Surrey Lane Rental Scheme

Consultation Overview & Cost-Benefit Analysis

Foreword

Making the best use of our road network is vital for Surrey. Our roads facilitate the transport of people and goods, provide access to homes, businesses and other destinations, and provide public space where people shop, socialise or relax. Under the road surface lies essential infrastructure for the communications and services that underpin our lives.

Surrey County Council has a legal duty to manage, maintain and improve the road network, including managing its use and the activities (works) taking place on it.

The Council has a range of powers and duties under which they maintain and improve the network and manage its use and the activities taking place on it. These include:

- the Highways Act 1980 principally covering the structure of the network;
- the New Roads and Street Works Act 1991 covering utility street works; and
- the Road Traffic Regulation Act 1984 regulating the activities of road users.

Surrey's introduction of a permit scheme in 2013 was a progressive increase in the ability of the Council to manage and coordinate works, and to minimise disruption. A lane rental scheme will complement this permit scheme by providing greater financial incentive to encourage organisations to improve their planning, work outside of peak times and reduce the duration of their work.

In accordance with Government Guidance: *Lane Rental Schemes: Guidance for English Local Highway Authorities.* the Council is required to consult on a proposed lane rental scheme, with defined consultees and interested parties, prior to bringing a scheme into legal effect.

The Council have issued this document to support the consultation process, with the intention to answer questions consultees may have in relation to the proposed scheme.

This document is not intended to influence opinion within this consultation – any specific responses related to your area of interest can be submitted via the formal consultation response process set out within this document.

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Traffic Manager, Surrey County Council

Document content

This document has been produced by Surrey County Council (owner).

This document is a draft version of the intended final document and should therefore be treated as such.

1 Lane Rental Scheme Consultation

1.1 Purpose of the Consultation

1.1.1 In accordance with Government Guidance, issued by the Department for Transport, any local highway authority making an application to the Secretary of State to run a lane rental scheme will need to have carried out a full consultation on the draft scheme.

1.1.2 The purpose of the consultation is to seek views and clarifications from those potentially affected by the introduction of a lane rental scheme and other interested parties.

1.1.3 Responses to the consultation will be considered by the Council, and whether any changes are required to the lane rental scheme, or whether further clarification of the scope or operation of the scheme is required in light of the responses.

1.1.4 It should be noted that a lane rental scheme has to be compliant to legislation and many associated references, such as: statutory guidance; technical specifications; and codes of practice. As such, the Council is limited in changes that can be applied to the scope and content of the lane rental scheme.

1.1.5 The consultation will run for a period of twelve weeks, between Friday 10th July 2020 and Friday 2nd October 2020.

1.2 How to obtain the scheme documents

1.2.1 The proposed scheme and supplementary documents are available for download on the Council website (refer to URL below). Paper copies of these documents can be obtained by contacting the Council.

https://www.surreysays.co.uk/environment-and-infrastructure/f7776765

1.3 How to Respond to the consultation

1.3.1 Responses can be submitted through the Council website (as above).

1.3.2 A response can be submitted on any section of the scheme or the overall scope or objectives of the scheme. Where appropriate, reference to a specific section in the scheme would be beneficial. This will provide context for the response and to enable the Council to provide the necessary consideration and a response (where applicable).

1.3.3 Responses can be received from individuals, organisations or those representing an interested party or organisation.

1.3.4 All consultation responses, including the respondent information, will be collated into a central list. Personal data related to any respondent may be stored by the Council but will not be released by the Council.

2 Lane Rental Scheme Background

2.1 Lane rental schemes

2.1.1 What is a lane rental scheme?

2.1.2 A lane rental scheme is a legislative scheme, brought into effect through a legal Order, to allow the Council, acting as a highway authority, to charge a organisations undertaking street works or road works, *referred to as a Promoter*, for the time their works occupy specified streets of the highway.

2.1.3 This provision for a lane rental scheme is provided through the **Street Works (Charges for Occupation of the Highway (England)) Regulations (2012)**. These regulations set out a framework for a scheme:

- lane rental can only be applied to streets with a designation of protected or traffic sensitive; and
- lane rental charges, to a maximum of £2,500 per day, can only be applied when works occupy the highway during designated traffic-sensitive periods.

2.1.4 Why is the Council considering the introduction of a lane rental scheme?

2.1.5 The introduction a permit scheme in 2013 was a progressive increase in the ability of the Council to manage and coordinate works, and to minimise disruption.

2.1.6 A lane rental scheme is a way to complement a permit scheme by providing financial incentives to encourage Promoters to work outside of traffic sensitive times and reduce the duration of works.

2.1.7 How does a lane rental scheme come into effect?

2.1.8 The Order (statutory instrument) to bring a lane rental scheme into legal effect would be issued by the Secretary of State for Transport.

2.1.9 Government Guidance sets-out the criteria and process for a council to apply to the Secretary of State for this order. The review process is carried out by the Department for Transport (DfT).

2.2 Objectives of a lane rental scheme

2.2.1 What are the expected benefits of a lane rental scheme?

2.2.2 The benefits from a lane rental scheme come from the financial incentive for Promoters to avoid working at peak times (designated traffic sensitive) on the most congestion section of the network.

2.2.3 These benefits should be derived through behaviour changes by the Promoter, which would include:

- a reduced length of time a work site is unoccupied, without any works taking place or waiting for the next stage of works to commence;

- works completed to standard first time, avoiding a return visit;
- works being completed outside of peak periods;
- implementing measure to reopen use of the highway at busiest times;
- optimising operatives on site to reduce the duration of the works; and
- improved planning, coordination and working methods, including collaboration with other Promoters.

2.2.4 The Street Works Lane Rental Evaluation published by the DfT (2015) summarises observations from both TfL and Kent County Council on the benefits of a lane rental scheme. The overall observations are

- improvement in journey times and journey time reliability on lane rental routes for TfL, during a period with a general trend towards a decrease across the network as a result of increased traffic flows;
- reduction in total serious and serve disruption (42%) on TfL's lane rental streets, compared with other non-lane rental streets;
- increase in the number of collaborative sites for TfL (81%), resulting in a decrease in the percentage of works taking place during peak times, with an increase in works taking place out-of-hours and overnight; and
- slight reduction in overall durations of works.

2.2.5 Is the lane rental scheme a mechanism to generate revenue for the Council?

2.2.6 A lane rental scheme has the potential to generate revenue for the Council from charges applied. However. as a general principle a lane rental scheme should not be viewed as an additional source of revenue for the Council.

