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CLSRTP Parking Scheme

Assessment Guidance

November 2020

Central London Sub-Regional Transport Partnership

Parking Scheme Assessment Guidance

Produced by:



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Executive Summary

Overview

Integrated Transport Planning Ltd. (ITP) was commissioned by Cross River Partnership in December 2019 to develop a common framework and associated guidance document for the appraisal and evaluation of parking schemes on behalf of central and inner London boroughs that constitute the Central London Sub-Regional Transport Partnership.

The study developed recommendation two of ITP’s *Benefits of Parking Management in London* report for London Councils which advocates the adoption of a common framework-based approach to the appraisal and evaluation of parking schemes throughout London.

The adoption of a common framework-based approach would be expected to deliver the following benefits:

* Enable a clear and consistent evidence base on parking scheme performance to develop, which accrues over time;
* Provide an evidence-led approach to parking scheme design which supports central/inner London boroughs in their efforts to engage with the public as part of the public consultation process;
* Enable boroughs to develop a set of key performance indicators to enable them to effectively measure the contribution that parking schemes make to the realisation of their targets and policy objectives; and
* Facilitate a consistent basis for parking scheme design and evaluation which positions central/inner London boroughs as a best practice exemplar throughout the UK and internationally.

The framework itself is provided as an Excel file in Annex 1, while this report provides guidance for borough transport and parking officers on how to apply the framework and embed it within the parking scheme design process. A worked example is then provided in Annex 2 where the framework approach is applied to appraise and evaluate a fictitious parking scheme.

Current Practice in Parking Scheme Design

Traditional approaches to parking scheme design in London have been predominantly *reactive*; usually in response to complaints or petitions from residents or ‘material change’. They typically rely heavily on precedent schemes and officers’ local knowledge.

Increasingly, boroughs are seeking to become more proactive with parking scheme design to aid resilience and strategic planning capability. This involves identifying issues before they emerge and proactively ‘designing them out’.

Proactive parking design necessitates a vision-led approach. This requires setting objectives and targets in relation to parking schemes at the design stage and being explicit as to how parking schemes can contribute to the realisation of wider policy goals. By contrast, reactive approaches more commonly lend themselves to ‘firefighting’ issues as they arise and trying to maintain an ‘acceptable status quo’. They are backward looking by nature.

One of the key challenges to the adoption of a proactive approach to date has been the availability and quality of data. The lack of good quality available data at the micro scale has been a significant factor in ensuring that parking scheme design has remained largely reactive. However, this is changing; driven by advances in digital technology such as 5G, artificial intelligence, machine learning and the Internet of Things (IoT) that will eventually see users, vehicles and infrastructure seamlessly interconnected.

This will give the borough parking officer access to rich datasets in relation to the performance of their parking infrastructure continuously and in real time. Such on-demand data will improve the quality of decision-making, whilst significantly reducing the need for, and the expense associated with, bespoke data collection.

The key objective of this framework is to facilitate this transition towards proactive design by giving borough transport and parking teams a structure within which to construct the appraisals and evaluations they undertake on their parking schemes. The framework must be applicable at a variety of scales and it is therefore vital that the framework is sufficiently general to ensure it is appropriate to the diverse range of challenges presented to inner London parking teams.

Benefits of Parking Management

On average, the private car is estimated to spend 95% of its time parked with parking required at the start and end of almost every journey. With 2,943,507 private cars registered for use in London in 2019, a minimum of 39 square kilometres of land is required in the capital for car parking alone – an area roughly the same size as the boroughs of Camden and Westminster combined.

However, the allocation of land for parking is ultimately a choice and all CLSRTP boroughs price to manage demand. Local authorities should aim to ensure that between 15% and 20% of their total parking stock is available at any given time. Where parking occupancy within a given area exceeds 85%, the area is considered to be under parking stress.

ITP’s Benefits of Parking Management in London report for London Councils ([ITP, 2018](https://www.londoncouncils.gov.uk/download/file/fid/23351)) identifies the following eight benefits that parking schemes can deliver:

1. Reducing congestion
2. Improving road safety
3. Improving air quality
4. Ensuring good access and accessibility
5. Promoting the local economy
6. Maximising the productive use of land resource
7. Promoting health and wellbeing through travel choice
8. Providing funding for parking and wider transport scheme improvements, including the Freedom Pass concessionary travel scheme

ITP (2018) estimates the total benefit of parking management in London to be £3.6billion per annum and that parking schemes in London generate a return on investment of £10 for every £1 spent. However, the magnitude of benefit is directly proportionate to the need to manage parking demand and it is therefore likely higher still amongst the CLSRTP boroughs.

In addition to the aforementioned benefits, parking management is also an important tool within the borough’s climate emergency response toolkit, principally as parking schemes can help support a reduction in CO2 emissions. Boroughs are increasingly adopting emissions-based parking charges where the price of a parking permit or a parking session is differentiated based on the carbon footprint of the vehicle, thus incentivising mode shift and accelerating fleet renewal.

The Parking Assessment Framework

The Parking Assessment Framework is designed to give a structure to the activities of parking scheme appraisal and parking scheme evaluation. The framework approach is designed to be integrated within the wider process of parking scheme design.

The appraisal component focusses on the process of option development. It provides a basis for enabling boroughs to assess the merits of one or more options against the status quo (‘do-nothing’ scenario) to enable a preferred option to be identified and evidenced. The evaluation component, meanwhile, focusses on capturing the impact of the scheme once implemented. It provides for a binary comparison of the pre-scheme and post-scheme environments.

