

Title: Reducing Disruption on Local 'A' Roads IA No: DfT00346 Lead department or agency: Department for Transport Other departments or agencies:	Impact Assessment (IA)		
	Date: 05/04/2016		
	Stage: Consultation		
	Source of intervention: Domestic		
	Type of measure: Primary legislation		
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Summary: Intervention and Options	RPC Opinion: Fit for purpose
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Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2014 prices)	In scope of One-In, Three-Out? Measure qualifies as
N/Q	N/Q	N/Q	Yes IN

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

Utility companies and local authorities work on local roads to maintain the essential services we all rely on, and to maintain the local road network. These works create disruption and congestion, the greatest impact being on 'A' roads. In two scenarios the disruption could be reduced by different behaviours. First: where works have been started but not completed during the working week, and left in place over the weekend causing delays with no activity; and second, where works are finished and temporary traffic signals are not removed promptly. Works are carried out by commercial companies that lack incentives to incur costs to take measures to reduce this disruption, therefore Government intervention is necessary.

What are the policy objectives and the intended effects?

The policy objectives are to minimise disruption and frustration to motorists (including business travellers) by ensuring that works taking place on 'A' roads in England are either continued throughout weekends, or the work-site is cleared over the weekend and re-opened following the weekend; and that where temporary traffic lights are deployed at works on 'A' roads that they are promptly removed when the works are completed. The effect of these measures will be to minimise congestion affecting business, commuting and leisure traffic, and disruption to local communities and creating an unnecessary cost to the economy.

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

Option 0: Do nothing.

Option 1 (preferred): to create requirements for work to be carried out at weekends on local 'A' roads where a work-site is in place, and to ensure that temporary traffic lights are removed promptly after works are finished. A charge would be applied to works contravening these requirements. The charge would reflect the cost of congestion caused, and be sufficient to incentivise works' promoters to change behaviour.

Option 2: to require all English local authorities to operate a Permit Scheme, and use 'permit conditions' to apply the requirements. Fixed penalties would be a sanction for non-compliant behaviour. Only 55% of authorities have permit schemes, so this would over-ride local choice and could take longer to achieve.

Option 3: to ask those carrying out the works to comply as above. As these are commercial organisations that would incur costs but not benefit directly, we anticipate that this would achieve a limited outcome.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:**
5 years following implementation

Does implementation go beyond minimum EU requirements?			No		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded: N/Q	Non-traded: N/Q	

Summary: Analysis & Evidence

Policy Option 1

Description: Requirement for work to be carried out at weekends on local 'A' roads or cleared to allow free traffic flow. Additional requirement that temporary traffic lights are removed promptly after the completion of works.

FULL ECONOMIC ASSESSMENT

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

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

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

None of these costs can be monetised at this stage. Estimates would be highly uncertain. Further information will be sought at consultation. Utilities, authorities and contractors will bear the cost of removing works from 'A' roads over weekends OR additional costs of continuing works through weekends, incurring higher labour costs, and uplifts for obtaining materials. Authorities will also incur extra costs for inspection and admin staff working at weekends. Cost of congestion for increased duration of works when sites cleared.

Transition cost of updating the Electronic Transfer of Notices protocol (EToN). Familiarisation costs will be incurred by local authorities, contractors and utilities. Additional costs will be incurred through acquiring 'hot-lay' materials for the reinstatement of roads out-of-hours. Utilities have also indicated that they experience difficulty in obtaining staff willing to work at weekends. Local authorities and utilities that fail to comply with the requirements will incur charges.

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

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

None of these benefits can be monetised at this stage. Estimates would be highly uncertain. Further information will be sought at consultation. The wider public and the economy will benefit from the effects of reduced congestion on 'A' roads. The requirements will generate travel time savings, reduced crash risk around road works, fuel carbon emission savings and reduced losses of Government indirect tax revenues. Reduced frustration through not sitting in queues at works where no work is taking place. Reduced complaints to officials and politicians due to less overall occupation of key routes and fewer unoccupied sites. Increased access to business premises due to less occupation of nearby roads. Reduced complaints to utility companies and local authorities.

Improved delivery of local authorities' network management duty.

Key assumptions/sensitivities/risks

Discount rate

We do not have evidence to suggest what proportion of works will choose to clear rather than work through the weekend. The costs and benefits of the policy will be sensitive to a shift in the balance between the two scenarios. There is also significant variation in the cost of congestion across 'A' roads, thus in some scenarios the congestion benefits may be lower than the costs of complying with the measure. We expect to gather more data through the consultation process.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: N/Q	Benefits: N/Q	Net: N/Q	Yes	IN

Summary: Analysis & Evidence

Policy Option 2

Description: Implement requirements through Permit Schemes in all English authorities.

FULL ECONOMIC ASSESSMENT

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

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

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

None of these costs can be monetised at this stage. Estimates would be highly uncertain. English local authorities that have so far chosen not to introduce a permit scheme (45%) would have to do so. A permit scheme requires the authorities' own works to be more transparent, and a business case must be developed which includes data-gathering, building an economic case and consulting with those affected, so there is a cost in doing so. Those working on the roads have to carry out more detailed planning and utility companies incur a permit fee each time they need to work. All parties will need to become familiar with the new processes. Utility companies failing to comply with the new 'permit conditions', or carry out work without first obtaining a permit will incur fixed penalty charges.