2.2.7 A successful lane rental scheme should result in all relevant works being undertaken outside of traffic sensitive times, and therefore no charges applied. However, in practice it is not always possible to undertake works outside of traffic sensitive times and therefore changes are applied. This has been demonstrated by the pioneer schemes in both TfL and Kent.

2.2.8 In reference to the application of charges, the Regulations state that the "Authority must apply the net proceeds [after deducting reasonable costs] for purposes intended to reduce the disruption and other adverse effects caused by street works".

2.2.9 Government Guidance provides further detail on the areas that could apply for this application of the next proceeds:

- Investment in innovation and developing new products or disruption saving techniques;
- Trails of new techniques and products;
- Installing "pipe subways" or ducting than enables apparatus to be accessed more easily and without causing disruption to traffic;
- Measures to improve the quality or accessibility of records about the location of underground pipes, wires and other apparatus;

- Repairing potholes caused by utility street works; and
- Implementing extraordinary measures to mitigate congestion caused by works, especially major works projects.

2.2.10 Does the introduction of a lane rental scheme align to the strategic transport objectives for the Council?

2.2.11 The Surrey Transport Plan is a statutory Local Transport Plan (LTP) and sets out the Councils transport strategies. The latest version of the Plan (LTP3) covers strategies to 2026.

2.2.12 The Surrey Transport Plan outlines four key objectives:

- **Effective transport**: To facilitate end-to-end journeys for residents, business and visitors by maintaining the road network, delivering public transport services and, where appropriate, providing enhancements.
- **Reliable transport**: To improve the journey time reliability of travel in Surrey.
- **Safe transport**: To improve road safety and the security of the travelling public in Surrey.
- **Sustainable transport**: To provide an integrated transport system that protects the environment, keeps people healthy and provides for lower carbon transport choices.

2.2.13 The introduction of a lane rental scheme would serve as a very effective tool to realise the objectives of effective transport and reliable transport.

2.2.14 Within the Surrey Transport Plan are a number of transport strategies, which include a **Climate Change Strategy** and a **Congestion Strategy**. These strategies are measured through indicators and targets, which include:

- CC1 - Climate Change: 10% reduction in absolute emissions by 2020 increasing to 25% reduction by 2035 on 2007 levels of 2,114 k tonnes (1.9 tonnes per capita); and
- CON1 – Congestion: No increase in average journey time as a result of congestion on key routes from 2008/09 levels
- CON2 – Congestion: No deterioration from 2010 levels, measured as change in journey time variation across all monitored routes.

2.2.15 A lane rental scheme can significantly help the Council meet these targets and will support many others contained within the transport strategies.

2.2.16 Why don’t current legislative powers provide sufficient control of works?

2.2.17 The Council utilise their existing powers effectively to control works across their network. In 2019, permit conditions resulted in 50% of the works on the proposed lane rental network being undertaken outside of peak times. This has a potential societal benefit to Surrey of £15million when compared to the same works being undertaken at peak times.

2.2.18 Similar to Government Guidance, the Council *considers that well-designed and well-targeted lane rental schemes, which need to be focused on the most critical parts of the highway network and with charges applying only at the busiest times, should encourage those undertaking works (including highway works) to carry out their works in a less disruptive manner.*

2.2.19 The latest lane rental scheme monitoring report from Transport for London (2018/19) demonstrates that since the introduction of a lane rental scheme:

- 99% of TfL works avoid a charge and 84% of utility works avoid a charge,
- the average number of collaborative work sites have increased by 65%; and
- there has been a 28% increase in planned utility works taking place overnight

2.2.20 As effective as current powers are to coordinate and control works, it remains difficult for the Council to effectively influence the initial stages of planning for works. Current controls are more effective once the Council has been notified of works or after the works have caused disruption.

2.2.21 The Council expect a lane rental scheme to provide more incentive, through a financial charge, to influence the planning of works and engagement with the Councils network management teams at a much earlier stage.

2.2.22 As a road user will I notice a difference if a lane rental scheme is introduced?

2.2.23 Road users should not expect to see a dramatic change in their journey times or levels of congestion across Surrey. Differences should be notable in the volume of works being undertaken on the most congested section at peak times, which typically compound existing levels of congestion.

2.2.24 The Council note that the latest lane rental scheme monitoring report from Transport, for London shows significant improvement from customer satisfaction surveys for the following areas since the introduction of the scheme:

- 30% improvement with ‘repeated roadworks on the same stretch of road within the same year’;
- 25% improvement with ‘takes too long to carry out the work’; and
- 28% improvement with ‘seeing streets partially closed, but no-one working there’.

2.2.25 Whilst it is difficult to quantify these satisfaction levels, the Council is encouraged by this level of feedback in one of the most congestion cities in the world.

2.2.26 In the current economic climate and with COVI19, is a lane rental scheme justified?

2.2.27 The immediate impact of the restrictions taken to tackle COVID-19 have seen reduced vehicle traffic as many people remained at home. With these restrictions being eased, traffic levels are now returning to pre-pandemic levels, and some forecasts suggest an increase to private vehicle use as people avoid public transport.

2.2.28 The impact of roadworks on congestion are therefore expected to be as sizable, even in the present economic climate. As the impact of work causes very real wider economic impacts of lost time and lost productivity, ensuring efficient management of works remains justifiably important.

2.2.29 Will any change to methods of transport affect the benefits of a lane rental scheme?

2.2.30 The potential for increased private vehicle use, as travellers avoid public transport in the near term, has the potential to accentuate congestion. In this case, the benefits of a lane rental scheme would likely be greater as the disruption caused by works could be greater in an increased congestion environment.

2.2.31 Travellers are being encouraged to consider alternative modes of transport, including walking and cycling. These forms of transport are more space efficient means of travel and can therefore lead to reduced levels of congestion if take-up is significant. This can potentially reduce the pressure of excess vehicle demand on the network.

2.2.32 Will a lane rental scheme stop works being carried out or result in poor maintenance of vital services?

2.2.33 To avoid lane rental charges organisations may choose to prioritise routine maintenance and replacement works on areas where lane rental does not apply.

2.2.34 The lane rental scheme is not intended to prevent works from taking place, but instead limit works taking place at peak times on the most congested sections of the network. As such, the Scheme provides many opportunities for works without charge through the use of lane rental timings (refer to section 3.5).

2.2.35 In addition, the Scheme also provides several opportunity for discounted lane rental charges, which are essentially based on organisations undertaking works that maintain and improve their assets and working behaviours that should lessen the impact of these essential works.

