

Shropshire Council

West and Shires Permit Scheme

Performance & Evaluation Report

Years 1 & 2



CONTROL HISTORY

Issue	Status	Owner	Date	Change summary	QA review
1	DRAFT	Mouchel	24/9/16	Draft for review	AB/CG
2	DRAFT	Shropshire Council	27/11/16	Draft for review and release	AB
3					

Foreword from Simon Jones, Portfolio Holder for Highways and Transportation:



I'm pleased to present the final draft of the Permit Scheme Performance and Evaluation Report for years one (2014/15) and two (2015/16) of the operation of the West and Shires Permit Scheme.

We are very proud of what has been achieved in Shropshire during the first two years, and overall the report highlights some significant positive outcomes that represent real benefits to the people and businesses of Shropshire alike, for example:

- Reducing permit durations has equated to an overall saving of 10,000 days of highway occupation over the two years.
- Within the 10,000 days saved, an estimated 1500 collaborative activities took place, with as much as 3-4 days of occupation saved for each collaborative works.
- These saved days of highway occupation have resulted in massive savings to the local economy.
- The operation of the scheme has been cost neutral to Shropshire Council, as all costs have been covered by the permit fees income.

As always, we will continue to strive for further improvements and developments and are aware that there have been some data quality and reporting issues (that are fully covered within the report) as the new systems and procedures have bedded in. We are already working on ways to improve this for the year 3 report and are confident that we will continue to see improvements in this area.

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1 Executive Summary

The management of road and street works is vital when delivering or repairing essential utility services and facilitating much needed maintenance and improvements to the road network itself, thus ensuring that the infrastructure remains in a fit and proper state. However, these works also cause significant delay and disruption to the road network and frustration to road users, businesses and residents.

The development of the West and Shires Permit Scheme (WaSP) was led by Shropshire Council, who were also the first authority in the West Midlands to implement it after an eighteen-month process that involved significant contributions from statutory undertakers and neighbouring highway authorities.

The introduction of the WaSP scheme in Shropshire required a significant transition for everyone involved, requiring adaptation to the new procedures and ways of working which set the foundation of how the scheme would be managed. Shropshire Council has been fully committed in ensuring that the main objectives of the WaSP scheme are met and adhered to.

The new permitting rules allow for greater control over works taking place on the network, with Shropshire Council's network management and coordination team (the Permit Authority) able to refuse consent for works considered to have the potential to cause unnecessary disruption. The new powers also allow the authority to agree conditions with the activity promoter to ensure that works are expedited and are undertaken in the most efficient manner.

The increased discipline required under permitting has improved existing processes within works promoter organisations, which has enhanced the quality of information relating to proposed works received by the permit authority. The permitting rules have also served to highlight the importance of providing early and detailed information concerning planned works to assist in the coordination process.

The permit authority has made effective use of the new powers and have worked closely with the utility companies and their own highway authority promoters to ensure that those powers have been applied in a reasonable and competent manner. The combined effect of these powers has contributed to improved network coordination and reduced disruption, key to Shropshire Council fulfilling its Network Management Duty.

This report evaluates the progress of the Shropshire Permit Scheme in meeting both the stated objectives and parity of treatment of both local authority highway works (Works for Road Purposes) which are undertaken by the highway authority and statutory undertaker works (utility company 'street works') for financial years 2014/15 and 2015/16.

In its first two years of operation, 37,989 permit applications were received with 24,654 having been granted and 12,902 refused for varying reasons.

While there are no significant trends, the scheme demonstrates some successful outcomes including:

- A clear reduction in overall works activity occupation of the highway through the assessment of permit durations and a significant improvement in identifying and

encouraging collaboration between works promoters, with an increase in the number of collaborative works. Together these have resulted in approximately 10,000 fewer days of occupation than the equivalent number of activities might have led too in 2013/14.

- The overall days saved represents a direct financial benefit to the regional economy in the region of £2m+ in terms of cost of disruption from street and road works.
- Cost neutral resourcing of a network management team, including coordinators, inspectors, network managers and an economic development officer.

In addition to the measured benefits, there are also a number of unmeasured benefits, including:

- An increased discipline amongst highway authority promoters recording their works and following statutory requirements.
- The need to book road space and undertake the activity within a specified time-period has focused attention on improved planning and activity scheduling by all works promoters.
- A shift in approach to large scale works on the highway, growth schemes and development opportunities; to provide a more proactive resource and assistance to these activities from conception to completion.
- Better quality information available to make considered coordination decisions.
- Improved public perception of the way in which activities were planned and undertaken.
- Improved relationships between Shropshire Council and all activity promoters.

The overall performance of the Shropshire scheme for financial years 2014/15 and 2015/16 has been successful in meeting its wider objectives but there is still scope for improvement both in terms of operational performance and also in the recording and analysis of data.

In 2017 Shropshire Council intends to review the street network (road categories) and analyse permit fee levels. This is allowed for in the permit scheme regulations, in order to ensure that the permit scheme operates on a 'cost neutral' basis for the Council while delivering the service effectively and efficiently.

2 Introduction

2.1 Shropshire Council road network

Shropshire is England's largest primarily rural county council. Sparsely populated, it has 5.5 thousand kilometres of road network, of which less than 24% comprises motorway, A and B roads.

Although the urban environment can be particularly challenging in achieving effective overall network management due to the numbers of people and amount of traffic, increased evidence suggests that the effects of disruption felt in rural areas are equally frustrating and costly to residents, road users and rural business.

Shropshire's economy is dominated by agriculture. In rural Shropshire farmland and farm business vehicles account for the majority of traffic across the network. Rural business can be hindered by the distances involved in travel between urban areas and poor transport links. Shropshire Council is committed to wider economic development and recognises that a well-managed network capable of high-speed communication and moving people and goods efficiently encourages the growth of business.

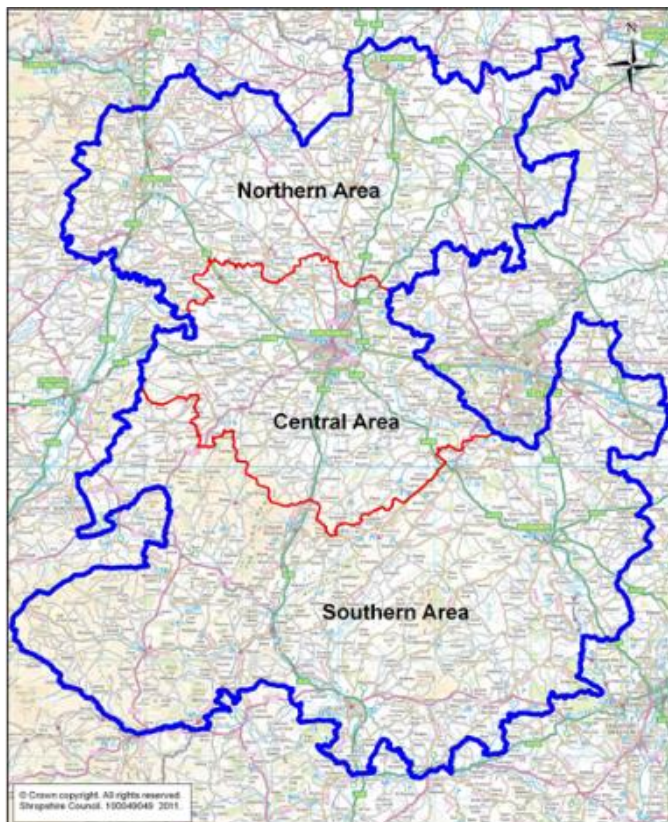
Shropshire is a county of national importance due to its cultural and historical attractions. From areas of outstanding natural beauty located around the county, two UNESCO World Heritage sites, to a plethora of attractions including archaeological sites, castles and stately homes, Shropshire has a considerable number of popular tourist attractions.

There is a considerable volume of traffic carrying tourists into or through the County. The effective management of the highway network is vital to stimulating further growth of tourism businesses,

which has led to increased visitor numbers, ultimately benefiting other businesses and promoted wider infrastructure improvements.

Shropshire's Local Transport Plan (LTP) 2011-2026 (and the associated implementation plans) sets out Shropshire's transport objectives. Implementation of the permit scheme has supported the overall strategy to help achieve the wider aims.

The highway network is an essential part of the local economy and its effective management ensures that everyone benefits, from improvements in safety to all road users, journey reliability and decreased environmental impacts. A well-managed network also aids local regeneration projects and helps improve local transport further promoting the local economy.



2.2 Objectives of the WaSP Scheme

The objectives of West and Shires Permit Scheme are laid out in Section 2.3 of the Scheme document.

Objective	How the objective has been met
To increase the efficient running of the highway network by minimising the disruption and inconvenience caused by road works and other highway events and activities through proactive management of activities on the highway	Significant savings in occupation from activities through the use of conditions to manage activities, coordinating works to avoid clashes, seeking collaborative opportunities and challenging durations.
To improve the quality and timeliness of information received from all activity promoters to increase and improve the publicly available data for integration into the Council-wide travel information.	Use of permit refusals to ensure information is accurate. Use of Fixed Penalty Notices to drive quality of information and its timely submission. Encourage the use of non-statutory cancellation notices. Works information synchronized to roadworks.org for visibility to the public.
To encourage a proactive approach to planning and undertaking of works on the highway from promoters and thus lessen the impact of activities on road users	Greater level of planning to ensure permit contains all the necessary information required in order to grant the permit. Careful use of conditions to ensure works are undertaken at suitable times. Encourage first time permanent reinstatements or interim reinstatements where this benefits the network.
To protect the structure of the street and the integrity of the apparatus in it	Greater number of Major works are now planned to ensure 'Section 58/58a' protection of the asset. More comprehensive inspection regime at 'works in progress' stage, and coring programme in place to look at wider reinstatement and material issues.
To ensure safety of those using the street and those working on activities that fall under the Scheme, with particular emphasis on people with disabilities	Increased number of site inspections have helped to drive focus on best practice, compliance and safety to all road users. Closer assessment and coordination process allows better consideration to be given to modes of transport other than vehicles, and a focus on elements such as those people with disabilities and young children.
To ensure parity of treatment for all activity promoters particularly between statutory undertakers and highway authority works and activities working on activities that fall under the Scheme.	Performance Indicators show both highway authority and statutory undertaker works are assessed in an equal manner and conditions applied to both in a considered way. Introduction of wider Council processes to include other activities that do not fall under the scheme (highway events, developments, Highways Act licenced activities etc.).

The successful performance of the scheme has brought a number of unquantified subsidiary benefits. These include:

- maximising the safe and efficient use of road space;
- providing reliable journey times;
- improving the resilience of the network;
- minimising inconvenience to all road users; and
- improving public satisfaction.

2.3 Shropshire Council's Permit Scheme evaluation

The Traffic Management Act 2004 (TMA), Part 3 Sections 32 to 39, and the Regulations make provision for Permit Schemes to be introduced in England. The West and Shires Permit Scheme was adopted by Shropshire Council on 1st April 2014 and has been revised in October 2015 to reflect the requirements introduced in the 2015 permit scheme regulation amendments¹.

This report sets out an overview of the scheme's operational performance in its first two years. The report provides analysis of the available data in relation to street works and road works activities in Shropshire Council for the primary purpose of

- demonstrating the introduction of the WaSP scheme has and will continue to provide the benefits stated in the objectives; and
- outlining any changes required by Shropshire Council to improve the operation of the scheme.

Data has been collected, collated and presented in either graphical or tabulated format for each of the defined KPIs. Commentary is also provided to draw out and expand on noteworthy trends in the data.

A number of case studies are also provided to showcase some examples of the successes of the scheme in Shropshire.

¹ The Traffic Management Permit Scheme (England) (Amendment) Regulations 2015, 2015/958

3 Fees, Costs & Benefits

Shropshire Council has set their fee levels in accordance with the Department for Transport and within the maximum fee levels specified in Regulation 30.

3.1 Permit Fees

A charge is raised only once an application has been assessed and the permit subsequently granted. Applications that are refused, or have modification requests, are not charged. This consideration is taken into account when preparing the fee model. Permits that are granted but subsequently cancelled are still charged; it is considered a disincentive for promoters, which should encourage better planning.

The levels set reflect Shropshire Council's commitment to keeping charges proportionate to the level of work done in issuing a permit. Therefore, there is a zero charge on Minor, Standard and Immediate activities on non-strategically significant streets. This ensures Shropshire Council are able to operate the scheme in a rigorous and effective manner, focussing on more significant activities and those taking place on streets where disruption is likely to be highest.

There is a charge for Permit Variations on all streets. This reflects the added work required to manage changed situations and is an incentive for activity promoters to plan and submit permits accurately in the first instance.

Activity type	Charge on strategically significant streets	Charge on non-strategically significant streets
Provisional Advance Authorisation	£105	£75
Major activities (over 10 days duration OR requiring a TTRO)	£240	£150
Major activities (4 to 10 days duration)	£130	£75
Major activities (up to 3 days duration)	£65	£45
Standard activities	£130	£0
Minor activities	£64	£0
Immediate activities	£60	£0
Permit variation	£45	£35

In addition there are a number of discounts available to help promote improvements in working practice that help reduce the impact or occupation of activities and to reflect the desire of the Council not to penalise economic growth and development.

Discount	Discount value
Where the Permit Authority has to vary or revoke a permit through no fault of the activity promoter	100%
For the maintenance of fire hydrants carried out by the fire service or a contractor designated by the fire service to carry out this work on their behalf	100%
Where the works are Diversionary Works as a result of a Major Highway or Bridge works, initiated by the Highway Authority, as described in Section 86 of NRSWA.	100%
Where promoters work in a collaborative way (sharing trench or road space or traffic management)	At least 50%
Multiple applications for a single activity (e.g. works continue around a corner into another street)	At least 50%
Working fully outside traffic sensitive times	At least 50%
Innovative working techniques that can be shown to substantially reduce disruption or occupation	At least 50%
Economic development, including new connections or new major infrastructure works	100%
Other situations where benefit has been gained through the positive and proactive or pre-emptive actions of a statutory undertaker	At least 50%

3.2 Economic appraisal

The quantitative economic analysis is 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 impact and duration data for a selection of representative works sites. The cost/benefit analysis undertaken as part of the business case for implementing a permit scheme in Shropshire produced a high positive benefit of 5.84 within its primary scenario. Almost all the additional sensitivity tests also produced high benefits (>3.2 in eight out of nine cases). There is no reason to suggest that these figures have changed significantly in the course of two years.

3.3 Future fee levels

Following review of the Local Street Gazetteer and its Associated Street Data and road type classifications, the Council will undertake a full re-evaluation of the fee profile to ensure the cost neutral requirement of the service delivery.