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

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

None of these benefits can be monetised at this stage. Estimates would be highly uncertain. Further we anticipate that the benefits of option 2 will be the same as described for option 1.

Key assumptions/sensitivities/risks	Discount rate	
This option would involve the imposition of permit schemes on the remaining English authorities that have chosen not to implement schemes to date. The process of introducing a scheme can be lengthy.		

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: N/Q	Benefits: N/Q	Net: N/Q	Yes	IN

Summary: Analysis & Evidence

Policy Option 3

Description: Request works' promoters to deliver 7 day working, and traffic light removal through voluntary measures

FULL ECONOMIC ASSESSMENT

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

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

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

None of these costs can be monetised at this stage. Estimates would be highly uncertain. The main affected groups would be those carrying out the works for utility companies and authorities, usually contractors. As identified in option 1, compliance with the desired outcomes carries a cost to works' promoters. We anticipate that resulting behaviour change would be at a much lower level than for option 1, as works' promoters are tasked with delivering work at the lowest costs, so are unlikely to add costs that they don't have to. There would be a further cost for works' promoters in familiarising staff with different ways of working.

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

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

None of these benefits can be monetised at this stage. Estimates would be highly uncertain. Further benefits would be the same kind of reduced congestion that would be realised in option 1. However, as the changes would only be implemented by some of the works' promoters as they would be optional, we consider that they would be much less than with mandatory requirements. We would also expect general wellbeing benefits, thanks to reduced frustration experienced by motorists, but again at a lower level than in options 1 and 2.

Key assumptions/sensitivities/risks	Discount rate
Works' promoters are required by regulators and customers to complete their work at the lowest possible costs. In the case of water and energy companies, regulators are unlikely to allow them to pass on extra costs for optional additional expenditure, which this would be.	

BUSINESS ASSESSMENT (Option 3)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: N/Q	Benefits: N/Q	Net: N/Q	Yes	IN

Evidence Base (for summary sheets)

The problem under consideration

1. The New Roads and Street Works Act 1991 (NRSWA) sets a framework for utility companies' work to install, repair, replace or remove apparatus or infrastructure in the highway. This includes specific information on the notices that must be exchanged between utilities companies and highway authorities to allow the co-ordination and inspection of such work.
2. Alternatively, local highway authorities in England can choose to implement a Permit Scheme where both authorities and utilities have to obtain a permit to work, which gives greater powers to co-ordinate works and deliver better network management.
3. Roads and works in scope of the policy:
 - a. 'A' roads managed by local authorities
 - b. Roadworks undertaken by local authorities and utilities companies
 - c. Minor, Standard and Major works
 - d. This policy will also cover immediate works, where work has to be carried out when the need arises, and cannot be planned.

Rationale for intervention

4. Utility companies and local authorities work on local roads to maintain the essential services we all rely on, and to maintain the local road network. These works create external costs through disruption and congestion, the greatest impact being on 'A' roads. In two scenarios the disruption could be reduced by different behaviours. First: where works have been started but not completed during the working week, and left in place over the weekend causing delays with no activity; and second where works are finished but temporary traffic signals are not removed promptly. Works are carried out by commercial companies that lack incentives to incur costs to take measures to mitigate external costs. Therefore Government intervention is necessary to ensure that street works are carried out in a way that generates a lower burden on society. Where road works undertakers do not comply the external costs that this causes (e.g. congestion) will be reflected in the charge that can be applied.
5. The policy is also intended to minimise the frustration and irritation experienced by motorists when they are delayed by temporary works sites on local 'A' roads, where it then turns out that there is no activity going on. This can apply equally to works undertaken by authorities and utilities.

The policy objective

6. To ensure that congestion and frustration to road users are reduced by requiring that road works are not left unattended at weekends on local authority 'A' roads, and that temporary traffic lights are removed promptly.

Description of options

Option 0: Do Nothing

7. This would mean maintaining the current requirements for undertaking street works. It would not address the two issues under consideration: that some works are left

unattended over weekends; that traffic management systems are left in place beyond the completion and reinstatement of a street work.

Option 1 (preferred): 7 day working and traffic management requirement

8. To create requirements through amendments to primary legislation for work (legislative slot to be identified) to be carried out at weekends on local 'A' roads where a work-site is in place, and to ensure that temporary traffic lights are removed promptly after works are finished. A charge would be applied to works contravening these requirements. The charge would reflect the cost of congestion caused, and be sufficient to incentivise works' promoters to change behaviour. This is the preferred option as requirements would be applied automatically to 'A' roads in all authority areas.

