Title: Street Manager and updates to permit schemes **IA No:** DfT00408 **RPC Reference No:** N/A **Lead department or agency:** Department for Transport **Other departments or agencies:**	**Impact Assessment (IA)** **Date:** 21/06/2019 **Stage:** Consultation **Source of intervention:** Domestic **Type of measure:** Secondary legislation **Contact for enquiries:** Sally.Kendall@dft.gov.uk

Summary: Intervention and Options

RPC Opinion: Not Applicable

Cost of Preferred (or more likely) Option (in 2016 prices)			
Total Net Present Social Value	**Business Net Present Value**	**Net cost to business per year**	**Business Impact Target Status**
£69.2m	£41.7m	-£4.8m	Qualifying provision

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

There are estimated to be around 2.5 million road works each year on the local road network in England. These can cause significant disruption to people's journeys and congestion which is estimated to cost the economy around £4 billion per year. The Government is working with local authorities and utility companies on a range of measures to help ensure that road works are managed and co-ordinated as effectively as they can be, to reduce the time it takes to carry out works, and to make accurate and up-to-date information available to road users. The current system (EToN) that is used by the sector is mandated in current regulations but is outdated, no longer fit-for-purpose, and needs to be modernised.

What are the policy objectives and the intended effects?

As part of a programme of modernisation and reforms, the Government has invested £10 million in the development of a new digital service called Street Manager. This will transform the planning, management and communication of street and road works, and it will provide up-to-date, accurate and open data on live and planned works. To support implementation of the service, we need to make a number of amendments to legislation. In addition, we are consulting on amendments to the national conditions that apply to permit schemes to improve the operation of them and to reduce the impact of works on congestion. These proposals will support the reduction in disruption to people's journeys and congestion.

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

A Discovery/user research carried out in 2017 considered the current systems (EToN) in use, found a number of issues and un-met user needs, and considered options for meeting user needs. It considered no change, amending the current technical specification for the systems in use supported by regulation, and recommended the development of a new central digital service. The latter requires amendment to regulations to replace the old system with the new service and to support its operation. Other non-regulatory options would not meet policy aims and user needs, or address limitations of current technology.

Option 0 – baseline option, do-nothing scenario: Keep the EToN system and EToN technical specification in current legislation.
Option 1 – do-something scenario: Implement Street Manager digital service by amending current legislation. Also amend permit scheme national conditions to reduce the impact of works on congestion.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 2025

Does implementation go beyond minimum EU requirements?	No			
Is this measure likely to impact on trade and investment?	No			
Does this measure comply with our international trade and investment obligations, including those arising under WTO agreements, UK free trade agreements, and UK Investment Treaties?	N/A			
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)	**Traded:** N/A	**Non-traded:** N/A		

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister: _____ Date: _____

Summary: Analysis & Evidence

Policy Option 1

Description: Assessment of the costs and benefits of introducing Street Manager digital service

FULL ECONOMIC ASSESSMENT

Price Base Year 2018	PV Base Year 2019	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: 54.1	**High:** 99.4	**Best Estimate:** 76.7

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0		-3.8	**-31.5**
High	0		-3.8	**-31.5**
Best Estimate	0		-3.8	**-31.5**

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

Utility companies, contractors and local highways authorities – licence fee costs for EToN software and charges for Street Manager, cost savings related to switching from EToN to Street Manager
Government – Costs to operate Street Manager which will be recovered using annual charges.

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

Utility companies, contractors and local highways authorities – cost savings related to previous EToN upgrade costs when switching from EToN to Street Manager, one-off familiarisation and administration costs
EToN developers – new costs from developing technology links to Street Manager which are likely to be recovered from customers. Loss of revenue which might be replaced by use of other new products developed as a result of Street Manager and its data.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0		2.6	**22.6**
High	0		7.9	**67.9**
Best Estimate	0		5.3	**45.3**

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

Road users and wider society – congestion cost savings from better planned, managed and communicated open source road works data

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

Existing EToN developers – have access to open source data and can create new products using Street Manager.
Technology sector – new technology firms can enter the market using open source data and create products for users. The market benefits from increased competition and users benefit from a wide variety of products.

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5

Key assumptions to the analysis are the reduction in work days due to Street Manager, the Street Manager transition period, the likely take-up of Street Manager and the likely continued use of EToN products. These assumptions have been sourced using feedback from stakeholder engagement and sensitivity analysis has been used, where appropriate, to mitigate against any risks.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m: -24.2
Costs: -2.7	**Benefits:** 2.7	**Net:** -5.4	

Evidence Base (for summary sheets)

The problem under consideration

There are estimated to be around 2.5 million road works carried out in England each year. These can cause significant disruption to people's journeys and congestion which we estimate costs the economy around £4 billion per year[1]. Street works are carried out by utility companies (water, gas, electricity and telecommunications) to install, repair or maintain the vital services on which we all rely. Road works are carried out by the local highway authority (LHA) to maintain the roads or, for example, to install cycle or bus lanes. We have used the term road works to cover both types of works in this Impact Assessment.

Road works need to be planned, managed and co-ordinated more effectively to reduce the impacts they have on congestion. The time it takes to carry out works needs to be reduced and accurate and up-to-date information needs to be available to road users to help them plan their journeys more effectively. This is not just to minimise the impact that works have on congestion, but also to ensure that that our systems are fit for the challenges of the future, including the digital transport agenda, that they support innovation and that they are able to deal with the rising demands for transport services and for utility infrastructure.

Rationale for intervention

The current works notification system (EToN) – baseline option

The main system used by local authorities and utility companies for managing road works was originally developed in the 1990s. It is called the Electronic Transfer of Notifications (EToN). The DfT owns and issues a detailed technical specification that provides the rules through which data is exchanged (an XML schema) between EToN systems. The data requirements and the technical specification are underpinned by regulations, guidance and authorities' permit scheme orders. Each local authority and utility company has its own EToN product and to use these to apply for street works permits or to issue street works notices.

Each individual organisation has its own EToN product or software package that is provided by a small number of private sector companies. The technical specification has been updated over the years. The last time was in 2013[2]. EToN allows for the notices and permits that are needed for road works to be submitted to the local highway authority from the works promoter, who may be a utility company, a highway's works team or from a contractor. EToN also allows for two-way communication between the local authority and the works promoter to, for example, query times and plans, and it will store details of the works in local systems.

In early 2017, the DfT began to investigate whether or not the current system was fit for purpose in terms of the technology it uses, the needs of the user community from local authorities and utilities, the needs of road users, and the rising demand for up to date and accurate data about road works. Organisations were reporting frustrations about:

- The timeliness and accuracy of data
- The lack of visibility and availability of the data across different local authority areas
- High costs
- The need for updates to reflect current needs and legislative changes
- Inconsistent systems and data

The Discovery that we commissioned carried out user research with all those that are involved with and interact with street and road works on the local road network. Several common themes emerged from the research around:

[1] Halcrow 2004, Estimation of the Cost of Delay from Utilities' Streetworks

[2] Technical Specification Version 6.0 April 2013 New Roads and Street Works Act 1991 Technical Specification for the Electronic Transfer of Notifications (EToN)

- A lack of consistent working practices, leading to increased overheads and discontent
- Use of multiple systems leading to inconsistency
- The need for better communication and collaboration
- Too much time and effort being spent managing inefficient processes
- A general lack of visibility and accuracy of limited data
- Little or no support for collaboration and joint works
- Use of outdated and expensive technology
- An inability to change systems or add new fields to deal with legislative amendments
- A lack of innovation

The Discovery considered options for updating or reforming the current systems and recommended that the best way of meeting user needs and policy goals would be to develop a new digital service. It identified the goals for a new service and a set of prioritised user needs. It recommended that the project proceeded to an Alpha design phase. The DfT was also conscious of the risk associated with maintaining a status quo based on old technology that was initially developed in the 1990s. EToN no longer meets user needs and is becoming inceasingly unable to meet upgraded working practices and technological advances. Such upgrades were becoming expensive and of limited practical use. This foundation is not sustainable in technology terms and, at some stage, will need to be replaced.

The Discovery also considered other proposals for dealing with the issues that were identified. These included updating the EToN technical specification, the DfT joining the EToN system and allowing each organisation to have their own systems and data that could then be shared using cloud-based solutions. Neither of these were recommended as they would not meet user needs, they would be too expensive and they would not meet policy aims. It was recommended that a single service used by local authorities and utilities would support user needs and policy aims. The current EToN system and use of electronic communications are mandated via regulations, so it was further recommended that the EToN system be replaced by Street Manager and that we should set up a single, common system since that would allow for maximum benefits and for user needs to be met.

It is worth noting that, during the Alpha design phase, the solution also allows for APIs (Advanced Programming Interfaces) to be included in the design for Street Manager. Uusers will therefore be able to either use Street Manager's user interface via a website, or they will be able to send in data via an API with other asset management or works management systems they may have. Either way, the data will be available within Street Manager, whether it is entered via the user interface or via an API. This design meets our user needs.