4 Performance Indicators

The WaSP scheme was written with a number of performance indicators set out within the scheme itself. These included four Key Performance Indicators defined in the regulations and with the specific purpose of showing parity between how different activities and promoters are treated, and seven operational measures which were developed specifically for the scheme to help to quantify the key objectives.

In October 2015 the permit scheme regulations were amended and as part of this process new advice on performance indicators was published as part of the statutory guidance² and while some Key Performance Indicators were removed as a statutory guidance, other Traffic Performance Indicators were added.

For the purposes of ease of reporting, to help ensure some sense of continuity, and to try to provide consistency in the data, this report will describe the performance indicators as originally developed, but will use the more recent TPIs where there is appropriate interchange.

4.1 Specific considerations

4.1.1 Permit Modifications

Permit Modification Requests allow the network coordinators to refuse an application (normally for relatively minor errors in content) but allows the promoter to resubmit it with corrections and meet their original proposed dates for the activity. This relies on prompt resubmission and assessment of the applications. This transaction is very beneficial to permit schemes; a refusal normally means that the promoter has to re-plan and resubmit their permit application with different dates in order to meet the application period requirements (this is a statutory timeline between submitting an application and when works can start). A PMR gets around the delays and administrative burdens of a straight refusal.

4.1.2 Permit team changes

There have been several changes to the structure of the network management team over the two years that is covered by this report, and these can be seen clearly in some of the performance results.

In the second half of the first year, the Permit Authority introduced a new post in the coordination team to deal solely with highway authority permits. This enabled a close working relationship to be developed which helped the highway authority side considerably – a single point of contact and someone who was able to provide a more flexible approach to the coordination function that had not been possible previously.

The inspection team processes were changed mid-2014 and then a new team of inspectors were recruited in May 2015 and trained to undertake inspections in a manner that concentrated on the

² Statutory Guidance for Highway Authority Permit Schemes, October 2015

inspection and compliance on site. Again, it is possible to identify these changes in some of the results shown below.

4.1.3 EToN software

All authorities and statutory undertakers in the industry have notice management systems (NMS) which use an industry developed XML schema called the Electronic Transfer of Notices (EToN), to transfer of information, allowing authorities and promoters to meet their basic regulatory requirements.

Prior to the scheme's implementation Shropshire Council used a system called Confirm (developed by Pitney Bowes). In June 2015, the database was moved to a new platform called 'Mayrise' (developed by Yotta).

Both systems are fully EToN compliant. However, their databases are structured very differently and it was apparent when data was transferred from Confirm to Mayrise that some elements of the data could not be reassigned or used. It is also well known in the industry that different SWRs, while compliant with the EToN Technical Specification (ETS), do interpret some things differently or (dis)allow certain actions.

4.1.4 Reporting problems

Prior to the implementation of the WaSP scheme, reports were generated to gather valuable data for the development of the scheme to aid analysis. As the WaSP scheme developed, it has become apparent that there are more difficulties in collating the required performance data than originally anticipated; neither system is able to produce all of the relevant information for both the nationally agreed Key Performance Indicators (KPIs) and the Operational Measures (OMs) that the scheme requires.

It also became apparent that both systems used by Shropshire (Confirm and Mayrise) had slightly different rule sets about how the information was extracted and these difficulties have affected Shropshire's ability to accurately provide the KPIs and associated measures. Every effort has been made to ensure that all of the data has been obtained in as consistent a format as possible.

4.1.5 Data collection

Where possible, data for this evaluation has been collated from Mayrise through built-in or bespoke reports for both highway authority and statutory undertaker data. This has been done to provide some consistency in the manner of calculation. In some cases it has not been possible to extract data from Mayrise, in which case data is either missing, or where practicable (for year 1 mainly) it has been replaced with the data available from Confirm.

In most indicators that follow, data from January 2015 to June 2015 is not available. This is due to the changeover period from Confirm to Mayrise and a problem with data transfer and collection.

Throughout this report, the financial year April 2014 to March 2015 is referenced as Year 1, while 2015/16 is indicated Year 2.

The sections below describe summary or high level figures and analysis. The original data used to generate the charts and information is available separately as a supplement to this report.

4.2 KPI 1 - The number of permits and permit variation applications

The introduction of the WaSP scheme provided Shropshire Council, as the Permit Authority, with the powers to Grant or Refuse an application to work on the public highway. There are specific timescales in which network coordinators must assess and respond to permit applications. If action is not taken within this time the permit becomes 'Deemed', thereby granted by default.

KPI1 provides the number of permits and permit variation applications received, the number granted and the number refused, and is shown as:

- The total number of permit and permit variation applications received, excluding any permit applications that are cancelled prior to assessment
- The number of applications granted as a percentage of the total applications made
- The number of applications refused as a percentage of the total applications made

4.2.1 KPI 1 - Results

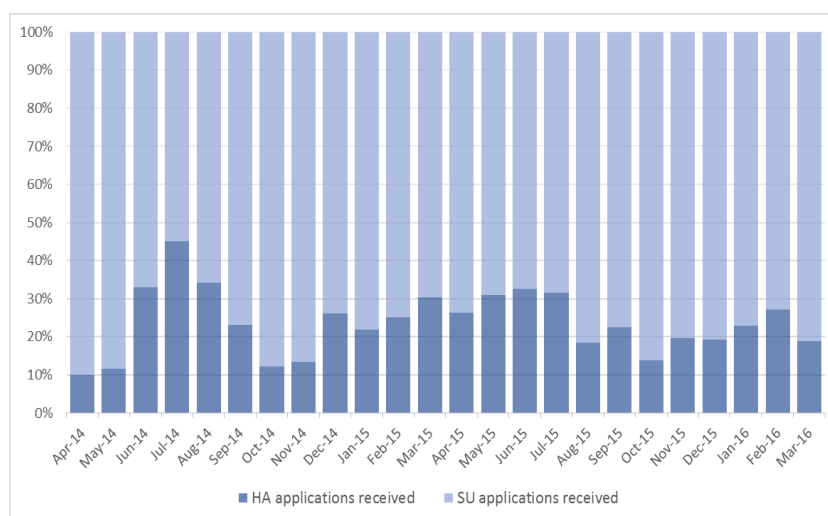
The data below is obtained by running the Mayrise report "KPI1 Permit and Permit Variations". It includes permit applications and variation applications that were granted, refused or permit modification requests. It includes any granted permits that are subsequently cancelled.

Table 4.2a: Total number of permit applications and responses

	Year 1 2014/15	Year 2 2015/16
Permit and Variation Applications Received	18,374	19,615
Granted	11,393 (62%)	13,261 (68%)
Refused	6,985 (38%)	5,917 (32%)

The chart below compares the percentage of permit applications received from highway authority and statutory undertaker. On average, highway authority permit applications ranged between 10-40% of the total permit applications received for Year 1 and 15-35% in year 2.

Chart 4.2a: Proportion of permit applications received from highway authority and Statutory Undertakers (Year 1 and 2 combined)



The charts below shows the number of permits granted in relation to highway authority and Statutory Undertaker applications.

Chart 4.2b: number applications received and total permits granted (highway authority and Statutory Undertakers) (year 1)

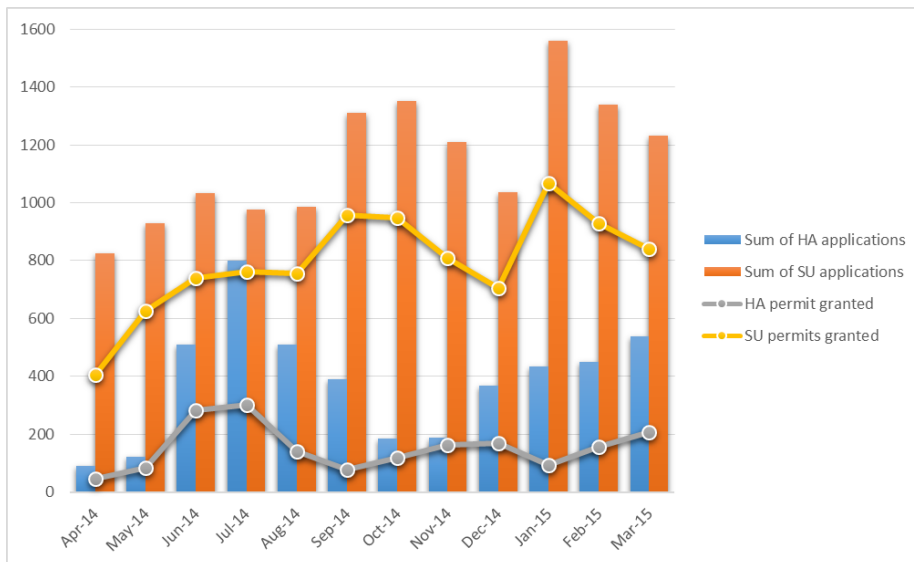
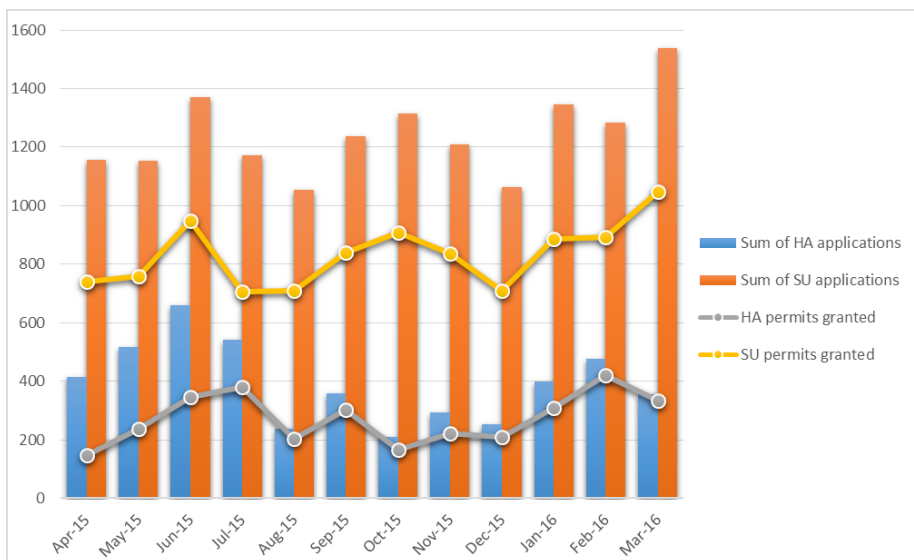


Chart 4.2c: number applications received and total permits granted (highway authority and Statutory Undertakers) (year 2)



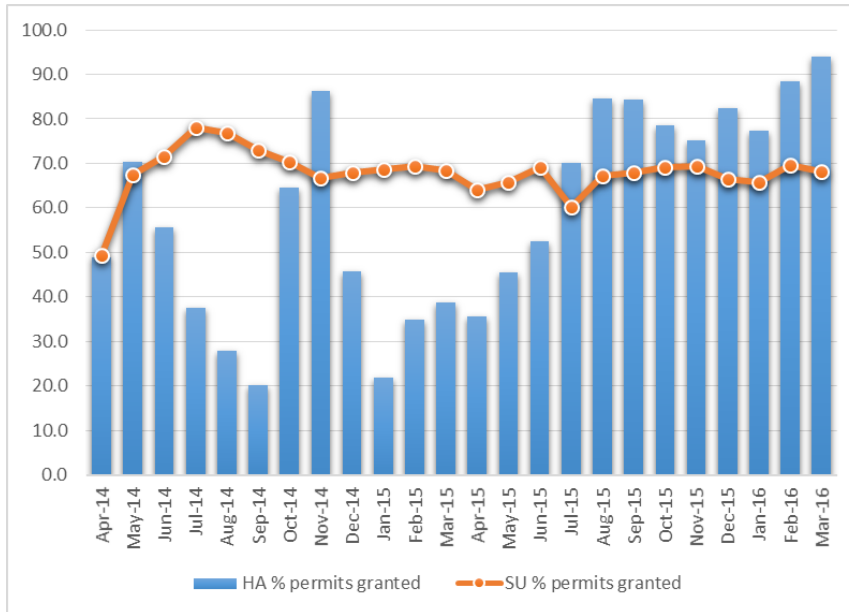
The following must be noted in relation to this data

- Each application has a statutory response period; the number of applications received in any one period would not necessarily correspond to the total permits granted plus applications refused within that same period. In other words, a permit application received in one period may be responded to within the next period.

- The 'refused' response includes those applications where a permit modification request is submitted instead of a straight refusal.
- The report includes applications that are not assessed and subsequently 'deem'.

The following chart provides a biennial comparator of the percentage of permits granted for highway authority and statutory undertaker applications.

Chart 4.2d: Highway authority and Statutory Undertaker: comparison between the percentages of permits granted (Years 1 and 2)



4.2.2 KPI 1 - Analysis

Number of Permit Applications

In both years, on average the highway authority generated around 25% of applications and the statutory undertakers 75%.

The number of applications from the highway authority in year 1 varied significantly. The authority term contractor underwent significant change processes at this time and the step up from 'noticing' to 'permitting' was considerable. It was apparent that a number of works types were not being correctly submitted prior to permitting, and the Permit Authority undertook extensive work to help the contractor develop new processes.

In the second half of year 1 the Permit Authority introduced a new post in the coordination team to deal solely with highway authority permits. The result of this change can be seen not only in year 2 application volumes (which have steadied despite similar amounts of contracted work), but also in the significant rise in the percentage of application subsequently granted (charts 4.2c and 4.2d).

Permits Granted and Refused

In comparison to the numbers of permit applications received, on average 62% of applications were granted in year 1 compared to 68% in year 2. It was expected that the number of refusals during year 1 (38%) would be greater than in year 2 (32%) because of necessary education and

maturity within the application process by both the works promoters and Shropshire's network coordinators. OM4 (Chapter 6.4.1) provides further analysis of the reasons for refusals, but primarily applications are refused for reasons including:

- Incorrect use of conditions by promoters
- Incorrect, missing or conflicting information within the permit application
- Challenges to the proposed works duration if considered to be excessive
- The activity conflicts in some way with another activity nearby

This figure includes the permit modification request (PMR) response. These are technically treated as a refusal, although it allows the promoter to resubmit their application with minor amendments and keep their proposed works dates. The use of PMR is actually a beneficial process to enable works to go-ahead as planned while allowing the authority and promoter to work quickly to improve more minor elements of data quality or detail.

It is noticeable that grant rate for the highway authority in the last few months of year 2 are significantly higher than statutory undertakers. This is almost certainly because of the dedicated resource that the Permit Authority is using for these activities and the close working relationship that means many activities (particularly larger schemes) are being discussed in detail prior to the permit being submitted, which ensures expectations on the content of the application can be met by the promoter.

The refusal data continues to be analysed and discussed in Shropshire to encourage better data and planning and therefore reduce the rates year on year. It is anticipated that the National Response codes (discussed in Section 6.4) along with the work being undertaken with statutory undertakers regarding identifying and resolving permit errors will result in a reduction in refusals and an increase in granted permits.

