

Title: The Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 IA No: DfT00090 Lead department or agency: Department for Transport Other departments or agencies:	Impact Assessment (IA)			
	Date: 20/02/2012			
	Stage: Final			
	Source of intervention: Domestic			
	Type of measure: Secondary legislation			
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Summary: Intervention and Options	RPC: GREEN
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Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, One-Out?	Measure qualifies as
£441.5m	£163.6m	-£27.4m	Yes	Zero Net Cost

What is the problem under consideration? Why is government intervention necessary?

Street works (i.e. works by utility companies and others with apparatus in the street) are a significant cause of delay and disruption. On some estimates, congestion resulting from street works costs some £4.3 billion a year in delay costs. However, these costs are borne by society rather than by those carrying out the works (i.e. they are "externalities"). Works promoters are incentivised to focus on their own costs (to maximise profit), not these wider costs to society. Government intervention is needed to bring works promoters' incentives more into line with those of society at large, focusing on those parts of local road networks where works impose the greatest costs on society.

What are the policy objectives and the intended effects?

To reduce the disruption caused by works on critical parts of local road networks - i.e. the places where works have the greatest adverse impact. Carefully-designed lane rental schemes could provide a clear financial incentive for works promoters to manage their works in a less disruptive way, so reducing the costs currently incurred by road users (including businesses). In the first instance, the Government is interested to see the progress of a very small number of carefully-targeted pilot schemes, to inform future assessments of whether lane rental could usefully play a wider role. The new regulations are necessary to enable any such schemes to go ahead.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

New regulations for lane rental are part of a package of measures to reduce the impact of street works, which also includes non-regulatory measures. For the most critical parts of local road networks, additional regulatory powers could enable highway authorities to secure significant reductions in disruption caused by works. Specific options considered are: 1. Legislate to allow lane rental pioneer schemes targeted on critical parts of local road networks at the busiest times. 2. Local authorities make enhanced use of existing permit schemes on traffic-sensitive streets, supported by higher penalties for certain breaches of permit conditions. 3. A non-regulatory approach building further on existing voluntary codes of practice.

The preferred option is to allow a small number of local "pioneer" schemes in line with Option 1, which offers a better balance between costs and benefits than Option 2 (particularly for the business sector).

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 12/2017					
Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded: n/a	Non-traded: n/a	

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: _____ Date: _____

Summary: Analysis & Evidence

Policy Option 1

Description: Legislate to allow lane rental schemes focused specifically on key strategic parts of local road networks

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2012	Time Period Years 6	Net Benefit (Present Value (PV)) (£m)		
			Low: 0	High: 529.8	Best Estimate: 441.5

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	0	0
High	0.3	18.2	109.4
Best Estimate	0.3	15.2	91.2

Description and scale of key monetised costs by 'main affected groups'

Costs largely fall on utility companies and other street works undertakers (or their contractors), either through lane rental charges incurred or through costs of applying less disruptive working practices in order to avoid exposure to charges. To the extent that costs cannot be avoided by efficient utility companies, they are likely to be reflected in utility prices paid by consumers. Local authorities will incur some costs in administering schemes.

Other key non-monetised costs by 'main affected groups'

Administration costs to street works undertakers have not been monetised, as very few specific estimates have been supplied in response to the consultation. These costs are expected to be modest relative to the total monetised costs of lane rental. Increased noise is to be expected outside of core working hours, as a result of works being shifted to periods of less heavy traffic.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	0	0
High	0	106.5	639.2
Best Estimate	0	88.8	532.7

Description and scale of key monetised benefits by 'main affected groups'

Road users (including business users) benefit from a reduction in delays and an increase in journey time reliability. Highway authorities will benefit from the lane rental revenues that accrue to them (which are a transfer from street works undertakers), and those revenues can be put to productive use.

Other key non-monetised benefits by 'main affected groups'

Changes in emissions resulting from lane rental have not been monetised, given the highly complex relationship between patterns of traffic flow and vehicle emissions.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

Impacts will depend on how many authorities are granted approval to implement lane rental, and how their schemes are designed. This impact assessment draws on modelling work carried out by Transport for London as part of their work to develop a detailed scheme proposal. The "best estimate" assumes one scheme being implemented in a major urban area and one in another area.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: 14.4	Benefits: 41.7	Net: 27.4 benefit	Yes	Zero net cost

Summary: Analysis & Evidence

Policy Option 2

Description: Enhanced use of permit schemes, supported by higher penalties for certain breaches

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2012	Time Period Years 6	Net Benefit (Present Value (PV)) (£m)		
			Low: 0	High: 417.9	Best Estimate: 348.2

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	0	0
High	6.7	93.0	564.8
Best Estimate	5.6	77.5	470.7

Description and scale of key monetised costs by 'main affected groups'

Costs largely fall on utility companies and other street works undertakers (and their contractors), either through lane rental charges incurred or through costs of applying less disruptive working practices in order to avoid exposure to charges. To the extent that costs cannot be avoided by utility companies, they are likely to be reflected in utility prices paid by consumers. Local authorities will incur costs in administering schemes.

Other key non-monetised costs by 'main affected groups'

Administration costs to street works undertakers have not been monetised, but for reasons set out in the evidence base these are likely to be materially greater than under Option 1. Increased noise outside of core working hours is to be expected, as a result of works being shifted to periods of less heavy traffic.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	0	0
High	0	163.8	982.7
Best Estimate	0	136.5	818.9

Description and scale of key monetised benefits by 'main affected groups'

Road users (including business users) benefit from reduced congestion. The application of fixed penalty charge revenues by highway authorities would generate further benefits, with the beneficiaries depending on the use to which those revenues were put.

Other key non-monetised benefits by 'main affected groups'

As for option 1, emissions-related impacts have not been monetised.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

Impacts will depend crucially on the extent of take-up by highway authorities. Cost-benefit analysis in this impact assessment is based on initial modelling work carried out by Transport for London on the potential design and impacts of a scheme targeted on London's traffic-sensitive streets. The "high" estimate is based on such a scheme being implemented alongside a small number of schemes in other major urban areas.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: 70.4	Benefits: 49.4	Net: 21.0 cost	No	NA

Summary: Analysis & Evidence

Policy Option 3

Description: Non-regulatory initiatives

FULL ECONOMIC ASSESSMENT

Price Base Year n/a	PV Base Year n/a	Time Period Years n/a	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: n/a

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	n/a	n/a	n/a

Description and scale of key monetised costs by 'main affected groups'

None. There is no reliable basis on which to monetise the impacts of the non-regulatory measures described in the Evidence Base.

Other key non-monetised costs by 'main affected groups'

Immediate costs include costs (to street works undertakers) of preparing and disseminating best practice guidance; costs (to local authorities and their systems developers) of developing systems to generate data to populate a performance scorecard; costs (to undertakers and authorities) of deciding whether to participate in the Code of Conduct.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	n/a	n/a	n/a

Description and scale of key monetised benefits by 'main affected groups'

None. There is no reliable basis on which to estimate the extent to which street works undertakers will choose to adopt different working practices in response to non-regulatory initiatives.