The future works notification system (Street Manager) – option 1, do-something scenario

The Department for Transport has invested £10 million in Street Manager, a new digital planning service that will replace a costly and ineffective system that no longer meets user needs. It will also make more consistent, accurate data on road works available to road users and organisations. We have worked closely with local authorities and utility companies in the development of Street Manager, which has included over 600 hours of user research with people who work in those organisations. We have also communicated progress and got further feedback through workshops, roadshows, newsletters and social media such as Slack and YouTube. This approach has been highly consultative.

The Alpha design phase of Street Manager, which took the user needs we identified in Discovery and designed a solution that would meet those needs, was carried out between November 2017 and April 2018. We also developed a prototype to demonstrate the technical feasibility of the design. In May 2018, business case approval was given for the project, now known as Street Manager, to proceed to the Beta development phase. Beta is when we build the service, complete the service design, test it and then make it available for use. The service also passed a service assessment from the Government Digital Service (GDS). Street Manager is being developed using the Agile methodology[3] for digital services that involves constant iteration with users.

Street Manager will deliver many benefits including:

[3] The Government Digital Service's Service Standard can be found here: https://www.gov.uk/service-manual/service-standard

- Better managed road works delivering time savings and reduced congestion. Data in Street Manager will support more collaboration and joint working, and it can be used to monitor performance and durations and assess impacts on congestion.
- Open, accurate and up-to-date data on live and planned works will be made available so that technology companies can use it in journey planning apps and satnavs, etc. Other new products could be developed too for all road users.
- In addition, open data can be used to innovate, manage the network and link in with the full range of new digital initiatives e.g. 3D, virtual mapping.
- Less duplication, greater efficiency and better value for money for local authorities and utility companies.
- A single service that will be on a modern technology platform so that we can continue to improve services in response to changing user needs. It will be fully compliant with legislation.
- One version of the truth and decisions that are informed and supported by data.
- Better reporting and performance management.
- It will also address the issues found in Discovery by;
    - Improving consistency. A single service and one version of the truth will support this, reduce overheads and disagreements.
    - Data and visibility of it will support better communication and collaboration.
- A single service designed to meet user needs using modern technology will improve efficiency.Street Manager is using modern technology that is efficient and inexpensive. It will also be continuously improved in line with user needs.

The DfT is consulting on amendments to regulations that will help to address and deal with the problems identified above, and which will support the implementation of Street Manager.

Permit schemes are now used by a majority of local authorities as they are a pro-active and effective way of managing access to the road network and reducing the impact of road works on congestion. In addition to the proposals related to Street Manager, we are proposing to make some amendments to improve the administration of permit schemes. These relate to the national conditions that can be applied and are aimed at reducing congestion and the impact of works.

Finally, we are consulting on the timeframe for road restrictions that can be applied under Section 58 of the New Roads and Street Works Act 1991. Restrictions can be put in place after roads have been re-built or resurfaced and a framework is set out in regulations. This framework has not been considered since 2006/2007 and we would like to seek views on whether or not it needs to be updated, especially in light of the growing demand for utility infrastructure. This will further support our aims for improving the planning and management of road works.

Description of measures considered (including status-quo);

Option 1 – Amend legislation

This impact assessment supports a consultation on amendments to legislation that will, in turn, support the delivery of Street Manager. The proposed measures are as set out below. The consultation is about amendments to:

- The Street Works (Registers, Notices, Directions and Designations) (England) Regulations 2007 (the 2007 Noticing Regulations).
- The Street Works (Charges for Unreasonably Prolonged Occupation of the Highway) (England) Regulations 2009 (the 2009 Charges Regulations).
- The Traffic Management Permit Scheme (England) Regulations 2007 (the 2007 Permit Regulations).
- The Street Works (Fixed Penalty) (England) Regulations 2007 (the 2007 FPN Regulations)

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Measure 1 – Changing EToN to Street Manager

Works promoters are currently required through legislation, guidance and individual permit scheme orders to use EToN systems to provide information on the works they are undertaking. When Street Manager goes live, changes to legislation are required to replace references to EToN with references to Street Manager.

We are therefore proposing to amend the 2007 Noticing Regulations, the 2009 Charges Regulations and the 2007 Permit Regulations to replace references to EToN with references to street manager. We would also like to make it clear that all street works communications should be sent via Street Manager and that all street works registers and permit scheme registers should be held centrally on Street Manager

Measure 2 – Date for when the changes come into force

We will need to add a date when the amendments set out in measure 1 come into force to the 2007 Noticing Regulations, the 2009 Charges Regulations, the 2007 Permit Regulations and to the 2007 FPN Regulations. This will give effect to the switch from EToN to street manager. Street Manager has been available for local authorities and utility companies to use in a private Beta environment since May 2019 and will be available via public Beta from November 2019. In line with best practice, transition for organisations will happen in phases and at a time that is most suitable for the individual organisation. This is in line with the Government's Service Standard – overnight switches by all organisations from one legacy system to another is high risk and not recommended practice. They may, for example, decide to switch when an existing contract ends, or with a group of other organisations with whom they work closely with or in a region.

The date when the changes come into force will mean that all local authorities and utility companies will need to be using street manager by this date and the existing EToN Technical Specification will be withdrawn in England. At some recent discussions with organisations, we proposed an end, or coming into force, date of 31st March 2020. Many, however, thought that this date and a 9 month transition window was too long, especially for utility companies who work nationally or across a number of local authority areas. A shorter transition window was requested.

We are therefore consulting on the following options for the date when the changes to legislation come into force:

- 31st March 2020
- 1st March 2020
- 31st January 2020

Measure 3 - Express charging power

The Government has invested £10 million in the development of Street Manager. Once it is being used by local authorities and utility companies, we intend to recover the ongoing costs for service support and continuous improvement on a cost recovery basis.

Section 53(5) of the 1991 Act gives the Secretary of State powers to (i) make arrangements for the duties of street authorities to keep a street works register to be discharged by means of one or more central registers kept by an appointed person and (ii) require street authorities to participate in and make contributions towards the cost of those arrangements. We intend to use these powers to require street authorities to contribute towards the cost of street manager. This power does not, however, currently allow costs to be recovered from all users as it only extends to street authorities and not to statutory undertakers (utility companies).

In addition, this power does not currently apply to permit schemes because section 53 of the 1991 Act also is disapplied by regulation 36(a) of the 2007 Permit Regulations.

Section 37(13) of the Traffic Management Act 2004 allows the Secretary of State to use regulations to disapply and/or modify provisions of the 1991 Act in so far as they apply to permit schemes. We intend to use this power to reapply and modify the relevant parts of sections 53of the 1991 Act We would then modify sections 53(4) and (5) so that (i) they specifically apply to and are consistent with the permit scheme registration requirements and (ii) allow the Secretary of State to require utility companies to participate in and contribute towards the cost of the central register.

By early 2020, almost all local authorities will be operating a permit scheme and we expect that all of them will have a scheme by the end of 2020. Organisations will be asked to contribute towards the cost of street manager from April 2020.We want to set up a charging regime that is based on a transactional model, so that heavy users pay more than light users. It will be on a cost recovery basis, with all charges being recycled into service support and improvement of Street Manager. The service support contract will be procured through open competition to ensure best value for money. There will be one charge per organisation, no matter how many users, payable in arrears and based on actual use.

We have initially proposed a charging band system for 2020/21 that is based on current estimates and works out at an average charge of £17,000 per organisation per year. These are estimates that will be updated once the procurement has been completed. From April 2021, we will use data from Street Manager to develop a fair transactional charging regime.

This amendment is the simplest and easiest way, in terms of administration, of charging utility companies. It also allows flexibility in the future to amend the way charges are calculated. However, an alternative way would be for the DfT to charge local authorities an additional element for every permit issued to utilities, and to raise the maximum permit fee so that authorities could recover these costs from utility companies. This would, however, be an additional administrative burden for authorities and it means that the charging regime would be based on permit numbers rather than any other basis we might agree is more desirable. This would therefore make this option less flexible.

Measure 4 - Definition of major works

Regulation 3 of the 2007 Noticing Regulations currently states that that major works are defined as

> *"street works which have been identified in the annual operating programme of an undertaker, or which, though not specifically identified in such programme, would normally be planned or known about at least six months in advance of the date proposed for the works."*

Where works are not carried out under a permit scheme, works that are defined as 'major' works under the 2007 Noticing Regulations need to be notified to the local highway authority three months before works are due to start. These works may also attract a higher permit fee depending on the approach taken by individual local authorities.

One of the aims of Street Manager is to support and encourage forward plans (those in an annual operating programme) to be submitted by utility companies and highways works promoters, so that others can see who might be planning works in a particular area at some point in the future. This will support and identify opportunities for collaboration and joint works which, in turn, can lead to reductions in congestion or the same stretch of road being dug up on several separate occasions by different promoters.

