Knowsley Council

The Knowsley Permit Scheme for Road & Street Activities

Annual Review, Year 2 2016-17

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Knowsley Council Permit Scheme,
Year 2 Review, 2016-17

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1 INTRODUCTION

1.1 Background

1.1.1 The Knowsley Council (KMBC) Permit Scheme went live on 1st March 2015, with the first month operating as a trial with no charges applied. Permit charges were applied from 1st April 2015.

1.1.2 The first year of operation was evaluated and reported in the *'Knowsley 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 significant at 43% overall. There was a 55% reduction in the number of highway works and a 26% reduction in the number of utility works.

1.1.5 This equates to over 21,000 fewer days worked on the network in year 1 (48% reduction overall). Not all this reduction can be attributed to the Permit Scheme. The number of highway authority promoted works has been steadily falling since 2013 from a peak of 4,700 works per annum to 2,100 in 2015-16, and 1,293 in 2016-17.

1.1.6 The financial benefit to road users of the Permit Scheme in year 1 is calculated at **£3.1M per annum**. This saving equated to approximately 25% of the overall cost of works calculated in the CBA (£13.1M per annum total cost to road users).

1.2 Year 2 Review

1.2.1 Following the second anniversary of the Permit Scheme on 1st April 2017, GK Traffic Consultancy Limited (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 second year of operation is evaluated and reported in this report *'Knowsley 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, 2013 (Confirm database)
- Permit Scheme work stops notices, April 2015 – March 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.

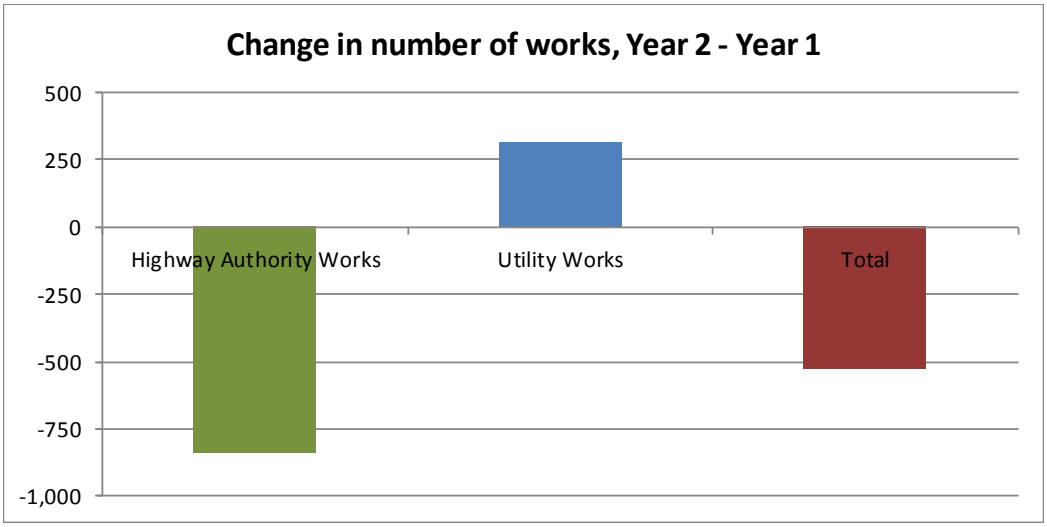
2.2 All works

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 2013	Year 1 2015-16	Year 2 2016-17	Change
Highway Authority Works	4,847	2,136	1,293	-843
Utility Works	3,732	2,765	3,080	315
Total	**8,579**	**4,901**	**4,373**	**-528**



2.2.3 The biggest change is a further 843 reduction in highway authority works, compared with the year 1 records. This is a 40% reduction in highway works compared with the previous year and a 73% reduction compared with the 2013 Noticing records.

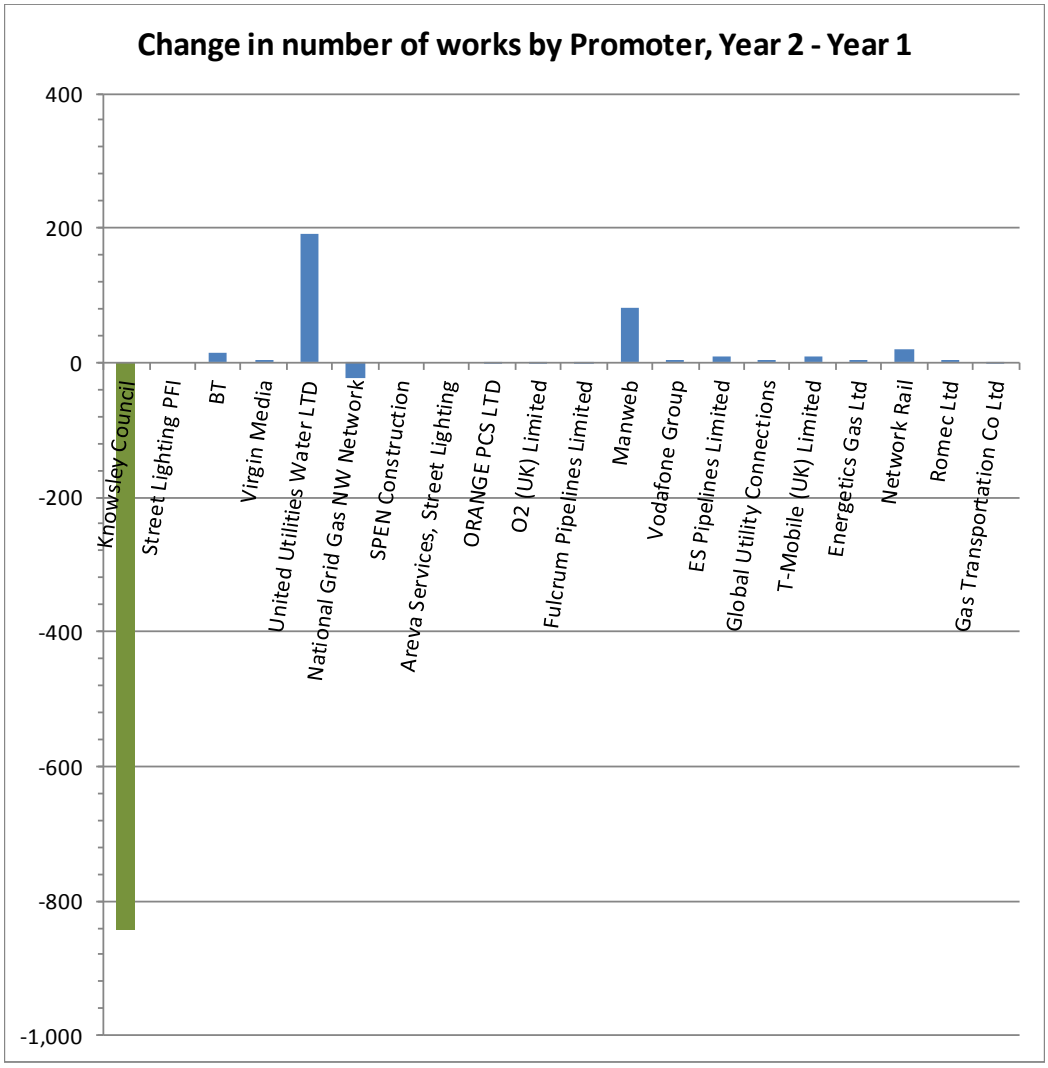
2.2.4 Not all of this reduction can be attributed to the Permit Scheme. This reduction is a result of lower budget available to undertake planned and highway improvement works.

2.2.5 Utility works show a 11% increase in year 2, with the annual number of works returning to within 17.5% of the level evident before the introduction of the Permit Scheme.