The Framework has been developed to be applicable to any type of parking scheme. This could be a very localised lining scheme or a comprehensive area-wide Controlled Parking Zone (CPZ) review. While it has been developed on behalf of the central and inner London boroughs that constitute the CLSRTP, it is suitable for the appraisal and evaluation of parking schemes in any urban area where there is a need to manage demand. For simplicity, this could be defined as any area that experiences parking stress. We therefore expect that it could be adopted by any London borough or by counterpart local authorities in other UK towns and cities.

Figure 1 below presents a schematic of the parking design process in the context of a theory of change (ToC). It sub-divides the process into six sequential stages which collectively represent best practice in parking scheme design.

Full detail on each stage is provided in the written guidance that follows on from this executive summary.

Figure 1: Parking scheme design: A Theory of Change



Making the Framework Work

The full benefit of the framework approach will only be realised when scheme evaluation data comes to fruition. This may take several years and will undoubtedly require the uptake and participation of several boroughs.

Therefore, in order to make the framework approach work to the fullest possible extent, we make the following four recommendations to Cross River Partnership for next steps and downstream programming:

1. Cross River Partnership should actively promote and encourage the adoption of the framework approach amongst member authorities. Initially, a trial should be established to enable the framework approach to be tested and applied in the real-world and to be refined where necessary.
2. Cross River Partnership should undertake a review of the framework and guidance at the conclusion of the trial period to ensure it is fit-for-purpose and to make amendments to it where necessary.
3. Cross River Partnership should develop a common repository for parking scheme evaluations to be stored / uploaded online that is accessible to all boroughs to provide a consolidated evidence platform.
4. Once the framework-approach is beyond trial stage and the repository is in place, Cross River Partnership should promote the framework approach to Transport for London, London Councils, other London partnerships and other UK local authorities (perhaps through the Local Government Association) as a means of disseminating best practice throughout the country and encouraging wider uptake.

# Introduction

* 1. Integrated Transport Planning Ltd. (ITP) was commissioned by Cross River Partnership in December 2019 to develop a common framework and associated guidance document for the appraisal and evaluation of parking schemes on behalf of central and inner London boroughs that constitute the Central London Sub-Regional Transport Partnership.

## Cross River Partnership

* 1. Cross River Partnership is a non-profit public-private partnership organisation which has been delivering positive change for London’s residents, businesses and visitors for over 25 years. CRP co-ordinates the Central London Sub-Regional Transport Partnership (CLSRTP) on behalf of Transport for London.
  2. The CLSRTP is a collective of senior transport officers from ten London boroughs:

City of London

City of Westminster

London Borough of Camden

London Borough of Hackney

London Borough of Islington

London Borough of Lambeth

London Borough of Lewisham

London borough of Southwark

London Borough of Wandsworth

Royal Borough of Kensington and Chelsea.

* 1. The geography of the CRP area in relation to the rest of Greater London is presented in Figure 1‑1 below:

Figure ‑: Map to show Cross River Partnership boroughs



## Purpose

* 1. The study develops recommendation two of ITP’s *Benefits of Parking Management in London* report for London Councils which advocates the adoption of a common framework-based approach to the appraisal and evaluation of parking schemes throughout London.
  2. This report provides guidance for borough transport and parking officers on how to apply the framework and embed it within the parking scheme design process.
  3. The adoption of a common framework-based approach would be expected to deliver the following benefits:
* Enable a clear and consistent evidence base on parking scheme performance to develop, which accrues over time;
* Provide an evidence-led approach to parking scheme design which supports central/inner London boroughs in their efforts to engage with the public as part of the public consultation process;
* Enables boroughs to develop a set of key performance indicators to enable them to effectively measure the contribution that parking schemes make to the realisation of their targets and policy objectives; and
* Facilitates a consistent basis for parking scheme design and evaluation which positions central/inner London boroughs as a best practice exemplar throughout the UK and internationally.

## A Circular on the Implications of Covid-19

* 1. This study was developed during the time of the global coronavirus pandemic which began in 2019 (“Covid-19”) and which has implications for the application of the Framework. It is important to understand that any scheme evaluation is dependent upon the ability to undertake a like-for-like comparison of pre- and post-implementation scenarios. Evaluations are only successful (and only worth doing) where external factors can be suitably controlled for to ensure that the impacts observed post-implementation can be attributed to the scheme.
  2. Covid-19 presents a very real challenge for evaluations because travel behaviour is in a state of flux and supply and demand are at a point of significant disequilibrium. Moreover, it is not yet clear what the new equilibrium will be. It is only clear that local authorities are keen to ensure that some of the positive trends in travel behaviour to emerge from the pandemic, such as increased walking and cycling, are retained.
  3. It is imperative that the movement restrictions in place at the time of evaluation – as well as any changes to them – are clearly documented within a scheme’s evaluation report. This will enable the reader to make a judgement on the appropriateness and transferability of the findings to other schemes that they are looking to bring forward to determine the extent to which the evaluation findings can form part of the evidence base for a future scheme’s appraisal.
  4. Beyond these notes of caution, we want to stress that this Parking Assessment Framework has been designed to be applicable to the widest-possible range of parking schemes. It can also be applied to other types of schemes where there is a need/desire to evaluate the impact on parking, such as Low Traffic Neighbourhood (LTN) schemes. To that end it can be used to support boroughs in delivering schemes commensurate with their Covid-19 response.
  5. Where applying it at this time, officers should consider the possible need to expand the criteria to include, for example, the promotion of social distancing, and consider the metrics they might want to adopt to data collection and evaluation.