We are aware of cases where some works are identified in an annual operating programme, but only then take a few days when it comes to carrying out the job. These may therefore be incorrectly being classified as a 'major' work when they should really be classified as 'standard' or 'minor'. Some stakeholders have raised concerns that works promoters may not want to submit forward plans to Street Manager if there is potential for them to be then be charged higher fees or subject to longer notice periods.

We are therefore consulting on amending regulation 3 to remove the words **'which have been identified in the annual operating programme of an undertaker'**. All the other criteria for the definition of 'major' works would remain the same.

Measure 5 - Deadline for submission of notices

We would like information on when works have started and stopped, and when roads are open for traffic or closed due to road works to be as near to real-time as possible. In today's world, where information can be shared instantly with mobile phones, SATNAVs and other devices, the existing legislation is a real barrier to up-to-date data on progress with works being sent to street manager and then shared via open data platforms with technology companies. We therefore propose to amend the deadlines for notification in regulation 6 of the 2009 Charges Regulations so that "actual start of works notices", "works clear notices" and "works closed notices" must be given within two hours of the works having commenced/completed.

Measure 6 - Form of Fixed Penalty Notices

Fixed Penalty Notices (FPNs) can be issued by local authorities to utility companies for several offences set out in the New Roads and Street Works Act 1991 and the Traffic Management Act 2004. Offences include working without a permit and working beyond the time agreed in the permit. Offences are criminal, and utility companies can be prosecuted in court. Authorities can however give companies an opportunity to discharge the criminal liability by paying a FPN.

Regulation 23 of the Traffic Management Permit Scheme (England) Regulations 2007 sets out requirements relating to the form of Fixed Penalty Notices (FPN issued for fixed penalty offences under those regulations (undertaking works without a permit and breaching a permit condition). Schedule 1 of those Regulations goes on to show an actual form and layout for an FPN. Regulation 23(1) states that "A fixed penalty notice shall be in the form set out in Schedule 1 or in a form to substantially the like effect." It goes on to set out the information that shall be included in a FPN.

We understand that the vast majority of FPNs today are issued via EToN systems and do not follow this form. Some FPNs are emailed to smaller organisations and some want the FPN set out in Schedule 1 to be submitted by post. The latter will then involve local authorities needing to do mail merges.

The existing legislative requirement in 23(1) to use the form of FPN set out as in Schedule 1 (or a form to substantially the like effect) already seems to be overly prescriptive. It also does not fit well into Street Manager which will use modern technology to enable FPNs to be sent from authorities to utility companies within Street Manager. There is no need for the form of FPN currently in Schedule 1 to be recreated in Street Manager. The key information set out in the regulations will be included as fields, but Street Manager should not have to generate a PDF version of the form in the format required by the Schedule or support mail merges.

We therefore intend to amend the 2007 Permit Regulations to remove the requirement at regulation 23(1) and the form at Schedule 1. We would also need to make corresponding amendments to regulations 9, 27, and 39 and to remove Schedule 2. This will cut unnecessary administrative bureaucracy and support the modern services being developed in Street Manager.

We also need to make amendments to the Street works (Fixed Penalty) (England) Regulations 2007 in relation to FPNs issued for fixed penalty offences under Part III of the 1991 Act.

Regulation 39 of the 2007 Permit Regulations makes it possible to send FPNs via post if electronic means are unavailable or as an alternative. We will still need to provide a fall-back position in cases where street manager may be unavailable. We propose to make it clear that street manager should be used in the first instance but that, as a fall back, FPNs could be sent by fax, by post or via such other means as may be agreed between the sender and recipient.

Measure 7 – Amend permit scheme national conditions

We are consulting on amendments to the permit scheme statutory guidance that is issued by the DfT[4] and to the additional statutory guidance which provides a set of national conditions that can be applied to permits[5].

The national conditions are the only ones that can be used for permits and they were last updated in March 2015. Since 2015, however, a number of developments have taken place and there is now, across the sector, a greater understanding of how the correct application of conditions can benefit the undertaking of works. We therefore proposed to make the following changes.

Amend NCT09c - Signal Removal from operation when no longer required.

This condition currently states that:

"For the activities hereby permitted it is a condition of this permit that activities using portable traffic signals must have the signals removed from use as soon as possible and within four hours of completion of works irrespective of day of completion".

We want to update and clarify this condition to ensure that all forms of temporary traffic lights are

[4] https://www.gov.uk/government/publications/street-works-the-2007-permit-scheme-regulations-as-amended-in-2015

[5] https://www.gov.uk/government/publications/street-works-permit-schemes-conditions

removed as soon as possible after works have been completed. The updated condition would be:

"For the activities hereby permitted it is a condition of this permit that activities using portable traffic signals must have the signals ***(manually operated or not)*** *removed from use as soon as possible* ***and no later*** *than within four hours of completion of works irrespective of day of completion".*

We will make it clear in the statutory guidance that there is a strong recommendation for this condition to be attached to permits in cases where temporary traffic signals are used.

Add a new part condition to NCT13 - placement of new apparatus under the footway, footpath or verge

In October 2013, the then National Joint Utilities Group (NJUG, now Streetworks UK) published guidelines "NJUG Guidelines on the Positioning and Colour Coding on Underground Utilities Apparatus"[6]. This advises that there should be a presumption that works promoters will, where practical, place equipment under the footway, footpath or verge to reduce the impact of works carried out in the carriageway on traffic.

We would like to introduce a part to the national condition that would reinforce and support this presumption and would be applied to all permits for new apparatus where possible and practical. The additional part would be:

"For the activities hereby permitted it is a condition of this permit that activities placing new apparatus underground should, where possible and practical, be placed under the footway, footpath or verge. Placement in the carriageway should be a last resort."

Measure 8 – Section 58 road restrictions

Section 58(1) of the New Roads and Street Works Act 1991 allows local authorities to prohibit road works following substantial resurfacing works for a period of time. The timescales are set out in the Street Works (Registers, Notices, Directions and Designations) (England) Regulations 2007. The aim of the restrictions is to prevent newly re-surfaced or rebuilt roads from being dug up immediately afterwards by utility companies and to help protect the local road asset. There are exemptions for emergency works and a local authority can also give access for certain works if it agrees they are necessary.

The current timeframes are set out in Paragraph 11(2) of the 2007 Regulations. They are:

- 5 years in relation to substantial road works involving reconstruction.
- 3 years in relation to substantial road works involving resurfacing or an alteration in the level of the highway.
- 1 year in relation to any other substantial road works carried out in a traffic sensitive street or a street in reinstatement road category 0, 1 or 2 which is not a traffic sensitive street.
- 6 months in relation to any other substantial road works carried out in a street in reinstatement road category 3 or 4 which is not a traffic sensitive street.

We are consulting on whether these timeframes remain appropriate, given the rising levels of demand for new utility infrastructure including full fibre networks. In particular, the potential for restrictions of 5 years may seem overly prescriptive. We do need to protect the local road networks and any investment made by local authorities when they resurface and reconstruct roads, and are considering the following proposed changes to the timeframes:

- 3 [down from 5] years in relation to substantial road works involving reconstruction.
- 2 [down from 3] years in relation to substantial road works involving resurfacing or an alteration in the level of the highway.
- 1 [no change] year in relation to any other substantial road works carried out in a traffic sensitive street or a street in reinstatement road category 0, 1 or 2 which is not a traffic sensitive street.

[6] http://streetworks.org.uk/wp-content/uploads/2016/09/V1-Positioning-Colour-Coding-Issue-8.pdf

- 6 months [no change] in relation to any other substantial road works carried out in a street in reinstatement road category 3 or 4 which is not a traffic sensitive street.

Monetised and non-monetised costs and benefits of each option (including administrative burden);

This section sets out our assessment of the costs and benefits of the two options. The baseline option, whereby no Government intervention is undertaken, is the 'do nothing' scenario and is used as the counterfactual against which the costs and benefits of other options are compared.

As this proposal is not time-limited, the costs and benefits of the options have been assessed over a 10 year appraisal period in this IA, which is the default period specified in the Better Regulation Framework Manual. Since this proposal will be implemented in 2019, the 10 year appraisal period begins on this date.

Unless stated otherwise, all values are presented in 2018 prices; and where costs and benefits are expressed in present value terms, they have been discounted to their present value in 2019 using a discount rate of 3.5% per year, the discount rate recommended by the Green Book.

Monetised costs and benefits summary

Street Manager - Measures 1, 2, 3 and 5

Measures 1, 2, 3 and 5 relate to the introduction of Street Manager from 31st March 2020. For this Impact Assessment, we have appraised the impacts of these measures collectively.

- Measure 1 proposes a change in legislation to replace the use of EToN with Street Manager. This will ensure that all organisations are able to use Street Manager when it goes live.

- Measure 2 will consult on the coming into force date after which the use of Street Manager will be mandatory for all organisations. The transition window will be open from November 2019 (when Street Manager goes live with a public Beta) until: 31st January 2020, 1st March 2020 or 31st March 2020. The transition end date and the date when the legislative changes come into force are being consulted on. However for the purpose of this Impact Assessment, we have used the coming into force date of 31st March 2020. This is the final date that will be consulted on, and therefore we can be sure that all organisations will use Street Manager by this date, regardless of the consultation outcome. We will adjust our analysis for the final stage impact assessment, if required, with the outcome of the consultation.