2.2.6 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 2013	Year 1 2015-16	Year 2 2016-17	Change
Knowsley Council	4,847	2,136	1,293	-843
Street Lighting PFI	167			
BT	317	447	462	15
Virgin Media	514	531	536	5
United Utilities Water LTD	1,364	912	1,104	192
National Grid Gas NW Network	710	331	309	-22
SPEN Construction	351			
Areva Services, Street Lighting	201			
ORANGE PCS LTD		2		-2
O2 (UK) Limited	18	4	2	-2
Fulcrum Pipelines Limited	8	8	7	-1
Manweb		486	568	82
Vodafone Group	27	27	28	1
ES Pipelines Limited		5	15	10
Global Utility Connections		1	4	3
T-Mobile (UK) Limited		5	13	8
Energetics Gas Ltd	13	1	4	3
Network Rail	15	3	23	20
Romec Ltd	2		4	4
Gas Transportation Co Ltd		2	1	-1
Total	**8,554**	**4,901**	**4,373**	**-528**



2.2.7 Following the introduction of the Permit Scheme the number of works carried out by utility promoters reduced from 3,732 to 2,765 in year 1.

2.2.8 The pre-Permit Scheme total includes works noticed under the street lighting PFI and other street lighting works carried out by Areva Services. Discounting these works, the total number of works noticed by utility works promoters in an average year to 3,339.

2.2.9 The number of works completed by United Utilities Water Limited reduced from 1,364 to 912 in the first year of the Permit Scheme. The year 2 works total has increased by 192 to 1,104 works.

2.2.10 The number of works completed by National Grid Gas NW Networks reduced from 710 to 331 in year 1 of the Permit Scheme and by a further 22 in year 2.

2.2.11 Works undertaken by Manweb (Scottish Power Energy Networks) have increased by 62% from 351 before the introduction of the Permit Scheme to 568 works in year 2. Similarly, the number of works undertaken by BT works promoters have increased from 317 before the introduction of the Permit Scheme to 462 in year 2; an increase of 46%.

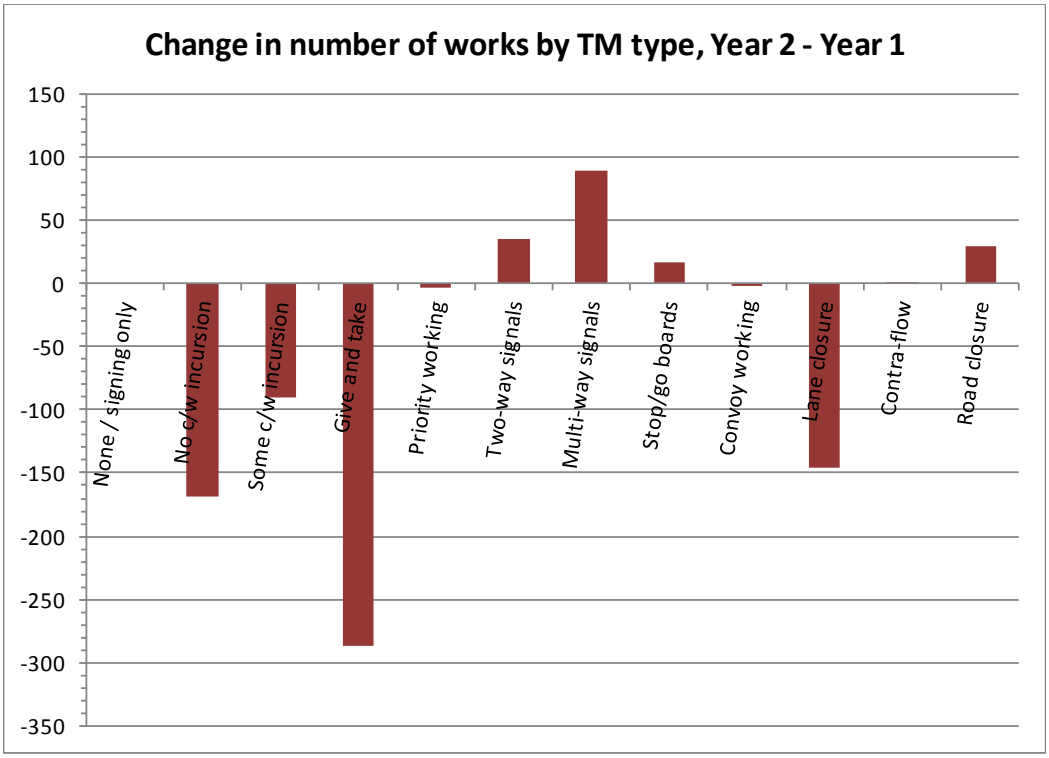
2.2.12 Other than these large changes, the variation in number of works by other utility works promoters are not felt to be significant and are generally indicative of annual fluctuations to be expected year on year.

2.2.13 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.

2.2.14 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 2013	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	3,400			
No c/w incursion		1,276	1,107	-169
Some c/w incursion		1,221	1,130	-91
Give and take	4,188	1,337	1,050	-287
Priority working	64	27	23	-4
Two-way signals	294	219	254	35
Multi-way signals	154	138	227	89
Stop/go boards	59	130	146	16
Convoy working	2	1		-1
Lane closure	334	442	296	-146
Contra-flow			1	1
Road closure	84	110	139	29
Blank				
Total	**8,579**	**4,901**	**4,373**	**-528**



2.2.15 There are no significant changes in traffic management types between year 1 and year 2.

2.2.16 Analysis of works carried out by utility works promoters Appendix A.2 shows a decrease in the number of works carried out with lane closures, some carriageway incursion, give and take traffic management and a reduction in the number of works recorded as having no carriageway incursion.

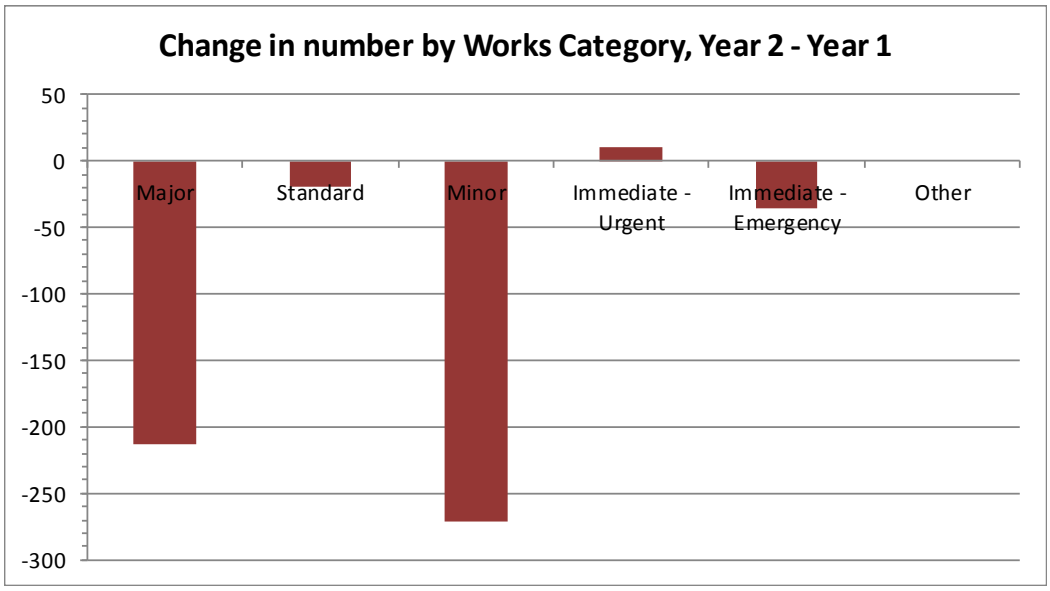
2.2.17 There is also a continuing increase in the number of utility works carried out using temporary traffic signals and road closures. Some of these changes will be due to the better recording of traffic management type in the system, but suggest a transition to more appropriate traffic management types as a result of the introduction of the Permit Scheme.

2.2.18 Other changes would appear to amount to small year on year fluctuations only.

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 2013	Year 1 2015-16	Year 2 2016-17	Change
Major	254	401	188	-213
Standard	404	361	342	-19
Minor	5,124	3,184	2,913	-271
Immediate - Urgent	2,576	753	763	10
Immediate - Emergency	221	202	167	-35
Other				
Total	**8,579**	**4,901**	**4,373**	**-528**



2.2.20 The number of Major works has reduced by over 200 compared with year 1. This change is a result of a large reduction in Major highway works from 333 to

116. While the number of Major works reported for highway projects has reduced compared with year 1, the year 2 figure is slightly higher than recorded prior to the introduction of the Permit Scheme.

