	A418 9	PU	407694	266760	B4497	LA Boundary	2
60	2825 6	West Midlands	Worcestershire	A451	PU	381249	271506	A4025	A4025	0
61	2825 7	West Midlands	Worcestershire	A402 5	PU	381358	271350	A451	A4025 Gilgal	0
62	2839 1	West Midlands	Worcestershire	A44	PU	384300	254710	A449	A443	0
63	2840 3	West Midlands	Worcestershire	A44	PU	384670	254940	A449	A44 Deansway/Bridge St	0

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64	2840 5	West Midlands	Worcestershire	A451	PU	381058	271241	Bridge St	High St	0
65	2846 6	West Midlands	Worcestershire	A441	PR	403500	274000	M42	B4120	1
66	2854 9	West Midlands	Worcestershire	A456	PR	392000	281190	Monument Lane	LA Boundary	3
67	2855 9	West Midlands	Worcestershire	A38	PR	386470	241430	A4104	A4104	0
68	2881 3	West Midlands	Worcestershire	A444 0	PR	387550	252550	A4440	M5	1
69	3640 4	West Midlands	Worcestershire	A38	PU	384670	256000	A449	A449	1
70	3715 5	West Midlands	Worcestershire	A422	PR	400000	256260	A4538	A441	18

Table 54(e) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
71	3720 2	West Midlands	Worcestershir e	A443	PR	38277 0	260000	A4133	Bramley Ave, Worcester	7.1
72	3720 9	West Midlands	Worcestershir e	A448	PR	40000 0	269000	A38	B4096/B4184	5.9
73	3721 0	West Midlands	Worcestershir e	A448	PU	38400 0	276300	A451	A449	0.6
74	3721 4	West Midlands	Worcestershir e	A449	PR	38450 0	278350	A451	B4189	0.8
75	3721 5	West Midlands	Worcestershir e	A442	PU	38320 0	275000	A449	A451	1.1
76	3721 6	West Midlands	Worcestershir e	A449	PU	38454 0	258000	A38	Bevere Lane	2.1
77	3721 9	West Midlands	Worcestershir e	A450	PR	38500 0	272340	A449	A442	1
78	3723 4	West Midlands	Worcestershir e	A456	PU	39000 0	279700	A450	A491	2
79	3725 9	West Midlands	Worcestershir e	A491	PR	39660 0	276000	A38/M5	B4551	1
80	3775 6	West Midlands	Worcestershir e	A413 3	PR	38500 0	263840	A449	A38	4

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81	3777 8	West Midlands	Worcestershir e	A453 8	PR	38940 0	257000	B4636	M5	1
82	3792 9	West Midlands	Worcestershir e	A442	PR	38796 0	270000	Doverdale Lane, Droitwich	A450	9
83	3810 0	West Midlands	Worcestershir e	A38	PU	38553 0	253000	A4440	A44	3
84	3825 6	West Midlands	Worcestershir e	A438	PR	38000 0	234908	B4208 (south)	B4211	8
85	3825 8	West Midlands	Worcestershir e	A413 3	PR	38460 7	263705	A4133 Holt Fleet Road roundabout	A449	0
86	3831 2	West Midlands	Worcestershir e	A38	PU	39684 0	272403	Birmingham Road non-A38	M42	1
87	3845 9	West Midlands	Worcestershir e	A44	PU	38489 7	254796	A44 All Saints Rd	A38	1
88	3860 3	West Midlands	Worcestershir e	A418 4	PU	40332 0	242000	A46(T)	B4035	1

Table 54(f) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
89	3860 8	West Midlands	Worcestershire	A38	PR	397480	276000	M5	Gannow Rd	1.9
90	3861 0	West Midlands	Worcestershire	A491	PU	391370	281300	A456	LA Boundary	0.5
91	4640 2	West Midlands	Worcestershire	A38	PR	388660	261000	A4538	A38 principal/Copcut Lane	1.3
92	4647 7	West Midlands	Worcestershire	A44	PR	408600	239030	A46(T)	B4632	6.7
93	4647 9	West Midlands	Worcestershire	A44	PR	380000	254640	LA boundary	A4103	11.6
94	4716 7	West Midlands	Worcestershire	A435	PR	409100	270000	Slip roads to Ullenhall Lane	M42	5
95	4717 8	West Midlands	Worcestershire	A441	PU	405000	260600	B4090 Salt Way	Dagtail Lane, Redditch	4
96	4718 1	West Midlands	Worcestershire	A442	PU	382000	277700	A4535	B4190	1
97	4718 2	West Midlands	Worcestershire	A443	PR	370000	268200	A456	A451	13

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98	4719 5	West Midlands	Worcestershire	A449	PU	384240	277000	A448	A456	1
99	4719 7	West Midlands	Worcestershire	A449	PR	388000	257800	A449 spur	M5	2
100	4719 9	West Midlands	Worcestershire	A451	PU	380000	270500	B4194	A4025	2
101	4721 5	West Midlands	Worcestershire	A456	PU	384000	277100	A451	A449	1
102	4721 6	West Midlands	Worcestershire	A456	PR	368729	271365	A443	A4117	12
103	4724 1	West Midlands	Worcestershire	A448	PU	396500	270800	B4091	A38	1
104	4768 1	West Midlands	Worcestershire	A38	PU	395000	268500	B4094	Stoke Rd/ Charford Rd	2
105	4784 6	West Midlands	Worcestershire	A38	PU	388300	263000	A4133	A442	2
106	4784 7	West Midlands	Worcestershire	A456	PU	391290	280810	A491	A491	1

Table 54(g) AM 10 Carbon Emissions - DfT Traffic Count Sites

Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
107	4788 8	West Midlands	Worcestershir e	A450	PR	38600 0	273540	A442	A448	2.6
108	4788 9	West Midlands	Worcestershir e	A402 3	PU	40466 6	267651	B4160	A441	0.4
109	4807 0	West Midlands	Worcestershir e	A38	PU	38494 0	255200	A38 Sansome St/City Walls Rd	A449 Castle St	0.5
110	4818 4	West Midlands	Worcestershir e	A448	PU	39592 1	270888	B4091 Hanover St	B4091 Stourbridge Rd	0.7
111	4824 0	West Midlands	Worcestershir e	A438	PR	38600 0	233400	B4211	LA Boundary	4.2
112	4847 8	West Midlands	Worcestershir e	A44	PU	38460 5	254870	A449 Croft Rd	A44 Bridge St	0.2
113	5639 5	West Midlands	Worcestershir e	A38	PU	38480 0	257000	A449	CHECKETTS LANE	1
114	5640 3	West Midlands	Worcestershir e	A38	PU	38522 0	254400	A44	A44	0

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115	5714 3	West Midlands	Worcestershir e	A441	PR	40400 0	268905	B4184 Middlehouse Lane	B4101	1
116	5715 5	West Midlands	Worcestershir e	A448	PR	38550 0	275200	Spennells Valley Road roundabout	A450	3
117	5716 2	West Midlands	Worcestershir e	A449	PU	37746 8	245000	Green Lane	B4211 mid-junction	4
118	5717 7	West Midlands	Worcestershir e	A441	PR	40305 5	275000	B4120	LA Boundary	2
119	5718 1	West Midlands	Worcestershir e	A456	PR	38000 0	275940	B4190	B4549	2
120	5718 9	West Midlands	Worcestershir e	A451	PR	37600 0	266260	A443	B4194	7
121	5719 6	West Midlands	Worcestershir e	A449	PR	38428 1	269699	A4025	A450	4
122	5721 4	West Midlands	Worcestershir e	A449	PU	38430 0	254000	Canada Way	A44	2
123	5723 2	West Midlands	Worcestershir e	A491	PR	39200 0	279487	B4091	A456	6
124	5749 2	West Midlands	Worcestershir e	A413 3	PR	38451 0	263250	A4133 School Bank/Holt Fleet Rd	A449	1

Table 54(h) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
125	5751 8	West Midlands	Worcestershire	A449	PU	384560	255220	A44	A38	0.7
126	5751 9	West Midlands	Worcestershire	A38	PR	388000	262445	B4090	A4133	1.8
127	5761 7	West Midlands	Worcestershire	A413 3	PR	384000	263620	A443	A4133 School Bank roundabout	3.3
128	5761 9	West Midlands	Worcestershire	A451	PU	383450	276000	A442	A448	1.1
129	5762 1	West Midlands	Worcestershire	A402 5	PU	381420	271610	Worcester Rd	Vale Rd	0.3
130	5769 9	West Midlands	Worcestershire	A410 4	PR	393400	245000	B4080	A44	3.1
131	5797 6	West Midlands	Worcestershire	A38	PU	396802	272000	A448	Birmingham Rd	2

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132	5799 6	West Midlands	Worcestershire	A453 5	PU	382300	276000	A451	A456	1
133	5805 2	West Midlands	Worcestershire	A44	PU	384710	254860	A44 North Parade	A44 All Saints Rd	0
134	5805 4	West Midlands	Worcestershire	A402 5	PU	381000	271300	Bridge St	Lion Hill	0
135	5808 8	West Midlands	Worcestershire	A449	PR	384570	263000	A4133	A4133	1
136	5812 6	West Midlands	Worcestershire	A441	PR	403350	272000	B4101	M42 jn2	5
137	5813 3	West Midlands	Worcestershire	A402 3	PR	408000	268160	Alders Drive	LA Boundary	0
138	5837 2	West Midlands	Worcestershire	A444 0	PR	386000	252000	A38(T)	A44	2
139	7011 8	West Midlands	Worcestershire	A44	PU	384640	254782	Hylton Rd	North Parade	0
140	7392 9	West Midlands	Worcestershire	A411 7	PR	372920	274540	LA Boundary	A456	2
141	7402 8	West Midlands	Worcestershire	A448	PR	404400	264380	A441	LA Boundary	0
142	7402 9	West Midlands	Worcestershire	A422	PR	405520	257120	A441	LA Boundary	0

Table 54(i) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
143	7410 5	West Midlands	Worcestershire	A38	PR	385305	251595	A38 Trunk/Taylor's Lane	A4440	0.3
144	7420 9	West Midlands	Worcestershire	A411 2	PR	359260	267000	LA Boundary	LA Boundary	4.3
145	7421 2	West Midlands	Worcestershire	A449	PR	376600	240310	LA boundary	A4104	1
146	7421 3	West Midlands	Worcestershire	A438	PR	377000	236530	LA boundary	B4208 (south)	2.3
147	7511 5	West Midlands	Worcestershire	A453 6	PR	386930	258200	B4450	A449 spur	0.5
148	7511 6	West Midlands	Worcestershire	A449	PR	386880	258450	A449 main route	A4536	0.3

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149	7511 7	West Midlands	Worcestershire	A449	PR	386950	258240	A449 spur	A449 spur	0
150	7511 8	West Midlands	Worcestershire	A449	PR	387000	258060	A4536	A449 main route	0
151	7605 8	West Midlands	Worcestershire	A38	PR	386000	258700	A38 principal	A4536	2
152	7605 9	West Midlands	Worcestershire	A38	PR	388950	261380	A38(T)/Copcut Lane	B4090	0
153	7709 7	West Midlands	Worcestershire	A38	PR	391430	265000	A38 principal	M5 jn5	2
154	7723 4	West Midlands	Worcestershire	A448	PU	395500	270730	Whitford Rd	B4091 Hanover St	1
155	7723 5	West Midlands	Worcestershire	A38	PU	396960	273700	M42	A38 Halesowen Rd	2
156	7726 9	West Midlands	Worcestershire	A456	PU	391600	281040	A491	Monument Lane	0
157	7727 0	West Midlands	Worcestershire	A38	PU	398500	277180	Gannow Rd	LA Boundary	1
158	7730 9	West Midlands	Worcestershire	A38	PR	390630	264000	B4065	A38 trunk	0
159	7731 0	West Midlands	Worcestershire	A442	PR	389000	264590	A38	Doverdale Lane	2
160	7731 9	West Midlands	Worcestershire	A449	PR	377200	241500	A4104	Green Lane, Great Malvern	2

Table 54(j) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_ km
161	7732 0	West Midlands	Worcestershire	A449	PU	37900 0	248170	Richmond Rd/Pickersleigh Ave	B4208 Townsend Way	1.1
162	7735 1	West Midlands	Worcestershire	A402 5	PR	38300 0	269680	A449	Sandy Lane, Kidderminster	2.9
163	7735 2	West Midlands	Worcestershire	A449	PR	38422 0	273300	LA Boundary	Summerfield Lane	0.5
164	7735 3	West Midlands	Worcestershire	A448	PU	38450 0	276000	A449	Spennells Valley Road roundabout	1
165	7735 4	West Midlands	Worcestershire	A456	PU	38450 0	277170	A449(T)	Husum Way	0.9

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166	7735 5	West Midlands	Worcestershir e	A456	PR	38700 0	277770	Husum Way, Kidderminster	A450	5.5
167	7735 6	West Midlands	Worcestershir e	A451	PU	38481 0	278360	A449(T)	Park Gate Rd	1
168	7735 7	West Midlands	Worcestershir e	A442	PU	38170 0	278150	B4190	Honeybrook Lane	0
169	7738 5	West Midlands	Worcestershir e	A456	PR	37965 0	275000	B4195 Stourport Rd	B4190 Kidderminster Rd	2
170	7744 0	West Midlands	Worcestershir e	A441	PU	40426 0	264000	Dagtail Lane, Redditch	A448	1
171	7744 2	West Midlands	Worcestershir e	A402 3	PU	40550 0	268020	A441	Alders Drive	3
172	7744 3	West Midlands	Worcestershir e	A441	PU	40462 0	268000	A4023	B4184 Middlehouse Lane	1
173	7752 5	West Midlands	Worcestershir e	A449	PR	38366 0	252500	A4440	Canada Way	1
174	7752 7	West Midlands	Worcestershir e	A44	PR	38225 0	254600	A4440	Tudor Way	1
175	7752 9	West Midlands	Worcestershir e	A38	PR	38700 0	259020	A4536	Sling Lane	1
176	7753 0	West Midlands	Worcestershir e	A449	PR	38480 0	259140	Bevere Lane	A449(T)	1
177	7753 1	West Midlands	Worcestershir e	A443	PU	38400 0	255410	Bramley Avenue	A44	2
178	8048 4	West Midlands	Worcestershir e	A44	PR	40401 5	246133	A44	A46(T)	0

