

The Sefton Metropolitan Borough Council Permit Scheme for Road and Street Activities#



SEFTON MBC NETWORK MANAGEMENT
YEAR 2 REVIEW, 2016-17



*Sefton Council Permit Scheme,
Year 2 Review, 2016-17*

Contents:		Page
Chapter 1	INTRODUCTION.....	1
Chapter 2	PERMIT APPLICATIONS.....	2
Chapter 3	KPI MONITORING	11
Chapter 4	CONCLUSIONS	19
Appendix A	YEAR 2 DETAILED ANALYSIS	
A.1	Highway authority works	
A.2	Utility works	
Appendix B	SCHEME BENEFITS	



1 INTRODUCTION

1.1 Background

- 1.1.1 The Sefton Metropolitan Borough Council (SMBC) Permit Scheme went live on 2nd February 2015.
- 1.1.2 The operation of the first year of operation was evaluated and reported in the '*Sefton 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 16%. The combination of a reduction in the number of works and a significant reduction in average works durations resulted in an overall 38% reduction in number of days worked on the road network. This equated to nearly 25,000 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 **£3.9M per annum**. This saving equated to approximately 20% of the overall cost of works calculated in the CBA (£18.25M 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 was evaluated and reported in the report '*Sefton 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 (Mayrise database)
- Permit Scheme work stops notices, February 2015 - February 2016, Year 1 (Mayrise database)
- Permit Scheme work stops notices, February 2016 - February 2017, Year 2 (Mayrise database)

2.1.2 This review assesses 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.

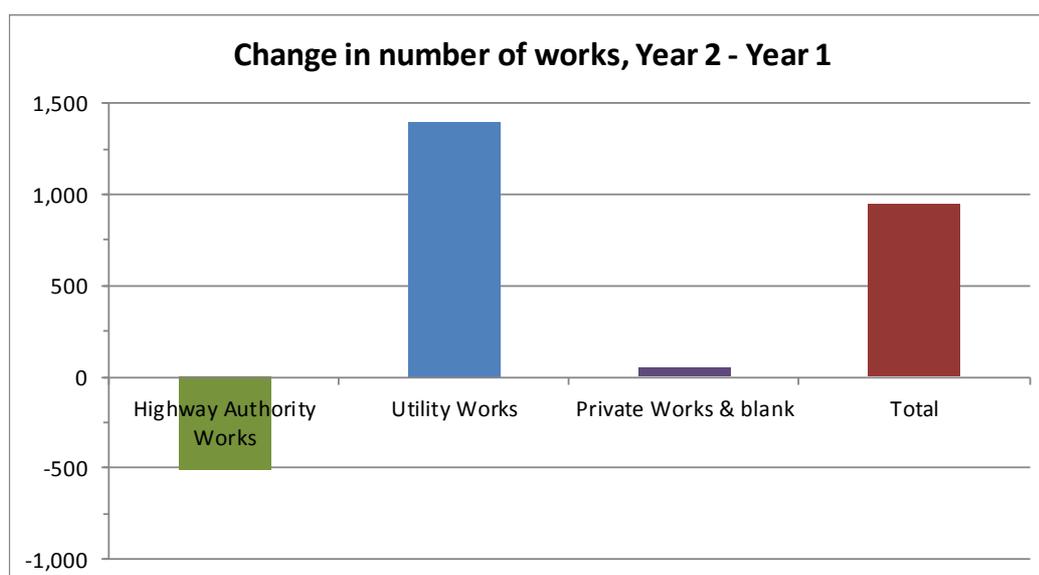
2.2 All works

2.2.1 The following series of charts and tables present a comparison of the second year under the Permit Scheme and both the year 1 data 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	11,945	8,970	8,458	-512
Utility Works	7,761	7,562	8,963	1,401
Private Works & blank	80	71	123	52
Total	19,786	16,603	17,544	941

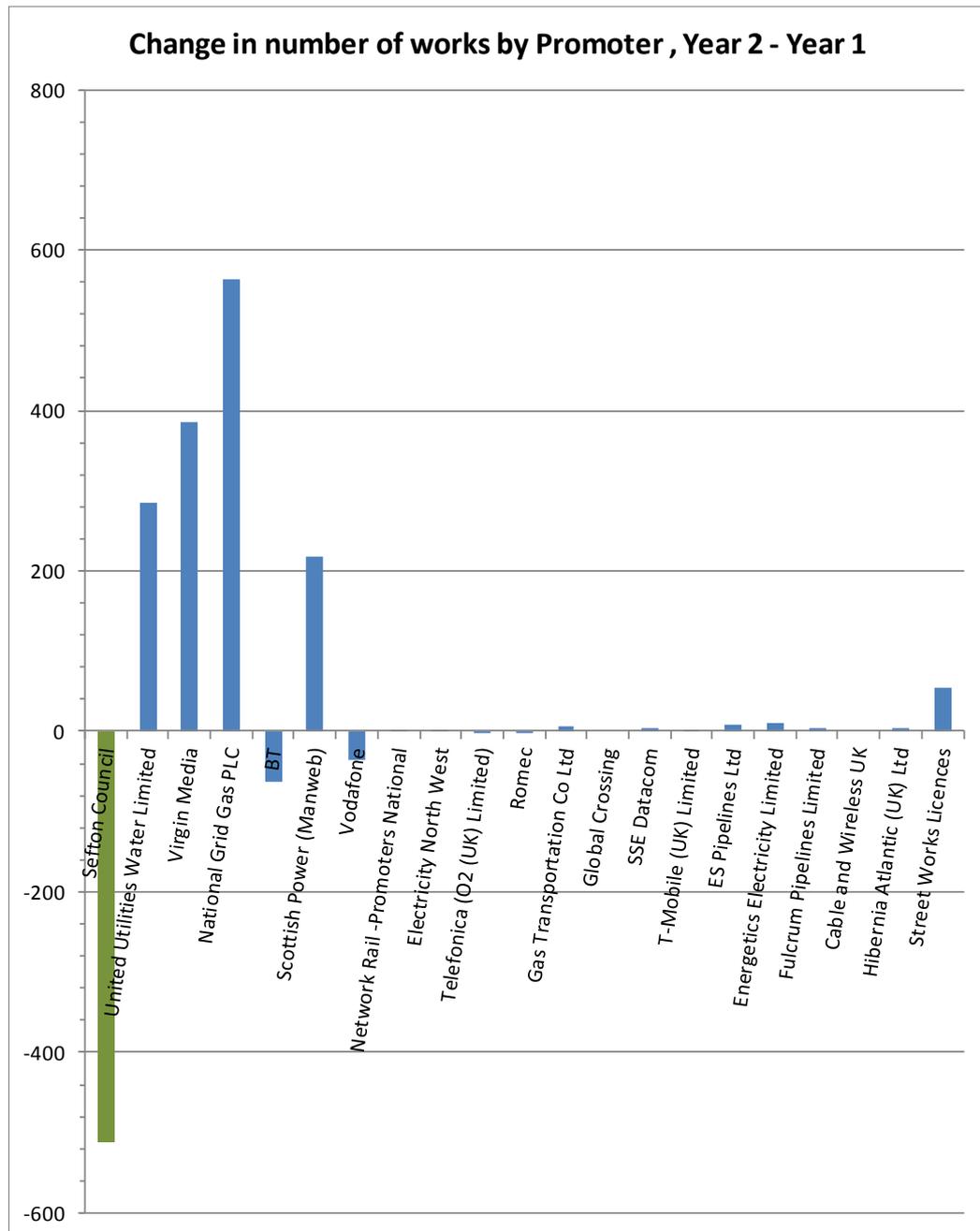




- 2.2.3 There is a small reduction in the number of highway works permitted (a 6% reduction from the previous year) and a 1,400 increase in the number of utility works requiring a permit (a 18% increase on the previous year).
- 2.2.4 The change in number of Permit applications by works promoter is presented 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
Sefton Council	11,945	8,970	8,458	-512
United Utilities Water Limited	3,090	3,432	3,717	285
Virgin Media	879	753	1,138	385
National Grid Gas PLC	1,012	1,025	1,589	564
BT	1,600	1,392	1,329	-63
Scottish Power (Manweb)	931	810	1,028	218
Vodafone	32	59	24	-35
Network Rail -Promoters National	48	30	31	1
Electricity North West	4		1	1
Telefonica (O2 (UK) Limited)	11	3	2	-1
Romec	25	2		-2
Gas Transportation Co Ltd	1	4	11	7
Global Crossing	6			
SSE Datacom	12		4	4
T-Mobile (UK) Limited	61	29	30	1
ES Pipelines Ltd	9	7	15	8
Energetics Electricity Limited	10		10	10
Fulcrum Pipelines Limited	25	14	18	4
Cable and Wireless UK	4			
Hibernia Atlantic (UK) Ltd		2	6	4
Street Works Licences	80	68	122	54
Blank / Others	1	3	11	8
Total	19,786	16,603	17,544	941