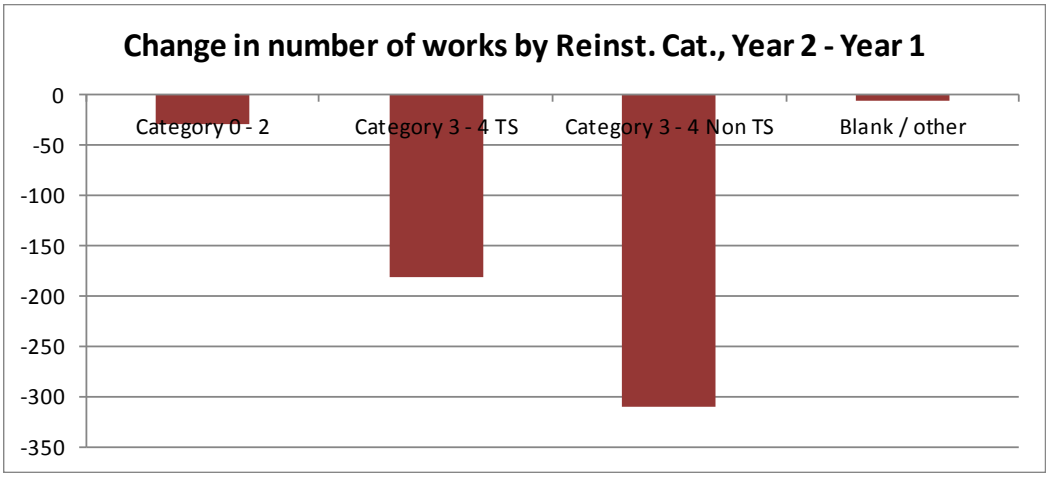
2.2.21 The highway works figures - Table A.2 in Appendix A.1 - also show a large reduction in Minor works (from 3,066 before the Permit Scheme to 1,660 in year 1 and then 1,062 in year 2) and Immediate – Urgent works (from 1,746 before the Permit Scheme to fewer than 30 in years 1 and 2).

Recommendation 01: Monitor the number of highway authority Major, Minor and Immediate works to ensure a permit is raised for all appropriate works.

2.2.22 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 2013	Year 1 2015-16	Year 2 2016-17	Change
Category 0 - 2	1,510	1,126	1,097	-29
Category 3 - 4 TS	2,460	1,320	1,138	-182
Category 3 - 4 Non TS	4,439	2,429	2,118	-311
Blank / other	170	26	20	-6
All works	**8,579**	**4,901**	**4,373**	**-528**



2.2.23 The overall reduction in number of works permitted in year 2 is spread across the network based on the relative proportions of each road type

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

Table 6 Average works duration

DURATION	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	5.1	4.7	3.9	-0.8
Total number of days worked	**43,964**	**22,906**	**17,045**	**-5,861**

2.2.25 The overall reduction in average duration is significant; reducing from 4.7 days to 3.9 days between year 1 and 2. This is a 17% reduction in average works duration compared with year 1 and a 24% reduction compared with average durations before the introduction of the Permit Scheme.

2.2.26 The reduction constitutes 5,861 fewer days worked compared with year 1, an overall 26% reduction in working days. However, a significant proportion of this change is due to the further reduction in highway authority works recorded in year 2.

2.2.27 Reviewing the highway authority works durations – Table A.3 in Appendix A.1 - shows a reduction in average duration (from 5.9 to 4.9 days). This is primarily due to the large reduction in the number of Major works with an average duration of around 30 days.

2.2.28 The average duration of highway authority works by works category – Table A.4 in Appendix A.1 - have generally increased slightly compared with year 1.

Recommendation 02: Monitor the duration of highway authority works to identify if further reductions in works duration can be achieved in year 3.

2.2.29 Reviewing the utility company works durations – Table A.7 Appendix A.2 - shows a further reduction in average works duration (from 3.8 days to 3.5 days). This reduction has offset most of the increase in total number of days worked because of the increase in the number of works – an 11% increase in number of works has resulted in only a 3% increase in total number of days worked.

2.2.30 Major works average duration – Table A.8 Appendix A.2 - has reduced from 20.5 days to 14.1 days and there are further small reductions in Standard and Immediate – Urgent works.

2.3 Scheme Benefit

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

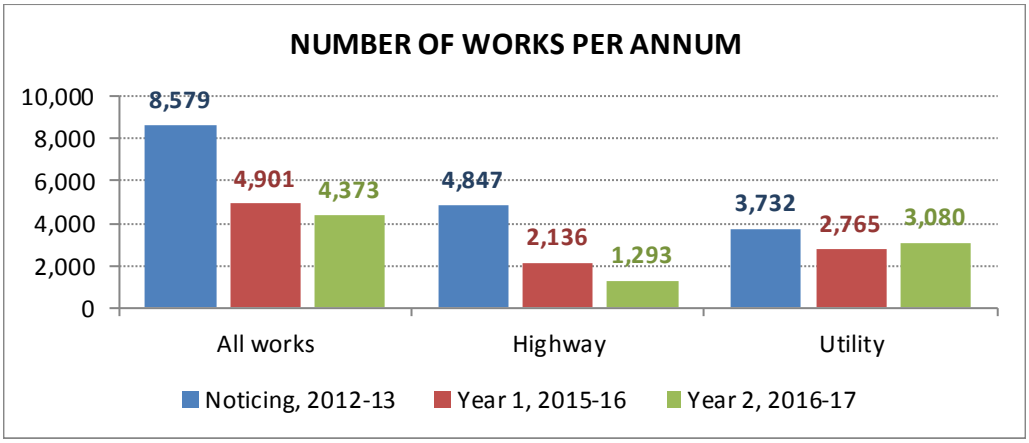


Figure 1 Number of works per annum

2.3.2 The reduction in number of works across the network is significant at 11% overall (and 50% compared with the number prior to the introduction of the Permit Scheme). There is a 40% reduction in the number of highway works and an 11% increase in the number of utility works compared with year 1.

2.3.3 The reduction in average duration for utility works (a further 8% reduction in year 2) almost offsets the increase in number of utility works; resulting in a 3% increase only in the total number of days worked by utility works promoters.

2.3.4 The number of days worked on highway authority schemes has reduced by 49.5% compared with year 1, due mainly to a 40% reduction in the number of works recorded and also a 17% reduction in average works duration.

2.3.5 This equates to over 5,861 fewer days worked on the network by all promoters in the last year (26% reduction overall). Not all of this reduction can be attributed to the Permit Scheme. The number of highway authority promoted works has been steadily falling since 2013 from a peak of 4,847 works per annum to 1,293 in 2016-17.

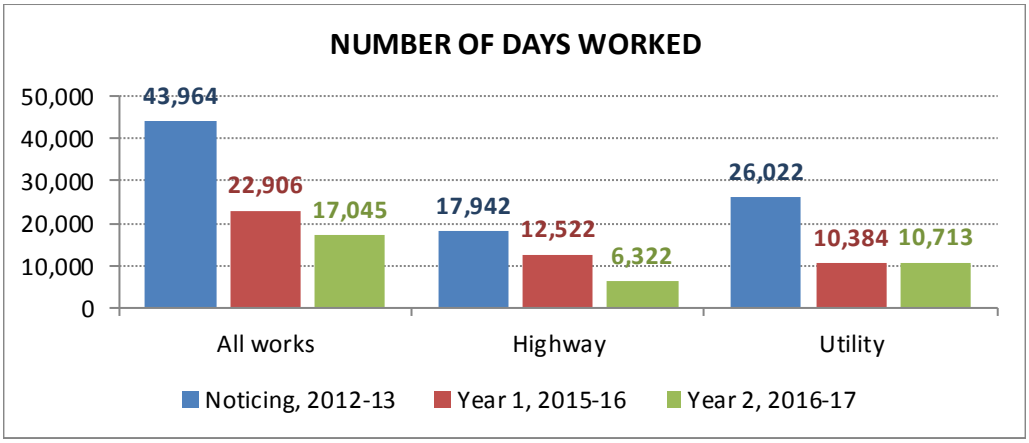


Figure 2 Number of days worked per annum

2.3.6 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 on non-traffic sensitive streets and for short duration Minor and Immediate works, the monetary value of the benefit to road users of the Permit Scheme in year 2 is calculated as:

- Average monetary cost of works per day, £199 (source: CBA report 2010 prices, average cost of impact for all works involving some form give & take traffic management on low flow roads)
- Number of days saved under Permit Scheme compared with 2013 Noticing benchmark, 15,309 *
- **Monetary value of benefit to road users, £3M per annum**

** the saving in days worked is calculated for utility works only to avoid over-stating the benefits due to fewer highway authority maintenance works being undertaken (26,022 – 10,713 = 15,309 days saved).*

2.3.7 This saving equates to approximately 25% of the overall cost of works calculated in the CBA (£13.1M per annum total cost to road users).

