



The Lancashire Permit Scheme for Road & Street Activities

Year 2 Review, 2016-17



*Lancashire County Council Permit Scheme,
Year 2 Review, 2016-17*

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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 The operation of the first year of operation was evaluated and reported in the '*Lancashire County Council 12 Month review, 2015-16*'.
- 1.1.3 The purpose of the 12-month review was to;
- 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.
- 1.1.4 The reduction in number of works across the network was not significant at 3%; but combined with a significant reduction in average works durations, resulted in an overall 17% reduction in number of days worked on the road network. This equated to nearly 28,000 fewer days worked on the network in the last year.
- 1.1.5 The financial benefit to road users of the Permit Scheme in year 1 is calculated at **£16.4M per annum**. This saving equated to approximately 23% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).

1.2 Year 2 Review

- 1.2.1 Following the second anniversary of the Permit Scheme on 2nd February 2017, GK-TC has been commissioned to undertake a detailed review of the operation during year 2 and to determine whether benefits achieved in year 1 have been maintained.
- 1.2.2 The operation of the second year of operation is evaluated and reported in this report '*Lancashire County Council Year 2 Review, 2016-17*'.
- 1.2.3 Chapter 2 presents the analysis of the permit applications and actual durations. The review of the key performance indicators is reported in Chapter 3.
- 1.2.4 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 2017 (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.

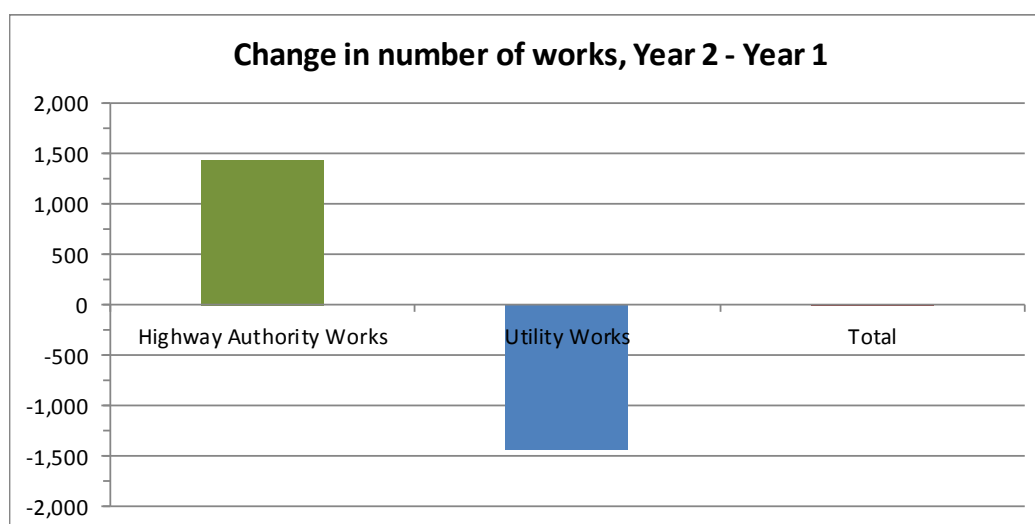
2.2 All works

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	Year 1 2015-16	Year 2 2016-17	Change
Highway Authority Works	887	2,116	3,558	1,442
Utility Works	26,498	26,176	24,741	-1,435
Total	27,385	28,292	28,299	7



2.2.3 There is no significant change in number of works permitted between year 1 and 2. The biggest change is a near 1,500 increase in highway authority works, which is offset by a similar reduction in utility works.

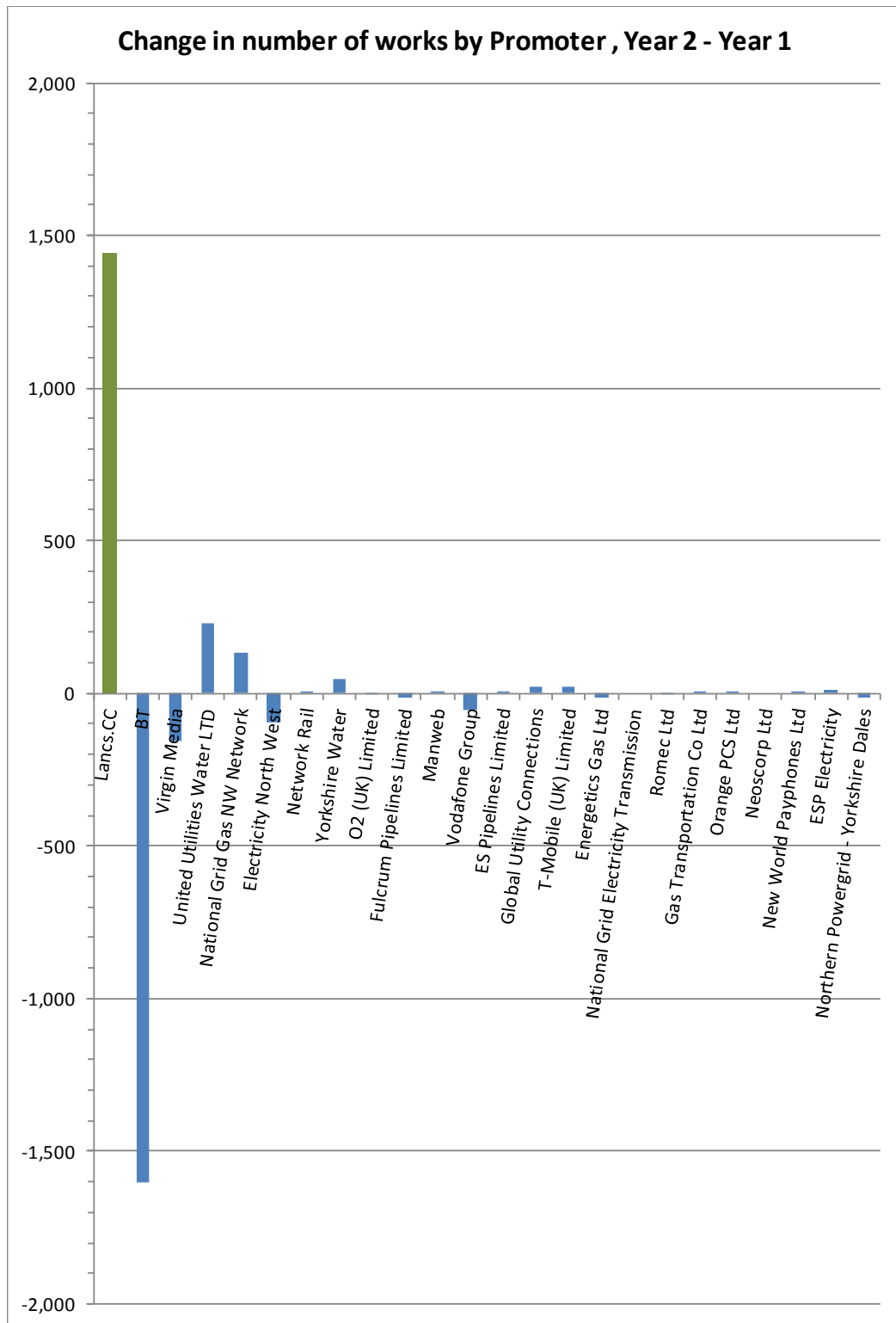


2.2.4 The net effect of these is an additional 7 works permitted over the course of year 2, compared with the previous year.