Other key non-monetised benefits by 'main affected groups'

Benefits might include: improved performance on matters covered by the 'scorecard' and the 'Code of Conduct' benefiting road users (eg fewer overrunning works; less-disruptive working practices; better-quality highway reinstatements); local communities better informed about street works in their area (as a result of wider adoption of good practice). Benefits will arise only to the extent that undertakers and local authorities choose to invest in behavioural changes in response to these initiatives.

Key assumptions/sensitivities/risks	Discount rate (%)	n/a
<p>Costs and benefits involved in these initiatives will depend crucially on the extent to which street works undertakers and local authorities choose to implement behavioural changes as a result of these non-regulatory measures. There is no reliable basis on which to estimate the extent of behavioural change in advance.</p>		

BUSINESS ASSESSMENT (Option 3)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: n/a	Benefits: n/a	Net: n/a	No	NA

Evidence Base (for summary sheets)

Background

1. Works in the street are necessary in order to provide and maintain essential utility services and transport networks on which we all depend. However, these works also cause significant disruption, imposing substantial costs on individuals and on the economy. These costs are “externalities”, borne by society at large, not by the works promoter. On some estimates, congestion caused by street works by utilities and others with apparatus in the street costs up to £4.3 billion a year (*source: Estimation of the Cost of Delay from Utilities’ Street Works, Halcrow Group Ltd, June 2005*). The principal costs arising relate to extended journey times and reduced reliability, but congestion also has environmental consequences (including emissions and noise). Analysis presented by Transport for London (TfL) suggests that the costs of road works disruption on streets for which they are responsible (roughly 5% of the total London road network) amount to some £300m a year¹. For works taking place within TfL’s Congestion Management Areas² at traffic-sensitive times, TfL analysis suggests that the average disruption cost is in the region of £700 per hour; for the most disruptive emergency works, this figure is likely to exceed £5,000 per hour.
2. Permit schemes are an existing tool by which highway authorities can play a stronger role in managing and coordinating the works carried out on their streets. Under a permit scheme, works promoters must obtain a permit from the relevant highway authority for any works they propose to carry out. Permits may be issued with conditions attached, placing restrictions on specific aspects of how the works may be carried out. Local highway authorities covering much of London, Kent and Northamptonshire have so far chosen to implement permit schemes, and early evidence indicates that they are helping to reduce disruption. Authorities operating permit schemes are required to carry out a proper evaluation of their schemes based on the evidence from their first year of operation; in the case of London and Kent, these evaluations have now been published³, while Northamptonshire’s should follow during 2012.
3. Other existing primary legislation allows a highway authority to apply to the Secretary of State for Transport to operate a lane rental scheme on its network, though no such schemes are currently in place. A statutory lane rental scheme would require street works undertakers to pay a charge for each day their works occupy the road network. The Department is also recommending that authorities implementing a statutory lane rental scheme should also apply the same charges in respect of their own highway works.
4. It is for individual highway authorities – not central government – to develop and bring forward proposals for lane rental schemes. Under Regulations commenced in December 2001, pilot lane rental schemes were introduced in the London Borough of Camden (including Transport for London streets) and Middlesbrough in April 2002. These pilot schemes operated on all roads in the scheme areas, but following their conclusion no further schemes have been introduced.⁴ The original scheme orders have since been revoked and the 2001 Regulations are no longer operable.
5. There are likely to have been a number of reasons why the pilot schemes were insufficiently successful to encourage further application of the lane rental model. The Government believes it is reasonable to infer that the charge rates were insufficiently high to provide the intended incentive for street works undertakers and others to reduce the duration of their works, but also considers that the pilot scheme design provided insufficient opportunity for undertakers to reduce their exposure to charges by changing behaviour in ways other than merely reducing durations. For example, there will be scope to reduce disruption in some cases by avoiding works at peak hours, with the highway being reopened to traffic at those times.
6. Given the need to do more to tackle the costs of works-related congestion on our busiest streets, the Government is putting in place new regulations that will enable local authorities to implement lane rental schemes in the future, but following a very different approach to the earlier pilots. In particular, future schemes will be much more targeted on the most critical streets, and will need to provide genuine opportunity for works promoters to avoid charges by carrying out their works at less busy times. It is recognised that there is significant uncertainty surrounding the likely costs and benefits of lane rental schemes, which will depend crucially on the design of individual schemes. Accordingly, the Government intends that no more than a very small number of “pioneer” schemes under the new legislation should be

¹ From the cost-benefit analysis published alongside Transport for London’s consultation on a proposed lane rental scheme.

² The parts of TfL’s network where works cause the greatest disruption.

³ *London Permit Scheme First Year Evaluation Report*, www.tfl.gov.uk; *Measuring the Success of the Kent Permit Scheme*, www.kent.gov.uk.

⁴ Halcrow Group was commissioned to report on the lane rental pilots.

allowed to go ahead in the first instance. Evidence from the evaluation of these pioneer schemes would inform future decisions on whether or not to allow further lane rental schemes to be implemented. Consistent with this view, a “sunset clause” is included in the regulations – i.e. a review of lane rental would be carried out in 2017, with the lane rental regulations (and by implication any individual schemes) subsequently ceasing to operate unless a decision were taken to extend their operation in light of the review.

7. The Government's proposals were the subject of a written public consultation carried out between August and October 2011, and an earlier draft of this impact assessment was published as part of the consultation package.

Options considered

8. Three options are considered below: two regulatory, one non-regulatory.

Regulatory options

9. While street works can cause disruption and inconvenience wherever they take place, the greatest costs are associated with works on a small proportion of the road network – typically the most heavily-trafficked streets and the specific pinch-points that constrain the overall capacity of the network (eg junctions and road narrowings). For example, the Transport for London road network comprises roughly 5% of London's total road length, but accounts for some £300m⁵ of the estimated £750m⁶ annual economic and social costs of road works across London. Further regulatory intervention is therefore judged to be necessary, but specifically targeted on the most critical parts of the network.

10. Two broad regulatory approaches have been identified:

Option 1: legislating to allow highway authorities to apply lane rental charging schemes to their most critical streets (i.e. an approach based on financial incentives)

Option 2: highway authorities make enhanced use of permit conditions to impose less disruptive working practices on works promoters, supported by a substantial increase in penalties for contravening such permit conditions (i.e. an approach based on proactive regulation by highway authorities of utilities' and other undertakers' working practices)

Option 1 – financial incentives (ie lane rental)

11. The underlying case for government intervention is that works in the highway impose significant negative externalities – primarily congestion, but also environmental. A charging scheme, with charges reflecting these external costs, would bring private companies' incentives more closely into line with those of society as a whole. This in turn would encourage greater investment by works promoters in less disruptive technologies and working practices, and hence reduced congestion. (This argument rests on the reasonable assumption that utilities and other private-sector works promoters will seek to maximise overall profit: i.e. it is worth spending up to £1 on developing and implementing less disruptive working practices, in order to reduce lane rental charge liability by £1.)
12. At its simplest, a scheme could involve the application of daily charges to all works, with charge levels set at a level that aims to reflect the negative externalities imposed by works. Such a scheme should encourage works promoters to reduce the durations of their works, up to the point where the cost of a further day's reduction equals or exceeds the daily charge.
13. However, this approach would fail to reflect the reality that the external costs of works vary substantially according to the day of the week (weekdays vs. weekends), the time of day (rush-hour vs. off-peak times), the type of road and even the time of year (school holidays vs. other times). So in addition to reducing overall works durations, a more sophisticated charging scheme could encourage works promoters to carry out works at less disruptive times. This could be achieved by offering discounts or exemptions where works are executed at less disruptive times, with the highway being reopened to traffic at peak periods. This is becoming more practicable thanks to

⁵ Source: Transport for London internal analysis.