2.3.8 The saving calculated due to the improved performance of utility works promoters is very similar to year 1 (£3.1M per annum saving), in spite of an 11% increase in the number of works completed.

2.4 Conclusions

2.4.1 The biggest change is a further 843 reduction in highway authority works, compared with the year 1 records. This is approximately 40% reduction in highway works compared with the previous year and a 75% reduction compared with the 2013 Noticing records.

2.4.2 Not all of this reduction can be attributed to the Permit Scheme. This reduction is a result of lower local authority budget available to undertake planned and highway improvement works.

2.4.3 Utility works show a 10% increase in year 2, with the annual number of works returning to within 17% of the level evident before the introduction of the Permit Scheme. The pre-Permit Scheme total includes works noticed under the street lighting PFI and other street lighting works. Discounting these works, the total number of works noticed by utility works promoters in an average year to 3,350.

2.4.4 The number of works completed by United Utilities Water Limited and National Grid Gas NW Networks has reduced significantly in years 1 and 2 compared with the situation prior to the introduction of the Permit Scheme. Conversely, works undertaken by Manweb (Scottish Power Energy Networks) and BT have increased by 50% to 60%.

2.4.5 The overall reduction in average duration is significant; reducing from 4.7 days to 3.9 days between year 1 and 2. This is a 17% reduction in average works duration compared with year 1 and a 24% reduction compared with average durations before the introduction of the Permit Scheme.

2.4.6 The reduction constitutes 5,861 fewer days worked compared with year 1, an overall 26% reduction in working days. However, a significant proportion of this change is due to the further reduction in highway authority works recorded in year 2.

2.4.7 To avoid over-stating the Permit Scheme benefits due to the large reduction in highway authority works undertaken, the benefits have been calculated for utility works only. The monetary value of the benefit to road users of the Permit Scheme in year 2 is calculated at **£3M per annum**.

2.4.8 The 26% reduction in number of days worked by utility promoters is substantially higher than the 5% benefit specified in the DfT guidelines for the business case justification for a move to Permit Schemes.

2.4.9 The saving calculated due to the improved performance of utility works promoters is very similar to year 1 (£3.1M per annum saving), in spite of an 11% increase in the number of works completed.

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	1,867	57	3.1%
Utility	4,860	554	11.4%
ALL	6,727	611	9.1%

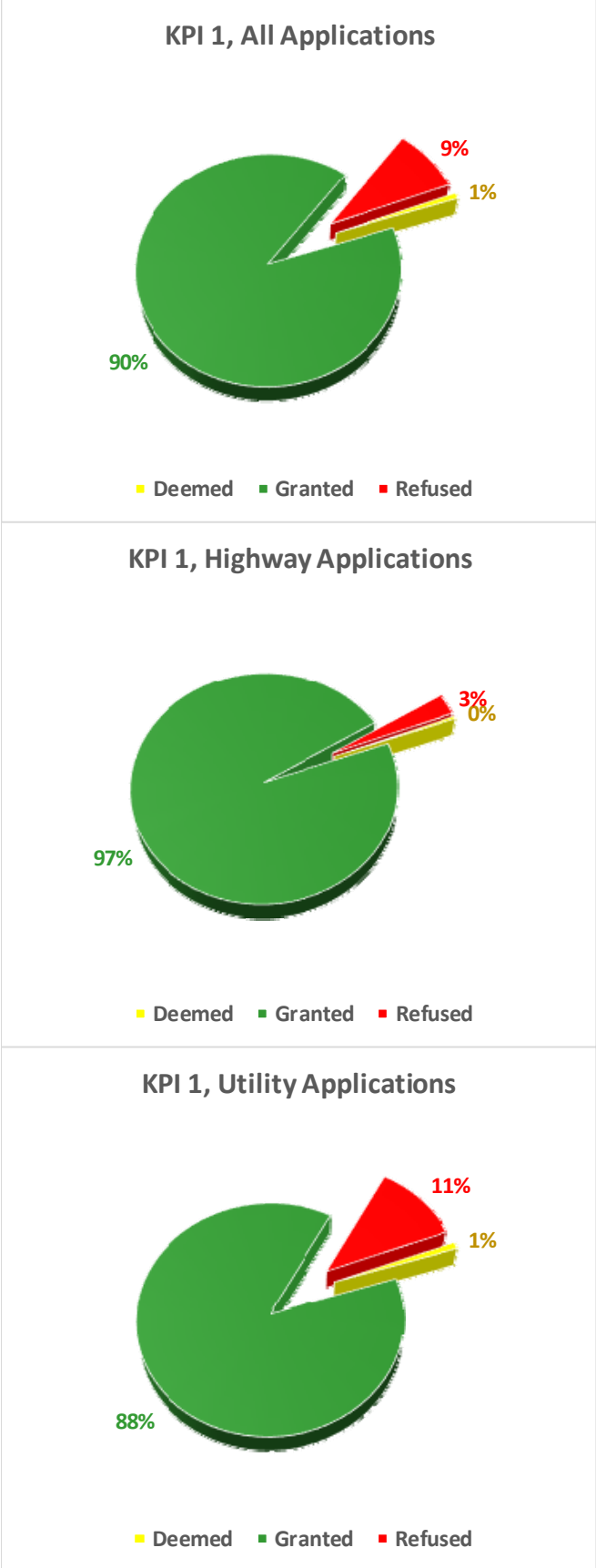


Figure 3: KPI 1, Permit and Variation Applications

3.2.3 KPI 1 – Approximately one ninth (11%) of all permit and permit variation applications by statutory undertakers were refused. 9% of all applications are refused. This is a reduction compared with year 1, when 16% of utility applications and 11% of all applications were refused. The refusal rate for highway authority permit applications is slightly reduced at 3.1% compared with 3.8%.

3.2.4 51 permit applications were deemed in year 2 – 6 highway authority applications and 45 utility works promoter applications. This is an increase over the 25 permit applications deemed in year 1.

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 Figure 4.

All Conditions	Utility	Highway	All
TOTAL	6,557	2,948	9,505
	69%	31%	

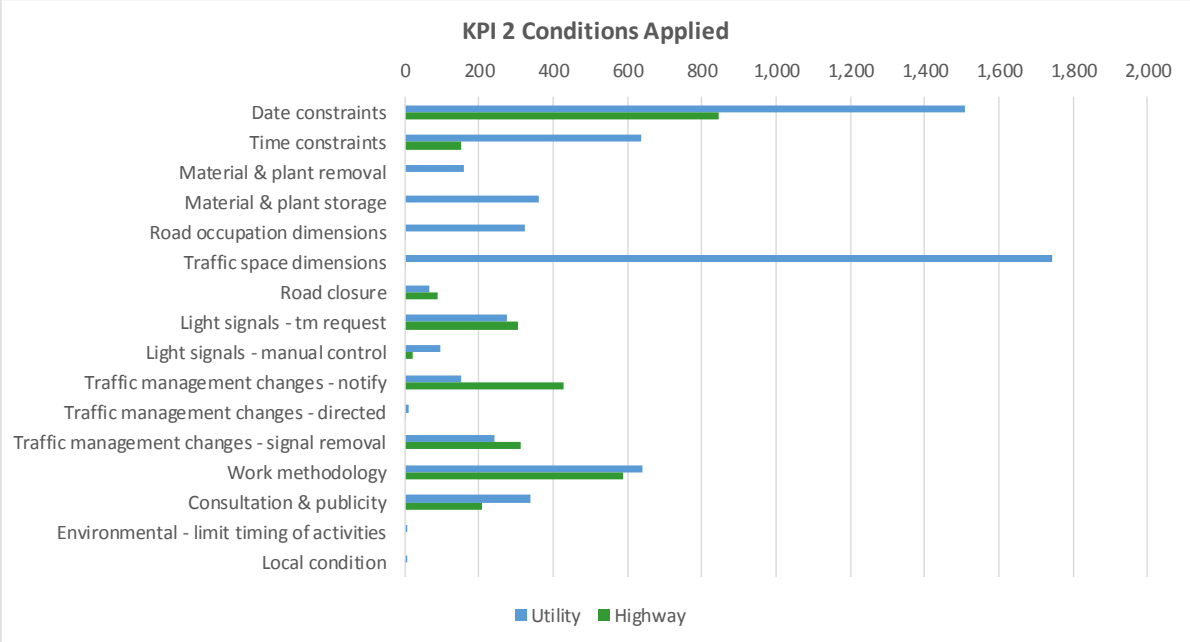


Figure 4: KPI 2, Conditions Applied

3.2.6 The number of conditions reported has increased by a factor of 6 compared with the first year of the Scheme. The proportion of conditions applied to utility and highway authority works promoters is broadly unchanged.

