

Cumbria County Council

**Permit Scheme for Road and Street Works Activities
Year 2 Annual Review, 2021-22**

November 2022



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1 INTRODUCTION

1.1 Background

1.1.1 The Cumbria County Council Permit Scheme went live in April 2020.

1.1.2 The Permit Scheme legislation requires an annual review of Scheme performance in the first 3 years of operation and every 3 years thereafter.

1.1.3 The purpose of the annual review is to;

- Compare the scheme against the stated Scheme Objectives
- 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).
- Review 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 purpose of this review is to monitor the performance of the Scheme in the second year of operation and to recommend measures to further improve the performance of the Scheme in terms of the objectives stated in 1.1.3 above.

1.1.5 The operating costs and fee income will be reviewed at the end of year 3 with fees charged adjusted accordingly in the event of a loss or surplus.

1.2 Report structure

1.2.1 The following chapters present the results of the review with respect to:

- Scheme objectives
- Duration of works
- Key Performance Indicators
- Staffing & resources



2 OBJECTIVES

2.1 Scheme Objectives

2.1.1 The objectives as set out in the 'Cumbria County Council Permit Scheme for Road and Street Works Activities' scheme document are:

- a reduction in safety hazards and incidents in and around works sites;
- a reduction in the adverse impact of works on local residents and/or businesses;
- a reduction in the adverse impact of works on disabled people and/or public transport users;
- targeted work to help delivery of a national infrastructure project;
- protection of the structure of the street and apparatus within it, in a way that helps manage long-term maintenance costs;
- better information for road users about works in the highway;
- greater compliance with highways legislation by works promoters;
- greater cooperation and collaboration between different works promoters;
- greater adoption of minimally invasive works methods, and measures to mitigate the impact of excavations;
- reduction in the environmental impact of works (less noise, greater cleanliness, more recycling of materials etc.);
- increased productivity of the local authority's own highway service teams.

2.1.2 Many of these objectives are subjective in nature, but where they can be objectively evaluated, the annual review will report on the impact towards achieving the objectives stated above, for example;

- Demonstrating scheme parity for all promoters by presenting approval and refusal rates for all applications.

2.1.3 Others will require to be evaluated over the initial years of the scheme to identify changes and progress towards the objective, for example;

- Demonstrate a year-on-year increase in collaborative working between works promoters,
- Reducing occupancy of the highway during the peak holiday seasons,
- Improve safety for all road users by driving down non-compliance during inspections and FPN rates for signing and lighting failures, for example.

2.1.4 The review will also objectively monitor the impact of street works on road users, by monitoring the reduction in works duration and occupancy of the network.



3 WORKS DURATION

3.1 Methodology

3.1.1 Data sources available for this review are:

- Permit Scheme work stops notices, April 2021 – March 2022 (Symology database)
- Key Performance Indicators (KPI) reports, April 2021 – March 2022
- Fee income billed for permits and permit variations granted, April 2021 – March 2022
- NRSWA Noticing work stops notices, 2017 – 2018 (WDM database)

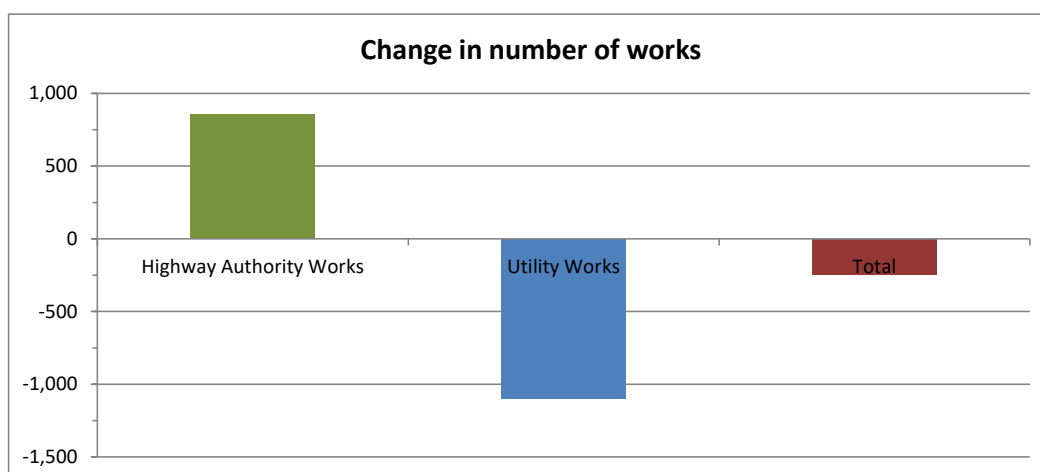
3.1.2 The purpose of this review is to quantify the benefit of the Permit Scheme in terms of a reduction in number of days worked on the road network during the second year of operation.

3.2 All works

3.2.1 The number of completed works in the second year is compared with the number completed in the first year and the number of Notices recorded for an equivalent 12 month period in Table 1 and the accompanying chart.

Table 1 Number of works closed

PROMOTER TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Highway Authority Works	383	2,375	3,230	855
Utility Works	13,048	13,026	11,927	-1,099
Total	13,431	15,401	15,157	-244



3.2.2 The number of highway authority works recorded in the first year increased sixfold compared with the Noticing benchmark period, from 383 to 2,375 works completed. This has increased by a further 36% to 3,230 completed works in the second year. This amounts to 21% of all works completed in the second year.



- 3.2.3 There has been a reduction in the number of utility works recorded, reducing by 1,099 works or 8.4%.
- 3.2.4 Overall, the number of works completed in the second year of the scheme is less than 2% lower than recorded in previous years.
- 3.2.5 A further 3,735 permit applications were granted in the second year but abandoned before the proposed start date. 1,090 by the Council and 2,645 by utility works promoters.

