

# Appendix A

## Network Management Duty report 2012

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# **Network Management Duty report 2012**

## **1 Policy Background**

### **1.1 Traffic Management Act 2004**

The Traffic Management Act (TMA) was introduced in 2004 to tackle congestion and disruption on the road network. The TMA places a duty on the Council to ensure the expeditious movement of traffic on the Harrow road network and those networks of surrounding authorities. This is required in order to deliver the Network Management Duty (NMD). The TMA reinforces the legislation in the New Roads and Street Works Act 1991 (NRSWA) which governs Street Works' operations. In particular, the TMA has provided the Council with additional tools which can be used to better manage parking policies, moving traffic regulations and better coordinate and enforce street works.

In order to know the impact of the TMA on improving the network performance, the Authority has a duty to monitor its effectiveness. This report has been produced to demonstrate this improved network performance and to demonstrate Harrow's successful progress in carrying out the network management duties.

This section provides further details on policy related to the TMA.

#### **1.1.1 Network Management**

As part of the TMA, authorities are required to manage their road network to secure the expeditious movement of traffic on that network and to facilitate the same on the network of others.

#### **1.1.2 Permit schemes**

Effective works co-ordination is dependant on accurate and timely data exchanged between works promoters and street authorities. The TMA provides for the creation of permit schemes under which utilities and highway authorities wishing to carry out registerable works have to apply for a permit to carry out works and have to comply with any conditions attached. This ensures improved coordination of works by both utilities and highway authorities and also ensures improved standards. All proceeds from the operation of the permit scheme are used to cover the costs associated with running the permit scheme.

#### **1.1.3 Street works and Fixed Penalty Notices (FPNs)**

The adoption of a FPN Scheme enables Harrow to improve permit condition compliance as well as application data accuracy and timeliness, therefore improving performance in street works activities and improving working relationships between noticing/permitting organisations and street authorities.

All FPNs issued under Part 3 of NRSWA offers an undertaker the opportunity to discharge any liability to conviction for a fixed penalty offence by payment of a penalty. However, the street authority retains the power to take an alleged offender to the Magistrate's Courts and if the undertaker does not pay the penalty within 36 days then the street authority may bring proceedings in the Magistrates Court for the original offence. The FPN regime is not intended to be used as an additional source of income for street authorities.

The penalty fee for working without a Permit is £500 and the penalty fee for NRSWA offences or working in breach of permit conditions is £120. The period for payment is 36 calendar days, beginning with the day on which the FPN is given. This may be extended at the discretion of the street authority. A discounted amount of £300 for working without a permit or £80 for NRSWA offence or breach of permit conditions will apply if payment is made with 29 calendar days, beginning with the day on which

the FPN is given.

The penalty fee for FPNs is set by the Department for Transport in consultation with the Highway Authorities and advised by the Highway Authorities and Utilities Committee (HAUC). HAUC (UK) brings highway authorities, utilities and government together with the aim of working safely and smartly to reduce the impact of street and road works on members of the public throughout the UK.

The benefits from introducing FPNs are as follows:

- The provision of accurate and timely data assist in improved works co-ordination
- Improved performance by statutory undertakers in delivery of their statutory obligations
- Monitoring processes will assess works promoters performance and be used as a benchmark for ongoing improvements
- Surplus monies received from FPNs can be reinvested in the service and contribute towards developing policies to promote and encourage safe, integrated efficient and economic transport facilities and services, to, from and within the area
- Improvement in quality of information received enhance the Highway Network Team's ability to co-ordinate works effectively
- A standard reporting of data quality for all works promoters
- A contribution to minimising disruption arising from road and street works,

The FPN scheme has been established as a means to improve notice/permit data accuracy and timeliness without the recourse to court procedures. For this reason Harrow uses the FPN scheme to drive improvement rather than taking court proceedings.

## **2 The London Permit Scheme (LoPS)**

The London Permit Scheme (LoPS) was introduced to improve the way London Boroughs' manage the impact of street works and activities on their highway networks. It is a common permit scheme that London's highway and traffic authorities developed to comply with the provisions of the Traffic Management Act 2004 (TMA) and discharge their network management duty under the Act.

The new permitting scheme allows for greater control over works taking place on London's streets, with Authorities able to refuse consent for works considered to have the potential to cause unnecessary disruption. The new powers also allow permitting authorities to agree conditions to ensure that works are expedited and are undertaken in the most efficient manner. The combined effect of these powers is intended to improve traffic coordination and reduce journey disruption.

The impact of LoPS is to require that any works promoter who wishes to carry out any registerable activity in a road or street must obtain a permit from the relevant Permit Authority operating the LoPS first. The permit allows the promoter to carry out the specified activity and sets out the location, start and finish dates, duration and any specific conditions that may be required. The LoPS does not apply to work promoters that are not statutory authorities (e.g. developers, building firms and domestic drainage companies) and in these cases application for a Street Works Licence under section 50 of NRSWA will continue.

One of the key principles of permit schemes is that undertaker's activities are carried out on an equal basis. The present regulations provide for permit schemes to include street works by statutory undertakers and highway authority works such as routine and structural maintenance, drainage and traffic schemes. In short, local authority works promoters now have to apply for permits in exactly the same way as statutory undertakers and are subject to the same conditions attached to a permit being approved to undertake works.

## **2.1 Co-ordination of works**

The LoPS recognises the importance of sharing road space between works promoters as well as trench sharing in order to minimise traffic disruption and delay. Where one or more promoters can work together within the same site, separate permit applications should be submitted but they will not attract a permit fee in order to encourage joint working. However it should be noted that if any of those promoters then fail to work together the permit may be revoked, taking into account the circumstances and new permits may be required. It is the intention of LoPS to encourage better planning of works by works promoters, thereby reducing the impact on congestion caused by road works and help to reduce the level of vehicle emissions and improve air quality.

