



BEDFORD
BOROUGH COUNCIL

Permit Scheme Measurement for Bedford Borough Council

Year 1 Evaluation

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Foreword from the Authority Sponsor

Bedford Borough Council strives to provide safe and efficient transport network to supports the economic development of the Borough, using the most appropriate tools and technology available.

Since the formation of the Borough Council as a unitary authority in 2009 The elected Mayor and Councillors have expressed a desire to improve the co-ordination of works within the highway and will therefore minimise disruption from any works and events taking place on or adjoining the highway network.

Bedford is a small compact part urban and part rural borough. The main town of Bedford grew up around a river crossing.

Today, the river presents a substantial barrier to moving around Bedford, and the few bridges over the river and railways carry a substantial amount of traffic. With over 50,000 people travelling into Bedford on a typical weekday, (and with 80% travelling in private cars), effective management of this the core urban network is a critical factor in providing reliable journey times.

Congestion can have a big impact on accessibility to the town centre and key services. Reducing it can make the environment more accessible, attractive and safer which will open up choices for people to walk or cycle to key services and the town centres

The bus operators in Bedford Borough use routes both in the towns and in the rural locations which do not follow road hierarchies. A major driver for the desire to have a permit scheme where conditions can be applied, is the attention to public and alternative transport. Works on minor roads have a cumulative impact on inter urban bus journeys which will affect journey time reliability. By better managing works on minor roads which serve buses and form parts of the cycle network the modal shift from the private car to other forms of transport can be encouraged.

These points were set out in the business case for the permit scheme which described how conditions and publicity would be used on all roads to reduce the impact of works on all highway users and allow systems to give better real time information about current and predicted traffic flows allowing users to make their own decisions about when and how to travel.

I am pleased that Bedford has been joined by the Highways authorities of Hertfordshire, Southend-on-Sea and Luton working together to bring consistency to the common scheme which is the East of England Permit Scheme, EEPS. It is also good to see new schemes coming into effect are using some of the best practice developed through EEPS.

Brian Hayward

Head of Highways, Bedford Borough Council

1 Introduction

In November 2012 Bedford Borough Council as a Local Highways Authority introduced a permit scheme, *the East of England Permit Scheme (EEPS)*, as part of the Council's Local Transport Plan as a mechanism to improve network management through better control of works across the Council's highway.

This Permit Scheme Measurement (Year 1 Evaluation) Report, *referred to as the Report*, has been prepared by the Local Highways Authority, *referred to as the Permit Authority*, for the primary purpose of

- (i) demonstrating the introduction of the EEPS has and will continue to provide the benefits stated as the objectives; and
- (ii) (outlining any changes required by the Permit Authority and those undertaking works, *referred to as Works Promoters*, to improve the operation of the EEPS.

As part of the application to introduce a permit scheme submitted to the Secretary of State for Transport in 2012, the Permit Authority committed to "*introducing a methodology for measuring and assessing any achievements against the objectives of the Permit Scheme*".

Section 23 (Monitoring and Evaluation) of the EEPS sets out the principles and methodology to measure and assess the permit scheme against the stated objectives.

The EEPS is a Common Permit Scheme, which is a functionality identical permit scheme operated by a number of different Permit Authorities (under separate Statutory Instruments). The overall methodology and framework for measuring the EEPS is applied to all the Permit Authorities operating the EEPS however it is recognised that there are many influencing factors and results from each of the Permit Authorities so a separate Report has been produced for each individual Permit Authority, with a Summary Report for the EEPS.

It is suggested that this Report is read in conjunction with the EEPS. Any terminology used within this report, *for example to detail the scope or a process*, is consistent with the EEPS.

2 Background

Under the Traffic Management Act 2004, Bedford Borough Council introduced a permit scheme in November 2012 to better manage work taking place on the highway network. The proposed permit scheme will help improve the co-ordination of works within the highway and will therefore minimise disruption from any works and events taking place on or adjoining the highway network.

A permit scheme contributes towards the objectives of the Network Management Strategy within the LTP ;

To provide a highway network which effectively meets the daily demands placed on it by traffic, while contributing to safer, more efficient movement by buses, pedestrians and cyclists.

The aim of the Network Management Duty is to provide the “expeditious movement of traffic”. The statutory duty reflects the importance placed on making best use of existing road space for the benefit of all road users. A permit scheme helps to meet this duty and will help to make journey times more reliable.

Congestion can have a big impact on accessibility to the town centre and key services. Reducing it can make the environment more accessible, attractive and safer which will open up choices for people to walk or cycle to key services and the town centres.

The Network Management Strategy states that

Communicating information effectively will ensure that all members of public know that during events or works services are still accessible. Communications could include provision of information that provides a choice of different modes of transport to encourage access by non-car modes.

In having a greater control over work in the highway that a permit scheme provides, we will be able to provide up to date information to users about traffic on the network. This will allow the travelling public to make informed decisions on which route to take.

Improved management of the network will lead to better information about the current state of the highway network and to clear routes when unplanned incidents occur.

The bus operators use routes both in the towns and in the rural locations which do not follow road hierarchies. These routes can often have several sets of road works on unclassified roads affecting the same bus route. These unclassified roads will be better co-ordinated under a permit scheme.

A permit scheme to manage and co-ordinate works on all roads is likely to result in a benefit to the local economy of c.£2.7million per annum (a summary of the cost to benefit ratio is provided in section 7.0 of this application document).

3 Objectives of the Permit Scheme

Section 2 of the EEPS sets-out the objectives of the permit scheme (shared by all the Permit Authorities operating the EEPS).

These objectives are aligned to the overall duty placed on local highways authorities under NRSWA and the TMA, whilst also being practical in consideration to the statutory duty of all works promoters.

The objectives set-out within the EEPS are as follows:

- a) To ensure effective co-ordination;
- b) To ensure adherence to health and safety and CDM;
- c) To protect apparatus, assets and structures;
- d) To minimise disruption and inconvenience;
- e) To tackle congestion;
- f) To encourage good practice;
- g) To encourage collaboration;
- h) To provide better communication to all road users; and
- i) To demonstrate parity for all Promoters.

Wherever possible, this Report will provide data and explanation as to how BBC has met the above objectives through the introduction of a permit scheme, or how further operational changes may be applied to measure or deliver these objectives.

4 Executive Summary

The Permit Scheme has enabled the Authority to grant or refuse permit applications in order to minimise the effects of congestion and to ensure that works are carried out in a timely manner and with the least disruption to residents and the travelling public.

All applications are dealt with in the same manner, ensuring parity between Authority own works and other works promoters. Conflicts are easily identified through the Streetworks system and works can then be co-ordinated to lessen the impact on vehicles, and to provide sufficient road space to works promoters needing to carry out both new works and routine maintenance.

Prior to the Permit Scheme starting, the Authorities own works promoters were not 100% compliant in registering their works. After extensive training and education of all factions of the Authority, virtually all works are now registered and permit applications placed on the system in the same way as Utilities. Opportunities for collaboration can be identified early, encouraging joint working if at all possible.

Operational efficiency can be easily measured by looking at the volume of deemed permits, which is very low (and only as a result of system failure). BBC try to deal with applications well within the allocated time allowed within the Permit Scheme and by communicating with works promoters by comments, phone etc to try and progress permit application when insufficient information has been given.

Another key issue is the requirement to carry out letter distribution and / or advance signing of the works, thereby communicating with the public and reducing complaints from residents not knowing what is happening. As these activities can be placed as a condition on the permit, it increases the visibility of the works and reduces enquiries to the Council.

The Permit Scheme has also improved the overall accuracy of applications, and this benefits transport organisations, and public transport operators, looking at the Roadworks.org web site, for traffic delays, disruption and any interference with traffic flows.

5 Measurement Framework

5.1. Approach to Measuring the EEPS

As part of the initial assessment for the introduction of a permit scheme and the subsequent application to the Secretary of State for Transport, the Permit Authority conducted a Cost: Benefit Analysis (CBA) on the likelihood of a scheme to deliver value for money (as a benefit to cost ratio).

This CBA was based on the principles of the Department for Transport's New Approach to Transport Appraisals (NATA) framework and include broad assumptions on the costs and benefits of a permit scheme.

There is no set guidance or framework for the measurement of a permit scheme, post-formal review and acceptance, so the collective Permit Authorities operating the EEPS have produced a measurement framework aligned to the principles of:

- (i) ensuring the capability to use existing data to determine both qualitative and quantifiable results linked directly to the introduction of the permit scheme;
- (ii) providing assessment that can influence decisions for addressing any areas that need improvement, both within the Permit Authority and for all Works Promoters;
- (iii) providing comparison data before the scheme was introduced to show a variation in behaviour or performance (where available and applicable);
- (iv) limitations to data recorded and processed through the EToN¹ Technical Specification (ETS);
- (v) delivering measurements that are value for money, to ensure the cost to collect data, prepare and analyse the results does not exceed a fair and reasonable and is commensurate to the costs for operating the scheme;
- (vi) learning from the assessment and analysis completed for permit schemes already in operation.

At a high-level the Measurement Framework contains two different types of measurements: (1) efficiency and (2) effectiveness, which can be linked but are fundamentally different.

For the purpose of this Report, effectiveness is described as *the achievement of the stated objectives* and efficiency is described as *the way in which the process of operation is carried out*.

To help understand this principle, consider the role of a Coordinator of Street Works: they could be efficient at processing all permit applications within the timescales set-out for response; however are they also being effective at imposing conditions to minimise the impact of these works on the network?

¹ Electronic Transfer of Notifications

Ideally, for any operation to be a success it must be both efficient and effective. In some areas of operation, poor performance of efficiency is often an early indicator to not achieving the overall objective(s).

Wherever it is possible, pre-scheme data and analysis has been provided in order to demonstrate a variation in behaviour and/or performance that is directly linked to the introduction of the EEPS.