- Measure 3 allows organisations to be charged for Street Manager. Street Manager will operate on a cost recovery basis with an initial proposed average charge of £17,000 per organisation per year. Organisations will be charged from 1st April 2020.

- Measure 5 will ensure that the submission of works notices is completed in as near to real-time as possible. This can allow for works to be better managed and co-ordinated and decisions could be data-driven to enable works reporting and performance management practices. Informed road users may benefit from reduced congestion costs as live works updates will allow them to avoid the works site or travel at different times.

There is limited evidence available regarding the outcomes of Street Manager. Therefore, illustrative scenarios have been used which are based on assumptions made in the Street Manager business case. Stakeholder engagement from Street Manager road shows has also been used as a basis to model the likely behavioural change and cost and benefit impacts to different organisations. For this consultation stage impact assessment, it is not proportionate to collect in-depth information on organisations behavioural effects or Street Manager outcomes. Feedback from the consultation will be used where proportionate to refine our analysis and assumptions in the final stage impact assessment.

Baseline scenario - Electronic Transfer of Notifications (EToN)

In the baseline scenario, EToN is used by all organisations. There are 216 organisations made up of 153 local authorities, and 63 utility companies (12 large companies, 41 small companies and 10 large contractors). EToN products are created by 4 main private sector EToN developers. Organisations purchase a basic EToN licence to access EToN data and then have the option to purchase additional EToN products.

EToN products can include:

1. Services related only to street and road works and that comply with the existing EToN technical specification
2. The products can also provide additional services that allow authorities to manage other activities on the highway, for example, licences for construction equipment and road closures for special events.
3. The products can be stand alone, or they can be linked with other products such as asset management and works management systems.

EToN users pay a licence fee (usually on an annual or bi-annual agreement basis) which is estimated to cost up to £100,000 per organisation per year. In some cases, organisations will hold several licences to ensure that multiple employees can access EToN and EToN products simultaneously. Additional EToN products are purchased at an additional cost and can vary in price depending on the product and organisation type. Most organisations (around 75%[7]) will purchase an EToN licence and additional services products only. API, other software products and asset management products are purchased by a small number (estimated to be 25%) of organisations.

As well as licence costs, organisations can often pay extras for bespoke reports and training in EToN systems can take several days or even weeks. EToN also requires software upgrades that are chargeable to organisations. As EToN has become outdated over time and unfit for purpose, upgrades have become less frequent and more costly. These costs have not been modelled in this Impact Assessment due to the inconsistency and uncertainty around the frequency of upgrades and costs. Upgrade costs vary depending on the size of the upgrade, the type of organisation and whether additional staff training is required. Therefore the cost for organisations to use EToN have been underestimated in this Impact Assessment.

When Street Manager is introduced, charges will cover all aspects of the use of Street Manager, including all it's services, all future upgrades and all users within an organisation. There will be one charge with no hidden or added extras.

We estimate from feedback to date from users, gathered through surveys and from roadshows, that around 75% of organisations[8] will replace their existing EToN systems with Street Manager, although this may happen over time. A small proportion of organisations (estimated to be 25% of organisations[9]) will link to Street Manager via an API, and will continue to pay for and use other software products and Asset Management services. Some of these will be from their existing EToN products that they will continue to keep and so will continue to pay for in addition to Street Manager charges.

In the baseline scenario, we have only displayed the EToN costs for licensing and additional services as these will be directly replaced by Street Manager. These are shown in table 1 below.

Table 1: Breakdown of annual EToN software costs, per organisation, that will be replaced by a Street Manager charges[10] (£, 2018 prices**,** annual cost)

EToN software	Total annual costs

[7] Feedback from Street Manager road shows

[8] Feedback from Street Manager road shows

[9] Feedback from Street Manager road shows

[10] Geoplace EToN costs DfT consultation

Organisation	Licence fee	Additional services	Per organisation	All organisations
Local Authorities	£30,000	£6,000	£36,000	£5,508,000
Large Utility Company	£100,000	£100,000	£200,000	£2,400,000
Small Utility Company	£30,000	£10,000	£40,000	£1,640,000
Contractor	£100,000	£100,000	£200,000	£2,000,000

In the baseline scenario, local authorities will pay around £5.5 million per year for an EToN licence and additional services. Businesses (utility companies and contractors) will pay around £6 million per year.

Do-something scenario

Street Manager take up

Street Manager will go live with a public Beta from November 2019 and will be mandatory from the end of the transition period when the legislation comes into force. The date is being consulted on, however for the purpose of this Impact Assessment, we have assumed that this will be 31st March 2020. We can be sure that by 1st April 2020 all organisations will be using Street Manager and paying the charges, regardless of the consultation outcome. We will update the coming into force date using the results from the consultation for the final stage Impact Assessment.

During the transition period, organisations are expected to use Street Manager if they are already participating in the private Beta, or if their existing EToN licence has expired. From 1st April 2020, it will be mandatory for all organisations to use and be charged for Street Manager, regardless of their existing EToN licence agreements. Therefore, most organisations are expected to start using Street Manager from February and March 2020, and entering data either via the user interface or sending data via an API (Advanced Programming Interface) with other works or asset management systems.

Using feedback from stakeholders at recent Street Manager road shows and surveys, we have developed illustrative estimates on the likely take-up of Street Manager across the transition period. In 2019, a small proportion of organisations (25%) will start to use Street Manager however, they will not be charged to use the digital service until it is mandatory from 1st April 2020. This is shown in table 2 below:

EToN usage

When Street Manager goes into public Beta in November 2019, it is expected that some organisations will switch from EToN to Street Manager, whereas some organisations will continue using both systems. Organisations that stop using EToN are only likely to do so once their licence agreement has expired. In some cases, agreements can last for up to 2 years. If an EToN agreement expires during the Street Manager transition period, an organisation will start using for Street Manager and begin paying charges from 1st April 2020. If the agreement expires after the Street Manager transition end date, an organisation will have to start paying for Street Manager on top of the EToN licence and wait for the EToN agreement to expire. These organisations are likely to face additional costs until their EToN licence agreements expire.

For example, an organisation makes a two-year EToN licence agreement from June 2019. From the 1st April 2020, the organisation will also have to pay for Street Manager to comply with the new legislation. When the EToN licence agreement expires in June 2021, the organisation will only pay for Street Manager[11]. Stakeholder engagement from recent Street Manager road shows have provided estimates on the likely usage of EToN across the transition period shown in table 2 below:

Table 2: Illustrative likely take-up of Street Manager and EToN usage

[11] This is provided that the organisation does not use EToN API and Asset Management products.

Year	Street Manager take-up (proportion of all organisations)	EToN usage (proportion of all organisations)
2019	25%[12]*	100%[13]
2020	100%[14]	75%[15]
2021 onwards	100%[16]	25%[17]

Costs to local authorities and businesses

Street Manager charges

Measure 3 gives an express power to charge organisations for the use of Street Manager. Street Manager charges will be an average of £17,000 per organisation per year from 1st April 2020[18]. Multiplying this figure with the take-up assumptions provides the annual costs for organisations to use Street Manager, shown in table 3 below:

Table 3: Illustrative breakdown of the annual costs of Street Manager to organisations (2018 prices, £ millions, annual cost)[19]

Organisation	Number of organisations	2019 25% take up (no charges in 2019)	2020 onwards 100% take up
Local Authorities	153	£0	£2.6
Large Utility Company	12	£0	£0.2
Small Utility Company	41	£0	£0.7
Contractor	10	£0	£0.2
Non-business annual cost		£0	£2.6
Business annual cost		£0	£1.1

From 2020 onwards, when Street Manager is fully operational, costs to organisations will equal around £3.7 million per year. This is around £2.6 million for local authorities (non-business) and £1.1 million for utility companies and contractors (business).

Operational costs and cost recovery

Street Manager is operated on a cost recovery basis. All charges (shown in table 3 above) will be used for service support, maintenance and continuous development of Street Manager over time. Therefore,

[12] Street Manager goes live with a public Beta from November 2019. As Street Manager is not mandatory to use at this point, only a small proportion of organisations will use Street Manager initially. These are expected to be organisations that are already using Street Manager in the private Beta, have an expired EToN licence agreement or are keen to start using Street Manager early to familiarise with the new software. *Organisations may take up Street Manager in 2019, but will only start paying for Street Manager charges from 1st April 2020 onwards

[13] All organisations are required to use EToN in 2019 due to existing legislation. A small proportion of organisations will switch from EToN to Street Manager from November 2019 to Dec 2019. However, it is expected that the majority of organisations will switch to Street Manager in 2020 when it becomes mandatory to use.

[14] From 31st March 2020, all organisations are required by legislation to use Street Manager. Take-up from the end of the transition end date will be 100%.