⁶ Source: *Road Sense: Balancing the Costs and Benefits of Road Works*, London First, 2010 (based on TfL analysis).

modern technologies such as “plating” (where metal plates are used to cover excavations securely so that traffic can pass over them).

14. Charging per lane occupied would add a further dimension to a charging scheme, as it would encourage works promoters to minimise the extent of their physical occupation of the carriageway, but could be complex and expensive to administer.
15. Regardless of the detailed design of individual schemes, a key feature of an incentive-based approach is that it should avoid the need for highway authorities to be prescriptive about the particular technologies or working practices that works promoters should use in particular circumstances. Instead, it leaves works promoters free to adopt whichever technologies and working practices enable them to reduce disruption in the most cost-effective way.

Option 2 – enhanced use of permit schemes

16. An alternative to financial incentives would be for authorities to use permit schemes to prescribe in more detail the disruption-reducing behaviours that they expect works promoters to apply. In many cases, greater use of permit conditions could be made to prescribe times and days at which the road must be reopened to traffic, and to limit the extent of physical occupation of the highway. Such an approach would be based on an existing regulatory tool – the permit scheme – and could potentially be implemented more quickly. Permit conditions are absolute: once applied to the permit, the works promoter is legally obliged to adhere to them. So each time it applied conditions of this nature, the authority would need to be satisfied that it was reasonably practicable for the works promoter to adhere to them. This means that, compared to lane rental, it would require a much more proactive, hands-on approach by the highway authority, so it would be substantially more resource-intensive for the authority than lane rental. In practice it is likely that there would be significant dispute between authorities and works undertakers about what conditions are reasonable in individual cases.
17. If permit schemes were to be used more widely in this way, it is likely that the sanction for breach of permit conditions about timing of works would need to be increased substantially. The current level of fixed penalty notice, set in regulations at £120 (or £80 if paid promptly), is unlikely to act as an adequate deterrent. For the purposes of this impact assessment, the analysis of this option assumes the fixed penalty for breach of timing-related permit conditions were increased to £750 (or £500 if paid promptly). (Primary legislation allows regulations to set the fixed penalty, subject to a maximum of £750; a discounted rate of £500 would preserve the existing one-third reduction for prompt payment.)
18. The only action needed by central government to enable permit authorities to implement Option 2 would be to legislate to increase the fixed penalty charges for certain breaches of permit conditions.

Non-regulatory options (Option 3)

19. Non-regulatory options have an important role to play in securing improvements in the way street works are managed and coordinated. Indeed, the Government is already supporting a number of sector-led initiatives, which include measures aimed at encouraging:
 - wider identification, dissemination and adoption of best practice;
 - more systematic and consistent monitoring of performance in the street works sector, to enable highway authorities and street works undertakers to work together to identify existing strengths and areas for future improvements; and
 - participation in a non-statutory Code of Conduct, which first operated in London but has now been rolled out more widely. This Code includes commitments aimed at delivering better coordination and management of works, with the aim of reducing disruption caused.
20. Option 3 would involve further activities, beyond those already in place or under development, in each of these areas.

Option 1: assessment of costs and benefits

21. The following assessment focuses on costs and benefits arising from a lane rental scheme under the new Regulations – i.e. a scheme applying to utilities and other street works undertakers. The analysis does not include likely impacts of local authorities applying the same charges to highway works, as such charges would operate alongside (not as part of) a statutory scheme. Annex 2 provides further information about the potential impacts of charges for highway works.

Option 1 - costs

22. The principal costs arising from any lane rental scheme would be the **costs to utility companies and others undertaking street works**. Lane rental schemes will not remove the need for essential works to maintain and upgrade utility infrastructure and other apparatus in the street – these works will continue to take place. But under the proposed new arrangements, schemes would need to provide utility companies and other street works undertakers with real opportunities to reduce their exposure to charges by carrying out their works in a less disruptive way.
23. Accordingly, it is envisaged that there would be two main elements to the costs incurred by undertakers: the costs of the lane rental charges themselves (in situations where works cannot be made less disruptive) and the costs of behavioural change (in situations where they can). It will make economic sense to adopt behavioural change where the costs of doing so are lower than the costs of the lane rental charge being avoided.
24. **Costs of lane rental charges** will clearly depend on the charge levels adopted by individual schemes. Our guidance to local authorities sets out the considerations that the Secretary of State will take into account when determining whether or not to approve a local authority's proposals. It emphasises very strongly that, to secure approval, proposed charges will need to be justified by reference to the external costs of congestion typically imposed by works on the types of streets where lane rental is intended to apply. It is open to authorities to propose different charges for different types of location within a scheme, though equally it would be undesirable to have too many different charge levels as this would add further complexity and administrative cost for all involved. The guidance is available at www.dft.gov.uk/consultations.
25. **Costs of behavioural change** would include:
- higher staff costs for out-of-hours working and shift allowances, and potentially recruitment costs if existing operatives prefer not to adapt their working hours;
 - operational changes to provide enhanced out-of-hours back-office support for operatives and contractors;
 - costs of additional equipment needed for night working (e.g. lighting and generators to power them; "hot boxes" to allow reinstatements to be carried out at times of the day when suppliers of hot-lay reinstatement materials are not operational);
 - additional training and any other necessary actions to mitigate the increased risk of night-time working.
26. It is recognised that undertakers would seek to pass additional costs on to their consumers in the prices they charge. Many undertakers are subject to price regulation and, following discussion with the regulators, the Government understands that the regulators would take account of lane rental costs when setting regulated prices only to the extent that the costs cannot be avoided by a utility company acting competently and efficiently. So long as price caps are fixed on the basis of expected rather than actual costs arising from lane rental, this should not dilute the incentive for undertakers to reduce disruption. This is because once a price cap is fixed, those subject to the cap would have every incentive to reduce their exposure to lane rental charges below the expected level (so as to maximise their profit). Thus it cannot be assumed that actual lane rental costs incurred would be passed through from regulated utilities to consumers 'pound for pound'.
27. The other main cost would be the administrative costs for highway authorities and street works undertakers. Administrative costs to undertakers are not monetised in this impact assessment, and will depend heavily on whether scheme design requires them to provide any additional information over and above that already supplied through existing notices that undertakers give to highway authorities. Regardless of that, there will be some cost in administering the payment of charges, and undertakers are likely to wish to check that authorities' invoices are indeed valid. However, administrative costs to undertakers are likely to be lower than those incurred by highway authorities (because it is assumed that highway authorities, not utilities and other street works undertakers, will be

responsible for monitoring and enforcement). Views on the possible scale of such costs were invited as part of the consultation, but little specific data was supplied in response. One large utility company, whose works account for a very substantial proportion of all works within the London area, have suggested that the administrative costs of the proposed TfL scheme could be of the order of £400,000 per year, but it is unclear how they have arrived at this figure. Accordingly, these costs have not been monetised in this impact assessment, but they are expected to be modest relative to the other (monetised) costs of lane rental (and are likely to be lower than under option 2).