2.3 Scope of the scheme

2.3.1 What streets will the lane rental scheme apply to?

2.3.2 A lane rental scheme can only be applied to streets with a traffic-sensitivity or protected designation; however Government Guidance states a scheme *needs to be focused on the most critical parts of the highway network* … and … *schemes must focus specifically on those critical parts of the highway network where the costs of disruption caused by works are greatest.*

2.3.3 Working with an independent consultant, the Council have undertaken extensive analysis of traffic across the Surrey road network. This analysis is based on defined methodologies and has used years of actual traffic flow data and volumes to determine levels of congestion, categorised by time delay and a delay cost.

2.3.4 The Council has also used this analysis to review the current designation for traffic-sensitivity and associated timings. A separate consultation for this will be undertaken in due course. In accordance with Government Guidance, each lane rental street has at least two regulatory criteria to designate a street as traffic-sensitive.

2.3.5 Using this analysis, the Council has been able to identify the most congested parts of the network and where the cost of disruption caused by works is potentially the greatest.

2.3.6 The Government Guidance also states that it expects new lane rental schemes to cover no more than 5% of the individual highway authority's network … and … if an authority wants to apply lane rental to more than 5% of its network, it should provide clear evidence and justification for why this is the case.

2.3.7 After careful consideration, using both the analysis and extensive knowledge of network management, the Council are proposing to introduce a lane rental scheme that covers 7.5% of the total network length.

2.3.8 *S*ection 3: The lane rental network and Section 4: Cost-benefit analysis provide further detail on the methodology used for the analysis and the justification to apply the scheme to 7.5% of the network.

2.3.9 What works will the lane rental scheme apply to?

2.3.10 The Regulations allow a lane rental scheme to be applied to street works, which are *those carried out in pursuance of a statutory right*, such as by local and regional, gas, water and electricity boards and national telecoms providers.

2.3.11 In addition to this. Government Guidance states the Government has decided to implement a clear principle of parity and will require lane rental charges to be applied to highway works on the same terms as to street works in order to maximise the overall benefits.

2.3.12 The Surrey Lane Rental Scheme will therefore apply to both street works and road works, the latter being works for road purposes carried out for the maintenance of the highway and associated assets, by or on behalf of the Council.

2.3.13 In principle, the scheme will apply to the same works as the Surrey Permit Scheme, with the addition of a NRSWA licence, covered by section 50, and a Highways Act licence covered by section 278 for developer works.

2.4 Scheme operation

2.4.1 What are the timescales to introduce a lane rental scheme?

2.4.2 The Council has a planned start date of 1st March 2021. This date is based on many dependencies, including a successful application to the Secretary of State, and is therefore subject to change.

2.4.3 Prior to the introduction of a scheme, the Council will issue notice at least 3 months prior to the date of legal effect. In addition, the Council will also undertake a trial of the scheme to provide an opportunity to test new ways of working.

2.4.4 Will the Council be issuing further operational guidance on the lane rental scheme?

2.4.5 Yes. The Council recognise the need, especially at the initial stages of operational, for further guidance on the application of the Surrey Lane Rental Scheme. This operational guidance will be developed in collaboration with representatives from the key organisations who undertake works and will be issued prior to the commencement of the scheme.

2.5 Further information

2.5.1 Where can I obtain further information on the lane rental scheme?

2.5.2 Further information can be obtained by request from the Council either via email streetworks@surreycc.gov.uk or using the contact details below.

FAO: Surrey Lane Rental Scheme

Surrey County Council - Highways

Unit 4

Mole Business Park

Leatherhead

Surrey

KT22 7BA

3 The Lane Rental Network

3.1 Policy framework

3.1.1 Government Guidance provides direction on the development of the lane rental scheme and in the selection of the network to which lane rental may be applied.

3.1.2 The key requirements can be summarised as follows:

- the scheme is to apply to the most congested and critical parts of the council's network, and therefore would only be applied to **c.5% of the entire network** [length] – with clear justification and quantifiable reasoning if this where to exceed 5%.
- charges can only be applied to those works undertaken on streets designated as **traffic-sensitive** and where works are carried out at the designated traffic-sensitive timings, *e.g. Monday to Friday 07:30 – 16:30, unless further justification can be provided.*

3.2 Assessing traffic levels across Surrey

3.2.1 The first step to develop congestion analysis across Surrey required an assessment of traffic conditions on Surrey's highway network, using the following data:

- **road network**, providing details of the extent and characteristics of the road network
- **travel speed**, giving details of traffic speeds in both congested and free flow conditions; and
- **traffic flow**, providing data on the volume of traffic travelling along each street section of the network;

3.2.2 Local data on vehicular traffic was sourced from traffic counts undertaken by, or for, the Council and for the Department for Transport, and DfT congestion data, collated for the Department for Transport by Teletrac Navman (TrafficMaster) using GPS devices within vehicles

3.2.3 This data was then used to provide traffic congestion calculations, which were disaggregated by roadlink; direction of travel; and time period.

3.3 Measuring congestion within Surrey

3.3.1 Defining congestion for a lane rental scheme

3.3.2 Traffic congestion is a difficult concept to define, involving both physical and relative dimensions. Congestion relates both to the physical way vehicles (and other road users) interact with each other, and people's perception of congestion, *e.g. 'the traffic is terrible today',* which in turn is influenced by their expectation of how the transport network will perform.

3.3.3 Initial analysis of the congestion across Surrey using the Department for Transports published data shows that Surrey's network experiences greater levels of congestion than neighbouring authorities in the South East region. According to DfT data, the average delay on locally managed A roads in Surrey stands at 44 seconds per vehicle mile, which is 25% higher than the average for the South East region as a whole.

3.3.4 There are various measures of congestion, typically relating to the physical progress of vehicles through the network. Government Guidance sets out the preferred metric in relation to lane rental scheme development:

> *the total average delay per link/road segment comparing average journey times with a free flow time counterfactual. [….]*
>
> *Average speed is the travel time divided by the road length, which is then capped to the national speed limit. Average delay compares observed travel times and expected 'free flow' travel times, and reports time lost per vehicle per mile.*
>
> *These metrics are calculated for a 24-hour period and includes all days (weekdays, weekends, bank holidays etc.). The data is also calculated for morning (7am to 10am) and evening (4pm to 7pm) peak times.*

3.3.5 This is the definition used by the Department for the relevant congestion statistics data used across the country by Councils for their roads on an annual basis, and for some more urban areas on a quarterly basis.