To effectively co-ordinate activities, it is essential that accurate and timely information is received by all parties undertaking works on the highway network.

## **3 TMA Monitoring**

### **3.1 Harrow performance**

As part of the LoPS approval process, several performance indicators and Objective Measures were agreed to be used to measure the performance of the permitting system.

This report will monitor various parts of the TMA and their impact. These include:

- Operations – including notices, permit conditions and FPNs;
- Inspections and reinstatements; and
- Impact on traffic flow.

### **3.2 Harrow operations**

Harrow received approval from the Secretary of State to commence operating a permit scheme from September 2011. At this time, Harrow also started issuing FPNs. The Network Management team in Harrow Traffic and Network Management act on behalf of Harrow Highway Authority to manage and operate LoPs and a FPN scheme in Harrow.

It will take a complete working year to see the full impact of the FPN system in place. However this report provides the latest information to date.

The following information shows data for all utility companies together and for contractors working on behalf of Harrow Council separately. This is shown partly to demonstrate the parity between the Council and the utility companies.

#### **3.2.1 Notices**

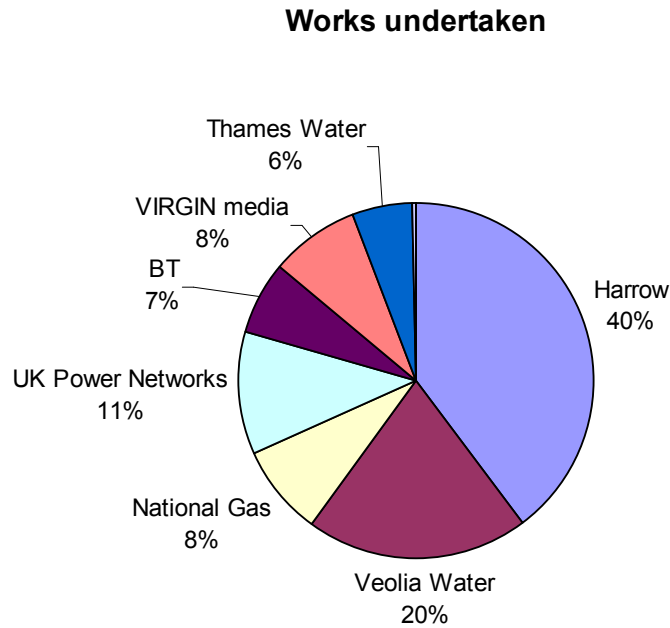
In order to carry out any work on Harrow's roads an application for a permit needs to be made.

The following utility companies have all regularly done works on Harrow roads:

- BSkyB Telecommunications
- British Telecom
- ES Pipelines Ltd
- Fulcrum Pipelines
- National Grid Gas
- O2

- Orange PCS Group
- T Mobile (UK)
- Thames Water
- Transport for London
- UK Power Networks
- Veolia Water
- Virgin Media
- Vodaphone

Works on Harrow roads are undertaken by a contractor acting on behalf of Harrow Council. As can be seen in the following Pie chart, Harrow's contractor were responsible for 40% of works undertaken since Sep 2011.



### 3.2.2 Types of works

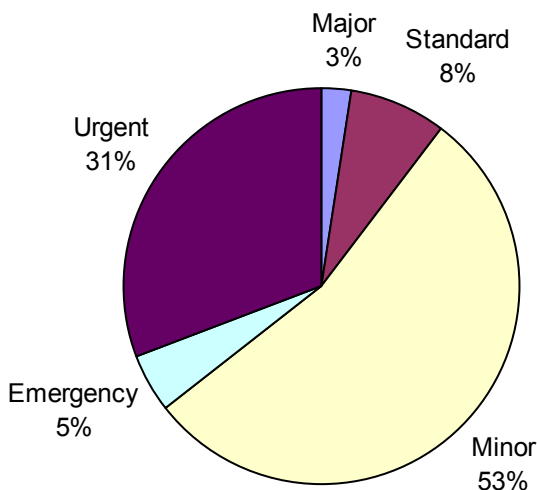
The nature of the type of work each of the utility companies undertakes is very different and has varying impacts on the roads. Notices which are issued by the utilities as either emergency or urgent are likely to cause the most road disruption as mitigation measures often cannot be undertaken in the times required. The following table shows the percentage of notices issued per utility company which are for emergency or urgent works.

Utility Company	% of notices which are either emergency or urgent notices
Thames Water	98
Harrow (009 - Reactive)	45
Veolia Water	43
National Grid Gas	46
UKPN	31
BT	12
Virgin Media	2
Harrow (002 - Planned)	3
Other	9

It is unsurprising that so much of Thames Water is emergency or urgent as in Harrow, all of Thames Water works relate to drainage and is often related to sewage problems or flooding at personal properties. Similarly the Harrow reactive work often relates to trip hazards and potholes which also need immediate attention.

The following chart shows the percentage of each type of works' notices and permits issued.