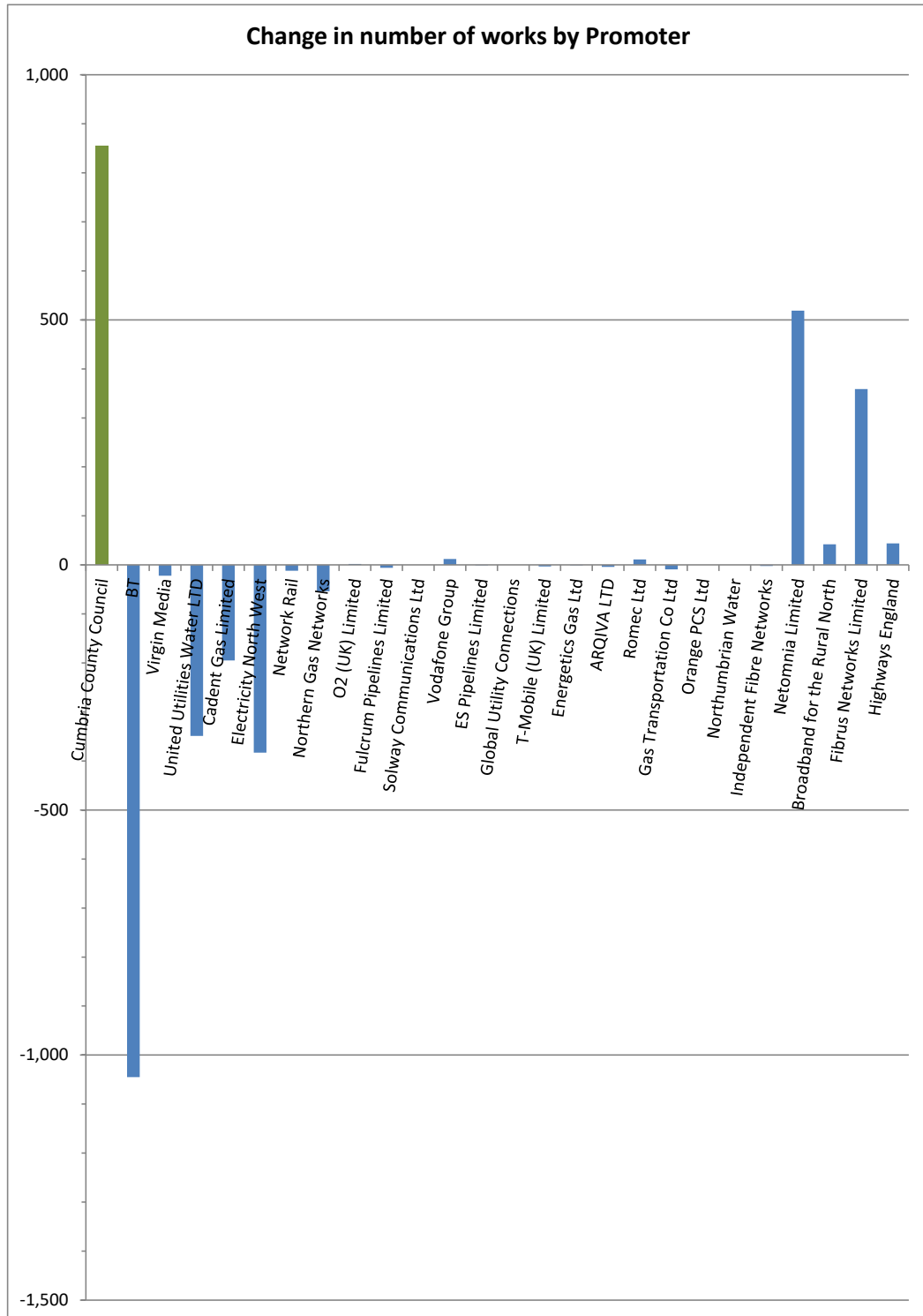
Table 2 Granted permits subsequently cancelled

Granted but Cancelled/Never Started	Granted	Cancelled / Never Started	%
Highway authority	6,028	1,090	18.1%
Utility	20,319	2,645	13.0%
ALL	26,347	3,735	14.2%

- 3.2.6 The number of granted then subsequently cancelled permits for utility promoters has increased by 27% compared with Year 1. Some promoters have been having trouble recruiting and retaining staff since returning from lockdown which has had an impact on scheduling works.
- 3.2.7 The overall cancellation of less than 15% is comparable with neighbouring authorities.
- 3.2.8 The breakdown of works completed by works promoter is shown in Table 3 and the accompanying chart.
- 3.2.9 The number of works completed by utility works promoters has reduced for most compared with the previous year. The number of works completed by BT, Cadent Gas, And Electricity North West have typically reduced by approximately 30%.
- 3.2.10 During Year 2, an increase in the number of works completed by new telecoms promoters – Netomnia Limited and Fibrus Networks Limited, completing almost 1,000 works in the second year – has offset a reduction in the number of works completed by BT and Virgin Media.
- 3.2.11 The number of works completed by other works promoters show only small changes from the previous year.

**Table 3 Permits completed by works promoter**

PROMOTER	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Cumbria County Council	383	2,375	3,230	855
BT	4,271	3,462	2,417	-1,045
Virgin Media	579	161	139	-22
United Utilities Water LTD	4,888	6,200	5,851	-349
Cadent Gas Limited	618	700	505	-195
Electricity North West	1,517	1,443	1,060	-383
Network Rail	97	142	130	-12
Northern Gas Networks	917	678	624	-54
O2 (UK) Limited	5		2	2
Fulcrum Pipelines Limited	11	6		-6
Solway Communications Ltd	16	60	60	
Vodafone Group	53	11	23	12
ES Pipelines Limited	10	4	3	-1
Global Utility Connections		3	3	
T-Mobile (UK) Limited	23	32	29	-3
Energetics Gas Ltd	2	5	4	-1
ARQIVA LTD	5	4		-4
Romec Ltd	1	2	13	11
Gas Transportation Co Ltd	4	13	4	-9
Orange PCS Ltd	1			
Northumbrian Water	2	5	5	
Independent Fibre Networks		3	1	-2
Netomnia Limited			519	519
Broadband for the Rural North	20	36	78	42
Fibrus Networks Limited			359	359
Highways England		31	75	44
Utility Distribution Networks Ltd		2	6	4
Others	8	23	17	-6
Total	13,431	15,401	15,157	-244

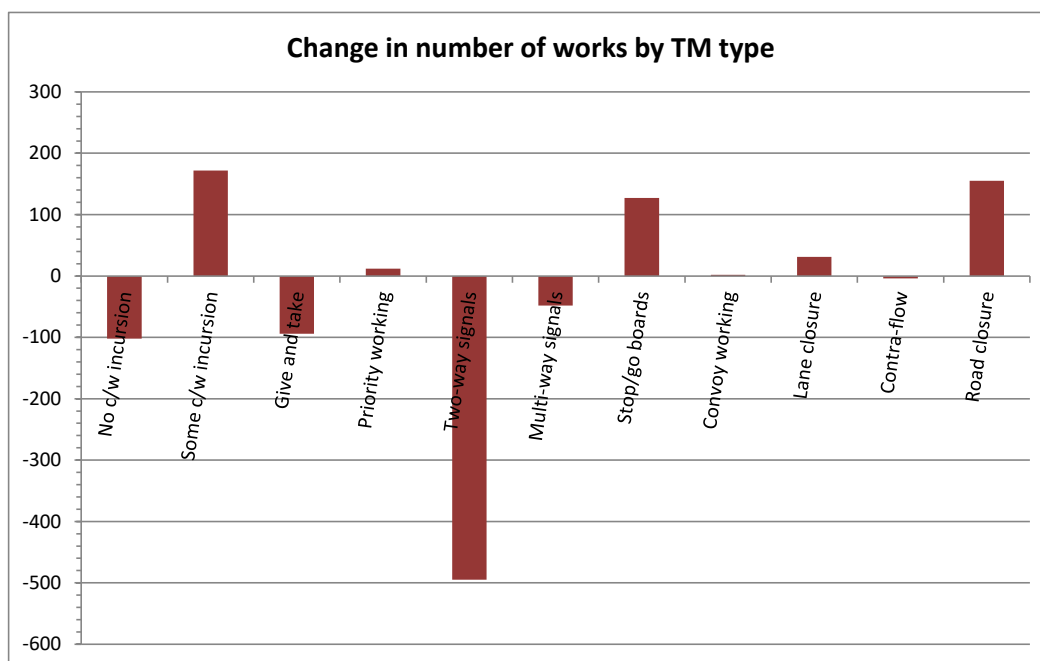


3.2.12 The breakdown of works by traffic management type is shown in Table 4 and the accompanying chart.



Table 4 Traffic management type

TRAFFIC MANAGEMENT TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
No c/w incursion	5,988	737	635	-102
Some c/w incursion	1,593	4,467	4,639	172
Give and take	1,380	2,501	2,407	-94
Priority working	87	166	178	12
Two-way signals	2,179	3,090	2,595	-495
Multi-way signals	1,110	1,409	1,361	-48
Stop/go boards	282	711	838	127
Convoy working	1	11	13	2
Lane closure	119	167	198	31
Contra-flow	1	10	6	-4
Road closure	696	2,132	2,287	155
Blank				
Total	13,436	15,401	15,157	-244