28. Depending on scheme design, stronger incentives to complete works at night or at weekends can be expected to have adverse noise-related impacts for local residents. Highway authorities would need to work closely with local environmental health departments to ensure that scheme design takes due account of these considerations, so that works promoters still have realistic opportunities to complete works when both lane rental charging hours and any environmental health-related restrictions are taken together. Less congested traffic patterns could also have noise implications: on the one hand, noise tends to increase as speeds increase; on the other hand, smoother traffic flow tends to be quieter (as there is less need for acceleration and deceleration).

Option 1 – benefits

29. The principal benefits arising from lane rental schemes would be:

- **reductions in congestion delay and journey time uncertainty for road users** where street works are carried out in a less disruptive way. This would benefit both businesses and private individuals;
- **revenues accruing to highway authorities.** The proposed regulations would require the revenue stream generated from lane rental to be applied to measures that will help to reduce the disruption caused by future works. Such measures would be expected to deliver further benefits to street works undertakers and road users. (Revenues accruing to highway authorities are obviously equal to the charges paid by those carrying out works, mentioned under 'costs' above);
- **potential environmental benefits.** By reducing the congestion arising at street works sites, lane rental has the potential to reduce road transport-related emissions – particularly local air quality pollution that is exacerbated by stationary or slow, stop-start traffic. Overall impacts of lane rental on emissions are highly uncertain: increasing traffic speeds tends to increase emissions, but smoothing traffic flow (as opposed to repeated stop-start traffic) tends to reduce emissions.

Option 1 – summary of monetised costs and benefits

30. The costs and benefits of lane rental will depend crucially on scheme design, and on the specifics of the local road networks to which they are applied. They will therefore depend on decisions that would be taken by local authorities when designing their scheme proposals.
31. At this stage, only a single highway authority – Transport for London (TfL) – has undertaken detailed scheme design work and accompanying analysis of likely costs and benefits based on a specific scheme proposal. The monetised costs and benefits in this impact assessment are based on the latest findings of this analysis presented to the Department by TfL in late October 2011. In providing the conclusions of their analysis, TfL have emphasised that their figures represent their latest best estimates, which are likely to be refined in the light of further scheme development work and modelling following the end of their public consultation. Their analysis is based on a scheme whose key features include:
- lane rental charges being applied to just over half of TfL's road network (ie just under 3% of the total London road network);
 - charge-free periods that provide opportunities for undertakers to avoid charges by carrying out their works at less disruptive times;
 - charge levels that can be justified by reference to the costs of congestion and other externalities arising from works, with a maximum daily charge of £2,500. Although there is an argument for setting a higher maximum charge, on the basis that the external costs caused by street works will in some instances be higher than £2,500 per day, this cap was judged to be appropriate in order to limit the overall impact of lane rental on utility companies and their customers.
32. TfL's analysis also assumes that significant progress will be made in developing and applying new, less-disruptive techniques over the first few years of any scheme. This is assumed to provide increased scope to work in less disruptive ways over time – so, from year to year, undertakers are

able to do more to reduce their exposure to lane rental charges by increasing their expenditure on less disruptive working practices. There are two justifications for assuming that technical progress will be made:

- first, the proposed Regulations would require lane rental revenues to be applied for purposes intended to reduce the disruption caused by future works. This is likely to include research and development into new, disruption-saving technologies. To kick-start this process, TfL and the Department for Transport are jointly funding a research project investigating the potential for greater use of plating, and new temporary and permanent reinstatement techniques. This is due to report in late 2012.
 - secondly, lane rental charging should, of itself, provide an incentive for the street works sector to invest in the development of such techniques.
33. TfL's analysis draws on several sources of detailed data about their road network. For example, congestion data from the London Congestion Analysis Project (LCAP)⁷ has informed a detailed analysis of which road segments and pinch-points are most sensitive to disruption caused by works, and the cost-benefit analysis assumes that only these most sensitive parts of the network would be subject to lane rental charging.
34. TfL's estimates of the likely costs of lane rental on these parts of the network draw heavily on its street works register, which provides detailed information about the number, duration, location and other features of works that have taken place on its road network in recent years. Alongside LCAP data, TfL's monetisation of benefits also draws on data from its Evaluation Framework, which contains a range of location-specific data including traffic flows and modal composition of traffic (i.e. private car, bus, commercial goods vehicle, etc.) A model of behaviour change is then used to predict the extent to which works promoters will shorten works durations or manage their works to avoid the most disruptive times. It takes into account factors such as the trench width, the level of lane rental charges and enforcement, and the local population density exposed to the noise of night works (which may constrain the scope for overnight working).
35. Although based on rich data-sets, TfL's analysis remains subject to significant uncertainties, for example regarding the extent of undertakers' behavioural response to the proposed charges. As anticipated, TfL's analysis has evolved since the consultation-stage version of this impact assessment was prepared – in particular because they have refined the design of their scheme in the intervening period. The table below reports the latest figures available at the time of submitting this impact assessment for scrutiny by the Regulatory Policy Committee.
36. Table 1 below summarises the key findings to date from the analysis supplied by TfL, presenting estimates of the scale of costs and benefits expected to arise from the scheme described above. The appraisal in this impact assessment is based on a six-year scheme life, consistent with the sunset clause included in the new regulations. It is noted that some utilities felt that the analysis in our consultation-stage impact assessment understated the likely costs of lane rental. It is acknowledged that costs remain uncertain at this stage. However, the costs per scheme to street works undertakers presented in this version of the impact assessment (based on more recent TfL analysis than the consultation-stage version) are significantly higher than at consultation stage. As part of its own consultation, TfL has also published sensitivity analysis indicating that their proposed scheme continues to deliver net benefits on a range of assumptions about the costs to undertakers of behavioural change.

⁷ This project uses automatic number-plate recognition (ANPR) technology at a large number of fixed sites across the TfL road network to derive detailed data about journey times and congestion delay.

TABLE 1 – anticipated costs and benefits from TfL’s analysis of their scheme proposal

£ million, 2012 prices	Year							PV
	0	1	2	3	4	5	6	
Costs								
Lane rental charges and penalties paid by undertakers	0.0	6.7	6.5	6.2	6.0	6.0	6.0	34.5
Costs of behaviour change by undertakers	0.0	7.4	6.8	6.2	5.6	5.6	5.6	34.4
Scheme admin costs for highway authority	0.2	0.9	0.8	0.7	0.6	0.6	0.6	4.1
TOTAL COSTS	0.2	15.0	14.1	13.1	12.2	12.2	12.2	73.0
Benefits								
Reduction in monetised negative externalities ¹	0	69.6	70.3	71.1	71.8	71.8	71.8	391.7
...of which reduction in monetised costs to businesses ²	0	35.5	35.9	36.2	36.6	36.6	36.6	199.7
Lane rental revenue accruing to local authority	0.0	6.7	6.5	6.2	6.0	6.0	6.0	34.5
TOTAL BENEFITS	0.0	76.3	76.8	77.3	77.8	77.8	77.8	426.1
Net benefit to society	-0.2	61.3	62.7	64.2	65.6	65.6	65.6	353.2
Impacts on businesses								
Benefits to general business community ³	0.0	35.5	35.9	36.2	36.6	36.6	36.6	199.7
Costs to street works undertakers ⁴	0.0	14.1	13.3	12.4	11.6	11.6	11.6	68.9
Net benefit to business	0.0	21.4	22.6	23.8	25.0	25.0	25.0	130.9

Notes to Table 1

Transport for London have published the detailed cost-benefit analysis from which this table is derived, as part of their consultation on their proposed lane rental scheme, at www.tfl.gov.uk.