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	Year 1 2015-16	Year 2 2016-17	Change
Lancs.CC	887	2,116	3,558	1,442
BT	5,267	6,482	4,881	-1,601
Virgin Media	2,708	2,518	2,360	-158
United Utilities Water LTD	10,253	9,662	9,891	229
National Grid Gas NW Network	3,682	3,396	3,529	133
Electricity North West	3,547	3,240	3,143	-97
Network Rail	184	152	157	5
Yorkshire Water	148	94	143	49
O2 (UK) Limited	26	10	6	-4
Fulcrum Pipelines Limited	93	57	41	-16
Manweb	39	45	52	7
Vodafone Group	80	193	138	-55
ES Pipelines Limited	31	51	54	3
Global Utility Connections	45	47	69	22
T-Mobile (UK) Limited	61	42	64	22
Energetics Gas Ltd	4	28	15	-13
National Grid Electricity Transmission		1	1	
Romec Ltd		9	7	-2
Gas Transportation Co Ltd	10	26	30	4
Orange PCS Ltd		5	7	2
Neoscorp Ltd	12	2	2	
New World Payphones Ltd		7	8	1
ESP Electricity		8	18	10
Northern Powergrid - Yorkshire Dales	87	101	89	-12
Section 50 Licences	151			
Others	68		36	36
Total	27,383	28,292	28,299	7



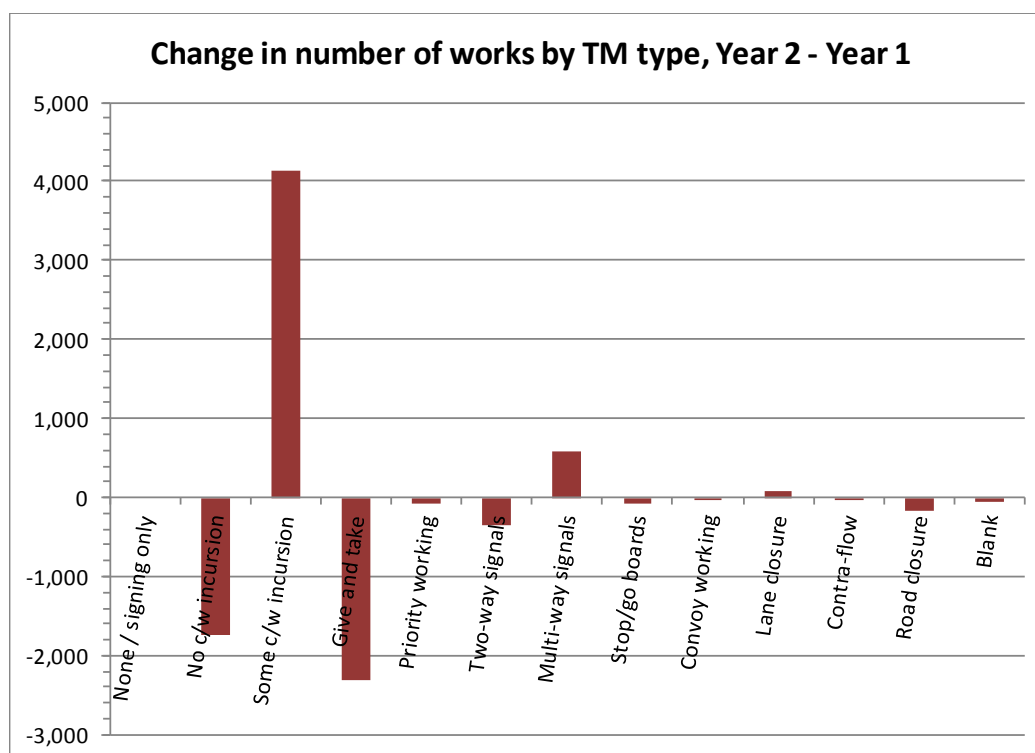
2.2.6 The uplift in highway works permitted is a near 70% increase overall. The only big change for a works promoter is a 1,600 reduction in the number of BT works, from 6,500 in year 1 to 4,900 in year 2; a 25% reduction. This almost reverses the 1,200 increase in BT works in the first year and returns the year 2 number to within 7% of the average number under Noticing.



- 2.2.7 There are smaller changes in works by the other promoters, with the other 4 larger promoters seeing changes of no more than 6% compared with year 1.
- 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	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	19,570			
No c/w incursion		6,784	5,037	-1,747
Some c/w incursion		8,836	12,979	4,143
Give and take	4,268	5,441	3,128	-2,313
Priority working	34	334	252	-82
Two-way signals	1,492	3,111	2,758	-353
Multi-way signals	414	1,045	1,625	580
Stop/go boards	692	730	651	-79
Convoy working	4	12	5	-7
Lane closure	212	268	347	79
Contra-flow	11	7	4	-3
Road closure	688	1,499	1,332	-167
Blank		225	181	-44
Total	27,385	28,292	28,299	7



2.2.11 There is a 26% and 42% reduction in the number of works defined as operating under no carriageway incursion or give and take traffic management and a corresponding 47% increase in works operating under some carriageway incursion.

2.2.12 Multi-way signal control has increased significantly over the last 2 years, from 414 prior to the introduction of the Permit Scheme to 1,045 in year 1 and a further increase of 580 in year 2 to 1,625 works.

2.2.13 The number of utility works operating under multi-way signal control increased by 549 in year 2. This is likely to be a result of promoters being given a FPN for using give and take traffic management close to a junction in year 1, therefore specifying multi-way signals to cover against this in year 2.

Recommendation 01: Monitor give and take and some incursion permit applications to identify if the works are likely to take place close to a junction. If so, consider directing promoter to use multi-way signal control.

2.2.14 There is a large increase in the number of highway works defined as operating under no carriageway incursion (Appendix A.1). This increase corresponds with the near 1,500 increase in highway works permitted in year 2. It is likely that the traffic management type is not being correctly defined at the application stage.

Recommendation 02: Monitor applications for highway works to determine if the appropriate traffic management type is being selected.

2.2.15 Road closures for highway works has increased significantly, from an average of 337 prior to the introduction of the Permit Scheme, to 616 in year 1 and 513 in year 2.

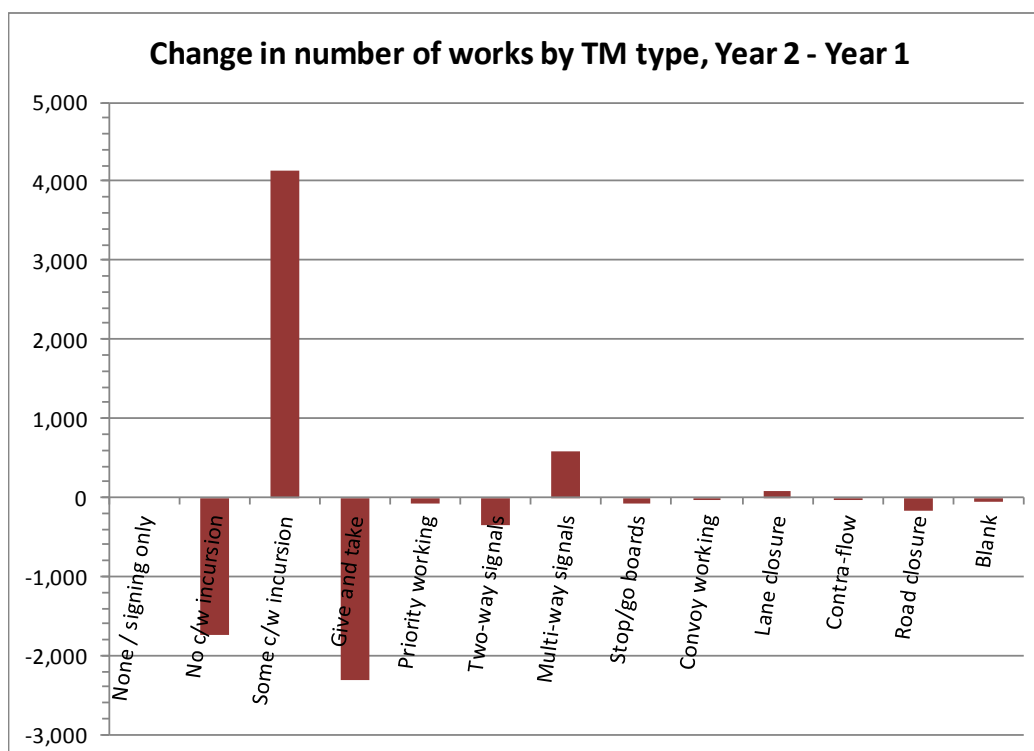
Recommendation 03: Monitor applications for highway works proposing to use a road closure and challenge the tm type if not thought to be appropriate.