Table 54(k) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_km
179	8062 7	West Midlands	Worcestershire	A456	PU	38180 0	276270	B4549	A4535	0.9
180	8063 8	West Midlands	Worcestershire	A449	PU	38380 0	274300	A442/Wilden Lane roundabout	FREDERICK ROAD (ROAD 1)	0.8
181	8064 5	West Midlands	Worcestershire	A451	PR	38160 0	272900	WALTER NASH ROAD WEST	WINDERMERE WAY	1.4
182	8064 6	West Midlands	Worcestershire	A451	PU	38134 0	272090	WINDERMERE WAY	A4025	0.6

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183	8087 1	West Midlands	Worcestershi re	A410 4	PR	39489 0	247010	B4084	A44	2.6
184	8087 2	West Midlands	Worcestershi re	A44	PR	39230 0	250800	A44	A4104	7.5
185	8087 3	West Midlands	Worcestershi re	A44	PR	40000 0	247140	A4104	A44	10
186	8122 1	West Midlands	Worcestershi re	A435	PR	40892 5	268340	A4023	Slip roads to Ullenhall Lane	1
187	8133 6	West Midlands	Worcestershi re	A448	PR	40444 6	265845	Bromsgrove and Alvechurch Highway	A4189	1
188	8133 7	West Midlands	Worcestershi re	A441	PR	40449 3	265919	Bromsgrove and Alcester Highway	Alvechurch and Bromsgrove Highway	1
189	8133 8	West Midlands	Worcestershi re	A448	PR	40435 3	265707	A448	A441	1
190	8134 0	West Midlands	Worcestershi re	A448	PR	40436 6	266023	A448	A441	1
191	8134 1	West Midlands	Worcestershi re	A441	PR	40462 6	266013	A4189	A441	1
192	8134 2	West Midlands	Worcestershi re	A441	PR	40467 2	265710	A441	A4189	1
193	8134 4	West Midlands	Worcestershi re	A441	PU	40500 0	267420	Alvechurch Highway	A4023	2
194	8134 5	West Midlands	Worcestershi re	A418 9	PU	40500 0	266140	Alvechurch Highway	B4497	2
195	8134 9	West Midlands	Worcestershi re	A441	PU	40480 0	264710	A448	Bromsgrove Highway	2
196	8139 2	West Midlands	Worcestershi re	A448	PU	40400 0	266170	B4096/B4184	Bromsgrove Highway	3

Table 54(I) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_km
197	99078	West Midlands	Worcestershire	A456	PR	361750	268490	LA Boundary	A443	3.2
198	99524	West Midlands	Worcestershire	A44	PU	383000	254295	Tudor Way	A449	1.9
199	99928	West Midlands	Worcestershire	A4440	PR	383000	253280	A4103	A449	3.1
200	99929	West Midlands	Worcestershire	A4440	PR	387450	253000	A44S	A44N	0.6
201	99930	West Midlands	Worcestershire	A4440	PR	388000	254000	A44	A422	1.3
202	99931	West Midlands	Worcestershire	A4440	PR	388330	254630	A422	B4636	4
203	948807	West Midlands	Worcestershire	B4194	BR	379792	269844	Dunley Road	B4196	1.4
204	948809	West Midlands	Worcestershire	B4197	BR	375537	265099	A443	Hockam's Lane	3

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205	948812	West Midlands	Worcestershire	B4092	BR	404084	261149	The Ridgeway	B4090	1.4
206	948814	West Midlands	Worcestershire	B4202	BR	372190	270257	A456	Porchbrook Road	2.3
207	948815	West Midlands	Worcestershire	B4195	BR	379513	273908	A456	Burlish Crossing	1.6
208	948817	West Midlands	Worcestershire	B4214	BR	361002	266475	A4112	Unclassified	3.1
209	948821	West Midlands	Worcestershire	B4084	BR	390677	249348	Wadborough Road	Egdon Lane	3.5
210	948823	West Midlands	Worcestershire	B4504	BR	403066	266683	A448	Middle Piece Drive	0.23
211	948826	West Midlands	Worcestershire	B4084	BR	391818	251125	A44	B4084	2.4
212	948827	West Midlands	Worcestershire	B4632	BR	408627	238562	A44	Cheltenham Road	1.5
213	948829	West Midlands	Worcestershire	B4204	BR	360575	267955	A4112	Unclassified	3.2
214	948830	West Midlands	Worcestershire	B4101	BR	404953	269538	A441	Icknield Street	2.2

Table 54(m) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Eastin g	Northin g	Start Junction	End Junction	LinkLength_k m
215	948831	West Midlands	Worcestershire	B4638	BU	387927	256562	Hastings Drive	Plantation Drive	0.28
216	948832	West Midlands	Worcestershire	B4551	BU	396227	279919	St Kenelm's Road	Dark Lane	0.55
217	948836	West Midlands	Worcestershire	B4637	BU	386392	255561	Sherriff Street	Woodgreen Drive	2
218	948839	West Midlands	Worcestershire	Gilberts End Lane	CR	382505	242137	B4209	B4208	2.9
219	948845	West Midlands	Worcestershire	Crown Lane	CR	391347	266659	A38	Crutch Lane	2.3
220	948846	West Midlands	Worcestershire	C2039 Ravenhayes Lane	CR	399109	280808	Church Hill	Balmoral Road	0.8
221	948847	West Midlands	Worcestershire	Stocks Road	CR	373466	250977	Unclassified	Hopton Lane	5.2
222	948855	West Midlands	Worcestershire	Blackwell Road	CR	400087	272594	Wheeley Road	Sandhills Road	2.1
223	948858	West Midlands	Worcestershire	Pound Green (C2134)	CR	375415	278189	B4194	Unclassified	0.5
224	948863	West Midlands	Worcestershire	Beacon Hill	CU	398857	276751	Whetty Lane	Hazel Road	0.45
225	948864	West Midlands	Worcestershire	Watery Lane (U54158)	CU	383424	254276	B4485	A44	0.17
226	948867	West Midlands	Worcestershire	Northwick Road	CU	384269	257935	Beckett Road	Old Northwick Lane	0.12

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227	948868	West Midlands	Worcestershire	Westwood Road (U41720)	CU	388923	264566	A38	Crofters Way	0.6
228	948870	West Midlands	Worcestershire	Tennyson Way (U12527)	CU	384935	276438	Borrington Road	Husum Way	0.65
229	948873	West Midlands	Worcestershire	Hoo Road	CU	383510	275885	A451	A449	1.6
230	948876	West Midlands	Worcestershire	Bordsley Lane (U32001)	UR	404260	268694	Millrace Road	End of Road	0.65
231	948881	West Midlands	Worcestershire	Church Road	CR	393171	273080	Woodland Road	Priory Road	0.3
232	948882	West Midlands	Worcestershire	U41002	UR	384946	259544	A449	Vicarage Road	0.35

Table 54(n) AM 10 Carbon Emissions - DfT Traffic Count Sites										
Ref No	DfT Traffic Count Sites									
	CP	Region	Local Authority	Road	Road Category	Easting	Northing	Start Junction	End Junction	LinkLength_km
233	948885	West Midlands	Worcestershire	Wapping Lane	UR	408158	269404	A435	End of Road	0.8
234	948886	West Midlands	Worcestershire	Northwood Lane (U13012)	UR	378038	276981	Kidderminster Road	End of Road	3.3
235	948887	West Midlands	Worcestershire	Old Worcester Road (U40028)	UR	384587	270834	A449	A449	1.5
236	948889	West Midlands	Worcestershire	Millenium Way	UR	404453	241929	A46	Enterprise Lane	0.45
237	948892	West Midlands	Worcestershire	Axborough Lane (U13213)	UR	385453	279763	A451	A449	1.3
238	948895	West Midlands	Worcestershire	The Beeches	UR	386247	240671	Ryall Road	Ryall Road	0.4
239	948896	West Midlands	Worcestershire	Westonhall Road (C2033)	UR	394582	266364	B4091	Shaw Lane	1.4
240	948898	West Midlands	Worcestershire	Nixon Court (U62011)	UR	383644	249695	Lower Ferry Lane	End of Road	0.13
241	948901	West Midlands	Worcestershire	Fordhouse Road	UU	396558	270394	B4184	A448	0.6
242	948903	West Midlands	Worcestershire	Berryfield Road	UU	402349	243385	Pershore Road	Evendene Road	0.16
243	948905	West Midlands	Worcestershire	Unicorn Hill	UU	403971	267640	Bates Hill	Hewell Road	0.13

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244	948907	West Midlands	Worcestershire	Waresley Court Road	UU	384303	270015	Waresley Road	Worcester Road	0.7
245	948908	West Midlands	Worcestershire	Oldington Lane (U12054)	UU	381884	273567	A451	End of Road	0.5
246	948909	West Midlands	Worcestershire	Carlyle Road (U21058)	UU	396639	269491	B4184	Stoke Road	0.27
247	948915	West Midlands	Worcestershire	Claughton Street	UU	382139	276108	Washington Street	Greatfield Road	0.3
248	948919	West Midlands	Worcestershire	Hever Avenue	UU	388387	256528	Powderham Avenue	Thetford Avenue	0.16
249	948921	West Midlands	Worcestershire	Oaklands	UU	387822	255024	Leopard Rise	End of Road	0.24
									Totals	525.99

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Table 55(a) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
1	30	148	21363	87	3983	327	76	88	10	66	187	755	26336
2	22	51	18872	107	2643	265	77	44	21	42	147	596	22269
3	30	125	7798	28	1356	157	49	45	24	53	76	403	9709
4	85	82	11985	240	1791	259	59	20	9	23	32	402	14501
5	16	45	7832	40	1231	119	48	26	23	27	43	285	9432
6	3	112	14782	40	2318	405	99	81	53	112	267	1018	18270
7	6	82	10545	10	2467	194	64	120	6	30	83	497	13600
8	16	142	22162	71	2864	514	105	249	53	140	274	1335	26574
9	17	49	7797	27	1518	146	45	24	39	31	66	350	9742
10	20	88	9389	33	1754	98	34	50	5	4	30	223	11486
11	10	133	16842	32	4120	457	100	228	9	92	383	1269	22397
12	10	30	1956	36	410	29	5	5	3	1	0	44	2475
13	23	112	8237	18	1315	176	50	20	10	38	112	406	10088
14	5	42	3184	19	940	176	45	27	15	33	33	329	4514
15	16	160	12761	49	2932	234	90	139	8	62	203	737	16639
16	108	104	12217	204	1222	116	20	11	4	13	5	169	13916
17	11	163	21372	195	3785	303	137	75	32	36	134	719	26234
18	66	113	9206	127	1354	305	28	16	4	5	2	360	11161

Table 55(b) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
19	89	60	6891	26	951	100	12	8	3	3	2	127	8056
20	50	142	17758	237	2996	127	49	38	7	7	35	264	21397
21	12	217	29167	85	4072	802	107	112	79	54	159	1313	34853
22	158	191	17507	251	2361	135	33	27	2	12	38	248	20559
23	10	112	6611	64	1093	113	30	55	11	28	101	338	8217
24	2	33	5586	37	1306	171	102	128	13	61	71	546	7509
25	36	79	10696	97	2118	331	58	19	20	55	32	515	13505

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26	37	187	17771	52	2601	465	94	170	66	134	166	1095	21706
27	1	170	15921	36	3199	330	91	100	28	102	265	916	20242
28	147	193	15992	200	2457	438	85	58	13	45	68	707	19549
29	13	105	8634	38	1412	115	44	23	8	56	48	294	10483
30	35	96	10288	22	1735	272	93	120	10	27	32	553	12694
31	5	86	7994	19	1591	302	91	80	33	79	140	725	10414
32	116	213	20415	417	3333	124	37	14	8	13	25	221	24600
33	7	161	18285	29	3213	317	59	53	16	45	105	594	22283
34	48	57	13793	77	2103	351	55	9	4	5	6	430	16460
35	51	92	15681	231	1883	147	59	74	13	11	52	355	18242
36	106	32	5810	110	881	36	4	0	0	0	0	40	6873

Table 55(c) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
37	128	264	27772	40	3908	483	77	80	72	258	243	1214	33198
38	21	14	3312	35	619	94	10	5	6	15	21	151	4132
39	6	126	21445	56	3204	397	129	143	74	204	196	1144	25975
40	25	95	6076	42	1056	203	39	40	26	81	65	452	7722
41	43	59	9661	101	943	89	18	20	4	4	3	139	10902
42	6	140	10248	41	1625	227	79	31	14	23	108	481	12535
43	48	155	13164	143	1518	131	50	22	8	20	12	241	15222
44	35	87	7701	78	1379	118	44	25	21	9	17	235	9479
45	10	28	2570	25	634	89	11	24	7	11	10	153	3410
46	4	65	8432	20	1990	148	32	35	4	13	60	293	10799
47	48	76	8607	50	1936	177	61	71	4	21	55	388	11057
48	6	114	20656	57	3764	333	87	139	23	116	351	1049	25640
49	71	151	18640	179	3278	301	63	36	14	43	79	536	22783
50	5	42	9144	26	1808	112	17	33	1	11	29	204	11226
51	44	194	24983	282	3192	269	87	107	34	38	156	691	29342
52	37	82	8311	33	1864	175	56	48	4	28	168	479	10770
53	4	31	3198	11	932	133	41	26	1	17	31	250	4421
54	58	160	17467	116	3735	218	75	86	21	58	129	586	22063