- 2.2.5 The increase in utility works is spread across four of the five principal utilities; UU Water, Virgin Media, National Grid Gas and Manweb.
- 2.2.6 Two of the utilities, Virgin Media and National Grid Gas, have seen a 50% increase in works compared with the previous year. The increases for UU Water and Manweb are still significant, at more than 200 compared with the previous year, amounting to an 8% and 27% increase, respectively.
- 2.2.7 The other utility companies show only small fluctuations from a relatively low base number in each year.
- 2.2.8 The changes for four of the big five utility companies is significant compared with the data for the previous four-year period, but reflects the increased activity on the network in the previous 12 months.

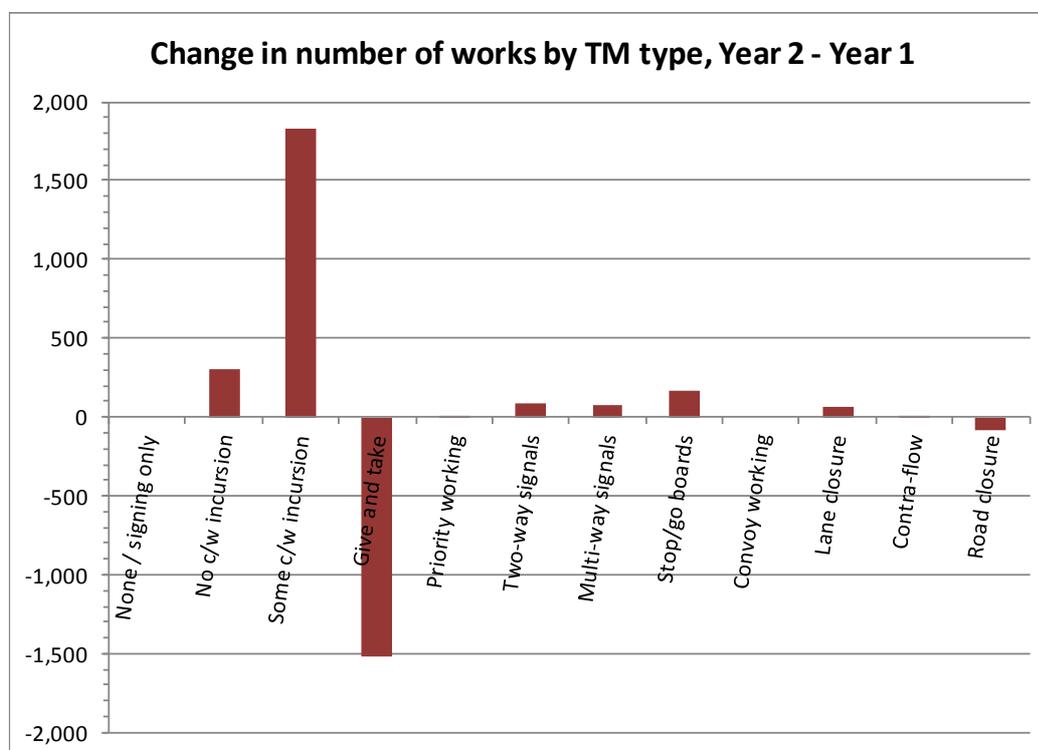


2.2.9 The following analysis is presented for applications by all works promoters. The same analysis is presented separately in Appendix A for highway authority works and utility company works.

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	17,397			
No c/w incursion		2,717	3,020	303
Some c/w incursion		10,133	11,961	1,828
Give and take	1,053	2,668	1,152	-1,516
Priority working	5	27	28	1
Two-way signals	326	318	403	85
Multi-way signals	159	188	269	81
Stop/go boards	324	91	261	170
Convoy working	148	1	1	
Lane closure	229	182	247	65
Contra-flow	4	1	7	6
Road closure	111	277	192	-85
Blank	30		3	3
Total	19,786	16,603	17,544	941



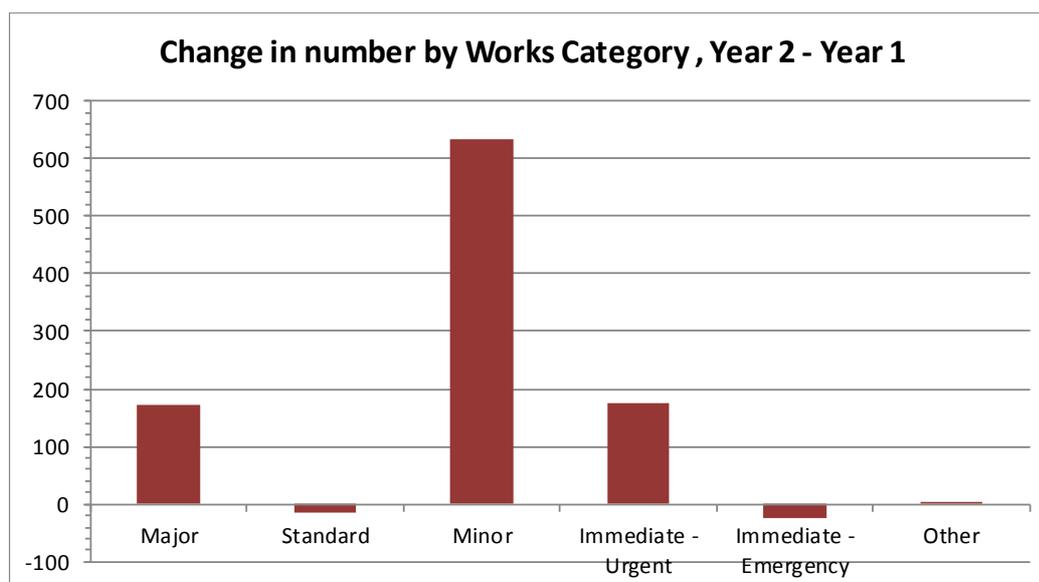
2.2.11 The biggest change from the previous year is the increase in works with some carriageway incursion and a corresponding reduction in works operating under give and take or with no carriageway incursion.



- 2.2.12 The reduction in highway works shows a large reduction in works operating under give and take and a smaller increase in works requiring some or no carriageway incursion.
- 2.2.13 The large increase in utility works shows a large number of additional Minor works and a corresponding increase in works operating with some carriageway incursion. There is a small reduction in works operating under give and take.
Year 2 Recommendation 01: Monitor traffic management types and confirm if an apparent move from give and take to some or no carriageway incursion is appropriate.
- 2.2.14 The 12-month review identified a reduction in works using stop/go boards or convoy working and a corresponding increase in road closures, with a recommendation that traffic management types be monitored in year 2 to *"confirm if an apparent move from stop/go boards and convoy working to road closures is appropriate."*
- 2.2.15 The year 2 data shows a shift back with an increase in the number of works operating with stop/go boards and lane closures and a reduction in the number of lane closures.
- 2.2.16 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	223	232	403	171
Standard	994	1,038	1,022	-16
Minor	11,977	11,935	12,569	634
Immediate - Urgent	5,376	2,567	2,742	175
Immediate - Emergency	1,215	829	805	-24
Other	1	2	3	1
Total	19,786	16,603	17,544	941