- 2.2.16 Two-way signal control has reduced by 11% in year 2, but is still nearly double the level prior to the introduction of the Scheme.
- 2.2.17 The changes in other traffic management types is not thought to be significant.
- 2.2.18 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 more appropriate traffic management, for example, multi-way signal control close to junctions or lane closures rather than a full road closure.
- 2.2.19 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	Year 1 2015-16	Year 2 2016-17	Change
Major	1,389	1,595	1,732	137
Standard	3,388	3,340	4,501	1,161
Minor	12,491	13,433	12,495	-938
Immediate - Urgent	7,887	8,127	7,764	-363
Immediate - Emergency	2,230	1,572	1,626	54
Intention to Issue Licence		225	181	-44
Total	27,385	28,292	28,299	7





2.2.20 There is an increase in Major and Standard works in year 2. The increase in Standard works amounts to a 35% increase compared with year 1.

2.2.21 Highway works show a 1,350 increase in Standard works in year 2. Again, this is equivalent to the overall increase in highway works permits in year 2 and may suggest new highway applications are defaulting to a Standard works category.

Recommendation 04: Monitor highway applications for Standard works to determine if this works category and proposed works duration is appropriate.

2.2.22 Utility works changes (Appendix A.2) generally reduce in line with the overall 1,500 reduction in the number of utility works in year 2.

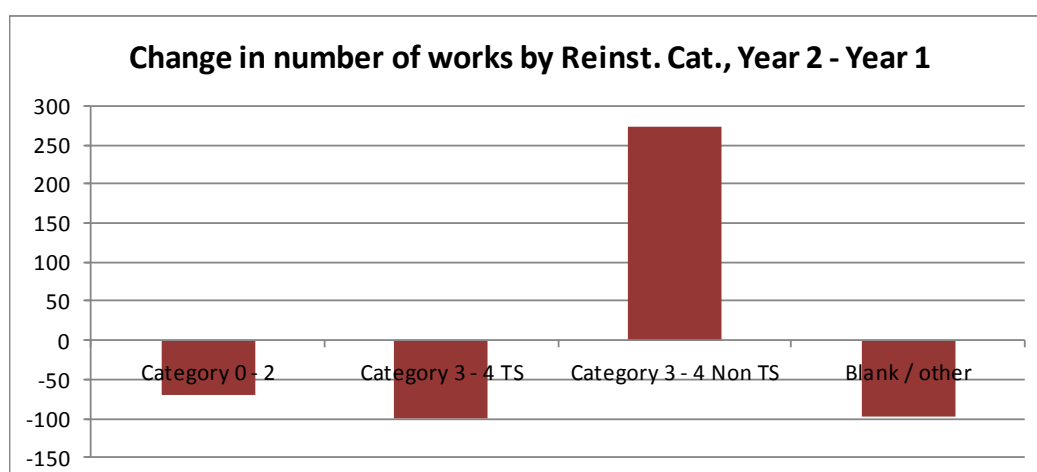
2.2.23 Both highway and utility promoters show an increase in Major works of around 70 in year 2. The utility works increase is not significant and is within the range identified prior to the introduction of the Permit Scheme.

2.2.24 Highway works show a year on year increase in Major works. This is expected though, given the large increase in highway works recorded since the introduction of the Permit Scheme.

2.2.25 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	Year 1 2015-16	Year 2 2016-17	Change
Category 0 - 2	5,973	6,464	6,395	-69
Category 3 - 4 TS	1,467	5,338	5,238	-100
Category 3 - 4 Non TS	19,945	15,942	16,215	273
Blank / other		548	451	-97
All works	27,385	28,292	28,299	7



2.2.26 The change in works by road type is not significant. There is a reduction of less than 2% on traffic sensitive roads and a similar increase on non-traffic sensitive roads. This is within the range of variation expected year on year.



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

Table 6 Average works duration

DURATION	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	5.9	4.7	5.1	0.4
Total number of days worked	161,587	133,791	143,595	9,804

2.2.28 Overall the average works duration has increased in year 2, but is still significantly lower than the level prior to the introduction of the Permit Scheme. This increase is a result of the 1,400 additional Major and Standard highway works.

2.2.29 Between them, these works add nearly 17,000 days worked on the network. This is slightly offset by a 6,000 day reduction in the number of days worked on Minor and Immediate Urgent utility works.

2.2.30 The number of days worked across the network throughout the year is still 18,000 lower than prior to the introduction of the Permit Scheme; an 11% reduction.

2.2.31 Overall, the average duration of highway works (Appendix A.1) reduces from 12.8 days to 12.5 days. The average duration of Immediate works reduces from 8.8 days to 6.6 days (Urgent) and from 14.3 days to 12.8 days (Emergency).

2.2.32 The average duration of all utility works reduces from 4.1 days to 4.0 days (Appendix A.2).

2.2.33 Recommendation 02 in the 12 month review last year, to monitor Immediate works and challenge to further improve Scheme benefits has been successful with a further reduction of 0.3 days (Urgent) and 0.1 days (Emergency) to reduce the number of days worked on Immediate works by over 4,000 days.

Recommendation 05 (on-going): Continue to monitor utility works durations on Immediate works in year 3, 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.

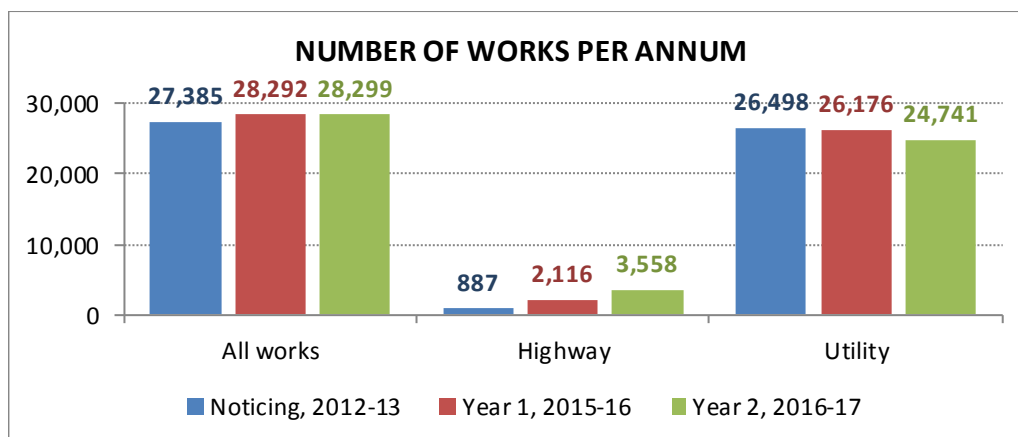


Figure 1 Number of works per annum

- 2.3.2 The change in number of works across the network is not significant. The increase in highway works is offset by the reduction in the number of utility works.
- 2.3.3 The average duration for both highway and utility works reduces by around 2% compared with year 1, but the change in works category numbers results in a near 10,000 increase in the number of days worked on the network in the last year (7% increase overall).