4.3 KPI 2 - The number of conditions applied by condition type

The WaSP scheme allows permit conditions to be attached to a permit. Conditions are applied by the works promoter either through their own volition or as requested by Shropshire Council's coordination team.

Up until October 2015, each permit scheme in the county used their own set of permit conditions. From October 2015, there were changes in the regulations that introduced a statutory set of conditions³ to bring all schemes into alignment with the way conditions were used. Appendix B provides a summary of these conditions.

The ETON Technical Specification specifies thirteen 'ETON condition type codes' that relate to the kinds of condition that might be applied under the regulations: traffic space, timing, publicity and consultation, environmental etc. There may be several conditions under each condition type that can be applied.

³ Statutory Guidance for Highway Authority Permit Schemes – Permit Scheme Conditions (March 2015) (DfT)

There are three conditions that are ‘standard’ and apply to every permit in all cases; it is not necessary to select these conditions types or include the condition text. These are in summary

1. Site must display the permit number at all times (NCT11a - Publicity)
2. The activity will only take place between the permit estimated start and end date on a Traffic Sensitive street (NCT1a - Date constraint)
3. The activity will only take place between the permit start and end date allowing for a validity period which allows works to start and end later on non-Traffic Sensitive street (NCT1b - Date constraint)

KPI 2 measures the number of conditions applied to permits and permit variations and shows:

- The number of permits granted per period
- The number of EToN condition types applied
- The number of each type being shown as a percentage of the total permits issued

4.3.1 KPI 2 - Results

The data was gathered from Mayrise using the report “KPI2 – permit application conditions”. The report counts the EToN condition type selections on each permit, not use of individual permit conditions themselves.

This data can be shown many ways. It has been decided to use a form of colour map to show the proportional contribution of each condition type per month, as the actual figures are not necessarily useful on their own; it is of more value to visualize general trends and use of their overall ongoing application.

The charts below show the proportional percentage of permit conditions applied against permits in relation to works for road purposes and works undertaken by statutory undertakers based on the thirteen standard EToN condition types.

Chart 4.3a: Highway Authority: percentage of condition types used for granted permits (years 1 and 2)

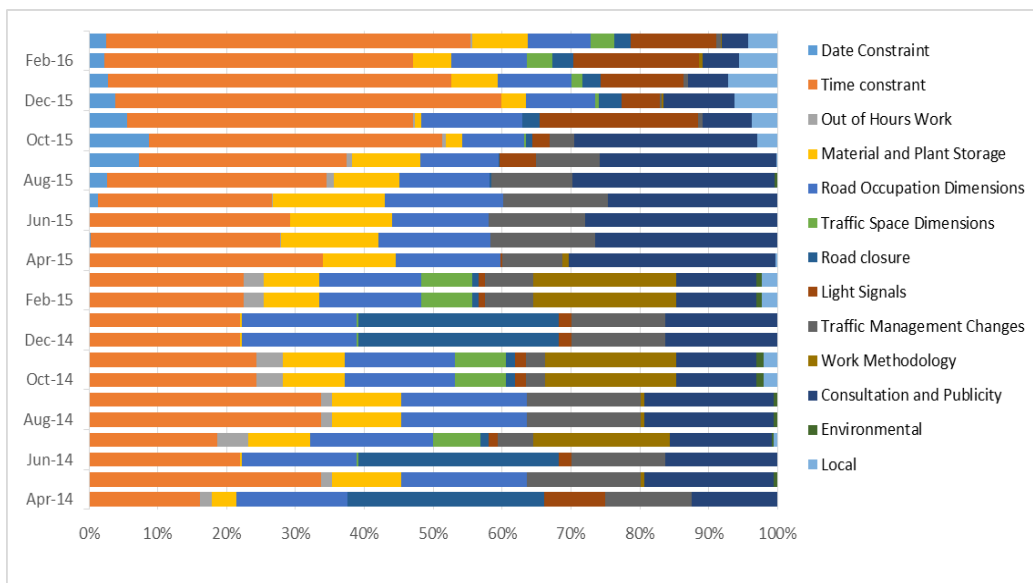
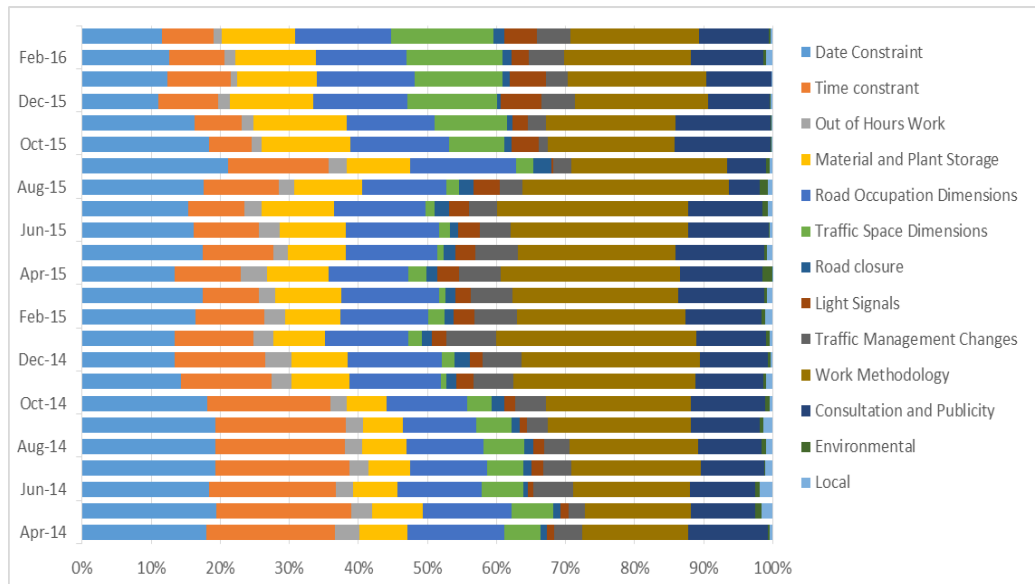
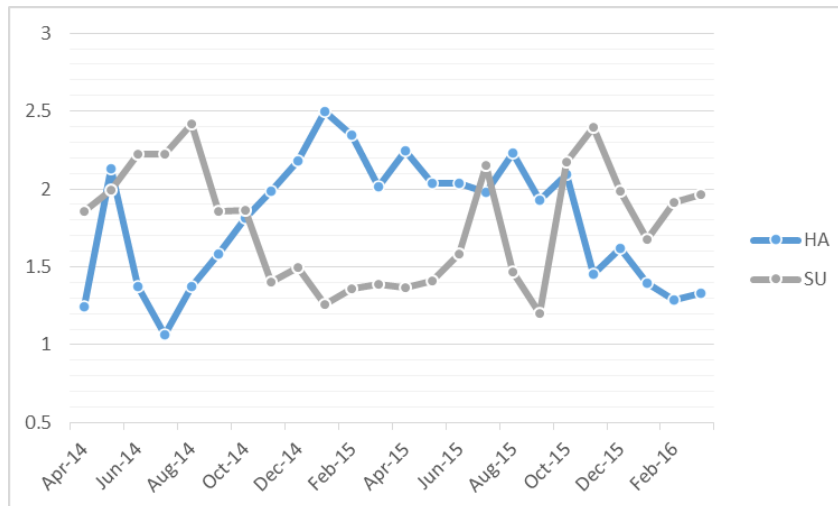


Chart 4.3b: Statutory Undertakers: percentage of condition types used for granted permits (years 1 and 2)



The chart below breaks down the data to show on average how many condition types are applied per permit. It should be remembered that some condition types may have more than one possible condition and so this chart does not necessarily show the actual number of conditions applied.

Chart 4.3c: Highway Authority and Statutory Undertakers: Average numbers of condition types applied per granted permit (years 1 and 2)



4.3.2 KPI 2 - Analysis

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

The need for consultation and publicity is inherent in any major scheme. For the highway authority, the beginning of the year sees the bulk of the surface dressing programme, which is difficult to manage and is very weather dependent. There is a high expectation that these kinds of activity are properly publicised including letter drops and advance signage. This trend is clearly seen in the higher proportion of activities requiring this condition type at those times of year. For statutory undertakers, publicity or consultation is normally only used on major projects or those that have significant impact on a local area.

Time constraints were also used for a large proportion of the permits over both years. This is not unusual; the highway authority contractors are probably much more aware of Traffic Sensitive times since there is a contractual demand to work outside sensitive time as far as possible. They are able to adjust their working times more easily because of the nature of their works, particularly reactive or responsive repairs are generally only a few hours or less in duration and so these condition types are used typically in Traffic Sensitive locations to limit the activity to periods outside peak or traffic sensitive times.

The statutory undertaker chart show a much more even spread of conditions. There is a high use of the date constraint type because many promoters will include one of the standard conditions (NCT1a/b) on their permits although this is not necessary. This is also likely to be the reason for the consistent use of the consultation and publicity type, which reflects the other standard condition (NCT11a) for display of permit number on site.

For the statutory undertaker, the use of a time constraint is very typical to try to ensure that works lasting several days are planned suitably to avoid significant times where no activity takes place on site – so as well as the standard conditions, typically this type is applied to ensure works only start or end on certain days. Anecdotal comments from the coordination teams suggest that this is a condition they have had to ‘impose’ in the past. It is hoped that as the scheme progresses, statutory undertaker become more familiar with the expectations and objectives of the scheme and can expect this condition to be imposed less frequently as works are planned appropriately.

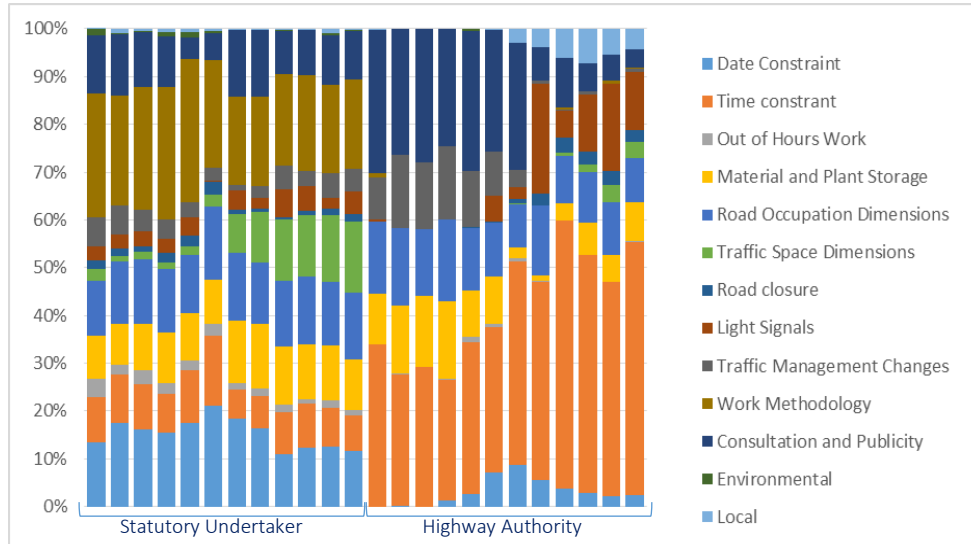
The need of the Permit Authority to understand the works methodology is important for statutory undertaker activities, hence the high rate of use. Often methodologies can affect the duration, temporary traffic management and overall impact of a site and so it can be key to understanding the scope of the works. Changes to a methodology can cause significant delays or disruption, particularly in the case of major or even standard works.

There was increasing use of traffic space dimensions and light signals types around October 2015 for both promoters; this is accounted for by the new statutory guidance which introduced a greater expectation on providing this information as part of the permit.

Chart 4.3c shows the average number of condition types applied to granted permits each month. For both promoters over two years this averages 1.8 although the figure varies significantly each month. The particularly noteworthy movement are highway authority works in the second half of year 1 where the introduction of the specialist coordinator post for these works it is clear that there was an emphasis on making sure the right conditions were being applied.

This indicator was originally produced as a parity KPI. Therefore, it makes sense to consider a comparison between promoters.

Chart 4.3d: Statutory Undertakers and Highway Authority: comparison of proportional use of condition types used (year 2)



In chart 4.3d only year 2 data has been used to show that the use of conditions varied significantly between promoters.

Conditions are clearly applied and assessed for both promoters. Despite the obvious differences, there is no evidence to suggest that one condition is being overly applied to another. The graphs also demonstrate that conditions are not being applied more robustly to utility work in favour of highway works, but rather the Permit Authority is acknowledging the differing kinds of work and resultant pressures put on the network. The expectation is every site requires its own particular conditions to suit the location and works. This shows that a consistent level of scrutiny and intervention is being undertaken by Shropshire Council on both types of works.

4.4 KPI 3 - The number of approved revised durations

Also known as “duration extensions”, these are an increase in the agreed permit duration, and therefore in most cases the Section 74 ‘reasonable period’.

Within the constraints set out in the WaSP scheme, works promoters may request an extension to their permit if they are responding to a genuine and unforeseen engineering difficulty on the ground. If Shropshire Council believe the reason for an extension is spurious, for instance due to poor planning or works management, then they may refuse the duration variation or extension to the reasonable period.

Extensions can have a significant impact on the network; an activity that was the subject of consultation or publicity can cause substantial disruption or nuisance to those people who are affected. Where the temporary traffic management is considerable then an extension may add significantly to traffic congestion or disruption. In addition, extensions are often required because

of poor planning. For example, works may be complete, but materials or plant remains on site. All of these situations are an unnecessary occupation and inconvenience.

Identifying and controlling extensions support the objectives of WaSP to reduce unnecessary occupation and disruption.

Extension requests are considered individually on their own merits by Shropshire Council, who will grant an extension if the reasons are legitimate (genuine engineering difficulties met) and if the network allows it (i.e. no conflict with other activities etc.).

The measure is shown as:

- the total number of permit and permit variation applications made
- the number of revised duration requests as a percentage of total applications made
- the number of agreed revised durations as a percentage of requests made

4.4.1 KPI 3 - Results

Both years' data for statutory undertakers is taken from the Mayrise report "KPI3 Approved permit extensions". The highway authority data for both years is manually transcribed from reports originally run from Confirm.

The charts below show the percentage of permits or variations granted with a revised duration request, and the subsequent percentage of the requests that were then approved.

