Better Bus Area Monitoring and Evaluation Framework
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1. Introduction

1.1 This framework sets out the Department's expectations for the monitoring and evaluation of projects receiving funding though the Better Bus Area (BBA) grant.

1.2 The framework takes a proportional approach to monitoring and evaluation.

1.3 In summary it:

- sets out the Department's requirements for the monitoring and evaluation activities and the roles of the Department and project teams in delivering these;
- reflects and builds on the proposals bidders set out in their BBA applications around monitoring; and
- provides project teams with the flexibility to collect monitoring and evaluation evidence in a way which is proportionate and which reflects the local variation of projects and data availability.

1.4 The Department expects to work collaboratively with local authorities and others to deliver this framework. It aims to build on the evidence base to inform future local and national decision making on improving the bus market.

1.5 Frontier Economics have conducted a scoping study into the feasibility of evaluating the BBA interventions. They recommended the priorities and methodology for a potential evaluation study which the department has considered.
2. Monitoring and evaluation principles

Policy Objectives of the fund

2.1 BBA projects are expected to deliver on the following primary objectives:
   - support the local economy and facilitate economic development through the improvement of local bus infrastructure, patronage numbers and services;
   - reduce carbon emissions or at the least be carbon neutral; and
   - improve the working relationship between local authorities and operators.

Monitoring and Evaluation

2.2 Monitoring is the collection of data to check progress against planned targets. It is the formal reporting of evidence that spend and outputs are successfully delivered and milestones met. By tracking changes in outcomes over time, monitoring data plays a key part in evaluation throughout the initiative's lifetime.

2.3 Evaluation is the assessment of the project’s effectiveness and efficiency during and after implementation. This includes measuring the causal effect of the project (or elements within the project) on planned outcomes and impacts, assessing whether the anticipated benefits and value for money have been realised and whether any unanticipated impacts occurred.

2.4 The monitoring and evaluation framework for BBA defined here sets out to:
   - investigate the contribution of the fund in delivering economic growth and carbon neutrality or reduction. (i.e. report against the policy objectives);
   - provide accountability to tax payers and Parliament;
   - fill evidence gaps to inform the case for future local, national or third party funding for bus market; and
   - provide an effective method for benchmarking and comparison for current and future bus projects.

2.5 Local authorities may also wish to use the monitoring and evaluation framework as the basis for generating evidence to support local bus policies, such as:
improving and understanding how to design, target and deliver bus initiatives most effectively and efficiently;

testing the impact and effectiveness of innovative approaches where the evidence base so far is under-developed;

identifying which measures will continue after BBA funding ceases in 2018;

demonstrating local impacts, with locally relevant data; and

benchmarking outcomes from one project against others.

2.6 Three principles have led to the development of this framework, and will continue to guide its implementation during the lifetime of the fund:

- **Proportionality** - adopting a light-touch, resource efficient approach to monitoring for local authorities (where possible utilising existing data sources);

- **Partnership** - Collaborative working across local authorities, government departments, academics and other organisations; and

- **Prioritisation** - Developing the evidence base to inform future local and national decision-making by targeting key evidence gaps.
3. Components and responsibilities

What does the BBA monitoring and evaluation framework consist of?

3.1 The framework consists of three components.

1 Annual outputs\(^1\) reporting - The annual output reports will monitor where the investment has been spent and what deliverables have resulted from this investment; this will be done by recording and reporting on inputs\(^2\) and the delivery of outputs. All BBAs are expected to complete these yearly via a standard reporting template provided by the Department.

2 Outcomes\(^3\) monitoring - All projects are expected to develop and deliver bespoke monitoring programs within their existing governance arrangements. They will track changes in key outcome metrics and benefits delivery and build on plans submitted in the BBA application form.

3 Evaluation of Impacts\(^4\) - Based on Frontier Economics scoping study, the Department has considered ways of carrying out specific evaluation studies around the impacts of certain types of interventions and the impact of the partnership arrangements. The Department has consulted with the BBAs and expects project teams to support this work.

3.2 This mix of components will allow for more effective monitoring and evaluation.

Responsibilities

3.3 The Department will support and co-ordinate the monitoring and evaluation framework overall. The responsibility for ensuring data

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\(^1\) Outputs are the tangible deliverables in a project. E.g. a new bus service, a traffic signalling operation, a bus priority lane etc. Each BBA scheme should have a series of outputs that will be delivered during the BBA period.