Enforcement and Monitoring

9. We anticipate that those authorities which implement the requirement may need to employ additional staff at weekends to undertake inspections to check compliance and conduct related admin tasks. Further information as to how this is implemented and authorities' corresponding propensity to enforce this legislation will be sought at consultation. However, it may be feasible to require the works' promoter to provide evidence of their activity through increasingly widespread technology and photographic evidence to limit the number of site visits required.
10. The requirement will apply to all authorities both those with 'noticing' and those with permit schemes. It is possible that those authorities which already operate permit schemes will find the new 7 day working requirement easier to adopt as they already have the enforcement structure in place for monitoring compliance with permit conditions. The remaining 45% of authorities who operate 'noticing' may need to make more significant changes to their processes to enforce the requirements. It is anticipated that authorities will need to deploy staff at the weekends to inspect for compliance with the 7 day working requirement or where traffic management systems (traffic lights) are required to be removed on the completion of a work. This may be through inspections on the ground or through photographic evidence. There will also be an additional requirement to ensure that the requirements are complied with.
11. Given that the enforcement of the requirement may be an additional cost for local authorities there is considerable uncertainty as to the extent to which the requirement would be enforced. We would welcome information on this during the consultation, gathering evidence on:
 - Opportunities for enforcement without on-site inspections.
 - Additional costs from existing personnel through overtime payments.
 - Opportunities for Local Authorities to enforce this legislation at lower cost by redeploying existing resource or through other options.
12. Our assumption is that enforcement will be risk/issue led and subject to consultation.
13. Fair and proportionate enforcement will require clear specification as to what is compliant and non-compliant behaviour. We would seek views on this at consultation.

Option 2: Apply Permit Schemes to all English Local Authorities

14. This option would require all English local authorities to operate a Permit Scheme, and use 'permit conditions' to apply the requirements. Permit schemes are currently optional for authorities. Fixed penalties could be used as a sanction for non-compliant behaviour.

15. 55% of authorities currently have permit schemes. Setting up a permit scheme would incur costs additional to the implementation of the requirement. We would seek further information at consultation stage as to what these costs are and how they could be offset through permit fees.
16. Existing permitting authorities would require legislative powers to enforce these measures. Primary legislation would be required to mandate permit schemes for all authorities. Mandating permit schemes across all authorities could be seen to be a disproportionate way of delivering this measure.
17. The set-up of a new permitting authority could be lengthy and imply a larger transition period before congestion savings are realised. We would seek further information from those authorities who have permit schemes about how long it took to set up the scheme in their area.
18. A further consideration is that this option would over-ride local choice. Although the option to become a permitting authority has been open to all Local Authorities since 2007, 45% have chosen not to employ these additional powers to date.
19. The ongoing costs of the permitting option (enforcement costs, clearance costs and weekend uplift costs) would be the same as for option 1, assuming the same level of compliance. There would not be a difference in the way that enforcement is carried out or in the way that street works undertakers are expected to comply with the works.

Enforcement and Monitoring

20. For option 2, enforcement of the requirement would be expected to be carried out in the same way as for option 1.
21. A key difference between option 1 and option 2 may be the level of enforcement that is realised. As mentioned previously, permitting authorities may find it easier to enforce the requirements than noticing authorities as they have a structure which could be adapted to the new requirements.
22. If enforcement were to be greater under option 2 then the net costs and benefits of the requirements would increase accordingly.

Option 3: to ask those carrying out the works to comply voluntarily with the weekend working and traffic management requirements.

23. We have considered non-regulatory measures to apply the seven day working and traffic management requirements. These included voluntary codes of practice, industry standards, and schemes to encourage public recognition of good practice.
24. Indications are that these would be unlikely to meet the policy objectives for the reasons below.
25. Works promoters would have little incentive to comply voluntarily with the requirement. These are commercial organisations that would incur costs, but would not directly benefit from the actions of clearing street works or working through the weekend.
26. Furthermore, utilities companies are required by regulators to carry out works as cost-effectively as possible, so without a regulatory requirement they would be unlikely to

modify their processes. Authorities are also tasked with delivering works at the lowest cost.

27. There may be some instances where utilities recognise that they would benefit from improved customer relations by complying with the requirement. However, we would assume that, in these instances, some variant of the requirement is already being applied. Thus a purely voluntary system would not necessarily reduce the number of unattended works or traffic management systems.
28. Local authorities would have similarly limited incentives to voluntarily comply with the requirement on the works which they undertake. The increased costs of weekend working or site clearances represents an additional constraint on local authority budgets. If the requirements are not backed by regulation then there is no opportunity for them to recoup this cost through charges on non-compliant works.
29. We therefore anticipate that a voluntary system would achieve a limited outcome in terms of achieving the seven day working requirement and associated congestion benefits.
30. It is possible that a voluntary mechanism would have some success in achieving the traffic management removal requirement. The costs involved in moving traffic management equipment (such as temporary traffic lights) out of the carriageway are in most cases likely to be small, and there are likely to be some public relations benefits of improving service delivery in this area. Greater coordination between contractors and traffic management operators may even generate additional efficiency savings for the firms involved.

Enforcement and Monitoring

31. Given that this would be a voluntary measure there could be no system of enforcement. Charges could not be applied and it is unlikely that authorities would employ resources in monitoring sites which otherwise comply with their notice/permit requirements.

Analysis of the costs and benefits

Option 1: 7 day works and traffic management requirement

Costs

32. The costs of the proposals can be categorised as either transitional - this refers to costs of setting up the new requirement - or ongoing. Ongoing costs are incurred by local authorities and utility companies in the course of applying the requirements.