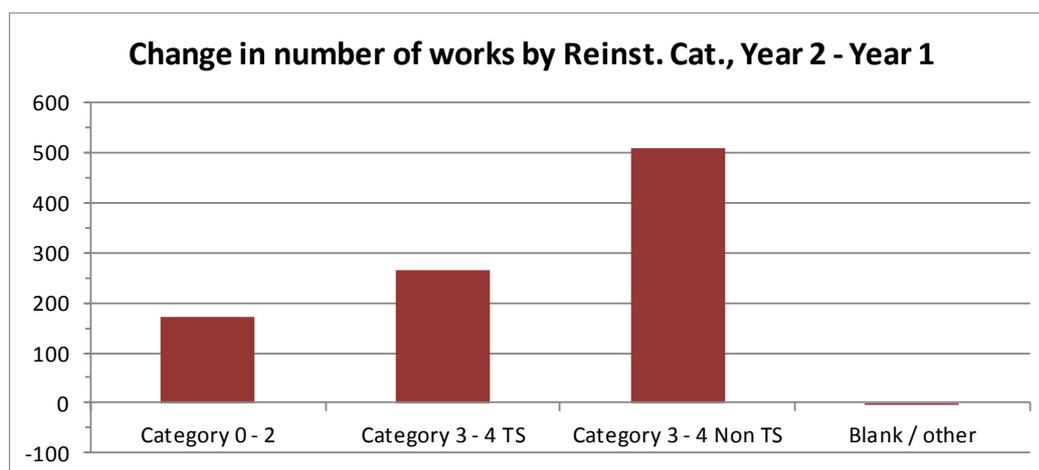
2.2.17 The most significant change is an increase in Minor works (from 11,935 to 12,569). The data analysis presented in Appendix A shows that the 360 reduction in the number of highway Minor works is offset by the 994 increase in the number of utility Minor works.

2.2.18 There is also a significant increase (74%) in the number of all Major works, with most of this increase attributed to utility works.

2.2.19 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	2,814	2,449	2,620	171
Category 3 - 4 TS	1,354	3,649	3,913	264
Category 3 - 4 Non TS	15,618	10,429	10,937	508
Blank / other		76	74	-2
All works	19,786	16,603	17,544	941



2.2.20 The increases are generally spread pro rata across the three reinstatement category groupings.

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	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	3.3	2.5	2.5	
Total number of days worked	65,672	40,996	44,115	3,119

2.2.22 There is no change in average works duration from the previous year. Therefore, maintaining the significant overall reduction from the period before the introduction of the Permit Scheme.

2.2.23 The 7.5% increase in total number of days worked is offset by the 6% increase in the number of works permitted in year 2.

2.2.24 Reviewing the highway authority works durations (Appendix A.1) shows a further small reduction in average duration in year 2, down from 1.8 to 1.7 days.

2.2.25 Average durations are low for each highway works category, with significant reductions in Major and Standard works compared with year 1. It is unlikely that durations could be reduced much further.

2.2.26 Reviewing the utility company works durations (Appendix A.2) shows a small increase in average duration for all works, from 3.2 days to 3.3 days.

2.2.27 Overall, the number of days worked on utilities schemes increased by 5,000 compared with the previous year. This is due to an increase in the number and duration of Major works (+2,700 days worked compared with year 1) and an approximate 20% increase in the number of Minor works (+1,700 days worked compared with year 1).

2.2.28 Average durations by works category are logical, but average durations for Immediate works are higher than for highway works (3.5 and 5.0 days compared with 1.7 and 1.6 days).



Year 2 Recommendation 02: Continue to monitor utility works durations on Immediate works in year 2, to identify if durations can be challenged to further improve benefits from the Scheme.

2.3 Scheme Benefit

- 2.3.1 There is an overall increase in the number of works in year 2. A 5.7% increase on year 1 records. But the number of works is still some 2,200 or 12% fewer than under Noticing in 2012-13. reduction in number of works across the network is significant at 16%.
- 2.3.2 Highway works have reduced by 5% compared with year 1 and utility works have increased by 20%.
- 2.3.3 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.

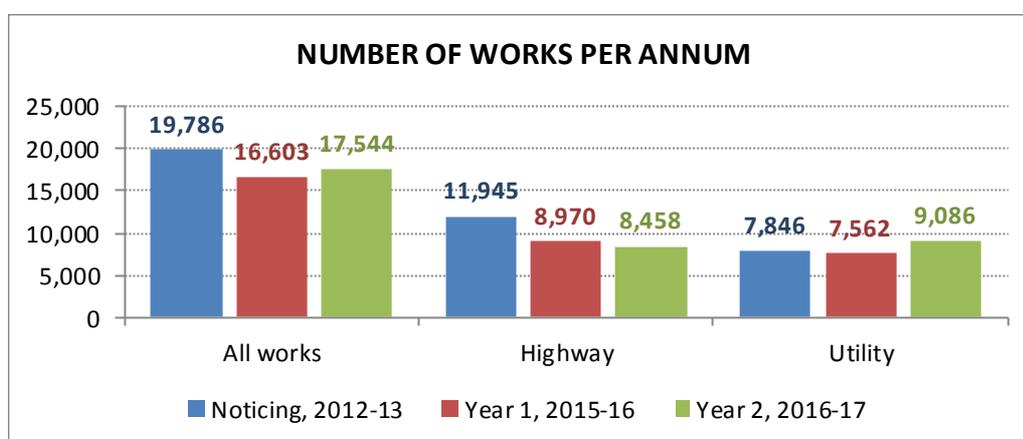


Figure 1 Number of works per annum

- 2.3.4 The 5.7% increase in number of works has resulted in a 7.6% increase in the number of days worked, due in part to a small increase (up by 0.1 days from 3.2 days) in the average duration of utility works.

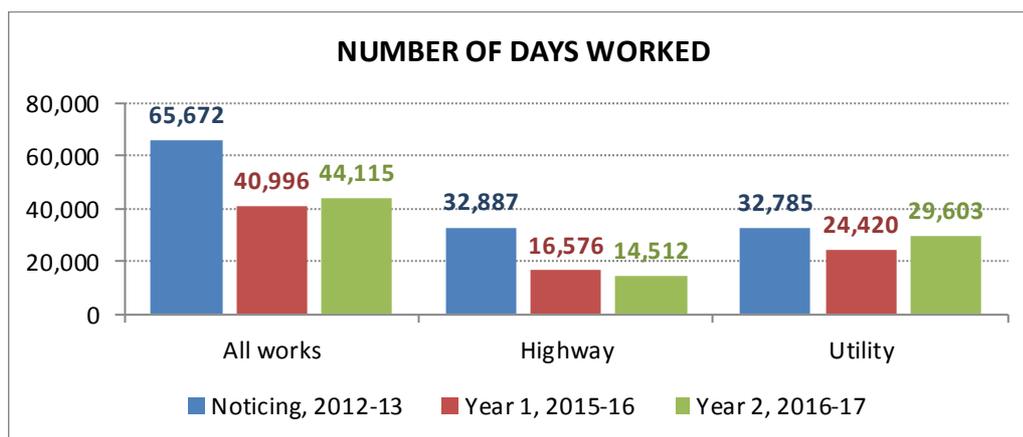


Figure 2 Number of days worked per annum

- 2.3.5 The number of days worked in year 2 is still some 33% lower than when operating under Noticing in 2012-13. The number of days occupied for highway



works is 55% lower and utility works 10% lower than the Noticing benchmark data.

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 works numbers is accounted for with short duration Immediate – Urgent works on category 3 and 4 non-traffic sensitive streets, the financial benefit to road users of the Permit Scheme in year 1 is calculated as:

- Average monetary cost of works per day, £159 (source: CBA report 2010 prices, works with some form of give and take management)
- Number of days saved under Permit Scheme, 21,557 (compared with 24,676 days in year 1)
- **Monetary benefit to road users, £3.4M per annum**

2.3.7 This saving equates to approximately 20% of the overall cost of works calculated in the CBA (£18.25M per annum total cost to road users).

2.4 Conclusions

2.4.1 The biggest change in the number of works is a 1,500 increase in utility compared with the year 1 data. This is a 20% increase in utility works.

2.4.2 The general trend for the larger utility companies is a significant increase in the number of works permitted compared with the noticing benchmark and Permit Scheme year 1 statistics.

2.4.3 Two of the utilities, Virgin Media and National Grid Gas, have seen a 50% increase in works compared with the previous year. The increases for UU Water and Manweb are still significant, at more than 200 compared with the previous year, amounting to an 8% and 27% increase, respectively.

2.4.4 The other utility companies show only small fluctuations from a relatively low base number in each year.

2.4.5 The overall reduction in average duration following the introduction of the Permit Scheme is maintained at 2.5 days; reducing from 3.3 days under Noticing. This is a 25% reduction in average works duration. The reduction constitutes 21,500 fewer days worked compared with the situation under Noticing, an overall 33% reduction in working days.