\(^2\) Inputs are the resources which are invested in implementing the project. This includes not only the Department's and local contributions to funding, but also human resources such as the time invested, skills required and other inputs such as equipment, technology and research.

\(^3\) Outcomes are the observable changes in the short to medium term, and are frequently measured to assess the effectiveness of a scheme at achieving its objectives. The anticipated outcomes for BBA schemes relate directly to the objectives (e.g. mode shift, increased bus reliability and patronage). Evaluation of outcomes enables assumptions to be tested about the effectiveness of outputs to deliver anticipated benefits.

\(^4\) Impacts are the longer-term effects on the primary. For BBA areas these are improved partnership working, economic growth and carbon neutrality or reduction.
collection, analysis and interpretation rests with BBA project teams, working in collaboration with other partners where appropriate.

3.4 In line with the Government's approach to decentralisation, the framework does not prescribe how BBAs will carry out monitoring and evaluation, but sets out what is required for accountability of the projects. Project teams are responsible for developing and delivering a proportionate approach that meets monitoring and evaluation objectives without detracting from delivery.

3.5 The responsibilities of the key partners to this framework are listed in Table 3.1.

<table>
<thead>
<tr>
<th>Table 3.1: Responsibilities of key partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Authorities</td>
</tr>
<tr>
<td>Record and report on inputs and delivery of</td>
</tr>
<tr>
<td>outputs through annual reporting.</td>
</tr>
<tr>
<td>Deliver outcomes monitoring as set out in</td>
</tr>
<tr>
<td>the BBA application as a part of the monitoring</td>
</tr>
<tr>
<td>plans.</td>
</tr>
<tr>
<td>Ensuring that the delivery of monitoring</td>
</tr>
<tr>
<td>and evaluation is on track.</td>
</tr>
<tr>
<td>Assist the Department and consultants in</td>
</tr>
<tr>
<td>their impact evaluation study.</td>
</tr>
</tbody>
</table>

| Operators and key stakeholders              |
| Assist local authorities in the collection  |
| and provision of data and results for all   |
| of the components of the monitoring and     |
| evaluation.                                 |

| Department for Transport                    |
| Ensure the monitoring and evaluation        |
| framework is delivered.                     |
| Ensure that monitoring and evaluation       |
| activities provide fit for purpose evidence |
| to demonstrate accountability and learn      |
| lessons for future decision making.         |
| Ensure that the delivery of monitoring      |
| and evaluation is on track.                 |
| Provide mechanism by which BBAs should      |
| record their output monitoring.             |
| Undertake the impact evaluation study and   |
| produce reports on the findings.            |
| Report back to BBAs on periodic basis with  |
| the results from the monitoring and         |
| evaluation activities.                      |
4. Annual outputs reporting

4.1 Project teams are required to complete annual output reports to cover the previous financial year. The annual reports will cover:

4.  A project description;
5.  Spend profile of each scheme element (including an explanation for any significant variations from the profile originally proposed in the bid);
6.  A short progress summary on each scheme element; and
7.  Information on the outputs from each scheme element.

4.2 The reports are intended to form the basis for information exchange between projects on good practice and lessons learnt during delivery. Project teams are encouraged to make these reports publicly available via the local authority’s website, to share directly with other project teams. These reports will provide an on-going record of outputs during delivery, which will then form the basis for any subsequent analysis of delivery as required. The report gives individual project teams the opportunity to showcase their achievements and lessons learnt.

4.3 The template by which the reports will be recorded by BBAs is provided alongside this guidance.

4.4 All project teams are strongly recommended to keep a project diary and assign a team member to complete it regularly, to keep track of what the project is delivering and when. The diary should also to capture information about external events that may impact on the outputs and outcomes (either positively or negatively). Project teams will find such project diaries invaluable when carrying out basic programme monitoring and any associated evaluation activities at a later stage.

4.5 The reports will focus on how each of the scheme elements, as outlined in the BBA bid, are progressing.

4.6 The Department will review the initial year’s output reports to establish whether the format of subsequent reports could be changed to improve analysis whilst not increasing the burden of monitoring or reporting on local authorities.

4.7 The first report will be completed and submitted to the Department in June/July 2014.
5. Outcomes monitoring

5.1 Data collection, analysis and interpretation of findings regarding the impact of BBAs on the local area is addressed through outcomes monitoring.