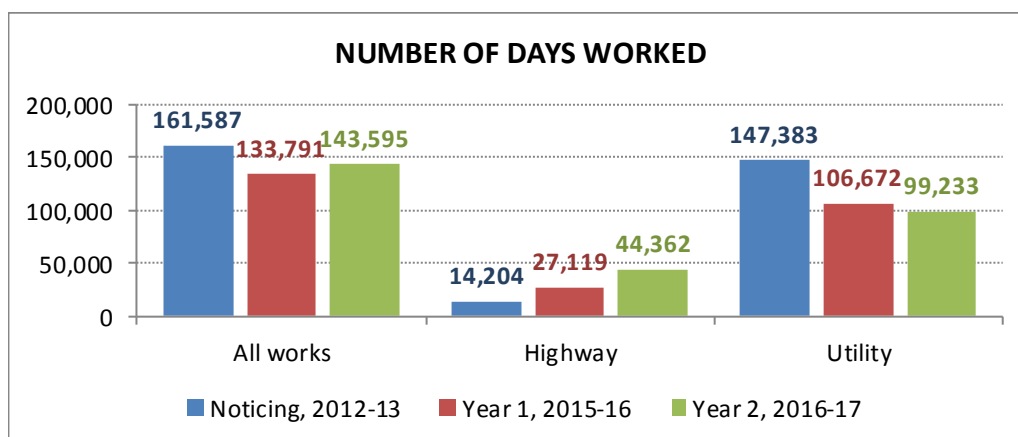


Figure 2 Number of days worked per annum

- 2.3.4 The benefit is assessed against the benchmark prior to the introduction of the Permit Scheme.
- 2.3.5 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, 17,992
 - **Monetary benefit to road users, £10.6M per annum**
- 2.3.6 This saving equates to approximately 15% 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 There is no significant change in number of works permitted between year 1 and 2. The biggest change is a near 1,500 increase in highway authority works, which is offset by a similar reduction in utility works.
- 2.4.2 The net effect of these is an additional 7 works permitted over the course of year 2, compared with the previous year.
- 2.4.3 Overall the average works duration has increased in year 2, but is still significantly lower than the level prior to the introduction of the Permit Scheme. This increase is a result of the 1,400 additional Major and Standard highway works.
- 2.4.4 Between them, these works add nearly 17,000 days worked on the network. This is slightly offset by a 6,000 day reduction in the number of days worked on Minor and Immediate Urgent utility works.
- 2.4.5 The number of days worked across the network throughout the year is still 18,000 lower than prior to the introduction of the Permit Scheme; an 11% reduction.
- 2.4.6 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 **£10.6M per annum**. This saving equates to approximately 15% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).
- 2.4.7 The 11% 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.
- 2.4.8 The benefit achieved in year 2 is lower than achieved in year 1, but Recommendation 04, to monitor highway Standard works permit applications to determine if this works category is appropriate and to challenge the proposed duration if not, should provide a substantial improvement in year 3 if implemented.



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	5,381	160	3.0%
Utility	37,877	2,942	7.8%
ALL	43,258	3,102	7.2%

3.2.3 The number of applications for permit or permit variations has increased from 27,599 in year 1 to 43,258 in year 2. However, the refusal rate for highway authority and utility permits is very similar at 3% and 7.8%, respectively (compared with 4.3% and 7.5% in year 1).

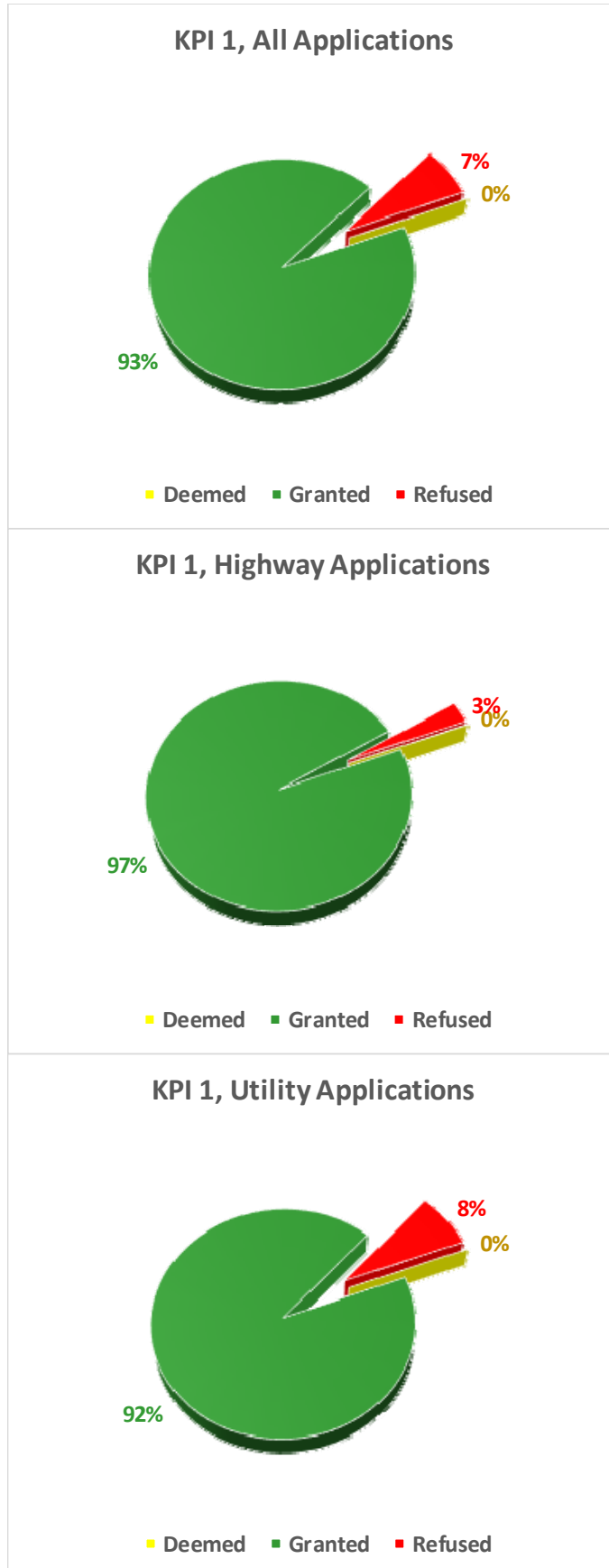


Figure 3: KPI 1, Permit and Variation Applications



- 3.2.4 KPI 1 – Approximately 8% all permit and permit variation applications by statutory undertakers were refused. 3% of applications by the highway authority were refused.
- 3.2.5 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	47,384	1,891	49,275
		96%	4%	

Condition	Condition Description	Utility	Highway	All
NCT02a	Date constraints	12,414	255	12,669
NCT02b	Time constraints	2,767	3	2,770
NCT04a	Material & plant removal	921	0	921
NCT04b	Material & plant storage	220	0	220
NCT05a	Road occupation dimensions	2,108	3	2,111
NCT06a	Traffic space dimensions	7,914	1,489	9,403
NCT07a	Road closure	666	28	694
NCT08a	Light signals - tm request	4,699	11	4,710
NCT08b	Light signals - manual control	2,020	11	2,031
NCT09a	Traffic management changes - notify	1,090	3	1,093
NCT09b	Traffic management changes - directed	776	0	776
NCT09c	Traffic management changes - signal removal	3,896	4	3,900
NCT10a	Work methodology	4,895	2	4,897
NCT11b	Consultation & publicity	2,359	16	2,375
NCT12a	Environmental - limit timing of activities	38	0	38
NCT13	Local condition	601	66	667
	TOTAL	47,384	1,891	49,275