2.4.6 The total number of days worked on highway authority works further reduces by 2,000 or 12% compared with year 1. Overall, the number of days worked on utilities schemes increases by 5,200 compared with year 1. The 21% increase in number of days worked is offset by the 20% increase in number of works permitted in year 2.

2.4.7 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 as:

- Average monetary cost of works per day, £159 (source: CBA report 2010 prices, works with some form of give and take management)
- Number of days saved under Permit Scheme, 21,557
- **Monetary benefit to road users, £3.4M per annum**

2.4.8 The 33% 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 applications received and refused

PROMOTER	Received	Refused	%
Highway authority	10,193	619	6.1%
Utility	9,037	1,502	16.6%
ALL	19,230	2,121	11.0%

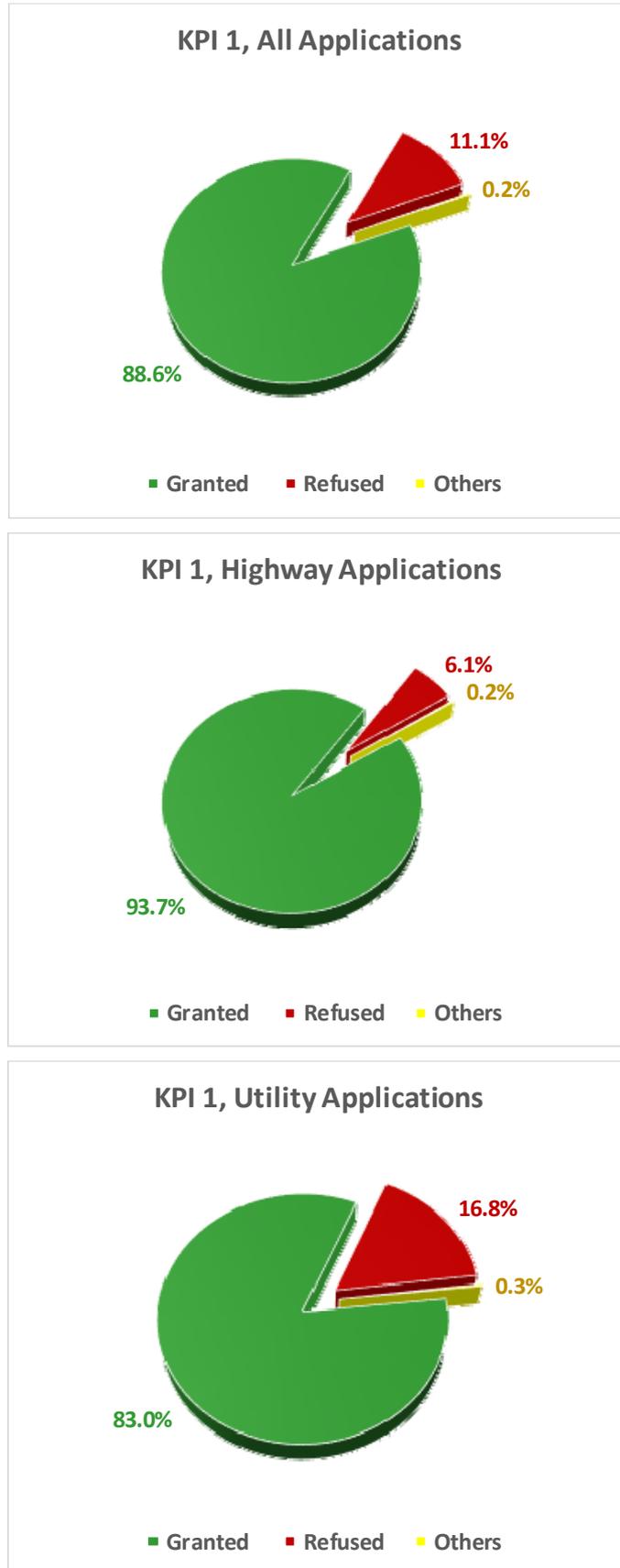


Figure 3: KPI 1, Permit Applications



- 3.2.3 KPI 1 – Approximately one in six of permit and permit variation applications by statutory undertakers were refused. 11% of all applications are refused.
- 3.2.4 This is slightly lower than the refusal rates for year 1, with utility applications refused down from 21% to 16.8%.
- 3.2.5 With regards to KPI 1, the high amount of granted permits does not reflect the actual amount of work involved by Scheme co-ordinators, as they only refuse permits where the activity promoters fail to update the permit.
- 3.2.6 It should be noted that the refusal data for KPI 1 includes Permit Modification requests for which the majority would have subsequently been granted. A high proportion of the modifications which have been requested are only applicable to utility works. This makes the KPI figures reported by Mayrise slightly misleading.
- 3.2.7 Table 8 and Figure 4 shows the breakdown of number of permit applications and permit variation requests received and the refusal rate.

Table 8 KPI 1, Permit Variation applications received and refused

PROMOTER	Received	Refused	%	Variation Apps as % Permit Apps
Highway authority	821	169	20.6%	8.1%
Utility	2,783	854	30.7%	30.8%
ALL	3,604	1,023	28.4%	18.7%

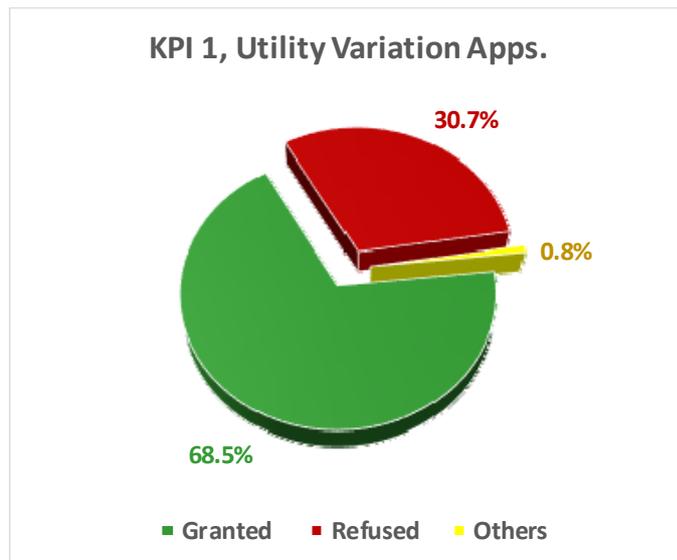
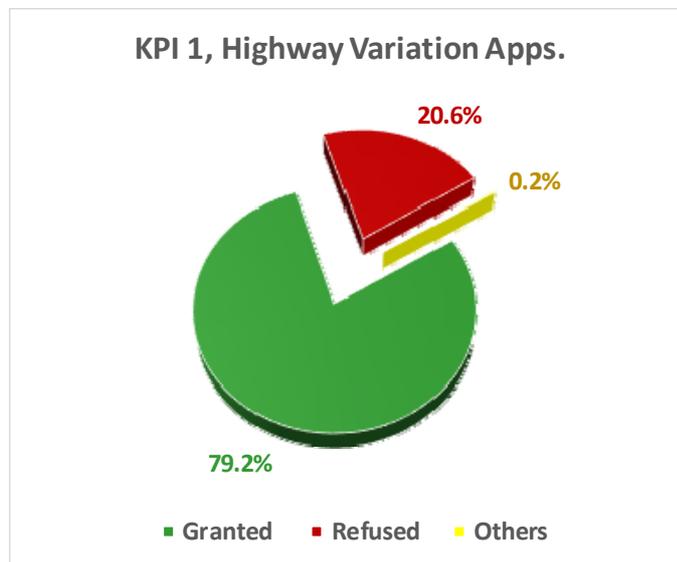
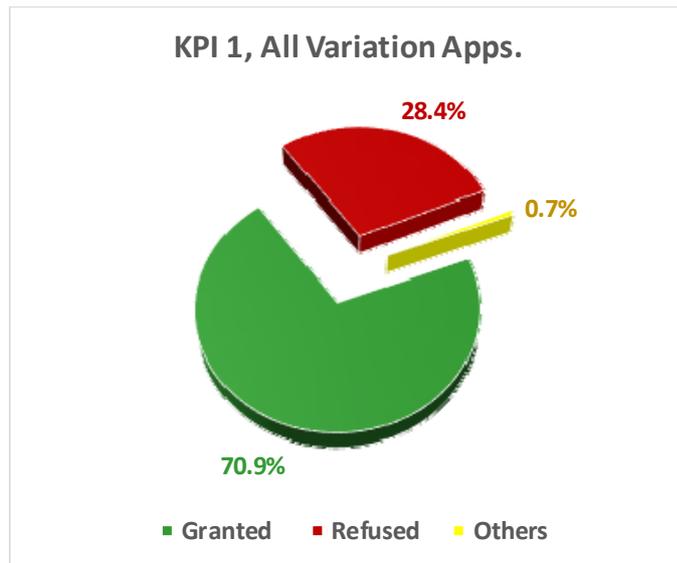


Figure 4: KPI 1, Permit Variation Applications



- 3.2.8 The refusal rate for permit variations is broadly similar with 21% of highway applications refused and 31% of utility applications refused. Approximately 80% of applications were submitted by utilities.
- 3.2.9 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 5.