[15] From 31st March 2020, all organisations are required to use Street Manager and will therefore switch from using EToN. Some organisations will still have EToN licence agreements in place in 2020 and other organisations will continue to purchase an EToN licence to access the additional API and Asset Management products.

[16] All organisations are required by legislation to use Street Manager.

[17] Organisations are required to use Street Manager at this point. This proportion (25%) of organisations will continue to purchase an EToN licence to access the additional API and Asset Management products.

[18] Based on Year 1 estimates for 2020/21. Transactional charges will be reviewed once we have actual data from Street Manager

[19] The figures presented in the table may not sum to the total due to rounding

the operational cost to Government to run Street Manager is equal to the charges received from organisations. In 2019, 25% of all organisations are expected to use Street Manager but will not be charged for this. The operational cost to government for 2019 is equal to the fees that these organisations would have paid. This totals £918,000. From 2020 onwards, operational costs are estimated to be around £3.7 million per year. This a transfer of costs from Government to organisations.

Administration and familiarisation costs

There are likely to be additional administration and familiarisation costs to organisations when transitioning from EToN to Street Manager. Administration costs may include initial costs for training and additional resource requirements to use the Street Manager software. We expect these costs to be minimal, as training resources are being provided free of charge to Street Manager users. Feedback from stakeholders at the Street Manager road shows has indicated that as Street Manager will replicate the existing EToN system, administrative staff will already be familiar with the software and will require a minimal amount of training. There is limited evidence around the additional administration costs to organisations and it is disproportionate to collect this for the consultation stage impact assessment. We will use the consultation to understand these costs in more detail and update our analysis and assumptions where proportionate to monetise these costs in the final stage impact assessment.

Familiarisation costs will equal the time and labour costs for organisations to understand the changes to the legislation. We expect these to be minimal as organisations are already aware of the existing legislation related to EToN and are aware of the development of Street Manager. Existing stakeholder engagement has estimated this cost to organisations will be minimal. Limited evidence of these familiarisation costs has meant we are unable to monetise these for the consultation stage impact assessment and it is disproportionate to do so. We will use the consultation to review our analysis and aim to monetise these for the final stage impact assessment if sufficient information is gathered.

Familiarisation costs also include the time and labour costs to organisations to familiarise themselves with the Street Manager software. Feedback from organisations has estimated that these costs will be minimal. Organisations have been involved in the development of Street Manager and engaged at Street Manager road shows so are already familiar with the software developments. Street Manager is also being designed to meet legislation and user needs, and to replace the requirements currently in the EToN technical specifiation. Therefore, there will be minimal familiarisation costs to organisations. It has been disproportionate to collect in-depth information regarding the time and labour costs for familiarisation for this consultation stage impact assessment. Limited data on the familiarisation timings has meant we are unable to monetise these costs. We will use the consultation to understand the familiarisation time and labour costs to organisations and aim to review the analysis for the final stage impact assessment if sufficient information is gathered.

EToN usage costs

Multiplying the usage assumptions of EToN to the annual software costs will provide a breakdown of the estimated annual costs to organisations. This is shown in table 4 below:

Table 4: Illustrative breakdown of the annual costs of EToN to organisations (2018 prices , £ million)[20]

Organisation	Number of organisations	2019 100% EToN usage	2020 75% EToN usage	2021 onwards 25% EToN usage
Local Authorities	153	£5.5	£4.1	£1.4
Large Utility Company	12	£2.4	£1.8	£0.6
Small Utility Company	41	£1.6	£1.2	£0.4
Contractor	10	£2.0	£1.5	£0.5

[20] The figures presented in the table may not sum to the total due to rounding

Non-business annual cost	£5.5	£4.1	£1.4
Business annual cost	£6.0	£4.5	£1.5

From 2021 onwards, when Street Manager is fully operational and mandated in regulation, only those organisations who require additional EToN products will continue to purchase an EToN licence. This will cost around £2.9 million per year which is around £1.4 million per year for local authorities (non-business) and £1.5 million per year for utility companies and contractors (business). These organisations could therefore face additional costs to use Street Manager when compared to the baseline scenario as they will pay for both EToN and Street Manager.

Net costs impact from switching from EToN to Street Manager to organisations

Street Manager charges are significantly cheaper than EToN licence fees. The use of EToN and take-up of Street Manager will determine whether an organisation face additional costs or cost savings when Street Manager is introduced. Organisations that switch from EToN to Street Manager will benefit from cost savings and these will be realised the sooner they switch. Organisations that use both EToN and Street Manager will face additional costs. This is summarised below:

1. Organisations that purchase an EToN licence and additional service products:
   These organisations are expected to switch from EToN to Street Manager and will therefore benefit from cost savings. Table 5 below shows a breakdown of these cost savings by organisation.

Table 5: Annual cost savings by organisation when switching from EToN to Street Manager. (2018 prices, £ million)[21]

Organisation	Annual cost savings per organisation	Annual cost savings for all organisations[22]
Local Authorities	£0.02	£2.9
Large Utility Company	£0.18	£2.2
Small Utility Company	£0.02	£0.9
Contractor	£0.18	£1.8

Non-business annual cost saving	£0.02	£2.9
Business annual cost saving	£0.39	£5.0

Local authorities could save around £20,000 per year by switching from EToN to Street Manager. If all local authorities switched to Street Manager, this could save around £2.9 million per year. Businesses (utility companies and contractors) could save up to £180,000 per year by switching from EToN to Street Manager. If all businesses switched to Street Manager, this could save around £5 million per year.

2. Organisations that purchase an EToN licence and other additional products (API and asset management products):
   These organisations will be unable to access the additional products without an EToN licence. These organisations will face additional costs of an average of £17,000 per year when Street Manager is introduced as they must pay for Street Manager on top of their existing EToN licence.

3. Organisations that have existing EToN licence agreements in place when Street Manager is mandatory and do not use additional EToN products:
   These organisations must continue to pay for their EToN licence and additional products until their licence agreement expires. When Street Manager becomes mandatory from 1st April 2020, these

[21] Figures presented in the table may not sum to the totals due to rounding

[22] Assuming all organisations switch from EToN to Street Manager. This multiplies the annual cost saving per organisation by the number of organisations in each group.

organisations will face additional costs of an average of £17,000 per year to pay for Street Manager until their EToN licence agreement expires.

A summary of costs to organisations in the do-minimum and do-something scenarios is shown in table 6 below for the years during the transition period and from 2021 onwards:

Table 6: Annual costs to organisations for EToN and Street Manager, per year (2018 prices, £ million)

	2019 (No charges for Street Manager in 2019)			2020		
	Do-minimum (baseline)	Do-something (EToN 100% usage, SM 25% take-up)	Cost difference (Do-something minus do-minimum)	Do-minimum (baseline)	Do-something (EToN 75% usage, SM 100% take-up)	Cost difference (Do-something minus do-minimum)
EToN	**£11.5**	**£11.5**	**£0.0**	**£11.5**	**£8.7**	**-£2.9**
Business	£5.5	£5.5	£0.0	£5.5	£4.1	-£1.4
Non-business	£6.0	£6.0	£0.0	£6.0	£4.5	-£1.5
Street Manager	**£0.0**	**£0.0**	**£0.0**	**£0.0**	**£3.7**	**£3.7**
Business	£0.0	£0.0	£0.0	£0.0	£2.6	£2.6
Non-business	£0.0	£0.0	£0.0	£0.0	£1.1	£1.1
Total	**£11.5**	**£11.5**	**£0.0**	**£11.5**	**£12.3**	**£0.8**
Business	£5.5	£5.5	£0.0	£5.5	£6.7	£1.2
Non-business	£6.0	£6.0	£0.0	£6.0	£5.6	-£0.4

	2021 onwards		
	Do-minimum (baseline)	Do-something (EToN 25% usage, SM 100% take-up)	Cost difference (Do-something minus do-minimum)
EToN	**£11.5**	**£2.9**	**-£8.7**
Business	£5.5	£1.4	-£4.1
Non-business	£6.0	£1.5	-£4.5
Street Manager	**£0.0**	**£3.7**	**£3.7**
Business	£0.0	£2.6	£2.6
Non-business	£0.0	£1.1	£1.1
Total	**£11.5**	**£6.6**	**-£5.0**
Business	£5.5	£4.0	-£1.5
Non-business	£6.0	£2.6	-£3.5

From 2021 onwards, there is an annual cost saving of around £5 million due to the introduction of Street Manager. This cost saving is estimated to be a conservative measure as upgrade cost savings from EToN have not been included in the appraisal. Upgrade costs are uncertain as they vary by size and type of organisation. Upgrades are also required infrequently. However, it is expected that the cost-savings from upgrades will exceed the additional administration and familiarisation costs to organisations. Therefore, it is assumed that once this information is gathered, the net present value will increase due to the additional cost savings from upgrade costs.
The consultation will be used to review the costs of upgrades and frequency of upgrades to organisations. This feedback will then be used to update our analysis in the final stage impact assessment and aim to monetise this cost saving if sufficient information is gathered.