Within this Report the term Pre-Scheme refers to the period 31 October 2011 to 04 November 2012 and Year 1 refers to the period 05 November 2012 to 01 November 2013.

5.2. Measuring Efficiency

The efficiency measures included within this Report are detailed below. Some of these measures provide base-data (volumes), on which further measures can be applied, for example *the volume of Permit cancellations from the total of applications received*.

Further explanation of the actual measure and the result to be determined from this measure are included within Section 5 of this Report and the associated Appendices.

- Volume of Permit Applications;
- Volume of Permit Applications, *delineated by Granted, Refused or Deemed*;
- Volume of Permit Variations Applications;
- Application of Conditions, *delineated by Condition Type*;
- Volume of Approved Extensions;
- Application Lead Time, delineated by adherence to minimum timescales and average lead time;
- Volume of Authority Imposed Variations;
- Volume of Permit Revocations;
- Volume of Permit Cancellations;

5.3. Measuring Effectiveness

The effectiveness measures included within this Report are detailed below. Further explanation of the actual measure and the result to be determined from this measure is included within Section 6 of this Report and the associate Appendices.

- Average Duration of Works;
- Section 58 Restrictions;
- Permit Compliance Inspections
- Performance Measure Indicators
- Examples of instances where the permit scheme has delivered a clear benefit

- Examples of where working relationships have improved as result of the permit scheme regime;
- NHT Survey - Traffic and Congestion Indicators
- Volume of public (including business and service) related street-works enquiries and complaints

Average Journey Time and Journey Time Reliability Analysis

One of the expected outcomes from the introduction of a permit scheme is a positive impact to journey times – both averages and their reliability. As yet BBC, and the other EEPS Permit Authorities, have been unable to identify a robust method to measure this outcome.

The EEPS Permit Authorities, including BBC, are fully supportive of the development of measures to demonstrate the impact a permit scheme would have to average journey times and journey time reliability. Any nationally agreed and implemented measures would be adopted by BBC for any future Reports.

QUADRO Analysis

Prior to the scheme coming into effect, BBC used an external Consultant to develop a Cost:Benefit Analysis (CBA) – *a copy of which is available on the EEPS website*. This CBA contained quantitative elements of analysis based on the use of QUADRO (QUEues And Delays at ROadworks) modelling to assess the potential impact of road works and the positive affect a permit scheme could have on these works. These models used traffic data together with road works volume and duration data for a selection of representative road works sites.

When originally considering the methods available to measure a permit scheme, BBC intended to rerun the QUADRO analyses based on actual volume and duration of road works taking place on the network during the initial years of operating the scheme. After careful consideration to the resource required to complete this analysis, the associated costs (for an external resource) and the usefulness of the potential output to influence the running of the scheme, *to best effect*, a decision was made not to complete this analysis. BBC does not consider the cost to develop this analysis would provide either value for money or a useful measure.

5.4. Averages

The data used for some of the measures contained within this Report for both notice and permit transactions, *pre-scheme and Year 1*, contain instances of exceptional values. These are generally caused by poor administration by the Works Promoters, *e.g. stop notices being submitted years after works have started*, and do not necessarily reflect a true value for that specific measure.

These exceptional values have the capability to affect the combined average of a measure, thereby providing a potentially false figure. *For example, if one hundred minor works each take 10 days to complete, the average would be ten days. If one of those works took 100 days, then the average would be 11 days (rounded-up). If two of those works took 100 days each, then the average would be 12 days (rounded-up).*

This level of variance may appear extreme, however there are many cases where a Works Promoter has submitted a work stop notice over a year after the works start notice, and in some instances over 400 days after works start. This has the potential to affect the average for durations considerably.

In consideration to this, the collective EEPS Permit Authorities have reviewed the exceptional values and where applicable these values (less than 10% of the total records) have been removed for the calculation of averages, in order to provide a more accurate average statistic.

5.5. EEPS Key Performance Indicators

The Permit Scheme Code of Practice (Chapter 20) stipulates that the Permit Authority must introduce two four Key Performance Indicators. The EEPS contains the following Key Performance Indicators, which are primarily efficiency measurements, although they can be developed to provide an effectiveness measurement. For example, *further analysis of the application of a condition related to collaborative working could indicate a number of days disruption reduced from the use of this condition.*

KPI 1 – The number of permit and permit-variation applications received, the number granted and the number refused;

KPI 2 – The number of conditions applied by condition type;

KPI 3 – Number of approved extensions;

KPI 4 – The number of occurrences of reducing the application period.

These KPIs are included in the efficiency measures within this Report and will be identified within the relevant Section.

5.6. Measurements

The measurements included within this framework are primarily based on data held within the Permit Authority's street works system, which has been designed to operate within the ETON Technical Specification. For some measures, the base-data from these systems has been used for further analysis and extrapolation.

As a result of this, there are some limitations to the data that can be extracted or how it can be delineated into separate transactions to align to a specific function, for example within some ETON systems it is not possible to delineate permit and permit variations from rejected application.

Wherever possible this has been taken into account and assumptions and business-logic have been applied to the output to ensure it provides meaningful analysis.

5.7. National Performance Indicators

BBC are aware of the development and introduction of a set of National Performance Indicators related to the operation of a permit scheme, together with a template for a Permit Scheme Evaluation Report.

BBC, together with the EEPS Permit Authorities, are supportive of a uniform approach to measuring performance across the industry, and are even involved in forums to develop permit and other related measures.

It is recognised that the limitations with introducing a set of national performance indicators are based on the need to:

- (a) produce measures (or extract base-data to produce measures) on a common platform and through IT systems built within the EToN Technical Specification; and
- (b) develop measures that can be justified with the introduction of a permit scheme and no other network changes or influencing factors.

Wherever possible, the content of this Report is aligned to suggested National measures and templates, however until such time as there is a nationally agreed and base-lined set of measures and reporting templates, the EEPS will develop an Evaluation Report based on the data available that can be aligned to the operation of EEPS permit scheme.

6 Measuring Efficiency

This section of the Report details the results and assessment from the efficiency measures. Further data on these measures is contained within the Appendices of this Report and where applicable a summary of this data is provided within this section.

Wherever possible, the measures within this Report are shown for all Works Promoters, and further delineated into works by the Statutory Undertaker (Street Works) and works for the Highway (Road Works).

6.1. Volume of Permit Applications

The basic measure of the EEPS is the volume of permit applications received by the Permit Authority, which provides a value for the EEPS Key Performance Indicator 1. The results of this measure reflect the requirement for all Works Promoters, *including the Council's own highways department and contractors*, to correctly register (permit) their works. *Further detail on these volumes is contained within Appendix A – Permit Volumes.*

The overall volume of works (being registered to BBC) has increased by c.23%, which is as a result of Statutory Undertaker works increasing by c.9% and Highways works increasing by c.106%

For Statutory Undertaker works the overall volumes of activities (being registered) have remained similar to volumes under the NRSWA noticing regime. Standard works have seen a noticeable decrease by c.58% whilst Minor works have seen an overall increase of c.66%.

Prior to the introduction of EEPS BBC were not efficiently noticing their Highways works, however in parallel to the introduction of EEPS, BBC brought their Highways service in-house which provided the opportunity to improve the registration of works (through permits). This has seen an overall increase in the registration of Minor works (by c.204%), although similar to the Statutory Undertaker Standard works have also fallen, by c.86%.

BBC estimate that no less than 5% of registerable works across the Borough are not submitted as a permit application, therefore they have visibility of at least 95% of works on the highway.

6.2. Volume of Applications Granted, Refused or Deemed

The introduction of the EEPS operation provided BBC with new powers to either Grant (accept) or Refuse (reject) an application to work. With this capability BBC has the opportunity to ensure all registerable works are correctly authorised with consideration to any network impacts and objectives of the EEPS.

The EEPS sets-out timescales for all a Permit Authority to process a permit application (including an application to vary a permit) and if action is not taken within this timescale the permit becomes Deemed, *thereby Granted by default.*

The total volumes of permit applications granted, refused or deemed are contained within Appendix B of this Report. Volumes related to application to vary a permit are contained within Appendix C of this Report.

The volumes of permit applications being refused is perceived as artificially high in the first year of operation as new ways of working and the associated practices have been introduced. The detail on the initial permit application has been insufficient or there has been no consideration to the impact of the work on the highway. Examples of reasons for refusals include:

- conflict with other works not taken into consideration;
- insufficient detail within the permit application, for example the Works Promoter has not specified whether they propose to work outside of Traffic Sensitive times;
- incorrect use of conditions, including conditions text not relevant to the EEPS.

Overall, c.71% of the total applications being made were granted, with 15% being refused. The variance between the total applications submitted and those granted or rejected is accounted for by those permits pending action or those that have been cancelled by the Works Promoter (before being processed).

In addition, BBC has a secondary system process anomaly where if a Works Promoter amends an application - before BBC has processed it –a subsequent application is received. When the subsequent application is granted, a variation grant is recorded, not permit grant. For BBC, two Works Promoters account for approximately 80% of these instances.

For the first year of operation BBC considers that it has the necessary people and resources in place to review and process permit applications. This is reflected in the very low volume of permits and permit-variations becoming deemed (less than 1% of the total applications received). The small numbers that have become deemed are due to unforeseen system issues, not resource or process issues.

6.3. Volume of Permit Variation Applications

The EEPS provides a process to allow a Works Promoter to vary their permit (under set conditions) primarily to advise the Permit Authority of planned changes to works, *ideally before any works have started*.

The visibility of works (before and after start) provides opportunity to affected road users, local resident and businesses to minimise the potential inconvenience and disruption caused by these works. Controlling any changes (variations) to works limits the follow-up effect changes may have to these affected parties.

As a variation to a permit can be applied for at any stage of the application (even before it has been processed) and during works, and also multiple times for the same permit, the measurement of permit variations should be taken as an indicator on which further analysis may need to be conducted. Volumes on Permit Variations (from the Works Promoters) are contained within Appendix C of this Report.

