

<b>Title:</b> <b>Street Works (Charges for Unreasonably Prolonged Occupation of the Highway) (England) Regulations 2011</b> <b>Lead department or agency:</b> Department for Transport <b>Other departments or agencies:</b>	<b>Impact Assessment (IA)</b>
	<b>IA No:</b> DfT00089
	<b>Date:</b> 03/02/2012
	<b>Stage:</b> Final
	<b>Source of intervention:</b> Domestic
	<b>Type of measure:</b> Secondary legislation
<b>Contact for enquiries:</b> Elizabeth.godden@dft.gsi.gov.uk	

## Summary: Intervention and Options

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

Street works are needed for essential repairs, for example to utilities, but they sometimes overrun. This causes unnecessary disruption and costs to transport users and others and which are estimated by the Department to be at £667.2 million per year. Currently, there are statutory provisions for undertakers of street works to be charged for overruns. However, existing charge levels are not sufficiently high to fully reflect the cost to society of overruns nor incentivise undertakers of street works to minimise overruns. Government intervention is needed to amend these charges so that undertakers of street works bear more of the costs to society of these overruns and so that the charges are more effective.

**What are the policy objectives and the intended effects?**

Policy Objective:

- To reduce the number of occasions where utility works in the street take longer than the agreed duration, especially on the most sensitive streets (i.e. those where works are likely to cause the most congestion and disruption).

Intended effects:

- Reduce the inconvenience and disruption of street works; overrun charges provide an incentive to minimise the number of occasions when works over run.

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

Option one: increase the maximum level of overrun charges applying to traffic sensitive streets to £25,000, £8,000 and £1,000 (road category 0-1, 2 and 3-4 respectively).

Option two: introduce a stepped charge system for traffic sensitive 0, 1 and 2 streets, and equalising the charge rates for all types of works on all streets. This is the preferred option as it delivers higher net benefit to society. The charge structure is outlined in Table 3. Uncertainty around key assumptions has been tested through sensitivity analysis; even where key assumptions are varied substantially, this option continues to deliver net benefits.

Overrun charges are levied when undertakers breach the planned duration as agreed through either notice or permits. If this was a voluntary or non statutory option undertakers will not have an adequate incentive to keep to planned durations,

**Will the policy be reviewed?** It will be reviewed. **If applicable, set review date:** 8/2018

**What is the basis for this review?** PIR. **If applicable, set sunset clause date:** N/A

<b>Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?</b>	Yes
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**SELECT SIGNATORY Sign-off** For final proposal stage Impact Assessments:

*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) the benefits justify the costs.*

Signed by the responsible SELECT SIGNATORY: \_\_\_\_\_ Date: \_\_\_\_\_

# Summary: Analysis and Evidence

# Policy Option 1

## Description:

Increase charge to £25,000 on the busiest roads

Price Base Year 2012	PV Base Year 2010	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £319.19	High: £128.05	Best Estimate: £223.62

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	£70.52	<b>£566.63</b>
High	0	£110.36	<b>£886.81</b>
Best Estimate		£90.44	<b>£726.72</b>

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

The main costs will be additional resources deployed by street works undertakers (who are mainly utility firms) and their contractors to reduce overruns. Undertakers will also have to pay higher charges when they overrun, but they are expected to overrun on fewer occasions and for shorter periods. The Department does not expect highway authorities to incur any additional costs. The Department does not consider that there will be familiarisation costs to utilities as it is just an increase of an existing charge.

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

None

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	£110.24	<b>£885.83</b>
High	0	£126.30	<b>£1014.86</b>
Best Estimate		£118.27	<b>£950.34</b>

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

There will be reduced congestion which will benefit road users affected by the street works. Based on analysis of traffic flows from the National Transport Model, approximately half of the benefit is expected to accrue to businesses. Local authorities will benefit from an increase in overrun charge revenues, which will be a transfer from street works undertakers to highway authorities.

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

Reducing the number of street works that overrun, and therefore reducing the associated congestion and disruption to road traffic will also have a positive impact in reducing local emissions of air pollutants from transport and reducing local traffic related noise.

### Key assumptions/sensitivities/risks

Discount rate (%)

3.5

The main assumptions are as follows:

- Level of overruns has dropped by 50 % from when Halcrow obtained the noticing data from 2003 to 2010;
- Increased level of charges will result in a decrease in overruns days in-between 70 and 80 %;
- In-between 50 and 55 % of these days will result in increases in planned duration;
- In-between 20 and 25 % of these days will represent reduced occupation of the highway;
- Undertakers will spend, in addition to the charges in-between 35 and 55 % of the potential charge in reducing street works overruns; and
- Authorities will only charge undertakers for in-between 60 and 75 % of the prescribed maximum

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: £90.44	Benefits: £59.14	Net: -£31.30	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England				
From what date will the policy be implemented?	01/10/2012				
Which organisation(s) will enforce the policy?	Highway Authorities				
What is the annual change in enforcement cost (£m)?	No change				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	N/A				
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	Traded: none		Non-traded: none		
Does the proposal have an impact on competition?	No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: n/a		Benefits: n/a		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro NK	< 20 NK	Small NK	Medium NK	Large NK
Are any of these organisations exempt?	No	No	No	No	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	No	
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# Summary: Analysis and Evidence

# Policy Option 2

## Description:

Introduce a stepped charge system the busiest streets.

Price Base Year 2012	PV Base Year 2010	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £425.09	High: £966.44	Best Estimate: £709.26

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	£33.72	<b>£270.96</b>
High	0	£89.20	<b>£716.79</b>
Best Estimate	0	£61.46	<b>£493.87</b>

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

The main costs will be additional resources deployed by street works undertakers (who are mainly utility firms) and their contractors to reduce overruns. Undertakers will also have to pay higher charges when they overrun, but they are expected to overrun on fewer occasions and for shorter periods. The Department does not expect highway authorities to incur any additional costs. The Department does not consider that there will be any familiarisation costs to utilities as it is just an increase of an existing charge.

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

None

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	£89.98	<b>£723.04</b>
High	0	£209.48	<b>£1683.23</b>
Best Estimate	0	£149.73	<b>£1203.14</b>

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

There will be reduced congestion which will benefit road users affected by the street works. Based on analysis of traffic flows from the National Transport Model, approximately half of the benefit is expected to accrue to businesses. Local authorities will benefit from an increase in overrun charge revenues, which will be a transfer from street works undertakers to highway authorities.

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

Reducing the number of street works that overrun, and therefore reducing the associated congestion and disruption to road traffic will also have a positive impact in reducing local emissions of air pollutants from transport and reducing local traffic related noise.

### Key assumptions/sensitivities/risks

Discount rate (%)

3.5

The main assumptions are as follows:

- Level of overruns has dropped by 50% from when Halcrow obtained the noticing data from 2003 to 2010;
- Increased level of charges will result in a decrease in overruns of in-between 55 and 60%;
- In-between 35 and 45% of these days result in increases in planned duration;
- In-between 10 and 25% of these days represent reduced occupation of the highway;
- Undertakers will spend in-between 35 and 65 of the maximum charge in reducing street works overruns; and
- Authorities will only charge undertakers for in-between 55 and 75% of the prescribed maximum charges.

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: £61.46	Benefits: £74.87	Net: 13.41	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England				
From what date will the policy be implemented?	01/10/2012				
Which organisation(s) will enforce the policy?	Highway Authorities				
What is the annual change in enforcement cost (£m)?	No change				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	N/A				
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	Traded: none		Non-traded: none		
Does the proposal have an impact on competition?	No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: n/a		Benefits: n/a		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro NK	< 20 NK	Small NK	Medium NK	Large NK
Are any of these organisations exempt?	No	No	No	No	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	No	
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

## Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

### References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	<a href="http://www.dft.gov.uk/consultations/closed/2010-013/">http://www.dft.gov.uk/consultations/closed/2010-013/</a>
2	
3	
4	

+ Add another row

### Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

#### Annual profile of monetised costs and benefits\* - (£m) constant prices

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
<b>Transition costs</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring cost</b>	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46
<b>Total annual costs</b>	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46	61.46
<b>Transition benefits</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring benefits</b>	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73
<b>Total annual benefits</b>	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73	149.73

\* For non-monetised benefits please see summary pages and main evidence base section

# Evidence Base (for summary sheets)

## Policy objective

1. The policy objective is to reduce the number of occasions where street works in the highway take longer than is necessary, with a particular focus on those streets where overrunning works cause the greatest disruption. This should reduce the inconvenience and disruption that is caused by street works overruns. The Department has estimated that the implemented option will decrease overrun-related occupation by 10 to 25 percent.

## Previous proposals

2. In March 2010 the previous Government consulted on raising the maximum charge level on category 0 and 1 (i.e. the busiest) traffic sensitive streets to £25000 and to £8000 respectively. In response to this consultation the majority of authorities who responded agreed that the charge should be increased. However a number of authorities and utility companies raised concerns that the proposed charge levels were too high, would risk creating substantial perverse incentives for works undertakers to adopt more-disruptive practices and would be unlikely to be charged in practice.