3.2.7 Approximately two thirds of the conditions applied relate to applications by utility promoters. The remainder apply to highway authority applications.

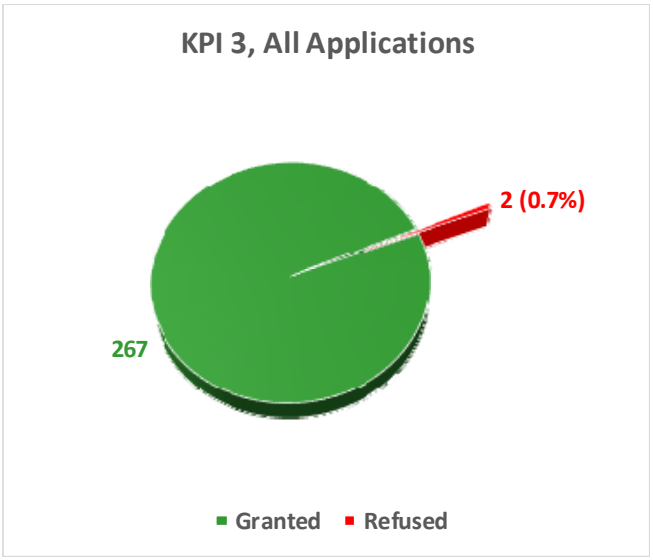
3.2.8 Conditions applied to highway authority permits shows a spread across more conditions, now including traffic management changes, temporary traffic signals and consultation, in addition to the date constraints and work methodology applied in year 1.

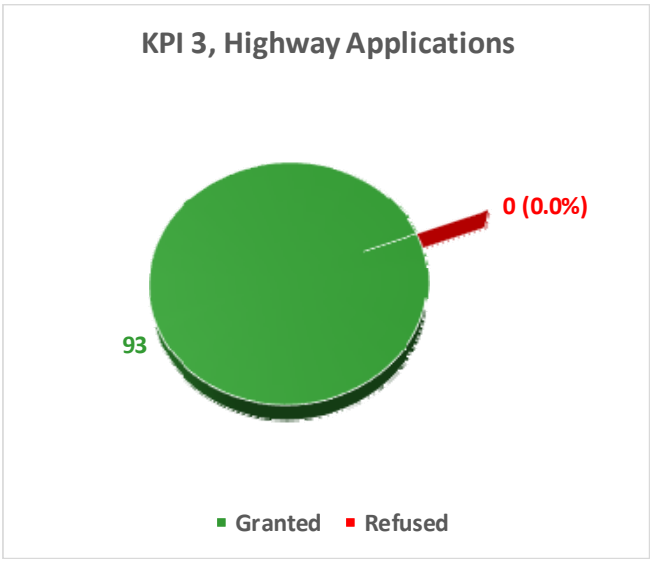
3.2.9 Utility applications show an increase in the number of conditions relating to date and time constraints and traffic space dimensions. Traffic space dimensions conditions have increased from 100 to over 1,700 in year 2.

3.2.10 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.

3.2.11 Only 2 requests for permit extensions were refused in the first year of the Scheme; both by statutory undertakers, compared with 3 requests in year 2.

3.2.12 The number of applications for extensions has reduced from 383 in year 1 to 267. Highway authority applications reduced from 236 to 93. Utility applications increased from 147 to 174.





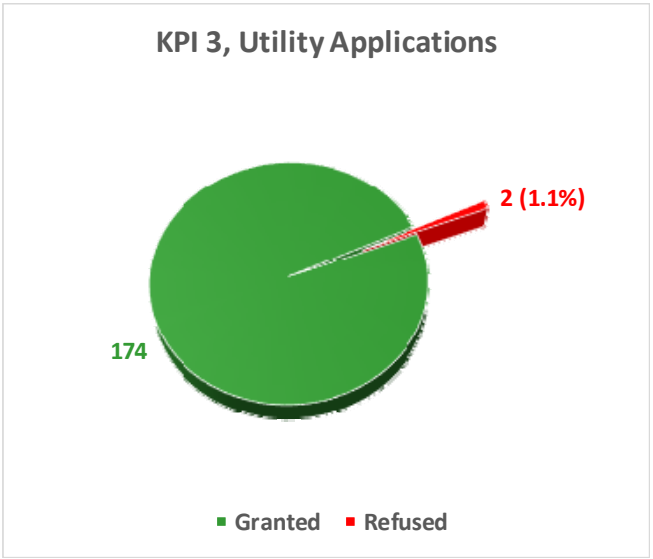


Figure 5: KPI 3, Permit Extensions

3.2.13 KPI 7 - the Number of Inspections carried out to monitor conditions. During the year 216 inspections have been carried out to monitor permit conditions and from these inspections only 2 passed. 214 (99%) were found to be non-compliant, see Table 8 below.

Table 8 Number of inspections carried out to monitor conditions

Permit Condition Inspections	Passed	Non-Compliant	Abortive	Number of Inspections	Fail %
Highway authority	0	0	0	0	
Utility	0	172	0	172	100%
ALL	0	172	0	172	100%

3.2.14 Last year, only permit condition failures were recorded in Symology and nothing has been recorded for those that pass. These are picked up during Routine or Targeted A inspections, and from evidence gathered in the office from the IT systems.

3.2.15 This remained the case in year 2, when 172 permit condition failures were recorded.

3.2.16 The recommendation following the 12-month review to record all permit inspections regardless of pass or failure should be carried forward to next year.

Recommendation 03 (on-going): Consider recording inspections passed for utility and highway authority permits in year three.

3.2.17 514 fixed penalty notices (FPN) have been given during year 2, compared with 570 in year 1.