All Conditions	Highway	Utility	All
TOTAL	3,336	9,720	13,056
	26%	74%	

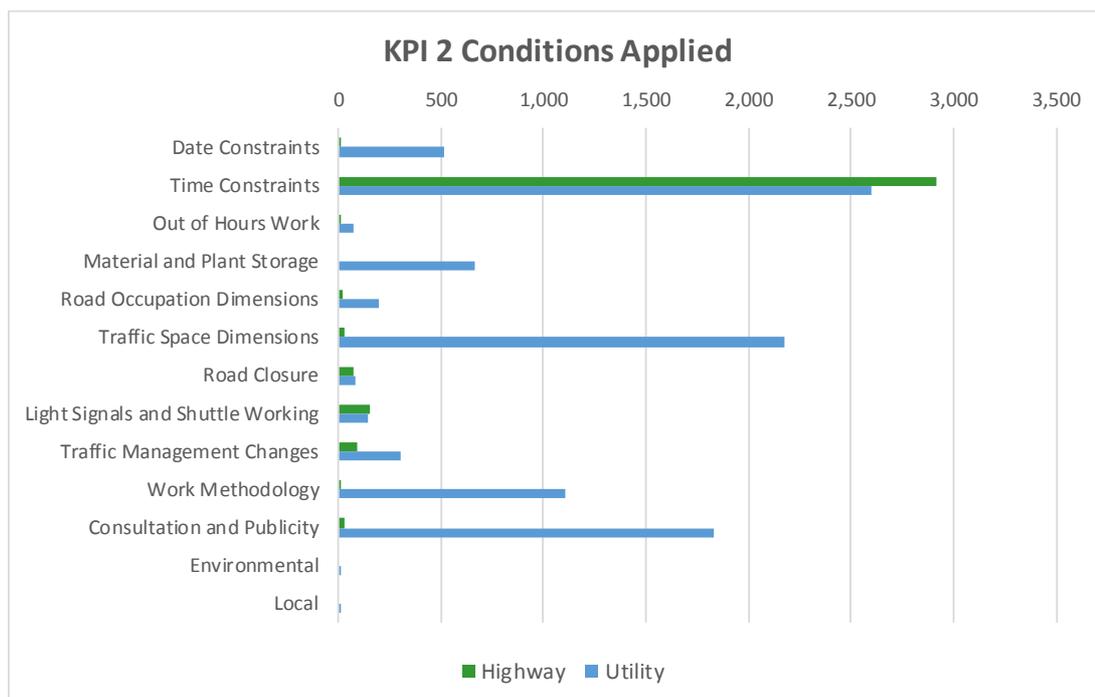


Figure 5: KPI 2, Conditions Applied

- 3.2.10 Approximately three quarters of the conditions applied relate to applications by utility works promoters. The remaining quarter apply to highway authority applications.
- 3.2.11 This is relatively consistent with year 1, where two thirds of conditions were applied to utility permit applications. The number of condition applied to highway authority permits is consistent with year 1. Utility conditions have increased from 8,100 to 9,700 in year 2. This 20% increase in conditions is consistent with the 20% increase in the number of utility permits granted.
- 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.

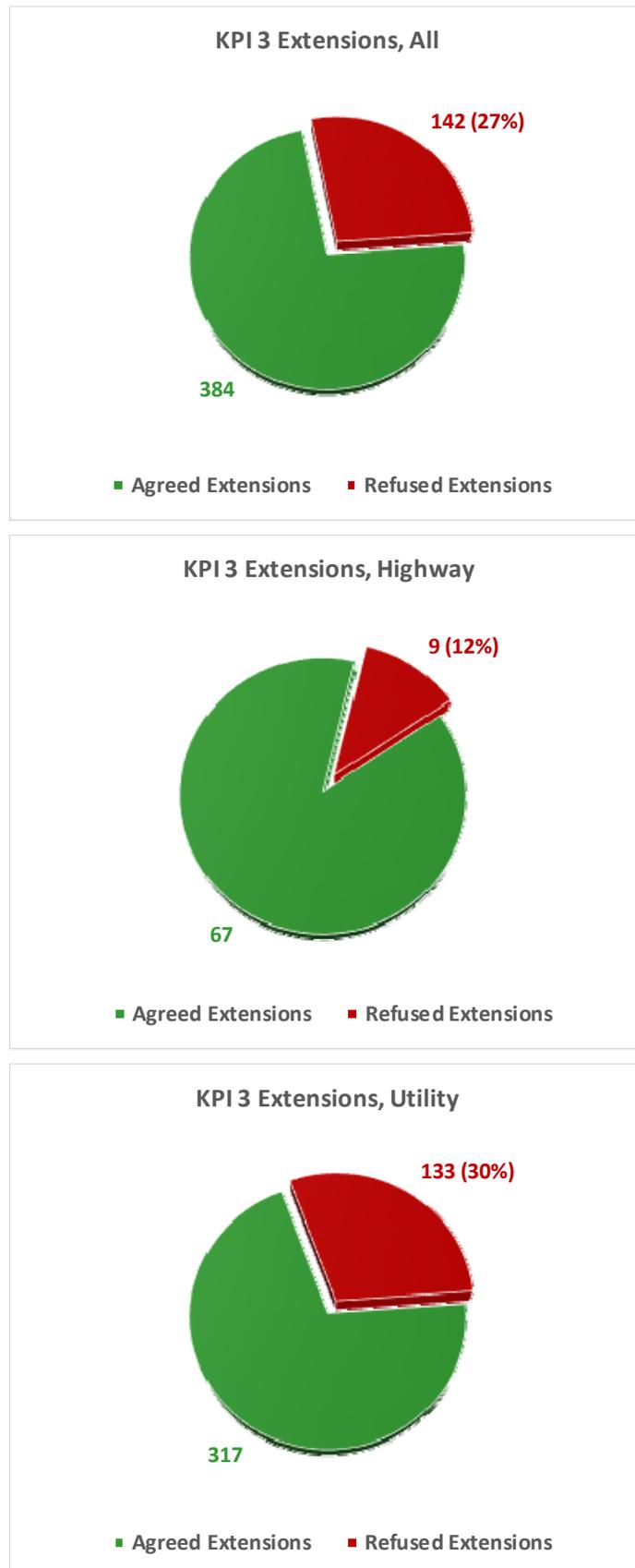


Figure 6: KPI 3, Permit Extensions



- 3.2.13 The statistics are broadly consistent with the year 1 data, with 30% of utility extension requests refused (compared with 24% in year 1). 9 out of 67 applications for highway permit extensions were refused (an increase from 2 out of 56 in year 1)
- 3.2.14 Sefton Permit Co-ordinators and Inspectors continue to work closely with each other. They are fully aware of the works that are being undertaken on-site and therefore only grant permit variations (extensions) where they feel that they are appropriate. This helps to reduce occupation of the highway.
- 3.2.15 KPI 7 - the Number of Inspections carried out to monitor conditions. During year 2, the number of inspections carried out to monitor conditions reduced from 1,055 in year 1 to 322. From these inspections 194 passed and 128 were found to be non-compliant, see Table 9 below. The failure rate has increased from 16% to 40%.