3.3.6 The Government Guidance definition for congestion required some clarifications, which were sought by the Council during the initial analysis stage.

3.3.7 Congestion metric

3.3.8 Government Guidance on congestion indicator mentions calculating average delay as 'lost time per vehicle mile'. This provides an indication of congestion on a single vehicle basis; however, it bears no reflection to the number of vehicles experiencing this congestion. Under this indicator, a very lightly used road may be flagged as one of the most congested in the network despite only a small number of vehicles being impacted.

3.3.9 The main body of the Guidance refers to '**total average delay** per link/road segment'. This would imply factoring for the delay experienced to all vehicles travelling along the road.

3.3.10 Whilst both average delay and total average delay have value in explaining congestion, for the purposes of establishing the appropriate lane rental network it would be more logical to consider the sections of network which cause the greatest delay in terms of **total delay experienced by motorists rather than delay per vehicle**.

3.3.11 This analysis therefore uses the '**total average delay'** metric as the basis for network congestion.

3.3.12 Government Guidance is specific in anticipating that not more than 5% of the network would be subject to lane rental. However, the derivation of the 5% of network is not specified. This could therefore be defined in several ways:

- by length, taking full road network length across Surrey;

- by length, taking the Councils managed road length within Surrey; or
- by number of streets across Surrey.

3.3.13 It would seem most logical to define network percentage by length, and the Council managed network length that lane rental could apply to seems the logical figure for this length. This analysis therefore adopts this calculation and uses an **applicable network length**. .

3.3.14 The second point of definition lacking in clarity within the Government Guidance is the time period upon which the 5% should be based. This could include:

- 24hr (all day, averaged across the year including weekends and bank holidays);
- morning peak (07:00 – 10:00);
- evening peak (16:00 – 19:00);
- inter-peak (10:00 – 16:00); or
- a hybrid of different peak times.

3.3.15 Following an extensive review of congestion patterns and timings across Surrey, the timings used for the congestion metric were for a hybrid of morning and evening peak period congestion experienced by motorists.

3.3.16 Measuring the impact of congestion

3.3.17 With an estimate of traffic volumes, an impact of congestion based on delay can be calculated. Total vehicle delay captures the total amount of 'lost minutes' experienced across a road link during a specified time period. This is calculated over a 1-mile distance, which allows relative delay to be compared across sections of differing lengths.

3.3.18 In addition to quantifying the scale of congestion experienced in terms of vehicle delay minutes, it is also possible to monetise this delay (as a cost to the road user) by applying a value to the time lost as a result of the traffic conditions.

3.3.19 The DfT appraisal guidance – WebTAG – provides the values of vehicle time which can be used to convert minutes of delay to the monetary cost of delay.

3.4 Selecting the lane rental network

3.4.1 Analysing network congestion

3.4.2 Using the congestion impact calculations each street across Surrey was given a measure, which was then used to establish the most congested sections of the network. In order to identify the most congested network by length, a cumulative total length was calculated.

3.4.3 The exercise to identify the lane rental network was undertaken using a combination of both the analysis and extensive experience of network management within the Council. The Council also sought to identify routes across Surrey within the most congested section of the network to ensure the application of lane rental considered end-to-end journeys and provided network resilience.

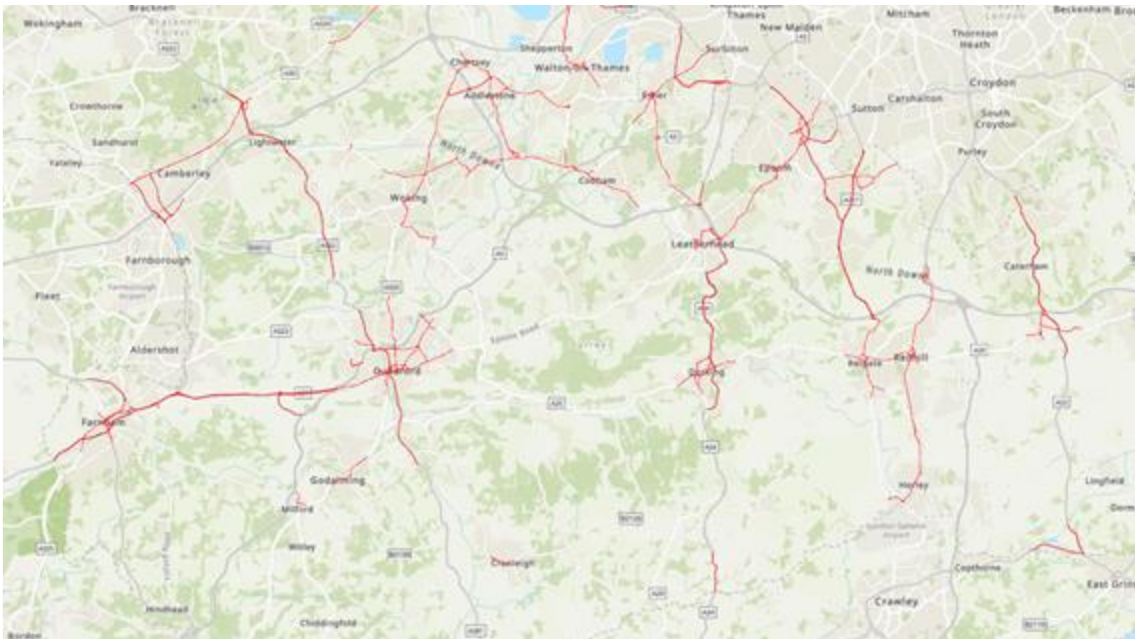
3.4.4 For each street, identified by Unique Street Reference Number (USRN), three delay values were calculated by period, for an average hour during that period, adjusted for a mile length to ensure comparability between each street:

- vehicle delay experienced expressed in seconds of delay per vehicle mile (spvm). Delay is the actual time a vehicle takes to travel a mile on the street compared to travelling that mile in free-flow conditions.
- Total vehicle delay expressed as number of hours of vehicle delay experienced within an average hour for the period. This is calculated by multiplying vehicle delay by the number of vehicles experiencing that delay; and
- delay cost as a monetised value in £ of the vehicle delay. The value of time for a typical vehicle is based on Surrey's traffic composition, using WebTAG vehicle values of time. The delay cost is the hours of vehicle delay experienced multiplied by this hourly value of time lost.

3.4.5 Taking total vehicle delay experienced by motorists, Surrey's highway network was rated according to the delay experienced. A lane rental network was identified using a combination of the congestion analysis - to establish a cut-off point to include a street for the lane rental scheme - and local expertise.