Table 55(d) AM 10 Carbon Emissions - Traffic Count Data

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Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
55	23	122	16491	126	2073	207	69	73	23	88	72	532	19345
56	53	211	25552	214	4784	366	135	67	18	50	99	736	31497
57	36	87	6869	32	1205	148	31	8	3	11	17	218	8412
58	16	148	23182	44	3872	326	108	103	11	82	157	788	28033
59	12	40	13970	2	1477	161	25	17	3	22	18	245	15734
60	34	121	15946	144	3270	194	81	50	1	9	14	348	19829
61	47	138	12806	170	2613	319	78	92	6	13	7	514	16241
62	86	176	16629	250	2467	226	59	57	9	20	51	421	19943
63	48	147	15916	384	1975	97	25	26	6	8	16	178	18601
64	58	103	7541	163	1366	125	24	4	1	1	0	154	9328
65	12	64	20264	48	2850	246	59	51	19	59	153	586	23812
66	19	122	21074	69	4234	320	78	62	13	83	178	735	26234
67	27	87	8164	72	1632	196	52	63	24	61	82	478	10434
68	11	124	29114	142	4877	709	129	75	93	176	428	1610	35866
69	287	176	17884	317	2737	321	63	45	13	22	9	473	21588
70	7	28	3904	44	1025	98	26	27	5	14	12	183	5184
71	7	26	7370	40	1436	173	49	41	13	8	24	308	9179
72	9	111	22360	93	3866	408	98	62	23	70	149	810	27240

Table 55(e) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
73	63	155	16572	177	1878	134	19	8	5	11	7	184	18966
74	15	71	9599	55	2179	183	62	58	13	56	96	468	12372
75	82	197	18892	53	3654	592	116	86	33	111	83	1021	23818
76	50	68	10292	119	1931	319	55	35	5	12	9	435	12845
77	8	76	7320	8	1689	169	19	56	6	15	40	306	9398
78	93	239	23816	66	3497	498	85	50	52	191	174	1049	28668
79	11	129	19438	57	3820	605	114	174	67	206	195	1360	24804
80	6	99	7538	52	1165	139	41	32	18	26	150	407	9261

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81	1	98	12573	115	2389	290	137	48	22	82	225	804	15980
82	8	28	5190	28	1383	225	37	18	22	43	50	395	7023
83	136	100	14875	143	2078	114	26	13	3	2	4	163	17359
84	4	28	1251	8	305	22	5	1	4	0	1	34	1626
85	21	60	10141	47	2107	149	26	24	13	16	18	247	12602
86	64	243	26721	110	5859	492	84	74	32	104	112	898	33831
87	77	208	15403	243	2510	261	54	19	8	21	23	385	18748
88	29	37	5822	58	1013	125	16	15	7	10	7	179	7109
89	23	151	17179	120	2516	260	49	22	20	32	135	518	20485
90	24	186	22743	82	3328	275	120	79	31	57	233	795	27134

Table 55(f) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
91	42	224	20454	172	2807	473	63	26	60	103	60	785	24441
92	11	104	7437	36	1603	315	62	28	13	83	60	560	9741
93	5	25	3758	35	1353	172	42	31	12	72	118	447	5618
94	17	161	28737	45	4992	1553	177	135	167	474	785	3290	37225
95	26	25	4194	19	577	57	19	37	5	10	3	131	4946
96	82	242	13734	54	1801	129	37	59	6	62	95	389	16219
97	0	10	2054	45	758	73	31	35	17	38	62	257	3125
98	74	84	11777	56	1900	126	65	24	19	44	59	338	14154
99	1	124	19645	107	4241	508	250	233	10	128	410	1539	25656
100	50	25	4744	21	980	89	16	7	3	1	1	116	5887
101	54	76	13786	121	2720	431	78	40	14	29	55	647	17350
102	0	14	2388	24	706	96	59	16	6	19	24	219	3351
103	12	86	11970	84	1899	227	65	13	2	10	15	331	14370
104	16	70	14836	72	2771	365	78	34	9	19	38	542	18292
105	7	81	13143	26	2567	297	59	53	6	64	165	645	16463
106	44	171	24523	98	5554	559	158	123	26	83	371	1319	31665
107	18	88	8471	9	1706	268	36	64	14	53	36	470	10744
108	5	87	21760	34	2107	128	12	12	17	16	19	204	24191

Table 55(g) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													

Worcestershire County Council Permit Scheme Yr1 Evaluation

2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
109	392	69	5189	230	776	70	15	2	0	3	2	92	6357
110	41	127	14137	608	2052	358	59	16	19	42	43	537	17461
111	15	52	2896	14	534	64	1	0	2	3	1	71	3568
112	103	166	20690	256	2031	203	42	28	11	26	22	331	23475
113	177	178	11937	358	1715	119	28	16	2	3	10	178	14367
114	217	214	23429	353	3715	213	40	28	8	25	42	356	28067
115	28	147	18817	55	3215	239	57	113	12	34	97	552	22785
116	23	68	10023	44	1845	115	28	36	5	18	31	233	12213
117	14	43	6697	31	1178	113	18	1	1	3	4	141	8090
118	40	112	18965	67	3241	261	73	81	8	77	185	685	23070
119	30	117	17132	141	2653	154	54	48	7	54	55	371	20414
120	4	46	2891	13	615	45	8	2	3	2	3	62	3628
121	16	134	14731	58	2784	274	83	113	32	57	198	758	18465
122	79	82	11448	63	1457	127	37	16	2	7	8	198	13248
123	4	129	15228	93	3066	300	159	89	30	100	435	1114	19629
124	7	13	2097	26	434	69	22	3	0	2	2	98	2667
125	370	154	16535	78	2228	145	34	85	35	3	21	324	19318
126	8	184	14528	18	2626	364	83	40	69	173	133	862	18218

Table 55(h) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
127	13	135	12253	19	2068	311	40	138	44	83	91	707	15181
128	4	120	16298	123	2199	705	149	92	17	50	162	1176	19917
129	71	103	14008	162	2609	249	66	46	10	17	20	407	17288
130	20	122	6703	79	1783	168	67	41	7	18	49	350	9038
131	45	158	22972	151	3489	508	152	49	17	74	115	915	27686
132	118	98	10532	92	1508	108	18	4	1	1	3	134	12364
133	210	392	17865	268	2298	214	62	36	10	28	16	365	21189
134	40	40	7853	122	1142	139	21	1	5	0	2	168	9324
135	6	128	19128	46	3518	343	93	135	18	91	290	970	23789

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136	16	42	11476	16	1773	208	39	74	21	86	56	484	13790
137	4	99	12769	29	2830	380	59	114	18	197	261	1028	16755
138	51	164	20716	97	4001	471	143	143	34	94	415	1300	26278
139	289	406	30512	491	4218	277	47	35	8	25	43	434	36061
140	4	40	4688	69	1281	130	39	35	9	14	16	243	6321
141	13	63	7581	40	1193	139	54	7	2	11	58	271	9148
142	5	34	2923	9	705	77	14	8	5	15	17	136	3807
143	35	87	7701	78	1379	118	44	25	21	9	17	235	9479
144	0	8	1716	16	366	27	9	4	3	5	5	53	2160

Table 55(i) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
145	15	40	5438	23	740	68	5	2	7	10	0	92	6333
146	37	35	1473	16	309	34	1	4	5	4	0	48	1881
147	70	134	11834	18	1940	345	59	46	62	104	50	667	14592
148	11	36	3379	30	676	81	21	26	10	25	34	198	4319
149	6	19	1796	16	359	43	11	14	5	14	18	105	2295
150	12	41	3803	34	760	91	24	29	11	29	38	223	4860
151	46	112	9501	120	935	95	14	20	9	16	16	171	10838
152	42	224	20454	172	2807	473	63	26	60	103	60	785	24441
153	2	102	13452	37	2110	369	90	73	49	102	243	926	16626
154	24	42	9959	100	1622	256	55	32	8	21	20	392	12115
155	33	164	23713	97	4421	363	85	98	12	73	207	839	29233
156	21	135	23393	77	4700	355	87	68	15	93	198	815	29120
157	25	168	19069	133	2793	289	54	24	22	36	150	575	22738
158	2	102	13452	37	2110	369	90	73	49	102	243	926	16626
159	20	83	8381	34	1955	259	74	49	15	182	254	833	11286
160	15	53	6071	54	1248	68	18	16	3	8	6	119	7545
161	44	97	17129	196	2689	150	48	26	3	9	9	244	20355
162	16	107	6934	59	1700	339	91	95	15	41	45	627	9426

Table 55(j) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													

Worcestershire County Council Permit Scheme Yr1 Evaluation

Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
163	34	170	16172	47	2367	423	86	155	60	122	151	997	19752
164	55	38	10580	163	1446	179	28	22	5	17	17	268	12494
165	25	149	14253	112	2716	265	127	101	26	69	251	837	18068
166	23	135	12841	101	2447	238	114	91	24	62	226	754	16278
167	4	37	5613	42	749	111	15	15	0	1	12	154	6595
168	11	124	7338	71	1213	125	33	62	13	31	112	375	9121
169	17	76	13075	159	1388	218	68	46	11	20	74	437	15135
170	19	93	11991	99	1577	234	20	22	4	9	10	298	14058
171	8	96	21413	18	3074	217	32	34	3	28	69	384	24985
172	10	131	23109	42	3261	286	57	49	28	19	77	517	27061
173	71	75	10418	58	1326	116	34	15	2	7	7	180	12056
174	71	93	7931	149	1247	78	35	37	7	6	11	174	9594
175	54	173	14612	159	1685	145	55	24	8	22	13	268	16896
176	45	62	9365	108	1757	290	50	32	5	11	8	396	11689
177	185	61	10736	55	1284	79	33	32	3	3	35	185	12321
178	7	149	16047	81	2980	417	121	58	40	163	184	982	20238
179	49	88	13470	141	2038	270	43	16	9	19	48	406	16143
180	76	314	18309	102	4402	618	138	85	53	199	172	1265	24393

Table 55(k) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
181	102	105	13307	242	2168	237	50	50	8	15	23	383	16205
182	112	115	14623	266	2382	260	55	55	9	16	26	421	17808
183	21	70	9838	78	1506	189	46	17	13	51	40	356	11850
184	6	62	7941	38	2033	310	102	99	34	107	112	765	10840
185	5	134	10552	49	2049	398	104	71	43	116	125	857	13641
186	17	161	28737	45	4992	1553	177	135	167	474	785	3290	37225
187	24	151	17504	97	3152	434	91	119	69	272	395	1380	22284
188	28	178	20658	114	3720	512	107	141	82	321	466	1628	26298
189	32	105	9821	87	1963	236	62	76	29	74	99	575	12551
190	35	114	10629	94	2125	255	67	82	31	80	107	622	13584

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191	30	98	9186	82	1836	220	58	71	27	69	92	538	11740
192	27	90	8378	74	1675	201	53	65	24	63	84	490	10707
193	11	118	24418	19	3320	239	55	60	14	41	79	488	28363
194	0	31	15686	19	2352	244	69	79	1	25	88	506	18595
195	17	115	20557	54	3147	166	47	53	1	37	56	361	24234
196	0	86	21184	60	4070	326	73	51	2	29	91	572	25972
197	8	36	4556	33	1191	248	125	87	43	99	101	704	6519
198	78	102	8715	163	1371	85	39	41	8	6	12	192	10543

Table 55(l) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
199	21	73	9673	56	2320	291	71	52	23	117	122	676	12797
200	104	207	25218	94	3347	251	83	54	19	49	135	591	29458
201	14	208	22302	85	3056	221	104	30	33	71	53	513	26164
202	11	231	19442	134	2321	153	29	65	2	23	33	306	22434
203	19	25	2263	58	347	16	2	2	0	0	0	19	2713
204	8	6	1285	15	240	19	14	8	1	5	2	48	1593
205	22	25	3083	11	454	64	17	14	7	8	19	129	3702
206	16	11	1757	7	406	61	6	33	4	3	12	118	2300
207	55	139	9238	52	1149	111	25	37	3	3	15	194	10773
208	5	13	883	2	153	43	8	2	4	1	4	61	1113
209	16	52	7211	34	1317	177	46	27	14	21	53	337	8951
210	0	20	5608	9	664	57	11	2	2	4	1	77	6377
211	12	40	2682	3	522	45	9	5	5	2	3	69	3317
212	46	51	4197	33	560	79	16	4	6	6	6	116	4957
213	14	33	978	4	196	22	5	0	1	0	1	29	1240
214	7	50	5385	14	613	50	4	2	3	8	4	71	6133
215	63	97	11047	119	1010	88	18	6	1	3	3	119	12391
216	24	23	5538	16	945	49	9	15	2	0	0	75	6598

Table 55(m) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													

Worcestershire County Council Permit Scheme Yr1 Evaluation

Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
217	176	113	10947	132	1653	97	18	11	1	1	5	134	12979
218	15	2	137	0	24	1	0	0	0	0	0	1	164
219	22	3	229	0	50	8	0	0	0	0	0	8	290
220	37	78	9221	61	1821	88	11	5	4	4	1	115	11296
221	23	3	528	5	107	15	2	1	14	0	0	32	674
222	79	13	1968	27	149	7	2	0	0	0	0	9	2166
223	2	0	494	3	54	8	4	0	10	0	0	22	573
224	17	4	1818	1	150	5	0	0	0	0	0	5	1978
225	71	19	4533	4	529	41	5	2	0	3	4	55	5140
226	38	20	1867	18	174	6	0	0	0	0	0	6	2085
227	2	17	2344	43	262	20	0	1	0	0	0	21	2687
228	21	39	4555	34	477	14	3	0	0	0	0	17	5123
229	14	28	4058	33	411	11	0	0	0	0	0	11	4540
230	30	3	1647	9	36	5	2	0	1	0	0	7	1703
231	2	0	200	0	27	3	2	0	0	0	0	5	233
232	2	2	125	0	22	0	0	0	0	0	0	0	148
233	3	0	1	0	3	1	0	0	0	0	0	1	5
234	22	6	547	1	102	5	0	0	0	0	0	5	660