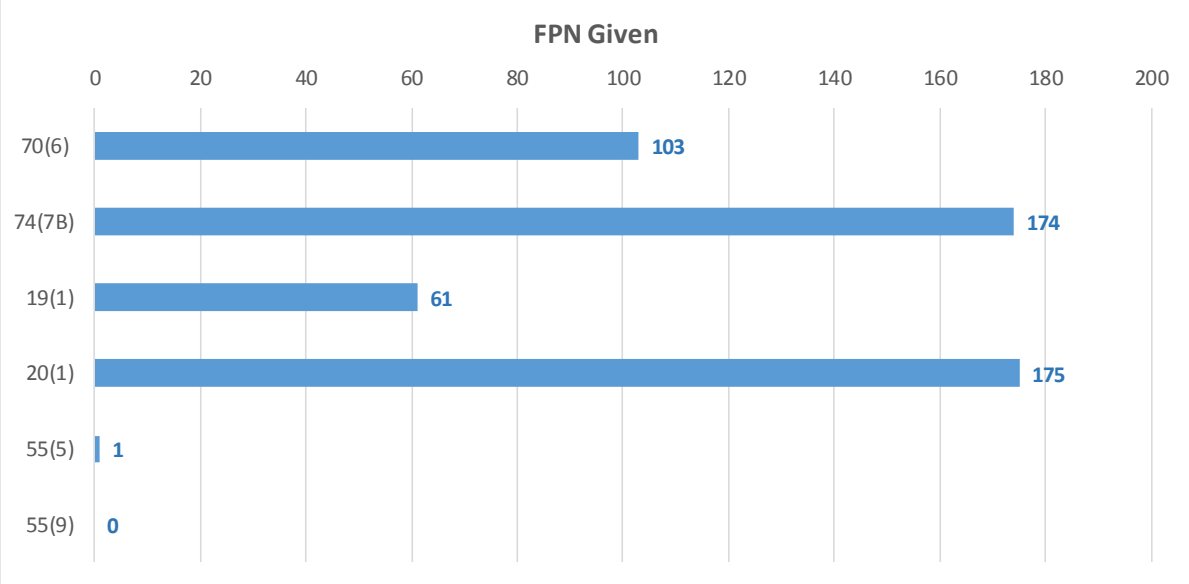


Figure 6: Fixed Penalty Notices Issued

3.2.18 The FPN figures for 70 (6), 74 (7B), 55 (5), and 55 (9) are consistent with those from previous years.

3.2.19 61 FPN were given for working without a permit (offence code 19 (1)) and 175 FPN given for a breach of permit conditions (20 (1)) are new offences relating specifically to permit schemes. This is the same total number as year 1, although the number of FPN for working without a permit increased from 43 to 61.

3.2.20 It is the Council's intention to continue to monitor these more closely throughout year 3 with a view to working with works promoters to identify and resolve potential issues.

Recommendation 04 (on-going): Continue to monitor site inspection failures and FPN issued for breach of permit conditions in year 3. Meet with poor performing utilities if necessary, to promote performance improvements.

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 one sixth (16%) of all permit and permit variation applications by statutory undertakers were refused (the refusal rate for applications by the highway authority was 3.8%).

3.3.2 KPI 2, the number of conditions applied by condition type; approximately three quarters of the conditions applied relate to applications by utility promoters. The remaining quarter apply to highway authority applications.

3.3.3 KPI 3, the number of approved Permit variations (extensions); only 3 requests for permit extensions were refused in the second year of the Scheme. Two requests by statutory undertakers and one by the highway authority.

3.3.4 KPI 7, the number of inspections carried out to monitor conditions; during the year 216 inspections have been carried out to monitor conditions and from these inspections only 2 passed. 214 (99%) were found to be non-compliant. Only Permit Condition failures are recorded and nothing has been recorded for those that pass. These are picked up during Routine or Targeted A inspections, and from evidence gathered in the office from the IT systems.

3.3.5 Consequently, 576 fixed penalty notices (FPN) have been issued during the course of the year. 240 FPN were issued for breach of permit conditions or working without a permit. It is the Council's intention to monitor these more closely throughout year 2 with a view to working with works promoters to identify and resolve potential issues.

4 CONCLUSIONS

4.1 Summary

4.1.1 Following the second anniversary of the Permit Scheme on 1st April 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.

4.1.2 The operation of the second year of operation is evaluated and reported in this report *'Knowsley Council Year 2 Review, 2016-17'*.

4.1.3 The purpose of the review is 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.

4.1.4 The Council plan to undertake this review annually.

4.2 Scheme benefits

4.2.1 The biggest change is a further 850 reduction in highway authority works, compared with the year 1 records. This is a 40% reduction in highway works compared with the previous year and a 75% reduction compared with the 2013 Noticing records.

4.2.2 Not all of this reduction can be attributed to the Permit Scheme. This reduction is a result of lower budget available to undertake planned and highway improvement works.

4.2.3 Utility works show a 10% increase in year 2, with the annual number of works returning to within 17% of the level evident before the introduction of the Permit Scheme. The pre-Permit Scheme total includes works noticed under the street lighting PFI and other street lighting works carried out by Areva Services. Discounting these works, the total number of works noticed by utility works promoters in an average year to 3,350.

4.2.4 The number of works completed by United Utilities Water Limited and National Grid Gas NW Networks has reduced significantly in years 1 and 2 compared with the situation prior to the introduction of the Permit Scheme. Conversely, works undertaken by Manweb (Scottish Power Energy Networks) and BT have increased by 50% to 60%.

4.2.5 The overall reduction in average duration is significant; reducing from 4.7 days to 3.9 days between year 1 and 2. This is a 17% reduction in average works duration compared with year 1 and a 24% reduction compared with average durations before the introduction of the Permit Scheme.

4.2.6 The reduction constitutes 5,861 fewer days worked compared with year 1, an overall 26% reduction in working days. However, a significant proportion of this change is due to the further reduction in highway authority works recorded in year 2.

4.2.7 The CBA business case calculated the cost per day for each traffic management type on each street type. The monetary value of the financial benefit to road users of the Permit Scheme in year 1 is calculated at **£3M per annum**. This saving equates to approximately 25% of the overall cost of works calculated in the CBA (£13.1M per annum total cost to road users).

4.2.8 The 26% reduction in number of days worked by utility promoters is substantially higher than the 5% benefit specified in the DfT guidelines for the business case justification for a move to Permit Schemes.

4.2.9 The saving calculated due to the improved performance of utility works promoters is very similar to year 1, in spite of an 11% increase in the number of works completed.

4.3 Recommendations

4.3.1 Two additional recommendations in addition to carrying forward two ongoing recommendations from year 1, 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 the number of highway authority Major, Minor and Immediate works to ensure a permit is raised for all appropriate works.

Recommendation 02: Monitor the duration of highway authority works to identify if further reductions in works duration can be achieved in year 3.

Recommendation 03 (on-going): Consider recording inspections passed for utility and highway authority permits in year three.

Recommendation 04 (on-going): Continue to monitor site inspection failures and FPN issued for breach of permit conditions in year 3. Meet with poor performing utilities if necessary, to promote performance improvements.

4.4 Conclusions

4.4.1 This review has demonstrated the significant benefit due to the reduction in the average duration of utility works in year 2 (reduced from 3.8 days to 3.5 days) has been maintained in spite of an 11% increase in the number of works completed. The monetary value of the reduced impact to road users is approximately £3M per annum.