### Notice and Permit types issued 2011/2012

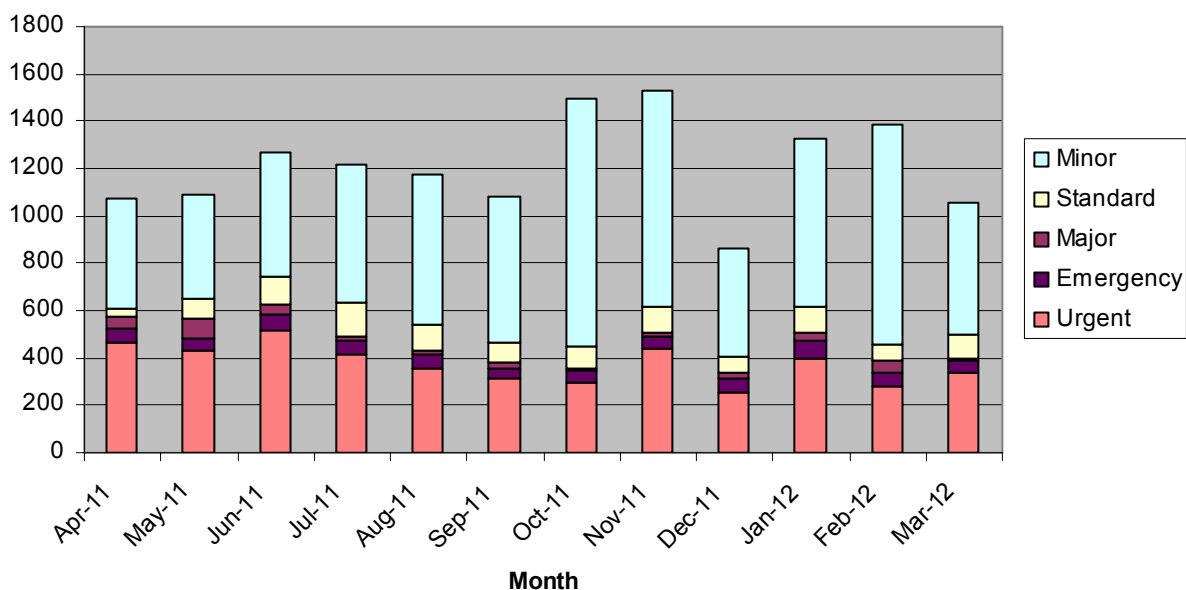


### 3.2.3 Changing the behaviour of utility companies

Since September 2011, permitting in Harrow has required utility companies to pay for permits to carry out work on the roads. As can be seen from the chart below, this has resulted in an increase in minor works' permits and a slight decrease in urgent works' permits.

There is some seasonality in this data and particularly for the major works which are organised to take place in school holidays in order to be less disruptive. There is also improved organisation of all works which has made the roads more manageable and almost certainly had a positive impact on traffic flow.

### Work type notices/permits



### 3.2.4 Permit conditions

Standard conditions which apply to all permits are:

1. Display permit number on site
2. Display any linked permit reference numbers on site
3. Display cross reference to original if remedial
- 4a Start and end dates fixed to traffic sensitive streets
- 4b Flexible start and end dates for non-traffic sensitive streets with set duration
9. Road space for vehicles and pedestrians at certain times
  - 9a ramps
  - 9b pedestrian access widths

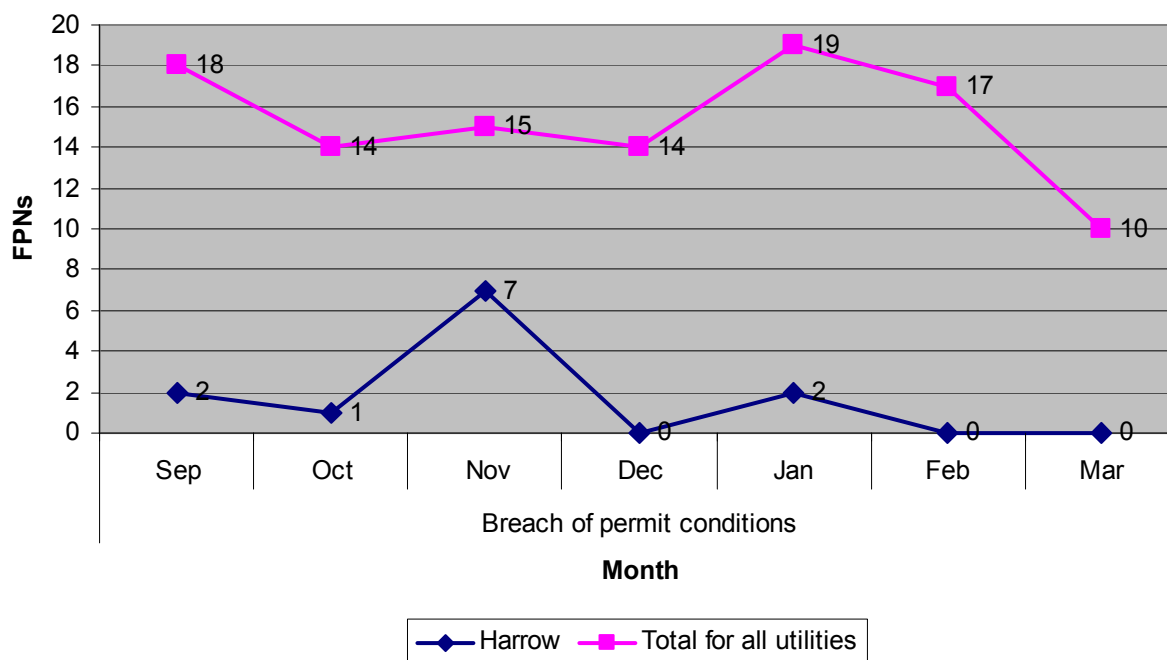
Further possible conditions are:

5. Timing restrictions (clear sites) e.g. conflicting event
6. Prompt removal of materials/plant e.g. clear each day
7. No storing materials or plant
8. Road space for works generally
10. Road closures
11. Traffic lights or stop/go
12. Other traffic orders e.g. parking restriction or banned turns
13. Changeable traffic management arrangements
14. Chargeable traffic management arrangements e.g. due to traffic sensitivity manual operated traffic lights
15. Methodology e.g. tunnelling / boring / open cut
16. Advance publicity e.g. Advance signing or advert. Also allows for letters to residents / businesses which must include a reference to the permit and how it can be obtained or alternatively with a copy of the permit.