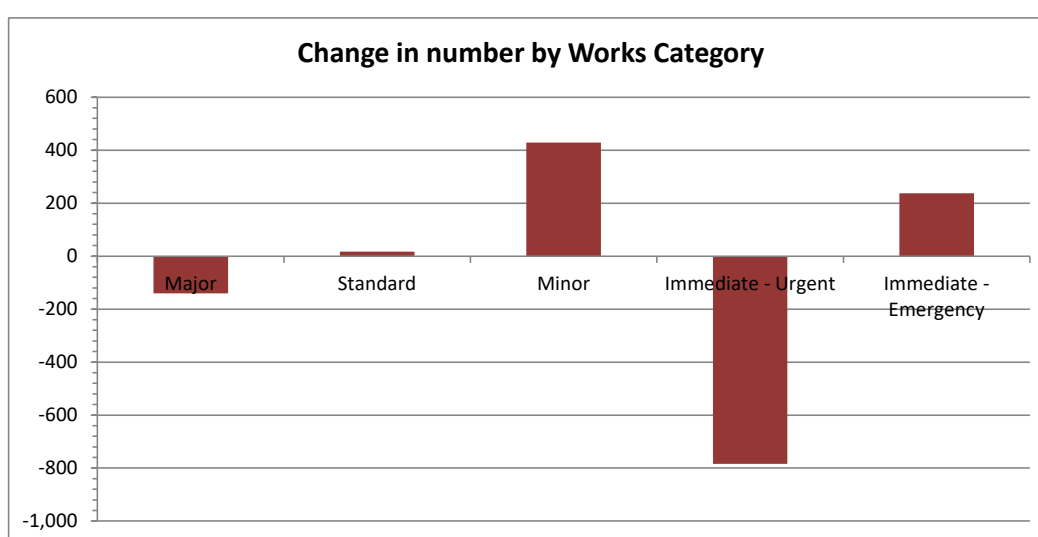


- 3.2.13 Year 2 shows an increase in the use of road closures and stop/go boards. There is a large reduction in the number of works operating with temporary traffic signal control.
- 3.2.14 This can be explained by the increase in number of highway works increasing the number of works operating with give & take, stop/go boards and road closures. The reduction in utility works overall, sees a large reduction in the number of works operating with temporary traffic signals and give & take.
- 3.2.15 The number of works completed for each works category is shown in Table 5 and the accompanying chart.



Table 5 Works category

WORKS STOPPED	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Major	606	1,621	1,480	-141
Standard	1,630	1,491	1,508	17
Minor	6,498	6,108	6,537	429
Immediate - Urgent	4,042	5,584	4,800	-784
Immediate - Emergency	660	595	832	237
Other		2		-2
Total	13,436	15,401	15,157	-244



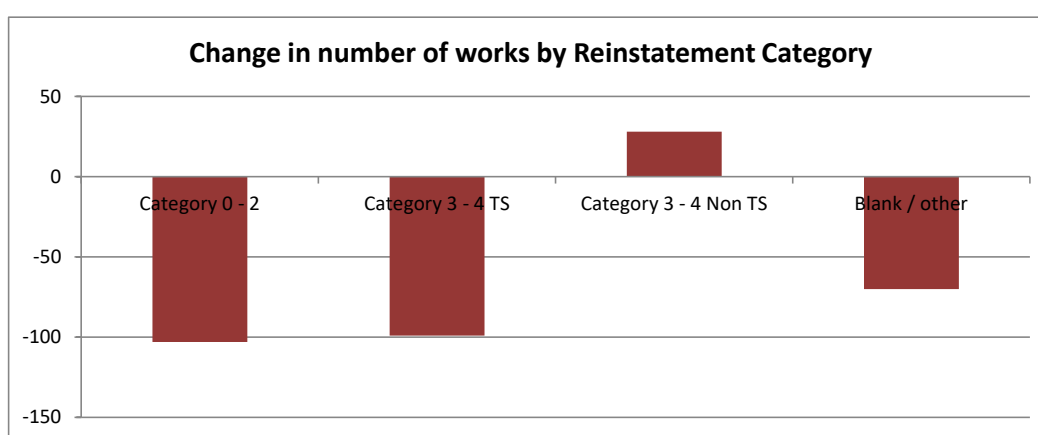
- 3.2.16 There is an increase in the number of Minor works completed in the second year of the scheme compared with the previous year; a 7% increase from 6,108 works to 6,537 works.
- 3.2.17 There is also a large reduction in the number of Immediate – Urgent works, reducing by 14% from 5,584 works to 4,800 works.
- 3.2.18 The increase in the number of highway works accounted for an increase in works across all categories, with a 50% increase in the number of Minor works adding a further 500 works to the annual total.
- 3.2.19 The reduction in the number of utility works recorded saw a disproportionate reduction in the number of Immediate – Urgent works; reducing by 920 from 5,502 to 4,582 works.
- 3.2.20 Year 1 saw Immediate Urgent works increasing by 38% from 4,042 to 5,584. Almost all of this increase was accounted for by a 36% increase in the number of utility works submitted as Immediate Urgent.
- 3.2.21 A recommendation was made in the Year 1 Annual Review to monitor the increase in Immediate – Urgent works applications submitted by utilities to determine if this is a genuine increase or an action to avoid the longer notification periods required. This recommendation may have contributed to the reduction in the number of Immediate – Urgent works recorded in Year 2.
- 3.2.22 The change in the number of other works categories is not thought to be significant.



3.2.23 The breakdown of works by reinstatement category grouping is shown in Table 6 and the accompanying chart.

Table 6 Reinstatement category & traffic sensitivity

REINSTATEMENT CATEGORY	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Category 0 - 2	1,300	2,867	2,764	-103
Category 3 - 4 TS	843	2,545	2,446	-99
Category 3 - 4 Non TS	11,053	9,709	9,737	28
Blank / other	240	280	210	-70
All works	13,436	15,401	15,157	-244



3.2.24 The change in the number of works recorded on Traffic Sensitive (TS) streets – both categories 0 to 2 and 3 to 4 – are less than 4% and not thought to be significant.

3.2.25 This follows a large increase in Year 1, resulting from the review of the National Streets Gazetteer (NSG) implemented before the scheme went live.

3.2.26 The change in number of days worked on the network in each 6 month period is shown in Table 7.

Table 7 Average duration and total days worked

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	4.3	3.6	3.4	-0.2
Total number of days worked	57,860	54,845	52,117	-2,728

3.2.27 Year 2 provides a further reduction in the average duration of works to 3.4 days, following the large reduction from 4.3 days to 3.6 days recorded in Year 1.

3.2.28 This results in a further reduction of total occupancy of 2,728 days – a 5% reduction compared with Year 1, despite the number of works completed only reducing by 1.6%.

3.2.29 Year 2 shows a reduction of 5,743 total days worked compared with the Noticing benchmark period, a reduction of 10%.



3.2.30 A detailed breakdown of the analysis for highway works and utility works promoters is shown in Appendix A.

3.3 Highway works

3.3.1 Only 383 highway works were recorded during the 2017-18 Noticing period selected as the benchmark period against which to evaluate the performance of the permit scheme.

3.3.2 The average works duration was 6.1 days, with a total occupancy of 2,344 days.

3.3.3 Average durations and total occupancy for highway works are compared in Table 8 below.

Table 8 Average duration and total days worked - highway works

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	6.1	5.6	5.8	0.2
Total number of days worked	2,344	13,407	18,704	5,297

3.3.4 2,375 highway works were recorded in the first 12 months of the permit scheme. This increased to 3,230 works in Year 2.