Table 55(n) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2015 Flow Data													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
235	1	3	285	0	33	0	0	0	0	0	0	0	321
236	187	42	4259	4	1171	210	75	13	8	129	111	546	6022
237	2	7	545	0	70	9	0	0	0	0	0	9	631
238	1	1	232	0	30	4	0	0	0	0	0	4	268
239	14	1	1312	0	278	38	8	4	1	10	9	70	1661
240	4	5	195	0	16	2	0	0	0	0	0	2	218
241	22	1	1216	0	73	0	1	1	0	0	0	2	1293
242	3	2	698	8	107	4	1	0	0	0	0	5	821
243	85	104	6985	308	542	25	11	2	0	0	0	38	7977
244	7	1	377	19	38	0	1	0	0	0	0	1	436
245	56	12	902	3	498	59	7	2	5	4	7	84	1498

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246	10	5	291	0	35	4	0	0	0	0	0	4	334
247	9	2	558	0	82	7	0	0	0	0	0	7	649
248	6	6	979	0	91	3	1	0	0	0	0	4	1080
249	3	1	246	0	27	2	0	0	0	0	0	2	276
Tot als	9700	23541	27922 46	20125	465965	52784	12718	11105	3987	11215	19959	1117 67	3413648

Table 55(o) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4Axle ArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
1	31	149	21955	87	4239	344	75	98	9	62	195	782	27211
2	23	51	19396	107	2812	278	76	48	17	39	154	612	22978
3	31	123	7809	27	1418	158	46	47	20	49	79	398	9775
4	79	78	12271	239	1924	269	57	22	9	23	37	417	14929
5	16	44	7843	39	1287	119	45	28	19	25	45	281	9493
6	3	107	15135	40	2489	419	96	88	50	117	310	1080	18851
7	6	81	10559	9	2580	195	61	126	5	28	86	501	13730
8	17	143	22777	70	3048	540	103	275	44	131	286	1379	27417
9	17	48	7808	27	1587	147	42	25	32	29	68	343	9814
10	19	84	9613	33	1883	102	33	55	5	5	35	235	11847
11	10	134	17309	32	4384	480	98	253	7	86	399	1324	23183
12	11	12	2249	41	391	38	7	4	3	1	5	57	2750
13	24	111	8248	18	1375	177	47	21	9	35	116	404	10156
14	5	42	3189	18	982	177	42	29	13	31	34	325	4556
15	17	161	13115	49	3120	246	89	153	7	58	211	765	17209
16	111	102	12234	199	1277	117	19	12	3	12	5	168	13981
17	10	161	20884	195	4067	301	128	79	26	33	137	704	26011
18	61	108	9426	126	1454	316	27	18	4	5	2	372	11486

Table 55(p) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4Axle ArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles

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19	83	58	7056	26	1021	104	12	9	3	3	2	131	8292
20	46	140	17353	238	3219	126	46	40	6	6	36	260	21210
21	12	218	29975	85	4333	842	105	124	66	50	166	1354	35965
22	146	189	17108	252	2537	134	31	29	2	11	39	245	20331
23	10	111	6620	62	1143	113	28	59	9	26	105	340	8275
24	2	33	5594	36	1366	172	96	135	11	57	73	544	7573
25	34	76	10952	96	2274	342	56	21	19	57	37	532	13930
26	38	188	18264	52	2767	488	93	188	55	125	173	1123	22393
27	1	171	16362	36	3405	347	90	110	23	95	276	942	20915
28	136	185	16373	199	2638	453	83	63	12	47	79	737	20132
29	14	104	8646	37	1476	116	41	24	7	52	49	290	10553
30	32	92	10533	22	1863	282	90	130	9	28	37	576	13086
31	6	85	8005	19	1663	303	86	84	28	73	145	719	10491
32	107	210	19949	419	3581	123	35	14	7	11	25	216	24376
33	7	159	17868	29	3452	315	55	55	13	41	107	586	22094
34	54	71	11833	68	1573	84	19	16	9	10	17	156	13700
35	47	88	16055	229	2022	152	57	81	12	11	60	372	18767
36	98	31	5949	109	946	37	4	0	0	0	0	41	7076

Table 55(q) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
37	132	265	28542	39	4159	508	76	89	60	241	253	1226	34232
38	22	14	3317	34	648	95	9	6	5	14	22	150	4162
39	6	127	22040	55	3409	418	127	158	62	190	205	1160	26792
40	25	94	6085	41	1104	204	36	42	21	75	67	445	7769
41	39	56	9891	100	1012	92	17	22	4	4	4	144	11203
42	6	138	10263	40	1699	228	75	32	11	21	113	480	12619
43	50	156	13529	142	1616	137	49	24	6	18	12	247	15691
44	36	85	7712	76	1442	119	41	27	17	9	18	231	9545
45	11	28	2574	24	663	89	10	26	6	10	10	152	3441
46	4	64	8444	20	2080	149	30	37	3	12	63	294	10902
47	44	72	8813	49	2079	183	59	78	4	21	63	408	11422
48	6	114	21229	57	4006	350	85	154	20	108	366	1083	26488
49	73	152	19157	178	3488	316	62	40	12	40	83	553	23527

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50	5	42	9157	26	1891	113	16	35	1	11	30	206	11321
51	41	192	24413	283	3430	267	81	111	28	35	160	681	28998
52	38	81	8322	32	1949	176	53	51	3	26	174	483	10868
53	16	35	3721	9	695	118	19	38	10	38	39	261	4722
54	54	157	17068	116	4013	216	69	90	17	53	131	577	21932

Table 55(r) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
55	23	101	17902	98	1996	169	60	57	26	78	70	460	20556
56	49	208	24969	215	5141	363	126	70	15	46	102	721	31254
57	52	51	6978	10	862	112	21	7	5	22	19	187	8088
58	15	146	22653	44	4161	324	100	108	9	75	161	777	27780
59	11	38	14303	2	1586	166	25	18	2	23	20	255	16184
60	30	58	14727	94	1828	179	46	57	3	12	11	308	17015
61	44	132	13112	169	2806	330	76	100	6	13	8	532	16751
62	80	169	17026	248	2649	234	57	62	8	21	59	441	20532
63	45	141	16296	382	2121	100	24	28	6	9	18	185	19125
64	54	99	7721	162	1467	129	24	4	1	1	0	158	9607
65	12	64	20825	48	3032	258	58	57	16	55	159	603	24573
66	41	142	24835	102	3978	455	80	55	48	165	162	965	30023
67	30	88	8428	71	1657	192	46	64	23	63	85	473	10717
68	11	125	29921	141	5190	745	127	83	78	164	446	1643	37019
69	266	174	17476	318	2941	319	58	47	11	20	9	464	21373
70	7	27	3909	43	1072	99	24	29	4	13	13	182	5234
71	8	25	7381	39	1501	174	46	43	10	8	24	306	9252
72	9	112	22980	93	4114	429	96	69	19	65	155	833	28132

Table 55(s) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
73	58	148	16968	176	2016	139	18	9	4	11	8	190	19498

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74	15	70	9612	53	2278	184	58	61	11	52	99	466	12480
75	113	159	19238	32	3388	339	58	58	27	112	69	663	23479
76	46	65	10537	118	2073	330	54	38	5	12	10	449	13244
77	8	75	7330	8	1766	170	18	60	5	14	42	308	9487
78	86	236	23272	67	3758	494	79	52	43	174	177	1020	28352
79	11	129	19977	57	4065	636	112	192	56	192	203	1391	25619
80	6	98	7548	51	1219	140	39	34	15	24	156	408	9323
81	9	161	13169	89	2350	405	124	67	34	146	98	873	16642
82	8	27	5197	28	1446	226	35	19	18	40	52	390	7088
83	75	98	13185	119	1486	87	22	5	2	9	14	138	15027
84	5	28	1253	7	318	22	5	1	3	0	1	33	1640
85	7	62	11884	49	1814	129	55	58	14	76	86	418	14228
86	59	240	26111	111	6296	488	78	78	26	95	115	879	33636
87	72	199	15770	241	2695	271	52	21	7	21	27	398	19304
88	27	35	5961	58	1088	129	15	16	6	10	9	186	7327
89	23	152	17656	119	2678	273	48	24	17	30	141	533	21138
90	39	137	23994	47	3908	436	106	107	51	103	329	1132	29218

Table 55(t) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
91	44	226	21021	171	2987	497	62	28	50	96	63	796	25201
92	11	103	7447	36	1676	316	58	30	11	77	62	554	9815
93	5	24	3763	34	1415	173	40	33	10	67	122	445	5681
94	18	162	29534	45	5312	1632	174	149	140	442	817	3354	38407
95	25	24	4294	19	620	59	18	40	5	10	4	136	5093
96	76	231	14062	54	1933	134	36	64	6	65	110	415	16695
97	0	10	2057	44	793	73	29	37	15	35	64	254	3158
98	68	80	12058	55	2040	131	63	26	18	45	69	352	14586
99	4	104	19279	29	3227	540	121	121	68	266	388	1505	24144
100	46	24	4857	21	1052	92	16	7	3	1	1	120	6075
101	22	74	13026	40	1910	213	65	59	21	61	54	474	15524
102	1	17	2365	24	362	60	11	39	7	29	67	213	2980
103	10	30	10265	33	1145	129	29	28	5	26	21	238	11711
104	19	78	13929	52	2067	206	46	24	20	79	75	450	16575

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105	7	78	13457	26	2757	308	58	58	6	66	191	687	17004
106	34	220	28414	122	4772	619	98	86	65	240	176	1284	34812
107	19	87	8483	8	1783	269	34	68	11	49	38	469	10830
108	4	86	21263	34	2263	127	11	12	14	15	20	199	23845

Table 55(u) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
109	363	66	5313	229	834	72	15	3	0	3	2	95	6536
110	38	121	14474	604	2204	371	57	18	17	43	50	557	17960
111	15	52	2901	14	558	64	1	0	2	2	1	71	3595
112	95	164	20218	257	2182	201	39	29	9	23	22	324	23145
113	164	170	12222	356	1841	123	27	18	2	3	11	185	14775
114	201	211	22894	354	3992	211	37	29	7	23	43	350	27801
115	29	148	19338	55	3421	251	56	125	10	32	101	575	23537
116	23	67	10037	43	1930	115	27	38	4	17	32	233	12309
117	31	21	5878	17	843	65	10	31	1	5	2	114	6873
118	57	121	17937	71	2766	232	46	40	31	102	112	563	21459
119	31	117	17607	140	2823	161	54	53	6	50	57	381	21068
120	4	45	2895	13	643	45	7	2	2	2	3	62	3659
121	16	135	15139	58	2963	288	82	125	27	53	206	781	19076
122	73	78	11721	63	1565	132	36	17	2	8	9	204	13631
123	7	113	18021	37	3280	376	75	64	39	245	146	944	22396
124	7	13	2100	25	454	69	20	3	0	2	2	97	2688
125	343	147	16930	77	2392	150	33	93	33	3	24	337	19883
126	8	185	14931	18	2795	383	81	44	58	161	139	866	18794

Table 55(v) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
127	13	136	12592	19	2200	327	39	152	37	78	95	728	15675
128	6	118	15119	112	2073	320	85	81	9	105	165	766	18187

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129	66	98	14342	160	2801	257	64	50	9	17	24	421	17823
130	39	194	8157	24	1418	175	33	48	7	32	39	334	10127
131	41	156	22448	152	3749	504	141	51	14	68	118	896	27401
132	85	79	8631	48	1044	44	7	4	0	1	2	58	9859
133	227	220	18426	230	2245	161	26	19	10	16	12	244	21366
134	37	38	8040	121	1226	144	20	1	5	0	3	172	9598
135	6	129	19658	45	3743	360	92	149	15	85	303	1004	24579
136	16	41	11492	15	1854	209	37	79	18	80	58	479	13882
137	4	100	13123	29	3012	399	59	126	15	183	272	1053	17316
138	52	165	21291	97	4257	495	141	158	28	88	432	1342	27152
139	268	401	29815	493	4532	274	43	37	6	22	44	427	35668
140	4	41	4687	69	1363	137	38	39	7	13	17	250	6410
141	14	62	7591	39	1248	140	51	7	2	10	60	270	9210
142	9	104	3937	6	550	136	19	5	9	33	31	232	4829
143	36	85	7712	76	1442	119	41	27	17	9	18	231	9545
144	0	8	1771	16	389	28	9	4	2	5	6	55	2239

Table 55(w) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
145	15	40	5437	23	787	71	5	2	6	9	0	94	6381
146	38	36	1521	16	328	35	1	4	4	4	0	49	1950
147	72	135	12162	17	2064	363	58	51	52	97	52	673	15052
148	12	36	3417	29	672	78	19	26	9	26	34	192	4344
149	6	18	1772	15	348	40	10	14	5	13	18	99	2253
150	13	38	3670	31	722	84	20	28	10	27	37	206	4667
151	48	111	9514	117	978	95	14	21	8	15	17	170	10888
152	44	226	21021	171	2987	497	62	28	50	96	63	796	25201
153	2	97	13773	36	2265	381	88	80	45	106	282	983	17155
154	23	40	10196	100	1741	265	54	35	7	21	24	406	12484
155	34	165	24370	97	4705	382	83	108	10	68	216	868	30204
156	45	158	27567	113	4415	505	89	61	53	184	180	1071	33325
157	26	169	19598	132	2972	304	53	27	19	33	156	592	23463
158	2	97	13773	36	2265	381	88	80	45	106	282	983	17155
159	21	81	8393	34	2044	260	69	52	13	169	264	827	11378
160	16	53	6080	53	1305	68	17	17	3	7	6	118	7608

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161	74	104	16270	180	1939	173	21	26	5	7	22	255	18748
162	6	37	8523	21	1539	217	71	132	19	77	42	559	10679