Within the first year of operation, the key reasons for variations to permits both before and after works start are mainly as a result of changes to the Works Promoters works schedules, either as a result of unforeseen circumstances or bad planning, *for example not scheduling contractors within the agreed permit dates.*

Within BBC it has been identified that additional planning resource is required for the scheduling and planning of highways works, which if put in place should affect the levels and types of variations being applied for.

6.4. Application of Conditions by Condition Type

A permit scheme not only provides the capability to grant or refuse a permit (and the associated works) but also to attached conditions (constraints) to a permit, *such as timing and duration.* Conditions are applied by the Works Promoter, to their permit either through their own volition or under the instruction of the Permit Authority.

The application of conditions is considered by the EEPS Permit Authorities as one of the key powers provided by a permit scheme to help deliver the expected objectives and benefits.

Areas of improvement in the use of conditions identified within the first year of operation include:

- the use of correct condition-text and those related to EEPS and not other schemes in operation;
- application of appropriate conditions by the Works Promoter and not including irrelevant conditions as a blanket-approach;
- detailing conditions within the appropriate EToN fields and not within inappropriate fields, *such as the works description.*

The number of applications containing conditions was 7996, which works out to be 65% of the total applications received. This is seen as a reasonable split between those with and those without conditions. However, some works promoters are placing on the same conditions regardless of where the works are, and some conditions are not always relevant to the site referred to. One of the difficulties when first operating the scheme, was to educate works promoters that a condition was not always required on all permit applications. (due to certain standard conditions written in to the EEPS) There was also a large volume of applications with the 'local condition' box ticked, when there are no local conditions contained within the scheme.

Permit Conditions are one of the most important aspects of a Permit Scheme and by applying appropriate and relevant conditions, BBC can manage works and events on their highway network in a better and more co-ordinated way.

Volumes on Permit Conditions are contained within Appendix D of this Report.

6.5. Volume of Approved Extensions

Within the constraints set out in the EEPS a Works Promoter may request an extension (of duration) to their permit (and associated works). Extensions can have a significant impact on the network due to work end dates being different to those previously agreed and published.

In addition, where extensions are required because of poor planning, *for example, works have completed, but materials or plant still remains on site*, this is an unnecessary occupation and inconvenience.

Identifying and controlling instances of approved extensions support the objectives of the EEPS to improve public awareness and also reduce unnecessary occupation.

Volumes of Extension are contained within Appendix E of this Report and this data provides a value for EEPS Key Performance Indicator 3.

The volume of extensions being granted by BBC is low (c.3% of started works), which is applied with parity for both statutory undertaker works (2.9% of started works) and highways works (3.6% of started works).

Prior to the EEPS coming into effect, BBC granted extensions to c.10% of all started works. Since the introduction of the EEPS this has dropped by c.7%, which demonstrate BBC's strict approach to the review and approval of extensions.

In support of this measure, the Section 74 (work overruns) enforcement within BBC is equally strict so this mitigates any possibility of Works Promoters working without an agreed extension to their works (when required).

Most extensions are being agreed are for Immediate works (c.57% of all extensions) by the Statutory Undertaker. In this regard, BBC accepts that the nature of these works can be fault finding and therefore the need to extend the work duration to continue fault finding and/or carry out repair works is required and in most cases is completed within the shortest possible duration.

6.6. Application Lead Time

Adherence to the correct minimum lead times for a permit application (or to vary a permit) is essential to ensure effective coordination of works by the Permit Authority and to provide opportunities for collaboration between Works Promoters. The visibility of proposed works is also vital to control the impact of works through increased awareness and subsequent journey planning. Section 11 of the EEPS sets-out the timings of permit applications.

The measure of Application Lead Time has been shown within two categories (i) adherence to minimum lead time; and (ii) the average lead time.

6.6.1. Adherence to Minimum Lead Time

The measure for adherence to minimum lead times has been calculated by comparing the date of the application (notification for pre-scheme) and the estimated start date provided within the application (or notification).

Immediate works have been excluded from this measure due to the difficulty in extracting reliable date and time data from EToN systems.

The adherence to minimum lead times provides a value for EEPS Key Performance Indicator 4, *i.e. the applications not in time is an occurrence of reducing the application period.*

When compared to the submission of notices prior to the permit scheme coming into effect, there are noticeable variances between the activity types and also between Statutory Undertakers and Highways Works

When considering the nature of these works and also the limitation for a Works Promoter to vary a PAA many opportunities have been taken by BBC to reduce the application period in order to ensure these works have minimal effect to the network, either through collaboration or having the works carried out at the right time.

In comparison to the lead times before the instruction of the EEPS, there has been a dramatic decrease in the % of applications being made within the correct timescales. This reflects the overall change in the process and level of control of works and should not be viewed as a negative consequence, but instead a result of the process.

For example a notice for a Standard works may have been submitted 11 working days before the planned start of works, therefore submitted within the correct time.

Under the EEPS the very same works may have required a condition, so the original application would have been rejected and resubmitted, for subsequent approval (keeping the same initial proposed start date). This process may take 2 working days and therefore the second application could have been submitted outside the application timescales.

6.6.2. Average Lead-in Time

An important factor to consider for a permit application is not only the adherence to the minimum lead times, but the actual lead-in time as this will further demonstrate the planning and visibility of works. All Permit Authorities will want to ensure they have as much visibility and accuracy of proposed works as possible.

Further information on the average lead times for permit applications can be found within Appendix F of this Report.

With the exception of PAA's, the average lead times for applications are above the minimum timescales set-out within the EEPS and compare favourably with the EEPS averages.

The processes associated with Major works and the submittal of the PAA normally result in a late or reapplication of a PAA, this allows for correct coordination of the proposed works once the Permit Authority has received the initial request for the works, which may not necessarily be as a result of a permit application for major works. As a result the average lead time for PAA's will be affected by this and should not be viewed as a negative measure.

6.7. Volume of Permit Cancellations

To ensure the control of works and to proactively minimise the effect of works by many different affected parties it is critical that any booked road space (occupation) should be used for actual works and any booked space not required is cancelled, in a timely manner.

Works that are not cancelled or cancelled after the agreed works start date could have a significant impact to those road users who have planned to mitigate the effect of the works, as well as the planning of other works in the same proximity or on a diversion route (in consideration to the originally planned works).

There is no legislation that requires works promoters to cancel works, either before or after the start date, however the DfT and HAUC support good practice that Works Promoters should cancel road space booking if not required.

Volumes of cancellations are contained within Appendix G of this Report.

Overall, the volume of cancellations received by BBC is high (c.33% of all granted permits). BBC have identified that the significant proportion of these cancellations are for Statutory Undertaker works (c.41% of all granted permits). BBC has further highlighted working practices that are causing this measure:

- Permits being cancelled after a refusal is sent (some of the Statutory Undertaker EToN systems will only allow them to submit a new application after a rejection, therefore the original application has to be cancelled);
- Multiple permits for works that cross more than one USRN if cancelled will result in several cancellations for one work, *this mainly applies to Statutory Undertaker metering works.*

The proportion of works being cancelled after permit granted is also high, for all works promoters, with an average of c.64% of all cancellations after works are due to start. The majority of cancellations were from the Water organisation, who seem to have a high cancellation rate, probably due to the high percentage of 'minor' works sites, and the knock on effect when changes are made to their schedule.

As works being undertaken on restricted roads are a very contentious issue within this Authority, this has not only provided a way forward for utilities but ensured that the best reinstatement possible is carried out as well.

6.8. Authority Imposed Variations and Permit Revocations

The EEPS provides additional powers for the Permit Authority to impose a variation on a permit (change the works) or to revoke a permit (remove the works). The correct and consistent use of these actions will help to minimise the impact of works on the network, especially those being carried out incorrectly or in situations where network demand requires the change or removal of works, *for example where an incident forces traffic along a diversion route.*

Appendix H of this Report contains the volumes for Authority Imposed Variations and Revocations.

6.8.1. Authority Imposed Variations (AIV)

The volume of AIV's issued by BBC represents 1.5% of all granted permits. A main proportion of these AIV's are for Statutory Undertaker Immediate works .where a permit has been granted, but, due to the works promoter attending site before all aspects of the works are known, ie. traffic management, pedestrian activity etc, no or insufficient conditions have been placed on the application.

AIV's are a way of being able to grant permits (so that works promoters are working legally) and being able to impose appropriate conditions for the works promoter to work to. AIV's are also used to ensure that planned and immediate works sites are closed down by a certain date/time, in order to facilitate events, bank holidays etc..

6.8.2. Permit Revocations

BBC have very few revocations as they are usually used only after an incident on the highway network has changed traffic patterns, and street or road works have to be cleared to allow traffic to flow in a better manner.

6.9. Average Duration of Works

The measure of the average duration of works is calculated by the delta in calendar days between the start date and stop date. It would be correct to assume that this does not provide a measure of the duration of actual work carried out, but instead the total occupation of the highway for these works. In many instances, the occupation could span several days, but only one day of actual work is completed.

There are many different influencing factors to average durations, however this analysis will ensure works are in the correct category *e.g. minor activities are 3 days or less*, and also support the identification of bad practices in the submission of start and stop notices.

There have not been any significant variations on the average duration of works when compared to those registered prior to the EEPS coming into effect. No anomalies are shown in the correct registration of activities, according to their durations.

6.10. Section 58 Restrictions

Section 58 restrictions allow the Authority to restrict further works on a street for up to five years following the execution of substantial highway works. Together with the increased visibility of works and capability to coordinate works more effectively, this control under a permit scheme is significantly increased to help protect the structure of the street and the integrity of the apparatus within it.

The Permit Scheme has provided benefits to this Authority on roads which have a Section 58 restriction applied to them.

Permits for planned works on these roads are usually refused, due to the restriction on them. If, however, a utility wishes for the works to go ahead, a site meeting is arranged and the permanent reinstatement agreed before any works can go ahead. This is placed in the permit as a condition.