Table 9 Number of inspections carried out to monitor conditions

	Passed	Non-Compliant	Number of Inspections	Fail %
TOTAL NUMBER OF INSPECTIONS	194	128	322	40%

- 3.2.16 Consequently, 232 fixed penalty notices (FPN) have been given for breaches of permit conditions or working without a permit, identified during the course of the year. This is down from 314 FPN given in year 1 relating to permit conditions.

	FPN Given				Total	Permits	
	70(6)	74(7B)	19(1)	20(1)		Granted	%
TOTAL	65	155	52	180	452	7,471	6%

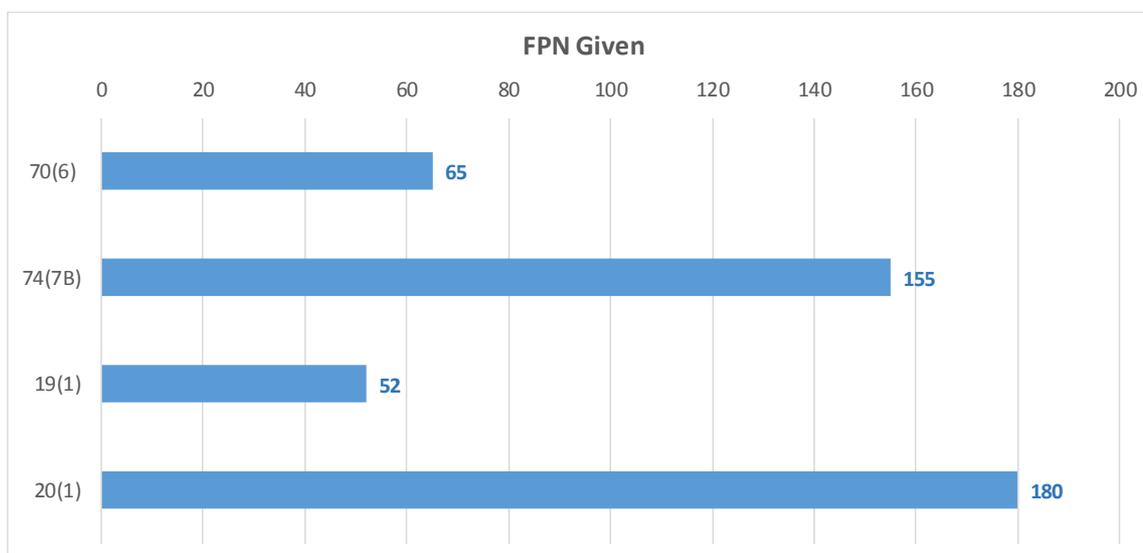


Figure 7: Fixed Penalty Notices Given

- 3.2.17 The FPN figures for 70 (6) and 74 (7B) are consistent with that from previous years. Offence codes 19(1) and 20 (1) are new offences relating specifically to permit schemes. 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.

Year 2 Recommendation 03: FPN rate down to 232 from 314 (working without a permit or breach of conditions). Monitor site inspection failures and FPN given for breach of permit conditions in year 3 to determine whether this reduction is result of improved working practices or a result of the reduction in the 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 one in six of permit and permit variation applications by statutory undertakers were refused. 11% of all applications are refused (the refusal rate for applications by the highway authority was similar to year 1 at 6%).
- 3.3.2 It should be noted that the refusal data for KPI 1 includes Permit Modification requests for which the majority would have subsequently been granted. A high proportion of the modifications which have been requested are only applicable to utility works. This makes the KPI figures reported by Mayrise slightly misleading.
- 3.3.3 **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. The change in number is broadly consistent with the change in number of permit applications compared with year 1.
- 3.3.4 **KPI 3**, the number of approved Permit variations (extensions); the statistics are broadly consistent with the year 1 data, with 30% of utility extension requests refused (compared with 24% in year 1). 9 out of 67 applications for highway permit extensions were refused (an increase from 2 out of 56 in year 1).
- 3.3.5 Sefton Permit Co-ordinators and Inspectors continue to work closely with each other. They are fully aware of the works that are being undertaken on-site and therefore only grant permit variations (extensions) where they feel that they are appropriate. This helps to reduce occupation of the highway.
- 3.3.6 **KPI 7**, the number of inspections carried out to monitor conditions; during year 2, the number of inspections carried out to monitor conditions reduced from 1,055 in year 1 to 322. From these inspections 194 passed and 128 were found to be non-compliant. The failure rate has increased from 16% to 40%.
- 3.3.7 Consequently, 232 fixed penalty notices (FPN) have been given for breaches of permit conditions or working without a permit, identified during the course of the year. This is down from 314 FPN given in year 1 relating to permit conditions.



4 CONCLUSIONS

4.1 Summary

- 4.1.1 The Sefton Metropolitan Borough Council (SMBC) Permit Scheme went live on 2nd February 2015.
- 4.1.2 The operation of the first year of operation was evaluated and reported in the '*Sefton Council 12 Month review, 2015-16*'.
- 4.1.3 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.
- 4.1.4 The purpose of the annual 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.

4.2 Scheme benefits

- 4.2.1 The biggest change in the number of works is a 1,500 increase in utility compared with the year 1 data. This is a 20% increase in utility works.
- 4.2.2 The general trend for the larger utility companies is a significant increase in the number of works permitted compared with the noticing benchmark and Permit Scheme year 1 statistics.
- 4.2.3 Two of the utilities, Virgin Media and National Grid Gas, have seen a 50% increase in works compared with the previous year. The increases for UU Water and Manweb are still significant, at more than 200 compared with the previous year, amounting to an 8% and 27% increase, respectively.
- 4.2.4 The other utility companies show only small fluctuations from a relatively low base number in each year.
- 4.2.5 The overall reduction in average duration following the introduction of the Permit Scheme is maintained at 2.5 days; reducing from 3.3 days under Noticing. This is a 25% reduction in average works duration. The reduction constitutes 21,500 fewer days worked compared with the situation under Noticing, an overall 33% reduction in working days.
- 4.2.6 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 2 is calculated at **£3.4M per annum**. This saving equates to approximately 20% of the overall cost of works calculated in the CBA (£18.25M per annum total cost to road users).
- 4.2.7 The 33% 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 Three recommendations have been made to monitor performance during year 3;

Year 2 Recommendation 01: Monitor traffic management types and confirm if an apparent move from give and take to some or no carriageway incursion is appropriate.

Year 2 Recommendation 02: Continue to monitor utility works durations on Immediate works in year 2, to identify if durations can be challenged to further improve benefits from the Scheme.

Year 2 Recommendation 03: FPN rate down to 232 from 314 (working without a permit or breach of conditions). Monitor site inspection failures and FPN given for breach of permit conditions in year 3 to determine whether this reduction is result of improved working practices or a result of the reduction in the number of inspections

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 continued to achieve its stated objectives in year 2, as defined in the application documents.