Chart 4.4a: Statutory Undertakers: percentage of permits with revised duration requests and percentage subsequently approved (Year 1&2)

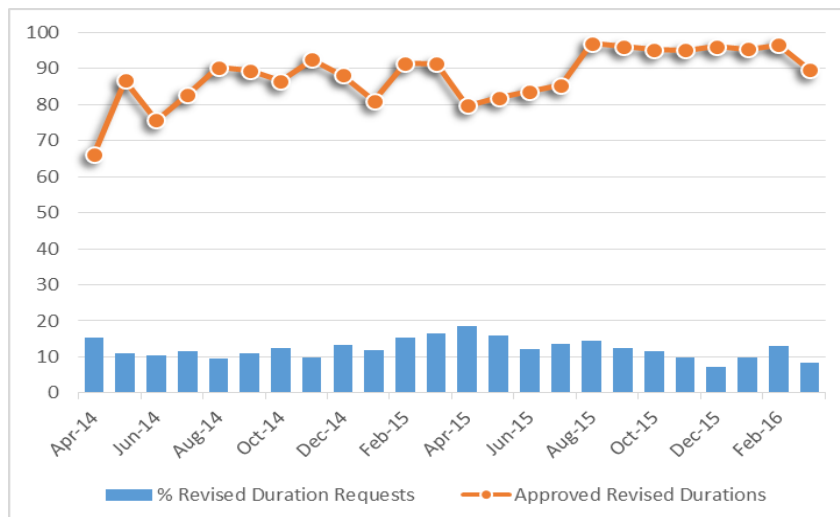


Chart 4.4b: Highway Authority: percentage of permits with revised duration requests and percentage subsequently approved (Year 1&2)

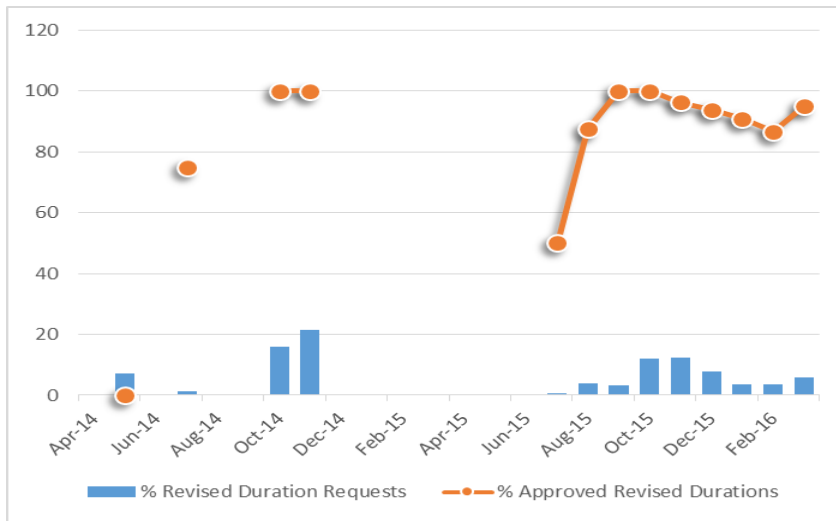
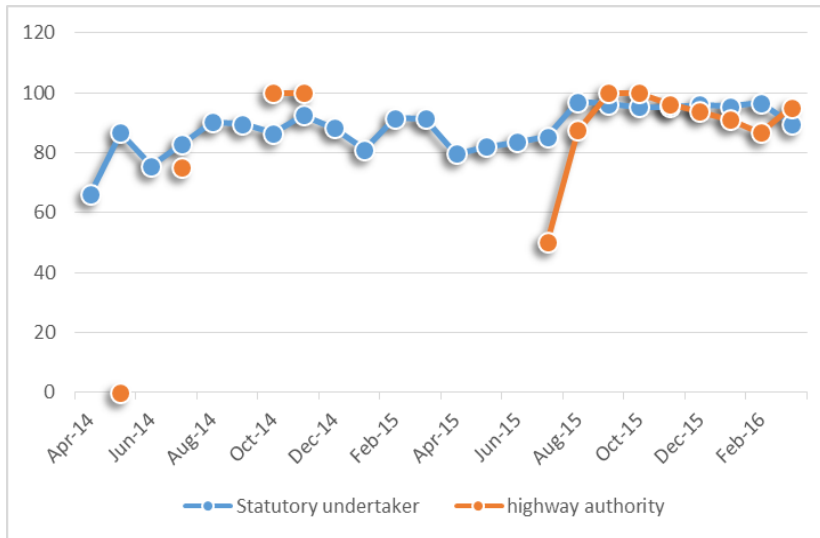


Chart 4.4c: Statutory Undertakers and Highway Authority: comparison of percentage of approved duration extension requests (year 1 and 2)



Shropshire Council have identified a number of problems with the report from Mayrise.

- While the principal of this Mayrise report using the EToN notification type 0510 'Duration Variation Application' is appropriate to some extent, this kind of variation is only applicable when works are in progress.
- There is also the question over exactly how this report deals with the conflict between permit durations and the section 74 'reasonable period'. These two separate pieces of (respectively) TMA and NRSWA legislation must be used together when an extension is required. If Shropshire Council do not agree that the reasons for the extension request are valid, but that the best course is to allow the works to continue until completion where possible, then the permit extension will be granted, but the section 74 duration (the 'reasonable period') will be amended back to the original end date. This will affect the approved duration variations

4.4.2 KPI3 Analysis

Identifying and controlling instances of approved extensions support the objectives of WaSP to reduce unnecessary occupation. It should also be born in mind that the reasons for requiring extensions will vary considerably between promoters and contractors and the kinds of works being undertaken. The above data shows that largely to be the case.

statutory undertaker requests have been consistent throughout the two years, averaging about 12.3% of granted permits per month, of which 88% are agreed. This is unsurprising as the process is a common one in the industry. Most permit authorities and statutory undertakers have well developed systems to deal with these requests, including methods of inspection and questioning

There are a number of operational factors that justify the need for a duration extension - often a result of the need for additional time to complete fault-finding and mitigation for emergency works, such as leak detection and fixes for statutory undertakers. Highway authority works often need extensions for either weather dependent activities (resurfacing or surface dressing) or where resources need moving around at short notice to deal with other situations (for instance in winter to deal with gritting or other winter maintenance duties). Comparing percentage approval rates (since this is a parity KPI) shows that there is no obvious tendency to agree either promoter group more than the other, showing that Shropshire Council consider each request individually on their merits without bias.

4.5 KPI 4 - The number of occurrences of reducing the application period

Also known as “early starts”, these are a reduction to the minimum notice period as set out in regulations and shown in table 1, section 7.1 of the Scheme document.

Adherence to the correct minimum lead times for a permit application (or to vary a permit) is essential to ensure effective coordination of works 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.

Early Start requests are used to help promoters reschedule activities and personnel if needed, while ensuring that their statutory requirements under permits (or indeed under noticing) are still met and the permit authority has the opportunity to properly assess and coordinate the activity and others in the area. There may also be operational factors that justify the need for a reduction in the application period in order to ensure an activity’s impact on the network is minimised, either through collaboration or through having the works carried out at a certain time.

Early start requests are considered individually on their own merits by Shropshire Council to ensure that there is a legitimate reason for the request and not a result of poor works planning by the activity promoter.

The measure is shown as:

- the total number of permit and permit variation applications made
- the number of requests to reduce the notification period as a percentage of total permits
- the number of agreements to reduce the notification period as a percentage of requests made.

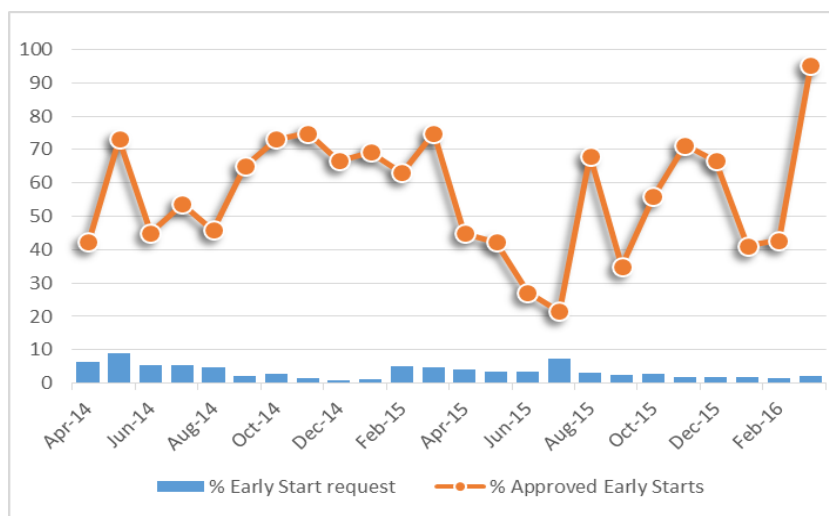
The WaSP scheme will operate in a fair and equitable way ensuring a level playing field with all promoters competing for time and space on the highway. The Permit Authority will ensure

sufficient separation between those operating the permit scheme and those responsible for highway activities so that parity of treatment is evident.

4.5.1 KPI 4 - Results

Both years' data for statutory undertakers is taken from a Mayrise report "KPI4 Reduced Application Periods". The highway authority data from July 2015 is also taken from this report, however the first eighteen months of works for road purposes is transcribed from reports originally run from Confirm.

Chart 4.5a: Statutory Undertaker: percentage of permits with early starts requested and subsequently approved (2 year)



In the following chart where there are no data points indicates that no early start requests were received (and therefore none were approved).

Chart 4.5b: percentage of highway authority early start requested and subsequently approved (2 year)

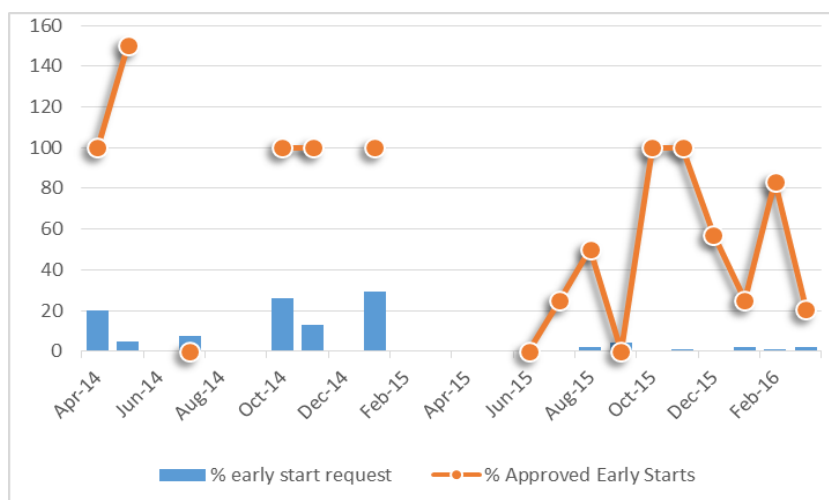
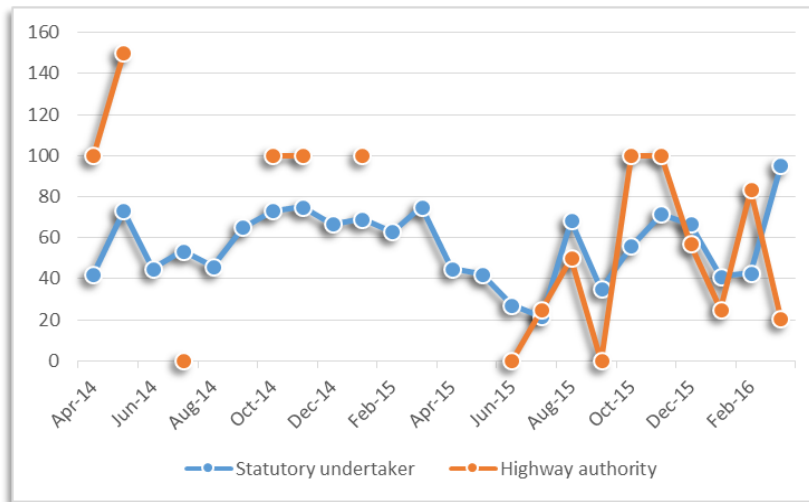


Chart 4.5c: Statutory Undertaker and highway authority: comparison of percentage of early starts approved (years 1 and 2)



4.5.2 KPI4 Analysis

statutory undertaker early starts average 56% approval rate. In some occasions, early start applications are received with the early start agreement field fabricated and clearly no early start has in fact been agreed.

In general, there seems to be a trend of fewer requests for early starts in winter months, but a greater proportion being agreed. This is likely to be because of the time of year; there are legitimate reasons for requesting early starts in order to help manage fluctuating workloads that might occur due to adverse weather conditions locally, regionally or even national demands on resources.

5 HAUC TPI measures

This section outlines the Permit Indicators (TPI) agreed by the National TPI working group.

These indicators for permit schemes are additional to the general TMA Performance Indicators (TPIs), which are already being produced.

The TPIs focus on occupancy, co-ordination and inspections, and therefore relate mainly to the stages of the works from works start to final conclusion. These additional permit indicators focus more on the process of permit applications and responses, prior to the works being carried out.

- TPI1 Works Phases Started (Base Data)
- TPI2 Works Phases Completed (Base Data)
- TPI3 Days Of Occupancy
- TPI4 Average Duration of Works Phases Completed
- TPI6 Phases Completed on time
- TPI8 Number of Phase One Permanent Registrations
- TPI9 Number of deemed permit applications

These measures will not be discussed in this report. As noted previously they did not exist when the WaSP scheme was first introduced and while Mayrise system allows Shropshire Council to run these reports retrospectively it has been decided for the sake of consistency for year 1 and 2 to use the existing KPIs and OMs. Where suitable, TPI report will be used in place of certain OMs.

It should be noted that TPI data is available from the Joint Authorities Group and Geoplace for analysis.

6 Authority Measures

In addition to DfT KPIs and HAUC TPIs, The WaSP scheme sets out a number of Operational Measures that provide further insight into the way the scheme is being operated and the success of the scheme.

6.1 OM 1 – Number of overrun incidents

It is essential for Shropshire to ensure that works being carried out on the network have a permit and are also compliant to the agreed terms and conditions of the granted permit, such as timing and duration. The increased visibility of works provides an added benefit of greater certainty of the works-state of an activity, allowing overruns (Section 74) to be more easily identified and sanctions used to discourage this behaviour.

The number of activities that are logged by the Permit Authority as overrunning their agreed end date is an indicator of how well the activity promoters are managing their activities and lessening the impact of their works on road users.

This measure is expressed as:

- The number overrun incidents shown as a percentage of permits issued

Whilst this measure sheds light on the effort of works promoters to complete works within agreed timescales it is not considered that it is a measure that is reflective of the success or failure or permitting.

6.1.1 OM 1 - Results (Overrun incidents)

Data has been recorded outside Mayrise. It relates only to the number of recorded incidents relating to statutory undertakers. Not all of these will have resulted in a charge.

There are some months where data is not available.