Table 55(x) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4Axle ArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
163	34	171	16620	47	2518	444	84	171	50	114	158	1022	20378
164	51	36	10832	162	1553	186	27	23	5	18	19	278	12861
165	34	96	13412	53	2378	304	69	76	39	148	159	795	16734
166	31	86	12083	48	2143	273	62	69	35	133	143	716	15076
167	4	35	5747	42	804	115	14	16	0	1	14	161	6789
168	12	123	7348	69	1268	125	31	65	10	29	116	377	9185
169	17	76	13437	159	1477	229	67	51	9	18	77	452	15601
170	17	89	12278	98	1693	242	20	23	4	9	11	309	14467
171	7	95	20924	18	3302	216	30	35	3	26	71	380	24720
172	9	129	22582	42	3504	284	53	51	23	18	78	507	26765
173	66	71	10666	57	1424	120	33	16	2	7	8	185	12404
174	66	89	8120	148	1340	80	34	41	7	6	13	181	9877
175	55	174	15017	158	1794	152	54	27	7	20	14	274	17417
176	42	60	9589	108	1887	300	49	35	5	11	9	409	12052
177	171	58	10992	54	1379	82	32	35	3	3	41	195	12679
178	7	150	16492	81	3171	438	119	64	34	152	192	998	20891
179	45	84	13792	141	2188	280	42	18	9	20	55	423	16628
180	34	188	17609	80	2786	387	62	123	26	156	109	864	21527

Table 55(y) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4Axle ArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
181	94	100	13625	241	2328	245	49	55	7	15	27	398	16692
182	104	110	14972	265	2558	270	54	60	8	17	30	438	18343
183	22	69	9852	76	1575	190	43	18	11	47	42	351	11924
184	3	53	7741	30	1557	287	122	98	26	139	114	787	10167

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185	5	132	10567	48	2143	399	98	76	36	108	130	846	13735
186	18	162	29534	45	5312	1632	174	149	140	442	817	3354	38407
187	26	147	17641	92	3242	434	85	129	58	256	393	1357	22477
188	30	170	20420	106	3752	503	99	150	68	296	455	1570	26018
189	35	102	9787	82	1924	223	54	75	26	73	99	549	12444
190	38	110	10583	89	2081	241	58	81	29	79	107	594	13457
191	33	97	9283	78	1825	211	51	71	25	69	93	521	11804
192	31	88	8486	71	1669	193	47	65	23	63	85	476	10791
193	10	116	23861	19	3567	237	51	63	12	37	81	480	28044
194	0	30	16061	19	2526	253	67	87	1	26	102	535	19170
195	16	113	20088	54	3382	165	44	56	1	34	57	357	23993
196	0	85	20700	60	4373	323	68	53	2	26	93	566	25784
197	8	35	4562	32	1245	249	118	92	36	92	105	692	6567
198	72	97	8923	162	1472	88	38	45	7	7	14	199	10853

Table 55(z) AM 10 Carbon Emissions - Traffic Count Data

Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxi	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
199	22	72	9686	55	2426	292	67	55	19	109	127	668	12906
200	107	209	25917	94	3562	264	82	59	16	45	141	608	30389
201	13	215	22506	86	2453	285	51	72	34	76	49	568	25827
202	11	232	19981	134	2470	160	29	72	2	22	35	319	23136
203	13	20	2592	50	326	29	6	2	0	1	1	38	3027
204	9	11	1507	19	295	28	16	12	0	3	3	62	1893
205	5	21	3407	15	537	78	15	16	2	8	3	123	4102
206	4	13	1794	4	118	22	17	24	0	1	6	71	2000
207	27	86	10364	40	1315	144	34	62	8	16	10	274	12079
208	4	13	901	2	177	53	9	2	3	1	4	72	1165
209	18	78	6701	71	1023	135	22	28	7	27	27	246	8119
210	0	18	5659	10	652	57	10	2	2	4	1	77	6416
211	5	43	3059	3	520	46	7	5	2	7	4	71	3695
212	6	49	4500	34	799	89	20	5	2	5	5	126	5508
213	13	33	998	4	227	27	6	0	1	0	1	34	1296
214	7	47	5434	16	602	51	4	3	2	8	5	72	6170
215	36	79	12587	69	1257	82	15	10	1	6	5	119	14110

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	216	26	55	5029	7	975	59	13	5	3	0	2	80	6146
Table 55(aa) AM 10 Carbon Emissions - Traffic Count Data														
Year 1														
2016 Flow Data														
Post-scheme														
Ref No	PedalCycles	Motorcycles	CarsTaxi	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles	
217	154	105	10841	122	1770	97	16	12	1	1	5	132	12970	
218	21	2	169	0	33	7	0	0	0	0	0	7	211	
219	9	3	303	0	50	4	0	1	0	0	0	5	361	
220	47	53	9557	67	1797	77	8	12	3	1	0	102	11576	
221	22	3	538	5	124	19	2	1	11	0	0	33	703	
222	47	23	2117	17	215	12	2	1	0	0	0	14	2386	
223	25	15	694	2	68	26	1	0	0	0	0	27	807	
224	12	8	1608	0	190	3	2	0	0	0	0	5	1811	
225	111	19	4250	5	422	27	9	1	1	3	1	42	4738	
226	42	6	1517	23	227	9	4	2	0	0	0	15	1788	
227	8	31	2293	37	220	18	1	0	0	0	3	22	2603	
228	20	43	4375	45	536	14	0	0	0	0	0	14	5013	
229	15	32	3893	26	341	14	3	1	0	0	0	18	4311	
230	26	4	1684	5	46	2	0	0	0	0	0	2	1740	
231	2	2	175	0	15	1	0	0	0	0	0	1	193	
232	0	0	135	0	27	0	0	0	0	0	0	0	162	
233	3	0	1	0	3	1	0	0	0	0	0	1	5	
234	14	5	545	3	100	4	2	0	0	0	0	6	659	

Table 55(ab) AM 10 Carbon Emissions - Traffic Count Data													
Year 1													
2016 Flow Data													
Post-scheme													
Ref No	PedalCycles	Motorcycles	CarsTaxi	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
235	1	3	290	0	38	0	0	0	0	0	0	0	332
236	122	31	4477	2	1138	199	37	12	18	219	163	649	6298
237	7	0	435	0	69	4	0	0	0	0	0	4	508
238	3	0	239	0	27	5	0	0	0	0	0	5	272
239	6	5	1243	0	304	48	10	1	2	5	6	70	1621
240	5	3	230	2	33	3	0	0	0	0	0	3	271

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241	12	3	1269	2	80	1	0	0	0	0	0	1	1354
242	3	2	691	8	115	4	1	0	0	0	0	5	821
243	87	99	7375	338	784	23	6	0	0	0	0	28	8624
244	14	0	322	24	37	2	1	0	0	0	0	3	386
245	59	38	948	3	631	68	6	3	1	7	12	98	1717
246	8	4	288	0	38	4	0	0	0	0	0	4	334
247	8	1	526	0	35	0	1	0	0	0	0	1	564
248	9	10	999	0	104	0	2	0	0	0	0	2	1115
249	0	1	91	0	4	4	0	0	0	0	0	4	101
Tot als	9259	22761	28276 81	19233	475040	52725	11280	11794	3723	12018	20048	1115 94	3456297

Table 56 AM 10 Carbon Emissions - Traffic Speed					
Average traffic speed (miles per mile) (Source DfT Congestion & Reliability Statistics Table CGN0501b) Average traffic speeds on local 'A' roads					
Year 1		Year 2		Year 3	
Period		Period		Period	
2015	2016	2016	2017	2017	2018
Pre-scheme	Post-scheme	Post-scheme	Post-scheme	Post-scheme	Post-scheme
32.2	31.9	31.9			

Table 57(a) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
1	0.00	0.02	0.82	0.02	0.20	0.03	0.03	0.03	0.02	0.02	0.02	0.17	1.23
2	0.00	0.03	2.91	0.08	0.53	0.10	0.10	0.10	0.08	0.08	0.08	0.54	4.09
3	0.00	0.07	0.99	0.02	0.22	0.05	0.05	0.05	0.05	0.05	0.05	0.31	1.60
4	0.00	0.03	1.15	0.11	0.22	0.06	0.06	0.06	0.02	0.02	0.02	0.21	1.73
5	0.00	0.02	0.78	0.02	0.16	0.03	0.03	0.03	0.02	0.02	0.02	0.17	1.15
6	0.00	0.02	0.80	0.01	0.16	0.05	0.05	0.05	0.06	0.06	0.06	0.33	1.33
7	0.00	0.04	1.34	0.01	0.41	0.08	0.08	0.08	0.04	0.04	0.04	0.36	2.15
8	0.00	0.08	3.16	0.05	0.53	0.21	0.21	0.21	0.16	0.16	0.16	1.12	4.94
9	0.00	0.05	1.92	0.03	0.49	0.09	0.09	0.09	0.08	0.08	0.08	0.52	3.01
10	0.00	0.02	0.43	0.01	0.11	0.01	0.01	0.01	0.00	0.00	0.00	0.06	0.62
11	0.00	0.03	0.97	0.01	0.31	0.08	0.08	0.08	0.07	0.07	0.07	0.44	1.76
12	0.00	0.05	0.85	0.07	0.23	0.03	0.03	0.03	0.00	0.00	0.00	0.10	1.31
13	0.00	0.06	1.02	0.01	0.21	0.05	0.05	0.05	0.05	0.05	0.05	0.30	1.59
14	0.00	0.01	0.15	0.00	0.06	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.30
15	0.00	0.03	0.59	0.01	0.18	0.04	0.04	0.04	0.03	0.03	0.03	0.20	1.01
16	0.00	0.01	0.33	0.03	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.43
17	0.00	0.01	0.33	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.49
18	0.00	0.02	0.39	0.03	0.07	0.03	0.03	0.03	0.00	0.00	0.00	0.08	0.59

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(b) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
19	0.00	0.01	0.16	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.21
20	0.00	0.00	0.14	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.19
21	0.00	0.21	6.74	0.09	1.23	0.40	0.40	0.40	0.17	0.17	0.17	1.70	9.96
22	0.00	0.01	0.27	0.02	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.37
23	0.00	0.11	1.55	0.07	0.33	0.08	0.08	0.08	0.08	0.08	0.08	0.48	2.55
24	0.00	0.04	1.59	0.05	0.49	0.19	0.19	0.19	0.10	0.10	0.10	0.89	3.05
25	0.00	0.01	0.33	0.01	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.53
26	0.00	0.01	0.34	0.00	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.55
27	0.00	0.06	1.41	0.02	0.37	0.08	0.08	0.08	0.09	0.09	0.09	0.49	2.35
28	0.00	0.06	1.29	0.08	0.26	0.08	0.08	0.08	0.03	0.03	0.03	0.31	2.01
29	0.00	0.06	1.13	0.02	0.24	0.04	0.04	0.04	0.04	0.04	0.04	0.23	1.68
30	0.00	0.02	0.52	0.01	0.11	0.04	0.04	0.04	0.01	0.01	0.01	0.15	0.80
31	0.00	0.03	0.74	0.01	0.19	0.07	0.07	0.07	0.06	0.06	0.06	0.39	1.37
32	0.00	0.02	0.55	0.05	0.12	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.78
33	0.00	0.04	1.13	0.01	0.26	0.04	0.04	0.04	0.03	0.03	0.03	0.21	1.64
34	0.00	0.01	0.69	0.02	0.14	0.04	0.04	0.04	0.00	0.00	0.00	0.11	0.97
35	0.00	0.01	0.36	0.03	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.50
36	0.00	0.00	0.18	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.24

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(c) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
37	0.00	0.08	2.14	0.01	0.39	0.08	0.08	0.08	0.11	0.11	0.11	0.58	3.21
38	0.00	0.00	0.13	0.01	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.20
39	0.00	0.02	0.83	0.01	0.16	0.04	0.04	0.04	0.04	0.04	0.04	0.27	1.28
40	0.00	0.06	0.87	0.03	0.20	0.07	0.07	0.07	0.06	0.06	0.06	0.39	1.53
41	0.00	0.03	1.19	0.06	0.15	0.03	0.03	0.03	0.00	0.00	0.00	0.09	1.52
42	0.00	0.06	1.14	0.02	0.24	0.06	0.06	0.06	0.04	0.04	0.04	0.31	1.78
43	0.00	0.03	0.71	0.04	0.11	0.02	0.02	0.02	0.01	0.01	0.01	0.07	0.96
44	0.00	0.15	3.20	0.15	0.75	0.13	0.13	0.13	0.05	0.05	0.05	0.54	4.79
45	0.00	0.01	0.30	0.01	0.10	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.52
46	0.00	0.09	2.96	0.03	0.91	0.13	0.13	0.13	0.07	0.07	0.07	0.58	4.57
47	0.00	0.02	0.60	0.02	0.17	0.04	0.04	0.04	0.01	0.01	0.01	0.15	0.96
48	0.00	0.07	3.10	0.04	0.74	0.14	0.14	0.14	0.18	0.18	0.18	0.97	4.92
49	0.00	0.15	4.38	0.20	1.00	0.16	0.16	0.16	0.08	0.08	0.08	0.71	6.44
50	0.00	0.03	1.41	0.02	0.36	0.04	0.04	0.04	0.02	0.02	0.02	0.17	1.99
51	0.00	0.02	0.77	0.04	0.13	0.02	0.02	0.02	0.02	0.02	0.02	0.12	1.09
52	0.00	0.11	2.69	0.05	0.79	0.15	0.15	0.15	0.16	0.16	0.16	0.94	4.57
53	0.00	0.04	0.91	0.01	0.35	0.10	0.10	0.10	0.03	0.03	0.03	0.39	1.70
54	0.00	0.01	0.27	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.42

