



The Lancashire Permit Scheme for Road & Street Activities

12 Month Review, 2015-16

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*Lancashire County Council Permit Scheme,
12 Month Review, 2015-16*

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1 INTRODUCTION

1.1 Background

1.1.1 The Lancashire County Council (LCC) Permit Scheme went live on 2nd March 2015.

1.1.2 This report forms the statutory 12 month review following the first full 12 months of operating the Permit Scheme, '*Lancashire County Council 12 Month review, 2015-16*'.

1.1.3 The purpose of the 12 month review is;

- Demonstrate a reduction in the duration of works.
- Demonstrate a reduction in the number of Permit applications (through an increase in collaborative working).
- Report the monitored Key Performance Indicators (KPI 1, KPI 2, KPI 3 & KPI 7).
- Re-evaluate the Cost Benefit Assessment to show an economic return on the investment.
- Report the annual scheme benefit to all road users.

1.2 Report Structure

1.2.1 Chapter 2 presents the analysis of the permit applications and actual durations. The review of the key performance indicators is reported in Chapter 3.

1.2.2 Chapter 4 presents the report summary, conclusions and recommendations.



2 PERMIT APPLICATIONS

2.1 Methodology

2.1.1 Data sources available for this review are:

- Noticing work stops notices, 2010 - 2013 (Exor database)
- Permit Scheme work stops notices, February 2015 - February 2016 (Symology database)

2.1.2 This review will assess the year on year change in the number of Permit applications and to review the breakdown of key metrics. The purpose of the review is to quantify the benefit of the Permit Scheme in terms of a reduction in number of days worked on the road network.

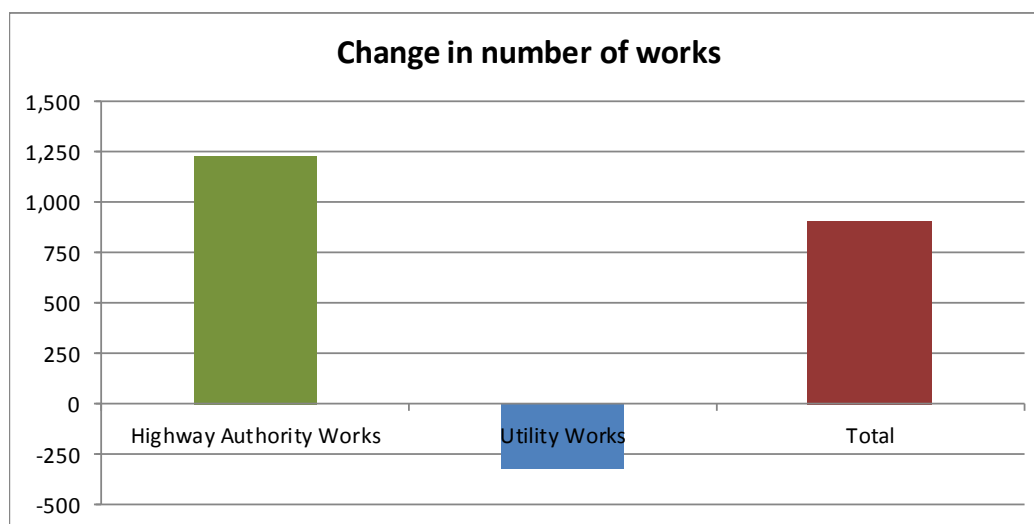
2.2 All works

2.2.1 The following series of charts and tables present a comparison of the first year under the Permit Scheme and the average year selected under Noticing for the CBA business case assessment.

2.2.2 The total number of Permit applications and a breakdown by highway authority and utility company is shown in Table 1 and the accompanying chart.

Table 1 Number of Permit applications

PROMOTER TYPE	Noticing 2012-13	Permitting 2015-16	Change
Highway Authority Works	887	2,116	1,229
Utility Works	26,498	26,176	-322
Total	27,385	28,292	907



2.2.3 The biggest change is a near 1,250 increase in highway authority works, compared with the noticing records. This is a 140% increase in highway works.

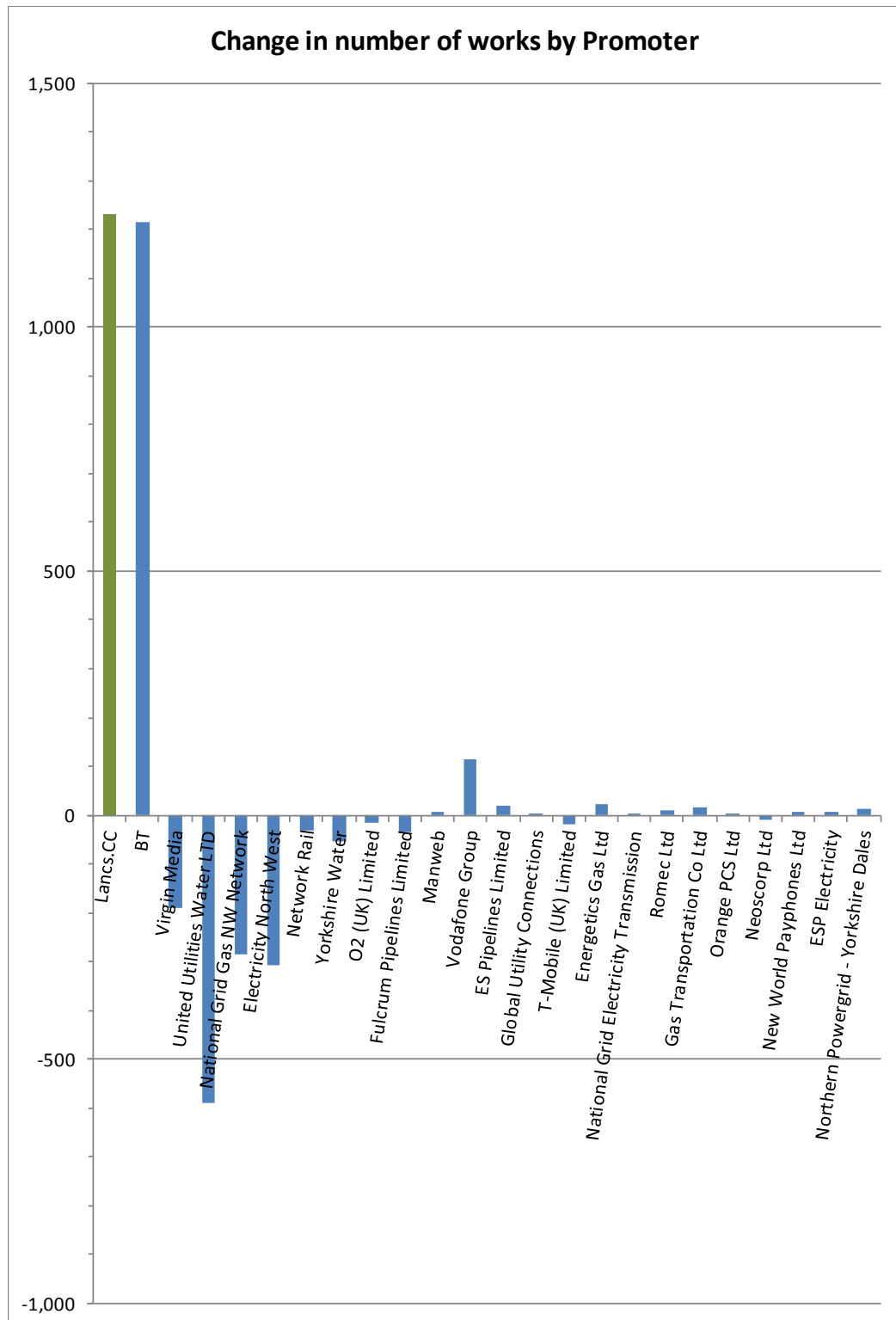
2.2.4 There is very little change in the number of utility works, a 1% reduction only.