# Current Practice in Parking Scheme Design

## A largely reactive approach

* 1. Traditional approaches to parking scheme design in London have been predominantly *reactive*; usually in response to complaints or petitions from residents or ‘material change’ e.g. in response to a major development coming forward. They typically rely heavily on precedent schemes and officers’ local knowledge.
  2. Reactive approaches are effective insofar as they act directly upon the requests of local stakeholders and therefore have the advantage of being particularly democratic. However, they possess the significant drawback that action is usually only taken once a problem has emerged which, in some cases, may be difficult to reverse.
  3. Increasingly, boroughs are seeking to become more proactive with parking scheme design to aid resilience and strategic planning capability. This involves identifying issues before they emerge and proactively ‘designing them out’. In many cases, it also involves using parking management as a Transport Demand Management (TDM) tool to proactively drive progress on transport, air quality and climate-related policy goals.
  4. Proactive parking design necessitates a vision-led approach. This requires setting objectives and targets in relation to parking schemes at the design stage and being explicit as to how parking schemes can contribute to the realisation of wider policy goals, as described above. This also requires a robust programme of monitoring and evaluation be put in place to ensure that progress is captured. By contrast, reactive approaches more commonly lend themselves to ‘firefighting’ issues as they arise and trying to maintain an ‘acceptable status quo’. They are backward looking by nature.
  5. One of the key challenges to the adoption of a proactive approach to date has been the availability and quality of data. Traditional parking beat surveys, for example, can be expensive; especially if conducted over a large geography e.g. to inform the possible introduction of an area-wide Controlled Parking Zone (CPZ). Meanwhile, the limited time period over which they are usually undertaken risks producing results that are not representative or that quickly become obsolete in the face of changing local circumstances. The lack of good quality available data at the micro scale has been a significant factor in ensuring that parking scheme design has remained largely reactive to date. However, this is changing.
  6. Progress on the so-called Fourth Industrial Revolution (“4IR”) is delivering advances in data that will eventually see users, vehicles and infrastructure seamlessly interconnected. 5G communications, artificial intelligence, machine learning and the internet of things (IoT) are all contributing towards this end state. This will give the borough parking officer access to incredibly rich datasets in relation to the performance of their parking infrastructure (as well as virtually every other component of the transport system) continuously, and in real-time.
  7. Such on-demand data will improve the quality of decision-making, whilst significantly reducing the need for, and the expense associated with, bespoke data collection. It will also ensure that local authorities are likely to embed monitoring and evaluation practices within a wider body of schemes as a matter of course, as concerns over cost will be considerably reduced. Where these processes already exist, they will become more effective.

## The contribution of the framework

* 1. The key objective of this framework is to facilitate this transition towards proactive design by giving borough transport and parking teams a structure within which to construct the appraisals and evaluations they undertake on their parking schemes. The framework must be applicable at a variety of scales and it is therefore vital that the framework is sufficiently general to ensure it is appropriate to the diverse range of challenges presented to inner London parking teams.
  2. In particular, we recognise that parking scheme design is becoming increasingly holistic and integrated within the borough’s wider policy agenda. Parking policy is expected to support an overarching narrative on climate change mitigation, local air quality improvement, public health and spatial planning as well as promoting mode shift and reducing car dependency. Parking management is no longer just about managing demand for the kerb and keeping traffic moving. This framework-led approach aims to reflect this.
  3. We also recognise that public engagement on parking schemes remains a challenge – not only because of the emotive nature of parking schemes and their tendency to court opposition, but also because of the public’s desire for increasingly-sophisticated approaches to consultation. For example, many boroughs have chosen to partner with Commonplace for scheme consultation in order to reach a wider audience than would have ordinarily been possible through traditional methods of consultation. This increases public participation and sets a healthy new precedent for expectations regarding the public consultation process.
  4. However, it should be noted that engagement may become more challenging under a proactive approach because the justification for intervention could become increasingly abstract to some stakeholders and less reliant on what can be observed on the street. This necessitates that local authorities place greater emphasis on communicating the benefits of parking schemes to their public as well as their responsibilities in law. We strongly encourage boroughs to share the findings of scheme appraisals with the public in an appropriate format at the point of consultation. This could be done through the use of interactive consultation platforms.

# Benefits of Parking Management

* 1. On average, the private car is estimated to spend 95% of its time parked with parking required at the start and end of almost every journey. With 2,943,507 private cars registered for use in London in 2019[[1]](#footnote-2), a minimum of 39 square kilometres of land is required in the capital for car parking alone – an area roughly the same size as the boroughs of Camden and Westminster combined[[2]](#footnote-3). Further land is required for the parking of other vehicles and for vehicles in motion. This is a considerable land requirement.
  2. However, the allocation of land for parking is ultimately a choice and all CLSRTP boroughs price to manage demand. Local authorities should aim to ensure that between 15% and 20% of their total parking stock is available at any given time. Where parking occupancy within a given area exceeds 85%, the area is considered to be under parking stress. Where parking stress exists, motorists will spend longer than usual circulating to find a parking space which adds unnecessary traffic to the network and exacerbates congestion, air pollution, etc. at a time where the journey is otherwise complete.
  3. Equally, however, the overprovision of parking reflects an inefficient use of space which can prove detrimental to the economic performance of the area. The key to parking management is to get the balance right by deploying a range of parking levers and mechanisms – together with other complementary policies – that encourage people to use more space-efficient and healthier transport modes where possible, while providing parking for those who need to drive or be driven.
  4. ITP’s Benefits of Parking Management in London report for London Councils ([ITP, 2018](https://www.londoncouncils.gov.uk/download/file/fid/23351)) identifies the following eight benefits that parking schemes can deliver:

1. Reducing congestion
2. Improving road safety
3. Improving air quality
4. Ensuring good access and accessibility
5. Promoting the local economy
6. Maximising the productive use of land resource
7. Promoting health and wellbeing through travel choice
8. Providing funding for parking and wider transport scheme improvements, including the Freedom Pass concessionary travel scheme
   1. The first seven benefits are considered primary benefits, while the final benefit relates to the value of reinvesting surplus parking revenue which is a secondary benefit and one that is unique to local authorities with a demonstrated need to set above-cost tariffs to manage demand for parking. Otherwise, local authorities must set parking tariffs at the level required to cover the cost of delivering the parking service; and not more. Any surplus generated must be ‘accidental’.
   2. ITP (2018) estimates the total benefit of parking management in London to be £3.6billion per annum and that parking schemes in London generate a return on investment of £10 for every £1 spent. However, the magnitude of benefit is directly proportionate to the need to manage parking demand and it is therefore likely higher still amongst the CLSRTP boroughs. This underlines the importance of implementing high-quality parking schemes that are well thought-out and rooted in a vision for the area and deliver upon public policy objectives. Where schemes are thought to generate such benefit, it also makes sense to evaluate them to quantify the benefits delivered and to communicate these to the public and other stakeholders. Over time, this will help to improve the public’s perceptions of parking schemes and civil parking enforcement services.
   3. In addition to the aforementioned benefits, parking management is also an important tool within the borough’s climate emergency response toolkit, principally as parking schemes can help support a reduction in CO2 emissions. Boroughs are increasingly adopting emissions-based parking charges where the price of a parking permit or a parking session is differentiated based on the carbon footprint of the vehicle, thus incentivising mode shift and accelerating fleet renewal.

# The Parking Assessment Framework

## An overview

* 1. The Parking Assessment Framework is designed to give a structure to the activities of parking scheme appraisal and parking scheme evaluation. The framework approach is designed to be integrated within the wider process of parking scheme design.
  2. The appraisal component focusses on the process of option development. It provides a basis for enabling boroughs to assess the merits of one or more options against the status quo (‘do-nothing’ scenario) to enable a preferred option to be identified and evidenced. The evaluation component, meanwhile, focusses on capturing the impact of the scheme once implemented. It provides for a binary comparison of the pre-scheme and post-scheme environments.
  3. The Framework has been developed to be applicable to any type of parking scheme. This could be a very localised lining scheme or a comprehensive area-wide Controlled Parking Zone (CPZ) review. This has been achieved because it is predicated on measuring performance against the aforementioned benefits of parking management that any parking scheme should be capable to support.
  4. When undertaking assessments, borough officers are free to expand upon the criteria where there is a need to do so e.g. where a parking scheme is being delivered to help promote non-parking objectives e.g. the need to promote social distancing in response to Covid-19.
  5. While the Framework has been developed on behalf of the central and inner London boroughs that constitute the CLSRTP, it is suitable for the appraisal and evaluation of parking schemes in any urban area where there is a need to manage demand. For simplicity, this could be defined as any area that experiences parking stress. We therefore expect that it could be adopted by any London borough or by counterpart local authorities in other UK towns and cities.
  6. The Framework itself is held separately in a Microsoft Excel file (see Annex 1). This represents a template that borough officers can develop in accordance with their needs. Guidance notes to appraisers and evaluators on how to structure the appraisal and evaluation processes are provided in this file. A worked example is also provided to practically demonstrate how the Framework should be applied (see Annex 2). More detailed guidance, which sets out the development of the appraisal and evaluation processes within the context of a theory of change (ToC) for parking scheme design, is provided in the next section.

## The parking scheme design process

* 1. Figure 3‑1 overleaf presents a schematic of the parking design process in the context of a theory of change (ToC). It sub-divides the process into six sequential stages which collectively represent best practice in parking scheme design.
  2. The feedback loop provided from the evaluation stage back to the diagnosis stage is designed to highlight the dynamic and evolving nature of parking in cities. A scheme that represents the optimal solution today may not necessarily continue to do so into the future as travel patterns and land use mix and densities change. There is no better example of this change than the current example of Covid-19. It is therefore possible that evaluation activities help to diagnose new and emerging issues, enabling boroughs to take a proactive approach.
  3. The remainder of this section describes each phase in turn.

Figure ‑: Parking scheme design: A Theory of Change



### Stage 1: Diagnosis

* 1. The origin of any parking scheme is rooted in the need to address an existing or anticipated parking-related issue (or combination of issues). This stage is called diagnosis. Where the **decision is taken to intervene**, the process of scheme design begins. Best practice in scheme design is presented in Figure 3‑1 above.