When the permit conditions attached to a permit are not adhered to, FPNs are issued for a breach in the conditions. The following graph show that there has been an overall decline in FPNs for breach of

permit conditions which shows that the general improvement over time in the way works are carried out.

### FPNs issued for breach of permit conditions



### 3.2.5 FPNs issued

The following table shows the scale of notices issued by works promoters and the FPNs issued to those working on Harrow’s roads between September 2011 and March 2012.

Percentage of FPNs per notices issued			
	Notices total	FPNs total	FPNs/Notice
Fulcrum Pipelines Ltd	13	5	38.46
TfL	16	2	12.50
O2	12	1	8.33
BT	1,773	111	6.26
National Gas	2,209	125	5.66
UK Power Networks	2,918	134	4.59
Harrow	10,593	319	3.01
Veolia Water	5,388	142	2.64
VIRGIN media	2,186	22	1.01
Thames Water	1,499	17	1.13
<b>Total</b>	<b>26,607</b>	<b>878</b>	<b>3.30</b>

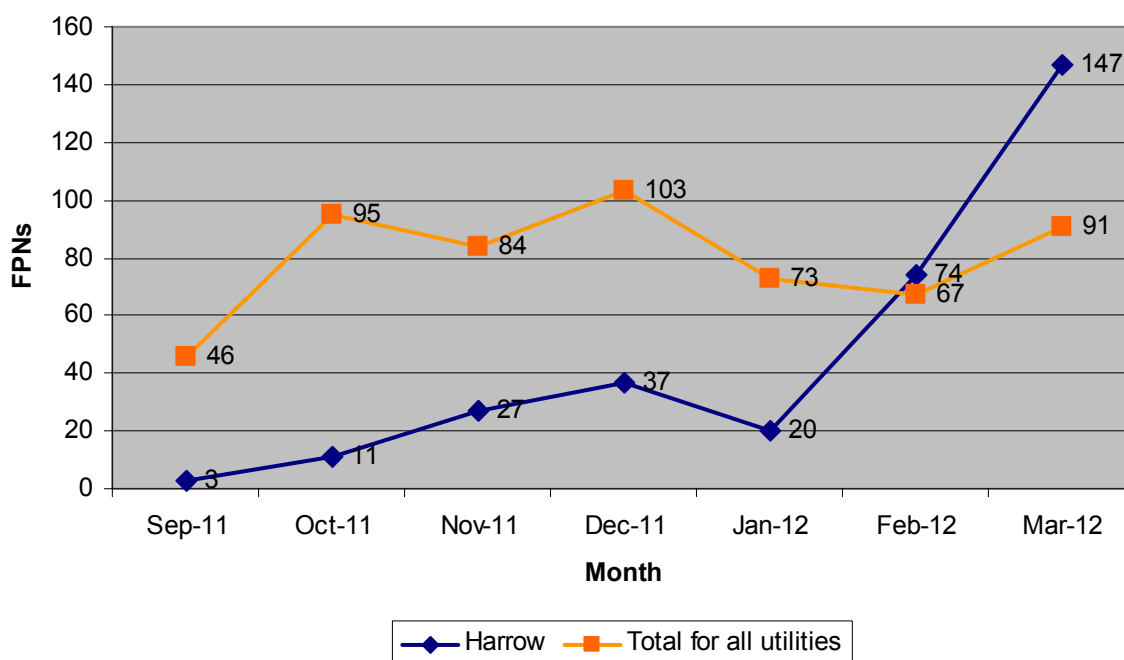


The following table and chart shows the impact of financial year end on the FPNs issued. FPNs issued to Harrow's contractor towards the end of the financial year are probably due to the upcoming change of contractor at this time.

Over a greater time period it would be good to show reductions in the FPNs issued as organisations learn to work within the legal requirements. In particular, this will demonstrate the effectiveness of FPNs being used as drivers both to improve the noticing data quality and the compliance with the associated conditions.

Total FPNs issued	Harrow	BT	Fulcrum Pipelines Ltd	National Gas	TfL	Veolia Water	VIRGIN media	Thames Water	UK Power Networks	Total for all utilities
Sep-11	3	8	0	9	0	9	0	1	18	46
Oct-11	11	26	1	13	2	23	6	2	22	95
Nov-11	27	31	1	19	0	17	4	3	9	84
Dec-11	37	11	0	22	0	16	1	3	50	103
<b>Total 4th quarter 11</b>	<b>75.00</b>	<b>68.00</b>	<b>2.00</b>	<b>54.00</b>	<b>2.00</b>	<b>56.00</b>	<b>11.00</b>	<b>8.00</b>	<b>81.00</b>	<b>282.00</b>
Jan-12	20	11	0	16	0	29	0	3	14	73
Feb-12	74	12	1	17	0	12	6	2	17	67
Mar-12	147	12	2	29	0	36	5	3	4	91
<b>Total 1st quarter 12</b>	<b>241.00</b>	<b>35.00</b>	<b>3.00</b>	<b>62.00</b>	<b>0.00</b>	<b>77.00</b>	<b>11.00</b>	<b>8.00</b>	<b>35.00</b>	<b>231.00</b>
<b>% change between quarters</b>	<b>221</b>	<b>-49</b>	<b>50</b>	<b>15</b>	<b>-100</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>-57</b>	<b>-18</b>