2.2.5 The change in number of Permit applications by works promoter is presented in Table 2 and the accompanying chart.

Table 2 Change by works promoter

PROMOTER	Noticing 2012-13	Permitting 2015-16	Change
Lancs.CC	887	2,116	1,229
BT	5,267	6,482	1,215
Virgin Media	2,708	2,518	-190
United Utilities Water LTD	10,253	9,662	-591
National Grid Gas NW Network	3,682	3,396	-286
Electricity North West	3,547	3,240	-307
Network Rail	184	152	-32
Yorkshire Water	148	94	-54
O2 (UK) Limited	26	10	-16
Fulcrum Pipelines Limited	93	57	-36
Manweb	39	45	6
Vodafone Group	80	193	113
ES Pipelines Limited	31	51	20
Global Utility Connections	45	47	2
T-Mobile (UK) Limited	61	42	-19
Energetics Gas Ltd	4	28	24
National Grid Electricity Transmission		1	1
Romec Ltd		9	9
Gas Transportation Co Ltd	10	26	16
Orange PCS Ltd		5	5
Neoscorp Ltd	12	2	-10
New World Payphones Ltd		7	7
ESP Electricity		8	8
Northern Powergrid - Yorkshire Dales	87	101	14
Section 50 Licences	151		-151
Others	68		-68
Total	27,383	28,292	909



2.2.6 The biggest change is a 1,200 increase in works promoted by the Council and by BT. There are smaller reductions in works by water, gas and electricity promoters. The 6% to 8% reduction in works by these promoters cancels out the increase in works by BT.

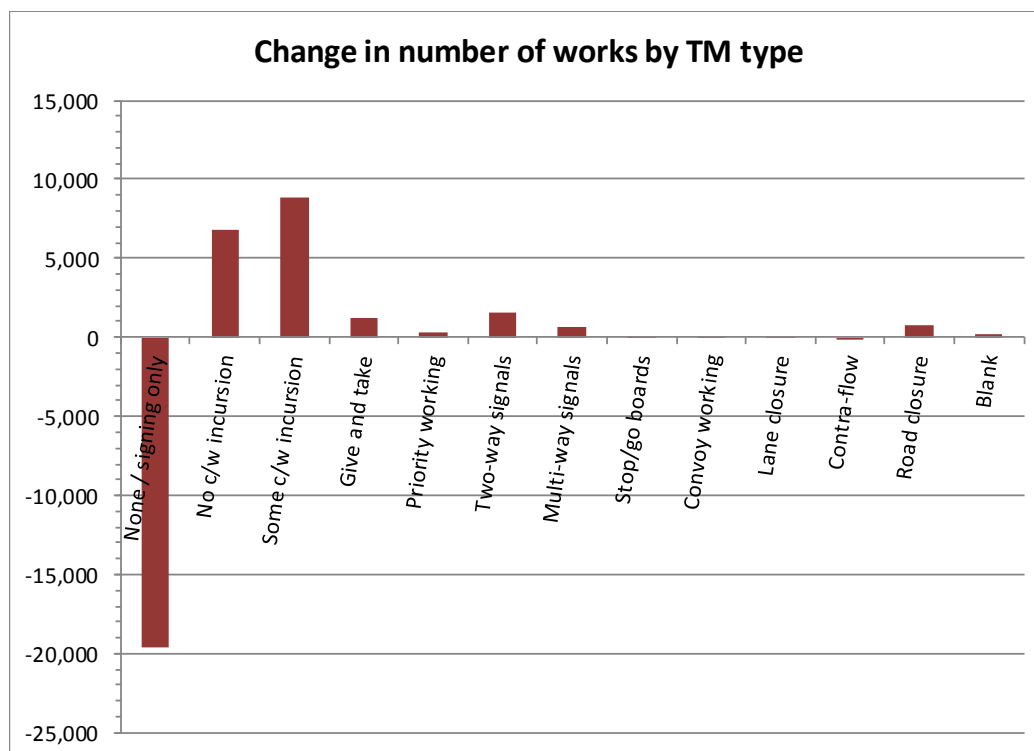
2.2.7 The other utilities show a very small change (+ or -) in permit applications compared with the 2012-13 noticing benchmark statistics.



- 2.2.8 Other than the increase in works by BT, the changes are not felt to be significant and are generally indicative of annual fluctuations in promoter works numbers to be expected year on year.
- 2.2.9 The following analysis is presented for applications by all works promoters. The same analysis is presented separately in Appendix A for highway authority works and utility company works.
- 2.2.10 Table 3 and the accompanying chart presents a comparison of the change in number of all works applications by traffic management type.

Table 3 Number of applications by traffic management type

TRAFFIC MANAGEMENT TYPE	Noticing 2012-13	Permitting 2015-16	Change
None / signing only	19,570		-19,570
No c/w incursion		6,784	6,784
Some c/w incursion		8,836	8,836
Give and take	4,268	5,441	1,173
Priority working	34	334	300
Two-way signals	1,492	3,111	1,619
Multi-way signals	414	1,045	631
Stop/go boards	692	730	38
Convoy working	4	12	8
Lane closure	212	268	56
Contra-flow	11	7	-4
Road closure	688	1,499	811
Blank		225	225
Total	27,385	28,292	907



2.2.11 The biggest change is the transition from EToN5 to EToN6 traffic management types, and a move from None/signing only to no carriageway incursion and some carriageway incursion.

2.2.12 There is a smaller increase in 'give and take' traffic management for utility and highway works.

2.2.13 There is a large increase in the number of works requiring temporary traffic signals and road or lane closures – a 3,000 (90%) increase overall. This change is evident for both highway authority and utility works.

2.2.14 It is likely that the introduction of the Permit Scheme will have improved the accuracy of the data inputs to the Street Works Register in relation to traffic management type. However, the better control offered to the Council in evaluating permit applications may have resulted in works promoters being directed to use traffic signal control or road/lane closures more frequently.