### Stage 2: Plan

#### Vision creation and objective setting

* 1. When adopting a proactive planning approach, it is imperative to first **set out a vision** for any scheme. To do so, borough officers need to think critically about the problem(s) at hand in the context of the policy objectives that the scheme needs to support. Formulating a **vision statement** can help officers to communicate the purpose of the scheme to internal and external stakeholders.
  2. Following the vision, it is also important to **establish a set of objectives** for the scheme. Again, borough officers should think about their policy objectives (transport, environment, climate, economy, etc.), legal obligations, but also the known benefits of parking management (see Benefits of Parking Management, Chapter 4 ([ITP, 2018](https://dl.dropboxusercontent.com/s/lyy2eneo7b4g7xz/Benefits%20of%20Parking%20Management%20in%20London?dl=0))). This is to understand which components of policy parking schemes are well placed to deliver on.
  3. Each objective should be supported by at least one **indicator** against which performance on the objective can be monitored and quantified. Indicators should be further supplemented by **targets** which are aligned to policy objectives. Targets should accord to the SMART framework, ensuring that they are: Specific, Measurable, Agreed (amongst internal stakeholders), Realistic (but ambitious), and Time-bound.
  4. In general, it is good practice to keep a vision statement broad and simple, and enable further detail to be explicated through the list of objectives.
  5. Table 3‑1 below presents a series of ‘guiding questions’ which borough officers may wish to consider when planning a parking scheme and determining a vision and set of objectives.
  6. The table provides a comprehensive list of desirable practical outcomes framed against each of the benefits of parking management, which are expressed below as ‘considerations’. It is extremely unlikely that all of these questions will be of relevance to any given scheme. They are designed to encompass a wide range of possible parking-related scheme objectives. However, equally, the list is far from exhaustive and local authority officers are strongly encouraged to think beyond this list where relevant to their area and the challenges they face.

Table ‑: Guiding questions for scheme design

|  |  |
| --- | --- |
| Consideration | Guiding Questions |
| Congestion | Will the scheme lead to an overall reduction in the level of congestion experienced on the immediate road network?  Will the scheme result in displaced traffic elsewhere?  Will the scheme lead to a reduction in cruising for parking? |
| Road safety | Will the scheme reduce the speed of traffic on the immediate road network?  Will the scheme alter the composition of traffic on the immediate road network?  Will the scheme improve the inter-visibility between pedestrians and motorists?  Will the scheme compromise the function of other modes e.g. buses? |
| Air quality | Will the scheme lead to a reduction in the volume of NOx and PM emitted and thus improve air quality? |
| Climate change | Will the scheme lead to a reduction in the volume of CO2 emitted? |
| Access / accessibility | Will the scheme dissuade less desirable users from parking e.g. long-stay commuter parking?  Will the scheme improve access for freight / commercial vehicles?  Will the scheme improve access for Blue Badge holders?  Will the scheme help to preserve the integrity of the footway i.e. prevent pavement parking?  Will the scheme contribute positively to achieving a ‘sense of place’, reduce severance, and/or lead to improvements to the public realm? |
| Local economy | Will the scheme benefit local businesses?  Will the scheme capture any missed trade opportunities experienced due to practices such as railheading?  Will the scheme contribute to the consolidation of freight and/or promote more off-peak deliveries? |
| Land take | Will the scheme alleviate parking stress?  Will the scheme result in a more desirable apportionment of supply and demand?  Will the scheme promote more efficient forms of ‘car use’ such as car sharing and/or car clubs? |
| Mode shift (as a means of calculating health and wellbeing benefits) | Will the scheme encourage a mode shift towards walking, cycling and/or public transport? |

#### Early optioneering

* 1. Once the vision and objectives have been established, borough officers can then begin to think about the **types of interventions** that could reasonably deliver on these.
  2. In some cases, it will be fairly apparent at the point of problem identification what an optimal solution is likely to entail. However, in others, scheme definition will require greater thought. In any case, it is important that visioning and objective setting precedes consideration of scheme options so as not to prejudice objectives to a particular type of scheme. This ensures that officers are not restricted in their capability to think creatively regarding interventions.
  3. Officers may opt to involve the public directly in this option development stage, if desired, through an informal consultation; particularly if a range of interventions would be appear viable or if they want to tap into local knowledge and expertise. This could be achieved using an interactive online consultation platform. A collaborative approach could ensure that the aspirations of key stakeholders are better accounted for when consulting formally upon a preferred scheme at a later stage (see Stage 4: Engage).
  4. The outcome of this task will be a **list of possible scheme options or interventions** and/or combinations of interventions, as appropriate, that respond to defined objectives.

#### Development of a Data Collection Plan

* 1. At this point, the strategic groundwork is complete and officers must shift their attention to consider the types of data needed to capture the impact of any scheme against the defined targets and objectives.
  2. A **Data Collection Plan** should be developed which provides a consistent framework for data collection throughout the lifecycle of the design process; encompassing baseline data collection (pre-appraisal) through to post-implementation monitoring and evaluation. A consistent approach is needed to ensure that the impact of the scheme can be effectively evaluated. This needs to be based on a like-for-like comparison between *before* and *after* studies.
  3. In addition to capturing progress on objectives, the Data Collection Plan should also be designed, where possible, to enable additional impacts to be captured as well as any unintended or undesirable consequences. For example, it might not be an objective of a scheme to reduce traffic speeds on a given road, but this may be foreseen as a likely outcome of a particular intervention. Therefore, the Data Collection Plan should be designed to capture this. Similarly, a scheme may lead to undesired consequences such as displacement of traffic or parking. The Data Collection Plan should enable these to be captured also.
  4. When developing the Data Collection Plan, officers should consider if/how real-time data feeds that exist in the area of the intervention could be utilised. Making use of available big data sources is one of the key justifications for routinely embedding appraisals and evaluations within the parking scheme development process because they can provide data of unprecedented quality and scale at no additional cost. By contrast, traditional data collection approaches have relied on expensive processes that deliver marginal value, which is why reactive planning has prevailed. For example, we are aware that Transport for London, Cross River Partnership and other bodies have invested in the products and solutions of Vivacity Labs. Other providers of artificial intelligence solutions are available and it is likely to be a market of considerable growth in the years ahead.
  5. Boroughs should seek to make use of this technology where it exists already and explore opportunities for adopting / embedding it where there is a desire to undertake routine data collection, particularly as part of scheme evaluations going forwards. However, it is expected that a range of ‘old’ and ‘new’ approaches would be included in the Data Collection Plan in the immediate term.
  6. Following the completion of the Data Collection Plan, officers should proceed to **gather the baseline data**. As part of this process, officers will need to consider the appropriateness / usefulness of existing datasets as well as the value of collecting entirely new data.
  7. Table 3‑2 below provides examples of types of data that could be programmed into a baseline data collection process with a view to enabling monitoring and evaluation of a scheme once up-and-running. The composition of metrics selected will depend on the objectives of the scheme.