3.3.5 Average duration increased slightly in the second year, from 5.6 days to 5.8 days, following a reduction from the 6.1-day average recorded under Noticing.

3.3.6 The near tenfold increase in the number of highway works recorded has added almost 5,300 days compared with the previous year and 16,360 days compared with Noticing.

3.3.7 Average durations for each works category are shown in Table 9.

Table 9 Average duration and occupancy by category - highway works

Year 2, 2021-22, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
11.0	6.8	2.5	6.1	9.0
8,176	4,818	3,795	1,336	579

Year 1, 2020-21, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
9.8	6.6	1.9	8.6	8.9
6,792	3,685	1,852	704	374

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
1.2	0.2	0.6	-2.5	0.1
1,384	1,133	1,943	632	205



3.3.8 The average duration for Major works has increased from 9.8 days to 11.0 days. This has added 1,384 days to the number of days recorded on Major works compared with Year 1.

3.3.9 There are smaller increases in the average duration of Standard and Minor works and increase in the number of each works category has added a further 3,000 days to the annual total.

Recommendation Yr2-01: Monitor the duration of highway authority works in the current year to identify if duration challenges are required.

3.4 Utility works

3.4.1 The change in number of days recorded on the network for utility works is shown below in Table 10.

Table 10 Average duration and total days worked – utility works

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	4.3	3.2	2.8	-0.4
Total number of days worked	55,516	41,438	33,413	-8,025

3.4.2 The average duration of utility works has reduced year on year since the introduction of the permit scheme; reducing from 4.3 days under Noticing to 2.8 days in Year 2 – a 40% reduction resulting in 22,103 fewer days occupancy recorded in the second year of the permit scheme, or 8.025 fewer days compared with Year 1.

3.4.3 Average durations for each works category are shown in Table 11.

Table 11 Average duration and occupancy by category - utility works

Year 2, 2021-22, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
7.6	6.3	1.7	2.5	3.5
5,659	5,074	8,473	11,496	2,711

Year 1, 2020-21, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
10.7	6.4	1.7	2.6	4.9
9,944	5,931	8,615	14,239	2,709

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-3.1	-0.1		-0.1	-1.4
-4,285	-857	-142	-2,743	2



- 3.4.4 The average durations for all works categories have reduced. The biggest reduction is recorded against Major works, further reducing to 7.6 days following a reduction from 25.3 days to 10.7 days in Year 1.
- 3.4.5 A reduction in the number of Major and Immediate – Urgent works also contributed to 7,000 fewer days worked for these categories.
- 3.4.6 A detailed breakdown of average duration by traffic management type and works category is shown in Appendix B for each of the works promoters with more than 100 permits per year.

3.5 Scheme Benefits

- 3.5.1 Figure 1 presents a comparison of the number of works per annum during the first twelve months of operation following the introduction of the Permit Scheme. The scheme benefits analysis is summarised in Appendix C.
- 3.5.2 There is a 1.6% reduction in the number of all works recorded in the second year compared with the previous year, but the number of works completed are still 13% higher than under Noticing.
- 3.5.3 The number of utility works recorded has reduced by 9% compared with previous years.
- 3.5.4 The number of highway works recorded in the first 12 months of the scheme increased sixfold from 383 during the Noticing benchmark period to 2,375. This increased by 36% in the second year to 3,230.

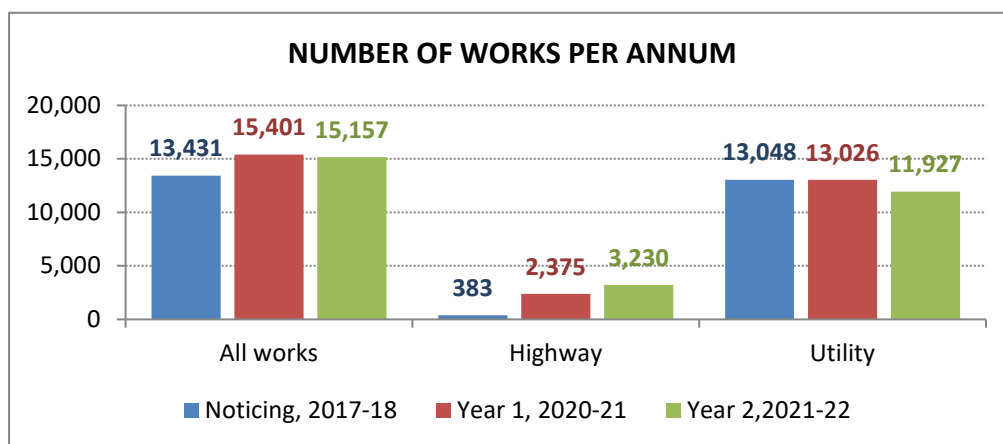


Figure 1 Number of works per annum

- 3.5.5 Figure 2 presents a comparison of the average duration of works.

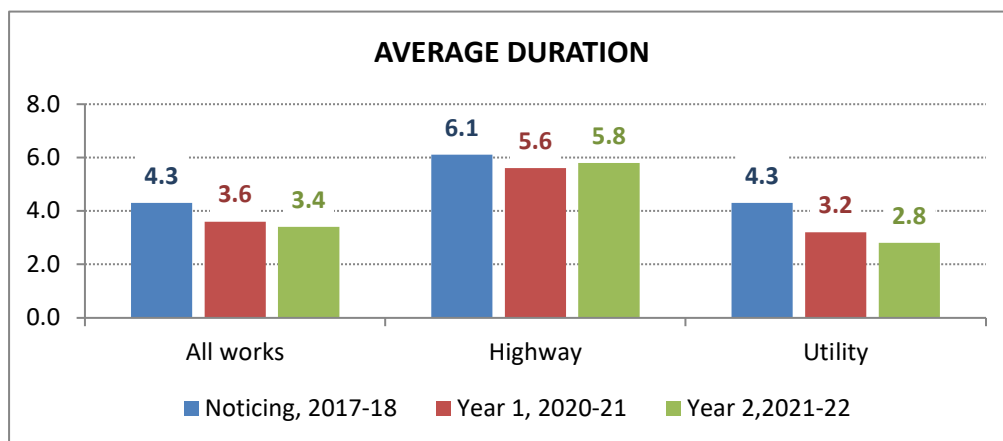


Figure 2 Average duration of works

3.5.6 The average duration has reduced overall, reducing from 4.3 days to 3.4 days. A slight increase in the average of duration of highway works – due to an increase in the duration of Major, Standard and Minor works – is more than offset by a further large reduction in the duration of utility works.

3.5.7 A comparison of the total number of days occupancy is shown in Figure 3.

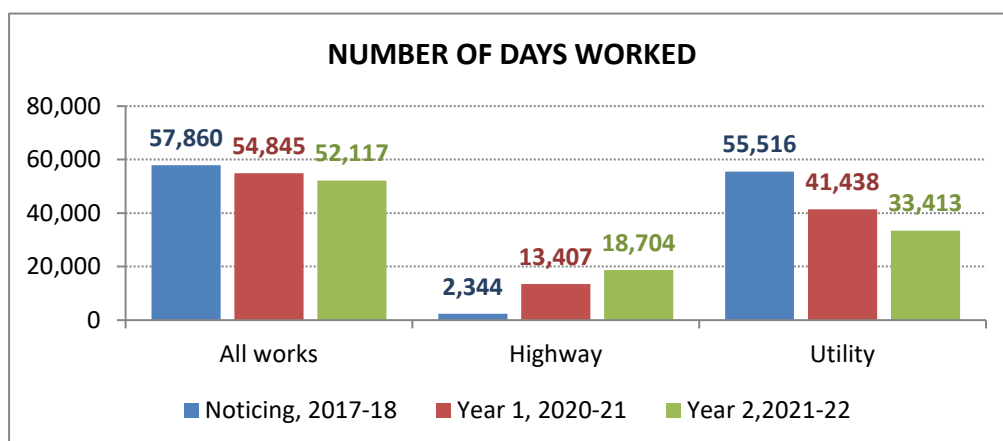


Figure 3 Number of days worked per annum

3.5.8 The number of working days recorded on the network in the second year has reduced by a further 5%, following a 5% reduction in the first 12 months; resulting in an overall 10% reduction compared with Noticing.