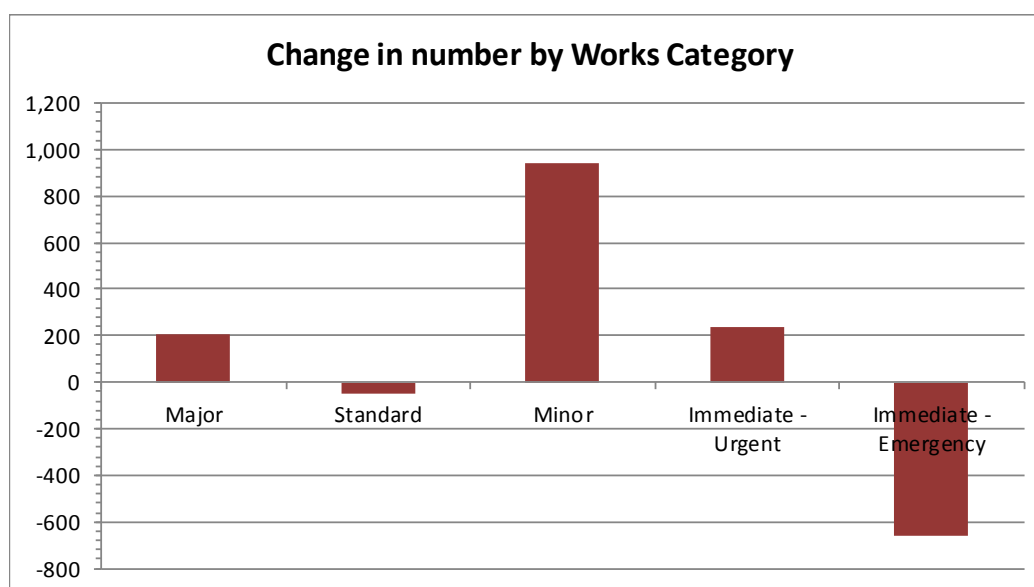
Recommendation 01: Monitor traffic management types in year 2 and confirm if the increase in temporary traffic signals and road closures is being actively promoted by the utilities or conditioned by the Council at the application stage or a consequence of details being entered to the Register more accurately.

2.2.15 The total number of Permit applications by Works Category is shown in Table 4 and the accompanying chart.



Table 4 Applications by works category

WORKS STOPPED	Noticing 2012-13	Permitting 2015-16	Change
Major	1,389	1,595	206
Standard	3,388	3,340	-48
Minor	12,491	13,433	942
Immediate - Urgent	7,887	8,127	240
Immediate - Emergency	2,230	1,572	-658
Intention to Issue Licence		225	225
Total	27,385	28,292	907



2.2.16 The most significant change is a large increase in the number of Minor works. The majority of this increase is by utility promoters. There is a corresponding reduction in the number of Immediate – Emergency works.

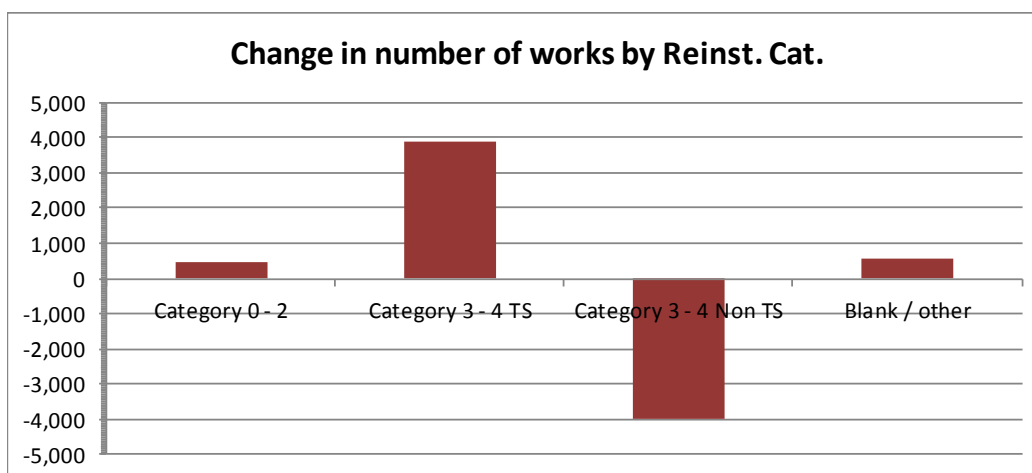
2.2.17 The change in other works category numbers are not significant.

2.2.18 The total number of Permit applications by reinstatement category type is shown in Table 5 and the accompanying chart.



Table 5 Number by reinstatement category type

REINSTATEMENT CATEGORY	Noticing 2012-13	Permitting 2015-16	Change
Category 0 - 2	5,973	6,464	491
Category 3 - 4 TS	1,467	5,338	3,871
Category 3 - 4 Non TS	19,945	15,942	-4,003
Blank / other		548	548
All works	27,385	28,292	907



2.2.19 There is a large increase in works on Category 3 and 4 Traffic Sensitive streets and a corresponding reduction in works on non Traffic Sensitive streets. This may be a result of how the data was reported in Exor, with traffic sensitivity status generated from a separate report. Therefore the traffic sensitive status data may not have been reliable.

2.2.20 The change in number of works on Category 0 to 2 streets is not significant.

2.2.21 Table 6 shows a comparison of the average works duration for all works.

Table 6 Average works duration

DURATION	Noticing 2012-13	Permitting 2015-16	Change
Average duration (days)	5.9	4.7	-1.2
Total number of days worked	161,587	133,791	-27,796

2.2.22 The overall reduction in average duration is significant; reducing from 5.9 days to 4.7 days. This is a 20% reduction in average works duration. The reduction constitutes nearly 28,000 fewer days worked compared with the situation under Noticing, an overall 17% reduction in working days.

2.2.23 Reviewing the highway authority works durations (Appendix A.1) shows a similar scale of reduction in average duration (from 16.0 to 12.8 days) but a 90% increase in the number of days worked. The increase in number of works carried out under permitting is responsible for this increase.



- 2.2.24 Reviewing the utility company works durations (Appendix A.2) shows a near 27% reduction in average works duration (from 5.6 days to 4.1 days) and over 40,000 fewer days worked (a 28% reduction overall).
- 2.2.25 This is a significant saving considering the number of works carried out in the year is only 1% below the 2012-13 noticing benchmark used for the assessment.
- 2.2.26 Average durations for Immediate works are possibly still a little high at 4.5 days on average for Immediate – Urgent works and 7.3 days for Immediate – Emergency works.

Recommendation 02: Monitor utility works durations on Immediate works in year 2, to identify if durations can be challenged to further improve benefits from the Scheme, particularly where temporary traffic signal control or road/lane closures are used.

2.3 Scheme Benefit

- 2.3.1 Figure 1 presents the number of works per annum under Noticing and during the first full year of operation following the introduction of the Permit Scheme.

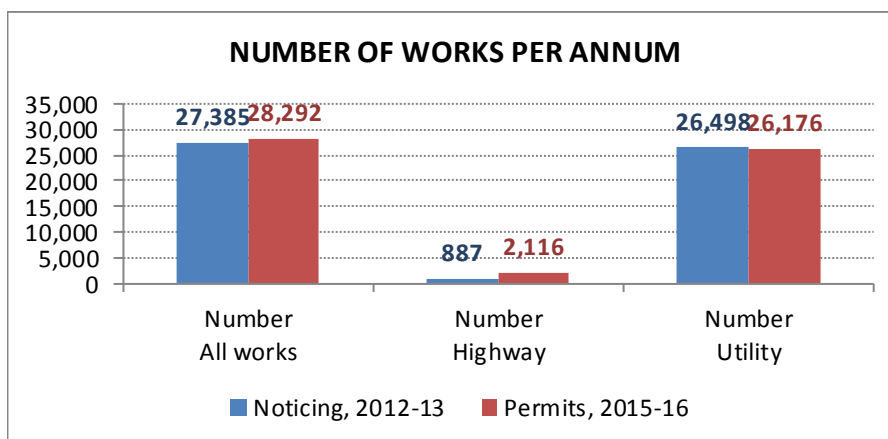


Figure 1 Number of works per annum

- 2.3.2 The change in number of works across the network is not significant, with a 3% increase overall. The large increase in highway works more than offsets the smaller reduction in the number of utility works.
- 2.3.3 The average duration for both highway and utility works reduces by around 20%. This equates to nearly 28,000 fewer days worked on the network in the last year (17% reduction overall).