5.2 It is expected that, as part of the partnership arrangements between operators and local authorities, some basic monitoring mechanisms will be in place to measure key outcomes.

5.3 The specific outcomes that will be monitored and measured will differ depending on the type of intervention and the intended impact of the BBA.

5.4 Examples of outcomes that are likely to be measured include:
- Patronage
- Bus mileage
- Bus occupancy
- Journey times
- Bus service reliability
- Passenger satisfaction
- Number of car journeys

5.5 Table 5.1 states the key outcomes that are required to be monitored, as well as recommended optional outcomes.

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Patronage growth</td>
<td>- Modal Shift</td>
</tr>
<tr>
<td>- Bus mileage</td>
<td>- CO₂ emissions</td>
</tr>
<tr>
<td>- Passenger satisfaction</td>
<td>- Number of car journeys</td>
</tr>
<tr>
<td>- (If a target of the project)</td>
<td></td>
</tr>
<tr>
<td>- Journey time reduction</td>
<td></td>
</tr>
<tr>
<td>- Bus reliability</td>
<td></td>
</tr>
</tbody>
</table>

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5 It is easier to measure traffic flow rather than origin-destination car journeys. Given the need for proportionality, we do not anticipate directing local authorities to measure the latter.
5.6 For all other outcomes it is left to individual local authorities whether to collect data on them.

5.7 The themes listed represent commonly collected and reported metrics. At a local level BBAs should aim to make every use of these metrics to aid comparisons across the BBA, unless there are good reasons why these are not applicable.

5.8 For each outcome reported, it is expected that the values are scheme or BBA specific rather than aggregated for the whole area. Collection of patronage and mileage data may be undertaken by operators who can then share the data with local authorities. It is recommended that local authorities work closely with operators in the collection of key outcomes. Collecting data at a local level allows the greatest opportunity for finding a suitable counterfactual.

5.9 The Department recognises that due to commercial sensitivities there may be difficulties in gathering data from operators. Aggregation of sensitive data could lead to agreement between operators and local authorities. Alternatively, percentage changes from an indexed baseline will be accepted, however the Department recommends BBAs go beyond this minimum.

5.10 The following section sets out a way in which the optional outcomes can be monitored in a consistent way across the different BBA areas.

Modal Shift

5.11 One of the principal aims of BBAs is to increase bus patronage by inducing mode shift from cars. We realise that conducting an accurate calculation of modal shift may be disproportionately costly for a BBA. Therefore, local authorities are not required to calculate the proportion of new bus passengers who have shifted from cars.

5.12 We would encourage local authorities to go beyond the minimum requirements set by the Department. More detailed evidence gathered on this policy helps the Department's case for buses at future spending reviews.

Carbon

5.13 A key principle of the BBA fund is for all BBA schemes to be at the very least carbon neutral. The monitoring of fuel usage and fuel type usage (and by extension CO₂ emissions) would be useful. The department recommends that local authorities should report CO₂ outcomes. If local authorities do decide to report on CO₂ this could be done using the Local Authority Carbon Tool produced by the Department.⁶ The main factors would be:

- Distance travelled/trip length (in vehicle kms);
- Vehicle speed; and
- Vehicle type.

Timescale

5.14 Local authorities will be expected to begin producing monitoring outcome reports in 2015 when schemes should be at the beginning stages of implementation. However, baseline data collection will need to be made before the schemes are implemented, to ensure that there is a counterfactual against the measured outcomes.

5.15 Outcomes should be measured, at the least, annually from 2014 to 2019. The outcomes reports would be expected to be completed and sent to the Department for Transport annually in June/July each year.

5.16 Key outcomes could be measured more often. This decision will be left to local authorities in conjunction with their operators.

5.17 The monitoring of data should provide a time series with multiple data points collected in a consistent and comparable fashion. The frequency of data collection will depend on the data sources available. Having more data points available within the timeframe provides an increased opportunity to observe and understand changes over time.

5.18 The monitoring process should draw on data available pre, during and post the delivery of the project. The monitoring data should always be posted annually and be accompanied by a general commentary or by basic analysis.

5.19 The final analysis and data collection should be conducted in 2019, one year after the end of the investment period.

**Reporting**

5.20 Local authorities will be expected to produce annual outcome reports from 2015 (using 2014/15 data) to 2019 (using 2018/19 data). It is expected that these would be produced in June/July of each year.