¹ *90% of the total monetised reduction in external costs is assumed to result from reduced delays, with the remainder arising from improved journey time reliability. Other external costs are not monetised here. Analysis is based on value of time data published in DfT’s Transport Analysis Guidance (www.dft.gov.uk/webtag)*

² *Assuming 51% of the congestion saving accrues to business, based on TfL analysis of the composition of traffic specifically in London.*

³ *Assuming no additional benefits to business over and above the monetised benefits identified above. The application of lane rental revenues by the highway authority is expected to result in some further benefits to street works undertakers (where R&D leads to the development and application of new cost-saving techniques) and to the wider business community (as a result of those techniques leading to further congestion savings in future). The latter benefit is implicitly monetised within the increasing level of congestion cost reduction modelled over the first few years of the scheme’s operation, but the former benefit is not monetised here.*

⁴ *Lane rental charges incurred, costs of behaviour change and penalties.*

37. For the summary sheet at the front of this impact assessment, the **best estimates** assume that two pioneer schemes are approved by the Secretary of State – one in a major urban area, and one elsewhere (e.g. covering the most critical streets in major towns and cities in the area of a non-metropolitan highway authority). Given that the costs of congestion in major urban areas are, in aggregate, substantially greater than elsewhere, it is assumed that the impact of lane rental schemes in other areas would be significantly smaller than in major conurbations.
38. The best estimates are consistent with a scheme being implemented in a major urban area (with the impacts set out in TfL’s analysis of their scheme proposal) alongside one other scheme, with the impacts of that other scheme being one quarter of the scale of TfL’s. There is a high level of uncertainty surrounding this “one quarter” assumption, in the absence of any detailed scheme proposals or impact assessment from other authorities at this stage. It is also recognised analysis

from London will not necessarily be applicable elsewhere, but the requirement for all lane rental schemes to focus just on the very busiest streets means that the overall balance between benefits and costs between different schemes should still be broadly similar. Individual schemes will in any case need to present their own cost-benefit analysis, based on their specific scheme proposal.

39. The **high estimates** assume that an additional non-metropolitan scheme is approved in addition to the best estimate case. The **low estimates** assumes that no schemes are approved.
40. The rationale for the choice of best, high and low estimates are as follows:
- the guidance accompanying the new Regulations makes clear that the Secretary of State intends to approve schemes in no more than one major urban area, and no more than two other areas. This provides a clear upper limit, and our high estimate is constructed accordingly.
 - TfL has already consulted on a scheme proposal for London and has indicated that, subject to the outcome of that consultation, it expects to submit a formal application to operate lane rental. Kent County Council is also actively investigating the scope for lane rental on some of their key routes and other authorities may also choose to develop proposals over time. The best estimate reflects this position, though it should be recognised that authorities that begin feasibility work will not necessarily end up submitting a scheme proposal (and will not necessarily secure approval if they do).
 - There is no commitment on the part of government to approve any schemes – hence the low estimates of zero. Approval would only be granted if proposals meet the criteria set out in the guidance accompanying the new Regulations. The Department has not at this stage carried out a formal assessment of any scheme proposals, and would not do so until a final proposal is formally submitted.
41. The analysis shows a net benefit to business over the appraisal period. This is because the anticipated benefits to the general business community (resulting from reduced traffic congestion) outweigh the costs to street works undertakers (of adopting less disruptive working practices where they can, and of paying lane rental charges where they cannot). Overall, option 1 is estimated to have a “best estimate” net present value of £441.5m and a benefit-to-cost ratio of 5.8.

Option 2: assessment of costs and benefits

Option 2 – costs

42. In common with option 1, the principal costs of the permit-based approach would be borne by street works undertakers (and to some extent passed on to their customers). These costs would comprise the costs of operating in less disruptive ways in order to comply with permit conditions, and the fixed penalties incurred on those occasions where it was not possible (or judged uneconomic) to do so. Administrative costs would also be involved, and it is anticipated that those costs faced by highway authorities would be significantly higher than under option 1 for the reasons set out in paragraph 16.

Option 2 – benefits

43. The nature of benefits expected to arise under option 2 are the same as those under option 1.

Option 2 – summary of monetised costs and benefits

44. Table 2 below presents indicative estimates of costs and benefits, based on unpublished analysis presented to the Department for Transport by TfL. The analysis assumes that highway authorities in London would choose to apply this option on a significantly more widespread basis than option 1. This is because all permit authorities in London (ie many of the London boroughs, in addition to TfL) could choose to implement it under the terms of their existing permit schemes, and would not be constrained by the same “targeting” requirement as future lane rental schemes will be.
45. Specifically, the analysis assumes that the approach would be applied to all streets that have been designated “traffic-sensitive” by the highway authority – estimated to be roughly 20% of streets in London. (Streets can be designated as traffic-sensitive if they meet one or more of a set of criteria set out in existing regulations – the criteria relate to matters such as traffic flows, usage of the street by commercial vehicles and buses, etc).
46. For consistency with option 1, costs and benefits are evaluated over a six-year period. For simplicity, the analysis under this option assumes a one-off change in impacts between years 2 and 3 to reflect technological change (as presented in the consultation-stage impact assessment); this is

clearly an artificial assumption and the analysis could have been revisited to show a smoother year-by-year profile. However, this was felt to be disproportionate given that the overall impact on the analysis would be small relative to the overall margin of uncertainty surrounding the cost and benefit estimates, and in any case of limited benefit given that this option is not being taken forward.

TABLE 2 – indicative costs and benefits from TfL’s analysis

£ million	Year							PV
	0	1	2	3	4	5	6	
Costs								
Fixed penalties paid by undertakers	0.0	45.0	45.0	29.0	29.0	29.0	29.0	191.4
Costs of behaviour change by undertakers	0.0	18.0	18.0	31.0	31.0	31.0	31.0	145.4
Scheme admin costs for highway authority	4.3	6.4	6.4	6.4	6.4	6.4	6.4	39.7
TOTAL COSTS	4.3	69.4	69.4	66.4	66.4	66.4	66.4	376.5
Benefits								
Reduction in monetised negative externalities	0.0	68.0	68.0	93.0	93.0	93.0	93.0	463.7
<i>...of which reduction in monetised costs to businesses</i>	<i>0.0</i>	<i>34.7</i>	<i>34.7</i>	<i>47.4</i>	<i>47.4</i>	<i>47.4</i>	<i>47.4</i>	<i>236.5</i>
Fixed penalty revenue accruing to authorities	0.0	45.0	45.0	29.0	29.0	29.0	29.0	191.4
TOTAL BENEFITS	0.0	113.0	113.0	122.0	122.0	122.0	122.0	655.1
Net benefit to society	-4.3	43.6	43.6	55.6	55.6	55.6	55.6	278.6
Impacts on businesses								
Benefits to general business community	0.0	34.7	34.7	47.4	47.4	47.4	47.4	236.5
Costs to street works undertakers	0.0	63.0	63.0	60.0	60.0	60.0	60.0	336.8
Net benefit to business	0.0	-28.3	-28.3	-12.6	-12.6	-12.6	-12.6	-100.3

47. In the summary sheet for Option 2, “low”, “high” and “best” estimates are derived from the TfL analysis in the same way as for Option 1, but there are obviously uncertainties surrounding the likely level of take-up by local authorities. In that sense, the overall balance between the estimated costs and benefits (ie the benefit-cost ratio) may be more instructive than the absolute levels of those estimates.