3.5.9 The significant reduction in average duration for utility works resulted in a 40% reduction in occupancy with more than 22,100 fewer days recorded in the second year of the scheme compared with the Noticing benchmark period.

3.5.10 This more than offsets the 16,360 increase in number of days recorded for highway works – a result of the near tenfold increase in number of highway works recorded.

3.5.11 The cost benefit of the scheme converted the reduction in working days to a monetary value for all road users. The assessment calculated to the total cost of delays and route diversions at roadworks during the Noticing benchmark period at £28.5M (quoted at 2010 values).



- 3.5.12 A 5% reduction in occupancy was predicted to achieve a benefit to cost ratio (BCR) of 2.3 with a Net Present Value (NPV) of £0.5M. The Department for Transport value for money threshold for investment in transport schemes is 2.0.
- 3.5.13 The first year of the scheme achieved an overall 5% reduction in occupancy, despite a 15% increase in the number of works recorded.
- 3.5.14 The increase in number of works was due to a larger number of highway works being recorded following the introduction of the scheme.
- 3.5.15 Utility works recorded a 40% reduction in occupancy in the second year of the scheme.
- 3.5.16 The CBA calculated the average cost of impact per day worked at £298 (based on £1,280 average cost for all works and average duration of 4.3 days).
- 3.5.17 The actual saving for all works recorded in the first 12 months of the permit scheme was £0.9M, or a 3.2% saving against the £28.5M calculated annual cost of roadworks. The further reduction in occupancy in the second year contributes a further **£1.7M** benefit, or **6%** saving against the £28.5M calculated annual cost of roadworks prior to the implementation of the scheme.
- 3.5.18 However, this calculation includes the 16,360 extra days recorded as worked on the network on highway works. This was not a true increase in occupancy on the network, but rather an increase in number of highway works recorded under permits, with the number of highway works increasing almost tenfold from 383 under noticing to 3,230 works recorded in the second year of the scheme.
- 3.5.19 A better indication of the effective benefit of the scheme is reduction in occupancy recorded for utility works. Year 1 recorded a 25% reduction in the occupancy of utility works. Year 2 saw a further reduction, with 40% fewer days worked compared with under noticing. This amounts to an **effective saving of £6.6M** in the second year or a **23%** saving in the annual cost of roadworks compared with the noticing benchmark case.
- 3.5.20 This is significantly higher than the 5% minimum reduction required to demonstrate value for money in the DfT guidelines.



4 KPI MONITORING

4.1 Introduction

4.1.1 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

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

4.2 KPI review

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

4.2.2 Table 12 and Figure 4 shows the breakdown of number of permit applications and permit variation requests received and the refusal rate.

Table 12 KPI 1, Permit & variation applications received and refused

Promoter	Received	Granted	Refused	Deemed	% Refused
Highway authority	6,122	6,028	12	82	0.2%
Utility	23,036	20,319	2,597	120	11.3%
ALL	29,158	26,347	2,609	202	8.9%

4.2.3 11.3% of all permit applications by statutory undertakers were refused – a slight increase from the 10.2% refused in Year 1. Less than one percent of applications submitted by the highway authority were refused in both years.

4.2.4 The low refusal rate for highway authority permit applications is a result of the permit team having dedicated personnel process paper applications provided by the highways teams, review the content and submit to the system for approval. The pre-sifting of proposed works resulted in very few permit applications being refused on submission.

4.2.5 This relatively low refusal rate overall for permit applications is a result of the Council actively working with Utility companies on their permits and how they are submitted. An open and frank dialogue is applied daily through the team; the aspiration is if a Permit is submitted it should be in a form and set up to be granted.

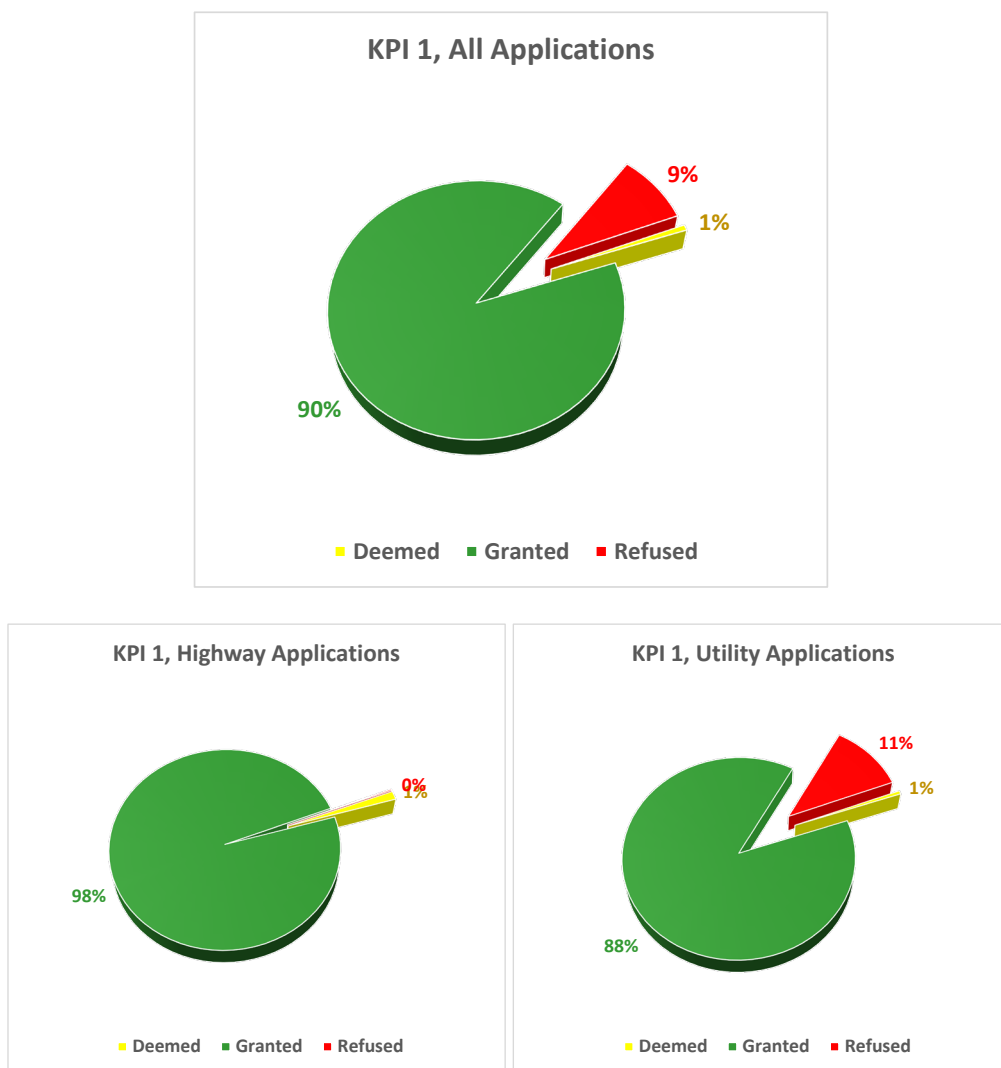


Figure 4: KPI 1, Permit & Permit Variation Applications

- 4.2.6 202 applications were deemed in the second year – a reduction from the 667 deemed in the first 12 months.
- 4.2.7 120 utility works promoter applications and 82 highway works applications were deemed. This equates to fewer than 1% of the total permit and permit variation applications received in the second year.
- 4.2.8 There were 3,926 permit variations granted for granted utility permits in the second year. This is 24% of all permits granted and is in the typical range evident on other permit schemes.
- 4.2.9 **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 Table 13 and Figure 5.