4.4.2 There are further benefits derived from reduced occupation of the highway, including;

- improves safety at road and street works
- reduces noise and air pollution

4.4.3 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

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

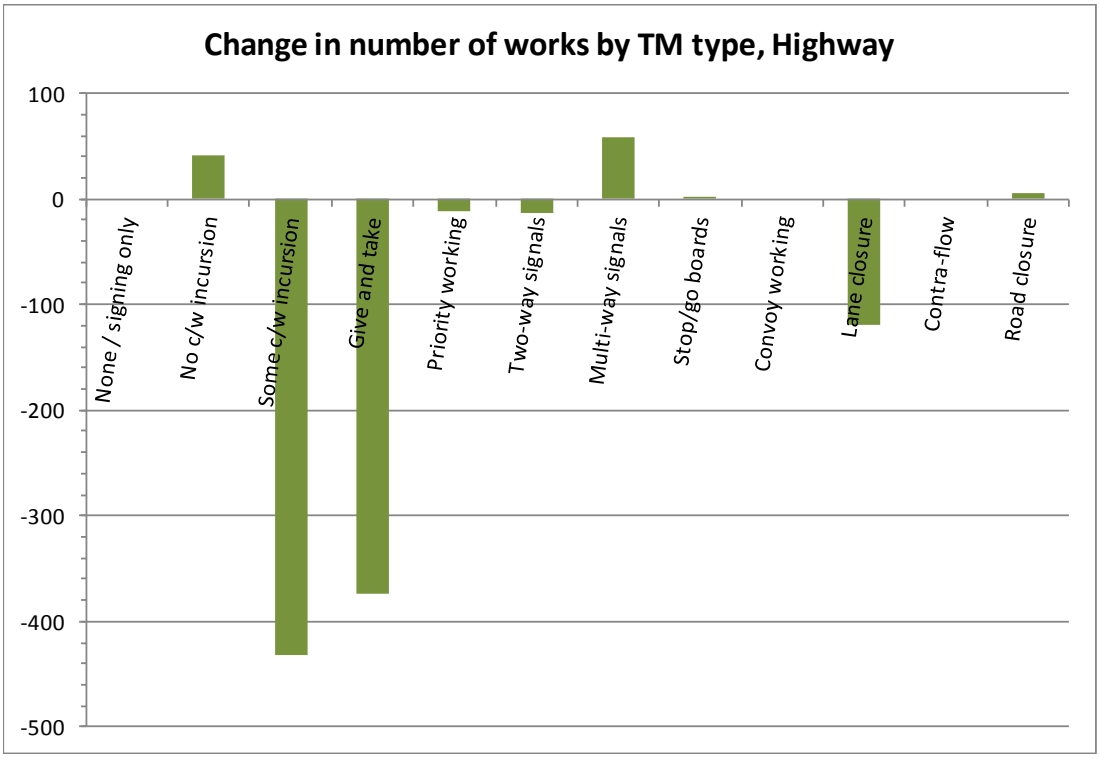
A. PERMIT APPLICATIONS 2016-17

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

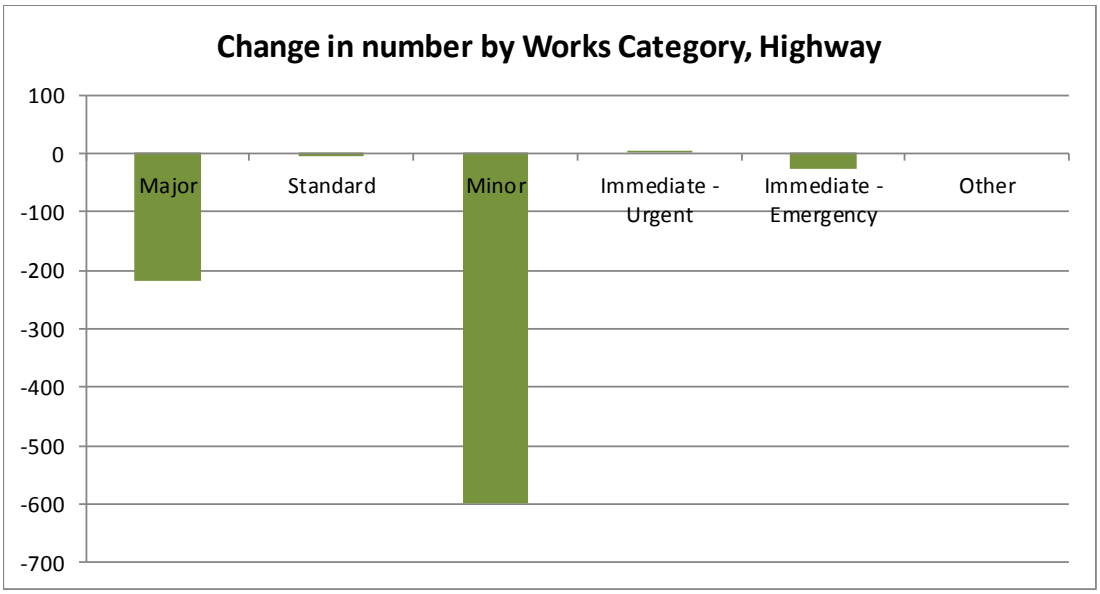
TRAFFIC MANAGEMENT TYPE	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	755			
No c/w incursion		54	96	42
Some c/w incursion		616	184	-432
Give and take	3,456	651	278	-373
Priority working	64	20	8	-12
Two-way signals	229	140	127	-13
Multi-way signals	119	80	138	58
Stop/go boards	39	110	111	1
Convoy working	1			
Lane closure	286	387	267	-120
Contra-flow				
Road closure	65	78	84	6
Blank				
Total	**5,014**	**2,136**	**1,293**	**-843**



Other than an increase in the works requiring multi-phase temporary traffic signals, the reduction in the number of each traffic management type is broadly in proportion to the overall reduction in highway works.

Table A.2 Applications by works category

WORKS STOPPED	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
Major	99	333	116	-217
Standard	85	88	83	-5
Minor	3,066	1,660	1,062	-598
Immediate - Urgent	1,746	22	26	4
Immediate - Emergency	18	33	6	-27
Other				
Total	**5,014**	**2,136**	**1,293**	**-843**



The scale of reduction is broadly in line with overall reduction in highway works. However, 200 fewer Major works is a large reduction from year 1 and the number of Minor works is one third of the number recorded prior to the introduction of the Permit Scheme.

Table A.3 Average works duration

DURATION	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	3.6	5.9	4.9	-1.0
Total number of days worked	**17,942**	**12,522**	**6,332**	**-6,190**

Highway authority works recorded show a significant reduction in average duration from year 1 (from 5.9 to 4.9 days).

The number of days worked on highway authority jobs in year 2 is 50% lower than in year 1 and 65% lower than prior to the introduction of the Scheme.

Table A.4 Average works duration, by works category

Year 2 Average Works Durations

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
29.7	17.0	1.3	1.1	14.7
3,449	**1,407**	**1,359**	**29**	**88**

Year 1 Average Works Durations

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
29.3	8.1	1.2	1.2	1.7
9,748	**717**	**1,973**	**27**	**57**

Difference

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
0.4	8.9	0.1	-0.1	13.0
-6,299	**690**	**-614**	**2**	**31**

The duration of Standard works has increased from 8.1 days to 17 days in year 2. The increase for Immediate Emergency works is due to one job with a duration of 83 days.

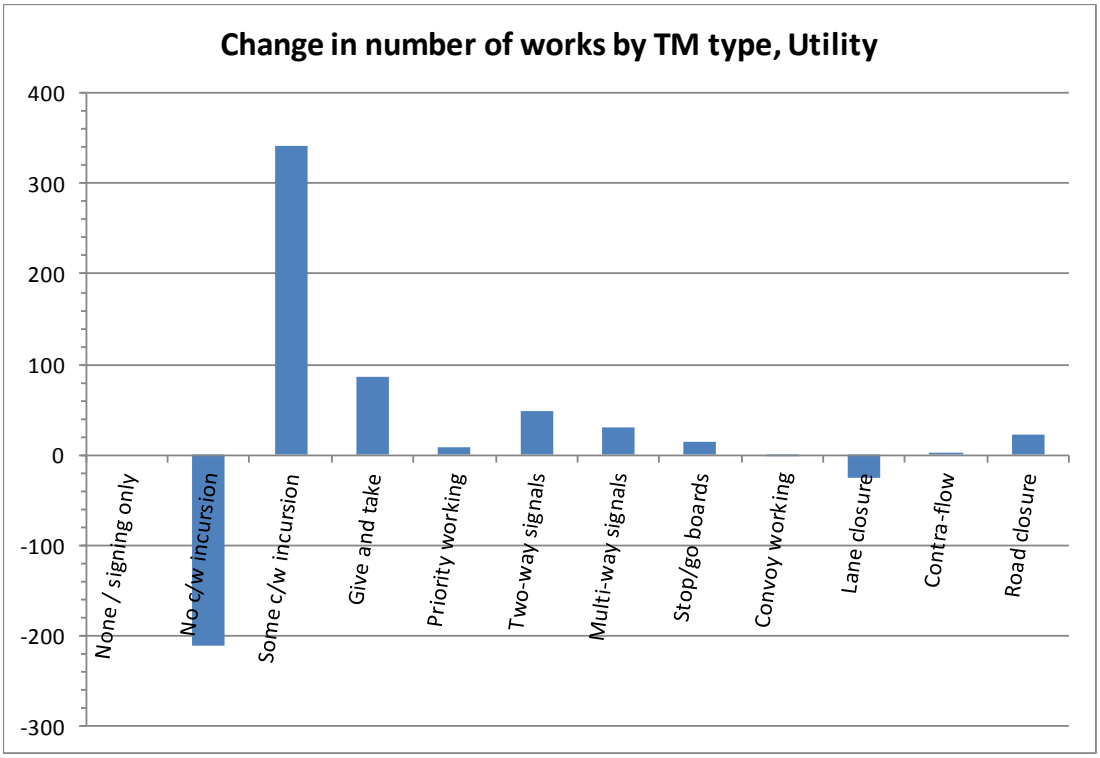
Otherwise, the average durations are within the range expected for each works category.