Option 3: assessment of costs and benefits

Option 3 – costs

48. Participation in non-regulatory measures is not compulsory, and so costs would be expected to be incurred only where the entity incurring them expected to secure benefits that exceed those costs.

49. The immediate costs involved in participating in the non-regulatory initiatives described would be:

- costs of software development needed to generate the data needed to populate the proposed ‘performance scorecard’. (The scorecard is to be based on raw data already contained within local authorities’ street works management systems, so the only cost is that of developing software to process the raw data into a useful format.)
- costs of preparing and disseminating best practice guidance; and
- costs of deciding whether or not to participate in the Code of Conduct.

50. These costs essentially relate to staff time, and are expected to be small relative to the costs associated with options 1 and 2. They will be measurable in thousands rather than millions of pounds. However, taking the actions described above will generate no immediate benefits. Benefits only arise if street works undertakers and highway authorities choose to behave differently as a

result of the non-regulatory initiatives. Those behavioural changes would involve more substantial costs, such as:

- costs of reforming works management processes and employing additional staff to improve timeliness of completion of works;
 - costs of improving standards of highway reinstatements, which might involve additional training of operatives and supervisors and additional time spent completing each individual reinstatement;
 - costs of applying best practice in communicating with road users, local communities, businesses and others affected by individual street works; and
 - costs of adopting less disruptive working practices in line with the Code of Conduct.
51. The scale of costs incurred will depend fundamentally on works promoters' decisions on whether, and if so to what extent, to change their behaviours as a result of the non-regulatory measures described. There is no robust basis on which to quantify the likely costs.

Option 3 – benefits

52. Benefits from these non-regulatory measures might include:

- reductions in disruption caused by works, and environmental benefits consequential on a reduction in congestion;
- better-quality reinstatements, providing a longer-lasting road surface and reducing the need for disruptive remedial works to be carried out; and
- local communities, and others affected by works, feeling better informed about planned works and therefore better able to plan alternative routes in advance.

53. As yet, there is no evidence on which to monetise the potential impacts of these non-regulatory measures, but initial indications from the London Code of Conduct are positive⁸. For example, several respondents to our consultation noted that 2,311 days of highway occupation have been saved during the first two years of the Code's operation. However, in general, the impacts of these kinds of non-regulatory measures are difficult to disentangle from the impacts of regulatory measures and of other general improvements in working practices that would have taken place anyway.

54. Since the consultation, the National Joint Utilities Group has highlighted to the Department more recent data published by the Mayor of London, showing a reduction in serious disruption from planned roadworks on the Transport for London road network of 39 per cent (April-December 2011 compared with the same period the previous year). The data do not attempt to disaggregate the contribution made by the London Code of Conduct towards this reduction.

Option 3 – balance between costs and benefits

55. Given that these measures depend on street works undertakers voluntarily choosing to adopt better (but more expensive) working practices, it is expected that the overall magnitude of costs and benefits would be substantially more modest than those arising from options 1 or 2 (if they were applied to the same, very limited, geographical extent as those options). On the other hand, the non-regulatory measures are in principle suitable for application on a more widespread basis across the country.

56. There is no reason to think that street works undertakers or local authorities would choose to adopt these non-regulatory measures unless they expected to secure benefits that would exceed the costs involved. Accordingly, the Government sees clear value in pursuing these measures, and is working with the Highway Authorities and Utilities Committee (HAUC(UK)) who are leading the work to implement them.

57. However, despite the expectation that non-regulatory measures will deliver some benefit, the Government also remains concerned about the adverse impact of works on the most critical parts of local road networks, and believes that the scale of these impacts is sufficient to justify additional, targeted action focused specifically on these most critical parts of the network.

58. While they are welcome and valuable, non-regulatory solutions cannot address the fundamental problem that, on these critical parts of the network, the financial incentives facing street works undertakers (to minimise cost) are poorly aligned with maximising social welfare (which depends on undertakers taking

⁸ *Mayor's Code of Conduct Annual Report 2009-10*, Mayor of London & Transport for London.

full account of the costs their works impose on society when deciding how to organise those works) – i.e. non-regulatory measures will not address the underlying “externality” problem.

Risks and assumptions

Options 1 and 2

59. As explained earlier, the assessment of costs and benefits of the two regulatory options are based on analysis carried out by Transport for London. They are compared against a “business as usual” scenario in which actions and initiatives being undertaken by TfL to smooth traffic on their network (including the existing London Permit Scheme) and by works promoters (e.g. through the London Code of Conduct) will act to offset other factors that would tend to work in the other direction, such that the network is assumed in future years to maintain current levels of journey time reliability on TfL’s roads in the morning peak (ie the busiest period of the day).
60. Key assumptions relate to:
- (i) scheme design and coverage;
 - (ii) the extent of the behavioural response by street works undertakers (i.e. how far will lane rental charges will result in the adoption of less disruptive working practices and techniques); and
 - (iii) assumptions about how many authorities might apply to the Secretary of State, and secure approval, to run lane rental pioneer schemes.
61. The impact assessment acknowledges that there are significant uncertainties surrounding each of these three assumptions. The resulting risks are:
- (i) further work by TfL following completion of their consultation could lead to further refinement of the proposed scheme design, and other authorities might develop different approaches. This could affect the overall balance between benefits and costs. However, as noted above, approval would not be granted unless the scheme proposer had shown that the benefits of the chosen scheme will outweigh the costs;
 - (ii) if the behavioural response by street works undertakers to any given level of charge is less [more] than anticipated, then the costs of lane rental would be higher [lower] and the benefits of lane rental would be lower [higher];
 - (iii) all else being equal, a greater [lesser] number of successful applications can be expected to increase [decrease] the overall costs and benefits in similar proportions.
62. These are the same risks as were highlighted in the consultation-stage impact assessment. The uncertainty surrounding points (i) and (iii) has declined significantly as the Department now has a clearer idea of the likely level of appetite for schemes and TfL’s analysis has evolved significantly since that time. Uncertainty surrounding point (ii) remains essentially unchanged, and the position will only become clearer once pioneer schemes are up and running and impacts can be monitored.

Option 3

63. Securing benefits under option 3 will depend upon:
- local authorities choosing to gather and disseminate ‘performance scorecard’ data in their area, and to benchmark performance against other parts of the country. Benefits will only arise from the scorecard if, by using the data to identify and shine a light on areas of relative strength and weakness, authorities are then able to work with street works undertakers to secure improvements in performance where they are most needed;
 - undertakers choosing to learn about, and apply the lessons of, existing best practice from elsewhere in the sector to a greater extent than they would have chosen to do in the absence of published case-studies and guidance; and
 - undertakers choosing to sign up to the Code of Conduct, and as a result implementing changes to their working practices that they would not otherwise have chosen to implement.
64. Because of the substantial uncertainty around these issues, it is not considered feasible to provide monetised estimates of costs and benefits of this option.
65. Being voluntary in nature, these measures are outside the scope of the ‘one in, one out’ rules.