Table 13 KPI 2, Permit conditions

Condition	Condition Description	Utility	Highway	All
NCT02a	Date constraints	4,562	4,036	8,598
NCT02b	Time constraints	655	10	665
NCT04a	Material & plant removal	46	3	49
NCT04b	Material & plant storage	154	0	154
NCT05a	Road occupation dimensions	843	6	849
NCT06a	Traffic space dimensions	5,260	35	5,295
NCT07a	Road closure	1,534	273	1,807
NCT08a	Light signals - tm request	4,007	23	4,030
NCT08b	Light signals - manual control	2,182	184	2,366
NCT09a	Traffic management changes - notify	165	12	177
NCT09b	Traffic management changes - direct	150	59	209
NCT09c	Traffic management changes - signal r	2,275	0	2,275
NCT10a	Work methodology	1,851	11	1,862
NCT11b	Consultation & publicity	1,202	17	1,219
NCT12a	Environmental - limit timing of activities	50	0	50
NCT13	Local condition	0	39	39
	TOTAL	24,936	4,708	29,644
	All Conditions	Utility	Highway	All
	TOTAL	24,936	4,708	29,644
		84%	16%	

- 4.2.10 16% of all conditions were applied to highway permits an increase from the 10% recorded in Year 1. The increase will be related to the increase in highway works recorded in the second year.
- 4.2.11 The majority of highway applications applied relate to date constraints.
- 4.2.12 Utility permits include a broader range of conditions, including time constraints, road and traffic space dimensions, traffic management notifications and consultation.

Recommendation Yr2-02 (Yr1-03 continued): Continue to review whether more conditions should be applied to highway permit applications.

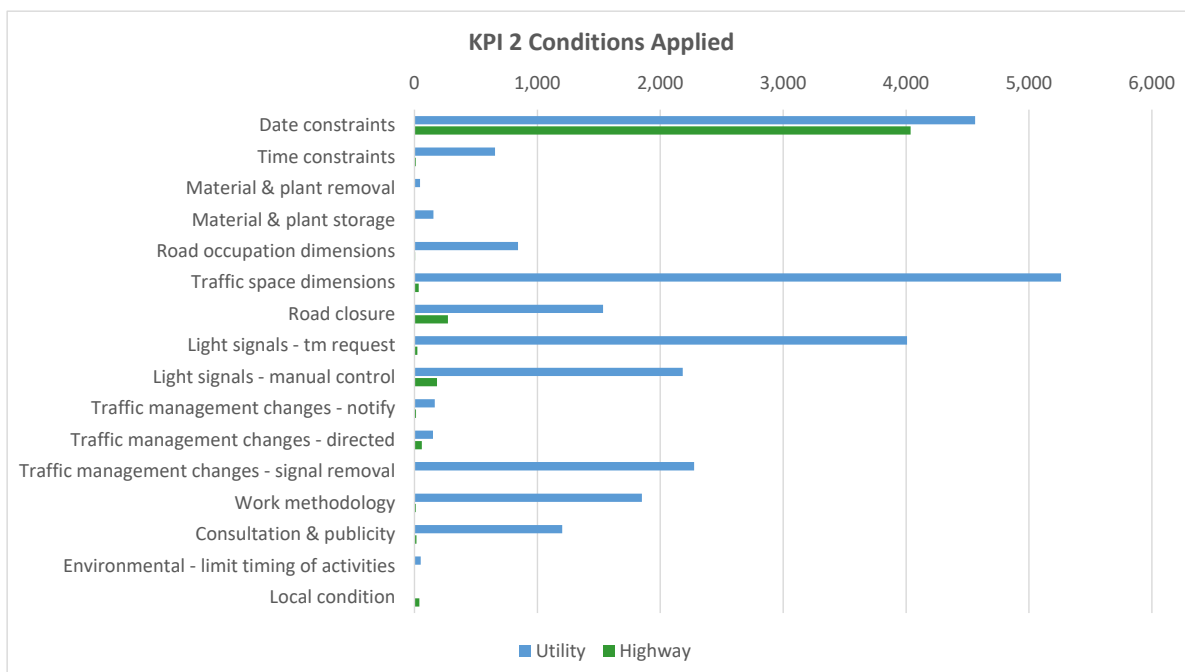


Figure 5: KPI 2, Conditions Applied

4.2.13 There is a broad range of number of conditions per permit between works promoters. Several promoters have submitted fewer than 1 condition per permit, while others have submitted 2 to 3 conditions per permit.

Recommendation Yr2-03 (Yr1-04 continued): Continue to review whether conditions are being correctly applied by all works promoters, particularly Major and Standard works and where temporary signals or road/lane closures are proposed.

4.2.14 **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.

Table 14 KPI 3, Duration extension requests

Promoter	Received	Granted	Refused	% Refused
Highway authority	556	555	1	0.2%
Utility	1,451	1,366	85	5.9%
ALL	2,007	1,921	86	4.3%

4.2.15 All but 86 requests for an extension to works duration were agreed in the second year – 4.3% of the 2,007 extension requests submitted were refused. This is an increase over the 35 refusals in the first year.

4.2.16 Like the previous year, the majority of extension requests were submitted by utilities, but the relative split is still similar to the proportion of permits granted for utility and highway works promoters.

4.2.17 The number of extension requests submitted in the second year is relatively high, at more than 13% of the number of works completed - compared with 10% in the first year.

Recommendation Yr2-04 (Yr1-05 continued): Monitor requests for duration extensions to ensure all requests are appropriate.