### Total FPNs issued per month

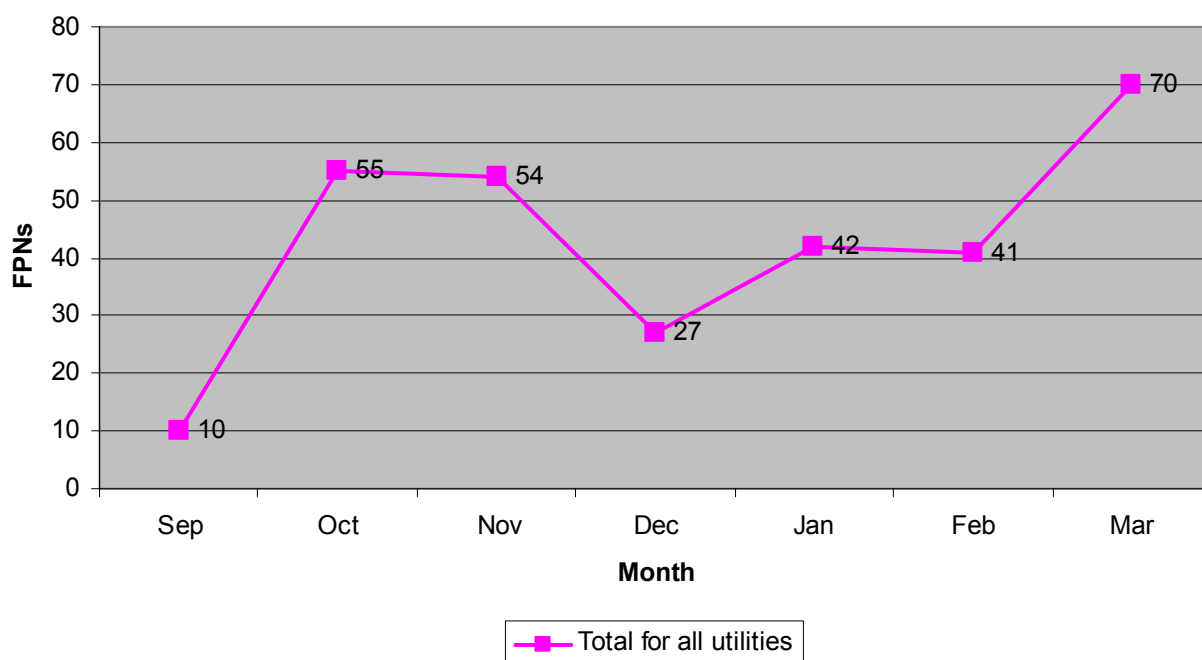


### Registration FPNs

When works are complete, companies are required to register details about the works carried out. When this is done incorrectly, FPNs are issued. Harrow are exempt from these FPNs as they are not required to register works undertaken but only to inform that works have been completed.

	BT	National Gas	UK Power Networks	Thames Water	Veolia Water	VIRGIN media	Total for all utilities
Sep-11	1	5	1	0	3	0	10
Oct-11	20	11	7	0	16	1	55
Nov-11	19	14	5	2	12	2	54
Dec-11	5	10	5	2	5	0	27
Total 4th quarter 11	44.00	35.00	17.00	4.00	33.00	3.00	136.00
Jan-12	4	12	1	3	22	0	42
Feb-12	9	14	5	2	8	3	41
Mar-12	11	23	3	2	29	2	70
Total 1st quarter 12	24.00	49.00	9.00	7.00	59.00	5.00	153.00
% change between quarters	-	40.00	-47.06	75.00	78.79	66.67	12.50