Transition Costs

33. The EToN system is the interface used by utility companies and local highway authorities to transfer information about planned, active and closed street works and road works. The technical specification underpins the system and ensures that all utility companies and all highway authorities communicate the same information in the same format.
34. In the event that street works requirements change, EToN's technical specification will need to be updated. This process will require developers to invest in updating the software in line with the revised specification.

35. There are five EToN developers. Four are commercial enterprises that provide the systems to the street works sector and the fifth, the telecoms company BT, produces their own in-house ETON system.
36. All utilities companies, Highways authorities and contractors that use ETON will also be required to upgrade their IT systems and familiarise their staff with the changes.
37. We have not been able to monetise these costs based on up to date information. We will use the consultation period to collect this evidence. We would welcome more up to date information as to the developer and user cost of updating the EToN system at consultation stage.
38. A consequence of the Traffic Management removal requirement could mean that reinstatement crews may need to move the traffic management system themselves in order to restore the road to free-flow. Typically this job is currently done by designated traffic management contractors or gangs who own and set-up the systems.
39. Therefore, an additional transition cost would be the training of contractors to handle and remove traffic lights. It is not expected that this would impose a significant burden on these businesses. This cost has not been monetised as it is difficult to predict at this stage how works' promoters will respond to the traffic management requirement. We would welcome more information on this issue during the consultation.

Ongoing costs

40. Local Authorities may need to employ additional staff at weekends to ensure that the requirements are being met. Early consultation with local authorities has suggested that the weekday wage of a member of staff is in the range of £320 - £410. Any staff who are required to work weekends may further receive an uplift on their wages. It may be possible to find a solution using photographic evidence that would remove the need to attend site in most cases. As mentioned in section 11, given that the enforcement of the requirement may be an additional cost for local authorities, there is considerable uncertainty as to the extent to which the requirement would be enforced. We would welcome information on this during the consultation
41. The requirement, where it is enforced, is expected to impose additional costs on those who undertake street works (e.g. utilities companies, local authorities, contractors) regardless of whether they choose to clear the site or work over the weekend. It is expected that the undertaker will choose the option which is both feasible and cost-effective.
42. In the case of short duration works, the issue may be avoided by planning works to ensure they are completed within standard working hours. There may also be other ways of avoiding any additional costs and we would welcome information on how this might happen.
43. Costs will be determined by the contracts that are in place – in some cases, weekend working will already be included as standard. For example, some emergency works may be required to work on consecutive days following an incident, regardless of whether this period incorporates weekends or not.

Cost of clearing work sites at weekends

44. If the works promoter chooses to clear the site so that traffic flow is not impeded during the weekend, they will need to employ resources (mostly staff but also materials such as temporary reinstatement materials or road plates) to carry out the temporary clearance and reinstallation of the work. This is an opportunity cost as resources are diverted away from completing the work.
45. The cost of deploying a work crew varies depending upon the type and scale of the work. To estimate the cost of clearing work sites, we would need to have sufficient evidence so as to put a figure on the average cost of employing a crew. This would then represent the opportunity cost of employing an average crew in clearing a site rather than working the site.
46. Based on early discussions with the sector, it has been assumed that the time needed to temporarily clear and subsequently reinstate a work would be half a day for a minor or standard work and one full day for a major work.
47. Under certain circumstances it will not be feasible to temporarily clear a work; for example, major works on gas or water mains require large excavations which could not be quickly and safely returned to normal use over the course of a weekend.
48. On the other hand, it may be feasible to schedule shorter, minor works so that they begin and end within the course of the working week to avoid incurring further costs from the seven day requirement.
49. At consultation we would welcome responses as to the percentage of works which the works promoter is likely to make the choice to clear (or reschedule during the week), and correspondingly the percentage of works which will instead continue over the weekend. These proportions would affect quantification of costs and benefits in a future IA.
50. The total opportunity cost of clearing would therefore be the opportunity cost per clearance (and reinstallation) multiplied by the total number of works choosing to clear.
51. As has been discussed, the temporary removal and reinstallation of street works takes time. As a result, for those works which choose to clear, the total duration of the work will be extended. Early consultation with the sector has led to the suggestion that this approach could extend the duration of a work by up to 15%. Work is continuing to be carried out to verify these figures and the results will be taken into account during the consultation and subject to change if new data comes to light.
52. An additional day of works represents an additional day of congestion, and therefore a cost. This congestion cost could be estimated by multiplying the number of additional days by congestion costs derived from QUADRO outputs (see annex B).
53. At this stage we do not have sufficient data to give an average value of the cost of a street work. We have a range of data for this so far, from an unrepresentative sample. We would welcome more data from local authorities as to these costs. In order to capture the congestion impacts of this policy we would particularly ask for data which differentiates between weekend and weekday QUADRO outputs.