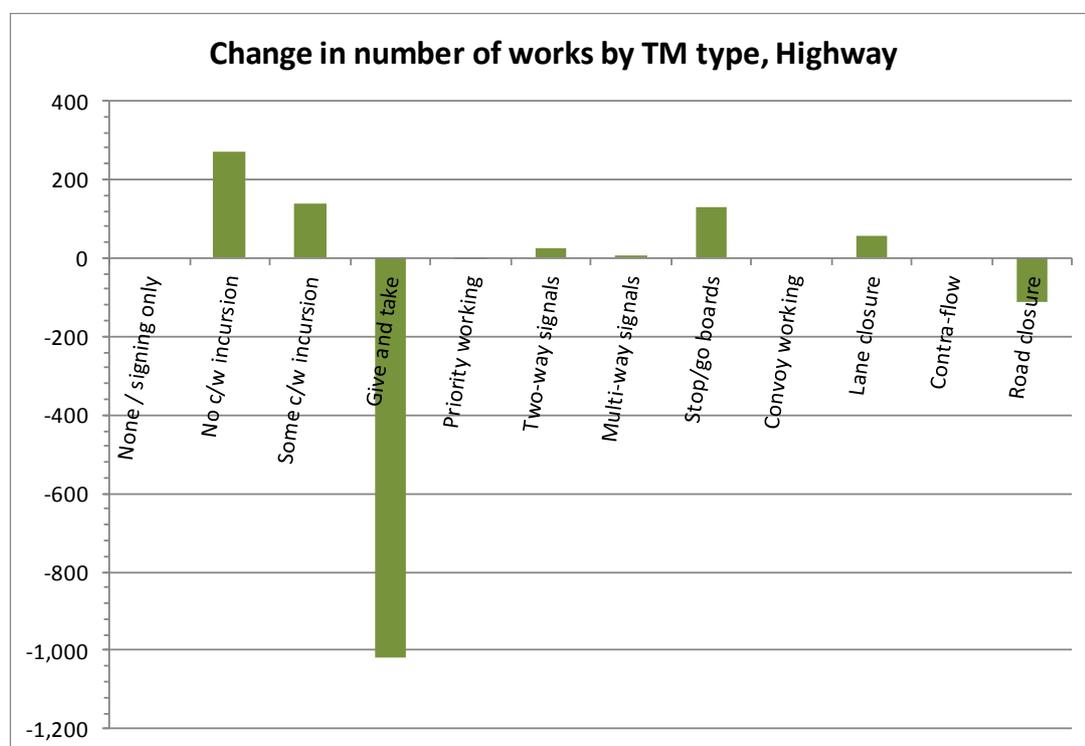
A. YEAR 2 DETAILED ANALYSIS

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	11,047			
No c/w incursion		127	396	269
Some c/w incursion		7,189	7,327	138
Give and take	122	1,068	52	-1,016
Priority working		2	1	-1
Two-way signals	189	173	198	25
Multi-way signals	68	75	78	3
Stop/go boards	146	40	169	129
Convoy working	148	1	1	
Lane closure	144	109	164	55
Contra-flow	1			
Road closure	50	186	72	-114
Blank	30			
Total	11,945	8,970	8,458	-512



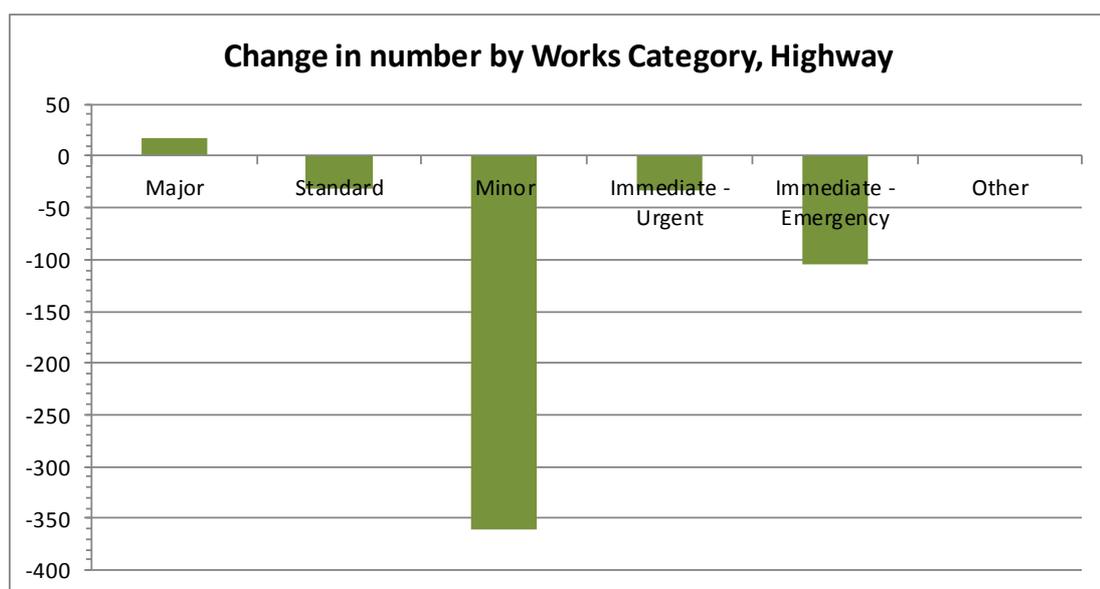
The biggest change is a reduction in the number of works operating under give and take traffic management. This is partly due to a reduction in the number of

Minor works (350 fewer than year 1) and also a shift towards works operating with no or some carriageway intrusion (400 more than year 1).

The number of works requiring a road closure has reduced back to Noticing levels, a reduction of 114 compared with year 1.

Table A.2 Applications by works category

WORKS STOPPED	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Major	65	32	49	17
Standard	259	525	494	-31
Minor	7,618	7,393	7,033	-360
Immediate - Urgent	3,543	646	612	-34
Immediate - Emergency	459	374	270	-104
Other	1			
Total	11,945	8,970	8,458	-512



The overall reduction in number of highway works accounted for by a 5% reduction in the number of Minor works and smaller reductions in the Standard and Immediate works.

Major works sees a small, but significant (50%) increase compared with year 1. The change appears to be within the range of variation over the previous 5 years.

Table A.3 Average works duration

DURATION	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	2.8	1.8	1.7	-0.1
Total number of days worked	32,887	16,576	14,512	-2,064

Highway authority works show a further small reduction in average duration and a 12% reduction in number of days worked.

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

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
14.2	5.4	1.4	1.7	1.6
695	2,673	9,663	1,059	422

Year 1, 2015-16, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
21.8	7.4	1.4	1.7	1.2
669	3,883	10,430	1,099	465

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-7.6	-2.0			0.4
26	-1,210	-767	-40	-43

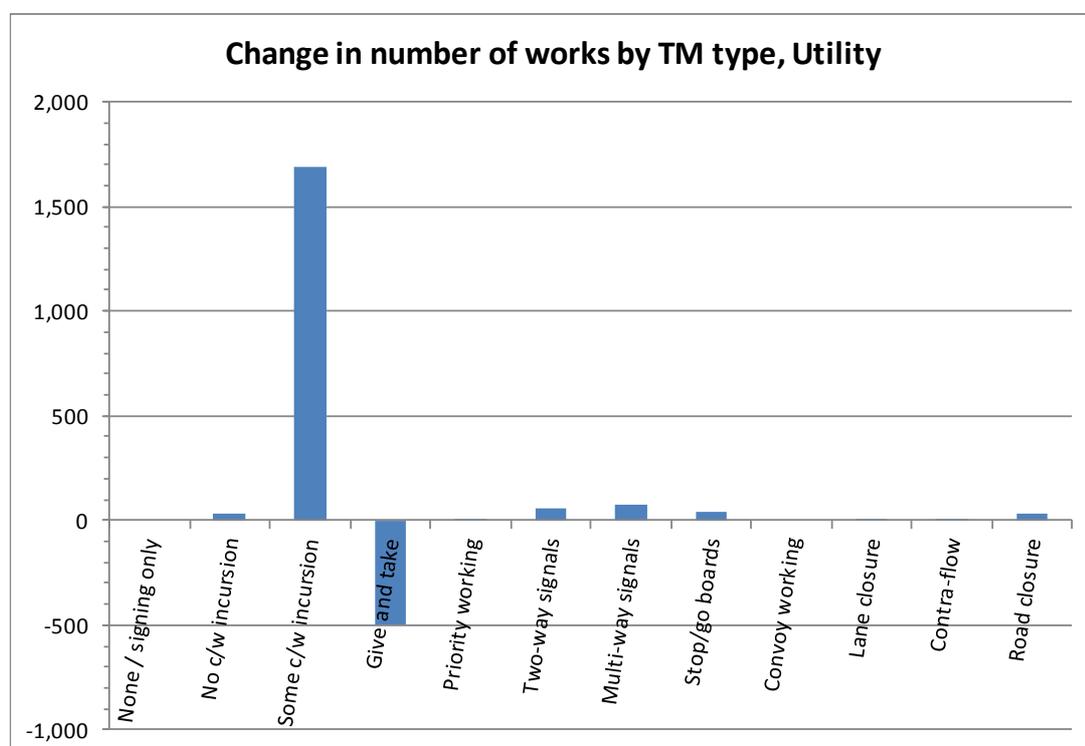
Highway authority average durations are within the range expected for each works category. Year 2 durations have reduced for Major and Standard works, with a near 33% reduction in average duration for both.

A.2 Utility works

Traffic management changes are primarily a result of the 19% increase in the number of utility promoters permits granted.