## FPNs issued for registration notice offences



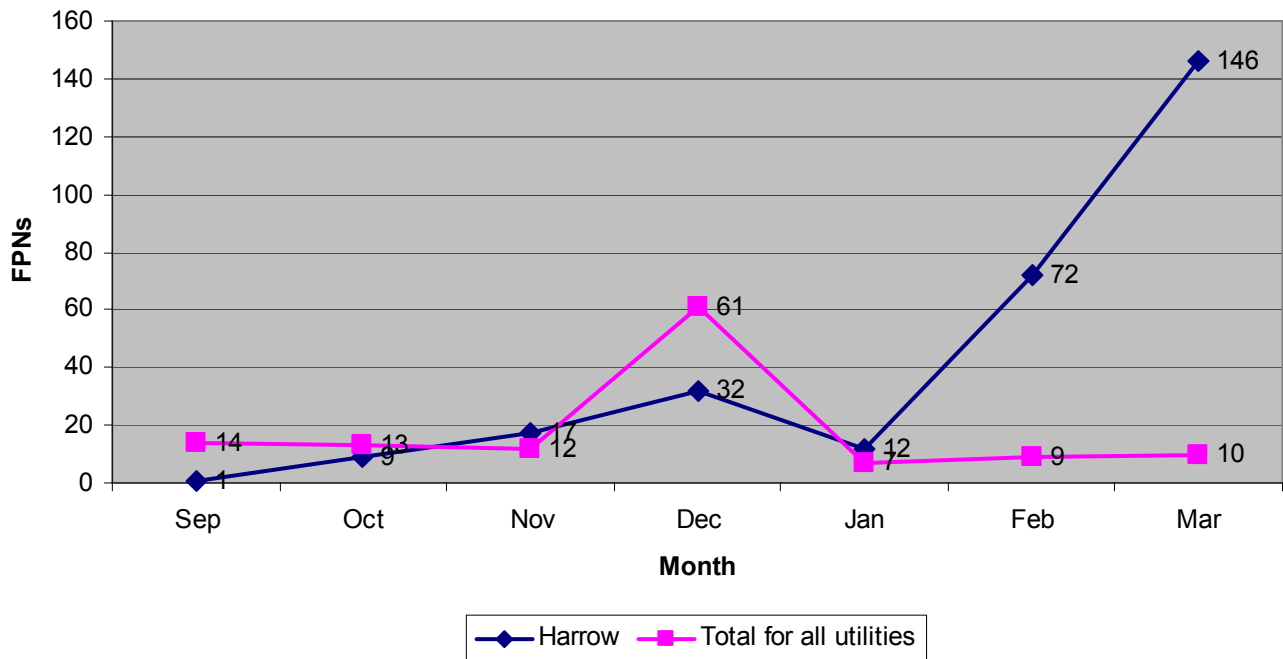
### Other notices

Companies working on the highway network are required to send in notices to the authority to indicate when works start and when they stop. Failure to do so within set timescales attracts FPNs. This is by far the most common reason any organisation working on the roads receives an FPN. The pressure of the change in Harrow Council's contractor to complete works prior to their contract ending is clearly shown here. All the utility companies improved their performance in the first quarter of 2012 in contrast to Harrow's contractor where the performance got significantly worse.

	Harrow	BT	National Gas	UK Power Networks	Veolia Water	Total for all utilities
Sep	1	5	1	4	3	14
Oct	9	1	0	6	3	13
Nov	17	3	4	0	3	12
Dec	32	6	6	40	5	61
Total 4th quarter 11	58.00	10.00	10.00	46.00	11.00	86.00
Jan	12	2	2	1	2	7
Feb	72	1	2	1	2	9
Mar	146	1	4	0	2	10
Total 1st quarter 12	230.00	4.00	8.00	2.00	6.00	26.00

% change between quarters	296.55	60.00	-20.00	-95.65	-45.45	-69.77
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### FPNs for notices such as late work starts and stops

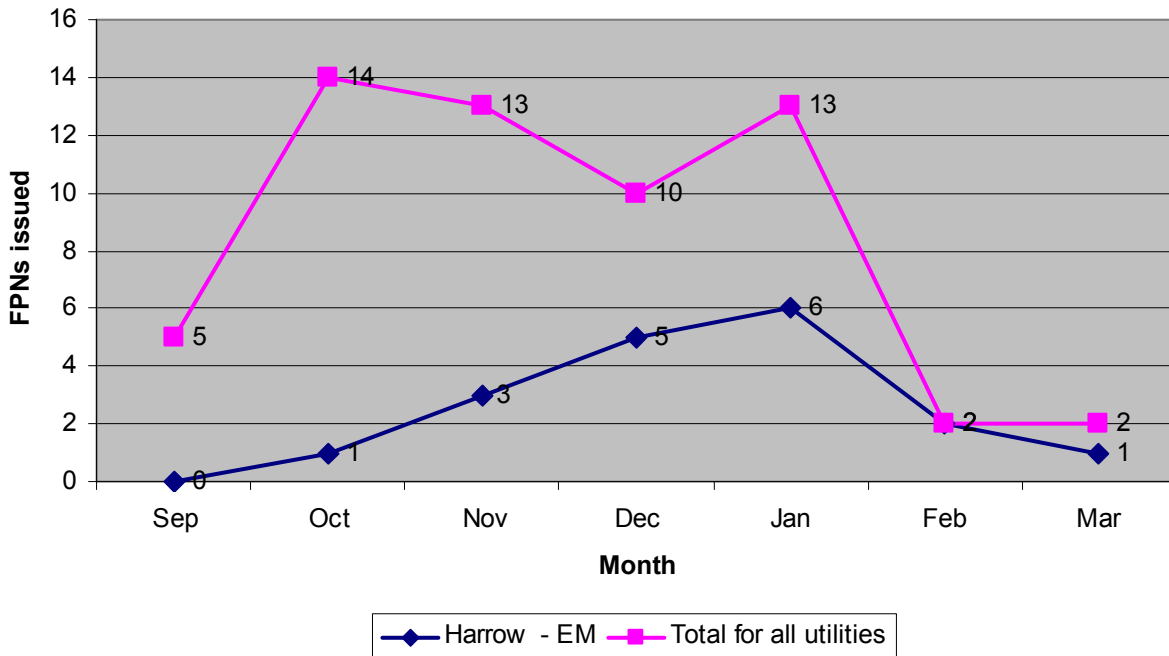


### Working without a permit

Companies are issued FPNs when working on the road without a permit. All works' promoters improved their performance in the first quarter of 2012 as compared with the fourth quarter 2011.

	Harrow	BT	Fulcrum Pipeline Ltd	National Gas	TfL	UK Power Networks	VIRGIN media	Veolia Water	Total for all utilities
Sep-11	0	2	0	0	0	1	0	2	5
Oct-11	1	2	0	2	2	2	2	3	14
Nov-11	3	6	1	1	0	2	0	0	13
Dec-11	5	0	1	2	0	0	1	1	10
Total 4th quarter 11	9.00	8.00	2.00	5.00	2.00	4.00	3.00	4.00	37.00
Jan-12	6	5	0	1	0	0	0	1	13
Feb-12	2	0	0	0	0	0	0	0	2
Mar-12	1	0	0	1	0	0	0	0	2
Total 1st quarter 12	9.00	5.00	0.00	2.00	0.00	0.00	0.00	1.00	17.00
% change	0.00	-	-1.00	-0.60	-1.00	-1.00	-1.00	-0.75	-0.54

### FPNs issued for working without a permit



### 3.3 Inspections and Reinstatements

A sample of 30% of works are inspected to ensure that works are undertaken safely and reinstated works are of a similar standard as to before the works began. If reinstatements do not meet this standard, and this is observed within the guarantee period Harrow will make the utility company put good the fault.

Three types of inspections take place for works that are inspected. These inspections are as follows:

- Category A During works – signing and guarding
- Category B Takes place within 6 months after work is completed
- Category C Takes place within 2 years after completion and this is the time period for which the works should be guaranteed.