Cost of working on sites at weekends

54. Alternatively, if the undertaker chooses to work on the site over the weekend they will incur additional costs of acquiring resources and employing staff “out of hours”. Applying the same logic as before it is assumed that it will not be feasible or preferable for all street works to continue over the weekend. The estimate of the total number of works which continue over the weekend could be estimated, as before, based on an assumption as to the percentage of works which will choose not to clear. Currently we do not have this evidence but will seek it at consultation.
55. At the weekend, we would expect there to be a considerable uplift in labour costs. Early, informal consultation with the sector indicates that the typical labour uplift for Saturday working is 25% and for Sunday working is 50%. Work is continuing to be carried out to verify these figures and the results will be taken into account during the consultation and subject to change if new data comes to light.
56. The labour cost of introducing the requirement is therefore the additional money spent on employing staff at weekends rather than employing them on weekdays (the baseline case). This is the weekend uplift cost.
57. The total labour cost of sites being worked at weekends could therefore be calculated by multiplying the number of works in scope of the requirement by the percentage of works which will be worked on weekends, and finally by multiplying this figure by the uplift cost per weekend.
58. The full cost of weekend working also includes uplift on materials. Reduced availability at weekends of these materials could lead to their prices increasing. In early consultation the sector has provided estimates that there is an expected 20% increase in costs for weekend availability of hot bituminous materials which are required.
59. As many plants which supply these materials do not open at weekend there may be issues with availability of additional charges incurred to obtain the materials – in some cases, plants are not permitted to open at weekends due to environmental considerations. The sector suggests that there would be a £1000 per day payment to operate at weekends. Alternative cold lay materials are available, but these can be more expensive thus they would also represent an increase in costs compared to the baseline.
60. We have not monetised these costs as it has proved difficult to develop aggregate estimates for the additional costs of materials over such a large number and variety of works. The sector is highly competitive and it is expected that the requirement will be carried out in the most cost effective manner. If contactors’ costs increase it is expected that this will be passed onto the utilities companies and local authorities which employ their services. We would welcome further information on this at consultation stage.
61. A further consideration is the impact of weekend works on noise pollution. Given uncertainty as to the number of sites which would be worked (rather than left unattended) we have been unable to quantify this cost. WebTAG provides guidance for quantifying costs however it was deemed disproportionate in this case due to the need to gather data from noise surveys.

Traffic Management Requirement Costs

62. It is assumed that the majority of street-work undertakers would respond to the traffic management removal requirement by training contractors to disable the lights and clear

the equipment from the road immediately following the work. This represents a transition cost initially but then an on-going cost of future staff members needing additional training. We have not monetised this cost due to a lack of data. It would be useful to have evidence from industry as to the amount of training that would be required and the estimated cost of providing this training.

63. The traffic management removal requirement may, in some cases, mean that the job of removing equipment will be transferred from one contractor to another. In aggregate this is not expected to generate a significant additional cost although it may require a revision to contracts and resources being employed to coordinate the prompt removal of traffic lights. We would welcome more information on this issue at consultation, both as to the feasibility of this type of arrangement and the costs involved.

Indirect costs

64. Road operatives and support staff will be required to work unsocial hours. This could have a negative impact on the well-being of these workers. It is expected that any workers employed during unsocial hours will be compensated (e.g. uplifted wages at weekends), and that this compensation will be dependent on the terms of the individual's contract. In some cases it may be that the monetary compensation received is lower than the opportunity cost of that individual's time. It is not possible to monetise this cost due to a lack of evidence as to the effect of weekend working on well-being in the sector.

Costs to business

65. Estimates suggest that 72% of works are carried out by utilities (see annex A). These are businesses and any costs that they incur will factor in the Equivalent Annual Net Cost to Business (EANCB) totals.
66. Assuming that local authorities and utilities will incur the same costs of undertaking works of each type (minor, standard, major, emergency, urgent) and that type of work is distributed evenly across the two groups of undertakers, the total cost to business of the scheme will be approximately 72% of the total cost of clearing works, and 72% of the total cost of working on weekends. These assumptions are based on unpublished data and can be tested during consultation.
67. As we have not been able to arrive at monetised estimates of the total costs of complying with the measure at this stage with the data available, we cannot say at the moment what the direct cost to business will be.
68. Given that utilities may be able to charge for their services at a level which reflects the cost of delivering these services, the cost of the requirement could potentially be passed onto customers in the form of higher utility bills.
69. The prices that utilities charge their customers are regulated (other than in the telecoms sector which operates in a highly competitive market). In order to allow a rise in utility bills, regulators would need to see evidence that utilities will incur additional costs as a result of complying with the seven day working requirement. If it is the case that the requirement is not widely complied with then the case for raising utility bills will be weakened.
70. Evidence from OFGEM shows that network costs represent approximately £300 of the average, £1,300, dual fuel bill per year. Street works are only one factor in the overall programme of network maintenance and management. It is assumed that the specific

cost of street works will be a small portion of the network cost; any increase in street works costs which is passed onto bills is therefore unlikely to have a large impact on the overall bill.

71. An additional cost to business generated by the policy is the congestion generated by the increased duration of works which clear.
72. WebTAG guidance indicates that the proportion of journeys made on a given weekday that are for business purposes (work as opposed to commuter or leisure journeys) is approximately 16.4%. The proportion of journeys made for business purposes at the weekend is lower at 3%.
73. Applying this percentage to the value of time cost of congestion generated by the increased duration of works would imply the total value of time cost of congestion to business. We do not currently have sufficient data to make a robust estimate as to this congestion cost.
74. We anticipate that the business costs of the proposal will exceed the benefits to business in all options.