## Problem under consideration

3. Works in the highway by statutory undertakers (e.g. a utility company) limit the amount of road space available to traffic and pedestrians leading to congestion and disruption. Some of the resulting disruption is inevitable, given the need to carry out the works to maintain essential utility services. However this disruption could be minimised by ensuring that works take no longer than necessary.
4. There are a variety of reasons why street works overrun. It has not been possible to obtain numerical data from local authorities or utilities on the percentages of reason for overrun as they do not record the reason works overrun. However authorities have supplied us with anecdotal evidence of the causes of overruns. These include:
  - Inadequate management and coordination of the contractors and sub contractors involved in works (often different contractors / sub contractors will be used for different stages of the work – e.g. one setting out signing lighting & guarding; another digging the hole and repairing the problem; another to reinstate the highway; then another gang will collect the signing lighting and guarding,
  - errors on site by operatives – e.g. damaging another utility's apparatus adds extra time to the works because that damage has to be put right,
  - competing priorities for utility or contractor mean resources originally planned for one job have to be diverted to another,
  - lack of manpower, i.e. not enough gangs for the number of jobs,
  - poor weather,
  - maintaining better records of precise locations of apparatus to reduce risks of “dry digs” (where the utility or contractor excavates a hole but does not find the equipment due to poor record keeping) and
  - the work was more complex than originally believed and so it becomes a longer job.
5. So there are a variety of ways in which utilities and contractors might take action in order to reduce overruns – investment in better management of contractor chains, investment in more training and better detection equipment to help avoid “dry digs” and accidental damage to other utilities' apparatus; employing additional staff to minimise risk of non-availability of operatives.
6. The existing legislative framework for utility street works, the New Roads and Street Works Act 1991 (“NRSWA”), sets out the broad powers and responsibilities which undertakers and local authorities have in relation to utilities' works. Section 74 of NRSWA, as amended by the Transport Act 2000, provides for Regulations to be introduced which require undertakers to pay a charge to highway authorities where their works take longer than the duration agreed with the highway authority to complete the works, (unless the total duration of the works is no more than two days as no overrun

charges can be levied in the prescribed period which the current noticing regulations has set at two days). The current Regulations came into force on 6 April 2009.

7. Under the 2009 Regulations, an undertaker (e.g. a utility company) proposing to carry out works in a particular street that are longer than 2 days must agree with the highway authority for that street how long the works are projected to take (the agreed period). If they exceed the longer of the agreed period, or the two-day period prescribed by the 2009 Regulations, the undertaker can be penalised by having to pay a charge. For instance, if it were agreed that the works should take six days and they actually took eight, the utility would have to pay the daily charge for two days.
8. Section 74 allows charges to be levied on undertakers and the power does not extend to works carried out by highway authorities. It is not compulsory to operate an overrun charging scheme, and authorities have the discretion to waive part or all of the charge so that it is below the maximum level permitted. In doing so, authorities are expected to apply a charge that is reasonable in the circumstances of the case – the regulations only establish the maximum permissible charge. In the 2007 consultation that preceded implementation of the 2009 Regulations, responses were received from 88 local highway authorities in England. Of these, 82 (93%) stated they already levied overrun charges, and a further 5% said they would do so under the 2009 Regulations. Therefore we consider that it is reasonable to assume, for the purposes of this analysis, that all highway authorities are now running an overrun scheme.

### **Level of congestion on Traffic Sensitive Roads**

9. By focussing the largest increases on the streets most sensitive to disruption (streets that are designated traffic sensitive) the proposed new Regulations should reduce overrun levels (and hence disruption costs incurred by road users) and improve road conditions for the greatest number of road users.

### **Rationale for increasing overrun charges**

10. The Department for Transport has considerable anecdotal evidence from consultation with local authorities and representatives of the industries that undertake street works that the 2001 Regulations reduced the amount of overruns and this has provided some evidence that utilities responded to overrun charges by ensuring more works were finished inside the planned duration. We have estimated that overruns have decreased by 50 percent since 2003 and included a 4 percent reduction from the 2009 overrun regulations, as set out in the IA for those regulations.
11. Although the charges set out in the Regulations are maximum charges, and local authorities do not always levy the full maximum charge, there are strong grounds to expect that increasing the maximum daily overrun charges in the Regulations will lead to an increase in the charges actually levied by highway authorities - which in turn will incentivise a reduction in actual overrun durations, and hence less disruption.
12. The Department's discussions with local authority representatives yielded the following conclusions about the ways in which local authorities apply overrun charges:
  - Nearly all local authorities do levy overrun charges, but they adopt a diverse range of approaches in levying overrun charges
  - Some authorities seek to recover the full maximum charge unless there are genuinely exceptional circumstances (severe weather problems etc).
  - Some authorities treat the maximum charge more as a starting-point for negotiating an actual charge level that takes account of the "severity" of the overrun (e.g. the extent to which it is likely to have been disruptive).
13. Authorities are increasingly recognising that the level of overrun charges which are currently being levied do not match the congestion they are causing. In addition local authority representatives commented that many authorities have found mitigating overruns to the levels they have been has not brought about a change in behaviour as the levels of overrun charges levied were not high enough to modify utilities behaviour. Therefore more authorities are mitigating the charge less and are charging higher levels of overrun charges. It is the belief of the local authority representatives that this will continue and higher levels of overruns will be charges by more authorities.



14. In light of the above, it follows that increasing the prescribed maximum charges will result in higher levels of overrun charges being levied as there is clear recognition from local authorities that the current level of charges authorities are charging do not reflect the congestion that overruns cause and that the current level of charges have not resulted in utilities completing works within the reasonable period. The Department considers that this along with the fact that some authorities already charge the maximum, means that increasing the maximum overrun charges will result in higher charges being charged which will correspondingly lead to a decrease in the number and duration level of overruns.
15. In 2009, the daily charges were amended, and the daily charges set out in the 2009 Regulations are set out in Table 1 below.

<b>Table 1: level of charges in the 2009 Regulations</b>				
	<b>Street of road category 0 or 1</b>	<b>Street of road category 2</b>	<b>Street of road category 3 or 4, being a traffic sensitive street</b>	<b>Street of road category 3 or 4, not being a traffic sensitive street</b>
<b>Major works and Standard works</b>	£2,500	£2,000	£750	£250
<b>Minor works and Immediate works</b>	£500	£500	£250	£100

***Road category** measures how busy a street is, based on commercial vehicle numbers it is designed to serve. Category 0 are the busiest and 4 the least busy. For the purposes of these regulations, the definition of Category 0 roads shall be taken to mean roads carrying over 30 million standard axles, with no upper limit.*

***Traffic sensitive streets** are streets which have been designated as the most likely to be disrupted by works, and where stricter controls on works should apply.*

**Major works** are works generally identified in advance in an organisation's annual operating programme or expected to last more than 10 days or works which require a temporary traffic order (eg to shut the street) under the Road Traffic Regulation Act 1984.

**Standard works** are between 3 and 10 days planned duration.

**Minor works** are works of less than three days planned duration.

**Immediate works** are emergency works (eg to deal with gas leaks) and urgent works (eg restoring an electricity supply where this has been severed).

16. The 2009 Regulations increased the charges for all categories of road, but there are two significant weaknesses in those Regulations. First, current maximum charges on the busiest, traffic-sensitive streets are still lower than the economic costs of congestion caused by overruns on those streets (this is explained in detail annex A below). Secondly, there is a significant inconsistency, in that maximum daily charges currently depend on the planned duration of works, such that overruns on longer-duration works can be charged at a much higher rate than those on short-duration works. But in practice the disruption caused by a day's overrun is invariant to the originally-planned duration of the works.
17. Traffic-sensitive streets are those streets that are more sensitive to disruption due to traffic levels, traffic mix (e.g. higher volumes of buses, heavy commercial vehicles) or strategic value (a list of the criteria for designating a street as a traffic sensitive road is attached at annex B). Disruption to traffic on these streets have effects on the wider community. For example if a bus route is substantially affected by a set of street works then not only the public transport users are affected but potentially anyone who wanted to travel via the bus route on that day but are deterred from doing so because of the disruption to traffic. This can reduce the reliability and predictability of services and this can increase the generalised cost of journeys.
18. A number of highway authorities have informed the Department that the most critical part of their network are traffic sensitive roads, some of which are in the less busy road categories (as classified according to table 1 above). These can include roads in city centres that are part of the one-way system and routes between major urban centres.

19. Considering these factors the Department for Transport judges that the current charging structure does not take adequate account of the particular nature and traffic mix on the traffic sensitive streets. The current regulatory structure imposes different charges for different types of works, but in a way that does not reflect the impact that these works have on road users, local businesses or residents. Highway authorities have reported, in consultation, that different types of street works can still cause the same level of congestion and in this case they should be all charged at the same rate.
20. These regulations would have an impact on:
- highway authorities in England (including county councils, London borough councils ,unitary authorities and metropolitan district councils, Transport for London and the Highways Agency), and
  - approximately 200 utility companies and other statutory undertakers of street works who have the right to carry out works in the street.

**Option one - increase the charge on traffic sensitive roads.**

21. To address the concerns outlined above in paragraphs 16 – 19 this option would alter the level of charge on traffic sensitive category 0 and 1 streets to £25,000 and to £8,000 on traffic sensitive category two streets. A different level of charge would be levied on different road categories, as in the existing regulations. It was proposed that on traffic sensitive routes the overrun charge would be the same for all works categories, as there is little difference between disruption, per day, caused by different categories of works. Table 2 below outlines the proposed new charges in this option.

<b>Table 2: Proposed Level of overrun charges – Option one</b>		
Description of Street	Category of Street Works	Amount (£)
Traffic-sensitive street which is not a street in road category 2, 3 or 4	All works	25,000
Other street which is not a street in road category 2, 3 or 4	Major works	2,500
	Standard works	2,500
	Minor works	500
	Intermediate works	500
Traffic- sensitive street in road category 2	All works	8,000
Other street in road category 2	Major works	2,000
	Standard works	2,000
	Minor works	500
	Intermediate works	500
Traffic- sensitive street in road category 3 or 4	All works	1,000
Other street in road category 3 or 4	Major works	250
	Standard works	250
	Minor works	100
	Intermediate works	100

**Option two – stepped charge system for traffic sensitive streets and no charge differential for type of works (the option chosen for implementation)**

22. To address the concerns outlined above in paragraphs 16 – 19, this option would involve more moderate increases in overrun charges on the busiest traffic-sensitive streets, combined with some other changes to improve consistency within the overrun charging system. This is the option that the Government has decided to implement, taking account of consultation responses and reflecting the Government’s commitment to ensuring regulation is both necessary and proportionate. This option involves: (i) lower rates of charges than option 1 on traffic sensitive 0, 1 and 2 streets; (ii) a stepped charging system for traffic sensitive 0, 1 and 2 streets; and (iii) equalising the charge rates for different categories of works on traffic sensitive roads. The basis for these charges is evidence

provided by research commissioned by the Department for Transport that estimated the typical cost of works-related congestion to be approximately £14,500 on category 0 and 1 streets and approximately £4,500 on category 2 streets. These costs are average figures for all streets in the road categories mentioned; so costs on traffic-sensitive streets within each category can be expected to be substantially higher than the averages mentioned. In principle, there is a good justification for setting overrun charges at a higher rate than the costs of the congestion they cause, as some overruns go undetected and therefore uncharged. However, this needs to be balanced against the fact that excessively high charges are more likely to have unintended impacts. The preferred option summarised in table 3 below, aims to strike a reasonable balance between these competing considerations.