5.21 It is expected, based on this guidance, that local authorities outline a plan for monitoring outcomes. The plan should follow the guidelines in table 5.2. The plan will be reviewed by DfT to ensure that they meet the general guidelines outlined in the framework. The framework has been designed not to be too onerous and provide flexibility for local authorities to design the monitoring plans as they wish. Plans should be sent to the Department in summer 2014 for the review by DfT.

5.22 Each year, it is recommended that the outcome monitoring reports follow the same structure as the 2015 plan reviewed by the Department.

### Table 5.2: Content of outcome monitoring plans

<table>
<thead>
<tr>
<th>Section Heading</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scheme background and context</td>
<td>Short description of the scheme (including costs, delivery timeframe and explanation of the wider delivery context)</td>
</tr>
<tr>
<td>2. Scheme objective and outcomes</td>
<td>State the scheme objectives and associated outcomes.</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>3. Data requirements</td>
<td>Provide details of the data being collected for each measure. Include rationale, data collection method and frequency of collection.</td>
</tr>
<tr>
<td>4. Resourcing and governance</td>
<td>Provide details of the monitoring and evaluation budget, the governance structure of the plan including the details of those responsible and procedures for risk management and quality assurance.</td>
</tr>
<tr>
<td>5. Delivery plan</td>
<td>Project plan for timeframe of data collection, reporting back to the Department and reporting of monitoring findings.</td>
</tr>
<tr>
<td>6. Dissemination plan</td>
<td>Details of how findings from monitoring will be communicated to key stakeholders and lessons disseminated.</td>
</tr>
</tbody>
</table>
6. Evaluation of impacts

6.1 BBAs are designed to improve the partnership working between operators and local authorities and to decrease levels of congestion by substantially increasing bus usage and encouraging modal shift. This section describes the intended way of evaluating these impacts.

6.2 The Department commissioned Frontier Economics to undertake a scoping study into the evaluation of BBAs. The report focused on two areas of evaluation for BBAs: partnership working and specific scheme interventions. The Department has decided to commission a full evaluation into these two areas.

6.3 Process evaluation is expected to be used to evaluate the partnership arrangements between BBAs and local authorities. It is expected that to undertake this study, surveys and interviews would be used to engage with BBAs. The study should show how partnership arrangements were formed and how they work within the BBA areas. The evaluation of partnership arrangements would take place in all BBAs.

6.4 When evaluating the impacts of specific BBA scheme intervention, the Department envisages that the evaluation programme will focus on the impacts of specific scheme interventions rather than an overview of the general impacts of BBA intervention.

6.5 In order to create the greatest opportunity to find suitable counterfactuals the evaluation will focus on specific scheme interventions on specific routes and compare these to similar routes where the intervention has not occurred. Evaluating at this local level allows the evaluator the greatest opportunity to avoid the impacts of other types of interventions such as LSTF and BBA1.

6.6 To keep the evaluation proportionate, the Department will focus it on a few specific interventions where there is currently a lack of evidence base and where there is the greatest scope for calculating a counterfactual. The Department feels that the following interventions and areas will be best for the impact evaluation:

- Real time information (RTI) and audiovisual (AV) in Sheffield and Nottingham;
- Bus priority in Sheffield and Nottingham; and
- Bus signaling in Merseyside.

6.7 The Department will commission a baseline data collection in April 2014. The consultant would be expected to work closely with BBAs in order to use available data for the evaluation of the previously outlined areas. The consultant would also be expected to suggest how intermittent data
should be collected between the baseline data collection in 2014 and a final evaluation in 2019.

6.8 The Department will then commission a separate, final evaluation in spring 2019. This evaluation would be expected to use the 2014 baseline data collection and intermittent data to conduct the final evaluation on partnership working and specific scheme interventions.
7. Next steps and engagement process

Output Reporting

7.1 Output reporting will be done through an online survey, which local authorities will be expected to complete annually. This survey will be published alongside the framework to allow BBAs to familiarise themselves with the form. BBAs will be contacted each year with details on where to find the output reporting form that they should complete. This will happen in June/July of each year.

Outcomes monitoring

7.2 It is expected, based on this guidance, that local authorities outline a plan for monitoring outcomes. The plan will be reviewed by DfT to ensure that they meet the general guidelines. The guidelines have been designed not to be too onerous and provide some flexibility for local authorities to design the monitoring plans as they wish.