The following table shows that there are actually a low percentage of inspections of reinstated works that fail. Most of the failures are category A and occur while the works are taking place. These require rectification usually within 2-4 hours.

	Passed	Failed - Low Risk	Failed - High Risk	Total	Failed
Category A	582	101	26	709	18%
Category B	1865	171	5	2041	9%
Category C	1880	42	0	1922	2%
Non-categorised	0	0	0	0	0%
All categories	0	0	0	0	0%
<b>Total</b>	<b>4327</b>	<b>314</b>	<b>31</b>	<b>4672</b>	<b>7%</b>

The following tables list the failures per utility company for each category of inspections undertaken. The list is in descending order of the number of notices issued between April 2011 and March 2012.

#### Category A inspections only

	Passed	Failed - Low Risk	Failed - High Risk	Total	Failed	Notices total
LB Harrow	8	8	1	17	53%	4,252
Veolia Water	266	17	6	289	8%	1,419
Virgin Media	19	2	1	22	14%	1,175
UKPN Eastern & London	98	54	11	163	40%	811
BT	46	7	3	56	18%	528
National Grid Gas Plc	136	11	3	150	9%	446
Thames Water	6	0	0	6	0%	276

#### Category B inspections only

Works undertaken by Harrow contractors do not undergo category B inspections.

	Passed	Failed - Low Risk	Failed - High Risk	Total	Failed	Notices total
Veolia Water	907	45	0	952	5%	1,419
Virgin Media	41	9	2	52	21%	1,175
UKPN Eastern & London	256	54	1	311	18%	811
BT	196	17	2	215	9%	528
National Grid Gas Plc	322	37	0	359	10%	446
Thames Water	69	4	0	73	5%	276

#### Category C inspections only

Works undertaken by Harrow contractors do not undergo category C inspections.

	Sample Inspections			Total	Failed	Notices total
	Passed	Failed - Low Risk	Failed - High Risk			
Veolia Water	864	18	0	882	2%	1,419
Virgin Media	51	0	0	51	0%	1,175
UKPN Eastern & London	290	11	0	301	4%	811
BT	207	7	0	214	3%	528
National Grid Gas Plc	348	3	0	351	1%	446
Thames Water	80	1	0	81	1%	276

### 3.4 Traffic Flow

Each year, the Council introduces traffic measures to help improve traffic flow, including pedestrian and cycle flow across the borough. These measures include bus priority, 20mph zones, cycling schemes, congestion relief works, travel planning, sustainable transport promotions and major scheme

works. Many of these schemes have a local impact on reducing congestion and encourage people to use more sustainable modes of transport which in turn also relieves congestion. Although the impact from each of these schemes can be looked at separately, for the sake of reporting, the impact on traffic flow will be measured by the following:

- in car GPS data which monitors traffic movement through a road *network of interest* in the borough; and
- bus speeds taken from in-built Automatic Vehicle Location (AVL) data on the buses.

### 3.4.1 GPS data

Each year, TfL provides all boroughs in London with information from GPS vehicle tracking. This is information provided by Trafficmaster and obtained from vehicles fitted with GPS devices. The information is provided for various time periods midweek and weekends and is studied to see if there are any notable differences from previous years and also to identify where the major problems in the borough lie.

In particular, this data is used to direct works undertaken to improve the network performance and the work funded by TfL through the LIP funding process. Nearly all works programmed through LIP funding are influenced by this data but particular schemes to relieve excess congestion that have been identified and implemented during 2011/12 are the Hatch End congestion relief scheme and the Stanmore Road / Uxbridge Road traffic signalling coordination work (SCOOT).

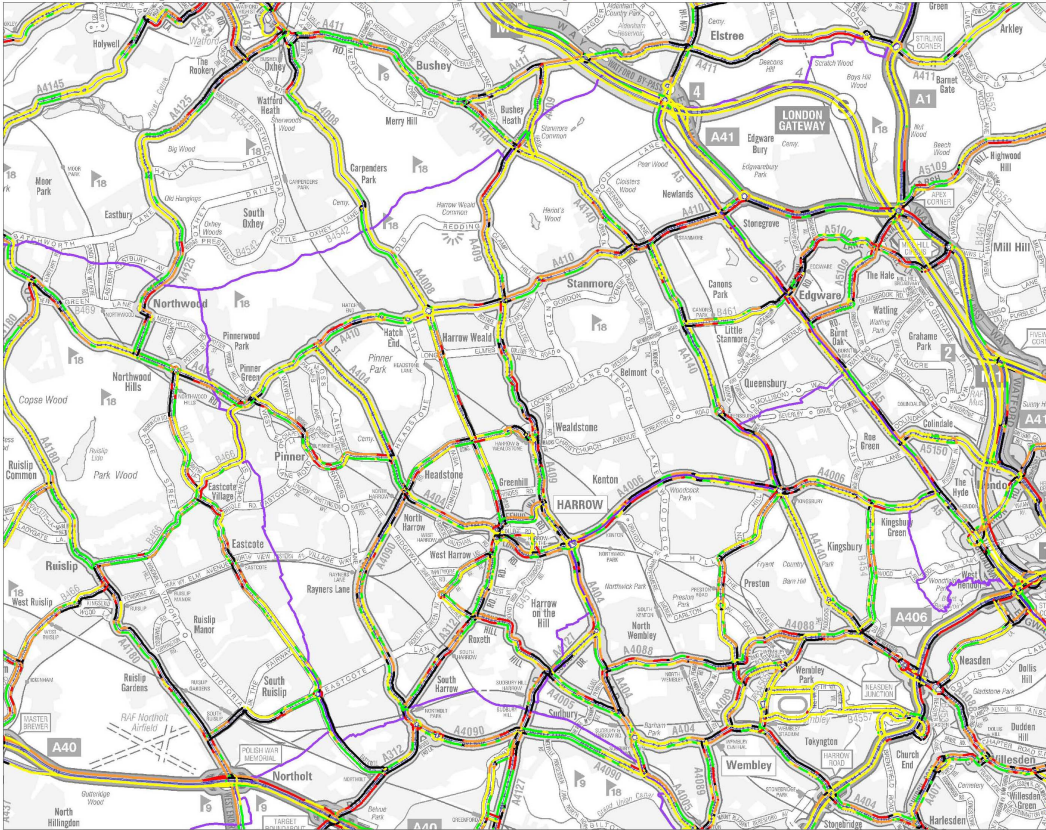
Other works that particularly reduce congestion on the network and are included in work programmes as part of the LIP funding process are bus priority works, travel awareness campaigns / information, school travel planning, cycle schemes and training and controlled parking zones which all contribute to reducing congestion in the borough by influencing different travel patterns either through reduced use of the private car or using alternative sustainable forms of transport.