3.4.6 The resulting lane rental network (as show in the map below) comprises:

- 323 streets;
- 426 kilometres in total length;
- 7.5% of the total applicable network length (5,694 Km).



3.4.7 Further analysis of this chosen network shows that nearly two-thirds of total peak network congestion experienced by motorists is on this lane rental network.

3.5 Selecting the lane rental timings

3.5.1 For each lane rental street, the day and time when lane rental would apply, and therefore the charges, was calculated using the traffic data within the defined periods for morning peak, inter-peak and evening peak (refer to section 3.3.14).

3.5.2 For each period the analysis showed (a) when a road could be designated as traffic-sensitive and (b) when congestion metric reached a point where the use of lane rental would be appropriate.

3.5.3 These timings were considered carefully to ensure they applied the appropriate level of incentive whilst also providing opportunity for works to be undertaken outside of the peak times.

3.5.4 The lane rental timings have therefore been applied predominately to peak times during the weekdays. Lane rental has been applied at weekends (Saturday only) in a few areas where the congestion levels are high, typically in a town centre. The lane rental timings are as follows:

- Monday to Friday (Weekday) 07:00 – 10:00 and 16:00 – 19:00 for all lane rental streets; and
- Saturday only 10:00 – 16:00 for 36 streets.

4 Cost-Benefit Analysis

4.1 Methodology

4.1.1 The development of a cost-benefit analysis (CBA) is required as part of the due diligence in the preparation of a permit scheme. The CBA provides a framework within which the impacts of a scheme can be compared against the cost of setting up and operating the scheme, to demonstrate whether the scheme will deliver value for money.

4.1.2 The role of the CBA is outlined in Government Guidance, which states: *Authorities must also send an analysis of the costs and benefits expected to arise from the proposed scheme, showing how the scheme will provide real scope for works promoters and the wider business community to reduce their exposure to charges through improved working practices. There should also be an explanation of what steps have been taken to minimise administrative costs.*

4.1.3 The approach adopted for the CBA is based on the Department for Transport's Transport Appraisal Guidance, also referred to as WebTAG. Under this approach the outputs of the CBA are:

- Present value of benefits (PVB) which is the sum of the benefits over the appraisal period; and
- Present value of costs (PVC) which is the sum of the costs over the appraisal period.
    - The PVB and PVC allow comparison of the costs and benefits of a scheme. This can be done using a number of metrics - the two most commonly used metrics are the benefit-cost ratio (BCR) and the net present value (NPV).
- The **benefit-cost ratio (BCR)** is given by PVB / PVC and so indicates how much benefit is obtained for each unit of cost, with a BCR greater than 1 indicating that the benefits outweigh the costs.
- The **net present value (NPV)** is simply calculated as the sum of future benefits minus the sum of future costs: PVB – PVC. A positive NPV means that discounted benefits outweigh discounted costs.

4.1.4 Government Guidance also states *the calculator published alongside this guidance should be used for preparing the cost benefit analysis.* For the development of a lane rental cost-benefit analysis the Council have prepared both an independent CBA and an evaluation using the DfT calculator.

4.2 Estimating the cost impact of works

4.2.1 The estimated impact of the works, *based on those with incursion into the carriageway*, have been modelled using the **QUeues And Delays and ROadworks (QUADRO)** program. QUADRO was originally developed for the DfT and designed to assess and monetise the impact of delays from works.

4.2.2 Many QUADRO model runs were undertaken to provide estimates of the daily impact for all types of work taking place on the Council's road network. Model runs were undertaken for different road classifications, types of traffic management and for urban and rural works locations. Works impact was estimated for different works periods, including all day (24hr), off-peak and out of hours works.

4.2.3 The QUADRO runs provide a societal impact estimate of works which includes the following elements:

- Road user travel time (delay caused to consumer and business as a result of works);
- Road user vehicle operating costs (the impact of delay and/or diversion on vehicle operating costs for consumers and business);
- Accident costs;
- Emissions costs (resulting from congested conditions and diversion); and
- Indirect tax revenue (increased tax revenue to the exchequer because of higher fuel consumption).

4.2.4 Having developed costs for every work type, each work within a dataset comprising three years' worth of work undertaken was assigned an impact cost, according to its characteristics and duration of the work. This provides highly granular results, especially when compared with the typical aggregated CBA approach adopted for many evaluations.

4.2.5 The modelled impact of typical works across the Council's lane rental network forms the basis of the projected lane rental scheme benefits calculation. Benefits already being derived from the Councils network management function, *such as the application of permit conditions to ensure works are undertaken outside of peak times*, were also taken into consideration for the CBA. Where applicable, works and their impact cost were removed from the analysis on the assumption that the current regime would remain effective and a lane rental scheme would complement, not replace, existing powers.

4.3 Quantification of lane rental scheme benefit

4.3.1 The benefits of the lane rental scheme are achieved through further reduced impacts from works, compared to the patterns observed before scheme implementation (under the current regime).

4.3.2 In order to quantify the scheme benefits, works undertaken on the lane rental network were analysed to identify and remove works:

- on a section of the highway that would not be subject to a lane rental charge, such as footway only works;
- using traffic control that did not impact the carriageway;
- where it was indicated that they would be carried out off-peak or out-of-hours; and

- with a permit condition (NCT2a) applied, under the assumption that this was applied to ensure that works avoided peak times.

4.3.3 It was assumed that remaining works were carried out at peak times. Further analysis was then undertaken on the duration of these remaining works, applying assumptions for changes to work times under a lane rental scheme – these assumptions are shown in the table below.

	Highway Authority				Statutory Undertaker			
	Major	Standard	Minor	Immediate	Major	Standard	Minor	Immediate
Reduction in duration as a % of total duration	1%	2%	2%	2%	10%	2%	2%	25%
% of works undertaken outside of lane rental times	10%	50%	75%	50%	10%	50%	75%	10%
% of works undertaken out of hours	10%	10%	10%	0%	10%	10%	10%	0%

4.3.4 Under these assumptions, the resulting impact shows:

- an estimated cost impact of the works prior to lane rental of c.£51.3million.
- an estimated reduction in impact as a result of lane rental of c.£32.8million
- a total estimated reduced impact cost of £18.5million from the implementation of a lane rental scheme.

4.3.5 The cost benefit appraisal requires that these estimated scheme benefits are appraised against scheme costs over the whole appraisal period. A 10-year appraisal period has been adopted, in line with the DfT CBA calculator tool.