23. In addition to having no charge differential for types of works this option also introduces a stepped charge system for the most sensitive streets (traffic sensitive 0, 1 and 2. Any days overrun after the third may be charged at a higher rate than for the first three days. This penalty element is intended to send a clear signal that lengthy overruns on the most critical streets are unacceptable. In practice, consultation with undertakers of street works has indicated that well managed street works should only exceptionally overrun by more than three days, and therefore it is expected that there will be only a small number of occasions on which undertakers would incur these charges.
24. The proposed charging structure would further incentivise utilities to carry out their works effectively. A different level of charge would be levied on different road categories, as in the existing regulations. It is proposed that on all streets the overrun charge would be the same for all works categories, as the impact on road users and congestion is the same. This conclusion was reached as a considerable number of consultation responses' stated that types of works were not a significant factor in the congestion caused and there was no substantive evidence presented against this argument despite this being a consultation question. Table 3 below outlines the proposed new charges.

<b>Table 3: Proposed Level of overrun charges – Option two</b>	
<i>Description of Street</i>	<i>Amount (£)</i>
Traffic-sensitive or protected street which is a street in road category 0 or 1	5000 10000(fourth and subsequent days)
Other street which is a street in road category 0 or 1	2500
Traffic-sensitive or protected street in road category 2	3000 (first three days) 8000(fourth and subsequent days)
Other street in road category 2	2000
Traffic-sensitive or protected street in road category 3 or 4	750
Other street in road category 3 or 4	250

25. Currently if the overrun only consists of one item of signing lighting or guarding the daily overrun charge is waived and the utility instead pays a single charge of £100 if the equipment is collected by the utility within 24 hours of being informed of it being left behind. The new Regulations extend this system. If the overrun only consists of to up to five items of signing lighting or guarding then the utility should pay the maximum of £100.

### **Sectors and groups affected**

26. The new Regulations would affect all English highway authorities and those undertakers that carry out street works within England. There would be no material differences in the impact on other businesses, voluntary organisations and charities or people in different social groups. Reducing the number of overrunning street works would have an impact on all individuals and businesses who use the road network, as there should be less disruption from street works than if the higher overrun charges were not implemented. The benefits of reducing street works overruns include

- congestion is reduced, with benefits for travel time, travel time reliability, air quality and other aspects of the environment;
  - business can operate more efficiently through quicker and more reliable delivery of goods, service of customers, etc;
  - disabled people are able to access their destinations more easily, saving time and effort; and
  - public transport can operate more reliably.
27. The exact scale of the benefits would depend on how far undertakers, who do not fully comply at present, improve their performance and undertake their works within agreed durations. It would also depend upon whether highway authorities more actively pursue undertakers who fail in their duties and obligations to complete works on schedule.
28. The Department is not able to accurately estimate the size of firms affected by these regulations. The vast majority of works are carried out by or under contract from large utility companies which count as large firms, and undertakers are legally responsible for any overruns that their works incur. A small number of works are carried out not by statutory undertakers (who are utilities which a statutory right to carry out works in the public highway), but under the licensing system set out in section 50 of the New Roads and Streets Works Act. These licensees may be smaller firms although these make up only a small amount of the works that are carried out. Therefore the vast majority of the works that might be affected by these regulations will be large firms.

### **Costs and benefits of each option (including administrative burden)**

#### **Costs**

29. There are two elements that make up the costs related to this policy: the costs of the overrun charges and the costs incurred by undertakers of street works to reduce overruns as a consequence of the implementation of the charging structure. The way these costs are calculated is the same for both options.

#### **Costs of the overrun charges**

30. In estimating the number of overrun days under each option, it is assumed that higher charges will give rise to two behavioural responses. First, undertakers will invest to reduce future overruns (as discussed below) – and this will help to achieve the policy objective outlined earlier in this impact assessment. But second, undertakers will seek to agree longer planned durations with highway authorities, and (at least in some cases) they can be expected to succeed in doing so because authorities do not have the capacity to challenge every single proposed duration. It is anticipated that this second effect will operate so as to partially offset the first.
31. The resulting number of overrun days for each category of street was then multiplied by the relevant new daily maximum charge. The total charge liability was then adjusted to reflect the assumption that highway authorities will not charge the full maximum in all cases (see paragraphs 11 to 13 above).

#### **Costs of reducing overruns**

32. The implementation of improved techniques of carrying out street works could improve the efficiency of street works and reduce the costs imposed on undertakers of street works by these regulations. The assessment of the costs of these regulations has not been able to reliably assess the full behavioural response of undertakers of street works to the implementation of these regulations. It has not been possible to provide an accurate estimate of what implementation of improved street work techniques might cost individually as there are many different possible techniques and technology (such as better records of assets, new working practices that can be deployed when a set of works develops a problem etc) that could be deployed. It could be that these new techniques once developed would be cost neutral, although there might be some initial development costs. Therefore the cost of reducing overruns is calculated by assuming that the undertakers spend a percent of the potential charge (the precise figure depends on the costs, business practices and efficacies of the individual utilities concerned) that they would have incurred to pay for the interventions outlined in paragraph 13 in annex A to reduce the amount of overruns. The

Department has estimated that utilities will spend in-between 35 and 65 percent of the charge that might have been liable for the reasons detailed below in paragraph 15 and 17 in annex A. These exact levels of spend have been used as an estimate following discussions with authorities on the likely average charge they will levy in the future, but given the uncertainty around these assumptions our cost estimates should also be read alongside the sensitivity analysis detailed in paragraphs 56 - 60. The estimated cost of reducing overruns is then added to the estimated total charge to be the total cost of each option.

33. It is assumed that utilities would not spend 100 per cent of the maximum charge they would be liable for each set of works they prevent overrunning as they know that authorities do not charge the full amount for every set of works for the reasons detailed in paragraph 31 above and on the rationale detailed in paragraph 37 and 38.
34. Highway authorities incur some costs associated with running the section 74 charging scheme, which can be offset against monies it received in overrun charges. Any excess must be used to develop policies to promote and encourage safe, integrated, efficient and economic transport facilities and services. As such, there should be no net additional cost to highway authorities. It must be noted that section 74 charges are not intended to be a revenue source for highway authorities.
35. Responses to the 2007 consultation on the current overrun charges indicated that almost 98% of authorities intended to levy overrun charges in the future. It did not indicate if each authority would charge in each case of an overrun. We have assumed that all authorities now run an overrun scheme.
36. The higher charges are likely to lead to higher administration charges as there are likely to be more disputes between utilities and highway authorities. However we consider that these are relatively minor in comparison to the costs of both the overruns and the cost utilities will spend improving performance.

#### **Option one costs**

37. To estimate the costs of raising the charge to the levels detailed in table 5 in annex A we have made a number of assumptions. These are as follows:
  - On the busiest streets there will be a reduction in overruns of between 70 and 80 percent of current total overrun days,
  - Of this in-between 50 and 55 percent of that reduction will result from increases in planned durations,
  - This leaves a net reduction in occupation of in-between 20 and 25 percent of current total overrun days,
  - To deliver this reduction in occupation utilities will spend in-between 35 and 55 percent of the overrun charges that would have been incurred,
  - Authorities will charge on average in-between 55 and 75 of the maximum charge,
  - On the basis of these assumptions, the Department have estimated that the total cost to street works undertakers would be in-between £70.5 and £110.4 million per year.
38. Utilities would not spend 100 per cent of the maximum charge they would be liable for each set of works they prevent overrunning as they know that authorities do not charge the full amount for every set of works (as works on a category one street but in a wide footway and therefore cause no congestion are likely to be charged a much lower amount than a works on the same street but in the middle of the carriageway).
39. A rational utility will spend money speeding up works to avoid an overrun where the marginal cost is the same or below that of the average charge they consider they will pay i.e. the average charge the authority charges. Raising the charge will raise the marginal cost that is worth incurring, so a rational utility will be prepared to pay more to avoid overruns on additional sets of works (ones where currently the cost to avoid the overrun is greater than the overrun charge the works are expected to attract). As noted earlier in this IA, there are a variety of reasons why works overrun, and therefore a variety of ways in which overruns can be avoided. Some overruns can be avoided relatively easily and cheaply; others require much more substantial investment to avoid. This implies an upward-sloping "marginal cost of avoiding overruns" curve, so that the average cost of

avoiding overruns will be substantially less than the level of overrun charge itself. Therefore higher charges in option one incentivise utilities to spend resources to prevent overruns that are above the charge level on option two, therefore the costs utilities spend on reducing and preventing overruns is higher.

40. A detailed breakdown of how the costs were derived is contained in annex A. The above estimates are based on knowledge of the industry. There is considerable uncertainty on the likely response by utilities to higher charges so the impact assessment presents sensitivity analysis showing how costs and benefits are likely to vary, given a wide range of assumptions about the extent of street works undertakers' behavioural response and the main assumptions need to be considered along side those contained in the sensitivity analysis section.