Preferred option

66. While non-regulatory measures (Option 3) are separately being pursued by the street works sector, the preferred option for the purposes of this impact assessment is to legislate to allow future lane rental schemes. However, recognising the uncertainty surrounding the likely level of costs and benefits, the intention remains to proceed with only a very small number of pioneer schemes in the first instance. This will enable real-world evidence to be gathered, to inform future decisions about whether more schemes should be supported.
67. The preference for Option 1 is in large part informed by the relative balance between costs and benefits under the options considered. Not only is the net benefit of option 1 higher, but the BCR of option 1 is substantially more favourable. Moreover, option 1 is expected to deliver a positive net benefit to the business sector. By contrast under option 2, the expected benefits to the general business community are significantly outweighed by the costs to the utility sector and other private-sector street works undertakers. Option 1 is also believed to be more consistent with the Hampton principles, in particular because it focuses new regulatory activity on those areas that need it most (in this case, focusing charging on the most critical parts of the road network, where works cause the highest levels of disruption).
68. A key feature of the preferred option is that, unlike the alternative, it should provide a long-run incentive for works promoters to invest in research and development into new, less-disruptive techniques. Assuming such R&D helped to prove the viability of new techniques that helped street works undertakers to reduce disruption, it would enable undertakers to reduce their exposure to lane rental charges in the future. Moreover, new techniques emerging from such R&D would be available for application across the whole country, not just within the boundaries of any lane rental schemes.
69. It is important to recognise that the proposed Regulations, of themselves, will impose no costs and deliver no benefits. The Regulations merely establish some basic parameters within which all schemes must operate – for example, setting out the principle that charges may not be applied on a street unless it has been designated “traffic-sensitive”; prescribing certain categories of minor works that are automatically exempted from charges. Once the Regulations are in force, it would be for highway authorities to develop their own scheme proposals. Before they could be implemented, they would require the approval of the Secretary of State. Costs and benefits would arise only once individual scheme proposals had been approved by the Secretary of State and implemented by the relevant highway authority.
70. This requirement for approval provides an opportunity to build in a number of important safeguards to help ensure that lane rental schemes deliver sufficient benefit to justify the cost, and are consistent with the Government’s “one in, one out” policy. Specifically, the Government proposes that (among other things) an authority seeking the Secretary of State’s approval to implement lane rental would need to demonstrate that:
- the benefits of the proposed scheme would be sufficient to justify the costs. Authorities would need to provide a robust, evidence-based case to demonstrate this;
 - the benefits of the proposed scheme *to businesses* would exceed the costs *to businesses*. Again, authorities would need to provide a robust, evidence-based case. Requiring this condition to be met will ensure that schemes do not impose net new costs on the business sector;
 - the proposed scheme is carefully targeted on the most critical parts of the road network – i.e. where works cause the greatest disruption – and that an evidence-based approach had been taken to identify those places;
 - the proposed scheme incorporates real opportunities for works promoters to reduce their exposure to charges, through exemptions and/or discounts where works are carried out at less disruptive times – i.e. schemes should not simply operate as an unavoidable levy that provides no meaningful incentive to change behaviour;
 - the proposed charges are set at a level that will be sufficient to encourage behavioural change, but not excessive relative to the external costs imposed by the works to which charging would apply;
 - authorities proposing schemes have a clear and robust plan in place to evaluate the performance of those schemes, to inform future decisions as to whether they should continue to operate.

71. Furthermore, the Government's intention would be to approve only a very small number of scheme proposals in the first instance. This would enable authorities to gather and present real-world evidence of the effectiveness of the proposed highly-targeted approach to lane rental, which in turn would inform future decisions about whether lane rental might usefully be applied more widely.
72. Proposed regulations would limit the use of lane rental revenues to measures intended to reduce future disruption caused by works. Such measures could include research and development into new disruption-saving techniques or the installation of "pipe subways" at critical points on the network. This constraint will help to reassure the public that lane rental will be implemented for genuine transport policy reasons, avoiding perceptions that it is being used to raise general revenues for the local authority at the expense of street works undertakers and their customers. It also ensures that revenues are used in a way that further supports the achievement of the objectives that lane rental schemes are intended to meet.

Scheme implementation and enforcement

73. As noted previously, it would be for highway authorities to develop scheme proposals and implementation plans (in consultation with street works undertakers and other interested parties). Existing electronic systems by which undertakers give notice of their works, including start and finish dates, should provide some of the information needed by authorities to establish what charges are due from each undertaker. However, depending on scheme design, it may well be necessary for authorities operating lane rental schemes to gather additional evidence of charge liabilities (which might be possible by on-street observation or via CCTV). Monitoring and enforcement activities would need to be funded by the authority: it is not proposed to introduce additional powers for authorities to charge inspection fees to support lane rental schemes. TfL's analysis suggests scheme running costs for their proposal could be up to about £1 million per year. The majority of these costs are expected to be monitoring and enforcement costs, though this will depend on how much can cost-effectively be done by means of camera-based enforcement rather than site inspections.
74. Where disputes do arise, street works undertakers and highway authorities would be expected to reach a mutually acceptable resolution in most cases – as they do at present with overrun charges, for example. Where this cannot be achieved, there is an existing procedure for arbitration between the two parties, managed by the Highway Authorities and Utilities Committee (HAUC(UK)). This is provided for in the existing Code of Practice for the Coordination of Street Works and Works for Road Purposes and Related Matters. It is not therefore anticipated that any new criminal or other regulatory sanctions will be needed in respect of lane rental schemes.

One in, one out

75. As noted earlier for Option 1, the Regulations are enabling, i.e. they do not of themselves give rise to any immediate costs or benefits. Costs and benefits will arise only indirectly as a result of local authorities' decisions about whether, and if so how, to make use of the powers. This was noted by the Regulatory Policy Committee in its opinion on the consultation-stage impact assessment. Nevertheless, this option is considered to be in scope of "one in, one out". The impact assessment shows that the implementation of lane rental schemes is expected to deliver net benefits to business, so it scores as "zero net cost". Therefore no offsetting deregulatory measure is needed.
76. The only regulatory change under Option 2 would be to increase the existing level of penalty for contravention of permit conditions. Increases in existing penalties are outside the scope of "one in, one out". Option 3, being non-regulatory, is also out of scope of "one in, one out".

Micro-businesses

77. The Department is not aware of any micro-businesses involved in street works, so the costs identified in this impact assessment will not accrue to such businesses. Micro-businesses (like larger businesses) will benefit from the anticipated reduction in traffic congestion.