Benefits

75. In the case that the site is worked at the weekend (where it would otherwise have been left in-place but unattended) the duration of the disruption caused by the street work will be shortened. This represents a congestion saving for weekend travellers.
76. The total congestion saving from worked weekends can be estimated by multiplying the number of weekend days that will be worked (rather than left unattended following the new policy) by an average value of congestion costs caused by a road work on a weekday. We do not have sufficient evidence on the relative likelihood of clearing sites rather than working through weekends to provide this average congestion figure.
77. Congestion savings will also accrue from the prompt removal of traffic management. We do not have the data on the number of works where traffic management equipment is left in place after the work has been completed and the road is reinstated. However this could be a significant benefit. Without baseline we are unable to estimate the value of travel time savings generated by the traffic management requirement. We would welcome evidence at consultation stage on this.
78. The benefits of the requirement will be highly dependent on the level of enforcement of the requirement.
79. Charges levied on non-compliant works effectively represent a new income stream for local authorities.
80. The charge for leaving weekend works unattended or for leaving traffic management in-place after the completion of a work could be set at level to reflect the cost of congestion. Although maximum charges will be set depending on the volume of traffic, it is expected that Local Authorities will exercise discretion to set the charge to reflect the cost of the traffic disruption.
81. It is expected that the use of this revenue will be determined by the same rules that are applied to overrun charges. Namely that:

The “street authority may deduct from fixed penalties received under Schedule 4B to the 1991 Act the reasonable costs of operating the scheme under which they are paid and shall apply the net proceeds for the purpose of developing or implementing policies for the promotion and encouragement of safe, integrated, efficient and economic transport facilities and services to, from and within their area.”

Regulation 9, paragraph 8 of Schedule 4B to NRSWA 1991, (S.I. 2007/1952).

82. It was not deemed proportionate to calculate the revenue that will be generated by this policy due to 1) uncertainty over uptake and enforcement of the requirement by Local Authorities and 2) uncertainty over compliance rates. We would welcome further information about this issue at consultation stage.
83. A further non-monetised benefit of the proposal is the potential reduction in complaints to authorities’ and utilities’ officials. This could be seen as a small efficiency saving as it would mean fewer resources are employed in responding to complaints. We do not have sufficient evidence to calculate the scale of this saving, and it was deemed disproportionate to extract this evidence.
84. Overall, the requirements could lead to improved delivery of the network management duty. Highway authorities have a ‘network management duty’ under the Traffic Management Act 2004. Congestion at weekends, and from road works in general, is perceived as a problem by the public causing frustration. This action could have positive external benefits in terms of improving the well-being of drivers beyond the direct impact on congestion savings.

Benefits to Business

85. Businesses can be affected by congestion from works in two main ways: employees being delayed; reduced activity due to problems of access.
86. To calculate the overall benefit to business derived from the 7 day working requirement, we can apply WebTAG estimates of the proportion of journeys undertaken for business to the total congestion savings (from cleared/worked sites). As we do not have enough evidence to aggregate the congestion savings we cannot estimate this benefit for business.
87. The measure would reduce the overall time when access to business premises is impeded by street works, thus allowing businesses to function free of disruption. This benefit has not been monetised but is potentially quite large, particularly at a local level, if for example works restricting access to a town centre.

Option 2: Apply Permit Schemes to all English Local Authorities

Costs

88. The ongoing costs of achieving both requirements are expected to be the same as described in option 1 (above). We will, however, welcome any additional information relating to the costs of this option.
89. Permitting authorities will need to employ extra staff at weekend to conduct inspections and enforce the policy.

90. The requirement would apply in the same way as option 1. Therefore there would be the same costs of congestion from the increased duration of cleared works.

Transition costs

91. The transition costs of option 2 are expected to be greater than for option 1 or 3. Moving to a permit scheme from a noticing scheme requires additional administrative work and training of staff to the new system. It will take time for these changes to be made. We would welcome more information on transitional costs and timing.

92. Some of the 45% of authorities that have not moved to a permit scheme may have found that, in their case, the costs of operating a scheme may have outweighed the benefits. We would welcome further information from 'noticing' authorities if this has been the case in their area.

Benefits

93. The benefits of option 2 are expected to be the same per work site as for option 1. We will, however, welcome any additional information relating to the benefits of this option.

94. The requirements will be enforced and executed in a similar way, thus any congestion savings will be equivalent.

95. It is possible that having a permit scheme in place could make it easier to enforce the requirements. However, we do not have evidence at this stage to confirm whether this would be the case.

96. It is anticipated that the benefits of the requirements would take longer to be realised. For those authorities that do not currently operate permitting schemes, it is unlikely that they would be able to implement the measures immediately. This would mean that, on balance, the scale of the benefits achieved by option 2 are likely to be lower than those achieved in option 1 across the standard ten year appraisal period.

Option 3: to ask those carrying out the works to comply voluntarily with the weekend working and traffic management requirements.

Costs

97. Transition costs under a voluntary system will be considerably lower than for the other options considered. There will not, for example, need to be an update to the EToN system.

98. Depending on whether monitoring measure implemented, there could be transition costs of, for example, setting up an app to record evidence of unattended sites. Given the early development of this proposal, and the wish to gather more ideas at consultation stage as to the feasibility of a voluntary system, we have deemed it disproportionate to quantify this cost.