### **Option two costs**

41. To estimate the costs of raising the charge to the levels detailed in table 3 we have made a number of assumptions. These are as follows:
- On the busiest streets there will be a reduction in overruns of between 55 and 60 percent of current total overrun days (this is a lower assumption than option one because the lower charges offer less incentive for undertakers to reduce overruns)
  - Of this in-between 35 and 45 percent of that reduction will result from increases in planned durations,, (this is lower than option one because the very high charges in option one mean there is considerably more pressure on undertakers to decrease overruns by either increasing the amount of planned days or by closing the works down before they have finished and reopening them later to finish them off).
  - This leaves a net reduction in occupation of in-between 10 and 25 percent of current total overrun days,
  - To deliver this reduction in occupation utilities will spend in-between 35 and 65 percent of the overrun charges that would have been incurred, (this is higher then option one as completing the works quicker is estimated to be more expensive then closing the works and reopening them later to finish them off) and
  - Authorities will charge on average in-between 55 and 75 of the maximum charge.
  - The Department have estimated that the total cost to utilities street works undertakers would be in-between £33.72 and £89.20 million.
42. Paragraphs 38 and 39 above also apply to the costs in this option and a detailed breakdown of how the costs were derived are contained in annex A. The above estimates are based on knowledge of the industry. There is considerable uncertainty on the likely response by utilities to higher charges so the impact assessment presents sensitivity analysis showing how costs and benefits are likely to vary, given a wide range of assumptions about the extent of street works undertakers' behavioural response and the main assumptions need to be considered along side those contained in the sensitivity analysis section.

### **Benefits**

43. The benefits that have been monetised in this impact assessment are (i) those generated by the reduction in congestion costs related to the decrease in the amount of overrun related occupations; and (ii) the revenue accruing to highway authorities (which represents a transfer payment from undertakers to authorities). The benefits for both options have been calculated using the estimated average cost per day of overrun multiplied by the estimated reduction in the number of days of overruns (taking into account the increase in the number of days of planned durations). The decrease in the amount of overrun related occupation is detailed in the above tables. The estimated benefits are likely to be an underestimate due to:
- in monetising the benefits of reduced congestion, data is used on the average costs of congestion caused by works on each category of road;
  - that average cost data does not distinguish between TS and non-TS roads. But costs of disruption will be much higher on TS roads as set out in tables 5 and 6 in Annex A; and
  - most of the congestion benefit from higher overruns will be on TS streets. So using the average cost data will understate the benefits as set out in tables 5 and 6 in Annex A.



## Option one benefits

44. It has been estimated that the charging structure proposed by this option would deliver on, an average annual basis, between £110.24 to £126.30. million reduction in congestion related to overruns. These estimates were obtained from the data shown in table 5 and 6 in annex A.

Table 4 – benefits option 1									
Description of street	number of net overrun days reduced low	number of net overrun days reduced high	average cost of congestion	reduction in congestion low	reduction in congestion high	charge income from LA low	Charge income received high	total low	total high
0,1 TS	1149	1436	£14,630	£60,041,520.00	£75,051,900.00	£67,245,000	£59,550,000	£127,286,520.00	£134,601,900.00
	2955	3694							
0,1 non-TS	251	251	£14,418	£3,619,638.90	£3,619,638.90	-£1,167,906	-£1,018,625	£5,231,532.65	£5,765,013.90
						£2,779,800	£3,164,000		
2 TS	1684	2105	£4,537	£18,699,699.20	£23,374,624.00	£8,857,760	£6,384,800	£27,557,459.20	£29,759,424.00
	2438	3048							
2 non TS	537	896	£4,538	£2,438,539.68	£4,064,232.80	-£15,386,504	-£14,634,200	-£12,947,964.32	-£10,569,967.20
3 and 4 TS	308	514	£527	£386,712.60	£644,521.00	-£8,698,508	-£8,313,263	-£8,311,794.90	-£7,668,741.50
	426	709							
3 and 4 non TS	7465	12441	£429	£3,202,339.14	£5,337,231.90	-£31,777,154	-£30,925,437	-£28,574,814.69	-£25,588,204.98
total				£88,388,449.52	£112,092,148.60	£21,852,488	£14,207,276	£110,240,938	£126,299,424

45. The estimated value of the reduction in congestion was calculated by taking the number of net overrun days reduced multiplied by the average cost of congestion related to overruns for each category of street. The average daily cost of congestion was calculated by taking the total cost of congestion associated with overruns for that category of streets and dividing it by the number of days of overruns.
46. It is not possible to accurately predict the utilities' response to increases in overrun charges but for the purpose of this IA it has been assumed that if charges were increased to levels detailed in table 2 it would result in a net reduction of overrun days of in-between 20 and 25 percent. The Department considers it to be in this range due to a number of factors including views expressed by authorities that better co-ordinating of works and more gangs would reduce the number of overruns, but that a considerable amount of overruns are the result of overoptimistic planning on behalf of the utility (hence the increase in planned durations is larger than the decrease in the net reduction of overrun days). Tables 6 - 10 outline the costs and benefits of differing levels of reduction of overrun related congestion. As with the costs the assumptions are based on the Department's knowledge of the industry. However like the assumption in the costs section there is considerable uncertainty surrounding the assumption that under this option there will be a decrease in congestion related to overruns of in-between 20 and 25 percent and this needs to be read alongside the sensitivity analysis on paragraph 56 – 60.
47. In addition to the reduction in congestion society will also benefit from monies paid as charges by utilities to local authorities. So the charges received by authorities have been added to the benefits of reduced congestion to produce the benefits total. This means that overrun charges are treated as a transfer payment – i.e. a cost to undertakers and an equal and offsetting benefit to local authorities.



## Option two benefits

48. It is estimated that the charging structure proposed by this option would deliver on an average annual basis £89.98 million to £209.48 million reduction in congestion related to overruns. This is based on the data shown in table 7 in annex A. The estimated value for this option is higher than option one due to fewer overrun days becoming planned durations as the very high charges in option one mean there is considerably more pressure on undertakers to decrease overruns by either increasing the amount of planned days or by closing the works down before they have finished and reopening them later to finish them off, which would mean them occupying the carriageway for longer due to the having to set up and excavate the site twice. The Department considers that under option two undertakers would be less likely to increase the number of planned days or close works early as these activities are likely to severely impact the working relationship between undertakers and highway authorities. So although in option one it appears there will be fewer overruns there is a larger increase in planned days (some of which are justifiable in that currently some of the current durations are underestimated, as a consequence of which those works overrun planned durations).
49. The reduction in congestion was calculated by taking the number of net overrun days reduced multiplied by the average cost of congestion for each category of street. The average daily cost of congestion was calculated by taking the total cost of congestion for each category of street and dividing it by the number of days of overruns for that category. More information on how these were derived can be found in annex A. It is not possible to accurately predict the undertakers' response to increases in overrun charges but for the purpose of this IA it has been assumed that if charges were increased to levels detailed in table 3 it would result in a decrease in congestion of in-between 10 and 25 percent. This is different from option one due to the lower level of charges in this option. Table 15 on page 24 outlines the costs and benefits of differing levels of reduction of overrun related congestion. There is the same uncertainty in this estimated reduction in overrun related congestion as the assumption in option one. Therefore this should be considered alongside the sensitivity analysis outlined in paragraphs 56 – 60.
50. In addition to the reduction in congestion society will also benefit from monies paid as charges by utilities to local authorities. So the charges received by authorities have been added to the benefits of reduced congestion to produce the benefits total. This means that overrun charges are treated as a transfer payment – i.e. a cost to undertakers and an equal and offsetting benefit to local authorities.

Table 5 benefits option 2										
Description of street.	number of net overrun days reduced low	number of net overrun days reduced high	average cost of congestion	reduction in congestion low	reduction in congestion high	charge income from LA low	Charge income received high	total low	total high	
0,1 TS	575	1436	£14,630	£30,020,760.00	£75,051,900.00	£17,058,980	£30,524,460	£47,079,739.50	£105,576,360.00	
	1478	3694								
0,1 non-TS	432	974	£14,418	£6,226,413.30	£14,046,736.50	-£1,167,906	-£2,711,211	£5,849,507.05	£10,567,125.56	
						£791,000	-£768,400			
2 TS	842	2105	£4,537	£9,349,849.60	£23,374,624.00	£16,261,957	£30,310,688	£25,611,806.40	£53,685,312.00	
	1219	3048								
2 non TS	1791	3376	£4,538	£8,128,465.60	£15,322,103.20	-£4,883,760	-£3,488,400	£4,248,665.60	£13,947,303.20	
						£1,003,960	£2,113,600			
3 and 4 TS	514	514	£527	£270,693.55	£1,766,003.35	£2,136,917	£3,147,741	£57,661.68	£3,661,722.10	
	0	2837								
3 and 4 non TS	41305	62952	£429	£17,719,630.50	£27,006,429.45	-	-£7,968,506	-£4,245,516	£7,135,378.63	£22,039,328.83
							-£2,615,746	-£721,585		
<b>total</b>				£71,715,812.55	£156,567,796.50	£18,266,946	£52,909,355	<b>£89,982,758.85</b>	<b>£209,477,151.69</b>	

### Balance of costs and benefits option one

51. If implemented this option would have average annual costs of between £70.52 million and £110.36 million, and average annual benefits of in-between £110.24 million to £126.30 million in reduced road user delays costs and additional revenue for local authorities.
52. The net benefit of the new Regulations, in present value terms over the ten years following implementation, will be between £319.19 million and £128.05 million.

### Balance of costs and benefits option two

53. This option would ensure that resources are concentrated on managing better those works which are most likely to cause disruption (as the amount spent by utilities in more effective management of street works can be expected to relate the potential charge, it is expected that the more effective management will be focused on the streets with the highest charges). It is estimated that the option would have an average annual cost of between £33.72 million and £89.20 million, and would generate average annual benefits of between £89.98 million to £209.48 million in reduced road user delay costs.
54. In option one the very high charges lead to a higher amount of overrun days turning into planned durations and not being reduced occupation. This results in lower benefits despite higher costs. Therefore the Department considered the lower charges in the implemented option will deliver a greater number of reduced days of occupation and lower costs to undertakers.
55. The net discounted benefit of the new Regulations, over the ten years following implementation, will be between £452.08 million and £966.44 million. In comparing the net benefits of the two options, Option 2 is therefore the preferred option.