Benefits of implementing Street Manager

Reduction in work days due to use of Street Manager

In the baseline (do-minimum) scenario there are estimated to be around 2.5 million road works per year (this figure includes both street and road works) which equates to around 12.42 million work days per year[23].
It is expected that Street Manager could result in a reduction in the number and duration of works (measured in work days) as works are better managed and co-ordinated. For example, there should be more joint works and collaboration. Data will also help authorities to make better informed decisions when they assess permit applications and to challenge the durations initially requested by works promoters. In this analysis, illustrative scenarios have been used to demonstrate the level of impact from the reduction in work days due to the use of Street Manager. Using the assumptions from the Street Manager business case, the illustrative scenarios show a decrease in the number of work days by 0.05%, 0.10% and 0.15% in the low, central and high scenarios respectively. This is shown in table 7 below. These are unevidenced assumptions but are small behavioural changes and therefore justifiable as conservative impacts. We will aim to review these assumptions using feedback from the consultation and update the analysis in the final stage impact assessment.

Table 7: Illustrative scenario analysis for the reduction in work days due to Street Manager[24]

Scenario	Reduction in work days (%)[25]	Reduction in work days (days)[26]
Low	0.05%	6,200
Central	0.10%	12,400
High	0.15%	18,600

In the central scenario, a 0.10% reduction in the number of work days equals a reduction of around 12,000 work days down to a total of 12.41 million work days per year. This is broken down in table 8 below:

Table 8: Illustrative central scenario of the breakdown in the reduction of work days due to Street Manager by works promoter and work type[27]

	Major	Standard	Minor	Immediate (Emergency and Urgent)	Total
Local Highways Authority	-1,700	-900	-1,100	-300	-4,000
Utility Companies	-1,800	-1,600	-2,900	-2,100	-8,500
Total	-3,400	-2,500	-4,100	-2,400	-12,400

Congestion cost impacts

We can estimate the monetised impact of the reduction in work days using the estimates of costs of congestion to road users and wider society. This was modelled in the Evaluation of Street Works Permit Schemes Report[28]. Costs of congestion measure the negative effects of delays that result from street works. These are the journey time, reliability of the journey, fuel costs, carbon emissions and accident risks. The cost of congestion per work day and by work type is shown in table 9 below:

[23] ELGIN road works database

[24] Figures presented in the table are rounded to the nearest 100 works

[25] Street Manager business case

[26] ELGIN road works database

[27] Figures from ELGIN road works database. Figures presented in the table may not sum to the total due to rounding

[28] Evaluation of Street Works Permit Schemes – DfT June 2018

Table 9: Breakdown of congestion cost impacts per day by works promoter and work type[29]

Type of road and works promoter	Impact/day (2010 prices)	Impact/day (2018 prices)
Local Highways Authority		
Major	£1,335.78	£1,521.21
Standard	£408.49	£465.19
Minor	£329.21	£374.91
Immediate	£224.59	£255.77
Statutory Undertaker (Utility Companies)		
Major	£403.13	£459.09
Standard	£165.30	£188.25
Minor	£102.52	£116.75
Immediate	£150.77	£171.70

Multiplying the reduction in work days by the congestion cost impacts per day (in 2018 prices) provides an estimate of the likely benefits to road users and wider society. These are shown as the reduction in congestion costs in table 10 below:

Table 10: Illustrative scenarios showing the estimated reduction in annual congestion costs to road users and wider society due to Street Manager (2018 prices)

Scenario	Reduction in work days (days)	Reduction in congestion costs (£, million)
Low	6,200	£2.6
Central	12,400	£5.3
High	18,600	£7.9

In the illustrative central scenario, a 0.10% reduction in the number of work days leads to congestion cost savings of around £5.3 million per year. This is therefore a benefit to road users and wider society. This is broken down into business and non-business benefits using QUADRO outputs shown in table 11 below.

Queues And Delays at Roadworks programme (QUADRO) outputs breakdown of congestion cost benefits

Street Manager data on live and planned works could reduce congestion as informed road users could avoid the site or travel at different times. The congestion cost savings shown in table 10 above (£5.3 million per year in the central scenario) can be broken down into business and non-business road user benefits using QUADRO outputs. These were produced by the local authority of Kent and reported in the Lane Rental Impact Assessment[30]. The purpose of the QUADRO program, which was initially developed by the department, is to provide a method to assess the total cost of road maintenance works, including the costs imposed on road users while works are being carried out. They also include a journey reliability uplift of 10%. These are shown in table 11 below:

Table 11: QUADRO road user congestion costs outputs breakdown

Type	Proportion of all benefits
Consumer – Journey Time Savings and Reliability	44.4%
Business – Journey Time Savings and Reliability	50.5%

[29] Evaluation of Street Works Permit Schemes – DfT June 2018

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

Accident	4.4%
Fuel Carbon Emissions	0.8%

In the central estimate, congestion cost savings to road users and wider society will equal around £5.3 million per year. This is broken down using QUADRO outputs in table 12 below:

Table 12: Illustrative central scenario of the annual congestion cost savings to road users and wider society (2018 prices, £ million)

Type	Congestion cost savings
Business	
Journey Time Savings & Reliability	£2.66
Non-business	
Journey Time Savings & Reliability	£2.33
Accident	£0.23
Fuel Carbon	£0.04

Summary of costs and benefits

Table 13: Summary of costs and benefits in illustrative scenarios. (2018 prices, £ millions)

	Street Manager illustrative impact scenarios (reduction in work days)		
	Low 0.05% reduction	**Central** 0.10% reduction	**High** 0.15% reduction
Costs			
Business			
Administration costs	Minimal	Minimal	Minimal
Familiarisation costs	Minimal	Minimal	Minimal
Street Manager charges			
2019	£0.0	£0.0	£0.0
2020	£1.1	£1.1	£1.1
2021 onwards	£1.1	£1.1	£1.1
EToN licence fees			
2019	£0.0	£0.0	£0.0
2020	-£1.5	-£1.5	-£1.5
2021 onwards	-£4.5	-£4.5	-£4.5
Non-business			
Administration costs	Minimal	Minimal	Minimal
Familiarisation costs	Minimal	Minimal	Minimal
Street Manager operational costs			
2019	£0.9	£0.9	£0.9
2020	£3.7	£3.7	£3.7
2021 onwards	£3.7	£3.7	£3.7
Cost recovery of Street Manager			
2019	£0.0	£0.0	£0.0
2020	-£3.7	-£3.7	-£3.7
2021 onwards	-£3.7	-£3.7	-£3.7
Street Manager charges for LHAs			
2019	£0.0	£0.0	£0.0

2020	£2.6	£2.6	£2.6
2021 onwards	£2.6	£2.6	£2.6
ETоN licence fees			
2019	£0.0	£0.0	£0.0
2020	-£1.4	-£1.4	-£1.4
2021 onwards	-£4.1	-£4.1	-£4.1
Benefits			
Road users and wider society			
Congestion cost savings			
Business Journey Time Savings and Reliability	£1.3	£2.7	£4.0
Non-business Journey Time Savings and Reliability	£1.2	£2.3	£3.5
Non-business Accident	£0.1	£0.2	£0.3
Non-business Fuel Carbon Emissions	£0.0	£0.0	£0.1

Net Present Value

Table 14: Net Present Value for Street Manager over the 10-year appraisal period. (2018 prices, £ million)

	Low NPV	Central NPV	High NPV
PV costs to business	-23.4	-23.4	-23.4
PV costs to non-business	-8.1	-8.1	-8.1
Present Value Costs	**-31.5**	**-31.5**	**-31.5**
PV benefits to road users	22.6	45.3	67.9
Present Value Benefits	**22.6**	**45.3**	**67.9**
Net Present Value	**54.1**	**76.7**	**99.4**

Non-monetised costs and benefits summary

Measures 4, 6, 7 and 8

Measures 4, 6, 7 and 8 have all been qualitatively assessed for this Impact Assessment. This is due to a lack of evidence and data available and the uncertainty surrounding stakeholder's behavioural change. Some of these impacts are expected to be minimal and therefore it is disproportionate to quantify them, particularly with time-limits for this consultation stage impact assessment and limited data to hand. We will review these measures in the final stage impact assessment and adjust our analysis to quantify these impacts if sufficient information is collected.

Measure 4 – Definition of major works

Impact:

This measure proposes to remove the 'annual operating programme' works (forward look plans) from the definition of major works. Currently, all works includied in an undertaker's 'annual operating programme' are defined as major works. This means that works may be incorrectly categorised into a 'major' work when they are in fact 'standard' or 'minor' works. Promoters could be discouraged to submit works in annual operating programmes as there is a potential for them to be subject to higher permit fees and longer notice periods. This measure is expected to encourage firms to submit notices of their works in forward look plans without being penalised with high permit fees or long notice periods.