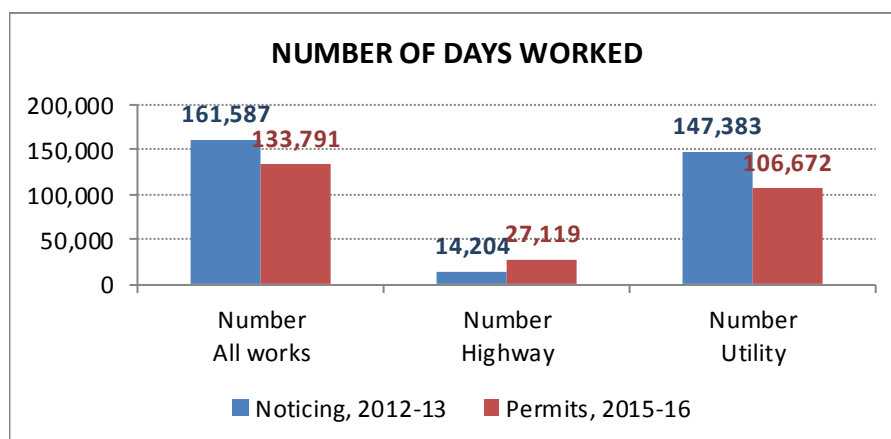


Figure 2 Number of days worked per annum

2.3.4 The CBA business case calculated the cost per day for each traffic management type on each street type. Since the majority of the reduction in days worked numbers is accounted for across all traffic management types, the financial benefit to road users of the Permit Scheme in year 1 is calculated as:

- Average monetary cost of works per day, £592 (source: CBA report 2010 prices, average cost of impact for all works involving some form give & take traffic management)
- Number of days saved under Permit Scheme, 27,796
- **Monetary value of benefit to road users, £16.4M per annum**

2.3.5 This saving equates to approximately 23% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).

2.4 Conclusions

2.4.1 The biggest change is a near 1,250 increase in highway authority works, compared with the noticing records. This is a 140% increase in highway works. There is very little change in the number of utility works, a 1% reduction only.

2.4.2 The overall reduction in average duration is significant; reducing from 5.9 days to 4.7 days. This is a 20% reduction in average works duration. The reduction constitutes nearly 28,000 fewer days worked compared with the situation under Noticing, an overall 17% reduction in working days.

2.4.3 Highway authority works average duration shows a similar scale of reduction in average duration (from 16.0 to 12.8 days) but a 90% increase in the number of days worked. The increase in number of works carried out under permitting is responsible for this increase.

2.4.4 Utility company works shows a near 27% reduction in average works duration (from 5.6 days to 4.1 days) and over 40,000 fewer days worked (a 28% reduction overall).

2.4.5 The CBA business case calculated the cost per day for each traffic management type on each street type. The financial benefit to road users of the Permit Scheme in year 1 is calculated at **£16.4M per annum**. This saving equates to approximately 23% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).



2.4.6 The 17% reduction in number of days worked is substantially higher than the 5% benefit specified in the DfT guidelines for the business case justification for a move to Permit Schemes.



3 KPI MONITORING

3.1 Introduction

3.1.1 The four Key Performance Indicators committed for inclusion in the annual review are;

- **KPI 1**, the number of Permit and Permit Variation applications received and a breakdown of the number granted and refused
- **KPI 2**, the number of conditions applied by condition type
- **KPI 3**, the number of approved Permit variations (extensions)
- **KPI 7**, the number of inspections carried out to monitor conditions

3.1.2 The above data should be presented separately for highway authority and utility company applications to demonstrate parity in the application of the Scheme.

3.2 KPI review

3.2.1 KPI 1 - the number and proportion of Permit and Permit Variation applications received and refused; a breakdown of refusal rate is presented below.

3.2.2 Table 7 and Figure 3 shows the breakdown of number of permit applications and permit variation requests received and the refusal rate.

Table 7 KPI 1, Permit and Variation applications received and refused

Promoter	Received	Refused	%
Highway authority	1,122	48	4.3%
Utility	26,477	1,988	7.5%
ALL	27,599	2,036	7.4%

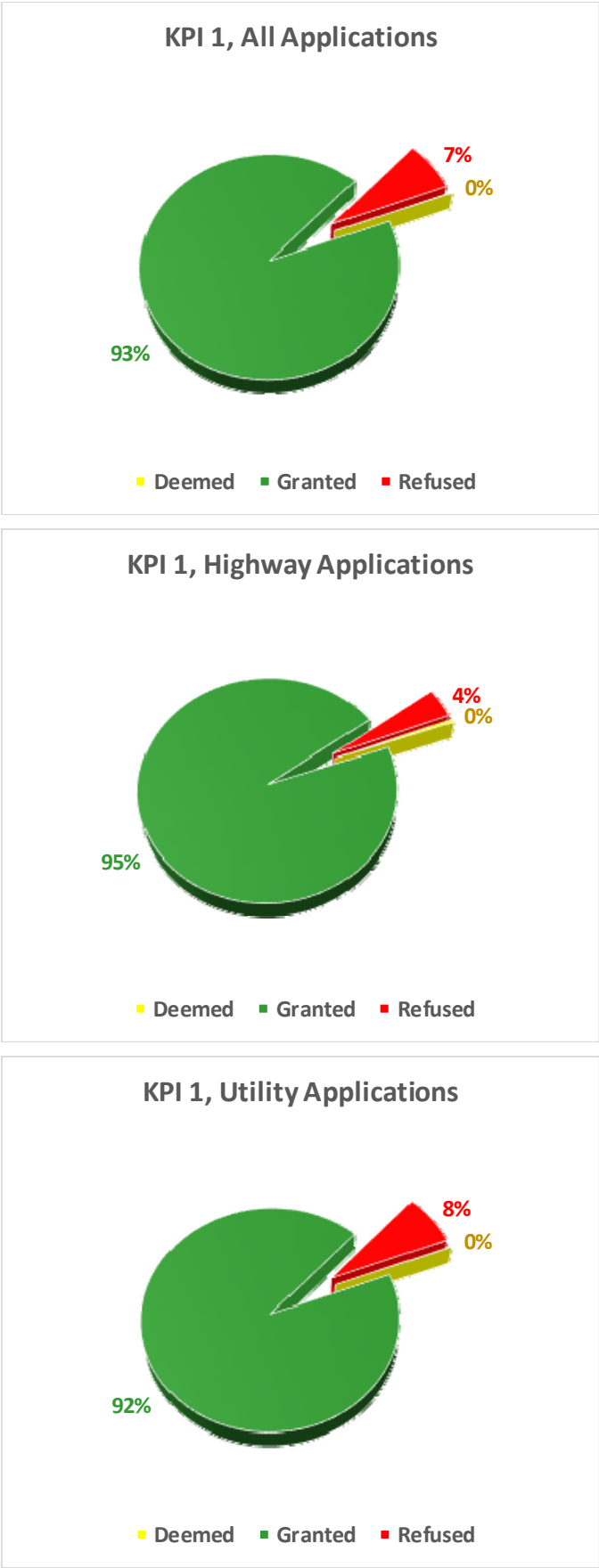


Figure 3: KPI 1, Permit and Variation Applications



- 3.2.3 KPI 1 – Approximately 7% all permit and permit variation applications by statutory undertakers were refused. 4.3% of applications by the highway authority were refused.
- 3.2.4 KPI 2 – the number of conditions applied by condition type; a breakdown of the number of conditions applied by condition type for highway and utility permit applications is shown in Table 8 and Figure 4.