### Sensitivity tests

56. While based on a thorough review of the available evidence, including research commissioned by the Department for Transport, it is recognised that there is high level of uncertainty in the assumptions in this impact assessment. In order to examine the potential impact of this uncertainty, this section examines the costs and benefits of the preferred option if the outcome is different from the assumptions stated above.

This includes examining the impact if the costs are different (as the utilities spend a different amount in reducing the number of overruns and a different percent of total charge liability). The data in these tables are estimated on the basis that value of all other variables apart from the one stated in the table heading remain as outlined above. In each case, the analysis shows that benefits exceed costs across the full range of assumptions tested (with one exception, where costs marginally exceed benefits for the most extreme assumption considered).

<b>Table 6: showing costs and benefits of differing levels of total charge liability and the potential liability utilities spend.</b>				
% of total charge liability actually levied	10%	50%	70%	90%
% of potential liability utilities spend to reduce overruns	5%	40%	60%	80%
Costs	-74.18	25.41	76.31	127.21
Benefits	-4.67	79.46	121.53	163.60

57. Variations in these assumptions have been modelled together as they have a relationship. It is expected that a street works undertaker would not spend more on avoiding the charge than they consider on average the authority will charge. Also the gap between the two variables will always be quite small as utilities will spend an amount close to but not exceeding the average amount of charge liability actually charged by the authority.
58. The Department considers it highly unlikely that authorities will charge either 10 or 90 percent of the total charge liability as charging as little as 10 percent would not be an effective deterrent to prevent utilities from overrunning. In addition due to the guidance stating that overrun charges should consider that the stated charge is a maximum and lower levels might be appropriate in some circumstances the Department does not consider that authorities will charge 90 percent of the total charge liability. As shown in table 6, benefits exceed costs across the full range of assumptions tested.

<b>Table 7: showing the costs and benefits for different levels of change in overruns and decrease in durations.</b>				
% change in overruns	-10%	-50%	-70%	-90%
% decrease in total durations	0	40	50	70
Costs	£272.7	£129.38	£52.98	-£19.24
Benefits	£264.93	£371.3	£357.34	£409.97

59. There is a relationship between the change in overruns and decrease in durations. Clearly the decrease in overrun related durations cannot be above the decrease in overruns. In table 7 we have modelled that there are large decreases in overrun related durations. Table 8 below shows the costs and benefits if there is a much smaller decrease in total durations. Benefits exceed costs almost throughout the range of assumptions tested; only in the extreme case with very low changes in overruns and total durations do costs marginally exceed benefits.

<b>Table 8: showing the costs and benefits for different levels of change in overruns and decrease in durations.</b>				
% change in overruns	-10%	-50%	-70%	-90%
% decrease in total Durations	0	15	20	25
Costs	£272.69	£118.31	£39.87	£-38.62
Benefits	£264.92	£204.17	£156.95	£109.67

60. In this IA we have used an estimate of the amount of overruns based on noticing data collected in 2003 decreased by 50%. Table 9 shows different costs and benefits that would be incurred for differing base levels of overruns. Again, benefits substantially exceed costs across the full range of assumptions tested.

<b>Table 9: showing the costs and benefits for differing levels of overruns since 2003</b>				
Level of overruns as a % of 2003 number	10%	30%	70%	90%

Costs	-£57.16	£23.35	£184.39	£264.92
Benefits	£30.82	£102.38	£368.79	£502

## Risks and assumptions

61. Due to lack of data the Department has had to make a number of assumptions when developing this impact assessment which is why the benefits and costs have been expressed in wide ranges. The estimates and assumptions presented in this Impact Assessment are based on a thorough review of the available evidence, including research commissioned by the Department for Transport.
62. The key assumptions for the implemented option in this Impact Assessment are:
- overruns have decreased by 50 percent from 2003 and 4% from 2009;
  - planned durations will increase in-between 35 and 45 percent;
  - increases in the charge in the preferred option will decrease overruns by in-between 10 and 25 percent on the busiest streets;
  - the data on the breakdown on the proportion of works is correct across England;
  - undertakers will spend in-between 35 and 65 percent of the potential overrun charge reducing overruns; and
  - authorities on average under the new regulations will charge in-between 55 and 75 percent of the total possible overrun charges that utilities would be liable for.
  - Half of congestion benefits resulting from overrun schemes will accrue to businesses as detailed in the National Transport Model.
63. For some of the above described assumptions there is no data set available. There are no data to model the decrease in overruns that alternative charging structures will deliver. However analysis of past behaviour of street works undertakers (after the introduction in of the 2001 Regulations) indicates that there was a decrease in the amount of overruns due to the introduction of charges. When questioned in consultation, utility firms stated that there would be no increase in performance and overruns would not decrease. However utilities are cost conscious, and at each stage when the Department for Transport has introduced financial incentives they have responded with improved performance in avoiding overruns. Another example in addition to the introduction of overrun regulations is the introduction of fixed penalty notices for noticing offences. This has led to an increased accuracy of notices sent to highway authorities by utilities.
64. Therefore the Department has had to make assumptions on the decrease in overruns. In making these assumptions, account has been taken of industry capacity, the difficulties highway authorities have in accurately assessing the length that a particular works should take, the difficulties faced by street works undertakers in managing works durations, combined with the financial motivation that the introduction of charges has in general on the sector.
65. Given that the introduction of overrun charges of £2,000 in 2004 resulted in a reduction in overruns of 50%<sup>1</sup>, we have assumed that a broadly similar reduction would occur were the charge raised to £5,000 as per option 2.
66. We have judged that a higher reduction in overruns (70-80%, option 1) will occur if the charge is raised to £25,000. We believe this is a conservative estimate and that the true reduction may well be higher, but that diminishing returns will set in, as the last 20% of overruns become increasingly more difficult or costly to avoid (eg human error). For this reason option 2 is preferred, as it is considered that more modest increases in charges could deliver a good proportion of the benefit, and the responses to the consultation carried out in 2010 reinforced this.
67. The analysis makes no allowance for the possibility of “lane rental” charges being introduced in the future in respect of street works. There could be some overlap of benefits between overrun charges and any future lane rental schemes. However, any such overlap is expected to be very small relative the overall range of uncertainty surrounding the costs and benefits of increased overrun charges. The main reasons for this are (i) that the Government is not expecting to approve more than one or two localised lane rental schemes for the foreseeable future; (ii) lane rental would only apply to a small proportion of streets in

<sup>1</sup> This was a finding of a report by Halcrow commissioned by the Department in 2004. Alternative data on which to base this assumption is not available.

those areas; and (iii) a substantial proportion of the benefits from any future lane rental schemes are expected to come not from reduced durations of works (as with overruns), but from works on the most critical streets being rescheduled from peak to off-peak traffic periods so that disruption will be lower.

### **Costs and benefits to business**

68. It is assumed that the costs of the revised overrun charges would fall to businesses. It is possible that second round effects would result in some or all of the charges being passed on to consumers, but regulators would make allowance for higher overrun charges in regulated prices only to the extent that costs could not be avoided by a utility acting competently and efficiently.
69. Benefits arise from a reduction in congestion as a result of revised charges further incentivising street work undertakers to reduce overruns. The Department for Transport's National Transport Model (a strategic model of the national road network, managed by the Department for Transport) indicates that approximately half of monetised costs of road congestion are borne by businesses. Accordingly, it is assumed that half of congestion benefits resulting from overrun schemes will accrue to businesses.
70. Businesses are likely also to benefit indirectly from the application of revenues by the local authority (which are a transfer from street works undertaker to highways authorities). The extent to which they benefit will depend on precisely how the revenues are redistributed, but it seems likely that a share of any transport-related spending will benefit the business community. This effect has not been monetised in the impact assessment.

### **One In One Out**

71. These regulations are not in scope of One In One Out regulations as they are a penalty for non compliance with existing regulations.

### **Wider impacts**

72. Reducing congestion related to street works will have wider benefits than those outlined above. These are a reduction in transport-related emissions of carbon, air quality pollutants, noise due to less congestion and vehicle related costs such as decrease in the amount of fuel used. It has not been possible to quantify the extent of this reduction as road users can take a large number of different actions when faced with congestion related to street works, including alternative routes, making the journey in different ways, at a different time of day or make the same journey and go through the street works and accept the congestion delay. Strategic modelling of traffic flows would not be able to accurately assess the impact at a national level.

### **Implementation plan**

73. The regulations will come into force in April 2012, giving software developers time to make the necessary amendments to the Electronic Transfer of Notices system (the IT system that utilities and highway authorities use to communicate details of street works – details of the individual works, when they have started, when they have finished, if an early start has been granted etc). When the regulations are laid the Department will inform the organisations representing utilities, highway authorities and systems developers. As these regulations only amend the maximum charge rates that apply within an existing overrun charging system, which is currently operating well, we consider this to be a robust implementation plan and costs of systems change will be negligible.

### **Statutory Equality Duties**

74. It is not considered that there will be a direct impact on statutory equality duties. To the extent that any unavoidable costs arising from overrun charges are passed through to consumers, households for whom associated 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**

75. The revised arrangements would apply equally to all street works undertakers (including utility companies managing the infrastructure of services i.e. electricity, gas, water and communications companies).
76. Based on an assessment of the possible impacts for competition, we do not believe that there would be implications for competition by revising the street works regulations.

## **Small Firms Impact Test**

77. Street works overrun charges would apply equally to all street works undertakers, regardless of size. Information needed by highway authorities to calculate charge liabilities is already provided through existing automated systems for exchanging information about street works, so the new regulations do not create any need for street works undertakers to comply with any additional information requirements.
78. The Government does not consider that smaller organisations should be exempted from overrun charges, on the basis that the disruption caused by street works does not vary with the size of the organisation carrying out those works. The moratorium on new regulation for micro-businesses and start-ups does not apply to these regulations, as they are outside the scope of the “one in, one out” rules (as explained in paragraph 69 above).