Evaluation

78. The Government will expect a robust evaluation plan to be built in to any proposed scheme that is submitted for Secretary of State approval. As the evaluation plan would be an integral part of the scheme, authorities would need to adhere to that plan in order to comply with the terms of Secretary of State approval. Each scheme's evaluation plan would need to set out the evidence that will be collected to enable a proper evaluation to take place, and the pre-lane rental benchmarks against which the comparison would be made. Authorities will be expected to evaluate their schemes at least annually.
79. Robust evaluation of individual schemes will be especially important given the Government's intention that, in the first instance, no more than a very small number of "pioneer" schemes would be approved. Evidence from the early evaluations will be needed to inform subsequent decisions on whether to invite further applications from authorities wishing to operate schemes.
80. The suggestion (in the summary sheet) that an overall evaluation of the impact of the regulations would take place in 2017 is consistent with the currently-proposed "sunset clause", under which lane rental regulations would cease to have effect at the end of the following year. If the first lane rental scheme(s) came into operation during 2012, that would mean up to five years' operational evidence being available to inform the Government's overall assessment of the legislation.

Annex 1 – specific impact tests

81. Although the following assessments refer to lane rental (ie Option 1), they are judged to be equally applicable to Options 2 and 3 except where indicated to the contrary.

Statutory Equality Duties

82. The Government does not consider that there will be a direct impact on statutory equality duties. To the extent that any unavoidable costs arising from lane rental are passed through to utility bills, households for whom utility costs account for a higher-than-average proportion of their income could be proportionately more affected than others. But given the indirect nature of this impact, and its likely scale given the small number of pilot schemes currently envisaged, an Equality Impact Assessment is not considered necessary or proportionate.

Economic Impacts

Competition

83. Lane rental charges would apply equally to all street works undertakers (principally utility companies responsible for managing the infrastructure of utility services, i.e. electricity, gas, water and communications companies). This would include not just those who have a statutory right to place and maintain apparatus in the highway (e.g. under the Gas, Electricity, Water and Communications Acts), but also those who do so by virtue of a street works licence issued by the relevant local highway authority (e.g. those who operate small private utility supplies). In that sense, the Government does not anticipate an adverse impact on competition. However, by adding to the cost of installing new apparatus in the highway (e.g. to carry out customer connections), lane rental could have an impact on customers wishing (say) to switch from electricity to gas as their primary source of heating.
84. Non-regulatory measures would be entirely voluntary in nature, so no impacts on competition are envisaged from option 3.

Small Firms Impact Test

85. Lane rental charges would apply equally to all street works undertakers, regardless of size. Costs of compliance for smaller organisations could be reduced by ensuring that, where highway authorities need information to calculate charge liabilities that is not already provided through existing automated systems for exchanging information about street works, the authority takes responsibility for gathering that information rather than requiring individual undertakers to supply it.
86. Non-regulatory measures would be entirely voluntary in nature, so no adverse impacts on small firms are envisaged.

Environmental Impacts

Greenhouse Gas Assessment

87. While transport is one of the major contributors to greenhouse gas emissions, it is difficult to model the impact lane rental will have. By reducing congestion, lane rental can be expected to increase overall traffic speeds (tending to increase emissions) – but also to reduce acceleration and deceleration that arises in stop-start traffic (tending to reduce emissions). *A priori*, the balance between these impacts is ambiguous. It will depend upon a complex interaction of local factors that determine traffic speeds and flows with and without lane rental. This means there is currently no sound basis on which to produce a robust estimate of the overall carbon impact of lane rental.
88. TfL's best estimate is that lane rental could reduce emissions by 2,000tCO₂e as a result of smoother traffic flow, and that this is likely to significantly outweigh increased emissions resulting from the use of generators for lighting overnight works. However, given the significant uncertainty surrounding these impacts, the impact on emissions has not been monetised for the purposes of this impact assessment.

Wider Environmental Issues

89. Some of the worst air-quality hotspots in major urban areas are associated with stop-start traffic on busy roads. Accordingly, a reduction in traffic congestion may result in an improvement in local air quality in these hotspot locations. Impacts on noise pollution at busy times are ambiguous because traffic can be expected to move faster (more noise) but more smoothly (less noise from repeated acceleration and deceleration).
90. However, lane rental schemes can be expected to result in increased working at night or at weekends. Authorities would therefore need to consider how best to avoid unacceptable increases in noise in residential areas, and decisions about scheme design would need to take account of those impacts. Highway and environmental health departments would need to liaise closely on these issues to strike an appropriate balance between transport and environmental issues.

Social Impacts

Health and Well-being

91. The lane rental regulations will not have a direct impact on health; however, to the extent that schemes improve air quality by reducing congestion, there could be indirect health benefits. Increases in night-time noise could have adverse health consequences if they affected residential areas, which is why engagement between lane rental scheme designers and Environmental Health Officers will be important.

Human Rights

92. The Department has identified no impact on Human Rights.

Justice System

93. The Department has identified no impact on the Justice System, as disputes should be resolved informally or (if necessary) via established arbitration processes.

Rural Proofing

94. The lane rental regulations would apply equally to authorities in urban and rural areas. In practice, the places where works are most disruptive are often in the most congested urban areas, and so schemes in those areas are likely to deliver the greatest benefits. However, some inter-urban links and other rural roads also suffer high levels of congestion, and each lane rental proposal would need be considered by the Secretary of State on its own merits.

Sustainable Development

95. The Department has identified no conflict between the lane rental proposals and sustainable development principles.

Annex 2 – impacts of applying charges to a highway authority’s own works alongside a statutory lane rental scheme

96. Table 1 in the main body of this impact assessment presents TfL’s assessment of the impacts of its lane rental proposals in so far as they would apply to utility companies and other street works undertakers. For comparison, Table 3 below shows equivalent estimates of the impacts arising from TfL’s proposal to apply the same charges to their own highway works. The figures reported in Table 3 are not included in the summary sheet, as they would arise not as a consequence of the Regulations covered by this impact assessment, but instead as a result of a decision by TfL to apply the same disciplines to their own works (which the Regulations do not oblige local authorities to do).

£ million, 2012 prices	Year							PV
	0	1	2	3	4	5	6	
Costs								
Lane rental charges and penalties paid by undertakers	0.0	4.1	4.0	3.9	3.8	3.8	3.8	21.5
Costs of behaviour change by undertakers	0.0	4.3	3.9	3.5	3.1	3.1	3.1	19.4
Scheme admin costs for highway authority	0.2	0.8	0.7	0.6	0.5	0.5	0.5	3.6
TOTAL COSTS	0.2	9.2	8.6	8.0	7.4	7.4	7.4	44.5
Benefits								
Reduction in monetised negative externalities ¹	0.0	40.9	41.0	41.2	41.3	41.3	41.3	227.0
<i>...of which reduction in monetised costs to businesses²</i>	<i>0.0</i>	<i>20.9</i>	<i>20.9</i>	<i>21.0</i>	<i>21.1</i>	<i>21.1</i>	<i>21.1</i>	<i>115.7</i>
Lane rental revenue accruing to local authority	0.0	4.1	4.0	3.9	3.8	3.8	3.8	21.5
TOTAL BENEFITS	0.0	45.0	45.0	45.1	45.1	45.1	45.1	248.5
Net benefit to society	-0.2	35.8	36.4	37.1	37.7	37.7	37.7	204.0
Impacts on businesses								
Benefits to general business community ³	0.0	20.9	20.9	21.0	21.1	21.1	21.1	115.7
Costs to street works undertakers ⁴	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net benefit to business	0.0	20.9	20.9	21.0	21.1	21.1	21.1	115.7