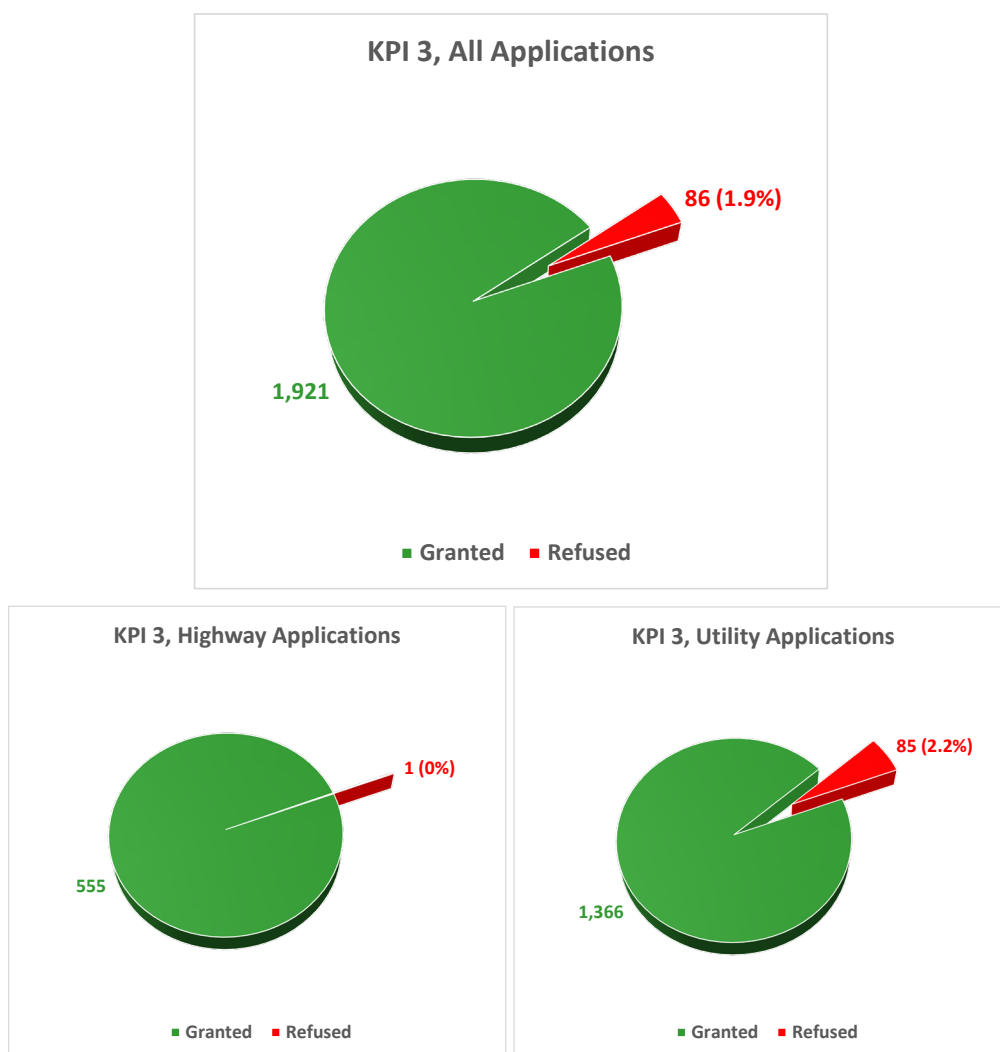


Figure 6: KPI 3, Permit Extensions

- 4.2.18 **KPI 7** - the Number of Inspections carried out to monitor conditions.
- 4.2.19 No data available for permit compliance inspections.
- 4.2.20 Compliance inspections of highway works are undertaken but not recorded in the same way. The Council's in-house site management remit includes a comprehensive inspection process, daily compliance checks (in all aspects) and depending on the size of the scheme, weekly progress inspections (reinstatement / progression of works).
- 4.2.21 The highway inspections are recorded against the site logs and performance information.
- 4.2.22 104 Fixed Penalty Notices (FPN) were given for non-compliance following a permit inspection in the second year of the scheme. This is 26 lower than the 130 FPN given in Year 1 for the same offence.



5 STAFFING & RESOURCE

5.1 Summary

- 5.1.1 The DfT Fees Matrix used to estimate staff numbers and set the permit fee charges has been re-run with the actual number of permit applications granted in Year 2, to determine whether the staff numbers forecast in the business case are still appropriate.
- 5.1.2 Overall, the number of works are higher than forecast, at 20,150 compared with 15,181 forecast in 2019.
- 5.1.3 The number of utility permits is significantly higher than forecast at 15,829 due to the number of permits granted and subsequently cancelled before the start date.
- 5.1.4 The remainder of the difference is due to a higher number of highway permits granted than forecast – 4,321 rather than 2,133 forecast.
- 5.1.5 A big change from the CBA forecast is the number of Major permits granted in the first year. The Noticing data recorded 606 Major works in 2017-18 with another 233 forecast from the additional highway permits anticipated.
- 5.1.6 Almost 2,000 Major permits were granted in each of the first two years of the scheme. This has significantly increased the number of staff required to process permit applications, the cost to process and the projected fee income.

5.2 Staff Resource

- 5.2.1 The DfT Fees Matrix calculates the number of staff required to process the revised permit applications forecast.
- 5.2.2 The forecast permit activity used in the 2019 business case estimated a total number of full time equivalent (FTE) staff of 9.2 (shown in Table 15). 6.8 FTE staff would be required to process utility permit applications and 2.4 FTE staff to process highway applications.

Table 15 2019 Business case staff resource projection

PERSONNEL LEVEL	All Works	Utilities
Street Works Officer	4.5	3.5
Street Works Co-ordinator	3.5	2.5
Traffic Manager	1.2	0.8
Total employees	9.2	6.8

- 5.2.3 Using the actual number of utility and highway authority permit applications granted in the second year, the same Fees Matrix spreadsheet calculates the total number of FTE staff requirement at 12.9 (Table 16) – an increase of 3.7 FTE staff.



Table 16 Year 2 staff resource, 2021-22

PERSONNEL LEVEL	All Works	Utilities
Street Works Officer	6.1	4.3
Street Works Co-ordinator	4.9	3.2
Traffic Manager	1.9	1.1
Total employees	12.9	8.7

- 5.2.4 The number of staff required to process highway permits has increased – from 2.4 FTE to 4.2 FTE staff.
- 5.2.5 An additional 1.9 FTE staff are required to process utility permit applications in the second year compared with the business case forecast.
- 5.2.6 Both are a result of an increase in the proportion of permits submitted on traffic sensitive streets (requiring additional time to process and co-ordinate) and the more than twofold increase in the number of Major permit applications submitted.

Recommendation Yr2-05 (Yr1-07 continued): Review the structure and number of staff available to process permits in view of the continued high number of permits submitted in the second year.

- 5.2.7 The additional resource required to process permit applications is reflected in a higher cost to the Council operate the scheme.

5.3 Operating costs

- 5.3.1 Using the same Fees Matrix spreadsheet, the operating costs to process all permits granted in the first year are shown in Table 17.

Table 17 Year 2 operating costs, 2021-22

	NUMBER OF STAFF	SCHEME COST	EMPLOYEE COSTS		OTHER COSTS
			PERMIT APPLICATIONS	VARIATIONS	OVERHEADS
All works	12.9	£1,445,026	£1,147,656	£159,500	£137,870
Utility works only	8.7	£989,985	£768,715	£126,626	£94,644

- 5.3.2 The total cost to process all permits granted in Year 2 is £1,445,026. This is broken down to £1,147,656 employee costs to process permit applications, £159,500 to process granted permit variations and £137,870 towards the allowable overheads to run the scheme.
- 5.3.3 The operating cost to process all granted permits has increased by 13.1% from the previous year. This is due to the 36% increase in the number of highway works in the second year.
- 5.3.4 The total cost to process utility permit applications granted in the second year is £989,985. This is broken down to £768,715 employee costs to process permit applications, £126,626 to process granted permit variations and £94,644 towards the costs for the utilities share of the allowable overheads to run the scheme.



5.3.5 The cost to process utility permit applications in the second year has increased by 5.6%, despite a reduction in the number of utility works completed. This is due to an increase in the number of permits granted then subsequently cancelled during Year 2.

5.3.6 The utilities share of the allowable overheads is recovered via a surcharge on the permit fees billed. This surcharge is approximately 9.5% of the total annual income.

5.4 Fee income

5.4.1 The total permit fees billed in the second year, after applying discounts for major works with duration less than 10 days and for working at non-traffic sensitive times, has increased from £880,397 in Year 1 to **£929,046** – an increase of 5.5% from the previous year.

5.4.2 The operating costs show a loss of £60,939 or 6.6% of the fees billed. The loss is a result of the discounts offered in the second year.