Chart 6.1a: statutory undertaker: recorded section 74 overrun incidents (Year 1 and 2)

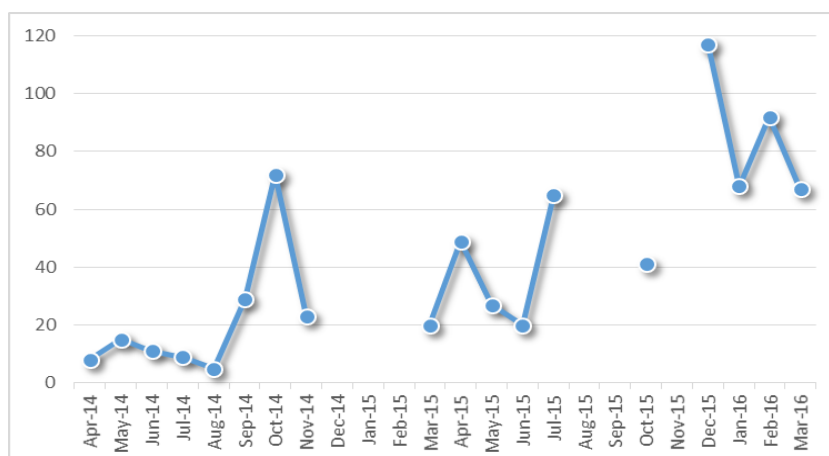
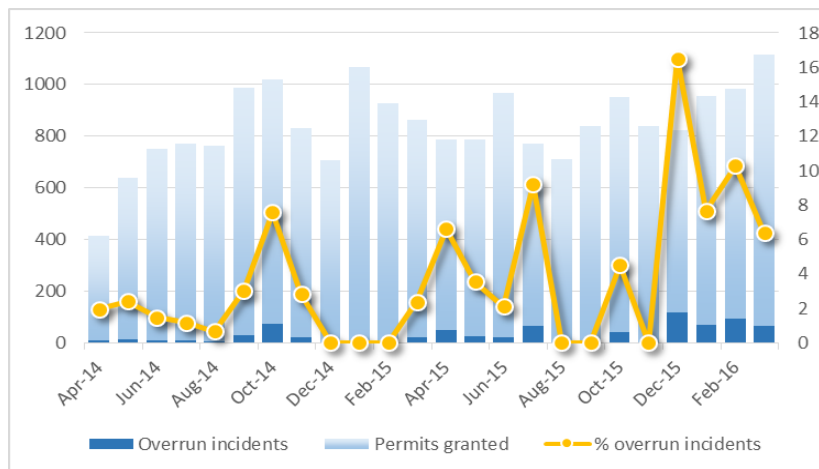


Chart 6.1b: statutory undertaker: recorded section 74 overrun incidents as percentage of permits granted (Year 1 and 2)



6.1.2 OM 1- Analysis

Gaps in the data are the result of administrative processes rather than a lack of actual overruns.

Number of overruns was very low throughout the immediate post-implementation phase, reflecting a much smaller inspection team. Changes to inspection processes were brought in mid-year 2014 and then a complete team restructure took place in May 2015 which accounts for a general increase in overruns identified after these points.

It is expected that in future data can be recorded to provide sufficient levels of detail since these kinds of information can be used by both Shropshire Council and the statutory undertakers to identify improvements in process on both sides.

6.2 OM 2 – Average road occupancy and reduced occupation

One of the benefits of permits is that works durations can be judged more effectively and the use of conditions is a greater driver for tighter processes from all activity promoters to reduce their occupation of the highway. Additionally analysis of permit durations shows how the Permit Authority and activity promoters are reducing the overall impact of activities on the highway. It is expressed as

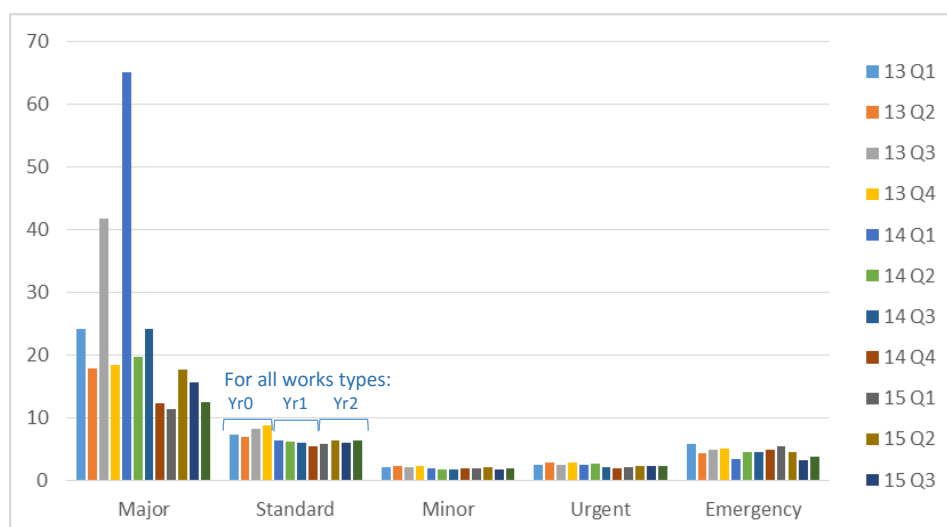
- The average number of working days for different works categories as compared between periods and other authorities
- The total number of days of reduced occupation for different works categories as compared between periods and other authorities

6.2.1 OM 2 - Results (Average Road Occupancy)

For the purposes of this metric, TPI4 has been used since this is part of the national scorecards. The data is collected from Mayrise TPI report “TPI4 – Average phase durations”, and is calculated for all works phases completed (closed) within a quarter where the aggregated duration (works start to works stop) divided by the number of works completed.

The data covers Years 1 and 2 and includes the pre-permitting year, April 2012-March 2013 (“Year 0”) to provide a baseline comparator.

Chart 6.2a: combined Statutory Undertaker and highway authority: Average works duration by works type, per quarter (Years 0 [baseline], 1 and 2 [permitting])



Additional processing has been done on this data to provide some comparators of average duration change (reduction or increase) across the three years.

It has not been possible to split statutory undertaker and highway authority promoters out and so this data combines works durations for both. Immediate Urgent and Immediate Emergency have been split out into individual groups.

6.2.2 OM2 Results (Savings in Road Occupation)

Reduction in overall occupation is calculated by multiplying out the average reduction of occupation for each works category, by the overall number of granted permits.

There are various permutations of how to best express the saving in road occupation. The accumulation of average increase and reduction in days over the two years, results in a total saving of 29,783 days. A very large proportion of this is accounted for in the reduction in durations of Major works (85%). Not including Major works results in an overall saving of 4489 days of occupation over two years for the four other works categories.

Table 6.2a summary of number of days saved in occupation (years 1 and 2)

Works Category	Year 1			Year 2			overall days saved (Y1+Yr2)
	Ave days saved	Permit granted	Actual saving	Ave days saved	Permit granted	Actual saving	
Major	4.702	1618	7607.836	-15.964	2061	-32901.8	-25293.968
Standard	-1.72	956	-1644.32	0.08	1038	83.04	-1561.28
Minor	-0.31	5016	-1554.96	0.095	5142	488.49	-1066.47
Immediate U	-0.37	3198	-1183.26	-0.05	4293	-214.65	-1397.91
Immediate E	-0.64	605	-387.2	-0.122	627	-76.494	-463.694
Days of occupation saved (-saving, +increase)				Total (inc. Major)			-29783.3
				Total (exc. Major)			-4489.4

Note in the above table a saving or reduction in days is shown as a negative figure, while an increase is a positive figure.

Chart 6.2c: overall proportion of days saved occupation (years 1 and 2)

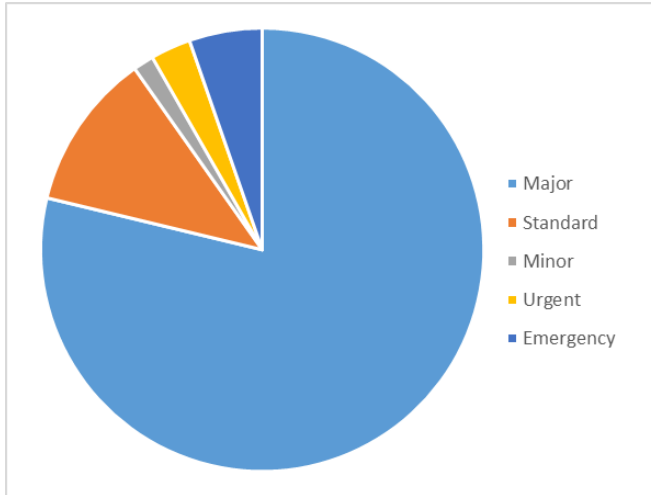


Chart 6.2d: actual number of days saved occupation by works category, not including Major Works (years 1 and 2)

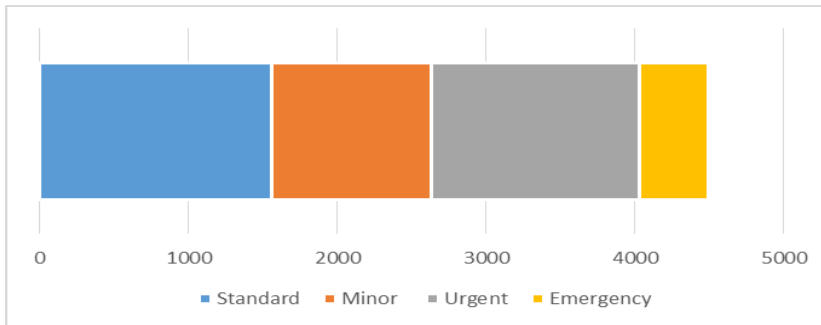
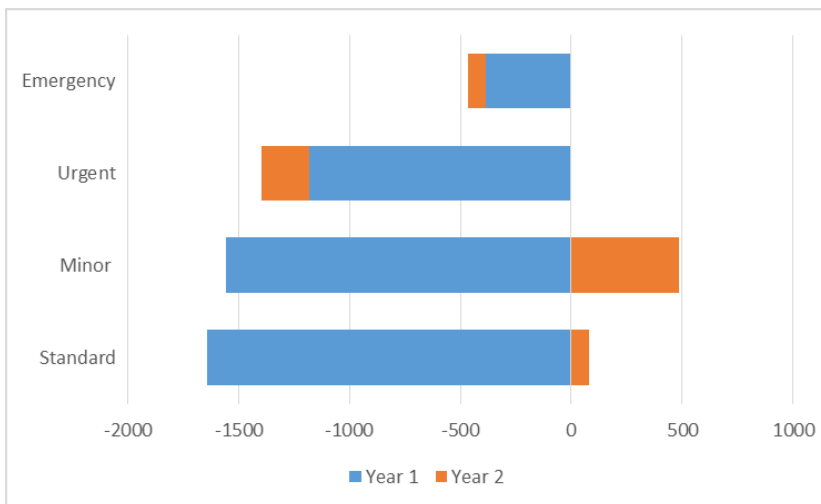


Chart 6.2e: comparison of total days occupation increase (positive) or reduction (negative) (Year 1 and 2), based on permits granted in that year.



6.2.3 Analysis - OM2 (Average Road Occupancy and overall savings in occupancy)

Overall average occupation shows small year-on-year changes (both increases and reduction up and down).

The first year shows an increase in overall average duration of Major Works (18%), and the second a decrease (52%). Comparison of major works to other categories is not appropriate since the scope of any project can vary considerably; it can be very dependent on location, works methodology and the wider coordination efforts. Major works durations are very likely to fluctuate from year to year (as is clear from chart 6.2a) and so chart 6.2d and 6.2e does not include major works allowing a clearer appreciation of general occupation reduction for the 'normal' day-to-day activities.

All other works categories showed a substantial drop in average works durations in year one (between 1/3 and 1 ¼ days), and minimal deviation moving to the end of year two (table 6.2a). As this table shows, even a very small difference of a tenth of a day, when multiplied out over the total number of activities within that category that take place across the year, can still provide a substantial overall movement in the overall days of occupation.

With the introduction of the scheme, Shropshire Council analysed works durations of all promoters comparing estimated durations (proposed start date and estimated end date on the initial notice) against actual durations (actual start and stop notices). From this analysis, Shropshire Council proposed a list of 'standardized' average durations for a number of works types that were to be used as a guide for the expected 'acceptable' durations for these works. Promoters submitting durations that are longer than expected would have to provide justification.

The benefits of this approach means that permit coordinators within each authority, as well as the wider WaSP community, have a benchmark for typical activities and ensures some consistency over what durations are considered acceptable. Similarly, since these durations are based on actual works over the previous year or more, statutory undertakers recognise the importance of asking for durations that are not excessive to ensure that the coordination effort can take place in an environment that is equal for all promoters.

It is almost certain that this exercise has driven the initial decrease in average durations seen in the first year of the scheme. Subsequent years' minor variations (increase or decrease) to this are likely to be natural variability in the numbers and types of activity being undertaken.

Despite the small variability seen from year 1 to 2, when considered in the context of the numbers of works that take place monthly and annually, these changes provide significant overall savings in occupation over the two years.

6.2.4 Monetised savings from reduced occupation

Using data from the original economic appraisal undertaken by Shropshire Council prior to the development of the permit scheme it is possible to quantify very roughly what these 'savings' in occupation mean.

The modelling used in the economic assessment produces a range of works costs, based on the type of road, and the average length of a works site and on an average duration of an activity. For approximately 4400 days saved (non-major) using the lowest possible daily cost of a works site

(£248 on a rural category 4 road for a 10m site length), it is possible to produce a very rough estimate of savings of just over £1.09m for the two years combined.

There are several assumption: in practice, works are spread across all categories of road (urban and rural, categories 1 to 4), and not all works will have a carriageway impact. However the daily rate on category 1 roads over 100m length is significantly higher, despite there being less of these kinds of activity. Therefore, the premise is to choose the very lowest daily rate on the very broad assumption that all of these factors ‘average out’. In reality it is likely that this saving is a low estimate.

6.3 OM3 - Number of collaborative works and days of disruption saved

The potential economic benefits from shared working space are considerable. In addition, this measure shows a proactive and positive approach to working together to minimise disruption and occupancy. The number of collaborative works will be expressed as:

- A percentage of all works granted per period.
- The number of days of reduced occupation per period.
- As an ongoing measure, this will also be expressed as the number of collaborative works sites per period, thus enabling a percentage increase/reduction to be calculated.