4.3.6 Benefits are projected forward over following years, with impacts increasing in real terms to reflect growth in values of time, vehicle operating costs, accident savings and emissions costs.

4.4 Lane rental scheme costs

4.4.1 Having established scheme benefits, these must be set against scheme costs to determine value for money. Lane rental scheme costs include the following elements:

- Setup costs;
- Scheme operating costs, such as staff, consultants, administration and running costs; and
- Scheme capital costs, such as IT equipment, software, accommodation and transport.

4.4.2 Importantly, the lane rental scheme costs included within the appraisal are **the additional costs of operating the lane rental scheme** above those incurred to operate the current regime. By considering the incremental costs, this fairly compares the 'with lane rental scheme' scenario with the 'business as usual' (current) scenario.

4.4.3 In addition to the costs of operating the lane rental scheme, it is important to recognise that there are costs borne by Promoters also in operating under the lane rental scheme. These will include:

- lane rental charges which represent a business cost to the promoter;
- additional administration costs incurred to comply with the lane rental scheme; and
- costs related to changes in working practices to avoid lane rental charges, such as greater use of traffic management or working off-peak or at weekends.

4.4.4 Lane rental fees are treated as a business cost to the Promoter and netted from the business scheme benefits. However, the transaction is effectively a transfer payment between the Promoter and the Council, with the payment also treated as a public body revenue and therefore subtracted from scheme operating costs

4.4.5 As the Council already operates a permit scheme, the net additional administration of operating under a lane rental scheme are considered to be negligible and have not been quantified.

4.4.6 It likely that there will be additional costs for a Promoter as a result of changing the way works are conducted, such as working additional shifts or out-of-hours. In the absence of detailed data on these additional costs the following sources of works cost estimates have been assumed:

- DfT Lane Rental Impact Assessment[1] which estimates average daily cost for all day working to be £250, and for out of hours working £350 (2017 prices)
- DfT Lane Rental Impact Calculator tool which provides default estimates of a peak working cost of £500 and a 40% uplift for off-peak working giving an off-peak works cost of £700 (2018 prices)

4.4.7 To ensure a conservative appraisal, the higher of the works cost estimates has been adopted, matching the assumptions within the DfT Lane Rental Impact Calculator.

4.5 Appraisal results

4.5.1 The CBA takes the benefits and costs estimated for the first year of operation and projects these over a 10-year appraisal period.

4.5.2 The future cost and benefits are discounted using the standard discount rate of 3.5%, meaning that near term costs and benefits are valued more highly than those occurring later in the appraisal period. The cost benefit analysis of the Surrey Lane Rental Scheme shows a net present value of scheme benefits in excess of £150million (2010 prices) over the 10-year appraisal period.

[1] Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/640877/road-works-the-future-of-lane-rental.pdf

4.5.3 The Surrey Lane Rental Scheme net present costs are negative as the lane rental fees outstrip the cost of operation. These revenues will be used by the Council to undertake positive network management initiatives and improvement activities which can in turn generate further benefits. These additional benefits have not been quantified here.

4.5.4 The overall value of the scheme amounts to £165.7million over the appraisal period. The strongly positive net present value demonstrates that the scheme represents strong value for money.

4.5.5 The full breakdown of the costs and benefits are shown in the Analysis of Monetised Costs and Benefits (AMCB) table (right).

4.5.6 This table shows that the main benefits derive from consumer and business users. This reflects the reduced impact of works in terms of time and operating costs as a result of greater off-peak working and the more efficient planning and execution of works.

4.5.7 It should be noted that the benefit to cost ratio (BCR) does not represent a useful metric of value for money. Where significant scheme revenues are generated, as is the case for a lane rental scheme, the negative value is a result of the negative scheme costs rather than of poor performance.

Analysis of Monetised Costs and Benefits

Noise		*(12)*
Local Air Quality		*(13)*
Greenhouse Gases	9,361,471	*(14)*
Journey Quality		*(15)*
Physical Activity		*(16)*
Accidents	8,050,399	*(17)*
Economic Efficiency: Consumer Users (Commuting)	37,657,623	*(1a)*
Economic Efficiency: Consumer Users (Other)	56,486,435	*(1b)*
Economic Efficiency: Business Users and Providers	36,247,400	*(5)*
Wider Public Finances (Indirect Taxation Revenues)	-15,180,978	*(11) See Notes*
Present Value of Benefits (see notes) (PVB)	132,622,351	See Notes
Broad Transport Budget	-14,204,234	*(10)*
Present Value of Costs (see notes) (PVC)	-14,204,234	*(PVC) = (10)*
OVERALL IMPACTS		
Net Present Value (NPV)	146,826,585	NPV=PVB-PVC
Benefit to Cost Ratio (BCR)	-9.34	BCR=PVB/PVC

For (11) - sign changed from PA table, as PA table represents costs, not benefits