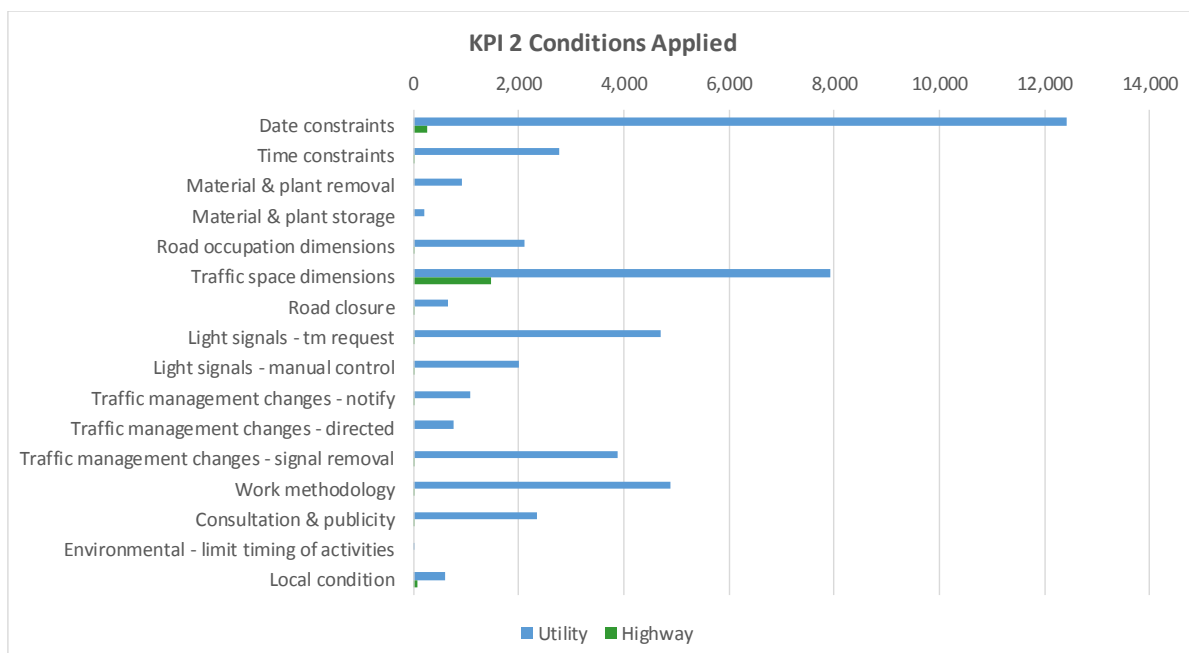


Figure 4: KPI 2, Conditions Applied

- 3.2.6 The number of conditions reported has increased tenfold from 4,076 to 49,275.
- 3.2.7 This is a result of Recommendations 03 and 04 in the 12 month review report, to apply more conditions to highway works (increased tenfold) and to ensure condition types are correctly referenced NCT0xx by all works promoters (to ensure Symology reports all condition codes correctly).
- 3.2.8 Despite the large increase reported, the ratio of utility conditions to highway conditions is unchanged.
- 3.2.9 The increase in conditions applied to highway authority permit applications is a result primarily of NCT06a traffic space dimensions, an increase of 1,489.
- 3.2.10 Conditions are more widely spread for utility applications, with date constraints, traffic space dimensions, traffic signal conditions and consultation/publicity accounting for the bulk of the increase.
- 3.2.11 BT and United Utilities Water account for almost 60% of the conditions applied.
- 3.2.12 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.

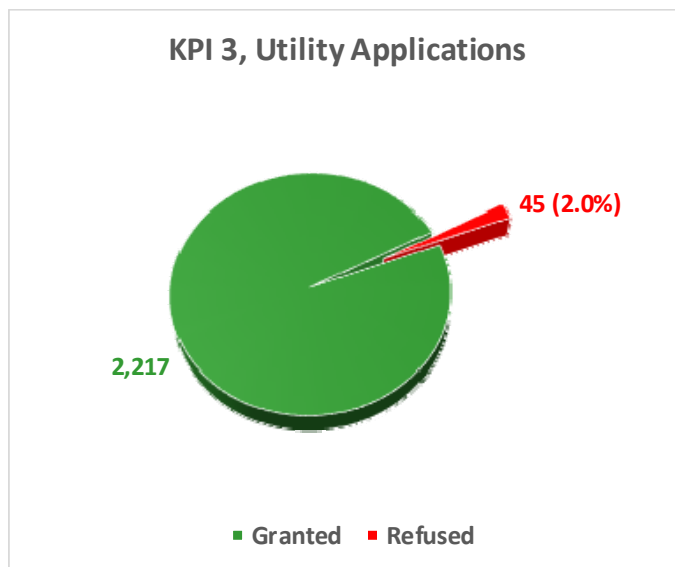
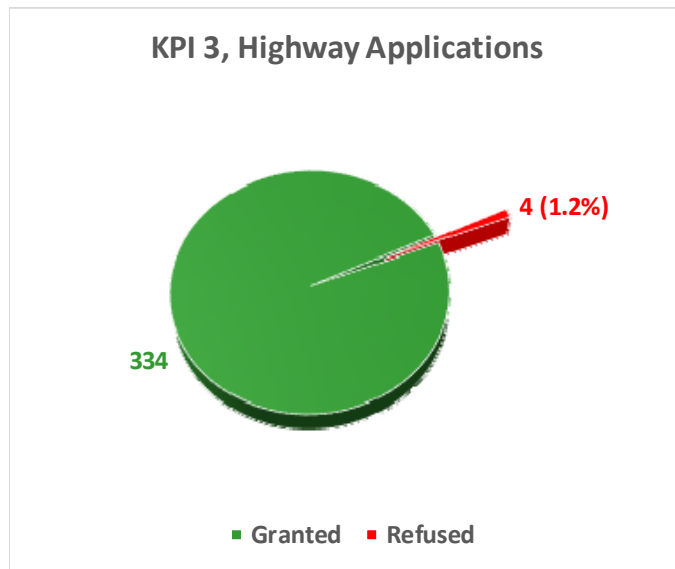
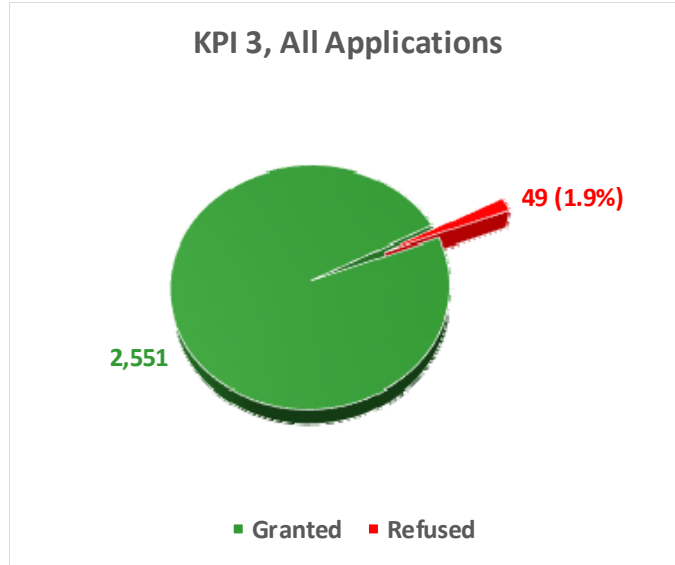


Figure 5: KPI 3, Permit Extensions



- 3.2.13 There were 334 requests for extensions by the highway authority compared with 55 in year 1. 4 were refused in year 2; a refusal rate of 1%.
- 3.2.14 Applications for extensions by utilities increased twofold in year 2, with the refusal rate reducing from 5.8% to 2%.
- 3.2.15 The increase in extension applications recorded is likely to be a result of implementing Recommendation 05 from last year's report, to make better use of EToN to apply for extensions rather than by telephone.
- 3.2.16 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 %
Utility	4,707	1,266	-	5,973	21%

- 3.2.17 The number of inspections carried out for utility works increase from 4,089 to 5,973. The failure rate has reduced slightly from 27% to 21%.
- 3.2.18 The number of FPN given in year 2 is shown in Figure 6.