6.11. Permit Compliance Inspections

The EEPS not only provides additional controls during the back-office application process, but it also provides the Permit Authority with the capability to take action for any works (from an Inspection) that do not have a valid permit or are in breach of conditions (for a valid permit). It is essential for the Permit Authority to ensure that works being carried out on the network have a permit and are also compliant to the agreed terms of a granted permit including conditions, such as timing and duration; or traffic management. Appendix J contains the volumes for Permit Compliance Inspections.

Whilst there are no regulatory guidelines on the number of Permit Compliant Inspections carried out, all EEPS Permit Authorities show that the number of Inspections carried out for Statutory Undertakers is significantly higher than Highways Works.

One of the main changes from a noticing scheme is that a permit can have certain conditions placed on it. In order to monitor that the conditions placed on a permit have been adhered to on site, additional inspections for 'permit compliance' have been carried out. (P/C inspections)

Whilst some P/C inspections were carried out in November 2012, these were not formally recorded, and therefore, do not form part of the data shown. The results show that, whilst there was quite a major noncompliance issue in December (one month after starting the Scheme) this improved month by month and seems to have settled between 5 and 10% in the latter part of the first year. It is believed that carrying out a high percentage of P/C inspections has been instrumental in ensuring that conditions placed on permits have been complied with, and are also appropriate for the site.

One of the benefits of Permit Schemes is that the planning of works is carried out in a better manner, with traffic management and resource thought out and planned beforehand. This, in turn has improved the content of the information given to the public, both by use of advance warning signs on site, and by electronic means through the ELGIN web site.

Conditions curtailing works on Traffic Sensitive streets, at peak times, has been one of the most useful aspects of the EEPS, and this has contributed to better traffic flow and less disruption to the road user at peak times.

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7 Measuring Effectiveness

This section of the Report details the results and assessment from the effectiveness measures. Further data on these measures can be found within the Appendices of this Report and where applicable a summary of this data is provided within this section.

7.1. Permit Scheme Case Studies

This measure is designed to capture examples (case studies) where the additional powers that an Authority has a part of the permit scheme, have enabled the delivery of a clear benefit to the Network and/or public and therefore assisting in the delivery of the wider scheme objectives and benefits.

The first year operating the Scheme has gone well, with few teething problems and certainly giving the Authority more control and vision of what is happening on the highway network.

One of the benefits, apart from collaboration and co-ordination, (see below) has been the change in most works promoters attitude to both works, co-ordination and in thinking about and actioning works on site. The Permit Scheme has forced works promoters to place in conditions, thus having to decide on traffic management measures, advertising, letter drops etc, before works start. Real benefit has been seen in the increase in advance warning signs, and providing the travelling public with accurate information, so that an alternative route may be taken to avoid delays.

As part of the process of granting a permit involves looking at the mapping of where the works will be, it has been possible to increase the accuracy in the mapping of sites, which provides vital information to the co-ordinator and prevents errors occurring on the gazetteer, data of which is held for the maintenance period of two or three years.

Case Study One

Gas works in Sharnbrook

Major gas works in Sharnbrook, being carried out under a Section 50 licence.

The Permit Scheme was of immense use, in co-ordinating other works in the area, to prevent conflicts and stopping additional disruption around the village, so that only one set of works were being undertaken at one time. Being able to refuse other works permits, until a time that would cause minimal disruption to the area, really made this scheme work well.

Case study two

Amphill Road, New Morrisons Store

Major works in and around Amphill Road, for new Morrisons store.

Amphill Road is the A6 and one of the most TS roads BBC have. All of the Utilities were trying to carry out works at same time as tree felling, and Section 278 works. Side roads were involved, and without the control that a Permit Scheme gives an Authority, there would have been severe disruption and conflict. Several road closures were also involved, and it was difficult, even with a Permit Scheme, to keep control of all the road space booking.

As all works could be co-ordinated properly, and works promoters advised when they could work, dates, times, traffic management they required etc. disruption to residents and traffic within the area was kept to a minimum.

Case Study Three

The Water utility placed in a permit application to carry out work to a manhole cover, on a busy road, by a retail park on Rope Walk in Bedford. This was going to cause disruption and had to be carried out overnight. It was discovered that there was soon going to be a road closure on the same road, for other works to be carried out, and Anglian Water collaborated with the other works promoter to carry out the works when the road was closed, causing no actual disruption on this road.

7.2. Improved Working Relationships

This measure is designed to capture examples where working relationships between the Authorities, Network Management Teams, transport providers, works promoters (both Statutory Undertakers and Highways Works), have improved as a result of the additional powers that an Authority has a part of the permit scheme. Whilst no actual case studies are detailed in this report, BBC do feel that the Permit Scheme has improved communications and relationships with most Utilities and even their own works promoter. As visibility of works improve because of the Permit Scheme, communication has also increased and improved. This has enabled works promoters to take advantage of obtaining shorter working windows within defined periods in order to carry out works at busy locations. Improved communications also benefits the travelling public, as shorter duration times can be negotiated to keep disruption to a minimum.

7.3. NHT Survey - Traffic and Congestion Indicators

The National Highways & Transport Survey provides public perspectives on, and satisfaction with, highways and transportation services in local authority areas. Included in the survey are specific questions relating to street works and tackling congestion.

The data shown is for each key measure or sub measure relating to street works and tackling congestion. Data is only available pre-scheme as the survey takes place in June with the results published in September. There is little difference in the results for the 2 years preceding the scheme implementation.

As a result of efficiency savings, BBC stopped taking part in the NHT survey from 2013, so no analysis can be conducted on any changes from the first year of permit scheme operation.

7.4. Street Works Related Enquiries and Complaints

The introduction of a permit scheme should provide the public with a greater level of information and the enhanced control of street works should lead to improved delivery of works on the Network. Therefore, Authorities should see a reduction in the level of enquiries and complaints received by the public in relation to street works.

As part of the introduction of EEPS, BBC embedded the roadworks.org website into their Council website to improve access to up-to-date works information.

Due to all of the works now being on the roadworks.org web site, processes within the highways helpline team have been changed so that accurate information can be provided to the public (from the web site) whilst a member of the public is still on the telephone line. This has helped in supplying information at source, and preventing further e mails/telephone calls to the Streetworks team, that could have been dealt with earlier.

8 Future Operation Improvements

Whilst it is too early to suggest any definitive improvements or enhancements to the Scheme, the EEPS Authorities are currently discussing a range of options for the future.

BBC may look at whether any Model Text is necessary, with a view to encouraging free text, provided the condition type is ticked appropriately, and the Streetworks co-ordinator is supplied with sufficient information to be able to grant the permit.

EToN 6 has also helped in giving further detail on permit applications, and allowing the Streetworks team to 'conditionally grant' permit applications instead of refusing them.

The use of accurate and appropriate conditions on permit applications has to also be a key driver in any enhancement, and BBC will be working with works promoters to not only ensure that the successful application of conditions remains a high priority but also to encourage even more initial applications to be granted on receipt.

9 Conclusion

Generally the East of England Permit Scheme has been well received by all stakeholders. By working with all works promoters some practical operating models have been adopted that are workable. In the main, all stakeholders can see the benefits that the scheme aims to achieve.

There have been over 10,000 permit applications made in Bedford Borough in the first year of operation. There was a noticeable rise in the number of permits over the first few months of operation as compliance inspections ensured recordable works did not take place without the required permit and co-ordination conditions. The biggest rise was in highway road works, which shows a greater equality being achieved between highway 'road' works and utility 'street' works – although throughout the development and operation of the scheme tries not to differentiate these works treating all works promoters the same.

The measurement of success of the scheme focuses greatly on 'numbers', or quantitative data. This might show how efficient we are at operating the scheme, but does not necessarily show how effective the permit scheme is at delivering the outcomes of reducing disruption and providing better information in the original scheme vision. These measures tend to be more qualitative and therefore more difficult to quantify in a way that shows improvement. However it is still possible to demonstrate this by collecting more appropriate data. For example, the public surveys which ask residents how well they feel road works are being managed on a scale of 1 to 10 will be able to show movement trends.

Individual case studies, feedback from stakeholders and press stories do show that the objectives are being achieved, but Bedford Borough wants to build on this and identify further measurable examples.

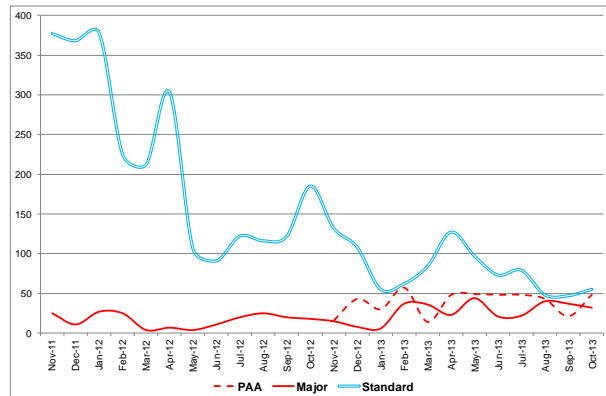
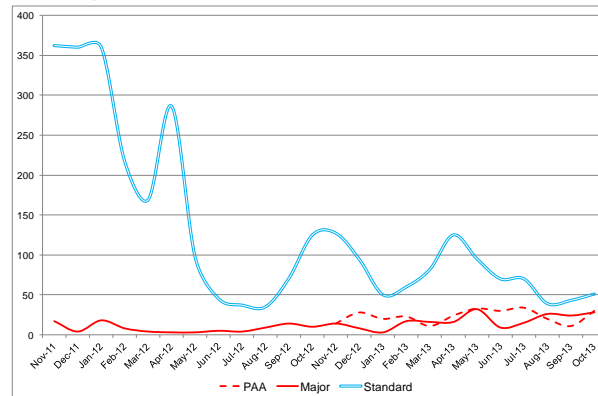
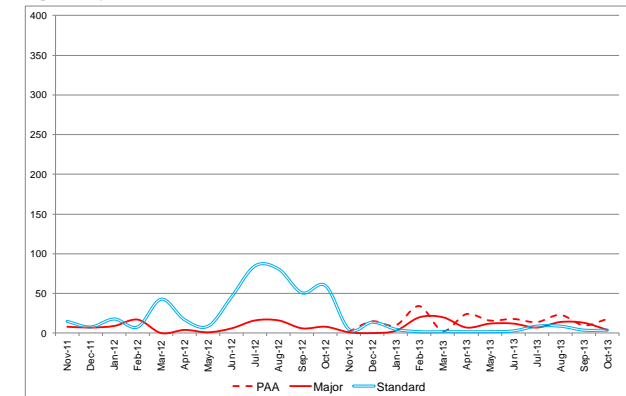
Bedford Borough recognises that national indicators of success focus on efficiency rather than effectiveness and as such will lobby Dft to adopt indicators to help demonstrate nationally how well all permit schemes meet their objectives.