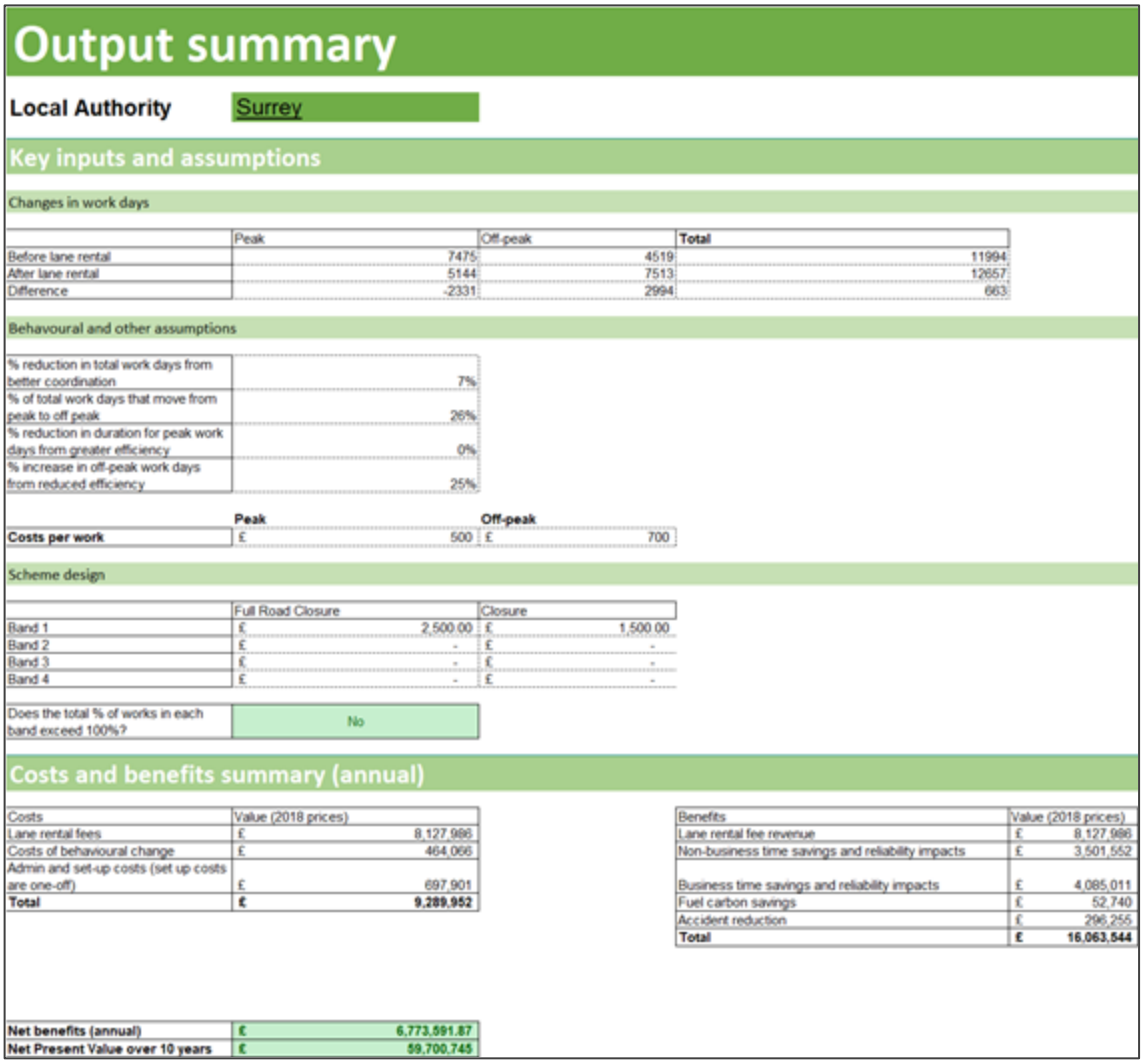
(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)

4.6 DfT cost-benefit analysis calculator

4.6.1 The cost-benefit-analysis presented in the previous section makes use of highly disaggregated works impact modelling, together with a projection of likely changes to working practices under various scenarios.

4.6.2 The DfT provides a lane rental impact calculator tool to provide a strategic assessment of likely value for money. For completeness, an evaluation has also been undertaken using this tool to provide a comparison with Surrey's own CBA.

4.6.3 The DfT tool also calculates a strong net present benefits from the introduction of a lane rental scheme in Surrey (refer to the Output summary from the calculator below).



Output summary

Local Authority Surrey

Key inputs and assumptions

Changes in work days

	Peak	Off-peak	Total
Before lane rental	7475	4519	11994
After lane rental	5144	7513	12657
Difference	-2331	2994	663

Behavioural and other assumptions

% reduction in total work days from better coordination	7%
% of total work days that move from peak to off peak	26%
% reduction in duration for peak work days from greater efficiency	0%
% increase in off-peak work days from reduced efficiency	25%

	Peak	Off-peak
Costs per work	£ 500	£ 700

Scheme design

	Full Road Closure	Closure
Band 1	£ 2,500.00	£ 1,500.00
Band 2	£ -	£ -
Band 3	£ -	£ -
Band 4	£ -	£ -

Does the total % of works in each band exceed 100%?	No

Costs and benefits summary (annual)

Costs	Value (2018 prices)	
Lane rental fees	£	8,127,986
Costs of behavioural change	£	464,066
Admin and set-up costs (set up costs are one-off)	£	697,901
Total	**£**	**9,289,952**

Benefits	Value (2018 prices)	
Lane rental fee revenue	£	8,127,986
Non-business time savings and reliability impacts	£	3,501,552
Business time savings and reliability impacts	£	4,085,011
Fuel carbon savings	£	52,740
Accident reduction	£	296,255
Total	**£**	**16,063,544**

Net benefits (annual)	**£**	**6,773,591.87**
Net Present Value over 10 years	**£**	**59,700,745**

4.6.4 The DfT tool categorises costs and benefits differently to the standard WebTAG approach, as adopted in the Council's CBA. This does not have an impact on the net present value but explains the non-negative net present cost value.

4.6.5 The net present value calculated using the DfT tool is not as high as that calculated by the Council, but remains strongly positive, with a present value of £60m over the same 10-year appraisal period.

4.6.6 It can be concluded that under either method of cost benefit calculation (refer to table right), the benefits of the lane rental scheme are strong, and provide a strong justification for implementation.

	DfT CBA Calculator	Surrey Council CBA
Net Present Benefits (B)	£138,247,123	£132,622,351
Net Present Costs (C)	£78,553,732	-£14,204,234
Net Present Value (B-C)	£59,693,391	£146,826,585
Benefit to Cost Ratio (B/C)	1.76	-9.34

5 Lane rental scheme checklist

No	Subject	Place in scheme document
1.	Scheme compliance statement (letter signed by Chief Executive or similar) headed to include the legal name of the authority.	Included with the submission documents.
2.	Scheme objectives including the improvements expected.	Section 2 of the Surrey Lane Rental Scheme. Surrey Lane Rental Scheme Evaluation Plan.
3.	The proposed implementation date.	Set out within the legal Order.
4.	A table showing regulatory compliance.	Refer to section 6 of this document. .
5.	Demonstration of compliance with the parity obligation. That is, demonstrate that the same standards and charges apply to an authority's own activities and works and provide an undertaking that lane rental charges will be applied to all registerable activities.	Section 3.3 of the Surrey Lane Rental Scheme.
6.	Clearly defined information as to the streets or parts of streets to which the scheme applies and the times when it will operate on those streets (which must be wholly within the area of the authority applying to run the scheme). *This will be to a MAXIMUM of 5% of that highway authority's network unless an exceptional circumstance is agreed by reference to the Secretary of State.*	Surrey Lane Rental Scheme Schedule. National street gazetteer additional street data.
7.	Evaluation structure for the proposed scheme.	Surrey Lane Rental Scheme section 7.1 and Evaluation Plan.
8.	Confirmation that, as a minimum, utility companies have been provided with 12 weeks' notice of scheme commencement.	Surrey Lane Rental Scheme section 8.2. Formal notice letter.