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 2013	Year 1 2015-16	Year 2 2016-17	Change
None / signing only	2,645			
No c/w incursion		1,222	1,011	-211
Some c/w incursion		605	946	341
Give and take	732	686	772	86
Priority working		7	15	8
Two-way signals	65	79	127	48
Multi-way signals	35	58	89	31
Stop/go boards	20	20	35	15
Convoy working	1	1		-1
Lane closure	48	55	29	-26
Contra-flow			1	1
Road closure	19	32	55	23
Blank				
Total	**3,565**	**2,765**	**3,080**	**315**



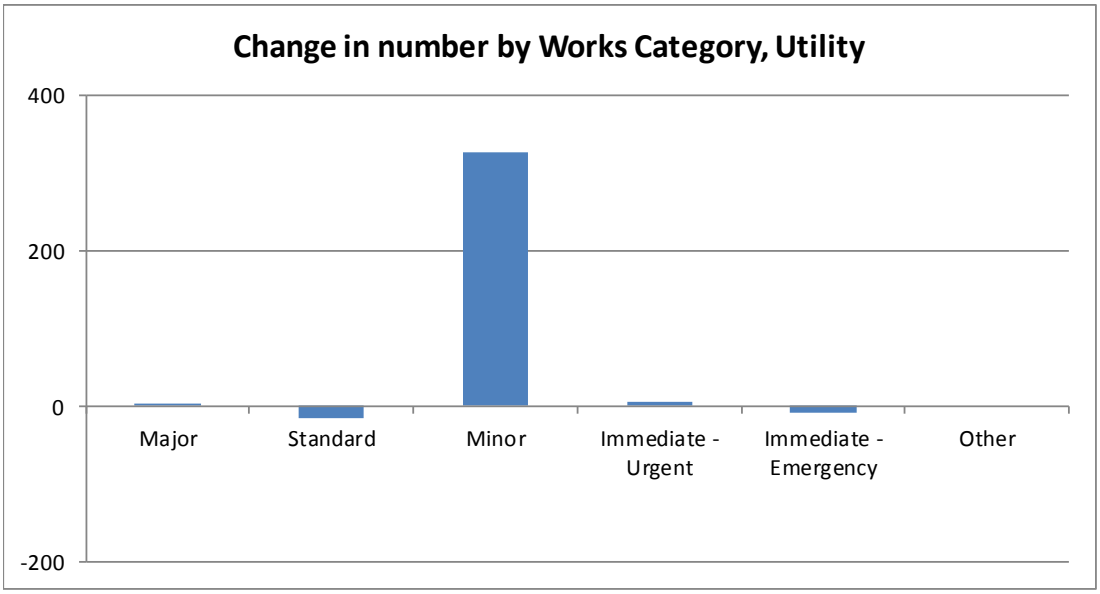
The year 2 traffic management types for utility works show an increase in works classified as having some carriageway incursion of operating under give and take or temporary traffic signal control. This may, in part, be due to the more

accurate recording of traffic management types following the introduction of the Permit Scheme.

Other than the reduction in works having no carriageway incursion, the increases are broadly in proportion with the number of each traffic management type.

Table A.6 Applications by works category

WORKS STOPPED	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
Major	155	68	72	4
Standard	319	273	259	-14
Minor	2,058	1,524	1,851	327
Immediate - Urgent	830	731	737	6
Immediate - Emergency	203	169	161	-8
Other				
Total	**3,565**	**2,765**	**3,080**	**315**



The additional 315 works are predominantly Minor works. There are no significant changes in the number of other works categories.

Table A.7 Average works duration

DURATION	Noticing 2013	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	7.3	3.8	3.5	-0.3
Total number of days worked	**26,022**	**10,384**	**10,713**	**329**

Utility works show a further 8% reduction in average works duration in year 2. This reduction offsets most of the increase in number of days worked (an 11%

increase in number of works has resulted in only a 3% increase in total number of days worked).

Table A.8 Average works duration, by Works Category

Year 2 Average Works Durations

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
14.1	6.8	2.1	4.1	6.2
1,014	**1,765**	**3,931**	**3,000**	**1,003**

Year 1 Average Works Durations

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
20.5	7.4	1.9	4.2	6.1
1,392	**2,021**	**2,908**	**3,037**	**1,026**

Difference

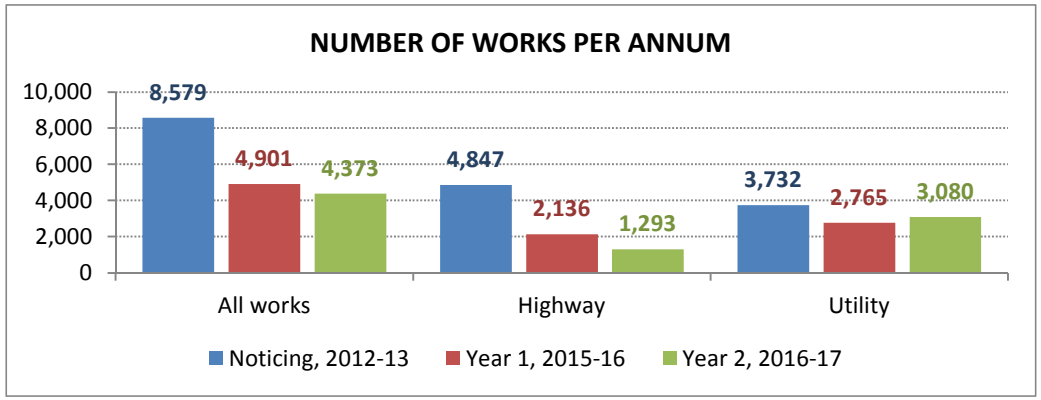
MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-6.4	-0.6	0.2	-0.1	0.1
-378	**-256**	**1,023**	**-37**	**-23**

Major works average duration has reduced from 20.5 days to 14.1 days and there are further small reductions in Standard and Immediate – Urgent works.

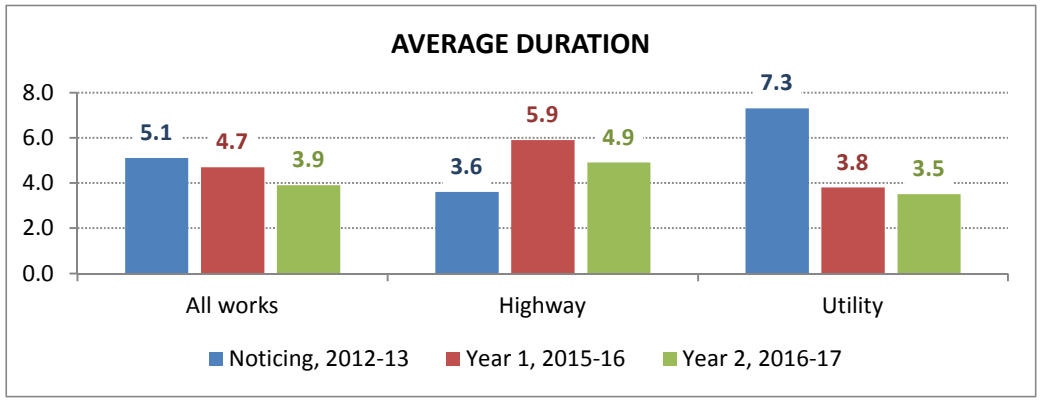
B. SCHEME BENEFITS

SCHEME BENEFITS

NUMBER OF WORKS	(number)		
	All works	Highway	Utility
Noticing, 2012-13	8,579	4,847	3,732
Year 1, 2015-16	4,901	2,136	2,765
Year 2, 2016-17	4,373	1,293	3,080
Change, Year 2 - Year 1	-528	-843	315
Change (%)	-10.8%	-39.5%	11.4%



DURATION	(days)		
	All works	Highway	Utility
Noticing, 2012-13	5.1	3.6	7.3
Year 1, 2015-16	4.7	5.9	3.8
Year 2, 2016-17	3.9	4.9	3.5
Change (days)	-0.8	-1.0	-0.3



DAYS WORKED	(days)		
	All works	Highway	Utility
Noticing, 2012-13	43,964	17,942	26,022
Year 1, 2015-16	22,906	12,522	10,384
Year 2, 2016-17	17,045	6,322	10,713
Change, Year 2 - Year 1	-5,861	-6,200	329
Change (%)	-25.6%	-49.5%	3.2%