Table 8 KPI 2, Conditions applied, number and type

All Conditions		Utility	Highway	All
	TOTAL	3,865	211	4,076
		95%	5%	

Condition	Condition Description	Utility	Highway	All
NCT02a	Date constraints	272	128	400
NCT02b	Time constraints	47	1	48
NCT04a	Material & plant removal	189	0	189
NCT04b	Material & plant storage	126	1	127
NCT05a	Road occupation dimensions	57	3	60
NCT06a	Traffic space dimensions	207	0	207
NCT07a	Road closure	3	7	10
NCT08a	Light signals - tm request	66	5	71
NCT08b	Light signals - manual control	68	12	80
NCT09a	Traffic management changes - notify	259	1	260
NCT09b	Traffic management changes - directed	2	0	2
NCT09c	Traffic management changes - signal removal	124	6	130
NCT10a	Work methodology	1,987	0	1,987
NCT11b	Consultation & publicity	410	9	419
NCT12a	Environmental - limit timing of activities	1	1	2
NCT13	Local condition	47	37	84
	TOTAL	3,865	211	4,076

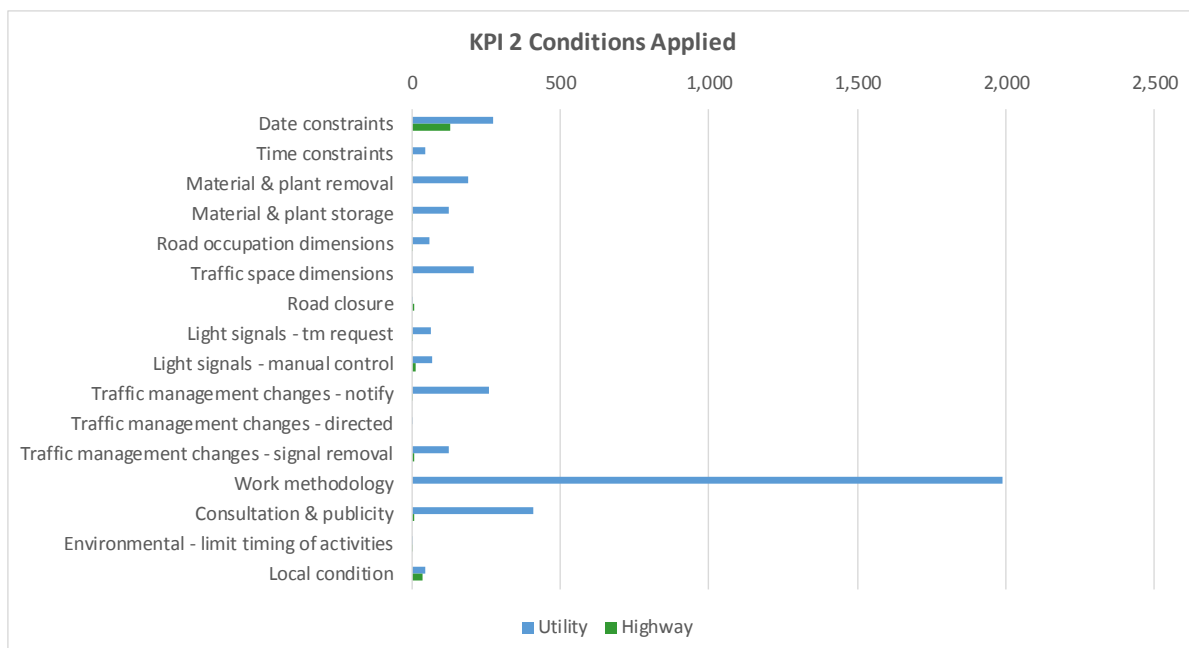


Figure 4: KPI 2, Conditions Applied

- 3.2.5 All but 5% of the conditions applied relate to applications by utility promoters.
- 3.2.6 Conditions applied to highway authority permits include data constraints (around 50% of conditions applied) and a small number relating to material & plant storage, traffic management and consultation/publicity.
- 3.2.7 Approximately 50% of the conditions to applied to the utilities permits relate to work methodology, with 75% of these applied to permits for BT. The remaining condition types are applied in similar proportions to the highway authority permits.

Recommendation 03: Apply more conditions to highway works.

- 3.2.8 In some cases, promoters are incorrectly referencing the condition type without a zero after NCT. Only correctly referenced conditions are reported in the end of year KPI reports.

Recommendation 04: Ensure condition types are correctly referenced (NCT0xx) by all works promoters.

- 3.2.9 KPI 3 – number of approved extensions; the following figures show the number of extensions granted and refused, for all promoters, and separately for highway authority applications and for statutory undertakers.

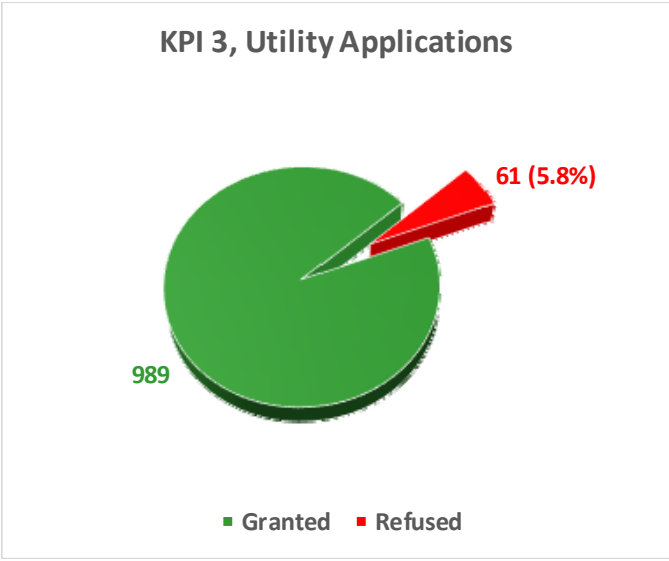
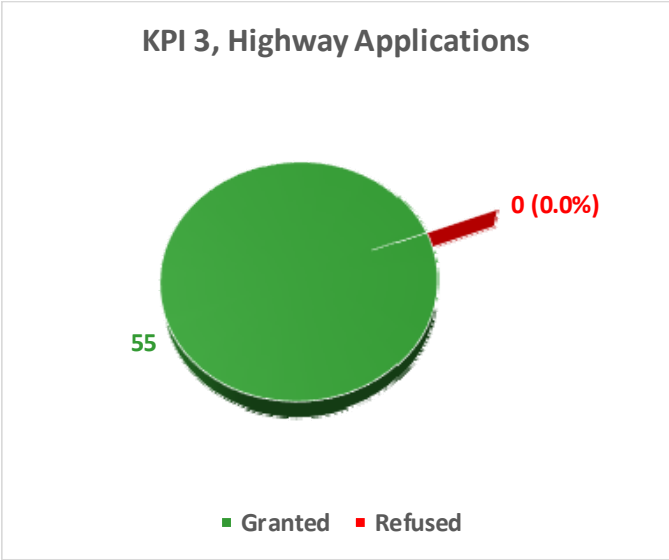
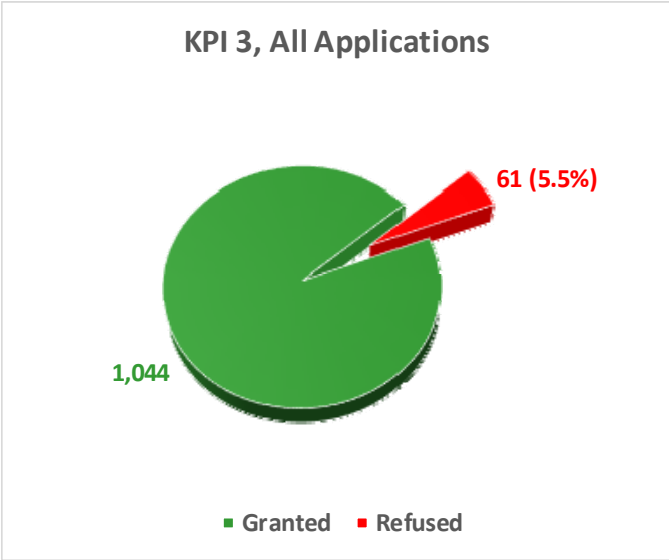