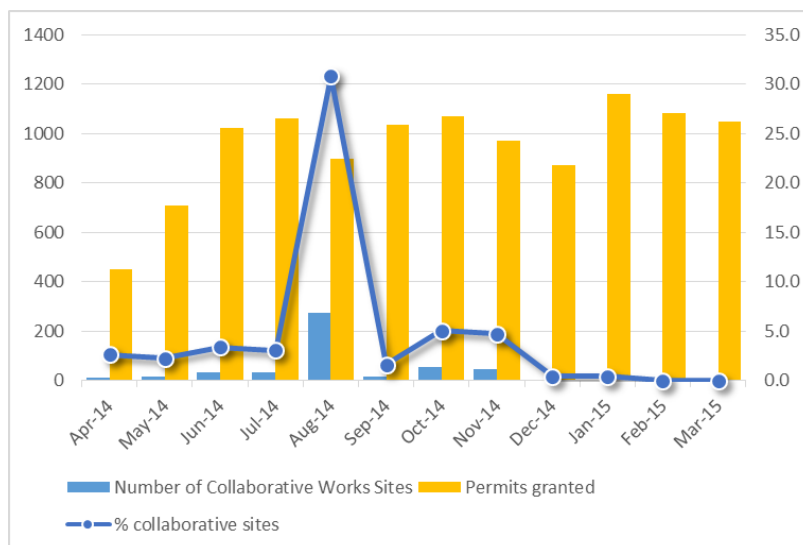
Any activity on the highway will be included to show how the Permit Authority is able to coordinate works and other highway activities proactively.

6.3.1 OM3 Results

The data for this measure is taken from the Mayrise report “OM6 collaboration” which analyses the use of the ETON codes for ‘collaboration’ that have to be included within a permit application.

The chart below shows the number of collaborative works that took place in Shropshire Council and the number of days saved in year 1. The percentage of these activities are also shown against permits granted.

Chart 6.3a: Number of collaborative activities set against number of permit granted and shown as a percentage of granted permits (Years 1 and 2)



The EToN 'collaboration' codes are susceptible to being used incorrectly by promoters, and this then puts pressure on network coordinators to take additional time checking the validity of the use of this code. A number of significant issues have been identified with these results. Additionally the way that Mayrise then extrapolates the savings in occupation are not correct. Shropshire Council has identified these problems and are working to achieve a more robust reporting method to reduce the likelihood of this occurring in year 3.

6.3.2 OM 3 - Analysis

Given the lack of confidence in both the data and the report output, other than presenting the data, Shropshire Council cannot provide further analysis on the Mayrise report.

However, under discussion with individual area coordinators and network managers has identified a number of records kept outside of Confirm and Mayrise. While these do not provide a continuous or necessarily consistent set of records across the entire two years, there are indicative estimations that approximately 1500 activities were collaborative in some way. Additionally further analysis has shown that on average each of these saved as much as 3-4 days of occupation.

Using a similar approach to monetising this saving as given previously in section 6.2.4, this equates to more than £1.1m saving, in terms of reduced days of occupation.

6.4 OM 4 – Number of refusals, by refusal reason

Actual numbers of applications refused are part of KPI1 and are an indicator of parity.

Monitoring permit refusals will show clearly the most common reasons for refusal. This is helpful to the activity promoter to identify particular areas where they are failing.

This measure will also show any improvements for each period for the way promoters deal with systematic failures within their processes. It is therefore a measure of how information quality is improving. It is expressed as

- The number of each category of refusal as a comparison of previous periods

Prior to 2016, most schemes had their own series of refusal codes that did not align with others in the country and when originally implemented, the WaSP scheme provided a template of regionally agreed standardized refusal codes and texts that must be used by all permit authorities in the region. Following the amended permit regulations in October 2015, HAUC produced an advice note with nationally agreed refusal codes⁴ (WR1a, WR3d etc.). Appendix C provides a list of these refusal codes and their meaning.

The term 'refusal' includes the issuing of a permit modification request (PMR); under the regulations this is technically a refusal since an application will automatically expire if a PMR is not responded to with a modified permit application (MPA).

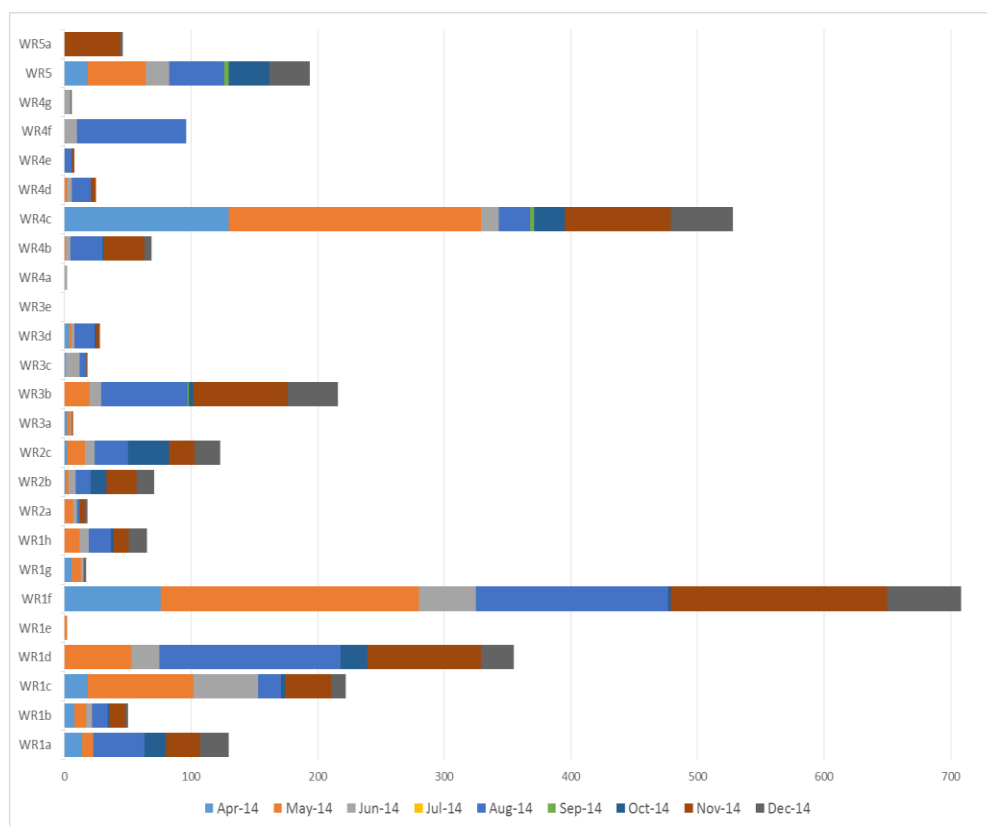
⁴ Draft guidance HAUC (England) Standard Permit Response Codes.

Refusal codes are used in both scenarios, the decision to use one or other generally depends on wider data/quality and timeliness of that application. However, there are certain situations when only a refusal will be issued: incorrect unique street reference number (USRN), or the permit dates conflict with other activities etc.

6.4.1 OM 4 - Results

Data for year 1 is taken from a bespoke report from Confirm, which analysed the textual response to a refusal and extracted the use of the unique code for each refusal. Data for year two is unavailable due to system changes on Confirm at the time and the move to Mayrise in June 2015.

Chart 6.4a: Statutory Undertakers: breakdown by refusal code of the number used each month (Year 1)



This data shows the number of times a refusal code was used in a month, not as a proportion of the number of permits issued. This is because

- it is possible for several refusal codes to be used on any permit application (i.e. there are multiple problems with that submission); and
- an application may be refused (or modified) many times before it is finally granted.

A percentage of permits granted figure would therefore be meaningless.

However there may be extracted some useful information from reflecting on refusal codes and their overall proportionate usage within month, as this allows a general consideration to be given to

- which codes are used the most within a month; and
- a comparison between months to identify general trends in usage

Chart 6.4b: Statutory Undertakers: overall numbers of refusal codes by month (Year 1)

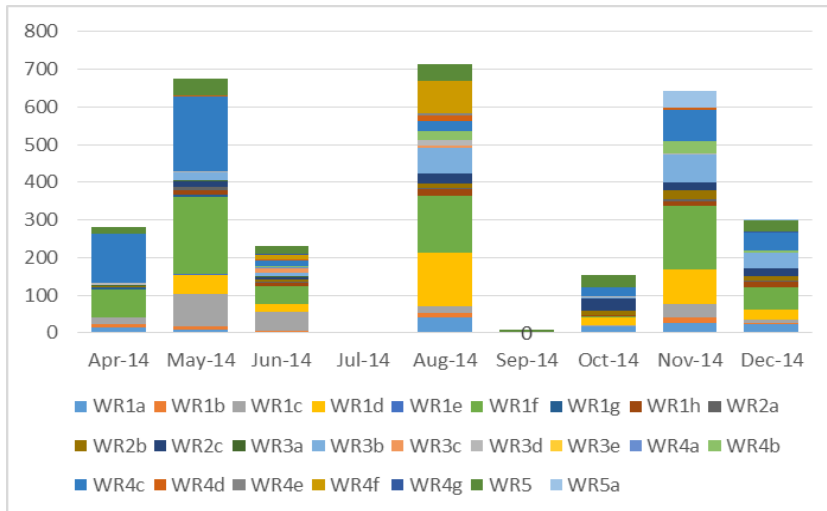
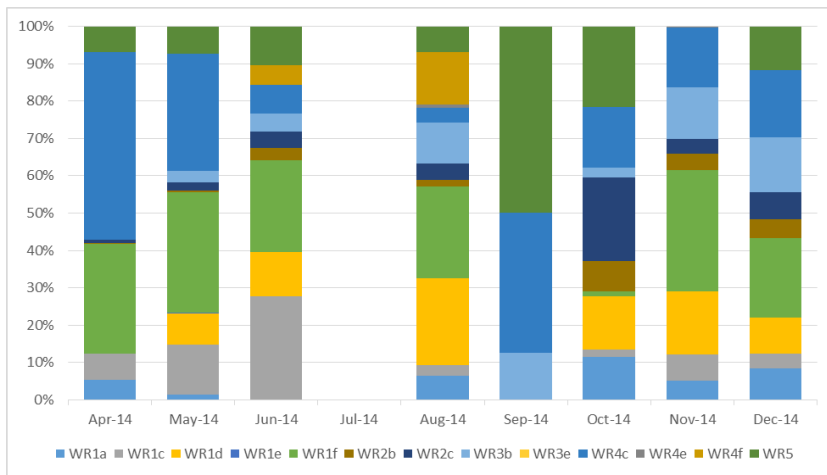


Chart 6.4c: Statutory Undertakers: Proportional usage of refusals by month (Year 1)



For the purposes of the comparison, because the data contains 25 separate refusal codes, the chart 6.4c above only shows those codes used approximately more than 5% of the time within any one month, or where there is substantial change in use of a code across the period. All other codes that may be used infrequently within a particular month or across the period are omitted. Since the chart provides only a general picture of proportionate usage, these exclusions are not significant for this exercise.

It should be remembered that these figures give use of individual refusal codes not the number of refused applications (see KPI1), as there could be several refusal codes used on any one refused application.

6.4.2 OM4 Analysis

Individual analysis of a month may not provide useful information unless it is to consider systemic problems with a promoter or the network coordinators. However, some useful information can be taken from the general figures for each refusal code.

For instance, from chart 6.4c, it is clear that certain codes are used more often than others.

Table 6.4a: Statutory Undertaker: top 5 refusal codes use, with commentary (Year 1)

Code	Refusal text	Comment
WR1f	Omission of essential conditions	It might be expected that this refusal code is used most often since the conditions of the permit must specify the activity it allows in detail, specific to the site and the method of the works planned. Any other limits or constraints on the activity must also be reflected in permit conditions.
WR4c	Excessive duration in relation to scope of work	A permit scheme should try to limit occupation on the highway and the use of this condition reflects the requirement for works durations to be reasonable and reflect the actual likely duration of the works, without building in excessive time to cover unforeseen circumstances or slack time.
WR1d	Traffic management and carriageway restriction specified on the permit is not appropriate for the work/location	It is essential to the coordination process that the Permit Authority has a clear understanding of the expected Temporary Traffic Management and it is common for inappropriate selections to be made on the application that are not suitable for the type or class of road, or indeed that do not match other elements of the permit application.
WR1c	A traffic management application has not been provided (includes temporary traffic restriction order (TTRO) and temporary traffic signals (TTS) approval)	Where the promoter needs a TTRO the process is separate to the permit and can take more time to process. Where TTS is required, the required application should be made as part of the permit submission on EToN, or separately by email.
WR3b	Road space is not available	A conflict with another activity means that the works may not take place on the requested time and date.

Chart 6.4b shows us overall numbers of refusal codes used each month. The results seem particularly variable with some months having a particularly high number of refusals and other months far fewer.

6.5 OM 5 - Number of cancelled permits

To ensure the control of works and to proactively minimise the effect of those activities by many different affected parties it is important that any booked road space not required is cancelled, in a timely manner.

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

Since there is a fee for a permit, a statutory undertaker must pay for their permit even if the works subsequently do not go ahead. This is therefore a disincentive for an activity to be cancelled once a permit is granted. Additionally there is more expectation that permits contain accurate and timely information because of the permit submission and assessment process. The permit authority can be more assured when assessing and coordinating works that those already granted are more likely to go ahead as planned; this is an area that under Noticing was far less certain and activities that did not take place as planned and were cancelled, often after the event, were an ongoing and significant problem for authorities.

It is not a statutory requirement for promoters to cancel works, either before or after the start date, however the DfT and HAUC support good practice that promoters should cancel road space bookings if not required.

One of the anticipated benefits of permitting is that better planning will mean that fewer activities are cancelled. This measure looks at permits that have been cancelled prior to works starting.

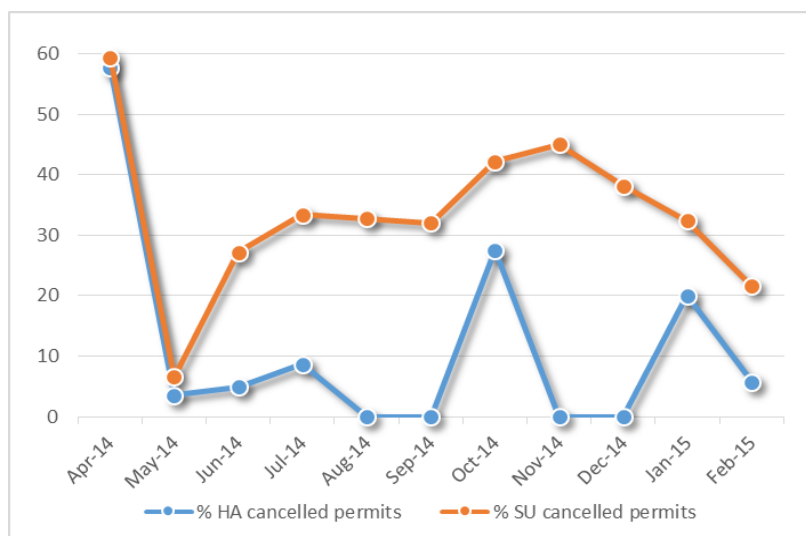
This measure will compare year on year rates of permit cancellation. This measure is expressed as

- The proportion of permits cancelled each period.