## **Environmental Impacts**

### **Greenhouse Gas Assessment**

79. While transport is one of the major contributors to greenhouse gas emissions, it is difficult to model the impact overrun charges will have. Vehicular Carbon Dioxide, and other greenhouse gas, emissions are linked to the speed of travel. Congestion will affect the speed of travel. However, the level of congestion caused by street works varies according to local factors, such as, existing levels of road traffic, street design, type of vehicle, engine efficiency, time of journey and speed of travel. This means it is hard to produce a robust and defensible estimate of how much carbon will be saved by reducing street works associated congestion.

### **Wider Environmental Issues**

80. A reduction in traffic congestion will result in an improvement in local air quality and reduce the amount of noise pollution.

## **Social Impacts**

### **Health and Well-being**

81. The higher overrun charges will not have a direct impact on health; however, by improving air quality, through the reduction in congestion, there could be indirect health benefits.

### **Human Rights**

82. There will be no impact on Human Rights.

### **Justice System**

83. There will be no impact on the Justice System.

### **Rural Proofing**

84. The higher overrun charges apply equally to authorities in urban and rural areas, but the positive effects will predominately be felt in urban areas and on busier inter-urban routes (i.e. the places where highway networks are more congested).

### **Sustainable Development**

85. The Department feels that higher overrun charges being implemented complies with Sustainable Development principles.

## Annex A – detailed explanation of how the costs and benefits were derived

### Level of congestion

1. The estimates of the level of current overruns which is derived from the research commissioned by the Department for Transport from Halcrow Consulting adjusted by a reduction of 50 percent to allow for the reduction in overruns from when Halcrow collated the data in 2003 is:

<b>Table 1: level of over run days by road category</b>			
<b>Reinstatement Category</b>	<b>Overrun Days</b>		
	<b>Traffic Sensitive Streets</b>	<b>Non Traffic Sensitive Streets</b>	<b>Total</b>
0 and 1	20,519	5,021	25,540
2	20,662	17,912	38,574
3 and 4	24,459	248,823	273,282
Total	65,640	271,756	337,396

2. This data has been split into rural and urban delays and by physical length of works. For ease of clarification, the assumption made in Halcrow’s report for a rural/urban split was that all county council roads are rural whilst the remainder of the local network is urban. While this is clearly not the most precise of assumptions it is not considered to make a significant difference to the analysis because the composition of traffic on “urban” and “rural” roads is not considerably different.

<b>Table 2: Level of over run days split by rural / urban</b>		
<b>Rural/Urban Characteristics</b>		<b>Number of Days Overrun</b>
<b>Reinstatement Category (RC)</b>	<b>Typical Flow AADT</b>	<b>Total</b>
Rural 0	32,000	1,832
Rural 1	16,000	2,582
Rural 2	12,000	9,874
Rural 3	8,000	10,326
Rural 4	4,000	105,723
Urban 0	40,000	2,443
Urban 1	24,000	18,682
Urban 2	16,000	28,700
Urban 3	8,000	36,899
Urban 4	4,000	120,424
	Total	337,485

3. Table 3 below shows the assumed vehicle class distribution by rural/urban and reinstatement category. This has been achieved using road traffic data published by the DfT<sup>1</sup>.

<b>Table 3: Assumed Vehicle Splits</b>						
<b>Rural/Urban Characteristics</b>		<b>Vehicle Split, %</b>				
<b>Reinstatement Category (RC)</b>	<b>Typical Flow AADT*</b>	<b>Cars</b>	<b>Light Vans</b>	<b>Buses/ Coaches</b>	<b>Goods Vehicles</b>	<b>Total</b>
Rural 0	32,000	80%	12%	1%	7%	100%
Rural 1	16,000	80%	13%	1%	6%	100%
Rural 2	12,000	80%	14%	1%	5%	100%
Rural 3	8,000	80%	15%	1%	4%	100%
Rural 4	4,000	80%	16%	1%	3%	100%
Urban 0	40,000	81%	13%	2%	5%	100%
Urban 1	24,000	82%	13%	2%	4%	100%
Urban 2	16,000	83%	13%	2%	3%	100%
Urban 3	8,000	84%	13%	2%	2%	100%
Urban 4	4,000	85%	13%	2%	1%	100%

\*Annual Average Daily Traffic

4. The assumed market price values of time per vehicle used are shown in Table 4<sup>2</sup>

<b>Table 4: Market Price Values of Time per Vehicle <sup>3</sup></b>	
<b>£ an hour, 2008 prices and values</b>	
<b>Vehicle Type</b>	<b>Average Value of Time</b>
Car	£14.22
Light Goods Vehicle (LGV)	£16.01
Other Goods Vehicle (OGV)	£14.04
Public Service Vehicle	£96.99

<sup>1</sup> <http://www.dft.gov.uk/pgr/statistics/datatablespublications/tsqb/2009edition/>

<sup>2</sup> <http://www.dft.gov.uk/webtag/documents/expert/unit3.5.6.php#012>

<sup>3</sup> The Department has not been able to replicate the values of time that Halcrow used and they appear to be 2.5% too low. This means that the time savings benefits will also be 2.5% too low.



5. Halcrow then modelled the data estimating the amount of time lost per vehicle which combined with the data in tables 1, 2, 3 and 4 of annex A to account for length of work site. This data was then used to estimate the total annual cost of overruns on traffic sensitive streets and on all streets split between reinstatement categories for cars and light vans, buses and coaches and goods vehicles, given in Tables 5 and 6 below.

<b>Table 5: Annual cost of overrun by vehicle class on Traffic Sensitive streets by reinstatement category 2008 prices and values</b>				
<b>Annual Cost (£m)</b>	<b>Vehicle Type</b>			
<b>Reinstatement Category</b>	<b>Cars and light vans</b>	<b>Buses and coaches</b>	<b>Goods vehicles</b>	<b>Total</b>
0, 1	£260.25	£27.9	£12.0	£300.2
2	£82.35	£8.65	£2.75	£93.75
3, 4	£11.5	£1.15	£0.25	£12.9
<b>Total</b>	<b>£354.1</b>	<b>£37.75</b>	<b>£15.0</b>	<b>£406.85</b>

<b>Table 6: Annual cost of overrun by vehicle class on all streets by reinstatement category in 2008 prices and values</b>				
<b>Annual Cost (£m)</b>	<b>Vehicle Type</b>			
<b>Reinstatement Category</b>	<b>Cars and light vans</b>	<b>Buses and coaches</b>	<b>Goods vehicles</b>	<b>Total</b>
0, 1	£323.1	£3.65	£14.9	£372.6
2	£154	£16.2	£5.1	£175
3, 4	£107	£10.5	£2.25	£119.5
<b>Total</b>	<b>£583.55</b>	<b>£61.35</b>	<b>£22.25</b>	<b>£667.2</b>

6. From this we should subtract the benefits already being delivered by the 2009 Regulations. The Impact Assessment for the 2009 Regulations estimated those Regulations would reduce congestion related to overrunning street works by £56.1m. Reducing this by 50 per cent to account for the reduction in overruns means the 2009 regulations will deliver £28.05m reduction in congestion. Therefore the level of overrun related congestion is £639.15m
7. With this data it is estimated that the cost of congestion per day is approximately £14,500 on average across all category 0 and 1 streets and approximately £4,500 on average across all category 2 streets. Given that costs on traffic-sensitive streets will be substantially higher than these averages, this provides evidence that overrun charges are not currently set at the level reflecting the congestion that overruns cause on these streets (these levels of overrun per category were calculated by dividing the total level of overrun days for that type of street). This was calculated by taking the number of overrun days and dividing that by the total amount of congestion for that street category.
8. There are some uncertainties about the value of congestion which include the following:
- There is a lack of accurate definition of the area occupied by, and of the location of, the works in the carriageway,
  - The uncertain relationship between traffic flow and reinstatement category,
  - There is no estimate of increased travel times due to diversion to other routes
  - The estimated level of disruption does not include effects on pedestrians and cyclists,
  - Some traffic sensitive streets are only traffic sensitive at specific times, dates or seasons but it has not been possible to represent this in the data. This may over estimate the impact of the level of congestion.

## Option one costs and benefits

9. To make an assessment of the benefits an estimate of how much congestion on traffic sensitive streets that relates to street works is needed. The Department for Transport contracted Halcrow to undertake a study on the level of congestion related to street works. This study built a database of notices collected in 2003-04 from 25 local authorities and this was validated by statutory undertakers at the time and 2007. From this data base Halcrow extracted the amount of over runs that occurred distributed across the 5 road categories split according to traffic sensitivity status. However in the consultation it was stated by 16 percent of highway respondees that the level of changes is not enough to produce a continued improvement of behaviour, despite this not being a consultation question. The respondees did not state the level of decrease from 2003-04 to present time. Therefore it has been assumed that there has been a 50 per cent decrease in overruns from when the data was collected. From that information for the central assumption we have assumed a decrease of 50 percent from the 2003 level.
10. We have also considered the potential impact of uncertainty around this central estimate. Due to this being an assumption we have modelled a number of different levels of change in the level of overruns in this IA which are detailed in the risks and assumptions section. The Department for Transport also attempted to collect data from highway authorities but the returns were not comparable and it was considered that it would involve disproportionate costs to obtain a statistically robust set of updated noticing data from highway authorities.
11. The table below outlines the reduction in overrun days option one will deliver. Number of overrun days is taken from the Halcrow estimate of the levels of overruns in 2004 and then reduced by 50 percent. Gross reduction in overruns (expressed as both a percent of the current total number of overruns and as actual days) is the Departments estimate on how much the current overruns will be reduced by. This reduction in days will either return as an increase in planned durations as utilities will seek to agree longer durations with local authorities before the works start, , and the rest will be an actual reduction in street works occupation of the highway (both of these are also expressed as both a percent of the current total number of overruns and as actual days). The current overruns that the Department considers will turn into increases in planned days are detailed in % increase in days and no increase in days. The current overruns that the Department considers will result in a decrease in overrun related occupation of the highway are detailed in columns net % reduction in overrun days and net no reduction in days. There is significant uncertainty regarding the key assumptions in this analysis. Therefore, a low and a high range of the change in the number of overrun days that are reduced due to the introduction of charges are set out as indicated in the charge amount column.