99. We do not expect that there would be enforcement as meeting the requirements would be voluntary, and there would be no penalty for non-compliance. Local authorities would therefore have no incentive to enforce the measure.

100. We expect that the ongoing costs for work's promoters of clearing/working a site will be equivalent under a voluntary system as under the mandatory systems outlined in options 1 and 2.
101. The total ongoing costs incurred through option 3 would depend upon the uptake of the voluntary 7 day working and temporary traffic light removal measures.
102. It is reasonable to assume that compliance will be much less than under a mandatory system where a charge is applied to non-compliant behaviour. Furthermore there are a number of constraints on works promoters which would make it unlikely that they could justify/absorb the extra expense of following the requirements.
103. For example, utilities companies are required by regulators to carry out works as cost-effectively as possible, so without a regulatory requirement, they would be unlikely to modify their processes.

Benefits

104. We anticipate that the congestion savings per work where voluntary measures are applied will be the same as for an equivalent work where mandatory measures are applied.
105. However, on aggregate we expect that the benefits of a voluntary system will be much lower due to a low uptake rate.
106. The work promoters will not directly benefit from the reduced congestion that modifying their work processes will cause and therefore have limited incentive to incur the costs of doing so.

Key data required to quantify the costs and benefits to business

Benefits to business	Value of savings from reduced congestion.
Costs to business	Labour uplift costs at weekends
	Material uplift costs at weekends
	Charges for non-compliance

Risks and Assumptions

Assumptions

107. The policy will only affect street works on local 'A' roads. 'A' roads make up 9.5% of local authority owned roads (in mileage terms). We will seek information on the proportion of works that are undertaken on 'A' roads.

Risks

108. Early consultation with the utilities' sector has highlighted that there is a risk of a skills shortage within the sector, particularly given competition from other sectors (such as construction).
109. There may be a further, related risk that the materials and capital needed to undertake street works at weekends/clear are not available, or only available at inflated prices.

110. There is a risk that compliance with the requirement (in all of the options considered) could lead to discontinuous demand for labour and resources in the sector.
111. Limited uptake of scheme by local authorities. The requirements will be applied to 'A' roads but enforcement will be the responsibility of highway authorities. It will be for them to put the resource in place to do this.
112. In complying with the requirements for their own works and the associated costs, local authorities could divert resources from other works, or reduce the number of works which they themselves undertake.
113. Maximum charges will be made available to authorities to apply. The revenue incentive could lead to limited inappropriate application of charges in some areas.
114. Non-compliance due to low perceived risk of enforcement.

One-in-Three-Out (OI3O) and the Business Impact Target (BIT)

This measure is in scope of OI3O. Although at this stage we are unable to quantify the cost to business, from informal consultation and our initial analysis we expect the costs to business to be greater than the benefits to business and therefore the measure would score as an IN. It is also a Qualifying Regulatory Provision (QRP) and therefore the EANCB from the final stage IA will score against the BIT.

Wider Impacts

Small and Micro Business Assessment

115. Seven-day works rules and charges would apply equally to all works promoters, regardless of size.
116. There are no utility companies undertaking street works that would fall into the category of a small (<49 employees) or micro business. Utility companies and local authorities are expected to bear the cost burden of applying the seven-day working rules; it seems likely that contractors would pass on the costs of weekend working and clearance.
117. Some contractors may be regarded as small firms. At present we do not have data to suggest how many or what proportion of contractors this represents. We ask for further evidence on this during the consultation.
118. The majority of works are, however, carried out by a small number of large contractors. The seven-day rules may be more difficult for small contractors to enact, as they may need to employ more staff to cover the full seven day duration of the works, and this could put them at a competitive disadvantage.
119. Typically, the Government does not consider that smaller organisations should be exempted from other street works regulations such as 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. This is with the aim of internalising the external costs generated by these firms.

Greenhouse Gases Impact Test

120. Congestion on roads generates greenhouse gases. Compared to our baseline (existing road conditions) our estimates suggest that the options appraised within this document would lead to a net reduction in congestion and therefore a net reduction in greenhouse gas emissions. These figures are based on QUADRO outputs thus we are unable to disaggregate the congestion costs/savings into their component parts and identify the specific net greenhouse gas saving.

Justice Impact Test

121. The charges for non-compliance will be penalty charges allowing for discretion rather than fines. The charges will be applied by invoice. We would expect the works' promoter and the authorities to negotiate an agreement on what is payable, in the same way as is done at present for 'over-run' charges. In the same way, we would anticipate that a very small proportion of charges applied would end up being challenged in court.

Rural Proofing Toolkit

122. We consider that the measures proposed will have a positive effect on rural communities. It means that works on rural 'A' roads will be carried out more efficiently and lead to less delays and disruption on those roads for rural communities and road users.

Equalities Impact Assessment

123. We consider that this proposed policy will not affect anyone with a protected characteristic.

Family Test

124. We consider that any impact at the level of the family will be small and indirect, or temporary in nature.

Post Implementation Review Plan

125. We plan to carry out a post implementation review 5 years after the implementation date of the policy. A detailed PIR plan will be set out in the final stage Impact Assessment.

Annex A: Number of works in scope of the requirement

1. The table below details estimates for the total number of works per year which are carried out by utilities and local authorities in the categories of work identified as in scope of the requirement.