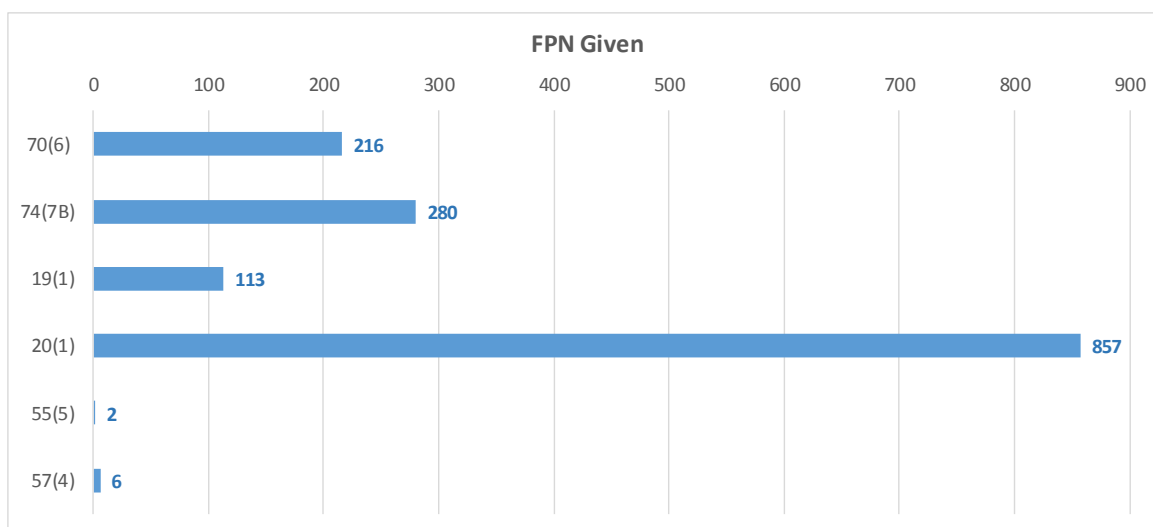


Figure 6: FPN Given

- 3.2.19 Nearly 1,000 of the FPN issued in year 2 relate to permit condition failures; 113 for working without a valid permit and 857 for a breach of permit conditions.

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 8% all permit and permit variation applications by statutory undertakers were refused. 3% of applications by the highway authority were refused. The refusal rate has not changed significantly from year 1.



- 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. The increase in conditions applied to highway authority permit applications is a result primarily of NCT06a traffic space dimensions, an increase of 1,489. Conditions are more widely spread for utility applications, with date constraints, traffic space dimensions, traffic signal conditions and consultation/publicity accounting for the bulk of the increase. BT and United Utilities Water account for almost 60% of the conditions applied.
- 3.3.3 **KPI 3**, the number of approved Permit variations (extensions); applications recorded increased from 1,000 to 2,500 in year 2. Of the 334 requests for extensions by the highway authority 4 were refused (1% refusal rate). Of the 2,217 applications for extensions by the utilities, only 45 were refused (2%).
- 3.3.4 **KPI 7**, the number of inspections carried out to monitor conditions; the number of inspections carried out for utility works increase from 4,089 to 5,973. The failure rate has reduced slightly from 27% to 21%. Nearly 1,000 of the FPN issued in year 2 relate to permit condition failures; 113 for working without a valid permit and 857 for a breach of permit conditions.



4 CONCLUSIONS

4.1 Summary

- 4.1.1 The Lancashire County Council (LCC) Permit Scheme went live on 2nd March 2015.
- 4.1.2 Following the second anniversary of the Permit Scheme on 2nd February 2017, GK-TC has been commissioned to undertake a detailed review of the operation during year 2 and to determine whether benefits achieved in year 1 have been maintained.
- 4.1.3 The operation of the second year of operation is evaluated and reported in this report '*Lancashire County Council Year 2 Review, 2016-17*'.

4.2 Scheme benefits

- 4.2.1 There is no significant change in number of works permitted between year 1 and 2. The biggest change is a near 1,500 increase in highway authority works, which is offset by a similar reduction in utility works. The net effect of these is an additional 7 works permitted over the course of year 2, compared with the previous year.
- 4.2.2 Overall the average works duration has increased in year 2, but is still significantly lower than the level prior to the introduction of the Permit Scheme.
- 4.2.3 This increase is a result of the 1,400 additional Major and Standard highway works. Between them, these works add nearly 17,000 days worked on the network. This is slightly offset by a 6,000 day reduction in the number of days worked on Minor and Immediate Urgent utility works.
- 4.2.4 The number of days worked across the network throughout the year is still 18,000 lower than prior to the introduction of the Permit Scheme; an 11% reduction.
- 4.2.5 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 **£10.6M per annum**. This saving equates to approximately 15% of the overall cost of works calculated in the CBA (£72.0M per annum total cost to road users).
- 4.2.6 The 11% 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.
- 4.2.7 The benefit achieved in year 2 is lower than achieved in year 1, but Recommendation 04, to monitor highway Standard works permit applications to determine if this works category is appropriate and to challenge the proposed duration if not, should provide a substantial improvement in year 3 if implemented.

4.3 Recommendations

- 4.3.1 Five recommendations have been made to monitor performance during year 3 to drive further improvements across the network;
Recommendation 01: Monitor give and take and some incursion permit applications to identify if the works are likely to take place close to a junction. If so, consider directing promoter to use multi-way signal control.



Recommendation 02: Monitor applications for highway works to determine if the appropriate traffic management type is being selected.

Recommendation 03: Monitor applications for highway works proposing to use a road closure and challenge the tm type if not thought to be appropriate.

Recommendation 04: Monitor highway applications for Standard works to determine if this works category and proposed works duration is appropriate.

Recommendation 05 (on-going): Continue to monitor utility works durations on Immediate works in year 3, 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.

4.4 Conclusions

4.4.1 Monitoring the key performance indicators and evidence gained from the first year of operation demonstrates that the Permit Scheme;

- improves coordination of activities
- improves safety at road and street works
- improves communication between authority and utility companies
- reduces occupancy of the highway
- improves accuracy of works records recorded in the Register
- reduces customer complaints

4.4.2 This review has demonstrated that Scheme has achieved its objectives in the first year, as defined in the application documents.

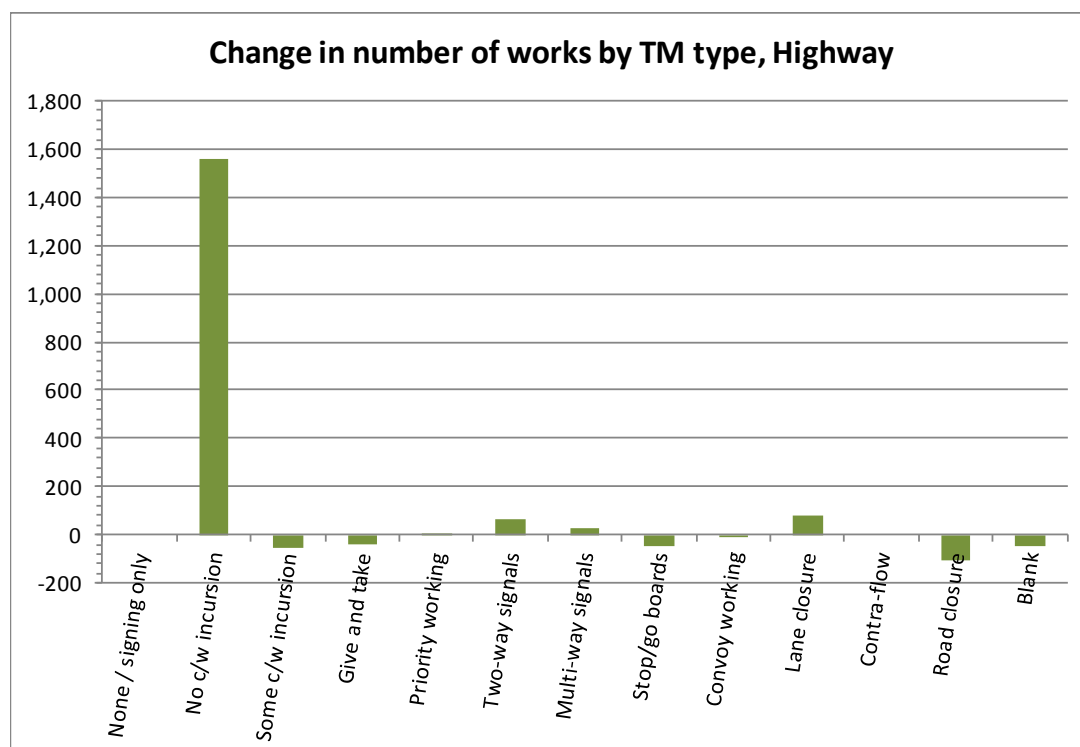
A. PERMIT APPLICATIONS 2016-17

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	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	119			
No c/w incursion		126	1,685	1,559
Some c/w incursion		201	147	-54
Give and take	66	328	285	-43
Priority working		13	16	3
Two-way signals	85	231	293	62
Multi-way signals	41	62	93	31
Stop/go boards	173	230	186	-44
Convoy working	3	1		-1
Lane closure	63	82	158	76
Contra-flow		1	1	
Road closure	337	616	513	-103
Blank		225	181	-44
Total	887	2,116	3,558	1,442