**Table7: Reduction in overrun days – option one**

Description of street.	Amount charge	difference from current charge	no overrun days current	gross % reduction in overruns low	gross % reduction in overruns high	gross no reduction in overruns - days low	gross no reduction in overruns - days high	over run days low	over run days high	% increase in days low	% increase in days high	no increase in days low	no increase in days low high	net % reduction in overrun days low	net % reduction in overrun days high	net no reduction in days low	net no reduction in days high
0,1 TS	25,000	22500	5745	70	80	4022	4596	1724	1149	50	55	2872.5	3159.75	20	25	1149	1436
	25000	24500	14775	70	80	10343	11820	4433	2955	50	55	7387.5	8126.25	20	25	2955	3694
0,1 non-TS	£2,500	£0	1405	15	15	211	211	1194	1194	10	10	140.5	140.5	5	5	70	70
	£500	£0	3616	15	15	542	542	3074	3074	10	10	361.6	361.6	5	5	181	181
2 TS	£8,000	£6,000	8418	70	80	5893	6734	2525	1684	50	55	4209	4629.9	20	25	1684	2105
	£8,000	£7,500	12190	70	80	8533	9752	3657	2438	50	55	6095	6704.5	20	25	2438	3048
2 non TS	£2,000	£0	7344	5	10	367	734	6977	6610	2	5	146.88	367.2	3	5	220	367
	£500	£0	10568	5	10	528	1057	10040	9511	2	5	211.36	528.4	3	5	317	528
3 and 4 TS	£750	£0	10273	5	10	514	1027	9759	9246	2	5	205.46	513.65	3	5	308	514
	£250	£0	14187	5	10	709	1419	13478	12768	2	5	283.74	709.35	3	5	426	709
3 and 4 non TS	£250	£0	104505	5	10	5225	10451	99280	94055	2	5	2090.1	5225.25	3	5	3135	5225
	£100	£0	144317	5	10	7216	14432	137101	129885	2	5	2886.34	7215.85	3	5	4330	7216

12. Table 8 below outlines how the costs are calculated using the data from the table above. The cost that utilities incur reducing the amount of overruns is calculated by dividing the charge by 100 and then multiplying that by the percent of additional charge spent reducing overruns and then multiplying that by the number of overrun days reduced, giving the total the Department considers utilities will spend reducing overruns. To calculate the total charge paid the number of overrun days is multiplied by the charge for that category of street and then divided by 100 and multiplied by the net charge level authorities actually charge, which is estimated to be in-between 55 and 75 percent for both options. The total costs are calculated by adding the two cost elements together (cost incurred reducing overruns and charges levied by authorities), and subtracting the total charges that would have been levied under the existing regulations (as detailed in table 8 below) for the same amount of works. Again, to reflect the significant uncertainty, low and high estimates, which are considered to reflect a reasonable range on the basis of the available evidence gathered for this impact assessment, are provided in addition to the central estimates.

13. In cases where the charge has not been raised the Department has assumed that some of the increased investment in street works operations due to the higher charges will provide some modest benefits across all street works operations. Such investment includes better mapping databases, improved working practices, improved coordination of the different gangs who carry out the street works. Whilst this investment would have been made to prevent overrunning street works on those streets where the charge is increasing, the Department has assumed that some of the improvement to working practices will spill over to affect all works that undertakers carry out. This is borne out by evidence from one of the authorities running a street works permit scheme, where even though the scheme is focused on the busiest parts of the network, the authority have also seen a noticeable improvement in street works operations on the less busy streets as utilities and their contractors have implemented some of the new working practices developed. The Department has taken account of this in the cost benefit model. This is why on the streets where the charge has not gone up the model shows both a small reduction in overruns and a resulting small decrease in existing overrun charges.

Table 8

Table 8 Costs for option one														
Description of street.	Charge	Difference low	number of net overrun days low	number of net overrun days high	% of additional charge spent reducing overrun low	% of additional charge spent reducing overrun high	number of days overrun reduced low	number of days overrun reduced high	cost of reduction of days 1-3 days low charge	cost of reduction of days 1-3 - high charge	charge level paid low	charge level paid high	total costs low	total costs high
0,1 TS	£5,000 – £10,000	£25,000	1724	1149	35	55	1149	1436	£10,053,750	£19,748,438				
	£5,000 - £10,000	£25,000	4433	2955	35	55	2955	3694	£25,856,250	£50,789,063	£84,645,000	£76,950,000	£103,155,000.00	£130,087,500.00
0,1 non-TS	£2,500	£2,500	1194	1194	35	55	70	70	£61,469	£96,594	£1,642,094	£1,791,375	-£1,106,438	-£922,031
	£2,500	£2,500	3074	3074	35	55	181	181	£158,200	£248,600	£4,226,200	£4,610,400	£2,938,000	£3,412,600
2 TS	£3,000 - £8,000	£8,000	2525	1684	35	55	1684	2105	£4,714,080	£9,259,800				
	£3,000 - £8,000	£8,000	3657	2438	35	55	2438	3048	£6,826,400	£13,409,000	£27,202,560	£24,729,600	£20,398,240	£29,053,600
2 non TS	£2,000	£2,000	6977	6610	35	55	220	367	£154,224	£403,920	£242,352	£550,800	-£11,353,824	-£10,795,680
	£2,000	£2,000	10040	9511	35	55	317	528	£221,928	£581,240	£348,744	£792,600	-£3,656,528	-£2,853,360
3 and 4 TS	£750	£750	9759	9246	35	55	308	514	£80,900	£211,881	£127,128	£288,928	-£5,955,772	-£5,662,991
	£750	£750	13478	12768	35	55	426	709	£111,723	£292,607	£175,564	£399,009	-£2,550,113	-£2,145,784
3 and 4 non TS	£250	£250	99280	94055	35	55	3135	5225	£274,326	£718,472	£431,083	£979,734	-£20,195,591	-£19,202,794
	£100	£100	137101	129885	35	55	4330	7216	£151,533	£396,872	£238,123	£541,189	-£11,155,704	-£10,607,300
												<b>Total</b>	<b>£70,517,270.15</b>	<b>£110,363,760.50</b>

<b>Table 9: cost of existing regulations</b>			
<b>Description of street.</b>	<b>current charge</b>	<b>current level of overruns</b>	<b>current level of charge</b>
0,1 TS	£2,500	5745	£11,490,000
	£500	14775	£5,910,000
0,1 non-TS	£2,500	1405	£2,810,000
	£500	3616	£1,446,400
2 TS	£2,000	8418	£13,468,800
	£500	12190	£4,876,000
2 non TS	£2,000	7344	£11,750,400
	£500	10568	£4,227,200
3 and 4 TS	£750	10273	£6,163,800
	£250	14187	£2,837,400
3 and 4 non TS	£250	104505	£20,901,000
	£100	144317	£11,545,360

14. Utilities will not be able to completely eliminate overruns, as there will be works overrunning where mistakes are made by the utility business, or unexpected incidents occur, that lead to works overrunning the reasonable period for the works and therefore they will still pay some overrun charges. It is also possible that for some specific works the cost of speeding up the works exceeds the cost of the charge. We understand, from responses gathered via consultation, that highways authorities currently do not always charge the maximum charge for every over run. It has been assumed, on the basis of the consultation responses, that authorities charge in-between 60 and 75 percent of the possible maximum charge fee on average. It is expected that undertakers will not usually be charged 100 percent of the total charge liability as the charge is a maximum and the statutory Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters set out that authorities should consider waving or reducing the charge in circumstances that they deem appropriate. Also the amendment to regulation 9 sets out that if the overrun only consists of one to five pieces of signing lighting or guarding being left behind then so long as the utility collects the left behind equipment the charge should only be £100. The cost of option one on an average annual basis, would be, between £70.52 million and £110.36 million.

## Option two

15. With the charges set at levels outlined in table 3 it is estimated by the Department that the overrun related durations will be reduced in-between 10 and 25 percent for the busiest roads. It is estimated that utilities will spend on average in-between 35 and 65 percent of the maximum value of the potential charge in reducing the number of overrun days. Utilities would not spend 100 per cent of the maximum charge they would be liable for each set of works they prevent overrunning as they know that authorities do not charge the full amount for every set of works (as works on a category one street but in a wide footway and therefore cause no congestion are likely to be charged a much lower amount than a works on the same street but in the middle of the carriageway).
16. A rational utility will spend money speeding up works to avoid an overrun where the marginal cost is the same or below that of the average charge they consider they will pay i.e. the average charge the authority charges. Raising the charge will raise the marginal cost that is worth incurring, so a rational utility will be prepared to pay more to avoid overruns on additional sets of works (ones where currently the cost to avoid the overrun is greater than the overrun charge the works are expected to attract). As noted earlier in this IA, there are a variety of reasons why works overrun, and therefore a variety of ways in which overruns can be avoided. Some overruns can be avoided relatively easily and cheaply; others require much more substantial investment to avoid. This implies an upward-sloping “marginal cost of avoiding overruns” curve, so that the average cost of avoiding overruns will be substantially less than the level of overrun charge itself. Therefore higher charges in option one incentivise utilities to spend resources to prevent overruns that are above the charge level on option two, therefore the costs utilities spend on reducing and preventing overruns is higher.
17. The table below shows how the reductions in overrun related occupations days is calculated for the different types of streets and different types of works. The table below outlines the reduction in overrun days option 2 will deliver. This has been worked out as follows. Description of the street, charge amount and difference from the current charge are as shown in the table. Number of overrun days is taken from the Halcrow estimate of the levels of overruns in 2004 and then reduced by 50 percent. Gross reduction in overruns (expressed as both a percent of the current total number of overruns and as actual days) is an estimate of how much the current overruns will be reduced by. This reduction in days will either end up as an increase in planned durations as utilities will seek to agree longer durations with highway authorities, and some of the reduction will be a actual reduction in street works occupation of the highway (both of these are also expressed as both a percent of the current total number of overruns and as actual days). The current overruns it has been estimated will turn into an increase in planned days are detailed in % increase in days and no increase in days. The current overruns that the Department considers will result in a decrease in overrun related occupation of the highway are detailed in columns net % reduction in overrun days and net no reduction in days. Due to the significant uncertainty, a low and a high range has been estimated of the change in the number of overrun days that are reduced due to the introduction of charges set as indicated in the charge amount column. As with option 1, it is recognised that there is considerable uncertainty regarding the key variables in this table, but these are the best estimates reached from assessment of the available evidence.