6.5.1 OM 5 – Results (cancelled permits)

Data for year 1 was taken from the Confirm system.

Chart 6.5a: Statutory Undertaker and highway authority: proportion of cancelled permits (Year 1)



6.5.2 OM 5 - Analysis

The proportion of statutory undertaker cancellations in the first year is remarkably high, averaging around 35%. Baseline data from the year 2012/13 suggested a cancellation rate of about 25% across all works types and street categories.

The statutory undertaker data provided does not take into account a number of factors:

- Some activity promoters cancel their application following a refusal from the authority.
- Some promoter cancel their application following a permit modification request, and resubmit a new application.
- Data includes applications cancelled prior to having been assessed.

Therefore, other than presenting the data, Shropshire Council cannot provide further analysis.

6.6 OM 6 – Number of first time permanent reinstatements

Undertaking a first time permanent reinstatement can reduce general inconvenience and disruption, particularly when any temporary traffic management in place is causing substantial problems, by removing the need for a return visit to a site. In general there are also significant cost benefits for many statutory undertakers, both in terms of labour, temporary traffic management overheads and permit charges, as well as other (albeit avoidable) liabilities like fines.

Measuring the number of interim reinstatements or the number of first time permanent reinstatements provides a comparison to be made each period, and allows targets for the scheme to be set to try to drive down interim reinstatements. It should be noted that under NRSWA Section 70, statutory undertakers may undertake an interim or permanent reinstatement. The permit scheme does not take precedence over this on any individual works even if a particular method is agreed between the Permit Authority and the promoter and set as a permit condition.

The metric is expressed as

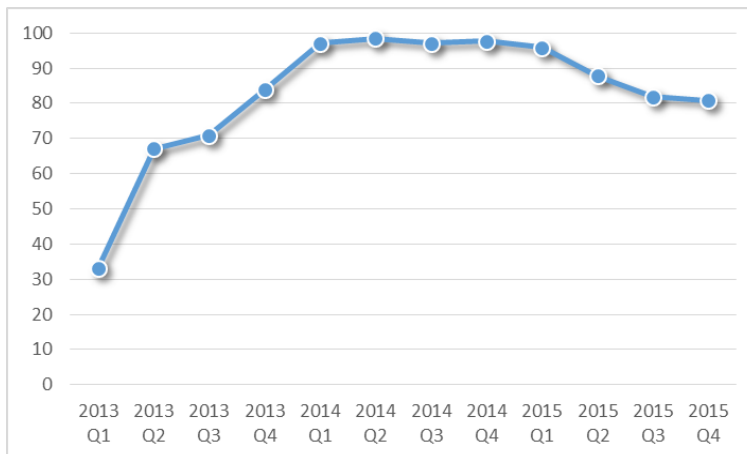
- The number of interim reinstatements undertaken as a percentage of total permits issued,
OR
- The percentage of first time permanent reinstatements from total permits issued

While first time permanent reinstatements are beneficial in terms of reducing overall occupation, there must be a balance; this can also lead to substantial pressures on promoters to complete works very quickly and this is often to the detriment of the reinstatement quality. In some instances, specialist surfaces mean that a first time permanent reinstatement is not practical because of the need to source materials and often provide specialist reinstatement gangs. There are also other demands for instance during winter when mains networks are under substantial pressure because of weather conditions, or where immediate works require a speedy resolution.

6.6.1 OM 6 – Results (percentage of first time permanent reinstatements)

For the purposes of this metric, it has been decided to use the TPI8 data since this is part of the national scorecards. The data is run from Mayrise TPI report "TPI8".

Chart 6.6a: Statutory Undertakers and Highway Authority: percentage of first time permanent reinstatements, by quarter (years 0 [baseline 2013/14], 1 and 2)



6.6.2 OM6 Analysis

Shropshire Council is unable to provide any further analysis since it is not clear that the parameters of this Mayrise report are correct.

6.7 OM 7 – Category A inspections

Category A inspections described in the NRSWA Code of Practice for Inspections scrutinizes the way a site is set up; suitability of traffic management, signing and guarding and site safety. This is not just for vehicular traffic; it has particular significance for the safety of pedestrians and those with a disability. In addition, they also cover methods of excavation, materials and methods used during the reinstatement.

Category A inspections are part of NRSWA and are a common reporting and performance measure for authorities. It can be argued that this measure is not specific to the permit scheme and does not necessarily provide information on how the permit scheme is being operated.

However, this measure has been included within the WaSP scheme because one of the key objectives of WaSP is to ensure safety of those using the street and those working on activities that fall under the Scheme, with particular emphasis on people with disabilities.

This metric provides

- year on year inspection results to show improvements in this element of works;
- comparison between permit authorities and enable them to consider different inspection regimes and gain a standardised approach to these inspections; and
- comparison between highway authority activities and utility activities.

The metric is expressed as the number of inadequate (failed) category A inspections shown as a percentage of the total Cat A inspections undertaken within a period.

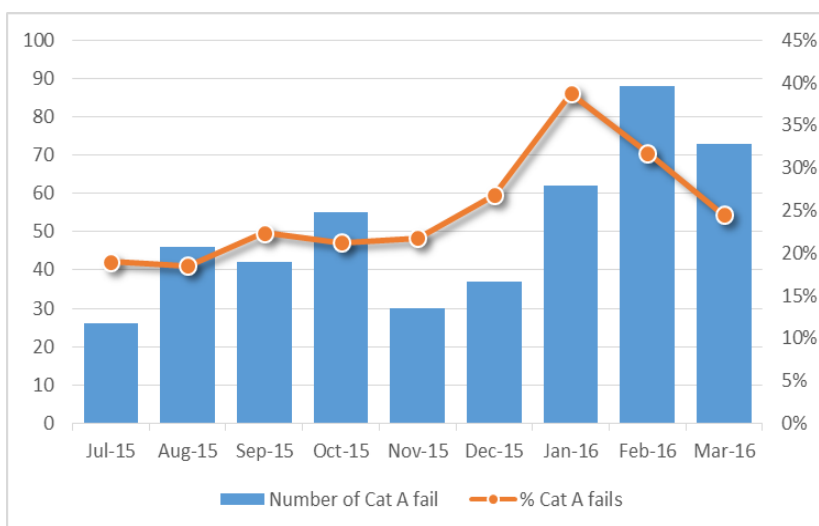
Category A Inspections are carried out on an ad hoc basis. There is a statutory requirement to undertake a random sample of at least 10% of all recorded statutory undertaker sites. However, there are difficulties in producing such a sample on a daily basis due to the transient nature of some works sites therefore it is common practice across the industry to visit a much larger number of sites with the expectation that many will either not have started yet, or are already completed and closed down.

An inspector will normally require site operatives or their supervisor to remedy any inadequacy found whilst on site. Even for relatively minor site issues that are rectified in this way, a failed inspection will always be recorded against the works so that there is a record of the site which feeds into longer term monitoring and performance.

6.7.1 OM 7 – Results (Category A inspection results)

The results below only account for statutory undertaker works, there is no requirement under the permit scheme regulations for highway authority contractors to undergo the same kind of inspection.

Chart 6.7a: Statutory Undertakers: number and percentages of Category A inspections recorded as inadequate (Year 2)



The data only covers year 2, the data taken from Mayrise.

6.7.2 OM 7 - Analysis

The overall rate of inadequacy for sites is very high. A 20% 'failure' rate is substantially over the expected levels, which are normally expected to be below 10% (Code of Practice for Inspections 2002, S.7.3). These high levels have been identified previously by Shropshire Council and have resulted in a number of Improvement Plans put into place between Shropshire Council and those statutory undertakers concerned. The majority of statutory undertakers showed good improvement over a period of months following this.

The level of reporting does not allow a breakdown by statutory undertaker to ascertain whether this high level is down to one or perhaps a small number of undertakers only. Nor is there any

indication of how many sites were made safe (or the issues rectified) by the site at the time of inspection (see previous comment regarding inspection and rectification process)

6.8 OM8 - Permit condition compliance

EToN 6 caters for specific permit condition compliance inspections that provide a measure of whether the promoter is working within the terms of their permit.

There is no statutory inspection sample size for condition compliance inspections, however the expectation is that any site that is inspected for a NRSWA Category A inspection will also have its permit conditions checked (and *vice versa*).

The measure is expressed as

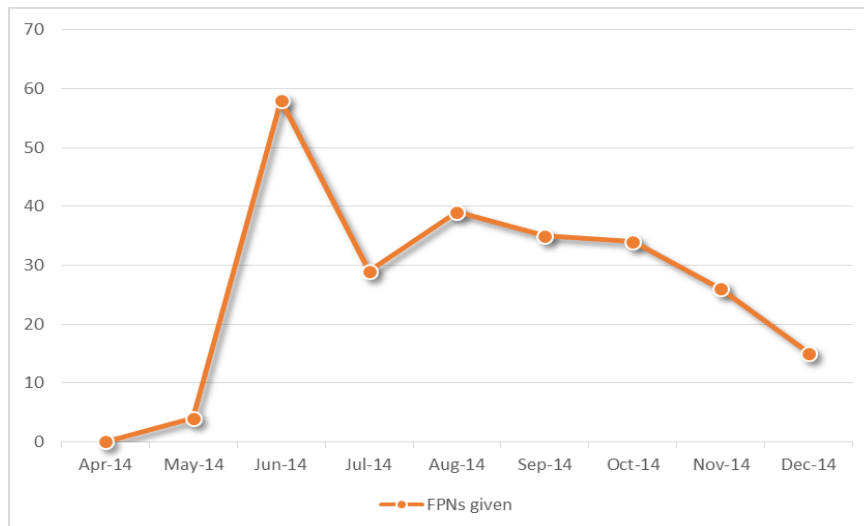
- the number of condition compliance inspections undertaken, monthly
- the number of condition breaches

While these figures are expressed as a total, the data collection should also allow for breaches of condition to be analysed by condition type, which is a useful tool for more general performance management.

6.8.1 OM 8 – Results (Number of failed condition inspections)

Year 1 data was gathered from Confirm. It is comprised only of the number of Fixed Penalty Notices given under regulation 20 (breach of condition), and does not provide information on the number of inspections undertaken, nor the number of actual condition breaches. For the purposes of this report however, it may be assumed that every non-compliant site resulted in at least one FPN.

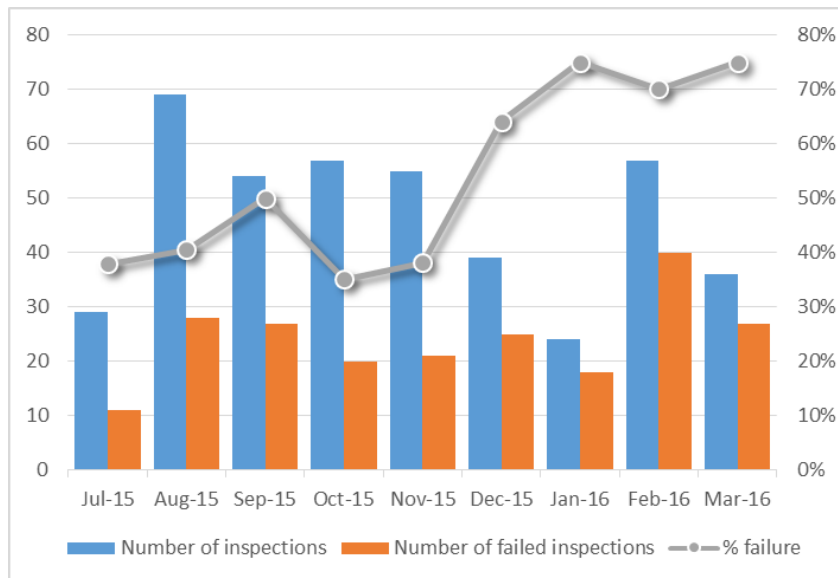
Chart 6.8a: Statutory Undertaker: number of Regulation 20 (Breach of Condition) FPNs given (Year 1)



Year 2 data was gathered from the Mayrise system and reports on the numbers of inspections undertaken, and the resultant number of non-compliant sites (noting that a site may have several

different breaches of condition but this is recorded only as one 'failed inspection'). The available data starts in July 2015 when Mayrise was first implemented.

Chart 6.8b: Statutory Undertake: results of condition compliance inspections, and percentage failed inspections (Year 2)



Note this chart does not show the number FPNs given; while it may be assumed the majority of condition inspections that fail will eventually result in an FPN, but this is not necessarily so:

- There may be multiple breaches of a condition at one site over a period of time that may be classed as only one FPN.

6.8.2 OM 8 - Analysis

Year 1

The data available records the numbers of FPNs given for regulation 20 offences (breach of permit condition).

For the first three months of the scheme, permit condition breaches were recorded and FPNs given, but the penalty was discounted to £zero. The intention was to help the scheme bed-in and to not penalise genuine learning mistakes during the transition period. This allowed both Shropshire Council and activity promoters to work closely together to ensure the first few months of the schemes implementation concentrated on the important aspects of the scheme and provide an opportunity for dialogue to ensure the success of the WaSP scheme as a whole.

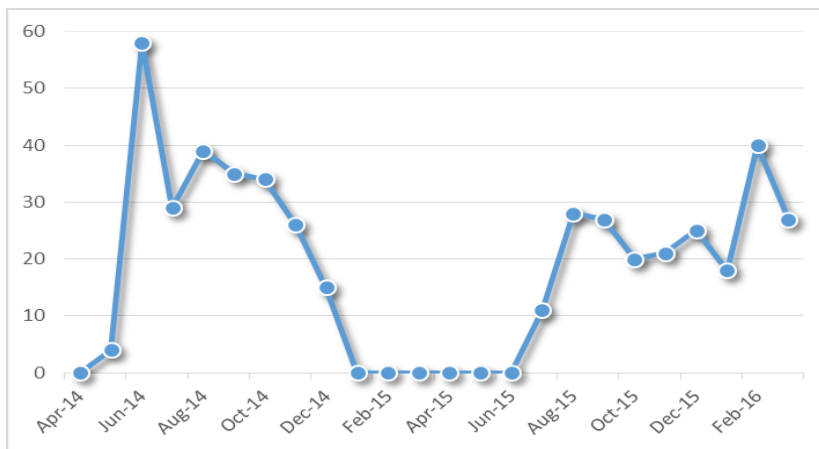
Year 2

Available data from Mayrise allows Shropshire Council to report on the numbers of compliance inspections undertaken, and the resultant number of fails (i.e. breach of permit conditions recorded). This data begins in July 2015 when Mayrise was first implemented. The move to Mayrise

ties into a change of process by Shropshire Council; a new team of inspectors were recruited in May 2015 and trained to undertake inspections in a manner that concentrated on the inspection and compliance on site.

The numbers of inspections increased substantially because a new larger inspection team was recruited and trained in April and May 2015. The general trend shows an increase in the percentage of inspected sites that were in breach of a permit condition.