Table ‑: Possible metrics for data collection

|  |  |  |
| --- | --- | --- |
| Consideration | Sub-consideration | Possible metrics for data collection |
| Congestion | General congestion | Traffic counts  Traffic speeds  Journey time variability  Queue length data |
| Displaced traffic | As above, but on surrounding links |
| Cruising for parking | Data from smart parking providers |
| Road safety | | Road traffic collision data  Visibility splays  Vehicle composition data (if relevant) |
| Air quality | | Data from air quality monitoring stations / devices |
| Access and accessibility | | User surveys  User observation  Parking compliance / contravention surveys  Analysis of enforcement statistics |
| Local economy | Impact of trade | Pedestrian counts in commercial areas  Business takings / performance |
| Freight efficiency | No. of unique deliveries  Volume of goods delivered per vehicle  Vehicle load factors |
| Land take | | Parking occupancy surveys  Parking turnover surveys  Analysis of permit to space ratios |
| Mode shift | | User surveys (household, workplace, school)  Parking permit renewals  Bus boarding data |

#### Refinement of options

* 1. The empirical nature of data gathering will shed greater light on the nature of the issue(s) at hand and may identify additional weaknesses in the transport environment that a parking scheme could reasonably solve. It may therefore be appropriate to **revise the objectives and targets** based on the additional knowledge and empirical evidence obtained through data collection and/or **refine or firm up the shortlist of schemes** to be progressed to appraisal.

### Stage 3: Appraise

* 1. With an agreed set of options, officers can proceed to appraisal. For this, we recommend that boroughs adopt a multi-criteria assessment (MCA) approach to assess the extent to which each option can deliver on scheme objectives, contextualised within the known ‘benefits’ of parking management. We encourage officers to consult the Appraisal Results Table tab of the CLSRTP Parking Assessment Framework file which provides a template for structuring the appraisal and to draw upon the worked example provided in Appendix A.
  2. An MCA is a streamlined form of appraisal which lends particularly well to comparisons between direct alternatives. The MCA approach establishes the relative benefits of each option being considered.
  3. Where data from previous interventions exists (i.e. previous scheme evaluations of a similar nature in similar contexts), it is strongly recommended that this be drawn into the appraisal process. It is hoped that widespread adoption of the Parking Assessment Framework by a range of boroughs will enable a rich source of comparable scheme evidence to be assembled over time. This comparability is a key justification to encourage boroughs not to diverge from the template framework; although the precise approach will be for each individual borough to determine. However, in early years, without the presence of robust evaluations from other boroughs that will take time to accrue, appraisals are likely to draw more heavily upon theory and qualitative assessment.
  4. The conclusion of the appraisal process should enable a **preferred option to be identified** upon which the borough wishes to consult. Alternatively, the borough may decide to consult on a range of possible schemes, particularly if the results of the appraisal show comparable benefits between alternatives. This will be a decision for officers.
  5. At this point, officers should **prepare a ‘*before*’ study** to record the findings of the data collection process and to document the appraisal results. This should be produced in a way that is suitable for the view of the general public.
* Provide a brief summary of the challenge
* Present the results of the data gathering (including, briefly, the methodology used)
* Describe the option(s) available / under consideration
* Present the appraisal results (including, briefly, the methodology)
* Outline next steps

### Stage 4: Engage

* 1. Once a preferred option has been identified and evidenced, borough officers will need to reach out to obtain wider support. The first point of engagement should be with **internal political stakeholders**. The precise approach taken and the level of engagement required will depend on the type of scheme and the relationship had with Ward Councillors, Cabinet Members, etc. However, for larger schemes, such as the introduction of a CPZ, it is advised that officers seek buy-in at all relevant political levels prior to undertaking a public consultation. It will be important to obtain buy-in from the relevant Cabinet Member early if a final decision is to be Member-led.
  2. Once the relevant political stakeholders are aware, officers should proceed with a wider **public consultation**. The precise approach taken will depend on the nature and scale of the scheme.
  3. Officers should present the results of the appraisal to all stakeholders engaged in a summarised and digestible form, including any options discounted and the rationale for discounting them.
  4. The findings of the consultation process will inform a decision on whether to progress with the identified scheme or, where consulting on multiple options, inform which scheme or relevant components should be progressed. At this point, depending on the nature of the scheme, officers may be required to further consult the Cabinet Member to enable a Member-led decision.
  5. If the scheme does not obtain a sufficient level of public and/or political support, the scheme may require revision and a further consultation, or it may be abandoned completely.