Figure 5: KPI 3, Permit Extensions



3.2.10 There were only 55 requests for extensions by the highway authority – none were refused. Of the 1,050 applications for extensions by the utilities, only 61 were refused (5.8%).

3.2.11 The reported refusal rate for extension requests is low because many promoters telephone to ask for an extension request even if within the timescales defined in the Permit Scheme. If these informal requests are refused, no record of the request is held in the system.

Recommendation 05: Make better use of EToN to apply for extensions rather than by telephone, if within the timescales defined in the Permit Scheme.

3.2.12 KPI 7 - the Number of Inspections carried out to monitor conditions. During the year 4,137 inspections have been carried out to monitor permit conditions and from these inspections 2,860 passed and 1,149 (30%) were found to be non-compliant, see Table 9 below.

Table 9 Number of inspections carried out to monitor conditions

Permit Condition Inspections	Passed	Non-Compliant	Abortive	Number of Inspections	Fail %
Highway authority	13	35	0	48	73%
Utility	2,847	1,114	128	4,089	27%
ALL	2,860	1,149	128	4,137	28%

3.2.13 The failure rate for highway authority inspections was higher at 73% compared with the utility failure rate of 27%, albeit on a much lower number of inspections.



3.3 Conclusions

- 3.3.1 **KPI 1**, the number of Permit and Permit Variation applications received and a breakdown of the number granted and refused; approximately 7% all permit and permit variation applications by statutory undertakers were refused. 4.3% of applications by the highway authority were refused.
- 3.3.2 **KPI 2**, the number of conditions applied by condition type; all but 5% of the conditions applied relate to applications by utility promoters. Conditions applied to highway authority permits include data constraints (around 50% of conditions applied) and a small number relating to material & plant storage, traffic management and consultation/publicity. Approximately 50% of the conditions to applied to the utilities permits relate to work methodology, with 75% of these applied to permits for BT. The remaining condition types are applied in similar proportions to the highway authority permits.
- 3.3.3 **KPI 3**, the number of approved Permit variations (extensions); there were only 55 requests for extensions by the highway authority – none were refused. Of the 1,050 applications for extensions by the utilities, only 61 were refused (5.8%).
- 3.3.4 **KPI 7**, the number of inspections carried out to monitor conditions; during the year 4,137 inspections have been carried out to monitor permit conditions and from these inspections 2,860 passed and 1,149 (30%) were found to be non-compliant.



4 CONCLUSIONS

4.1 Summary

- 4.1.1 The Lancashire County Council (LCC) Permit Scheme went live on 2nd March 2015.
- 4.1.2 This report forms the statutory 12 month review and report to DfT, following the first full 12 months of operating the Permit Scheme, '*Lancashire County Council 12 Month review, 2015-16*'.
- 4.1.3 The purpose of the 12 month review is;
- Demonstrate a reduction in the duration of works.
 - Demonstrate a reduction in the number of Permit applications (through an increase in collaborative working).
 - Report the monitored Key Performance Indicators (KPI 1, KPI 2, KPI 3 & KPI 7).
 - Re-evaluate the Cost Benefit Assessment to show an economic return on the investment.
 - Report the annual scheme benefit to all road users.
- 4.1.4 The Council plan to undertake this review annually.

4.2 Scheme benefits

- 4.2.1 The biggest change is a near 1,250 increase in highway authority works, compared with the noticing records. This is a 140% increase in highway works. There is very little change in the number of utility works, a 1% reduction only.
- 4.2.2 The overall reduction in average duration is significant; reducing from 5.9 days to 4.7 days. This is a 20% reduction in average works duration. The reduction constitutes nearly 28,000 fewer days worked compared with the situation under Noticing, an overall 17% reduction in working days.
- 4.2.3 Highway authority works average duration shows a similar scale of reduction in average duration (from 16.0 to 12.8 days) but a 90% increase in the number of days worked. The increase in number of works carried out under permitting is responsible for this increase. Utility company works shows a near 27% reduction in average works duration (from 5.6 days to 4.1 days) and over 40,000 fewer days worked (a 28% reduction in days worked by utilities).
- 4.2.4 The CBA business case calculated the cost per day for each traffic management type on each street type. The monetary value of the benefit to road users of the Permit Scheme in year 1 is calculated at **£16.4M per annum**. This saving equates to approximately 23% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).
- 4.2.5 The 17% reduction in number of days worked is substantially higher than the 5% benefit specified in the DfT guidelines for the business case justification for a move to Permit Schemes.

4.3 Recommendations

- 4.3.1 Five recommendations have been made to monitor performance during year 2 to prevent the year 1 benefits being eroded and to drive further improvements across the network;



Recommendation 01: Monitor traffic management types in year 2 and confirm if the increase in temporary traffic signals and road closures is being actively promoted by the utilities or conditioned by the Council at the application stage or a consequence of details being entered to the Register more accurately.

Recommendation 02: Monitor utility works durations on Immediate works in year 2, to identify if durations can be challenged to further improve benefits from the Scheme, particularly where temporary traffic signal control or road/lane closures are used.

Recommendation 03: Apply more conditions to highway works.

Recommendation 04: Ensure condition types are correctly referenced (NCT0xx) by all works promoters.

Recommendation 05: Make better use of EToN to apply for extensions rather than by telephone, if within the timescales defined in the Permit Scheme.

4.4 Conclusions

- 4.4.1 This review has demonstrated a significant benefit due to the reduction in the number of days worked on utility works alone. The monetary value of the reduced impact to road users is approximately £16.4M per annum.
- 4.4.2 The Highway Regulation & Inspection Team has introduced a number of initiatives before and during the implementation of the Permit Scheme that have contributed to the overall improvements in the management of the highway network.
- 4.4.3 These have directly contributed to the benefits gained during year 1 of the Lancashire Permit Scheme:
- Introduction of mobile devices and software for the Street Works Inspectors. This has enabled them to have instant access to relevant information regarding ongoing works, especially permit conditions, along with the ability to undertake inspections; directly entering information into the management software.
 - The Highway Regulation Team now have a more holistic view to management of the highway network by incorporating into the remit of the team the approval and processing of Temporary Traffic Regulation Orders & Notices; the approval of Temporary Traffic Signals; issuing skip & scaffolding permits and licences; approval and issuing Street Works Licences (Sect. 50 Licences) and management of other temporary activities on the highway.
 - The team operates 7 days a week given the level of activity on the network at weekends. This ensures that the network is better managed by ensuring permit conditions are applied and disruption kept to a minimum.
 - Much more scrutiny and monitoring of works especially greater restrictions on works wishing to start on a Friday using traffic control but not proposing to work over a weekend.