Works Promoter	Minor	Standard	Major	Emergency	Urgent	Total
Local Authority & Highways Agency	244,391	55,093	244,391	9,694	2,528	659,130
Water	8,270	28,081	381,647	11,196	114,189	559,923
Gas	19,801	34,961	23,496	37,245	3,892	158,997
Electricity	6,508	44,109	29,715	3,969	48,316	145,633
Telecoms	276,091	23,960	276,091	7,158	39,856	652,085
Total	555,061	186,204	955,340	69,262	208,781	2,175,768

2. The requirement only applies to street works taking place on 'A' roads that local authorities are responsible for. Approximately 9.5% of local roads are classified as 'A' roads. Assuming that works are evenly distributed across the network, in total this brings the number of works in scope of the requirement to approximately 206,700.
3. In order to estimate the number of weekends affected by the policy we need to estimate the number of weekends that are spanned by works in scope of the policy. It has not been possible to directly obtain this evidence thus we have made a number of assumptions to arrive at our estimates which are calculated using data on average duration of works. We have assumed that on average there are 112 weekend days in a year (including 8 bank holidays). The percentage of calendar days which would be affected by the policy is thus $365/112 = 31\%$. We apply this percentage to the estimated average duration of a work (in calendar days). We will then scale up this figure for works

on 'A' roads in order to estimate the number of weekend days spanned by all works in scope of the requirement.

4. Early consultation with the sector suggests that this method would overestimate the number of minor works which span weekends. The maximum length of a minor work (as defined by street work regulations) is 3 days. It is therefore common for works to take place on consecutive days mid-week, rather than across a weekend. There are likely to be even fewer minor works which are left in place but unattended during the weekend. To make our estimates more realistic we have used information collected from a single local authority who have provided the level of granularity in their data needed to identify the number of weekends spanned by minor works. This number has then been scaled up for works across all local authorities. Following consultation we would aim to improve our estimates by using a larger sample of data.
5. Our estimates are detailed below (we have used weekends as a unit rather than weekend days in order to make the data more manageable):

Type of work	Average Duration	Number of weekends spanned	Number of weekends spanned and left unattended
Minor	2.5	2,860	2,860
Standard	8	17,622	17,622
Major	25	25,868	25,868
Emergency	6.7	5,491	5,491
Urgent	3.8	12,085	12,085

6. For the purposes of establishing a baseline we need to know how many of the weekends which are spanned by works are left unattended. Not all works that span weekends will be left unattended, and not all works left in place will cause an obstruction to traffic, hence not all works will have to change their behaviour as a result of the introduction of the requirement.
7. We currently do not have evidence as to the number of works which are left in place but not worked during the weekend.
8. We aim to refine our estimates following consultation. In particular we would be grateful for evidence as to the number of works which are currently left unattended (or prevalence of 7 day working clauses in contracts). We would also welcome any evidence that would refine our assumption as to the number of works which take place on 'A' roads.

Annex B: Congestion costs and savings

Determining an estimate for the total value of time savings that the requirement will generate is not straightforward. The disruption, and therefore the delay caused by a street work will depend on a number of factors:

- a. Level of disruption to the carriageway – a large scale work could require full closure of the carriageway and thus significant delays or inconvenience to traffic. A partial closure would also imply some level of disruption. On the other hand a minor work that takes place largely on the verge or pavement may generate only minimal disruption. The cost of congestion will therefore vary accordingly.
 - b. Type of traffic management- some methods of traffic management will be more disruptive to the normal flow of traffic than others.
 - c. Flow rate of traffic – if the ‘A’ road is at high capacity many journeys will be affected by the work. The value of time costs of the congestion caused by the road will therefore be significant. If, on the other hand, the road is not well used or there are many viable alternative routes then the cost of the disruption caused will be lower.
 - d. Journey purpose – if the road is an important commuter route then the value of time costs of congestion from road works would be larger than on an equivalent road where the majority of journeys are taken for leisure purposes. The cost of travel time is assumed to be higher for those undertaking journeys for work than for those who are making the journey for leisure purposes.
 - e. Time – The cost of congestion will vary over the course of the day and will be different between weekdays and weekends.
9. Data provided to us by local authorities demonstrates the range of cost valuations for different types of work. To give a few examples: a road closure on a reinstatement category 1 road with a high flow rate can generate congestion costs as high as £20,000 on a Friday, the equivalent cost on a Sunday is frequently half that value. On the other hand, a work that does not result in full or partial closure of the road can generate costs in the low hundreds, even if carried out on a weekday.
10. It has therefore proved difficult to provide aggregate estimates of congestion costs and benefits. Our approach has been to make use of the data that we have and scale this up based on a number of assumptions about the number and characteristics of the works that are in scope of the requirement.
11. Works’ costs are typically calculated using QUADRO software. This is a package that appraises individual works on different types of road by modelling the delay experienced by road users, quantify this delay and the monetising the cost of this delay. QUADRO outputs consider the overall impact of the delay which includes consumer and business user costs, crash costs, fuel carbon emission costs and Government indirect tax revenues.
12. QUADRO data can be used to appraise the value of reduced congestion. This can be taken from a range of local authorities and further data will be collected at consultation.