**Table 10: Reduction in overrun days – option two**

Descripti on of street.	Amou nt charg e	differen ce from current charge	no overrun days current	gros s % redu ction in over runs low	gross % reducti on in overrun s high	gross no reducti on in overrun s - days low	gross no reducti on in overrun s - days high	over run days low	over run days high	% incr eas e in day s low	% increa se in days high	no increase in days low	no increase in days low high	net % reduct ion in overru n days low	net % reductio n in overrun days high	net no reductio n in days low	net no reductio n in days high
0,1 TS	£5,000 - £10,00 0	2500- 7500	5745	55	60	3160	3447	2585	2298	45	35	2585.3	2010.75	10	25	575	1436
	£5,000 - £10,00 0	4500- 9500	14775	55	60	8126	8865	6649	5910	45	35	6648.8	5171.25	10	25	1478	3694
0,1 non- TS	£2,500	£0	1405	15	25	211	351	1194	1054	10	20	140.5	281	5	5	70	70
	£2,500	£2,000	3616	55	60	1989	2170	1627	1446	45	35	1627.2	1265.6	10	25	362	904
2 TS	£3,000 - £8,000	1000- 6000	8418	55	60	4630	5051	3788	3367	45	35	3788.1	2946.3	10	25	842	2105
	£3,000 - £8,000	2500- 7500	12190	55	60	6705	7314	5486	4876	45	35	5485.5	4266.5	10	25	1219	3048
2 non TS	£2,000	£0	7344	15	25	1102	1836	6242	5508	5	15	367.2	1101.6	10	10	734	734
	£2,000	£1,500	10568	55	60	5812	6341	4756	4227	45	35	4755.6	3698.8	10	25	1057	2642
3 and 4 TS	£750	£0	10273	10	15	1027	1541	9246	8732	5	10	513.65	1027.3	5	5	514	514
	£750	£500	14187	15	25	2128	3547	12059	10640	15	5	2128.1	709.35	0	20	0	2837
3 and 4 non TS	£250	£0	104505	10	15	10451	15676	94055	88829	5	10	5225.3	10450.5	5	5	5225	5225
	£250	£150	144317	55	60	79374	86590	64943	57727	30	20	43295	28863.4	25	40	36079	57727



18. As with option 1, it is recognised that street works undertakers will not be able to completely eliminate overruns and therefore they will still pay some overrun charges. However we understand from consultation responses that authorities do not always charge the maximum charge for every over run. It has been assumed in the modelling above that authorities charge in-between 55 and 75 percent of the possible maximum charge fee on average for the reasons explained above in paragraph 15 of Annex A. This is different from option one as less overrun days turn into increases in planned durations. The total costs of this policy, on an average annual basis, would be between £70.52 million and £110.36 million. This range reflects an assessment of the uncertainty in these estimates.
19. In cases where the charge has not been raised the Department has assumed that some of the increased investment in street works operations due to the higher charges will provide some modest benefits across all street works operations. Such investment includes better mapping databases, improved working practices, improved coordination of the different gangs who carry out the street works. Whilst this investment would have been made to prevent overrunning street works on those streets where the charge is increasing, the Department has assumed that some of the improvement to working practices will spill over to affect all works that undertakers carry out. This is borne out by evidence from one of the authorities running a street works permit scheme, where even though the scheme is focused on the busiest parts of the network, the authority have also seen a noticeable improvement in street works operations on the less busy streets as utilities and their contractors have implemented some of the new working practices developed. The Department has taken account of this in the cost benefit model. This is why on the streets where the charge has not gone up the model shows both a small reduction in overruns and a resulting small decrease in existing overrun charges.

The table below summarises the assessment of the total cost for the policy.

Table 11 costs table for option two																				
Description of street.	Charge	low charge	high charge	number of net overrun days low	number of net overrun days high	% of potential charge spent reducing overrun low	% of additional charge spent reducing overrun high	number of days overrun reduced low	number of days overrun reduced high	cost of reduction of days 1-3 days low charge	cost of reduction of days 4+ days low charge	cost of reduction of days 1-3 - high charge	cost of reduction of days 4+ - high charge	charge level paid low	charge level paid high	Diff. Charge Low	Diff Charge High	total costs low	total costs high	
0,1 TS	£5,000	£5,000																		
	- £10,000		£10,000	2585	2298	35	65			£402,150	£1,206,450.00	£1,867,125	£5,601,375.00							
	£5,000	£5,000																		
	- £10,000		£10,000	6649	5910	35	65			£1,034,250	£3,102,750.00	£4,801,875	£14,405,625.00	£34,458,980	£47,924,460	£17,058,980	£30,524,460	£22,804,579.50	£41,502,660.00	
0,1 non-TS	£2,500	£2,500																		
				1194	1054	35	65	70	70	£61,469			£114,156	£1,642,094	£98,789	£1,167,906	£2,711,211	£1,106,438	-£2,597,055	
	£2,500	£2,500																		
				1627	1446	35	65	362	904	£316,400	£0	£1,469,000		£2,237,400	£678,000	£791,000	£768,400	£1,107,400	£700,600	
2 TS	£3,000	£3,000																		
	- £8,000		£8,000	3788	3367	35	65			£353,556	£1,414,224	£1,641,510	£6,566,040							
	£3,000	£3,000																		
	- £8,000		£8,000	5486	4876	35	65			£511,980	£2,047,920	£2,377,050	£9,508,200.00	£34,606,757	£48,655,488	£16,261,957	£30,310,688	£20,589,637	£37,791,392	
2 non TS	£2,000	£2,000																		
				6242	5508	35	65	734	734	£514,080	£0	£954,720		£6,866,640	£8,262,000	£4,883,760	£3,488,400	£4,369,680	-£2,533,680	
	£2,000	£2,000																		
				4756	4227	35	65	1057	2642	£739,760	£0	£3,434,600		£5,231,160	£6,340,800	£1,003,960	£2,113,600	£1,743,720	£5,548,200	
3 and 4 TS	£750	£750																		
				9246	8732	35	65	514	514	£134,833	£0	£250,404		£3,813,851	£4,911,778	£2,349,949	£1,252,022	£2,215,116	-£1,001,618	
	£750	£750																		
				12059	10640	35	65	0	2837	£0	£0	£1,383,233		£4,974,317	£5,985,141	£2,136,917	£3,147,741	£2,136,917	£4,530,973	
3 and 4 non TS	£250	£250																		
				94055	88829	35	65	5225	5225	£457,209	£0	£849,103		£12,932,494	£16,655,484	£7,968,506	£4,245,516	£7,511,297	-£3,396,413	
	£250	£250																		
				64943	57727	35	65	36079	57727	£3,156,934	£0	£9,380,605		£8,929,614	£10,823,775	£2,615,746	£721,585	£541,189	£8,659,020	
																		<b>Total</b>	<b>33,720,911.93</b>	<b>89,204,080.44</b>

## **Annex B – traffic sensitive streets definition**

One or more of the following criteria should apply before a highway authority may designate a street as traffic-sensitive:

- (a) The street is one on which, at any time, the street authority estimates traffic flow to be greater than 500 vehicles per hour, per lane of carriageway, excluding bus or cycle lanes.
- (b) The street is a single carriageway two-way road, the carriageway of which, is less than 6.5 metres wide, having a total traffic flow in both directions of not less than 600 vehicles per hour.
- (c) The street falls within a congestion charges area.
- (d) Traffic flow contains more than 25% heavy commercial vehicles.
- (e) The street carries more than eight buses an hour.
- (f) The street is designated for pre-salting, by the street authority as part of its programme of winter maintenance.
- (g) The street is within 100 metres of a critical signalised junction, gyratory or roundabout system.
- (h) The street, or that part of a street that, has a pedestrian flow rate in both directions at any time, of at least 1,300 persons per hour, per metre width of footway.
- (i) The street is on a tourist route or within an area where international, national, or significant major local events take place.

# Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

## Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p><b>Basis of the review:</b> The basis for the review is a PIR.</p>
<p><b>Review objective:</b> To confirm whether the revised overrun charges have reduced street work overruns whilst at the same time not increasing planned durations.</p>
<p><b>Review approach and rationale:</b> The review will be based on an analysis of data on planned works durations and actual overruns, which we would invite local authorities and utilities to supply from their EToN systems</p>
<p><b>Baseline:</b> The baseline data set for this review would be data on works durations and overruns in the run-up to the introduction of higher charges. A consistent street works 'scorecard' is currently being developed by the sector, and is due to be launched shortly. Data for financial year 2011-12 will be available to local authorities through the scorecard, and would form a baseline.</p>
<p><b>Success criteria:</b> A reduction in overruns reported by local authorities, accompanied by a reduction in average works durations (to confirm that the improvement in overruns does not merely reflect longer planned durations).</p>
<p><b>Monitoring information arrangements:</b> The street works performance scorecard (mentioned above) is expected to be available for all English local authorities shortly, and will provide relevant indicators to support the review of overrun charges. It should also be possible to validate this data against utilities' own records.</p>
<p><b>Reasons for not planning a review:</b> Not applicable.</p>