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(d) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
55	0.00	0.01	0.25	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.36
56	0.00	0.02	0.69	0.03	0.17	0.03	0.03	0.03	0.01	0.01	0.01	0.11	1.02
57	0.00	0.01	0.13	0.00	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.20
58	0.00	0.00	0.18	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.26
59	0.00	0.01	0.86	0.00	0.12	0.02	0.02	0.02	0.01	0.01	0.01	0.08	1.07
60	0.00	0.01	0.18	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.27
61	0.00	0.01	0.15	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.23
62	0.00	0.01	0.26	0.02	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.37
63	0.00	0.00	0.12	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17
64	0.00	0.01	0.12	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17
65	0.00	0.01	0.70	0.01	0.13	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.97
66	0.00	0.05	2.03	0.03	0.53	0.08	0.08	0.08	0.06	0.06	0.06	0.42	3.06
67	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05
68	0.00	0.01	0.56	0.01	0.12	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.89
69	0.00	0.03	0.83	0.07	0.16	0.03	0.03	0.03	0.01	0.01	0.01	0.12	1.21
70	0.00	0.08	2.71	0.14	0.93	0.18	0.18	0.18	0.05	0.05	0.05	0.69	4.55
71	0.00	0.03	2.02	0.05	0.51	0.12	0.12	0.12	0.03	0.03	0.03	0.46	3.06
72	0.00	0.10	5.08	0.10	1.15	0.22	0.22	0.22	0.14	0.14	0.14	1.06	7.49

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(e) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
73	0.00	0.01	0.38	0.02	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.50
74	0.00	0.01	0.30	0.01	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.49
75	0.00	0.03	0.80	0.01	0.20	0.06	0.06	0.06	0.02	0.02	0.02	0.24	1.29
76	0.00	0.02	0.83	0.05	0.20	0.06	0.06	0.06	0.01	0.01	0.01	0.18	1.29
77	0.00	0.01	0.14	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.22
78	0.00	0.06	1.38	0.02	0.26	0.06	0.06	0.06	0.06	0.06	0.06	0.36	2.08
79	0.00	0.02	0.60	0.01	0.15	0.05	0.05	0.05	0.04	0.04	0.04	0.25	1.02
80	0.00	0.06	1.10	0.04	0.22	0.05	0.05	0.05	0.07	0.07	0.07	0.37	1.79
81	0.00	0.02	0.58	0.03	0.14	0.04	0.04	0.04	0.04	0.04	0.04	0.22	0.99
82	0.00	0.04	1.76	0.04	0.61	0.16	0.16	0.16	0.10	0.10	0.10	0.77	3.22
83	0.00	0.05	1.66	0.08	0.30	0.03	0.03	0.03	0.00	0.00	0.00	0.09	2.18
84	0.00	0.04	0.39	0.01	0.12	0.01	0.01	0.01	0.00	0.00	0.00	0.06	0.62
85	0.00	0.00	0.08	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11
86	0.00	0.03	0.93	0.02	0.26	0.04	0.04	0.04	0.02	0.02	0.02	0.18	1.42
87	0.00	0.02	0.42	0.03	0.09	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.61
88	0.00	0.01	0.31	0.01	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.46
89	0.00	0.05	1.26	0.04	0.24	0.04	0.04	0.04	0.03	0.03	0.03	0.22	1.81
90	0.00	0.01	0.44	0.01	0.08	0.02	0.02	0.02	0.02	0.02	0.02	0.09	0.64

Table 57(f) AM 10 Carbon Emissions - Dft Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
91	0.00	0.05	1.02	0.04	0.18	0.05	0.05	0.05	0.03	0.03	0.03	0.23	1.52
92	0.00	0.11	1.92	0.04	0.54	0.18	0.18	0.18	0.10	0.10	0.10	0.83	3.44
93	0.00	0.05	1.68	0.07	0.79	0.19	0.19	0.19	0.22	0.22	0.22	1.22	3.81
94	0.00	0.13	5.53	0.04	1.25	0.61	0.61	0.61	0.68	0.68	0.68	3.86	10.81
95	0.00	0.01	0.60	0.01	0.11	0.03	0.03	0.03	0.01	0.01	0.01	0.10	0.83
96	0.00	0.05	0.63	0.01	0.11	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.91
97	0.00	0.02	0.99	0.10	0.48	0.11	0.11	0.11	0.14	0.14	0.14	0.76	2.34
98	0.00	0.01	0.41	0.01	0.09	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.58
99	0.00	0.05	1.82	0.05	0.51	0.16	0.16	0.16	0.12	0.12	0.12	0.84	3.26
100	0.00	0.01	0.33	0.01	0.09	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.47
101	0.00	0.01	0.48	0.02	0.12	0.03	0.03	0.03	0.01	0.01	0.01	0.12	0.75
102	0.00	0.03	1.08	0.05	0.41	0.13	0.13	0.13	0.05	0.05	0.05	0.55	2.12
103	0.00	0.01	0.41	0.01	0.09	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.59
104	0.00	0.02	1.20	0.03	0.29	0.07	0.07	0.07	0.01	0.01	0.01	0.24	1.78
105	0.00	0.02	0.86	0.01	0.22	0.05	0.05	0.05	0.04	0.04	0.04	0.25	1.36
106	0.00	0.01	0.47	0.01	0.14	0.03	0.03	0.03	0.02	0.02	0.02	0.15	0.78
107	0.00	0.04	0.85	0.00	0.22	0.06	0.06	0.06	0.03	0.03	0.03	0.26	1.37
108	0.00	0.01	0.34	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.40

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Table 57(g) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
109	0.00	0.01	0.10	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.15
110	0.00	0.01	0.38	0.08	0.07	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.62
111	0.00	0.03	0.47	0.01	0.11	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.69
112	0.00	0.01	0.16	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.21
113	0.00	0.03	0.46	0.07	0.09	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.68
114	0.00	0.00	0.09	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
115	0.00	0.03	0.80	0.01	0.18	0.03	0.03	0.03	0.01	0.01	0.01	0.13	1.14
116	0.00	0.03	1.08	0.02	0.26	0.03	0.03	0.03	0.01	0.01	0.01	0.14	1.53
117	0.00	0.03	0.95	0.02	0.22	0.03	0.03	0.03	0.00	0.00	0.00	0.10	1.32
118	0.00	0.04	1.61	0.03	0.36	0.06	0.06	0.06	0.06	0.06	0.06	0.35	2.38
119	0.00	0.03	0.99	0.04	0.20	0.03	0.03	0.03	0.02	0.02	0.02	0.12	1.38
120	0.00	0.05	0.73	0.02	0.20	0.02	0.02	0.02	0.01	0.01	0.01	0.09	1.09
121	0.00	0.08	2.27	0.04	0.56	0.12	0.12	0.12	0.11	0.11	0.11	0.69	3.65
122	0.00	0.02	0.79	0.02	0.13	0.02	0.02	0.02	0.00	0.00	0.00	0.07	1.04
123	0.00	0.13	3.64	0.10	0.95	0.22	0.22	0.22	0.33	0.33	0.33	1.66	6.48
124	0.00	0.00	0.08	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.13
125	0.00	0.02	0.45	0.01	0.08	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.60
126	0.00	0.05	1.01	0.01	0.24	0.06	0.06	0.06	0.06	0.06	0.06	0.36	1.67

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(h) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
127	0.00	0.07	1.56	0.01	0.34	0.11	0.11	0.11	0.07	0.07	0.07	0.52	2.50
128	0.00	0.02	0.69	0.02	0.12	0.07	0.07	0.07	0.02	0.02	0.02	0.28	1.13
129	0.00	0.00	0.16	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.24
130	0.00	0.06	0.80	0.04	0.28	0.06	0.06	0.06	0.02	0.02	0.02	0.23	1.41
131	0.00	0.04	1.33	0.04	0.26	0.07	0.07	0.07	0.03	0.03	0.03	0.30	1.96
132	0.00	0.01	0.37	0.02	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.49
133	0.00	0.01	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
134	0.00	0.00	0.09	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
135	0.00	0.02	0.74	0.01	0.18	0.04	0.04	0.04	0.04	0.04	0.04	0.23	1.17
136	0.00	0.03	2.08	0.01	0.42	0.10	0.10	0.10	0.07	0.07	0.07	0.51	3.05
137	0.00	0.01	0.20	0.00	0.06	0.01	0.01	0.01	0.02	0.02	0.02	0.10	0.36
138	0.00	0.06	1.91	0.04	0.48	0.12	0.12	0.12	0.12	0.12	0.12	0.73	3.23
139	0.00	0.01	0.12	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16
140	0.00	0.01	0.34	0.02	0.12	0.03	0.03	0.03	0.01	0.01	0.01	0.10	0.60
141	0.00	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09
142	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
143	0.00	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
144	0.00	0.01	0.28	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.43

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(i) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
145	0.00	0.01	0.21	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.28
146	0.00	0.01	0.13	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.21
147	0.00	0.01	0.23	0.00	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.36
148	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07
149	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04
150	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07
151	0.00	0.03	0.70	0.04	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.07	0.93
152	0.00	0.01	0.32	0.01	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.47
153	0.00	0.03	0.98	0.01	0.20	0.07	0.07	0.07	0.07	0.07	0.07	0.41	1.64
154	0.00	0.01	0.42	0.02	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.63
155	0.00	0.04	1.46	0.03	0.36	0.06	0.06	0.06	0.04	0.04	0.04	0.30	2.19
156	0.00	0.01	0.27	0.00	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.41
157	0.00	0.02	0.66	0.02	0.13	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.95
158	0.00	0.00	0.16	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.26
159	0.00	0.02	0.48	0.01	0.15	0.04	0.04	0.04	0.06	0.06	0.06	0.30	0.97
160	0.00	0.01	0.37	0.02	0.10	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.54
161	0.00	0.02	0.73	0.04	0.15	0.02	0.02	0.02	0.00	0.00	0.00	0.05	0.99
162	0.00	0.05	0.77	0.03	0.25	0.10	0.10	0.10	0.03	0.03	0.03	0.38	1.48

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(j) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
163	0.00	0.01	0.31	0.00	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.50
164	0.00	0.01	0.41	0.03	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.06	0.57
165	0.00	0.02	0.49	0.02	0.12	0.03	0.03	0.03	0.03	0.03	0.03	0.18	0.83
166	0.00	0.12	2.72	0.10	0.68	0.16	0.16	0.16	0.16	0.16	0.16	0.97	4.58
167	0.00	0.00	0.13	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.18
168	0.00	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09
169	0.00	0.02	0.86	0.05	0.12	0.04	0.04	0.04	0.02	0.02	0.02	0.16	1.21
170	0.00	0.01	0.46	0.02	0.08	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.63
171	0.00	0.05	2.47	0.01	0.46	0.06	0.06	0.06	0.03	0.03	0.03	0.25	3.24
172	0.00	0.02	0.89	0.01	0.16	0.03	0.03	0.03	0.01	0.01	0.01	0.11	1.19
173	0.00	0.01	0.36	0.01	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.47
174	0.00	0.01	0.18	0.02	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.27
175	0.00	0.01	0.28	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.38
176	0.00	0.01	0.29	0.02	0.07	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.45
177	0.00	0.02	0.95	0.02	0.15	0.02	0.02	0.02	0.01	0.01	0.01	0.09	1.24
178	0.00	0.00	0.12	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.21
179	0.00	0.01	0.47	0.02	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.67
180	0.00	0.04	0.56	0.01	0.18	0.04	0.04	0.04	0.03	0.03	0.03	0.23	1.02

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(k) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
181	0.00	0.02	0.72	0.06	0.15	0.03	0.03	0.03	0.01	0.01	0.01	0.11	1.07
182	0.00	0.01	0.34	0.03	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.50
183	0.00	0.03	0.99	0.04	0.20	0.04	0.04	0.04	0.03	0.03	0.03	0.21	1.45
184	0.00	0.07	2.29	0.05	0.77	0.25	0.25	0.25	0.18	0.18	0.18	1.29	4.47
185	0.00	0.21	4.06	0.09	1.03	0.37	0.37	0.37	0.27	0.27	0.27	1.93	7.32
186	0.00	0.03	1.11	0.01	0.25	0.12	0.12	0.12	0.14	0.14	0.14	0.77	2.16
187	0.00	0.02	0.47	0.01	0.11	0.03	0.03	0.03	0.05	0.05	0.05	0.23	0.85
188	0.00	0.02	0.48	0.01	0.11	0.03	0.03	0.03	0.05	0.05	0.05	0.24	0.86
189	0.00	0.02	0.38	0.02	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.64
190	0.00	0.01	0.33	0.01	0.09	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.55
191	0.00	0.01	0.28	0.01	0.07	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.48
192	0.00	0.01	0.29	0.01	0.08	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.49
193	0.00	0.04	1.79	0.01	0.32	0.04	0.04	0.04	0.02	0.02	0.02	0.20	2.35
194	0.00	0.01	1.45	0.01	0.28	0.06	0.06	0.06	0.03	0.03	0.03	0.26	2.02
195	0.00	0.03	1.35	0.02	0.27	0.03	0.03	0.03	0.02	0.02	0.02	0.13	1.80
196	0.00	0.04	2.69	0.04	0.67	0.10	0.10	0.10	0.04	0.04	0.04	0.41	3.85
197	0.00	0.02	0.56	0.02	0.19	0.10	0.10	0.10	0.07	0.07	0.07	0.51	1.30
198	0.00	0.03	0.64	0.06	0.13	0.02	0.02	0.02	0.00	0.00	0.00	0.08	0.93