- Quarterly performance meetings with key utilities to look to improve the safety, quality and performance of works. Key data sets are produced and discussed at every meeting.
- 4.4.4 There are further benefits derived from reduced occupation of the highway, including;
- improves safety at road and street works
 - reduces noise and air pollution
- 4.4.5 Furthermore, the benefits derived from operating the Permit Scheme include;
- improved coordination of activities
 - improved communication between authority and utility companies
 - improved accuracy of works records recorded in the Register
 - reduction in customer complaints
- 4.4.6 This review has demonstrated that Scheme has achieved its objectives in the first year, as defined in the application documents.

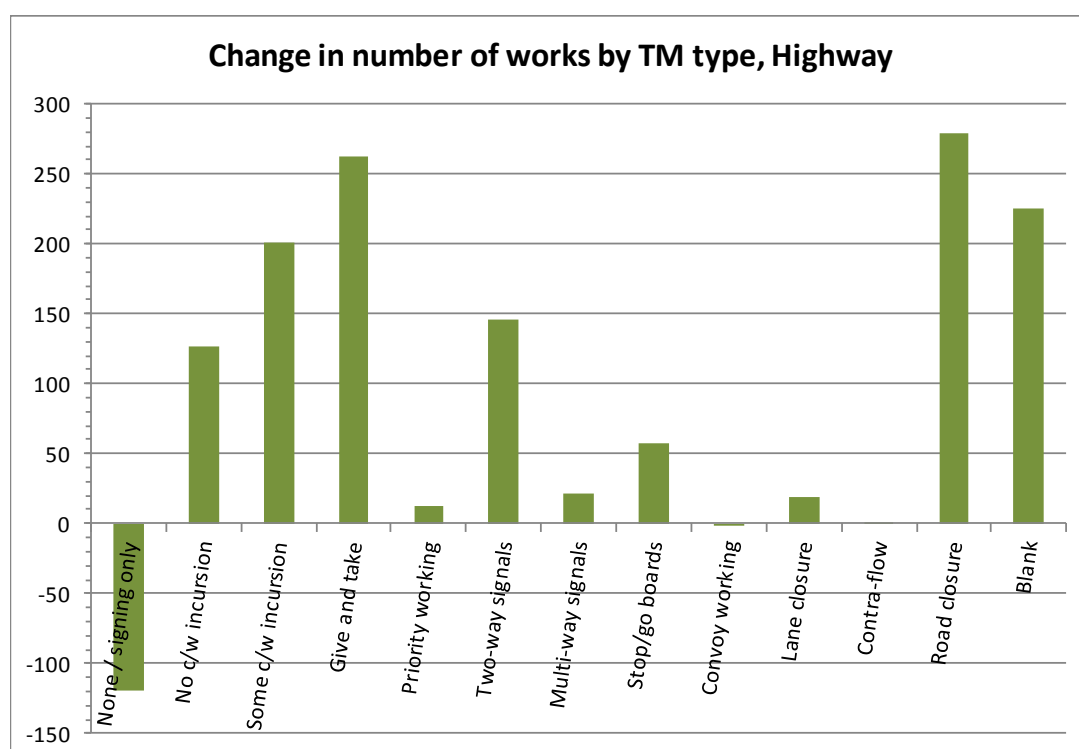
A. PERMIT APPLICATIONS 2015-16

A.1 Highway authority works

The number of highway authority applications by traffic management type is shown in Table A.1.

Table A.1 Number of applications by traffic management type

TRAFFIC MANAGEMENT TYPE	Noticing 2012-13	Permitting 2015-16	Change
None / signing only	119		-119
No c/w incursion		126	126
Some c/w incursion		201	201
Give and take	66	328	262
Priority working		13	13
Two-way signals	85	231	146
Multi-way signals	41	62	21
Stop/go boards	173	230	57
Convoy working	3	1	-2
Lane closure	63	82	19
Contra-flow		1	1
Road closure	337	616	279
Blank		225	225
Total	887	2,116	1,229

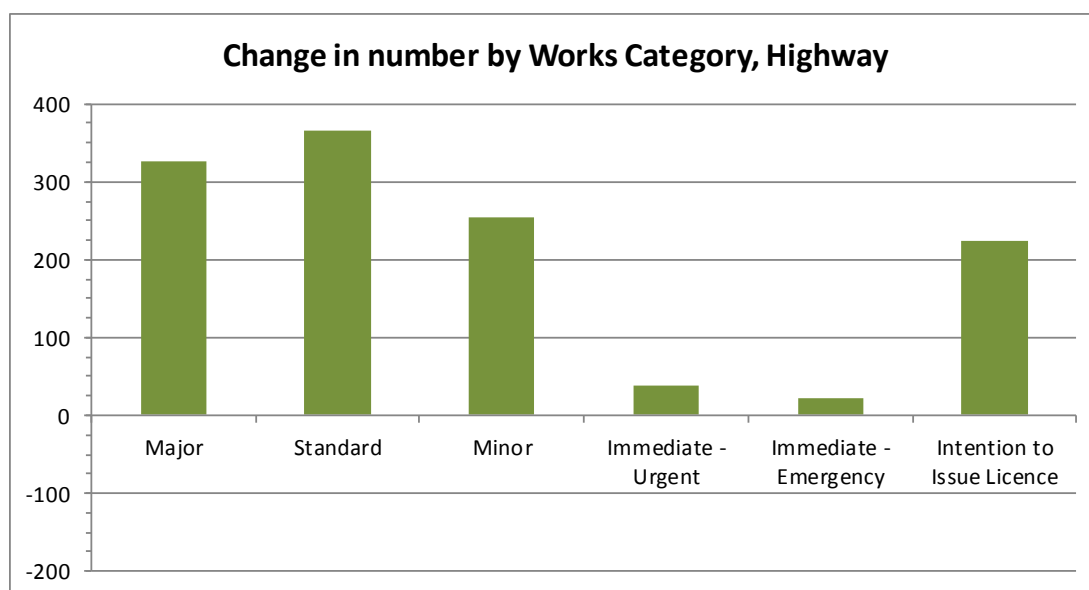


There is a reduction in the number of works with traffic management type classified as 'none/signing only' due to the move from an EToN 5 to EToN 6 compatible system.

There is an increase in the use of temporary traffic signals, stop/go boards and road and lane closures. The former may be a change in management of road works and the latter due to the increase in Major works recorded in the Permit Scheme.

Table A.2 Applications by works category

WORKS STOPPED	Noticing 2012-13	Permitting 2015-16	Change
Major	443	768	325
Standard	209	574	365
Minor	188	443	255
Immediate - Urgent	25	63	38
Immediate - Emergency	22	43	21
Intention to Issue Licence		225	225
Total	887	2,116	1,229



The overall increase in the number of highway works is spread across Major, Standard and Minor works categories. There is no significant change in the number of Immediate - Urgent and Immediate - Emergency works.

There is a large increase in the number of Major and Standard works recorded last year. Rather than a change in Council policy or funding, this is likely to be a result of the works being more accurately recorded by the Permit Scheme.