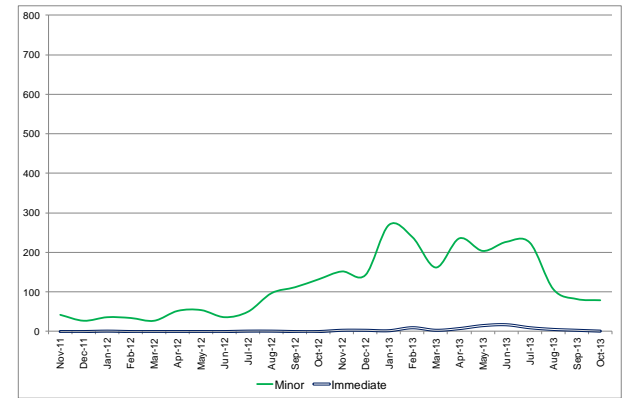
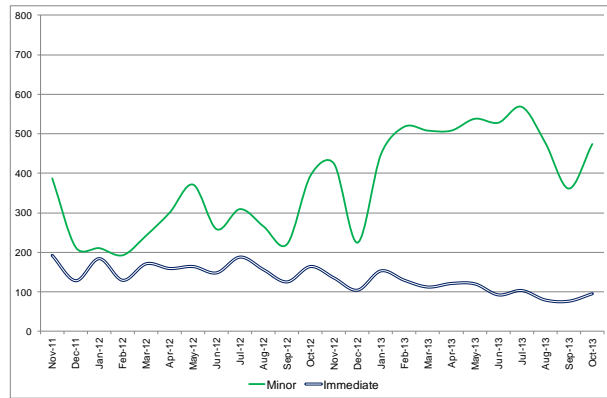
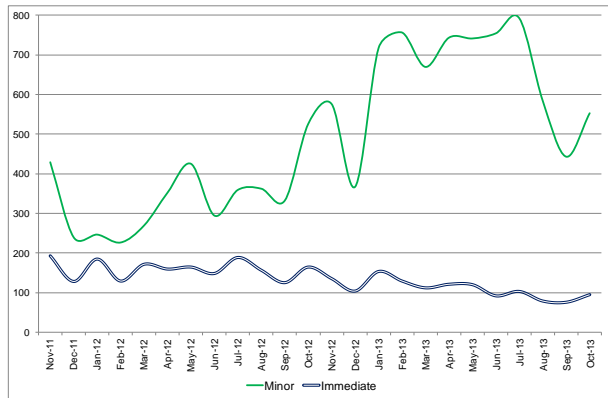
The success of EEPS is very reliant on the use of conditions to achieve success. However this report has shown that further consideration needs to be given to the detail and appropriateness of conditions used. Further work will be needed here to give a more accurate picture in future reports.

Appendix A – Permit Volumes

This measure is a count of total applications received during the year. To provide a comparison of pre-scheme, the numbers of notifications are shown before the scheme came into effect and then permit applications (within Year 1). The charts below show the volumes of notifications and applications for all works, and also Statutory Undertaker and highways works. To provide a comparison between before and after Scheme operation, the Notifications are aligned to a Permit activity, *for example 3 Day Notice is equal to a permit application for a Minor activity*.

	All Works						Statutory Undertaker						Highways					
	PAA	Major	Standard	Minor	Immediate	All Works	PAA	Major	Standard	Minor	Immediate	TOTAL	PAA	Major	Standard	Minor	Immediate	TOTAL
Pre-Scheme	0	197	2,605	4,059	1,908	8,769	0	99	2,164	3,360	1,905	7,528	0	98	441	699	3	1,241
Year 1	465	321	967	7,702	1,319	10,774	278	208	906	5,576	1,244	8,212	187	113	61	2,126	75	2,562
VARIANCE	465	124	-1,638	3,643	-589	2,005	278	109	-1,258	2,216	-661	684	187	15	-380	1,427	72	1,321
% VARIANCE	-	62.9%	-62.9%	89.8%	-30.9%	22.9%	-	110.1%	-58.1%	66.0%	-34.7%	9.1%	-	15.3%	-86.2%	204.1%	2400.0%	106.4%

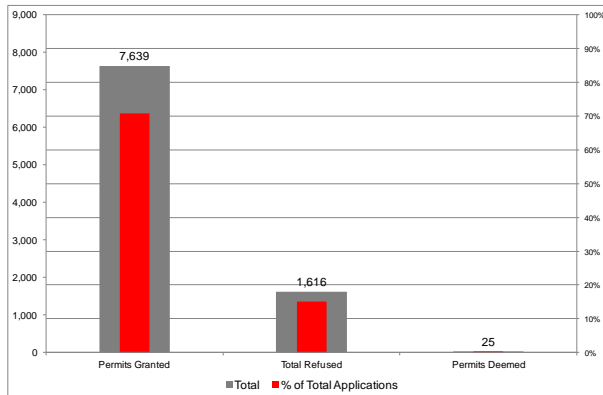
All Works Promoters

Statutory Undertaker Works

Highways Works




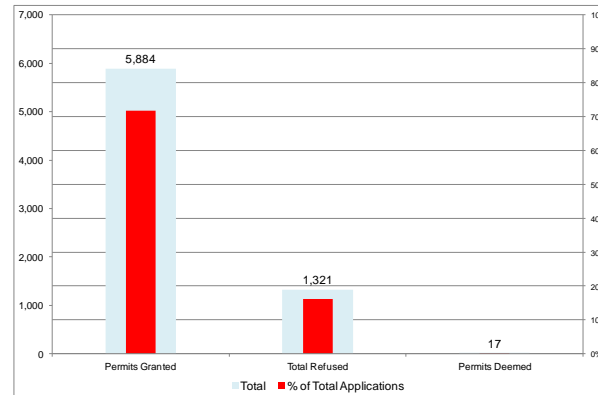
Appendix B – Permits Granted, Refused or Deemed

This measure is a count of applications granted, refused or deemed for the reporting period. The total for Refused permits includes both permits and variations - the option to analyse a separate refusal transaction for either a permit or variation is limited by EToN. There is a delta between these volumes and the permit application volumes as there are always permit applications received, but not processed to a status.

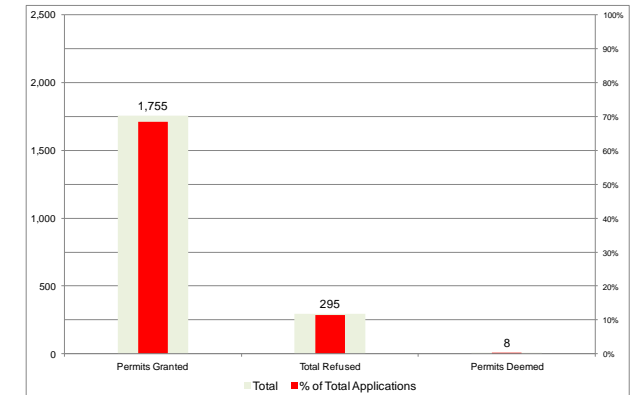
Activity Type	Total Permit Applications Received	All Works			Statutory Undertaker			Highways		
		Permits Granted	Total Refused	Permits Deemed	Permits Granted	Total Refused	Permits Deemed	Permits Granted	Total Refused	Permits Deemed
PAA	465	281	70	0	149	64	0	132	6	0
Major	321	192	98	1	128	49	0	64	49	1
Standard	967	535	260	1	494	254	0	41	6	1
Minor	7,702	5,421	1,141	17	3,974	907	11	1,447	234	6
Immediate	1,319	1,210	47	6	1,139	47	6	71	0	0
Total	10,774	7,639	1,616	25	5,884	1,321	17	1,755	295	8
% of Total Applications	-	70.9%	15.0%	0.2%	71.7%	16.1%	0.2%	68.5%	11.5%	0.3%



All Works Promoters



Statutory Undertaker Works



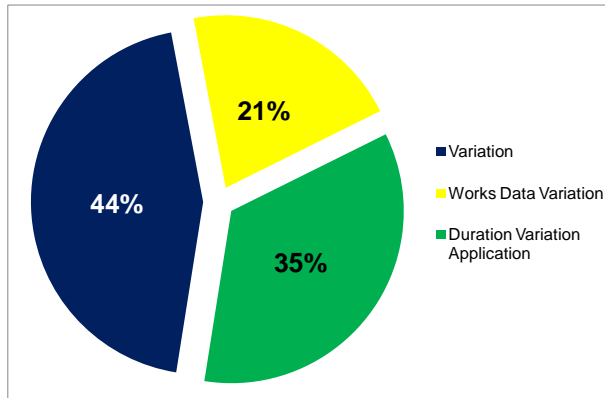
Highways Works

Appendix C – Permit Variation Applications

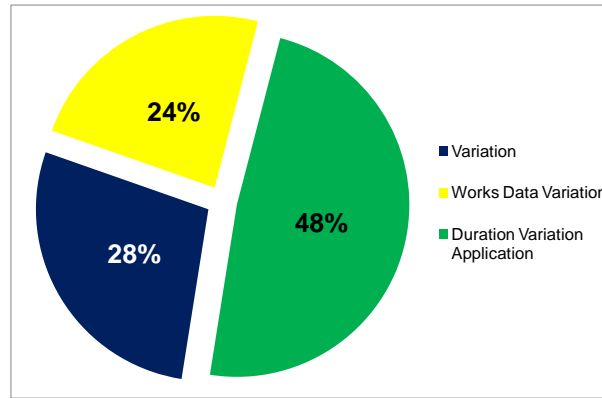
This measure is a count of the three types of permit variations: (1) variations before works have started; (2) variations after works have started with a change to the durations; and (3) variations after works have started with a non-duration change (data), *such as the traffic management*. This measure includes all application for a permit variation and does take in consideration multiple variations for one permit.