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(I) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
199	0.00	0.04	1.15	0.03	0.36	0.08	0.08	0.08	0.08	0.08	0.08	0.48	2.07
200	0.00	0.02	0.58	0.01	0.10	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.79
201	0.00	0.04	1.12	0.02	0.20	0.03	0.03	0.03	0.02	0.02	0.02	0.15	1.53
202	0.00	0.15	3.00	0.10	0.47	0.06	0.06	0.06	0.02	0.02	0.02	0.26	3.96
203	0.00	0.01	0.12	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17
204	0.00	0.00	0.15	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.23
205	0.00	0.01	0.17	0.00	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.25
206	0.00	0.00	0.16	0.00	0.05	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.27
207	0.00	0.04	0.57	0.02	0.09	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.78
208	0.00	0.01	0.11	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.18
209	0.00	0.03	0.97	0.02	0.23	0.06	0.06	0.06	0.03	0.03	0.03	0.26	1.51
210	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
211	0.00	0.02	0.25	0.00	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.36
212	0.00	0.01	0.24	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.34
213	0.00	0.02	0.12	0.00	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.19
214	0.00	0.02	0.46	0.01	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.58
215	0.00	0.00	0.12	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.15
216	0.00	0.00	0.12	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(m) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
217	0.00	0.04	0.84	0.05	0.17	0.02	0.02	0.02	0.00	0.00	0.00	0.05	1.15
218	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
219	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
220	0.00	0.01	0.28	0.01	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.39
221	0.00	0.00	0.11	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.18
222	0.00	0.00	0.16	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
223	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
224	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
225	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
226	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
227	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
228	0.00	0.00	0.11	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
229	0.00	0.01	0.25	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
230	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
231	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
232	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	0.00	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(n) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2015 Total Emissions (thousand tonnes CO2)													
Pre-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
235	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
236	0.00	0.00	0.07	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.16
237	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
238	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
239	0.00	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11
240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05
242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
243	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
244	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
245	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04
246	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
248	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
249	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	6.58	195.46	5.51	45.67	10.56	10.56	10.56	7.38	7.38	7.38	53.82	307.04

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(o) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
1	0.00	0.02	0.85	0.02	0.21	0.03	0.03	0.03	0.03	0.03	0.03	0.18	1.28
2	0.00	0.03	3.00	0.08	0.57	0.11	0.11	0.11	0.08	0.08	0.08	0.56	4.23
3	0.00	0.06	1.00	0.02	0.24	0.05	0.05	0.05	0.05	0.05	0.05	0.30	1.62
4	0.00	0.03	1.19	0.11	0.24	0.06	0.06	0.06	0.02	0.02	0.02	0.22	1.79
5	0.00	0.02	0.79	0.02	0.17	0.03	0.03	0.03	0.02	0.02	0.02	0.16	1.16
6	0.00	0.02	0.82	0.01	0.18	0.06	0.06	0.06	0.06	0.06	0.06	0.36	1.39
7	0.00	0.04	1.35	0.01	0.43	0.08	0.08	0.08	0.04	0.04	0.04	0.36	2.18
8	0.00	0.08	3.26	0.05	0.57	0.22	0.22	0.22	0.16	0.16	0.16	1.16	5.12
9	0.00	0.05	1.93	0.03	0.51	0.09	0.09	0.09	0.08	0.08	0.08	0.51	3.03
10	0.00	0.02	0.45	0.01	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.64
11	0.00	0.03	1.00	0.01	0.33	0.08	0.08	0.08	0.07	0.07	0.07	0.46	1.83
12	0.00	0.02	0.98	0.08	0.22	0.04	0.04	0.04	0.01	0.01	0.01	0.14	1.45
13	0.00	0.06	1.02	0.01	0.22	0.05	0.05	0.05	0.05	0.05	0.05	0.30	1.61
14	0.00	0.01	0.15	0.00	0.06	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.30
15	0.00	0.03	0.61	0.01	0.19	0.04	0.04	0.04	0.03	0.03	0.03	0.21	1.05
16	0.00	0.01	0.33	0.03	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.44
17	0.00	0.01	0.32	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.49
18	0.00	0.02	0.40	0.03	0.08	0.03	0.03	0.03	0.00	0.00	0.00	0.08	0.61

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(p) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
19	0.00	0.01	0.16	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.22
20	0.00	0.00	0.13	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.19
21	0.00	0.21	6.96	0.09	1.31	0.42	0.42	0.42	0.16	0.16	0.16	1.75	10.31
22	0.00	0.01	0.26	0.02	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.37
23	0.00	0.11	1.56	0.07	0.35	0.08	0.08	0.08	0.08	0.08	0.08	0.48	2.57
24	0.00	0.04	1.60	0.05	0.51	0.20	0.20	0.20	0.10	0.10	0.10	0.89	3.08
25	0.00	0.01	0.34	0.01	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.55
26	0.00	0.01	0.35	0.00	0.07	0.03	0.03	0.03	0.02	0.02	0.02	0.13	0.57
27	0.00	0.06	1.46	0.02	0.39	0.08	0.08	0.08	0.09	0.09	0.09	0.51	2.43
28	0.00	0.06	1.33	0.08	0.28	0.08	0.08	0.08	0.03	0.03	0.03	0.33	2.08
29	0.00	0.06	1.14	0.02	0.25	0.04	0.04	0.04	0.04	0.04	0.04	0.23	1.70
30	0.00	0.02	0.53	0.01	0.12	0.04	0.04	0.04	0.01	0.01	0.01	0.16	0.83
31	0.00	0.03	0.74	0.01	0.20	0.07	0.07	0.07	0.06	0.06	0.06	0.39	1.38
32	0.00	0.02	0.54	0.05	0.13	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.78
33	0.00	0.04	1.11	0.01	0.28	0.04	0.04	0.04	0.02	0.02	0.02	0.21	1.64
34	0.00	0.01	0.59	0.02	0.10	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.77
35	0.00	0.01	0.37	0.03	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.52
36	0.00	0.00	0.18	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.25

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(q) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
37	0.00	0.08	2.21	0.01	0.42	0.09	0.09	0.09	0.11	0.11	0.11	0.58	3.31
38	0.00	0.00	0.13	0.01	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.20
39	0.00	0.02	0.85	0.01	0.17	0.05	0.05	0.05	0.04	0.04	0.04	0.27	1.32
40	0.00	0.06	0.87	0.03	0.21	0.07	0.07	0.07	0.06	0.06	0.06	0.38	1.54
41	0.00	0.03	1.22	0.06	0.16	0.03	0.03	0.03	0.00	0.00	0.00	0.09	1.57
42	0.00	0.06	1.15	0.02	0.25	0.06	0.06	0.06	0.04	0.04	0.04	0.31	1.80
43	0.00	0.03	0.73	0.04	0.11	0.02	0.02	0.02	0.00	0.00	0.00	0.07	0.99
44	0.00	0.15	3.22	0.15	0.79	0.13	0.13	0.13	0.05	0.05	0.05	0.53	4.83
45	0.00	0.01	0.30	0.01	0.10	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.52
46	0.00	0.09	2.97	0.03	0.95	0.13	0.13	0.13	0.07	0.07	0.07	0.59	4.64
47	0.00	0.02	0.61	0.02	0.19	0.04	0.04	0.04	0.02	0.02	0.02	0.16	1.00
48	0.00	0.07	3.20	0.04	0.79	0.15	0.15	0.15	0.18	0.18	0.18	1.00	5.10
49	0.00	0.15	4.52	0.20	1.07	0.17	0.17	0.17	0.08	0.08	0.08	0.74	6.67
50	0.00	0.03	1.42	0.02	0.38	0.04	0.04	0.04	0.02	0.02	0.02	0.18	2.02
51	0.00	0.02	0.76	0.04	0.14	0.02	0.02	0.02	0.02	0.02	0.02	0.12	1.08
52	0.00	0.11	2.70	0.05	0.83	0.15	0.15	0.15	0.16	0.16	0.16	0.95	4.64
53	0.00	0.04	1.06	0.01	0.26	0.08	0.08	0.08	0.06	0.06	0.06	0.44	1.82
54	0.00	0.01	0.26	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.42

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(r) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
55	0.00	0.01	0.28	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.37
56	0.00	0.02	0.68	0.03	0.18	0.03	0.03	0.03	0.01	0.01	0.01	0.11	1.02
57	0.00	0.00	0.13	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.18
58	0.00	0.00	0.18	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.26
59	0.00	0.01	0.89	0.00	0.13	0.02	0.02	0.02	0.01	0.01	0.01	0.09	1.11
60	0.00	0.00	0.17	0.01	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.23
61	0.00	0.01	0.15	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.24
62	0.00	0.01	0.26	0.02	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.38
63	0.00	0.00	0.13	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17
64	0.00	0.01	0.12	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.18
65	0.00	0.01	0.72	0.01	0.14	0.02	0.02	0.02	0.02	0.02	0.02	0.13	1.00
66	0.00	0.06	2.40	0.05	0.50	0.10	0.10	0.10	0.09	0.09	0.09	0.56	3.56
67	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05
68	0.00	0.01	0.58	0.01	0.13	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.92
69	0.00	0.03	0.81	0.07	0.18	0.03	0.03	0.03	0.00	0.00	0.00	0.11	1.21
70	0.00	0.08	2.72	0.14	0.97	0.18	0.18	0.18	0.05	0.05	0.05	0.69	4.61
71	0.00	0.03	2.03	0.05	0.54	0.12	0.12	0.12	0.03	0.03	0.03	0.45	3.10
72	0.00	0.10	5.24	0.10	1.22	0.23	0.23	0.23	0.13	0.13	0.13	1.09	7.77

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(s) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
73	0.00	0.01	0.39	0.02	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.51
74	0.00	0.01	0.30	0.01	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.49
75	0.00	0.03	0.82	0.01	0.19	0.03	0.03	0.03	0.02	0.02	0.02	0.16	1.20
76	0.00	0.02	0.86	0.05	0.22	0.06	0.06	0.06	0.01	0.01	0.01	0.19	1.33
77	0.00	0.01	0.14	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.23
78	0.00	0.06	1.35	0.02	0.28	0.06	0.06	0.06	0.06	0.06	0.06	0.35	2.06
79	0.00	0.02	0.62	0.01	0.16	0.05	0.05	0.05	0.03	0.03	0.03	0.25	1.06
80	0.00	0.06	1.11	0.04	0.23	0.05	0.05	0.05	0.07	0.07	0.07	0.37	1.81
81	0.00	0.03	0.61	0.02	0.14	0.05	0.05	0.05	0.03	0.03	0.03	0.24	1.04
82	0.00	0.04	1.77	0.05	0.64	0.16	0.16	0.16	0.09	0.09	0.09	0.76	3.25
83	0.00	0.05	1.48	0.06	0.22	0.02	0.02	0.02	0.01	0.01	0.01	0.09	1.89
84	0.00	0.04	0.39	0.01	0.13	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.62
85	0.00	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13
86	0.00	0.03	0.91	0.02	0.29	0.04	0.04	0.04	0.02	0.02	0.02	0.17	1.42
87	0.00	0.02	0.43	0.03	0.10	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.63
88	0.00	0.01	0.32	0.01	0.08	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.48
89	0.00	0.05	1.30	0.04	0.26	0.04	0.04	0.04	0.03	0.03	0.03	0.23	1.87
90	0.00	0.01	0.46	0.00	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.71

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(t) AM 10 Carbon Emissions - Dft Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
91	0.00	0.05	1.06	0.04	0.20	0.05	0.05	0.05	0.03	0.03	0.03	0.23	1.57
92	0.00	0.11	1.93	0.04	0.57	0.18	0.18	0.18	0.10	0.10	0.10	0.82	3.47
93	0.00	0.04	1.69	0.07	0.83	0.19	0.19	0.19	0.22	0.22	0.22	1.22	3.85
94	0.00	0.13	5.71	0.04	1.34	0.64	0.64	0.64	0.67	0.67	0.67	3.92	11.14
95	0.00	0.01	0.61	0.01	0.12	0.03	0.03	0.03	0.01	0.01	0.01	0.11	0.86
96	0.00	0.04	0.65	0.01	0.12	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.94
97	0.00	0.02	0.99	0.10	0.50	0.11	0.11	0.11	0.14	0.14	0.14	0.75	2.36
98	0.00	0.01	0.42	0.01	0.09	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.61
99	0.00	0.04	1.79	0.01	0.39	0.12	0.12	0.12	0.17	0.17	0.17	0.87	3.10
100	0.00	0.01	0.34	0.01	0.10	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.49
101	0.00	0.01	0.45	0.01	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.09	0.65
102	0.00	0.03	1.07	0.05	0.21	0.08	0.08	0.08	0.11	0.11	0.11	0.60	1.96
103	0.00	0.00	0.36	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.47
104	0.00	0.03	1.13	0.02	0.22	0.04	0.04	0.04	0.03	0.03	0.03	0.22	1.61
105	0.00	0.02	0.88	0.01	0.24	0.05	0.05	0.05	0.04	0.04	0.04	0.27	1.42
106	0.00	0.02	0.55	0.01	0.12	0.03	0.03	0.03	0.02	0.02	0.02	0.15	0.85
107	0.00	0.04	0.85	0.00	0.23	0.06	0.06	0.06	0.02	0.02	0.02	0.26	1.39
108	0.00	0.01	0.33	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.40

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(u) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
109	0.00	0.01	0.10	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16
110	0.00	0.01	0.39	0.08	0.08	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.64
111	0.00	0.03	0.47	0.01	0.12	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.69
112	0.00	0.01	0.16	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.21
113	0.00	0.03	0.47	0.07	0.09	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.70
114	0.00	0.00	0.09	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
115	0.00	0.03	0.82	0.01	0.19	0.03	0.03	0.03	0.02	0.02	0.02	0.14	1.19
116	0.00	0.03	1.09	0.02	0.27	0.03	0.03	0.03	0.01	0.01	0.01	0.14	1.55
117	0.00	0.01	0.84	0.01	0.16	0.03	0.03	0.03	0.00	0.00	0.00	0.09	1.11
118	0.00	0.04	1.53	0.03	0.31	0.05	0.05	0.05	0.05	0.05	0.05	0.29	2.20
119	0.00	0.03	1.02	0.04	0.21	0.03	0.03	0.03	0.02	0.02	0.02	0.13	1.43
120	0.00	0.05	0.74	0.02	0.21	0.02	0.02	0.02	0.00	0.00	0.00	0.08	1.10
121	0.00	0.09	2.34	0.04	0.60	0.13	0.13	0.13	0.11	0.11	0.11	0.72	3.78
122	0.00	0.02	0.82	0.02	0.14	0.02	0.02	0.02	0.00	0.00	0.00	0.08	1.08
123	0.00	0.11	4.32	0.04	1.03	0.21	0.21	0.21	0.25	0.25	0.25	1.39	6.89
124	0.00	0.00	0.08	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.13
125	0.00	0.02	0.46	0.01	0.08	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.62
126	0.00	0.05	1.04	0.01	0.25	0.06	0.06	0.06	0.06	0.06	0.06	0.36	1.72