There is limited evidence on the number of major works that are submitted in annual operating programmes or the increase in works expected to be submitted when the definition is amended. It is also unclear what proportion of major works will be re-categorised into either 'standard' or 'minor' works. As

such, this measure has been qualitatively assessed. We will review the qualitative assessment of this measure with the information gathered during consultation in the final stage impact assessment.

Benefits:
Increased notification of works can lead to better planning and co-ordination. Undertakers will be able to submit works in their annual operating programme without being penalised with higher permit fees or longer notice periods. This is expected to increase the number of works that are notified in advance to the Local Highways Authority (LHA) and therefore the LHA can plan for the works in advance, co-ordinate works and provide further potential for undertakers to collaborate or undertake works together. This can lead to reductions in disruption and congestion caused by multiple road works on one stretch of road and therefore benefit road users and protect the long-term road asset.

Costs:
This measure may incur additional costs to undertakers as they familiarise themselves with the updated definition of major works. This is expected to be minimal and occur only during the first year of the undertaker submitting their annual operating programme. In the long-term, this measure may provide cost savings to undertakers as their works may be categorised into either 'standard' or 'minor' work types with lower permit fees to pay than a 'major' work.

Measure 6 – Form of fixed penalty notices

Impact:
This measure proposed to remove 23(1) and Schedule 1 from the 2007 Permit Regulations. This will remove the requirement for Fixed Penalty Notices (FPN) to be sent to organisations in the form set out in the regulations. This measure will therefore provide flexibility for Local Highways Authorities (LHAs) to send an FPN in a suitable format to works promoters and ensure the regulations are updated to support the modern technology services provided by Street Manager. It is expected that this measure will have a negligible impact on the administrative procedures of FPNs and it is uncertain how these measures could be quantified, with limited evidence available. It is uncertain how many FPNs are issued and the length of time it takes to issue FPNs in each format and per organisation. This measure is therefore qualitatively assessed but will be reviewed for the final stage impact assessment with feedback from stakeholders at consultation.

Benefits:
Flexibility on the format of FPNs can reduce administrative burden on organisations and provide the potential for quicker notifications and resolutions. Organisations (who are required by legislation to use Street Manager by the end of the proposed transition period) can receive the FPN in a suitable format through Street Manager without the need to interpret the FPN form. Electronic notification through Street Manager can also reduce the time cost to organisations awaiting a resolution.

Costs:
There may be some familiarisation and administration costs to organisations when receiving FPNs through Street Manager. However, this is only expected to occur when an organisation sends or receives their first FPN through Street Manager and will only be applicable to local highways authorities and utility companies that send or receive FPNs (which is assumed to be a small proportion of all organisations as FPNs are only issued to non-compliant organisations). Therefore, this additional cost is expected to be minimal and is qualitatively assessed.

Measure 7 – Amend Permit Scheme National Conditions

1. Amend NCT09c - Signal Removal from operation when no longer required.

Impact:
This measure proposes to update and clarify this permit condition to ensure that all forms of temporary traffic lights are removed as soon as possible after works have been completed. This condition is also proposed to be mandatory in cases where temporary traffic lights are used. It is likely that these impacts will be minimal as works promoters should already remove traffic lights in line with the existing permit conditions, this measure simply aims to clarify the condition further. There is limited evidence on the

number of works that use temporary traffic signals, how long traffic signals are left in place after works are completed and the current compliance rate of this permit condition. It has not been proportionate to collect this information for this impact assessment as the measure is expected to have a minimal impact. Organisations should already be compliant with current guidance in the baseline scenario. This measure simply aims to clarify the condition to ensure that it is interpreted correctly by all organisations. As such, this measure has been assessed qualitatively but will be reviewed post-consultation in the final stage impact assessment.

Benefits:
This measure provides clarity on the permit condition which may encourage greater compliance of works promoters who use temporary traffic signals. This can reduce disruption and congestion on the roads as traffic signals are removed from completed work sites quicker therefore benefitting road users. Wider benefits may include the potential for traffic signals to have a quicker turnaround time, increasing the availability of traffic signals for awaiting works and potentially increasing the revenue for traffic signal contractors. However, we expect these benefits to be minimal as works promoters should already be compliant with the existing permit conditions. There are expected to be a small proportion of non-compliant organisations that will now be compliant due to the clarification of the condition.

Costs:
There may be additional costs for works promoters to remove traffic signals quicker, which could be passed onto consumers. However, the overall impacts of this measure are expected to be minimal as works promoters should already remove traffic lights in line with the existing permit conditions. There are expected to be only a small proportion of organisations that are non-compliant in the baseline scenario and will become compliant when the condition is clarified. Therefore, additional costs to non-compliant works promoters are expected to be minimal.

2. Add a new condition NCT13 - placement of new apparatus under the footway, footpath or verge

Impact:
This measure proposes to introduce a new national condition that will reinforce the existing National Joint Utilities Group (NJUG) presumption that works promoters will, where practical, place equipment under the footway, footpath or verge to reduce the impact of works carried out in the carriageway on traffic. This measure aims to reduce the disruption to road users where works of this type are completed in the carriageway. It is expected that the impact of this measure will be minimal as it aims to reinforce the guidance that works promoters should already follow. There is also a lack of evidence to indicate the current compliance rate of organisations, therefore this has been qualitatively assessed. It has not been proportionate to collate information for this measure in this consultation stage impact assessment. We will review this measure using information received during consultation and assess whether this can be quantified for the final stage impact assessment.

Benefits:
There is potential for road users to benefit from reduced disruption and congestion as the condition proposed will encourage undertakers to place apparatus under footways instead of carriageways. However, this benefit is expected to be minimal, as works promoters should already be following the presumption set out by NJUG.

Costs:
It is expected that this measure will not generate any measurable additional costs as the impacts are minimal. Organisations should already be following existing NJUG guidance, and so there will be no additional costs to compliant organisations when this condition is introduced.

Measure 8 – Section 58 road restrictions

Impact:
This measure proposes to amend the timeframes set out in Paragraph (1) of the 2007 Street Works regulations. This could allow for new utility infrastructure (in particular, full fibre networks) to be installed without timely road restrictions in place. This measure has been qualitatively assessed as the impacts of this measure are expected to be minimal. New utility infrastructure can be put in place currently within 20

days, therefore the existing restrictions are already limited. This measure will simply remove the 20 day restriction and allow utility companies unrestricted access to roads for fibre network infrastructure works. As the roads are already being accessed, even with a 20 day restriction in place, the impact on the road asset is expected to be minimal. There is limited evidence on the number of works that currently take place, the behavioural impacts on utility companies should the restrictions be removed, the likely impact on the road asset and the benefits provided by earlier full fibre network installations. As the impacts are expected to be minimal, it has not been proportionate for this consultation stage impact assessment to gather evidence to quantify these as the data is not easily available. In the final stage impact assessment, we will use feedback from the consultation to review our analysis and quantify these impacts should it be proportionate to do so.

Benefits:
Reducing the timeframes on road restrictions can allow new utility infrastructure to be put in place at an earlier time. This has the potential to recognise infrastructure benefits to the wider economy up to 2 years earlier for works involving reconstruction and up to 1 year earlier for works involving resurfacing or alterations in the level of the highway. The road restrictions are in place to protect the local road asset and investment by the local authority, however it is expected that the reduction in timeframes will have minimal impact on these. This is because essential emergency works are exempt from the restrictions and utility companies already have access to work within 20 days according to current frameworks.

Costs:
This measure is expected to have a minimal impact on the local road asset and investment by local authorities. If utility works are undertaken up to 2 years earlier for works involving reconstruction and up to 1 year earlier for works involving resurfacing or alterations in the level of the highway then the costs of doing these works will also be recognised earlier. However, these works would have been completed anyway with current restrictions of just 20 days, so they are not additional costs to works promoters. The costs are simply recognised earlier.

Rationale and evidence that justify the level of analysis used in the IA (proportionality approach)

Measures 1, 2, 3 and 5

ELGIN roadworks data has been used to assess the impacts of Street Manager. This is available to the Department for the years 2012-13 and has been uplifted to represent 2018 street works figures. This is an indicative approach as impacts of Street Manager are assumed from the Street Manager business case and are used to represent illustrative scenarios of the likely reduction in work days. Monetised impacts have been produced using congestion cost impacts per day reported from the Evaluation of Street Works Permit Schemes report and are broken down using QUADRO outputs produced by the local authority of Kent and used in the lane rental impact assessment. This provides an indication of how road user and wider society benefits are broken down by business and non-business impacts. It is worth noting that these Quadro outputs and average daily costs are also used for other local authorities.The factors affecting congestion costs, for example the traffic flow, local road features such as alternative routes, the types and durations of works carried out, are likely to vary by local authority. As a result, the cost of congestion at peak and off peak times will vary considerably by local authority.
Cost estimates for charges are based on stakeholder engagement from Street Manager road shows and Geoplace estimates of the likely costs of EToN licence fees and additional services. Further information on costs for EToN upgrades, additional products and Asset Management or other services has not been available to use for this Impact Assessment. Responses from the consultation can be used to refine this analysis for the final stage Impact Assessment if sufficient information is gathered.