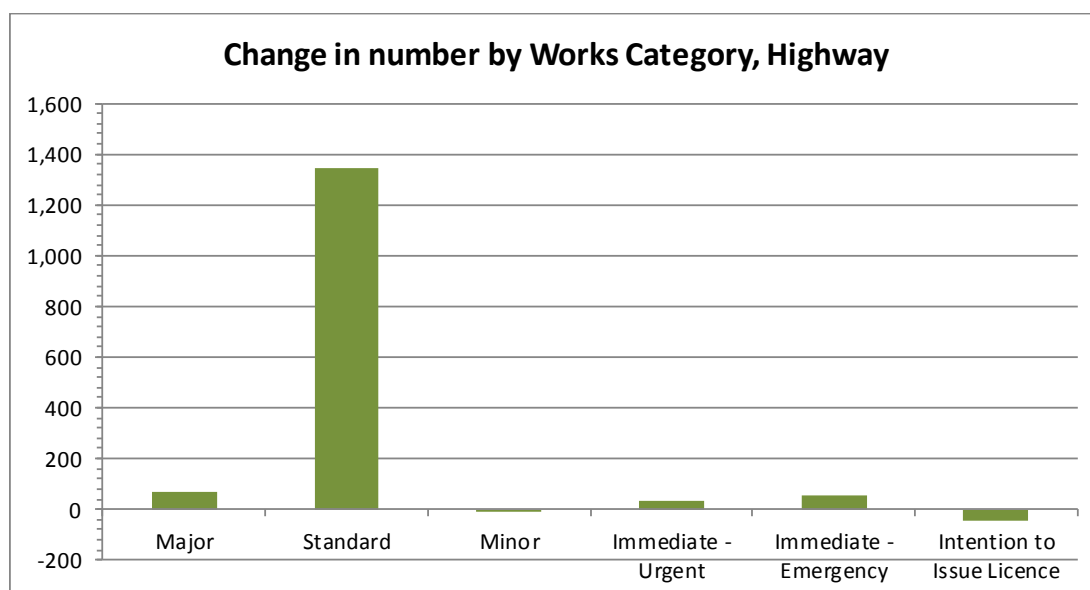
There is a 1,559 increase in the number of works with traffic management type classified as no carriageway incursion. This corresponds with the 1,500 increase

in number of highway works for which a permit was granted in year 2. The suggestion is the traffic management type is defaulting to no carriageway incursion for these the additional works.

There is no significant change in the other traffic management types.

Table A.2 Applications by works category

WORKS STOPPED	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Major	443	768	835	67
Standard	209	574	1,918	1,344
Minor	188	443	432	-11
Immediate - Urgent	25	63	94	31
Immediate - Emergency	22	43	98	55
Intention to Issue Licence		225	181	-44
Total	887	2,116	3,558	1,442



Standard works increase by almost 1,400, again corresponding closely with the overall increase in highway works. It is possible that the works category is defaulting to Standard for these additional works.

The change in number of other works categories is not significant.

Table A.3 Average works duration

DURATION	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	16.0	12.8	12.5	-0.3
Total number of days worked	14,204	27,119	44,362	17,243

Highway authority works recorded show a further reduction in average duration in year 2 (from 12.8 to 12.5 days) but a 65% increase in number of days worked. This is a result of the increase in number of works recorded from 2,116 to 3,558.

Table A.4 Average works duration, by works category**Year 2, 2016-17, Duration by works category**

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
26.9	8.6	3.6	6.6	12.8
22,477	16,517	1,574	619	1,253

Year 1, 2015-16, 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

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
4.7	-0.2	0.4	-2.2	-1.5
5,402	11,469	153	66	640

The average duration of Major works has increased from 22.2 days to 26.9 days. This combined with the increase in number of Standard works contributes to the 17,000 day increase in total duration in year 2.

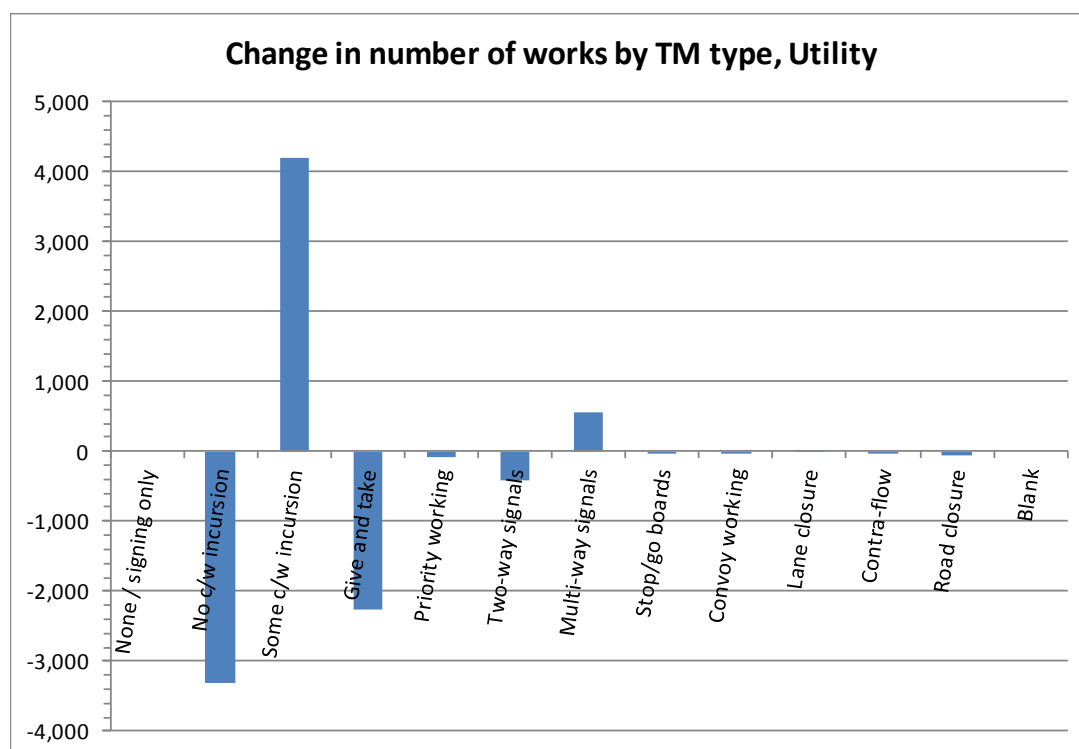
The average duration of Immediate works has reduced by 2.2 days (Urgent) and 1.5 days (Emergency).