### Stage 5: Implement

* 1. Where the requisite approval is obtained, and the decision is taken to proceed to implementation, officers must develop a **Monitoring & Evaluation Plan** to enable the impact of the scheme to be captured.
  2. This should represent a development of the original Data Collection Plan which sets agreed timeframes for monitoring activities to take place and outlines the resource requirements to deliver. The scope of data collection activity should have already been determined at the planning stage and diversion from this framework is not recommended to ensure consistency and therefore the most robust evaluation.
  3. The number of monitoring periods will be for officers to consider. However, in most cases, it is expected that some monitoring activity will take place immediately after implementation (e.g. within a month, as appropriate to the scheme) to capture the immediate impacts, with an additional period of monitoring activity at a more distant point (e.g. a year after implementation or after the initial baseline data collection stage) to enable the impact to be captured once the scheme has bedded in and users have had time to respond. However, as good practice, we would recommend the following suggested monitoring programme:

1. First monitoring period – 1 month after implementation
2. Second monitoring period – 12 months after baseline data collection
3. Third monitoring period – 12 months after scheme implementation
   1. Depending on the scheme, it may be deemed beneficial to design in interim monitoring periods and/or extend the monitoring period beyond a year. However, with more distant monitoring, it may be difficult to attribute observed changes back to the original scheme and to disentangle them from other schemes and developments that have since taken place.
   2. Where using to evaluate a Covid-19 response scheme, it may be necessary to condense the monitoring and undertake more intensive, and possibly continuous, monitoring.
   3. Once the Monitoring & Evaluation Plan is in place, officers can proceed with **implementation**.

### Stage 6: Evaluate

* 1. The evaluation phase centres on the **implementation / delivery of the Monitoring & Evaluation Plan**. This is critical and will enable the scheme’s impact to be captured and compared with the expected impact set out during the appraisal phase. We strongly encourage officers to consult the Evaluation Results Table tab of the CLSRTP Parking Assessment Framework file which provides a template for reporting on the findings of the evaluation as well as drawing upon the worked example.
  2. Once captured, the results should be **uploaded to a central repository** to facilitate knowledge sharing with other boroughs and to inform future scheme development in the borough concerned and elsewhere. This should be accessible to all boroughs.
  3. The time-series nature of the data captured as part of the monitoring process will help to identify any changes in the relative performance of the scheme against objectives that may occur through time. This can inform whether any tweaks or more fundamental revisions need to take place to the scheme in due course.
  4. At the conclusion of the evaluation phase, borough officers should prepare an ‘***after’* study** to report on the findings of the evaluation. This should cover the methodology adopted as well as, crucially, the results. This report should be concise with the aim of enabling borough officers to dive into it in the future to understand the evaluation process and to build the results into future scheme appraisals. It could be a standalone report, or an additional chapter to the original ‘before’ study.

# Making the Framework Work

* 1. As noted above, the full benefit of the framework approach will only be realised when scheme evaluation data comes to fruition. This may take several years and will undoubtedly require the uptake and participation of several boroughs.
  2. As the framework approach is sufficiently general to reflect a range of schemes and contexts, there is nothing to prohibit other boroughs or indeed other local transport authorities around the UK from adopting it and applying it. Importantly, the higher the adoption rate, the sooner the critical mass of parking scheme evaluation material will emerge that can be usefully fed back into scheme appraisals.

## Recommendations

* 1. In order to make the framework approach work to the fullest possible extent, we make the following four recommendations to Cross River Partnership for next steps and downstream programming:

1. **Cross River Partnership should actively promote and encourage the adoption of the framework approach amongst member authorities.** **Initially, a trial should be established to enable the framework approach to be tested and applied in the real-world and to be refined where necessary.**

It may not be possible to define the duration of the trial period right away, as this will be influenced by the level of participation, the initial experiences of boroughs using the framework, and the time at which schemes transition from planning to implementation (which will vary depending on scheme type). However, given the 12-month period required for monitoring and evaluation activity, the duration of the trial would need to reflect the time required to bring forward every scheme, plus the 12-month monitoring and evaluation period.

However, where trialling in relation to Covid-19 response schemes, the evaluation period could be shorter with condensed evaluation milestones or even continuous monitoring given the focus on delivering instantaneous rather than long-term behaviour change.

We strongly encourage a number of boroughs and a range of scheme types to be represented in the trial. Larger and more complex schemes may take longer to bring to fruition, but the trial would benefit from having such schemes involved. As a minimum, three use cases should be tested, but ideally more, and the more the better; however, this will be dependent on funding. We would therefore suggest that any scheme is a worthy trial candidate, but maximum value would be obtained where applying to schemes in areas of parking stress[[3]](#footnote-4) as the impact of intervention will be greatest and monitoring and evaluation outcomes will be less sensitive to exogenous background factors that can distort evaluations.

However, given the times, it may be most appropriate to trial on Covid-19 response schemes where they remove or are designed to reduce demand for parking. Of these, schemes that impact on businesses would be particularly interesting to include as they would provide for a richer context for evaluation. However, residential schemes would be a no less valid use case.

We appreciate that different authorities have displayed differing appetites for adopting the framework approach at this time and we believe that a trial would be best served by engaging boroughs that are most enthusiastic for its use.

1. **Cross River Partnership should undertake a review of the framework and guidance at the conclusion of the trial period to ensure it is fit-for-purpose and to make amendments to it where necessary.**

This could be facilitated through focus group research with the boroughs that have taken part in the trial. This would promote an open forum to discuss experiences (positive and negative) and encourage a consensus view on the scope of any revisions.

Even if the approach is deemed to be sound, we recommend replacing the existing worked example (which is fictitious) with real examples from the trial reflecting a range of contexts and scheme types, if possible.