7.3 Local authorities will then be expected to report their outcomes annually from June/July 2015 to June/July 2019. Although the first report will be requested to have annual data from before the project began.

Evaluation of Impacts

7.4 The final qualitative study will take place once the projects and funding has concluded in March 2019. A consultant will be contracted to oversee the collection of baseline data. By assessing the impacts during and after the project has concluded it will be possible to see if the new partnership arrangements in BBAs has resulting in better working relationship between local authorities and operators. The evaluation will also be able to see the impacts of the introduction of specific scheme interventions.
1. Introduction

A.1 The purpose of this annex is to provide suggestions and recommendations on how to implement the outcomes monitoring requirements set out in the BBA evaluation and monitoring framework, focusing on the main objectives. Data collection and methods are not covered here.

A.2 The Department appreciates that many projects will have already begun collection of monitoring and evaluation data. This annex is not intended to replace the work already done but instead offer supplementary advice.

2. Economy

A.3 Encouraging the use of buses can contribute to economic growth in a number of ways:

- Increasing the pool of labour that businesses have access to. This allows expansion to find the best people. (20% of adults live in a household without access to a car\(^7\)) improving bus accessibility will help counter some of the negative effects a lack of car accessibility can bring.

- Increasing accessibility and mobility of some of the most disadvantaged groups in society (Most bus users are females, the elderly and in the lower income bands).

A.4 The BBA guidance was prescriptive in stating that bids should have clear good value proposals for improving the economy by improving bus infrastructure. Bus infrastructure in itself will not improve the economy but the benefits such as journey time saving and greater information, contribute to greater efficiency savings.

A.5 Programme level monitoring of the economic impacts from BBA investment (e.g. employment levels) would be difficult to isolate the impacts from BBA investment from various other factors that influence economic indicators. Instead local factors should be selected to monitor the impact of BBA grant on outcomes which are believed to influence economic development e.g. reduction in journey times, accessibility etc.

3. Congestion relief

A.6 Many BBA bids are using the grant to reduce congestion and its impact on local economies. Left unchecked, congestion can increase costs to local businesses and reduce reliability. Congestion may also reduce the size of the labour market local businesses may be able to draw from

\(^7\) National Travel Survey, 2010 (DfT)
especially if there are high and variable journey times that deter certain commuting routes.

A.7 To assess the impact a BBA scheme has had on congestion, project teams are encouraged to measure:

- average AM peak journey time per mile; and
- variation in journey times on key corridors.
- For every scheme element that was meant to reduce congestion levels.

4. Carbon

A.8 BBA guidance was not prescriptive about how authorities should reduce carbon emissions. However, it did suggest ways that the scheme, whilst improving the bus network (resulting in increased bus kilometres and trips), could be carbon neutral.

A.9 If project teams opt to measure the net carbon change, the key factors that determines carbon emissions (outlined below) should be considered and converted into carbon impacts. This could be done, for example, by using the Local Authority Carbon Tool produced by the Department. BBAs should consider Suitable controls should be used to provide comparison of the impact of the scheme against what would otherwise have happened. It is important that BBAs consider what the counterfactual is against having BBA funding. If a BBA area has invested in another part of the bus industry, such as LSTF, then this should be mentioned.

A.10 The BBA guidance was prescriptive about ways that authorities can reduce carbon emissions. Suggested ways include:

- ensuring more effective use is made of the existing bus fleet;
- encouraging modal shift from car use; and
- improving fuel efficiency (for example by reducing waiting times), without encouraging additional bus kilometres.

A.11 The user guide to the Local Authority Carbon Tool sets out the data required to complete the assessment. When considering their monitoring plans, project teams are encouraged to consider these. In summary they are:

- Distance travelled - a greater distance travelled by a carbon emitting mode of transport would increase carbon emissions, other things being equal. For assessing carbon impacts, knowing the model of transport and vehicle type is important since a kilometre travelled by a bus, a car or a van will generate different emission impacts. Both the number of vehicles in each type and the average distance travelled are important in assessing changes in distance travelled.

- Vehicle speed - carbon emissions per kilometre vary with the speed a vehicle is travelling at. For each type of vehicle, more CO2 is emitted per km at low speed and high speed than at moderate speed. The
congestion metrics outlined in the ‘Economy’ section could be used here as well.