For information, the latest 2 years data for traffic delays for the AM peak midweek days is provided in this report.



**2009-10 Average Delay - AM Peak (Working days only - Mon to Fri)**

**Harrow**



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Contact [trafficdata@tfl.gov.uk](mailto:trafficdata@tfl.gov.uk) or 0203 054 0893



**Network Performance Traffic Analysis Centre**

**Note:**

- Network shown is OS ITN links on Network of Interest.
- AM Peak is 7am to 10am.
- Delay measurement is peak speed compared to night speed (10pm to 6am - free flow) in mins/km
- Links with 2 or more observations are shown
- Both directions are shown
- Processed as per DfT instructions issued in Apr 09



Information derived from data provided by TrafficMaster obtained from vehicles fitted with GPS devices

Delay Measurement (mins per km)	
Red	Greater than 1.5
Orange	1 to 1.5
Yellow	0.5 to 1
Green	0.25 to 0.5
Light Green	Less than 0.25
Grey	No Data

**2010-11 Average Delay - AM Peak (Working days only - Mon to Fri)**

**Harrow**



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Information derived from data provided by TrafficMaster obtained from vehicles fitted with GPS devices

Delay Measurement (mins per km)	
Red	Greater than 1.5
Orange	1 to 1.5
Yellow	0.5 to 1
Green	0.25 to 0.5
Light Green	Less than 0.25
Grey	No Data



The following tables show the change in vehicle speeds and in delays on the *network of interest* in Harrow. In particular it shows that traffic has got faster in both the morning and interpeak times and delays have similarly reduced during these time periods.

	Average speeds - weighted by vehicle Flow (MPH)		
	AMPeak	InterPeak	PMPeak
07/08	18.6	19.2	17.1
08/09	18.8	19.1	17.1
09/10	18.5	19.2	16.9
10/11	18.8	19.4	17.0

	Average Delay Measurement (mins/km) - weighted by vehicle flow		
	AMPeak	InterPeak	PMPeak
07/08	0.64	0.58	0.82
08/09	0.63	0.59	0.82
09/10	0.65	0.58	0.84
10/11	0.62	0.56	0.84

### 3.4.2 Buses

The London i-bus system is a state-of-the-art Automatic Vehicle Location (AVL) radio and on-bus passenger information display and announcement system. It is installed on all buses across the London bus network. The system tracks all of London's 8000 buses to provide passengers with audio visual announcements and improved information on bus arrivals. The system also triggers priority for buses at traffic junctions. Specifically, the system provides:

- at-a-glance information on the precise location of every bus on a particular route - this helps maintain a good service; and
- detailed journey time data – this enables operators to improve their bus route service.

Based on i-bus technology detailed bus speeds can be calculated between selected stops.

In Harrow, the results of this show:

			Average bus run time (mins)		
	Start	End	2010	2011	2012
H12	Chesswood Way	Harrow Weald Bus Garage	13.85	13.84	13.90
H12	Harrow Weald Bus Garage	Chesswood Way	13.17	13.12	12.88
H9-H10	Harrow View	Rayners Lane Station	9.03	8.99	8.98
H9-H10	Warden Avenue	Pinner View	9.32	9.06	8.86
140	Safari Cinema	Harrow Civic Centre	1.70	1.19	1.25
140	Harrow Civic Centre	Hindes Road	1.50	1.53	1.56
114	Turner Road	The Highlands	2.85	2.83	2.83
114	Oak Gardens	Turner Road	4.20	4.25	4.32
<b>Overall average run time</b>			<b>6.95</b>	<b>6.85</b>	<b>6.82</b>

More pro-active co-ordination and the scheduling of collocated works has contributed to this reduction in run times. There is no comparable information for where permits have not taken place so proving this impact on traffic flow is not possible.

## **4 TMA Reporting**

The impact of the TMA is reported through the Local Implementation Plan monitoring and reporting process. Each year, every London borough reports to TfL on improvements made in the borough regarding cycling, walking, road safety, buses, smarter travel, environment, accessibility, controlled parking zones and freight. These changes give an indication of the measures made regarding improving the road network. In addition, boroughs are required to prepare a three year impact report outlining the target achievement and evidence of how the works have contributed to the borough's transport objectives. These transport objectives encompass the TMA key objective to reduce congestion.

## **5 Conclusion**

The first few months of issuing FPNs and joining the London Permit Scheme have been successful. This is partly due to the improved working relationship that has been developed between the Network Management Team and all the utility companies regarding permitting. Future months will provide more data as to whether the improvements are both effective and sustainable.