For instances where Works Promoter submits a revised application before the first application is processed – if the application is granted it is recorded as a "grant variation" not a "grant permit" within the Street Works System. As a result of this system-process, the calculation for total Variations Granted is therefore inaccurate and hence why the % of total variations granted compared to total variations exceeds 100%.

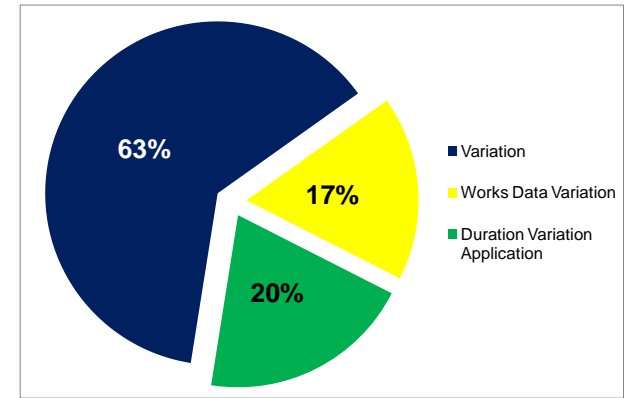
Activity Type	All Works					Statutory Undertaker					Highways				
	Variation	Works Data Variation	Duration Variation Application	Variations Granted	Variations Deemed	Variation	Works Data Variation	Duration Variation Application	Variations Granted	Variations Deemed	Variation	Works Data Variation	Duration Variation Application	Variations Granted	Variations Deemed
Major	39	17	54	109	0	25	5	37	68	0	14	12	17	41	0
Standard	49	21	29	163	2	44	12	25	146	0	5	9	4	17	2
Minor	298	66	91	962	3	57	16	32	407	1	241	50	59	555	2
Immediate	0	75	128	131	0	0	74	125	127	0	0	1	3	4	0
Total	386	179	302	1,365	5	126	107	219	748	1	260	72	83	617	4
% of Total (Variations)	-	-	-	157.4%	0.6%	-	-	-	165.5%	0.2%	-	-	-	148.7%	1.0%
% of Total Applications Granted	5.1%	2.3%	4.0%	-	-	2.1%	1.8%	3.7%	-	-	10.1%	2.8%	3.2%	-	-
Total % of Variations to Granted Applications	11.3%					7.7%					16.2%				



All Works Promoters

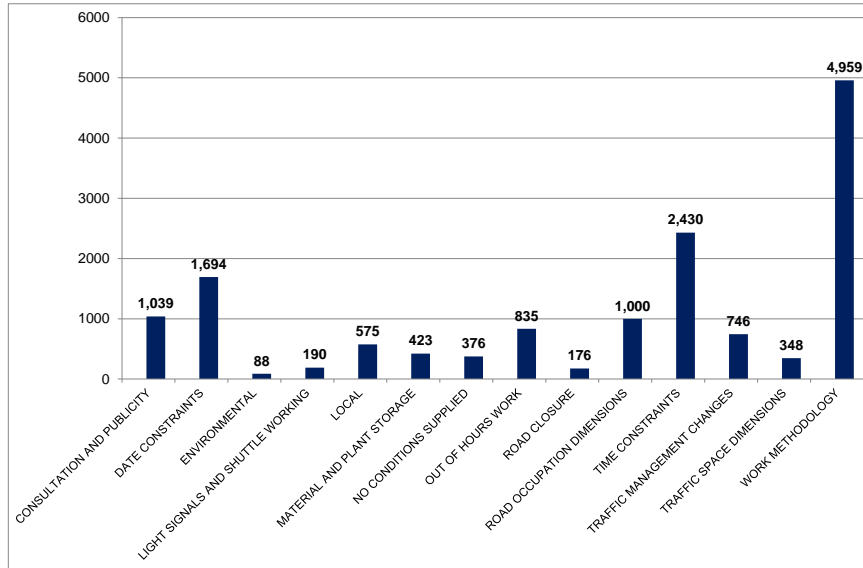


Statutory Undertaker Works

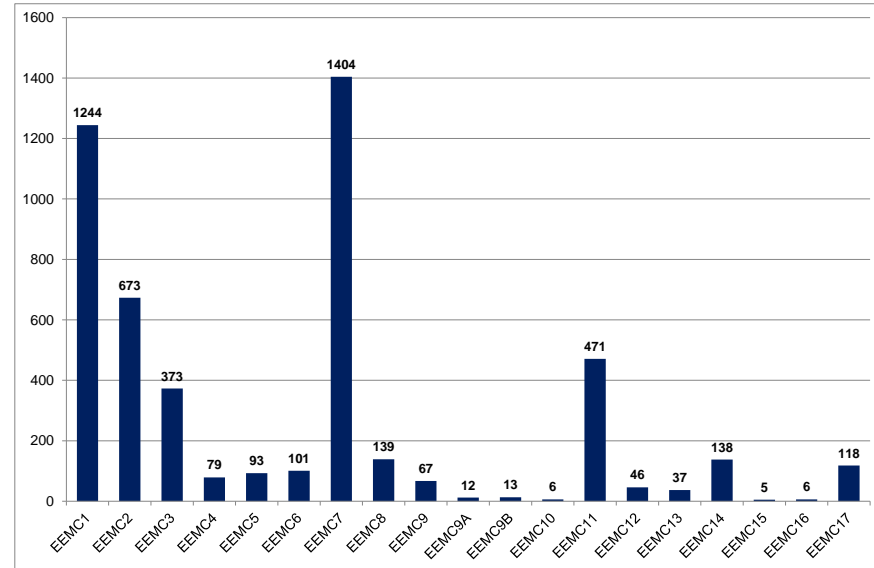


Highways Works

Appendix D – Conditions Applied to Permits



Conditions Applied (By Type)



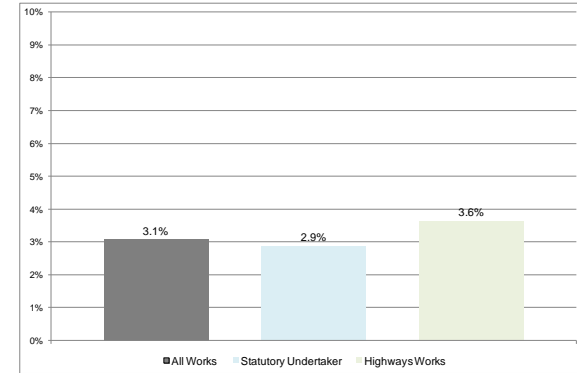
Conditions Applied (by EEMC Reference)

Appendix E – Number of Approved Extensions

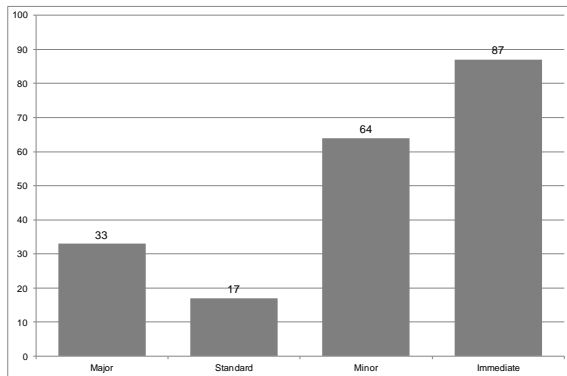
This is a count of where a 'duration variation application', i.e. a request to extend the duration of works after they have started, has been granted.

Revised duration variations applications received after EEPS came into effect for works that were registered before the EEPS came into effect scheme are excluded from this measure.

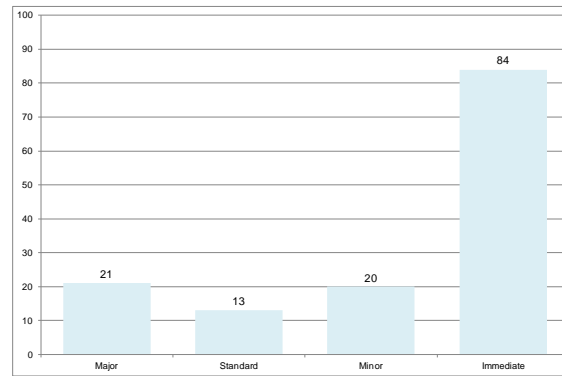
The % of started work with approved extensions shows the average of all extension requests for all started works, including Immediate works.



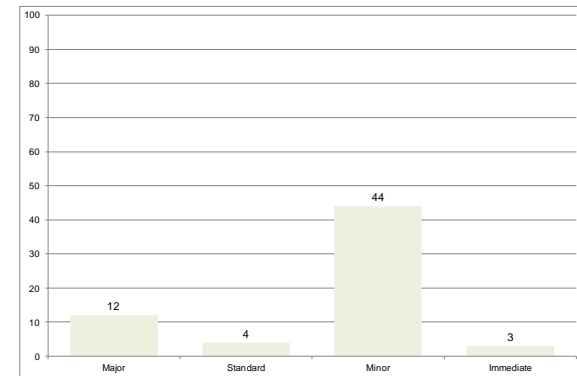
% of Started Work with Approved Extensions



All Works Promoters



Statutory Undertaker Works



Highways Works

Appendix F – Permit Application Lead in Time

Adherence to Lead Times

This measure is a count of the permit applications that were received by the Permit Authority within (in time) or outside (not in time) the application lead times (prior to the proposed start date) specified within the EEPS.