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	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	19,451			
No c/w incursion		6,658	3,352	-3,306
Some c/w incursion		8,635	12,832	4,197
Give and take	4,202	5,113	2,843	-2,270
Priority working	34	321	236	-85
Two-way signals	1,407	2,880	2,465	-415
Multi-way signals	373	983	1,532	549
Stop/go boards	519	500	465	-35
Convoy working	1	11	5	-6
Lane closure	149	186	189	3
Contra-flow	11	6	3	-3
Road closure	351	883	819	-64
Blank				
Total	26,498	26,176	24,741	-1,435

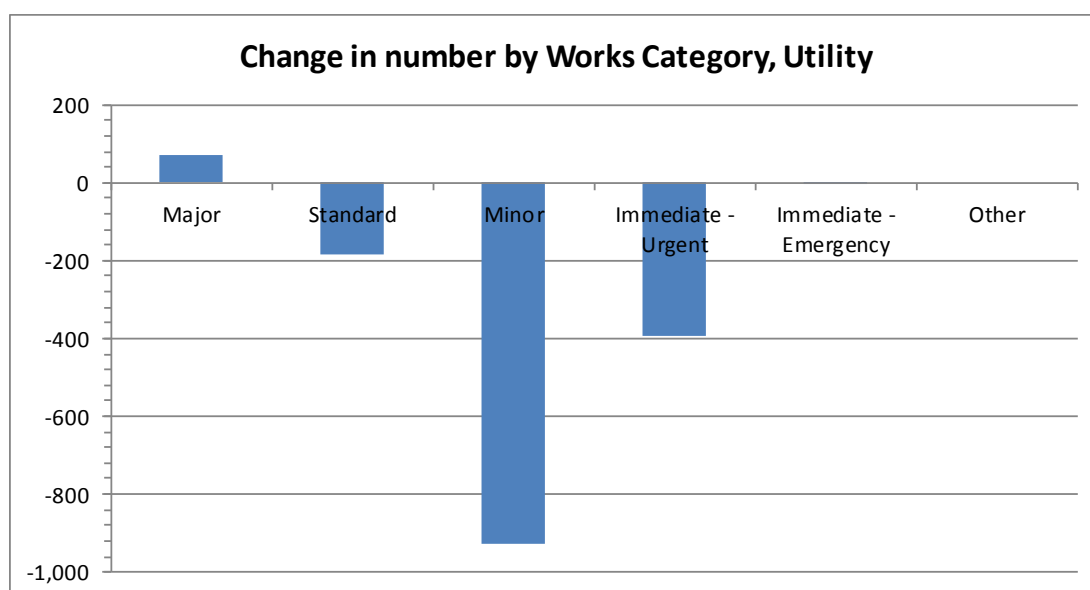


The number of works defined with no carriageway incursion or give and take traffic management has reduced compared with year 1. There is a corresponding increase in the number operating with some carriageway incursion.

A large increase in the number of works operating with multi-way signals is noted; an increase of 549 (55%) on year 1. This may be a result of FPN being issued in year 1 for promoters using give and take or some carriageway incursion close to junctions, when in many cases multi-way signal control would be the appropriate method of traffic management.

Table A.6 Applications by works category

WORKS STOPPED	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Major	946	827	897	70
Standard	3,179	2,766	2,583	-183
Minor	12,303	12,990	12,063	-927
Immediate - Urgent	7,862	8,064	7,670	-394
Immediate - Emergency	2,208	1,529	1,528	-1
Other				
Total	26,498	26,176	24,741	-1,435



Utility works changes generally reduce in line with the overall 1,500 reduction in the number of utility works in year 2.

The small increase in the number of Major works is within the range identified prior to the introduction of the Permit Scheme.

Table A.7 Average works duration

DURATION	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	5.6	4.1	4.0	-0.1
Total number of days worked	147,383	106,672	99,233	-7,439

Utility works show a small reduction in average works duration in year 2. The 7,000 reduction in number of days worked is predominantly a result of the reduction in number of works.

Table A.8 Average works duration, by Works Category

Year 2, 2016-17, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
14.4	7.2	2.0	4.2	7.2
12,876	18,705	24,069	32,548	11,035

Year 1, 2015-16, 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

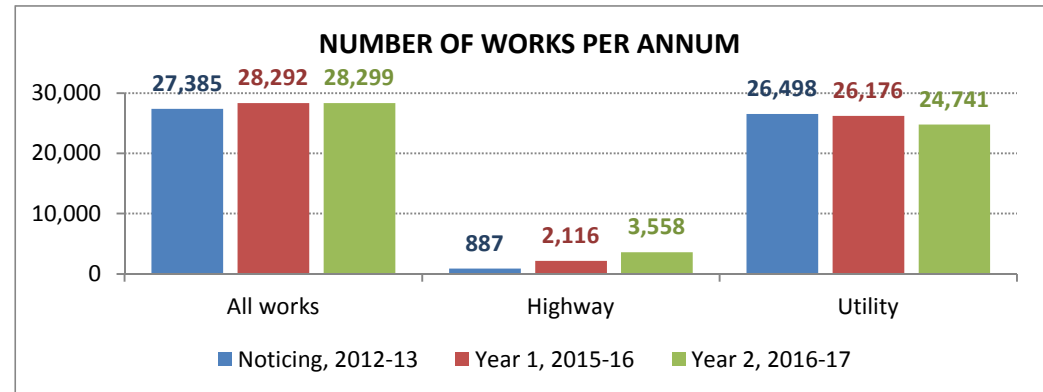
Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-2.5	0.4		-0.3	-0.1
-1,112	-107	-2,089	-3,962	-169

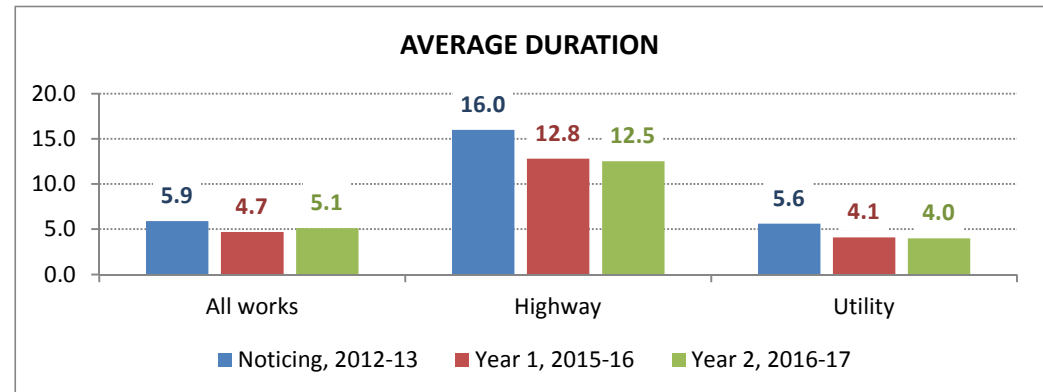
The trend for average duration by works category is downwards in year 2. Major works duration reduced from 16.9 days to 14.4 days. The average duration for Immediate works reduced by 0.3 days (Urgent) and 0.1 days (Emergency).

SCHEME BENEFITS

NUMBER OF WORKS (number)			
	All works	Highway	Utility
Noticing, 2012-13	27,385	887	26,498
Year 1, 2015-16	28,292	2,116	26,176
Year 2, 2016-17	28,299	3,558	24,741
Change, Year 2 - Year 1	7	1,442	-1,435
Change (%)	0.0%	68.1%	-5.5%



DURATION (days)			
	All works	Highway	Utility
Noticing, 2012-13	5.9	16.0	5.6
Year 1, 2015-16	4.7	12.8	4.1
Year 2, 2016-17	5.1	12.5	4.0
Change (days)	0.4	-0.3	-0.1



DAYS WORKED (days)			
	All works	Highway	Utility
Noticing, 2012-13	161,587	14,204	147,383
Year 1, 2015-16	133,791	27,119	106,672
Year 2, 2016-17	143,595	44,362	99,233
Change, Year 2 - Year 1	9,804	17,243	-7,439
Change (%)	7.3%	63.6%	-7.0%