- Vehicle mix\(^8\) - the carbon emissions per kilometre vary according to the vehicle used as defined in the vehicles Certificate of Conformity, not only do different modes have different emissions per kilometre, but two cars can have different emissions per kilometre. For example, an electric car produces fewer emissions as compared to a petrol or diesel car.

A.12 In many cases national average data on vehicle mix (e.g. fuel type and Euro standard) may be adequate for use in assessing the carbon implications of interventions. Default values for this and other variables are available in the Local Authority Carbon Tool.

5. Technical statistical issues

A.13 This section contains information on technical statistical issues when collecting data.

Statistical significance

A.14 Before deciding to invest in new data collection as a part of the monitoring and evaluation of the BBA, project teams should consider if the data will be able to measure the BBA intervention as statistically significant.

A.15 The Scottish Government have brought together a number of useful documents concerning the issues of statistical significance in data collection and how to use confidence intervals and hypothesis tests:

\[\text{http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey/ConfidenceIntervals}\]

Baseline data

A.16 Local authorities are encouraged to consider what data sets pre-exist and can thus be used as baseline data. When baseline data is used, local authorities should include this in the outcome monitoring.

A.17 The department strongly recommends the collection of baseline data. This will allow for a better counterfactual when measuring the impacts of BBA.

6. Suggested data sources

A.18 In many cases, centrally collected local statistics exist for many of the metrics being measured. However, when a BBA area is not the same as the local authority area this data may not be appropriate. However, sometimes the data may be useful for validation of data collected by the local authority. As interventions differ for each local intervention, it is down to the local authority to judge how appropriate the official statistics are.

\(^8\) The Carbon Tool Guidance contains the list of vehicle types to consider.
A.19 Project teams are best placed to decide on the appropriate level of geographical cover, detail and frequency of data collected. The

<table>
<thead>
<tr>
<th>Measure</th>
<th>Journey time reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Decrease in the average 24 hour figures for seven day, two way flows</td>
</tr>
<tr>
<td>Suggested metric</td>
<td>Reported across the whole intervention area (e.g. BBA) and on key corridors targeted for investment. Data collected on at least an annual basis</td>
</tr>
<tr>
<td>Potential data collection methods/ existing data sources.</td>
<td>Trafficmaster data Automatic Number Plate Recognition data. DfT congestion and reliability statistics series - vehicle speeds on locally managed A roads during the morning peak, quarterly by local authority</td>
</tr>
<tr>
<td>Further disaggregation</td>
<td>Recipients may want to consider changes in peak journey times by link (e.g. on key corridors) although they should be aware that it will be more difficult to establish statistically significant changes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Improved bus reliability.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Decrease in the variation in journey times in key corridors.</td>
</tr>
<tr>
<td>Suggested metric</td>
<td>Variation in journey times (7am - 7pm) on key corridors targeted for investment - [ideally would want to analyse day to day variability within time bands but may need to settle with variation in average journey times across the day]</td>
</tr>
<tr>
<td>Potential data collection methods/ existing data sources.</td>
<td>Should be significant number of observations to ensure that any differences are statistically significant.</td>
</tr>
<tr>
<td>Further disaggregation</td>
<td>Trafficmaster data Automatic Number Plate Recognition data.</td>
</tr>
</tbody>
</table>

Department may provide feedback on draft outcome monitoring plans.

Suggested data sources - carbon

A.20 Carbon data metrics are aligned with those for monitoring travel patterns and the economy.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Number of new alternative fuel and conventional buses in the affected area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Number of new alternative fuel buses (e.g. electric, hybrid, biomethane) in the BBA area</td>
</tr>
<tr>
<td>Suggested metric</td>
<td>Figures should be reported for each year of the BBA programme</td>
</tr>
<tr>
<td></td>
<td>Any historical data should also be reported</td>
</tr>
<tr>
<td></td>
<td>Alternative fuel buses should be separated into their specific types wherever possible.</td>
</tr>
<tr>
<td></td>
<td>If there is a significant mode shift as a result of the scheme, the change in other modes of transport should also be reported.</td>
</tr>
<tr>
<td>Potential data collection methods/ existing data sources.</td>
<td>Low Carbon Bus Calculator</td>
</tr>
<tr>
<td>Further disaggregation</td>
<td>Disaggregation by quarter rather than annually.</td>
</tr>
</tbody>
</table>