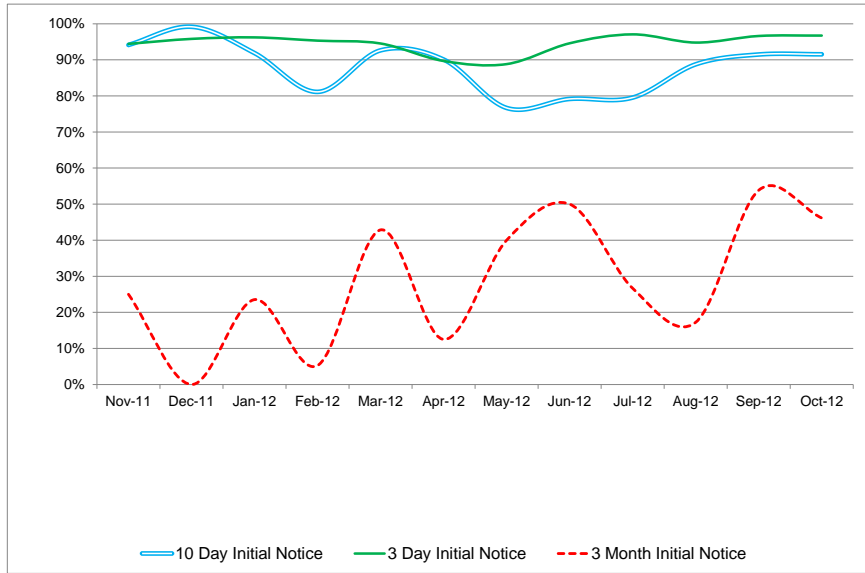
Pre-scheme

	All Works			Statutory Undertaker			Highways		
	3 Month Initial Notice	10 Day Initial Notice	3 Day Initial Notice	3 Month Initial Notice	10 Day Initial Notice	3 Day Initial Notice	3 Month Initial Notice	10 Day Initial Notice	3 Day Initial Notice
% In Time	27.2%	91.9%	94.3%	36.3%	93.7%	96.9%	10.4%	49.0%	77.9%
% Not in Time	72.8%	8.1%	5.7%	63.7%	6.3%	3.1%	89.6%	51.0%	22.1%

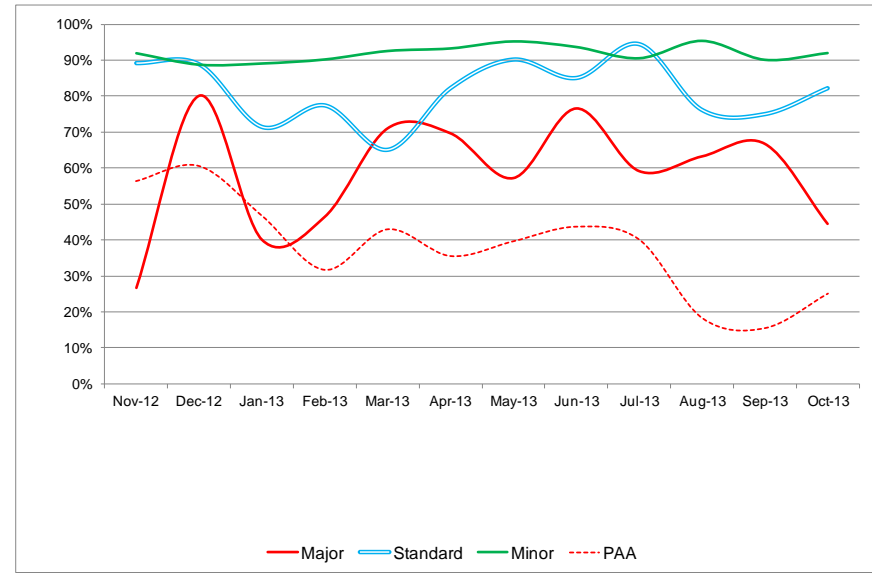
Year 1

	PAA	Major	Standard	Minor	PAA	Major	Standard	Minor	PAA	Major	Standard	Minor
	% In Time	43.3%	57.0%	81.2%	91.1%	58.3%	60.6%	81.8%	93.9%	22.7%	51.2%	77.3%
% Not in Time	56.7%	43.0%	18.8%	8.9%	41.7%	39.4%	18.2%	6.1%	77.3%	48.8%	22.7%	15.3%

Pre-scheme



Year 1



Average Lead Times

This measure is the average of the lead time (calendar days for PAA and working days for all other activity types) of applications received. The lead time is determined from the application date and the proposed start date (of the application).

As referenced within Section 4.4 of this Report, exceptional values for lead times have been removed from the total records in order to provide a more realistic average. The filter applied to the records is shown below and in addition to these, all records where the lead-time is less than zero have been removed (c.2% of all records). In total, no more than 10% of the records have been removed.

Provisional Advanced Authorisation and 3 Month Initial Notice *Lead-time of less than 120 days (c6%).*

Major Permit Application *Lead-time of less than 40 days (c5%).*

10 Day Initial Notice and Standard Application *Lead-time of less than 25 days (c8%).*

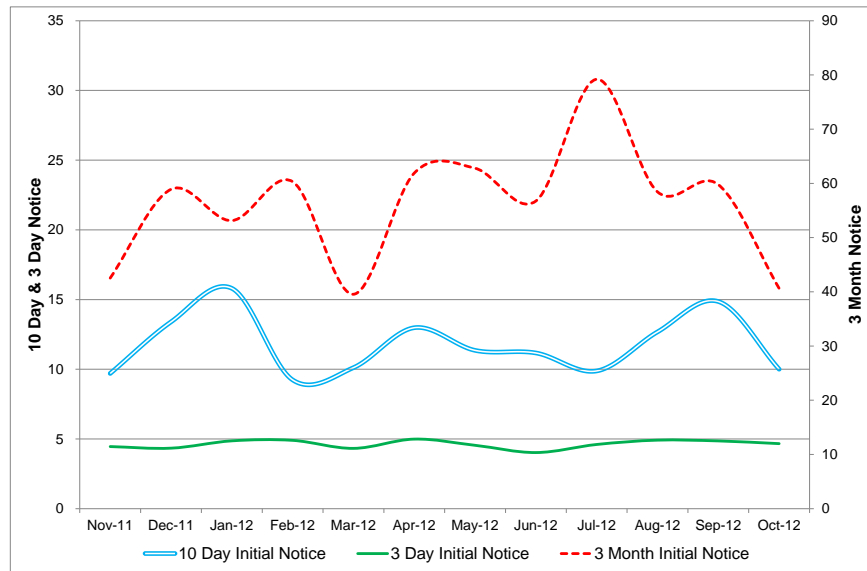
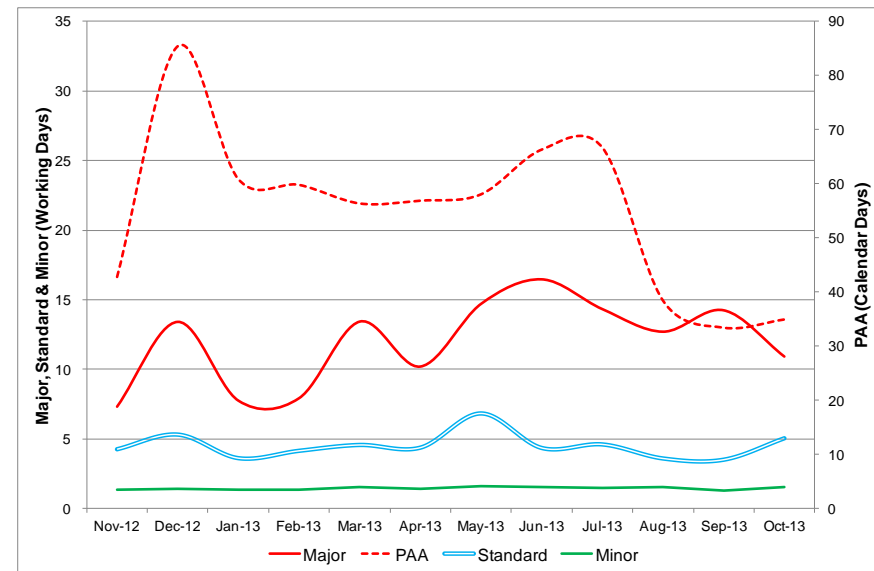
Minor Application *Lead-time of less than 10 days (c6%).*

Pre-scheme

	All Works			Statutory Undertaker			Highways		
	10 Day Initial Notice	3 Day Initial Notice	3 Month Initial Notice	10 Day Initial Notice	3 Day Initial Notice	3 Month Initial Notice	10 Day Initial Notice	3 Day Initial Notice	3 Month Initial Notice
Average (Days)	11.77	4.62	56.16	13.58	4.34	63.31	9.95	4.91	49.86
Target (Days)	10.00	3.00	90.00	10.00	3.00	90.00	10.00	3.00	90.00
Variance +/- (Days)	1.77	1.62	-33.84	3.58	1.34	-26.69	-0.05	1.91	-40.14

Year 1

	All				Statutory Undertaker				Highways			
	PAA	Major	Standard	Minor	PAA	Major	Standard	Minor	PAA	Major	Standard	Minor
Average (Days)	55.00	11.94	11.61	3.72	65.40	9.43	11.90	3.48	44.60	14.55	11.32	3.95
Target (Days)	90.00	10.00	10.00	3.00	90.00	10.00	10.00	3.00	90.00	10.00	10.00	3.00
Variance +/- (Days)	-35.00	1.94	1.61	0.72	-24.60	-0.57	1.90	0.48	-45.40	4.55	1.32	0.95


Pre-Scheme

Year 1

Appendix G – Permit Cancellations

This measure is a count of cancellations received before or after the (proposed) works start date within the permit application. Since the introduction of the EEPS, permits cancelled after they have been granted can be measured (are also shown in Year 1).