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(v) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
127	0.00	0.07	1.61	0.01	0.37	0.11	0.11	0.11	0.07	0.07	0.07	0.53	2.59
128	0.00	0.02	0.64	0.02	0.11	0.04	0.04	0.04	0.03	0.03	0.03	0.19	0.99
129	0.00	0.00	0.17	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.25
130	0.00	0.10	0.98	0.01	0.22	0.05	0.05	0.05	0.02	0.02	0.02	0.23	1.53
131	0.00	0.04	1.30	0.04	0.28	0.07	0.07	0.07	0.03	0.03	0.03	0.29	1.96
132	0.00	0.01	0.30	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.38
133	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
134	0.00	0.00	0.09	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
135	0.00	0.02	0.76	0.01	0.19	0.04	0.04	0.04	0.04	0.04	0.04	0.23	1.21
136	0.00	0.03	2.09	0.01	0.44	0.10	0.10	0.10	0.07	0.07	0.07	0.51	3.08
137	0.00	0.01	0.20	0.00	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.10	0.37
138	0.00	0.06	1.98	0.04	0.52	0.12	0.12	0.12	0.13	0.13	0.13	0.75	3.35
139	0.00	0.01	0.12	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16
140	0.00	0.01	0.34	0.02	0.13	0.03	0.03	0.03	0.01	0.01	0.01	0.10	0.61
141	0.00	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09
142	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
143	0.00	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13
144	0.00	0.01	0.29	0.01	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.45

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Table 57(w) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
145	0.00	0.01	0.21	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.28
146	0.00	0.01	0.14	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.22
147	0.00	0.01	0.24	0.00	0.05	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.37
148	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07
149	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
150	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07
151	0.00	0.03	0.70	0.04	0.09	0.02	0.02	0.02	0.01	0.01	0.01	0.07	0.94
152	0.00	0.01	0.33	0.01	0.06	0.02	0.02	0.02	0.01	0.01	0.01	0.07	0.48
153	0.00	0.03	1.01	0.01	0.22	0.07	0.07	0.07	0.08	0.08	0.08	0.44	1.71
154	0.00	0.01	0.43	0.02	0.10	0.03	0.03	0.03	0.01	0.01	0.01	0.09	0.65
155	0.00	0.04	1.51	0.03	0.38	0.06	0.06	0.06	0.04	0.04	0.04	0.31	2.27
156	0.00	0.01	0.32	0.01	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.47
157	0.00	0.02	0.68	0.02	0.13	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.98
158	0.00	0.00	0.16	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.27
159	0.00	0.02	0.49	0.01	0.15	0.04	0.04	0.04	0.06	0.06	0.06	0.30	0.97
160	0.00	0.01	0.38	0.02	0.11	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.55
161	0.00	0.02	0.69	0.04	0.11	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.91
162	0.00	0.02	0.96	0.01	0.23	0.08	0.08	0.08	0.04	0.04	0.04	0.35	1.56

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(x) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
163	0.00	0.01	0.32	0.00	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.52
164	0.00	0.01	0.42	0.03	0.08	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.59
165	0.00	0.01	0.47	0.01	0.11	0.03	0.03	0.03	0.03	0.03	0.03	0.17	0.77
166	0.00	0.07	2.57	0.05	0.59	0.15	0.15	0.15	0.16	0.16	0.16	0.93	4.21
167	0.00	0.00	0.13	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.19
168	0.00	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09
169	0.00	0.02	0.88	0.05	0.13	0.04	0.04	0.04	0.02	0.02	0.02	0.17	1.25
170	0.00	0.01	0.47	0.02	0.09	0.02	0.02	0.02	0.00	0.00	0.00	0.06	0.66
171	0.00	0.05	2.43	0.01	0.50	0.06	0.06	0.06	0.03	0.03	0.03	0.25	3.23
172	0.00	0.02	0.87	0.01	0.18	0.03	0.03	0.03	0.01	0.01	0.01	0.11	1.19
173	0.00	0.01	0.37	0.01	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.49
174	0.00	0.01	0.19	0.02	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.28
175	0.00	0.01	0.29	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.39
176	0.00	0.01	0.30	0.02	0.08	0.02	0.02	0.02	0.00	0.00	0.00	0.07	0.46
177	0.00	0.02	0.98	0.02	0.16	0.02	0.02	0.02	0.01	0.01	0.01	0.10	1.28
178	0.00	0.00	0.13	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.21
179	0.00	0.01	0.48	0.02	0.10	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.70
180	0.00	0.02	0.54	0.01	0.11	0.03	0.03	0.03	0.02	0.02	0.02	0.16	0.85

Table 57(y) AM 10 Carbon Emissions - DFT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
181	0.00	0.02	0.74	0.06	0.16	0.03	0.03	0.03	0.01	0.01	0.01	0.12	1.10
182	0.00	0.01	0.35	0.03	0.08	0.02	0.02	0.02	0.00	0.00	0.00	0.05	0.52
183	0.00	0.03	0.99	0.04	0.21	0.04	0.04	0.04	0.02	0.02	0.02	0.20	1.46
184	0.00	0.06	2.25	0.04	0.59	0.25	0.25	0.25	0.20	0.20	0.20	1.35	4.28
185	0.00	0.21	4.09	0.09	1.08	0.38	0.38	0.38	0.26	0.26	0.26	1.91	7.38
186	0.00	0.03	1.14	0.01	0.27	0.13	0.13	0.13	0.13	0.13	0.13	0.78	2.23
187	0.00	0.02	0.48	0.01	0.11	0.03	0.03	0.03	0.05	0.05	0.05	0.23	0.85
188	0.00	0.02	0.47	0.01	0.11	0.03	0.03	0.03	0.05	0.05	0.05	0.23	0.84
189	0.00	0.02	0.38	0.01	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.63
190	0.00	0.01	0.33	0.01	0.08	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.55
191	0.00	0.01	0.29	0.01	0.07	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.48
192	0.00	0.01	0.30	0.01	0.08	0.02	0.02	0.02	0.01	0.01	0.01	0.10	0.49
193	0.00	0.03	1.75	0.01	0.34	0.04	0.04	0.04	0.02	0.02	0.02	0.20	2.34
194	0.00	0.01	1.49	0.01	0.31	0.06	0.06	0.06	0.03	0.03	0.03	0.28	2.10
195	0.00	0.03	1.32	0.02	0.29	0.03	0.03	0.03	0.01	0.01	0.01	0.13	1.79
196	0.00	0.04	2.64	0.04	0.73	0.10	0.10	0.10	0.04	0.04	0.04	0.40	3.85
197	0.00	0.02	0.56	0.02	0.20	0.10	0.10	0.10	0.07	0.07	0.07	0.50	1.30
198	0.00	0.03	0.66	0.06	0.14	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.96

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Table 57(z) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
199	0.00	0.04	1.16	0.03	0.38	0.08	0.08	0.08	0.08	0.08	0.08	0.48	2.09
200	0.00	0.02	0.60	0.01	0.11	0.02	0.02	0.02	0.01	0.01	0.01	0.08	0.82
201	0.00	0.04	1.13	0.02	0.16	0.03	0.03	0.03	0.02	0.02	0.02	0.16	1.52
202	0.00	0.15	3.09	0.10	0.50	0.07	0.07	0.07	0.02	0.02	0.02	0.27	4.11
203	0.00	0.00	0.14	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.19
204	0.00	0.01	0.17	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.27
205	0.00	0.00	0.18	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.27
206	0.00	0.00	0.16	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.21
207	0.00	0.02	0.64	0.01	0.11	0.03	0.03	0.03	0.01	0.01	0.01	0.09	0.87
208	0.00	0.01	0.11	0.00	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.19
209	0.00	0.04	0.91	0.05	0.18	0.04	0.04	0.04	0.02	0.02	0.02	0.19	1.36
210	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
211	0.00	0.02	0.28	0.00	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.40
212	0.00	0.01	0.26	0.01	0.06	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.38
213	0.00	0.02	0.12	0.00	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.20
214	0.00	0.02	0.46	0.01	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.59
215	0.00	0.00	0.14	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17
216	0.00	0.00	0.11	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.15

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Table 57(aa) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
217	0.00	0.03	0.84	0.04	0.18	0.02	0.02	0.02	0.00	0.00	0.00	0.05	1.15
218	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
219	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
220	0.00	0.01	0.30	0.01	0.07	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.40
221	0.00	0.00	0.11	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.19
222	0.00	0.01	0.17	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.22
223	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
224	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
225	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
226	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
227	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
228	0.00	0.00	0.11	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
229	0.00	0.01	0.24	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.29
230	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
231	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
232	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	0.00	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 57(ab) AM 10 Carbon Emissions - DfT Sites													
Year 1													
2016 Total Emissions (thousand tonnes CO2)													
Post-scheme													
Ref No	PedalCycles	Motorcycles	Cars Taxis	BusesCoaches	LightGoods Vehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
235	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
236	0.00	0.00	0.07	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.16
237	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
238	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
239	0.00	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11
240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05
242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
243	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
244	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
245	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04
246	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
248	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
249	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	6.42	199.13	5.22	46.60	10.53	10.53	10.53	7.47	7.47	7.47	53.99	311.37

Table 58(a) AM 10 Carbon Emissions - Summary													
Year 1													
2015 Carbon Output													
Pre-scheme													
Period	Pedal Cycles	Motor cycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotor Vehicles
Flow	9700	23541	27922 46	20125	465965	52784	12718	11105	3987	11215	19959	1117 67	3413648
Average speed (mph)		32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2
Emission (g CO ₂ / km)	0.00	6.58	195.4 6	5.51	45.67	10.56	10.56	10.56	7.38	7.38	7.38	53.8 2	307.04
2016 Carbon Output													
Post-scheme													
Flow	9259	22761	28276 81	19233	475040	52725	11280	11794	3723	12018	20048	1115 94	3456297
Average speed (mph)		31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9
Emission (g CO ₂ / km)	0.00	6.42	199.1 3	5.22	46.60	10.53	10.53	10.53	7.47	7.47	7.47	53.9 9	311.37
Carbon Output Comparison													
Traffic Flow (+/-) %	-5%	-3%	1%	-4%	2%	0%	-11%	6%	-7%	7%	0%	0%	1%
Speed (+/-) %		-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Emission (g CO ₂ / km) (+/-) %	0%	-2%	2%	-5%	2%	0%	0%	0%	1%	1%	1%	0%	1%

Worcestershire County Council Permit Scheme Yr1 Evaluation

Table 58(b) AM 10 Carbon Emissions - Summary													
Year 2													
2016 Carbon Output													
Post-scheme													
Period	Pedal Cycles	Motor cycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotor Vehicles
Flow	9259	22761	2827681	19233	475040	52725	11280	11794	3723	12018	20048	111594	3456297
Average speed (mph)		31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9
Emission (g CO ₂ / km)	0.00	6.42	199.13	5.22	46.60	10.53	10.53	10.53	7.47	7.47	7.47	53.99	311.37
2017 Carbon Output													
Post-scheme													
Flow													
Average speed (mph)													
Emission (g CO ₂ / km)													
Carbon Output Comparison													
Traffic Flow (+/-) %													
Speed (+/-) %													
Emission (g CO ₂ / km) (+/-) %													

7.10 KPI 4

This KPI shows where promoters start their works without having to comply with the minimum Permit application lead-in period, commonly known as early start agreements.

This information is not available at this time.

7.11 KPI 5

This information is not available at this time.

7.12 KPI 6

This information is not available at this time.

8 APPENDIX 3 – COSTS and INCOME

8.1 FEE INCOME

£395,475 of Permit and Permit Variation fee income was received.

This is circa 40% more/ less than the maximum budget anticipated.

8.2 COSTS BUDGETS AND ACTUALS

The actual volume of Permits was in-line than data derived expectations.

The actual costs incurred were considerable less than anticipated.

Should the fee income be greater than costs in future years consideration will be given to the fees table to balance fees and costs over a number of years.

Table 62 AM 11 – Cost Budget Against Actuals		
Start up Cost Centre	Year 1 Budget	Year 1 Actual
KPI Production	0	0
Invoicing	0	£2,600
IT support	£18,700	£12,093
Unauthorised / Abandoned works	0	0
Management Overhead	£39,200	£58,967
Training	0	0
Staff	£604,267	£294,797
Totals	£662,167	£368,187

8.3 AVERAGE PERMIT COST

By dividing the number of Utility Permits granted by the Permit Scheme cost an average cost per Permit can be calculated.

This is a useful indicator of the general scheme costs to Utilities and can be compared to other schemes to show a general financial efficiency level.

Table 63 AM 11 – Average Permit Cost to Utilities			
Promoters	Total Permit Applications	Total Scheme Cost	Average Permit Cost
Utility	15,861	£368,187	£23.21

Table 64 Highway Authority Worcestershire Cost Benefit results		
Highway Authority Assessment	Opening Year Predicted (Mouchel 2015 CBA report)	Year 1 Actuals
5% reduction in works impact		
Net Present Value of Benefits	£94,828,902	£95,777,191
Net Present Value of Costs	£15,183,122	£9,362,752
Net Present Value of Permit Scheme	£79,645,780	£86,414,439
Benefit to Cost Ratio	6.25	10.23

Opening Year Predicted values sourced from 'Mouchel Technical Report Worcestershire TMA Permit Scheme Economic Appraisal and Cost Benefit (5 November 2015)'.

END