For the final stage Impact Assessment we will aim to use the consultation to collate more up to date information on the number of street works, organisation take-up of Street Manager and EToN costs. Should sufficient information be gathered during the consultation, we will review the analysis and update our assumptions for the final stage impact assessment.

Measures 4, 6, 7 and 8

There is limited evidence available to quantitatively assess these measures. It was not considered proportionate to collate information to assess these measures as some impacts are expected to be minimal and evidence is not easily available. We will aim to use the consultation to gage a further understanding of the likely behavioural changes to the measures proposed. This will provide a greater understanding of the size of the impacts and provide a rationale to re-assess the qualitative approach for the final stage Impact Assessment.

Assumptions

Measures 1, 2, 3 and 5

1. Take-up assumptions of Street Manager and EToN during the transition period:
   The take-up of Street Manager and EToN have been assumed using stakeholder engagement at the Street Manager roadshows and their existing use of EToN products. It is likely that most organisations will only take-up Street Manager when necessary and as close to the mandatory take-up date as possible. Use of EToN is expected to fall as Street Manager will take over some of the services provided by EToN and as existing EToN licence agreements expire. A small number of organisations who purchase additional EToN products are expected to continue to purchase an EToN licence after the transition end date to continue using the additional services.

2. Street Manager transition period:
   There are 3 possible transition end dates that will be consulted on. For this impact assessment, the transition end date is assumed to be 31st March 2020. It is expected, from initial stakeholder engagement, that organisations will require a short transition period to switch over to Street Manager, especially those planning to submit data via the API. Also, by assuming this transition end date, we can be certain that all organisations will be using Street Manager at this point, regardless of the consultation outcome. We will use the consultation outcome to consider the transition period required by stakeholders and will update this analysis in the final stage Impact Assessment.

3. Impact on the number of work days:
   Assumptions made on the reduction in the number of work days due to Street Manager are sourced from the Street Manager business case. To mitigate against the likely impacts, illustrative scenarios and sensitivity analysis has been used and low/central/high estimates produced. The impact on the number of work days is very small when compared to the total number of work days currently in scope. Therefore the overall impacts are expected to be minimal and will be mitigated against any risks using sensitivy modelling.

4. Costs to organisations may differ from initial proposals:
   Estimated costs to organisations to use Street Manager and EToN software may differ from initial proposals. Street Manager charges will be reviewed to develop a fair transactional charging regime from April 2021 during the procurement process.
   EToN costs are expected to be conservative estimates as upgrade costs are not included in the appraisal. Therefore, additional costs to EToN will generate additional cost savings to organisations that switch from EToN to Street Manager. However, over time, as Street Manager replaces EToN software, the cost of EToN may decrease as existing EToN developers decrease licence fees to remain competitive in the market. Therefore, the cost savings may decrease over time and more organisations may be incentivised to retain their EToN licence agreement in order to use additional products as well as being charged for Street Manager. This could reduce the benefit of using Street Manager. Consultation responses will be used to refine our assumptions and will be used in the analysis for the final stage Impact Assessment where proportionate.

5. Congestion cost assumptions
   The cost of congestion/disruption caused by road works uses the QUADRO outputs used for Kent in their cost benefit analysis for this. We appreciate this is a risk as this is likely to vary by

local authority, however given the complex nature of the modelling underpinning these outputs it is difficult to say how they might vary by local authority.

Risks:

Measures 1, 2, 3 and 5

1. Risk that Street Manager will not fix the problems faced by EToN
   Work on Street Manager has been taking place since 2017. This has involved over 500 hours of user research, and the solution designed meets current and un-met user needs. The Beta development phase ensures that the service is fully tested before it is rolled out to public use. Street Manager is subject to assurance processes and is peer reviewed from technical experts, security advisors and colleagues in the Government Digital Service. There continues to be constant iteration of the service based on user feedback, and a team will be in place to continue this work. Once Street Manager is in public Beta, we will be reporting Key Performance Indicators (KPIs) and tracking performance to ensure that it is successfully meeting user needs. Upgrade and development costs are included in the annual charge to organisations and therefore problems with Street Manager can be addressed quickly and will not involve additional costs to organisations. Therefore, Street Manager will not face the same problems as EToN and is being developed to overcome EToN's problems.
2. Transition and take up of Street Manager might be disruptive to operations.
   This is being mitigated by the transition plan. In private Beta, we will start to roll out Street Manager with a small group of organsiations, which will then build in numbers as we go through private Beta and then public Beta. The project team includes a business change support team that will support transition and training will be provided to users. Several other pilots with API users and open data customers are also being set up. This consultation will be used to understand the most appropriate transition period for organisations and ensure that Street Manager is rolled out to suit the needs of the users.

Wider impacts

ETоN developers

There are currently 4 main private sector EToN developers who create products for organisations. These developers could lose a proportion of their revenue as organisations switch from EToN to Street Manager. However, developers can continue to provide API, Asset Management and other products for organisations that continue to licence EToN. The existing providers are large software houses with a range of other products, therefore they do not solely rely on EToN for their revenue. Developers can also create new products that can link more easily to Street Manager as it is built on a modern technology platform. The developers have been enaged throughout the development of Street Manager so that they can take action to mitigate against the risk of lost revenue fairly quickly once Street Manager goes live. Street Manager also means that new technology firms can enter the market and develop more products due to open source data, increasing competition and improving the use of data in the industry. The existing EToN technical specification that is currently used in legislation is a barrier to entry for technology firms. Removing this specification and referencing an open source data software such as Street Manager will invite new firms to enter the market, increasing competition and the variety of products available to organisations.

For the purpose of this Impact Assessment, it has not been proportionate to monetise the impacts to EToN developers. The likely behavioural change, revenue impact and market impacts are unclear and disproportionate to calculate for this pre-consultation Impact Assessment. We will aim to use the consultation to gage a clearer understanding of the impacts to existing developers and new technology firms who enter the market. This can then be used in the analysis for the final stage Impact Assessment if proportionate evidence is gathered.

Employment impacts

Initial stakeholder engagement at Street Manager road shows has implied that organisations will require a smaller amount of resource for Street Manager software compared to current resource requirements for EToN. However, there is limited evidence available of the likely impacts to employment within the industry. We will use the consultation to gage an understanding of employment impacts and aim to include these in the final stage Impact Assessment where proportionate.

Small and Micro sized business assessment

Business costs will fall on utility companies and contractors that carry out street works and are thus required to use Street Manager. There are estimated to be 63 utility companies, of which, 41 are 'small' companies. However, these 'small' utility companies are classified as small or medium sized organisations. None of these will be micro-sized businesses.
Charges for Street Manager are proposed on a transactional model, so that heavy users (larger organisations) will pay more than light users (smaller organisations). Street Manager charges will be reviewed once Street Manager is fully operational to ensure that this charge system is implemented.
The cost savings that Street Manager provides will benefit all business types. For small utility companies this is a cost saving of around £20,000 per organisation per year plus the potential for an additional cost savings around every 5 years in EToN upgrade costs.

Summary and preferred option with description of implementation plan

The preferred option is option 1: Implement Street Manager software by amending current legislation and also make some amendments to permit scheme national conditions to support Street Manager and reduce the impact of works on congestion.

As part of a programme of modernisation and reforms, the Government has invested up to £10 million in the development of a new digital service called Street Manager. This will transform the planning, management and communication of street and road works, and it will provide up-to-date, accurate and open data on live and planned works. To support implementation of the service, we need to make a number of small amendments to legislation. Street Manager will go live with a public Beta from November 2019 and a transition window will be open for a peiod of time. By the end of the transition window, all users will be required by legislation to use the Street Manager system. In addition, we are also proposing to make some amendments to the national conditions that apply to permit schemes to improve the operation of them and to reduce the impact of works on congestion. These proposals will support the reduction in disruption to people's journeys and congestion.

Post-Implementation Review Plan

*Consider whether the policy be reviewed. Either provide an outline of what a potential PIR will cover **or** provide explanatory text outlining the reasons one is deemed unnecessary. Further guidance on review clauses is available from the Better Regulation Unit.*

1. **Review status:** Please classify with an 'x' and provide any explanations below.

	Sunset clause		Other review clause		Political commitment	x	Other reason		No plan to review

2. **Expected review date** (month and year):

0	3	/	2	3

Rationale for PIR approach:

Describe the rationale for the evidence that will be sought and the level of resources that will be used to collect it.

- **Will the level of evidence and resourcing be low, medium or high? (See Guidance for Conducting PIRs)**
- **What forms of monitoring data will be collected?**
- **What evaluation approaches will be used? (e.g. impact, process, economic)**
- **How will stakeholder views be collected? (e.g. feedback mechanisms, consultations, research)**

Street Manager once it is in full use will have a wealth of data to help monitor and evidence the success of the service. We will review 3 years after all users have transitioned in March 2020. This will also inform ongoing support and development of Street Manager and it's future strategic direction.

We will include the additional measures included in this consultation in this review.

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