Pre-Scheme

	All Works				Statutory Undertaker				Highways			
	3 Month Notice	10 Day Notice	3 Day Notice	Total	3 Month Notice	10 Day Notice	3 Day Notice	Total	3 Month Notice	10 Day Notice	3 Day Notice	Total
Cancelled Before Works Start	12	72	152	236	10	66	141	217	2	6	11	19
Cancelled After Works Start	17	1,127	721	1,865	13	1,109	701	1,823	4	18	20	42
% Cancelled After Works Start	58.6%	94.0%	82.6%	88.8%	56.5%	94.4%	83.3%	89.4%	66.7%	75.0%	64.5%	68.9%
% Cancelled of all Notified Works	14.7%	46.0%	21.5%	24.0%	23.2%	54.3%	25.1%	36.3%	6.1%	5.4%	4.4%	4.9%

Year 1

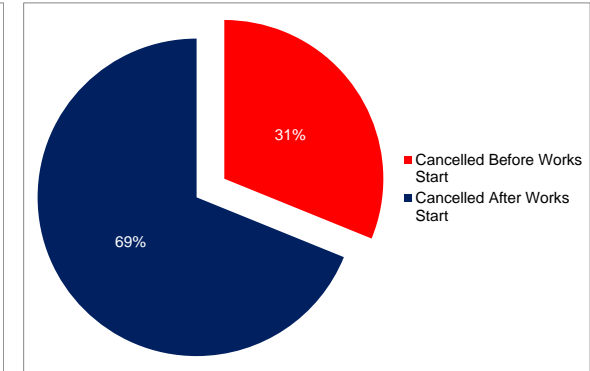
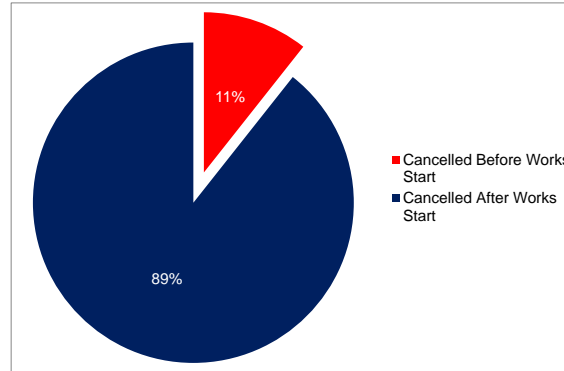
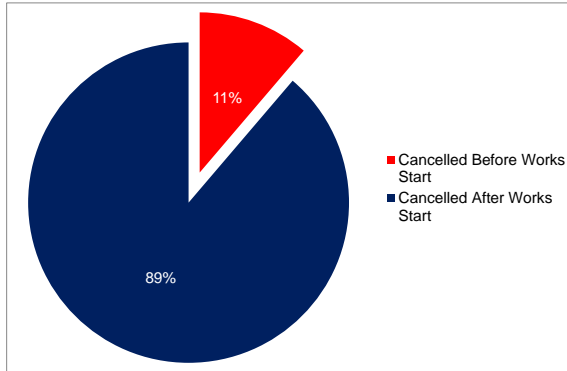
	All Works				Statutory Undertaker				Highways			
	Major	Standard	Minor	Total	Major	Standard	Minor	Total	Major	Standard	Minor	Total
Cancelled Before Works Start	54	130	543	727	50	128	495	673	4	2	48	54
Cancelled After Works Start	38	150	1,118	1,306	31	147	1,038	1,216	7	3	80	90
% Cancelled After Works Start	41.3%	53.6%	67.3%	64.2%	38.3%	53.5%	67.7%	64.4%	63.6%	60.0%	62.5%	62.5%
% Cancelled of all Granted Permits	47.9%	52.3%	30.6%	33.1%	63.3%	55.7%	38.6%	41.1%	17.2%	12.2%	8.8%	9.3%

All Works Promoters

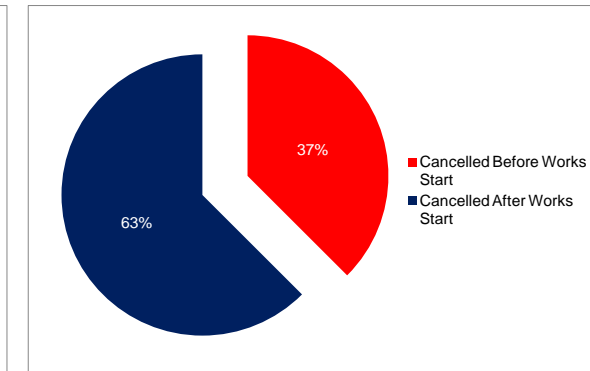
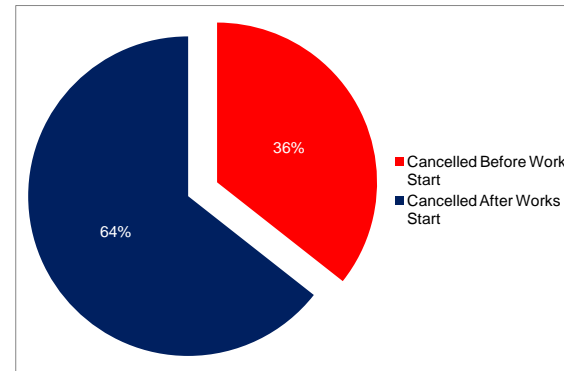
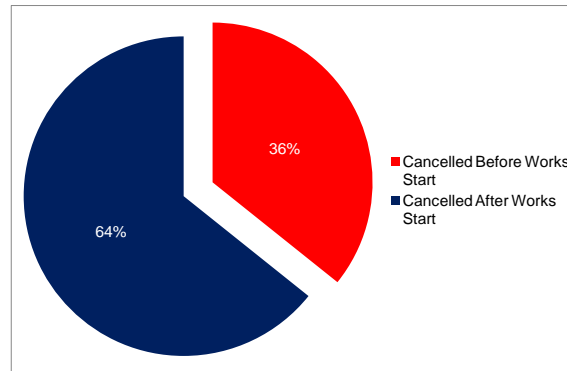
Statutory Undertaker Works

Highways Works

Pre-scheme



Year 1



Appendix H – Authority Imposed Variations and Revocations

This measure is a count of the number of Authority Imposed Variations or Revocations issued by the Permit Authority. The calculation for the % of Authority Imposed Variations does not include PAA's as these cannot be varied by either the Works Promoter or the Permit Authority.

Authority Imposed Variations

	All Works					Statutory Undertaker					Highways				
	Major	Standard	Minor	Immediate	% of all Granted Permits	Major	Standard	Minor	Immediate	% of all Granted Permits	Major	Standard	Minor	Immediate	% of all Granted Permits
Total AIVs	1	3	26	84	1.5%	0	3	22	82	1.9%	1	0	4	2	0.4%
Total Permits Granted	192	535	5,421	1,210	-	128	494	3,974	1,139	-	64	41	1,447	71	-
% of Permits Granted	0.5%	0.6%	0.5%	6.9%	-	0.0%	0.6%	0.6%	7.2%	-	1.6%	0.0%	0.3%	2.8%	-

Permit Revocations

	All Works					Statutory					Highways				
	Major	Standard	Minor	Immediate	% of all Granted Permits	Major	Standard	Minor	Immediate	% of all Granted Permits	Major	Standard	Minor	Immediate	% of all Granted Permits
Total Revocations	1	0	6	2	0.1%	1	0	3	2	0.1%	0	0	3	0	0.2%
Total Permits Granted	192	535	5,421	1,210	-	128	494	3,974	1,139	-	64	41	1,447	71	-
% of Permits Granted	0.5%	0.0%	0.1%	0.2%	-	0.8%	0.0%	0.1%	0.2%	-	0.0%	0.0%	0.2%	0.0%	-

Appendix I – Average Duration of Works

This measure is the average duration of works where a Stop Notice has been received by the Permit Authority. For any planned works, i.e. not an Immediate activity, there must have been a Start Notice submitted. The durations have been calculated by determining the working days between the actual dates contained within the Start and Stop Notices.

As referenced within Section 4.4 of this Report, exceptional values for durations have been removed from the total records in order to provide a more realistic average. The filter applied to the records is shown below and in addition to these, all records where the duration is less than zero have been removed (c.% of all records). In total, no more than 10% of the records have been removed.

Major Works *Duration of over 100 days removed.*

Standard Works *Duration of over 20 days removed.*

Minor Works *Duration of over 10 days removed.*

Immediate Works *Duration of over 20 days removed.*

Pre-scheme

	All Works	Statutory Undertaker	Highways
Major	14.4	20.7	8.6
Standard	6.5	7.0	5.0
Minor	2.1	2.3	1.8
Immediate	5.3	5.4	3.5

Year 1

	All Works	Statutory Undertaker	Highways
Major	16.0	22.1	9.8
Standard	6.3	6.8	5.9
Minor	2.3	2.7	1.9
Immediate	3.4	5.3	1.6

Appendix J – Permit Compliance Inspections

This is a count of the number of Inspections carried out by the Permit Authority for Permit Compliance – shown as either a Pass or Fail. This measure also includes a % of failed Permit Compliance Inspections where the failure is as a result of Traffic Management non-compliance. Un-attributable works are excluded from any of these counts.

	All Works					Statutory Undertaker					Highways				
	Passed	% Passed	Failed	% Failed	Total Inspections	Passed	% Passed	Failed	% Failed	Total Inspections	Passed	% Passed	Failed	% Failed	Total Inspections
Permit Compliance Inspection	796	89.0%	98	11.0%	894	705	88.5%	92	11.5%	797	91	93.8%	6	6.2%	97
Traffic Management Failure	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-