Chart 6.8c: Statutory Undertaker: extrapolated number of FPNs given (Year 1 and 2)



Noting that there is no data available between January 2015 and June 2015, chart 6.8c shows that the numbers of FPNs given overall have remained relatively constant, in the region of 20-30 per month over the past year.

7 Case Studies

There follows a number of case studies to provide a more qualitative account of the benefits that have been seen since operating the West and Shires Permit Scheme.

7.1 Collaborative working

In all, collaborative working can bring positive and substantial benefits to the council and to promoters, since it advances a better image to public regarding the planning of works. It is also a tangible outcome for all concerned in terms of 'days of occupation saved', and the resultant reductions in disruption and inconvenience.

7.1.1 Leg Street, Oswestry

In 2015 Wales and West had a road closure in place for a gas mains replacement. Shropshire Council's contractors were able to use the closure to do some road maintenance to the carriageway. Three days of occupation were saved overall, however in terms of disruption this amounted to a substantial benefit since these works were in the centre of town on a busy main road.

7.1.2 Scotland Street, Ellesmere

This street is part of the Shropshire Council's resurfacing programme in 2016. It was also identified as being on the Wales & West mains replacement programme and through early identification and discussion, it was possible to allow the gas mains works to take place prior to the resurfacing.

7.1.3 Multiple utility connections

There are many examples that might be cited to show the proactive work that takes place for new developments, to encourage collaboration between Water, Gas, Electricity and Telecoms companies when making their new connections into the developments.

These are often hard to make work in practice, because of contractual and payment issues from the customer, as well as the practicalities of bringing in new services to a site that may only be partially built, and where there may be other considerations in terms of Section 278 (Highways Act 1980) agreements and so on. However the permit scheme does encourage network coordinators to challenge the way developers and statutory undertakers approach these kinds of work and a proactive approach from the permit authority can pay dividends. It is not unusual to save up to 10 or more days of occupation on every site where two or more utility companies work together and is particularly effective where more than one service will cause substantial disruption (for instance both requiring a road closure or multiway temporary traffic signals).

7.2 Reductions in occupation of road space

While there was always the facility prior to permitting for an authority to challenge a duration, there were limited powers to ensure that an activity did actually happen over a reduced period, or to enforce this. This also relied on Notices submitted that were not always of the expected data quality or indeed timeliness. In addition, there was far less guarantee under a Notice that the works would take place. Under permitting all of these issues, whilst they have not wholly disappeared, are far less common than previously mainly because:

- all applications have to be assessed for accuracy, timeliness and practicality, and granted before works can take place; and
- where a duration of planned works is not considered suitable for the works type or location, then the authority is able to enter into a discussion with the promoter, in the knowledge that until it is happy with the outcome, works cannot take place.

There are many examples of reductions to duration through the assessment of the permit applications. In particular those which require road closures are given considerable scrutiny of the need to take up road space for extended periods, and if necessary promoters are asked to reconsider their works methodology or even location of key events or apparatus (for instance connections onto existing mains etc.) to enable overall reductions in the impact of the works. There is also a considerably improved inspection regime from the Authority to monitor and if necessary enforce the activities.

7.3 Application of Conditions

The use of conditions is a vital tool to ensure that activities take place as planned and anticipated by the authority. They also provide the space for both promoter and authority to consider the effects of working in a certain location at certain times or in certain ways.

An example is an Openreach activity on a roundabout next to a hospital; the permit allowed the network coordinator to apply strict conditions to the permit, stipulating the duration of works, working hours, manual control of lights, removal of lights as well as consultation with the hospital. Having the permit in place with the appropriate conditions applied allowed the coordinators to ensure the works were carried out without causing disruption to road users, residents and the hospital. This also benefitted Openreach as they were provided with information on what would be required in order to carry these works out with as little disruption as possible.

In another instance, a permit was applied for but because of numerous events in the town centre, it could not be accommodated. The permit was modified several times to avoid works been carried out at an inappropriate date and time, and with suitable temporary traffic management. Having the permit scheme allowed the coordinator to ensure the works took place on an appropriate Sunday evening under a suitable temporary traffic management. This was beneficial to the residents, businesses and highway users as the specific time chosen meant a reduction in disruption caused to traffic entering Shrewsbury town centre. It also allowed the coordinator to ensure suitable publicity and consultation were undertaken particularly with the Post Office sorting office which had a large number of HGV movements affected by reduced traffic space. Arranging for the work to be carried out of hours on a Sunday benefitted the Utility as the traffic flow was greatly reduced which created a safer working environment for the gang on site and it gave the reinstatement ample time to cure so that the road could be fully opened in time for Monday morning rush hour.

Applying appropriate conditions allows Shropshire Council to have more control over how road space and the network is managed whilst works are taking place and provides a means of enforcement should the activity take place outside the conditions of the permit. Enforcement income helps to pay for the inspectors and means that Shropshire Council is able to train and deploy a suitable number across the county to provide further compliance with the permit scheme. Inspection and enforcement also means that overall quality of works on the highway improves.

7.4 General considerations

Overall permits have allowed a much greater understanding and control of what and how works take place on the highway. Every permit is assessed and this means that in the very large majority of cases, the decisions about the impact of each activity are considered and taken into account before it is approved. It also provides a pre-emptive way of identifying potential clashes with other activities. This is not restricted to those in the immediate vicinity, but allows consideration to be given to much wider areas affected, for instance the impact on bus routes, the cycle network, tourist routes, industry and business.

Greater knowledge of what is taking place means that appropriate stakeholders can be involved in the work that takes place prior to a large activity. For instance, letting businesses know how works will progress through a village or town means that they can plan, together with Shropshire Council and the promoter, appropriately to ensure deliveries can be made and customers are kept informed.

As noted previously, income from enforcement of permits has allowed a more vigorous and comprehensive compliance and enforcement regime. In practice, this is likely to bring substantial long term benefits as the degradation of the highways asset through excavation and reinstatement is minimised by ensuring works are carried out in the appropriate manner, problems on site identified and dealt with, and materials and reinstatement are compliant with the Specification for Reinstatement of Highways.

8 Conclusion

Using powers not available under previous regulations, the permit scheme has improved the management of all activities on the road network by allowing Shropshire Council's Network Management Team to better co-ordinate the timing of works by statutory undertakers and its own highway contractors. Improvements in assessment and coordination have reduced the number and duration of works and helped reduce their impact on motorists and other road users.

Only works for statutory undertakers and the authority's own works for road purposes fall under the scheme. However, the scheme does also provide a framework to identify and manage for other potentially disruptive activities, for instance new developments, highway events, highway licences such as crane operations, skips and scaffolding, etc. By bringing in these different elements and adapting council wide changes to processes, Shropshire Council has been able to realise benefits across the whole county.

Collecting the data for this report has presented a challenge with notice management systems not being able to collect certain data. Just as problematic has been keeping the data consistent across software platforms. Any small difference in the way data is recorded can make comparisons very difficult. As a result, there are several areas where further work needs to be undertaken to develop and improve the operational reporting of the permitting system, since effective management of information is key to helping all parties to drive further improvements. Further regard needs to be given to the detail and appropriateness of how data is managed and produced to give a more accurate picture in future reports

Any activity carried out in the street has the potential to cause disruption. The WaSP scheme has provided an opportunity to realise these benefits to road users, local residents and businesses in the county and wider West Midlands area. The scheme allows better control, planning and coordination of works, and a more robust frame work for checking and challenging activities on the highway to reduce the total number of highway occupancy days, and ensure that the conditions in the permit promote the expeditious movement of traffic through works, reducing disruption and promoting safety at works sites.

The intention of implementing the West and Shires Permit Scheme was to help Shropshire Council increase the efficient running of the highway network by minimising the disruption and inconvenience caused by road works and other highway events and activities through proactive management of activities on the highway.

Overall, a number of the scheme's aims tie directly into Shropshire's policy objectives to bring about beneficial change to network management. However, Shropshire Council recognises that the introduction of a permit scheme does not deliver instant success and that to realise the objectives, a continuous policy of review and development is required.

9 Recommendations for the future

Whilst the management of road and street works and other highways activities has improved since the introduction of the WaSP scheme, it is recognised that there are improvements still to be made.

Shropshire will continue to consolidate and build upon the number of joint occupations of the highway and assist in the direction of timing, to maximise the amount of time the highway is available for use, as well as continue to work with all work promoters in improving the quality and timeliness of information and further exploring innovative ways of working. This will improve information to highway users to improve the reliability of journey choices, reduce the risk of penalties to works promoters, and continue to deliver more effective working practices.

Shropshire will also work with all promoters in improving quality of reinstatements through inspections, performance measures and improvement plans where required.

Shropshire would like statutory undertakers to take up the existing incentives that are currently available within this scheme. The council is keen to use incentives to encourage good practice and promote both a more sustainable and efficient method of working whilst contributing to the management of congestion within Shropshire. In order to do this, all promoters will be reminded of the current incentives and more importantly work with stakeholders seeking to identify further incentives that can contribute to the scheme objectives.

Shropshire is committed to carrying out an annual fee review whilst the WaSP scheme is in operation to ensure that a balance is maintained between permit fee income and costs incurred in dealing with utility promoter permits.

In 2016/17 it is anticipated that the council will undertake a detailed review of their road network in terms of the asset data held against each street. Improving the quality of information relating to how the road is constructed, what engineering difficulties exist, materials used and more general information about the road such as speed limits and 'traffic sensitivity' will allow a more joined-up approach to planning works by statutory undertakers as well as providing a more rigorous basis for coordination.

Shropshire intends to work with Yotta, and the authorities that make up the wider WaSP scheme, to examine and improve the quality and accuracy of the data being reported as part of the scheme's performance measures. There is also substantial deeper analysis that can be provided to individual promoters to help identify wider failings or systemic problems that could be rectified.

10 Glossary

Category A inspection – An inspection undertaken during the progress of the works as defined in Section 2.3.1 of The Code of Practice for Inspections 2002

EToN system – The Electronic Transfer of Notices, the nationally agreed format for the transmission of notice information.

EToN developers (EDG) – representatives of the main software developers involved in street works

EToN Strategy Group – responsible for the development of the EToN system

HAUC – Highway Authority and Utility Committee. Industry body to provide oversight of street works and associated practice.

KPI – Key Performance Indicator as developed by the DfT and set out in the Permit Code of Practice.

NMD – Network Management Duty, a legal obligation created by the Traffic Management Act 2004 for highway authorities to secure the expeditious movement of traffic.

OM – Authority Operational Measure.

PAN – Permit Advice Note.

TMA – Traffic Management Act 2004.

11 Appendices

11.1 Appendix A

Data that has been extracted and used in this report is available as a separate addendum (available on-line or for download on request). Please contact Network Management Team at Shropshire Council.

11.2 Appendix B - Permit scheme conditions

AS of October 2015 the DfT introduced nationwide standardised permit condition texts. Since this report covers the period before and after this change, the table below provides cross reference of original WaSP scheme conditions and existing statutory texts. There is some E'ToN type code' cross-over on a small number of the original conditions.

EToN ref	Statutory standardized conditions	Original (pre October 2015) WaSP conditions
1	Date Constraints	
	NCT1a – Duration applies to all permits on streets where validity window does not apply	WS1 – Duration applies to all permits on streets where validity window does not apply
	NCT1b – Duration APPLIES TO ALL PERMITS on streets where the validity window applies	WS2 – Duration APPLIES TO ALL PERMITS on streets where the validity window applies
2	Time Constraints	
	NCT02a - Limit the days and times of day	WS10 - Specifying the days and times of day that works may take place
	NCT02b - Working hours	
3	Out of Hours working (not used)	
4	Materials and plant storage	
	NCT04a -Removal of surplus materials/plant	WS20 - Removal of equipment, traffic management and materials
	NCT04b Storage of surplus materials/plant	
5	Road Occupation Dimensions	
	NCT05a - Width and/or length of road space that can be occupied	WS30 - Area of highway occupation permitted
	NCT06a - Road space to be available to traffic/pedestrians at certain times of day	
7	Road Closure	
	NCT07a - Road Closed to Traffic	WS43 - Temporary Traffic Restrictions and other approvals
8	Light Signals and Shuttle Working	
	NCT08a - Traffic Management Request	WS30 - Area of highway occupation permitted
	NCT08b - Manual Control of Traffic Management	
9	Traffic Management Changes	
	NCT09a - Changes to traffic management arrangements	WS40 - Traffic Management Arrangements
	NCT09b - Traffic management arrangements to be in place	WS41 - Works stages agreement
	NCT09c - Signal Removal from operation when no longer required	WS42 - Maintaining diversion signage

		WS43 - Temporary Traffic Restrictions and other approvals
10	Work Methodology	
	NCT10a - Employment of appropriate methodology	WS50 - Methodology for carrying out activities
		WS51 - Interim or permanent reinstatement
		WS52 - Specialist Materials
11	Consultation and Publicity	
	NCT11a - APPLIES TO ALL PERMITS -Display of Permit Number	WS60 - APPLIES TO ALL PERMITS -Display of Permit Number
	NCT11b - Publicity for proposed works	WS61 - Emergency Traffic Management
		WS62 - Consult with specific bodies
		WS63 - Publicity for proposed works
		WS64 - Delay in starting works
		WS65 - End of highway occupation
12	Environmental	
	NCT12a -Limit timing of certain activities	WS70 - Methodology at different times
		WS71 - Site specific environmental requirements
13	Local Condition	
	NCT13a – reserved for exceptional circumstances and local agreements	WS80 - Extended reinstatement on a street subject to Section 58

11.3 Appendix C – Refusal Codes

WaSP scheme refusal codes used in year 1. HAUC (England) guidance (draft) is in place as of mid 2016 and Shropshire Council will be moving to integrate these refusal codes with the new guidance.

Code	Description
WR1a	Location Description Refusal
WR1b	Works Description Refusal
WR1c	No TM Application Refusal
WR1d	Wrong TM refusal
WR1e	Bay Suspension Refusal
WR1f	Condition Refusal
WR1g	Site Provision Refusal
WR1h	No Illustration / Site Plan
WR2a	USRN Refusal
WR2b	Conflicting Coordinates and Location Refusal
WR2c	Wrong permit type
WR3a	Section 58 in place
WR3b	Road space unavailable
WR3c	weekend works (must/must not)

WR3d	working hours unspecified/out of hours working not possible
WR3e	Activity on site following modification request (no permit)
WR4a	Cross boundary discussions required
WR4b	TM application (TTRO/TTS) required
WR4c	Duration Challenge
WR4d	Agreed consultation (under PAA) not done
WR4e	Third party refusal (no approval from..)
WR4f	Modified after Grant
WR4g	Amended start and end dates on MPA
WR5a	Reinstatement (temp/perm) must be undertaken use condition WR51/local