Table A.3 Average works duration

DURATION	Noticing 2012-13	Permitting 2015-16	Change
Average duration (days)	16.0	12.8	-3.2
Total number of days worked	14,204	27,119	12,915

Highway authority works recorded show reduction in average duration (from 16.0 to 12.8 days) but a 90% increase in number of days worked. This is a result of the increase in number of works recorded from 887 to 2,116.

Table A.4 Average works duration, by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
22.2	8.8	3.2	8.8	14.3
17,075	5,048	1,421	553	613

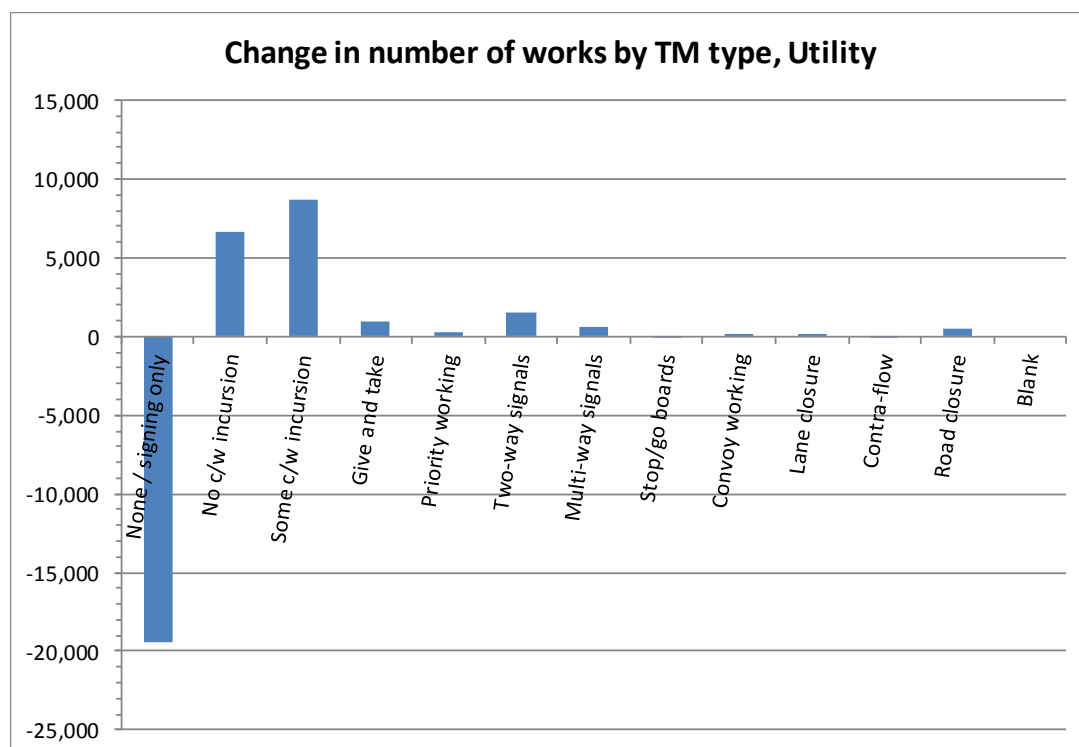
Highway authority average durations are within the range expected for each works category.

A.2 Utility works

The number of utility works applications by traffic management type is shown in Table A.5.

Table A.5 Number of applications by traffic management type

TRAFFIC MANAGEMENT TYPE	Noticing 2012-13	Permitting 2015-16	Change
None / signing only	19,451		-19,451
No c/w incursion		6,658	6,658
Some c/w incursion		8,635	8,635
Give and take	4,202	5,113	911
Priority working	34	321	287
Two-way signals	1,407	2,880	1,473
Multi-way signals	373	983	610
Stop/go boards	519	500	-19
Convoy working	1	11	10
Lane closure	149	186	37
Contra-flow	11	6	-5
Road closure	351	883	532
Blank			
Total	26,498	26,176	-322



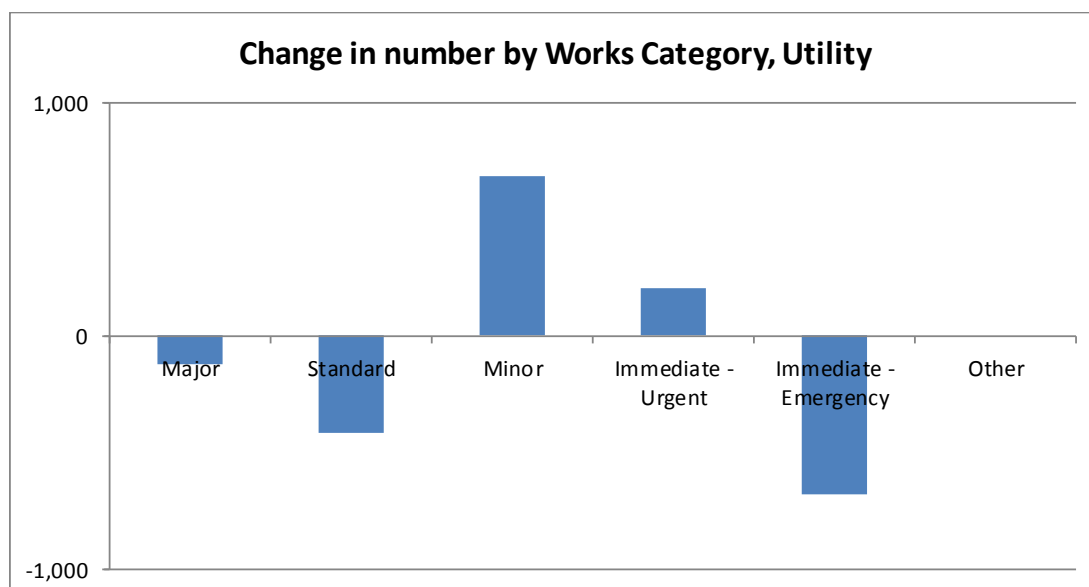
Traffic management changes for utility works are primarily a result of the transition from EToN5 to EToN6 traffic management types, with a shift from 'None/signing only' to No or Some Carriageway Incursion or 'Give and take'.

Approximately 45% of the transfer is classified as taking place with no carriageway incursion.

There is a large increase in the number of works classified as requiring temporary traffic signal control, stop/go boards and road or lane closures. It is not clear if this is a result of the improvement in control offered to the highway authority in terms of directing the type of traffic management used on all works or the traffic management type being more accurately recorded on permit applications or picked up during inspections.

Table A.6 Applications by works category

WORKS STOPPED	Noticing 2012-13	Permitting 2015-16	Change
Major	946	827	-119
Standard	3,179	2,766	-413
Minor	12,303	12,990	687
Immediate - Urgent	7,862	8,064	202
Immediate - Emergency	2,208	1,529	-679
Other			
Total	26,498	26,176	-322



There is no significant change in works category numbers with the Permit Scheme in place, other than a relatively small increase (5%) in Minor works and a corresponding reduction in Immediate – Emergency works.

Table A.7 Average works duration

DURATION	Noticing 2012-13	Permitting 2015-16	Change
Average duration (days)	5.6	4.1	-1.5
Total number of days worked	147,383	106,672	-40,711

Utility works show a near 27% reduction in average works duration and over 40,000 fewer days worked (a 28% reduction overall).

Table A.8 Average works duration, by Works Category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
16.9	6.8	2.0	4.5	7.3
13,988	18,812	26,158	36,510	11,204

Average durations for each works category are similar to the highway authority works.