1. **Cross River Partnership should develop a common repository for parking scheme evaluations to be stored / uploaded online that is accessible to all boroughs to provide a consolidated evidence platform.**

This repository should include recourse for uploading the Evaluation Results Table (quantitative data), but also enable recourse for uploading before and after written study reports to ensure that qualitative insights on schemes are documented. A common repository would greatly benefit knowledge sharing between boroughs and would become the ‘go to’ source for evidence on past parking scheme performance.

This should be established at the conclusion of the trial period and once any amendments to the framework-approach (which could feasibly include how information / data is captured and reported) are reflected.

1. **Once the framework-approach is beyond trial stage and the repository is in place, Cross River Partnership should promote the framework approach to Transport for London, London Councils, other London partnerships and other UK local authorities (perhaps through the Local Government Association) as a means of disseminating best practice throughout the country and encouraging wider uptake.**

This would enable the best practice approach that has been developed and adopted amongst CLSRTP boroughs to be adopted more widely, leading to better quality outcomes on parking schemes throughout the UK.

Annex 1

CLSRTP Parking Assessment Framework Templates

CLSRTP Parking Scheme Assessment Guidance



Annex 2

Worked Example of the application of the CLSRTP Parking Assessment Framework

CLSRTP Parking Scheme Assessment Guidance

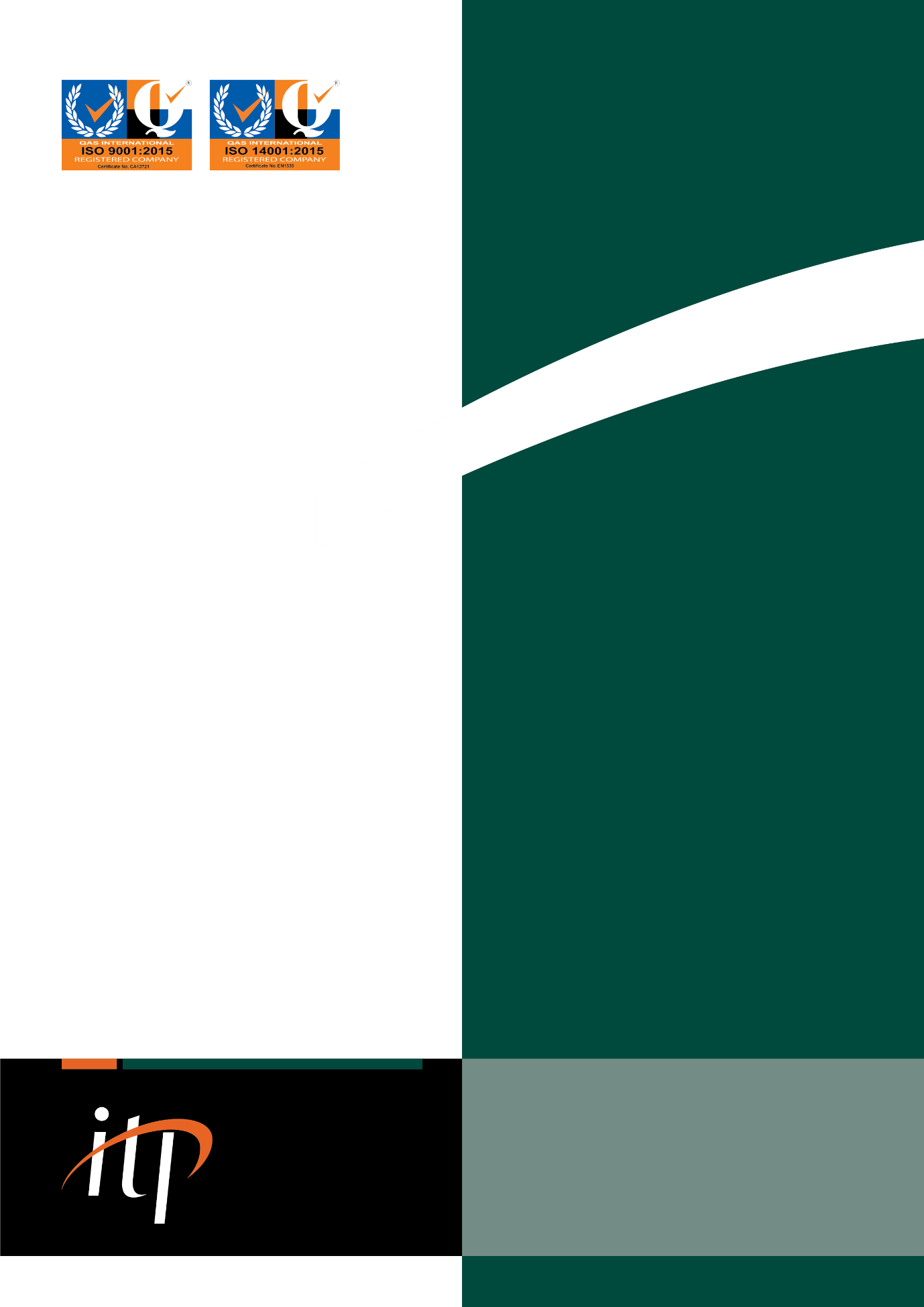


Appendix A

Discussion Group Report with London Borough Parking Representatives

CLSRTP Parking Scheme Assessment Guidance





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1. SMMT data for 2019. [↑](#footnote-ref-2)
2. Based on minimum car parking standards and best practices in terms of the level of supply. [↑](#footnote-ref-3)
3. Where parking occupancy exceeds 85%. [↑](#footnote-ref-4)