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	6,350			
No c/w incursion		2,590	2,624	34
Some c/w incursion		2,944	4,634	1,690
Give and take	931	1,600	1,100	-500
Priority working	5	25	27	2
Two-way signals	137	145	205	60
Multi-way signals	91	113	191	78
Stop/go boards	178	51	92	41
Convoy working				
Lane closure	85	73	83	10
Contra-flow	3	1	7	6
Road closure	61	91	120	29
Blank				
Total	7,841	7,633	9,083	1,450

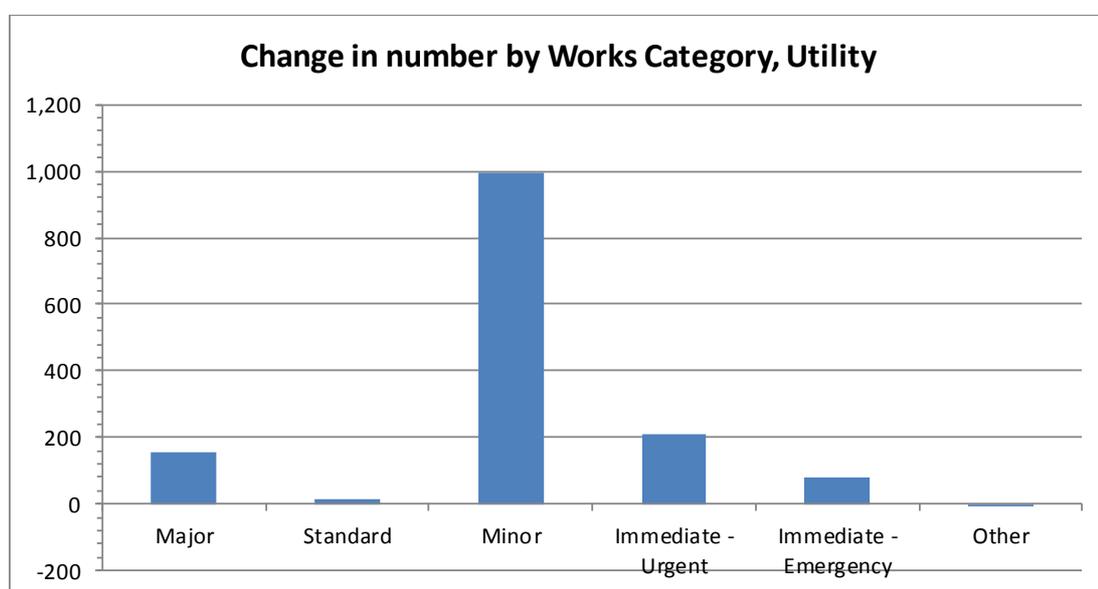


There is a significant increase in the number of works operating under some carriageway incursion (57% more than in year 1). This due in part to the overall increase in works, but also by an apparent shift from give and take to some carriageway intrusion.

There are small, but nevertheless significant, increases in works operating under temporary traffic signal control or stop/go boards. The increase in the number of road closures is broadly consistent with the overall increase in number of works.

Table A.6 Applications by works category

WORKS STOPPED	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Major	158	200	354	154
Standard	735	513	528	15
Minor	4,359	4,542	5,536	994
Immediate - Urgent	1,833	1,921	2,130	209
Immediate - Emergency	756	455	535	80
Other		2		-2
Total	7,841	7,633	9,083	1,450



The increase in works by category is generally distributed evenly across each category, other than a significant increase in the number of Major works (an additional 154 works or 77% increase compared with year 1). This increase will have contributed to the small overall increase in average works duration compared with year 1.

Table A.7 Average works duration

DURATION	Noticing 2012-13	Year 1 2015-16	Year 2 2016-17	Change
Average duration (days)	4.2	3.2	3.3	0.1
Total number of days worked	32,785	24,420	29,603	5,183

Utility works show a small 0.1 days increase in average duration. Otherwise the 5,200 (or 20%) increase in total number of days worked is accounted for by the 19% increase in the number of works undertaken by utility promoters.

Table A.8 Analysis, average duration by works category

Year 2, 2016-17, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
15.7	6.0	1.9	3.5	5.0
5,569	3,187	10,783	7,375	2,682

Year 1, 2015-16, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
14.1	5.9	2.0	3.8	5.0
2,829	3,027	9,081	7,215	2,263

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
1.6	0.1	-0.1	-0.3	
2,740	160	1,702	160	419

Average durations for Minor and Immediate works are lower than the previous year. There are small increase in durations for Major and Standard works, but these appear to be within the expected range of variation given the relatively small number of works for these categories.

B. SCHEME BENEFIT SUMMARY

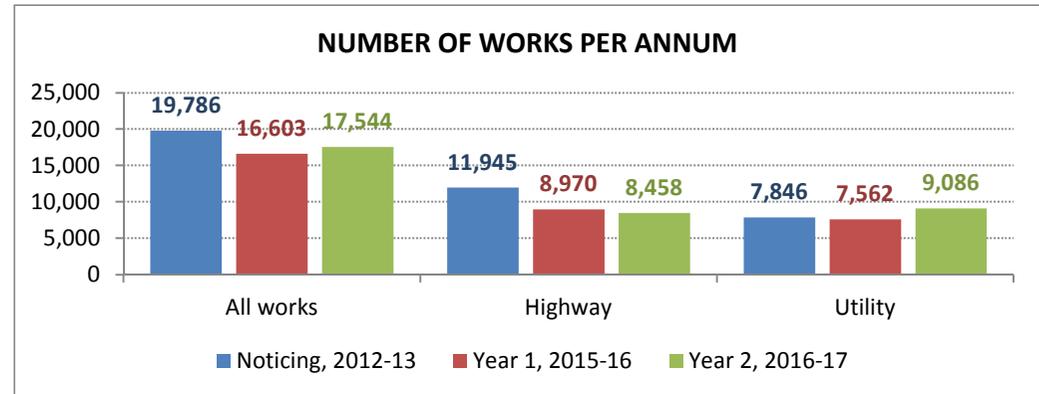
B.1 Year on year comparison

A comparison of the number of works, average duration of works and total number of days worked between year 2, year 1 and the pre-Permit Scheme situation under Noticing is shown on the following page.

SCHEME BENEFITS

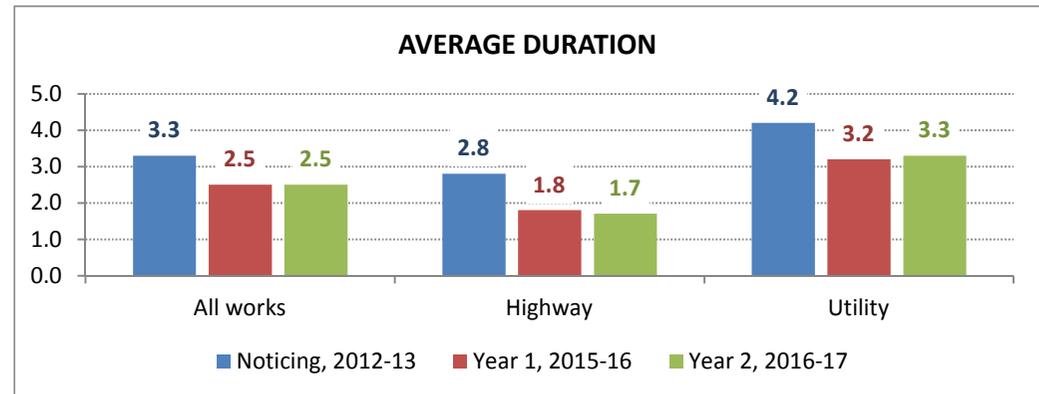
NUMBER OF WORKS (number)

	All works	Highway	Utility
Noticing, 2012-13	19,786	11,945	7,846
Year 1, 2015-16	16,603	8,970	7,562
Year 2, 2016-17	17,544	8,458	9,086
Change, Year 2 - Year 1	941	-512	1,524
Change (%)	5.7%	-5.7%	20.2%



DURATION (days)

	All works	Highway	Utility
Noticing, 2012-13	3.3	2.8	4.2
Year 1, 2015-16	2.5	1.8	3.2
Year 2, 2016-17	2.5	1.7	3.3
Change (days)	0.0	-0.1	0.1



DAYS WORKED (days)

	All works	Highway	Utility
Noticing, 2012-13	65,672	32,887	32,785
Year 1, 2015-16	40,996	16,576	24,420
Year 2, 2016-17	44,115	14,512	29,603
Change, Year 2 - Year 1	3,119	-2,064	5,183
Change (%)	7.6%	-12.5%	21.2%