No	Subject	Place in scheme document
9.	Confirmation that all required consultation processes have been met and details of any changes have been made following that consultation.	Included with the submission documents as a consultation report.
10.	Confirmation that all financial requirements have been met.	Included with the submission documents.
11.	Copies of all permit scheme evaluation reports as required by the permit scheme amendment regulation 2015 (regulation 16A). *As a minimum, all applicants will need to be operating a permit scheme and have provided at least one 12-month evaluation. All schemes operating permit schemes must fully comply with the requirements in the relevant regulations.*	Included with the submission documents as a consultation report.
12.	Details of any transitional arrangements which the authority would wish to apply in relation to the scheme coming into effect.	Surrey Lane Rental Scheme section 8.
13.	References to handling national infrastructure projects. *To note lane rental is dis-applied from HS2 works under the High-Speed Rail (London – West Midlands) Act 2017.*	Surrey Lane Rental Scheme section 5.4.3.
14.	Details of the team that will be in place to operate the scheme and provide contact information for them.	Included with the submission documents.

6 Regulatory Compliance

The Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 No.425		
Section	Regulation	Scheme Reference and Compliance
(1)	**Citation, commencement expiry and application**	Regulation specific detail
(2)	**Interpretation**	Regulation specific detail
3	**Application of Regulations**	
3(1)	Subject to paragraph (2), these Regulations apply to every maintainable highway which is— (a) a protected street; or (b) a traffic-sensitive street, in respect of which the highway authority is an Approved Authority.	Section 3.4.1 and Definitions
3(2) & 3(3)	These Regulations do not apply to a footpath or a bridleway. In this regulation— (a) “bridleway” and “footpath” have the meaning given by section 329(1) of the 1980 Act; and (b) “protected street” has the same meaning as it does for the purpose of section 61(1) of the 1991 Act.	Section 3.4.3.
4	**Prescribed charges**	
4(1)	Subject to paragraphs (4) and (5), an undertaker executing street works in a highway to which these Regulations apply must pay the Approved Authority a charge determined in accordance with paragraph (2).	Section 5.1.1 and Definitions

4(2)	Subject to paragraph (4), the charge is £2500 multiplied by the number of days, including part days, comprising the duration of the street works.	Not applicable to the Surrey Lane Rental Scheme.
4(3)	In addition, and subject to paragraph (4), the undertaker must pay the Approved Authority a charge of £100 if the circumstances in regulation 5(5) apply and the undertaker has complied with the request made under regulation 5(6)(b) within the time limit set out in regulation 5(7).	Not applicable to the Surrey Lane Rental Scheme.
4(4)	An Approved Authority may reduce the amount, or waive payment, of a charge— (a) in any particular case, (b) in such classes of case as it may decide, (c) in all cases, (d) in all cases other than a particular case, or (e) in all cases other than such classes of case as it may decide.	Sections 5.3 for charge categories and section 5.4 for discounts.
4(5)	Charges do not apply to street works— (a) in a verge; (b) in a traffic-sensitive street, other than at a traffic-sensitive time; (c) in the footway of a traffic-sensitive street, at a traffic-sensitive time, so long as the street works do not involve breaking up the street or tunnelling or boring under it.	Section 3.4.3 for location of works and 3.5 for the timings of works. The scheme disapplies 4(5) c in that it does not apply to footway works unless those works impact traffic flow on the carriageway.
4(6)	In this regulation— (a) “cycle track” has the meaning given in section 329(1) of the 1980 Act; and (b) “verge” means any part of the highway which is not a carriageway, footway or cycle track.	Regulation specific detail
5	**Duration of Works**	

5(1)	This regulation makes provision for the determination of the duration of street works.	Regulation specific detail
5(2)	Subject to paragraphs (3) to (5), the street works are to be treated as beginning on the date stated in the actual start of works notice and ending on the date stated in the works clear notice or works closed notice.	Section 5.2
5(3)	If it can be proved that the date stated in the actual start of works notice is incorrect, or the undertaker is not required by the 2009 Regulations to give such a notice, the street works are to be treated as beginning on the date the works actually began.	Sections 5.2.3 and 5.6.1.
5(4)	If it can be proved that the date stated in the works clear notice or works closed notice is incorrect, or the undertaker is not required by the 2009 Regulations to give such a notice, the street works are to be treated as ending on the date that the steps set out in regulation 6(3)(a) to (c) or 6(4)(a) to (c) of the 2009 Regulations were carried out.	Sections 5.2.3 and 5.6.1.
5(5)	An undertaker is deemed to have carried out the steps in regulation 6(3)(b)(i) or 6(4)(b)(i) of the 2009 Regulations if the undertaker has endeavoured to remove all signing, lighting and guarding and not more than five items of signing, lighting or guarding remain on the highway.	Not applicable to the Surrey Lane Rental Scheme.
5(6)	If paragraph (5) applies the Approved Authority may— (a) notify the undertaker of the identity and location of the items of signing, lighting or guarding; and (b) request the undertaker to remove them.	Not applicable to the Surrey Lane Rental Scheme.

5(7)	If the undertaker has not complied with the request by the end of the next working day following the day on which the request was received, the duration of street works is to be treated as re-commencing on the date the request was received and ending on the day that the undertaker complies fully with the request.	Not applicable to the Surrey Lane Rental Scheme.
6	**Payment**	
6(1)	An undertaker must, on receipt of a request in writing, pay to the Approved Authority the amount of charges calculated in accordance with regulation 4.	Section 5.7.1
6(2)	Charges are payable in respect of street works only where the Approved Authority has given the undertaker, not later than three months after receipt of a works clear notice or a works closed notice in respect of those works, a request in writing setting out the charges payable.	Section 5.7.1
6(3)	A request in writing under paragraph (2) may be given by electronic communication, by post or by hand delivery to the undertaker.	Section 5.7.1
7	**Application of charges and keeping of accounts**	
7(1)	An Approved Authority may deduct from charges received from undertakers pursuant to these Regulations, its reasonable costs of operating and evaluating the effectiveness of the scheme under which they are paid.	Section 7.2.1
7(2)	An Approved Authority must apply the net proceeds for purposes intended to reduce the disruption and other adverse effects caused by street works.	Section 7.2.2
7(3)	An Approved Authority must keep and publish yearly accounts of sums received by way of charges.	Section 7.2.4

7(4)	The accounts published in accordance with paragraph (3) must include details as to how the Approved Authority has applied any net proceeds in accordance with paragraph (2).	Section 7.2.4
8	**Revocation**	Regulation specific detail