5.4.3 The Council plan to continue to monitor fees and costs and carry out a full review of permit fee income and total costs to operate the scheme at the end of year 3, in line with advice in the Department for Transport “*Statutory Guidance for Highway Authority Permit Schemes*”, July 2020.



6 CONCLUSIONS

6.1 Objectives

- 6.1.1 The Cumbria County Council Permit Scheme went live in April 2020.
- 6.1.2 The Permit Scheme legislation requires an annual review of Scheme performance in the first 3 years of operation and every 3 years thereafter.
- 6.1.3 The purpose of this review is to monitor the performance of the Scheme in the second year of operation and to recommend measures to further improve the performance of the Scheme in terms of the stated objectives.
- 6.1.4 The operating costs and fee income will be fully reviewed at the end of year 3 with fees charged adjusted accordingly in the event of an accumulated loss or surplus.

6.2 Year 2 summary

- 6.2.1 The number of highway authority works recorded in the first year increased sixfold compared with the Noticing benchmark period, from 383 to 2,375 works completed. This has increased by a further 36% to 3,230 completed works in the second year. This amounts to 21% of all works completed in the second year.
- 6.2.2 There has been a reduction in the number of utility works recorded, reducing by 1,099 works or 8.4%.
- 6.2.3 Overall, the number of works completed in the second year of the scheme is less than 2% lower than recorded in previous years.
- 6.2.4 Year 2 provides a further reduction in the average duration of works to 3.4 days, following the large reduction from 4.3 days to 3.6 days recorded in Year 1. Year 2 shows a reduction of 5,743 total days worked compared with the Noticing benchmark period, a reduction of 10%.
- 6.2.5 The near tenfold increase in the number of highway works recorded has added almost 5,300 days compared with the previous year and 16,360 days compared with Noticing.
- 6.2.6 The average duration of utility works has reduced year on year since the introduction of the permit scheme; reducing from 4.3 days under Noticing to 2.8 days in Year 2 – a 40% reduction resulting in 22,103 fewer days occupancy recorded in the second year of the permit scheme, or 8.025 fewer days compared with Year 1.
- 6.2.7 The cost benefit assessment completed prior to the introduction of the scheme converted the reduction in working days to a monetary value for all road users. The assessment calculated to the total cost of delays and route diversions at roadworks during the Noticing benchmark period at £28.5M (quoted at 2010 values).
- 6.2.8 The actual saving for all works recorded in the first 12 months of the permit scheme was reported at £0.9M, or a 3.2% saving against the £28.5M calculated annual cost of roadworks. The further reduction in occupancy in the second year contributes a further **£1.7M** benefit, or **6%** saving against the £28.5M calculated annual cost of roadworks prior to the implementation of the scheme.
- 6.2.9 However, this calculation includes the 16,360 extra days recorded as worked on the network on highway works. This was not a true increase in occupancy on the network, but rather an increase in number of highway works recorded under permits, with the number



of highway works recorded increasing almost tenfold from 383 under noticing to 3,230 works recorded in the second year of the scheme.

- 6.2.10 A better indication of the effective benefit of the scheme is reduction in occupancy recorded for utility works. Year 1 recorded a 25% reduction in the occupancy of utility works. Year 2 saw a further reduction, with 40% fewer days worked compared with under noticing. This amounts to an **effective saving of £6.6M** in the second year or a **23%** saving in the annual cost of roadworks compared with the noticing benchmark case.
- 6.2.11 This is significantly higher than the 5% minimum reduction required to demonstrate value for money in the DfT guidelines.

6.3 Recommendations

- 6.3.1 Five recommendations have been included with this review. One related to the benefits of the scheme, three to key performance indicators and one relating to staff resource and structure in view of the increase in permits granted.

Duration & occupancy;

Recommendation Yr2-01: Monitor the duration of highway authority works in the current year to identify if duration challenges are required.

Key Performance Indicators;

Recommendation Yr2-02 (Yr1-03 continued): Continue to review whether more conditions should be applied to highway permit applications.

Recommendation Yr2-03 (Yr1-04 continued): Continue to review whether conditions are being correctly applied by all works promoters, particularly Major and Standard works and where temporary signals or road/lane closures are proposed.

Recommendation Yr2-04 (Yr1-05 continued): Monitor requests for duration extensions to ensure all requests are appropriate.

Permit Fees;

Recommendation Yr2-05 (Yr1-07 continued): Review the structure and number of staff available to process permits in view of the continued high number of permits submitted in the second year.

- 6.3.2 Four of the five recommendations are carried over from the Year 1 review to drive further benefits from the scheme.

6.4 Fee income

- 6.4.1 The total permit fees billed in the first year, after applying discounts for major works with duration less than 10 days and for working at non-traffic sensitive times, has increased from £880,397 in Year 1 to **£929,046** – an increase of 5.5% from the previous year.
- 6.4.2 The operating costs show a loss of £60,939 or 6.6% of the fees billed. The loss is a result of the discounts offered in the second year.
- 6.4.3 The Council plan to continue to monitor fees and costs and carry out a full review of permit fee income and total costs to operate the scheme at the end of year 3.



6.5 Conclusions

6.5.1 Monitoring the key performance indicators and evidence gained from the first year of operation demonstrates that the Permit Scheme is contributing towards the scheme's key objectives by improvements to the following;

- 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

6.5.2 This review has demonstrated that Scheme has exceeded the operational benefits specified in the permit scheme guidance documents.

A. PERMIT APPLICATIONS 2021-22

A.1 All works permits

Table A.1: Number of works p.a., year on year comparison

PROMOTER TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Highway Authority Works	383	2,375	3,230	855
Utility Works	13,048	13,026	11,927	-1,099
Total	13,431	15,401	15,157	-244

% highway works 2.9% 15.4% 21.3%

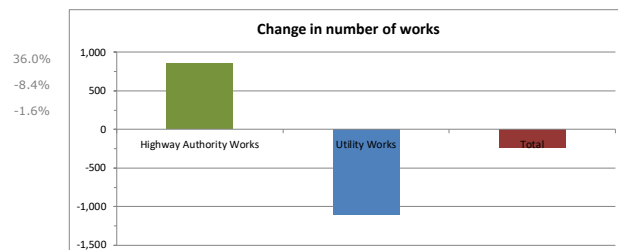


Table A.2: Number of works by Promoter, year on year comparison

PROMOTER	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Cumbria County Council	383	2,375	3,230	855
BT	4,271	3,462	2,417	-1,045
Virgin Media	579	161	139	-22
United Utilities Water LTD	4,888	6,200	5,851	-349
Cadent Gas Limited	618	700	505	-195
Electricity North West	1,517	1,443	1,060	-383
Network Rail	97	142	130	-12
Northern Gas Networks	917	678	624	-54
O2 (UK) Limited	5		2	2
Fulcrum Pipelines Limited	11	6		-6
Solway Communications Ltd	16	60	60	
Vodafone Group	53	11	23	12
ES Pipelines Limited	10	4	3	-1
Global Utility Connections		3	3	
T-Mobile (UK) Limited	23	32	29	-3
Energetics Gas Ltd	2	5	4	-1
ARQIVA LTD	5	4		-4
Romec Ltd	1	2	13	11
Gas Transportation Co Ltd	4	13	4	-9
Orange PCS Ltd	1			
Northumbrian Water	2	5	5	
Independent Fibre Networks		3	1	-2
Netomnia Limited			519	519
Broadband for the Rural North	20	36	78	42
Fibrus Networks Limited			359	359
Highways England		31	75	44
Utility Distribution Networks Ltd		2	6	4
Others	8	23	17	-6
Total	13,431	15,401	15,157	-244

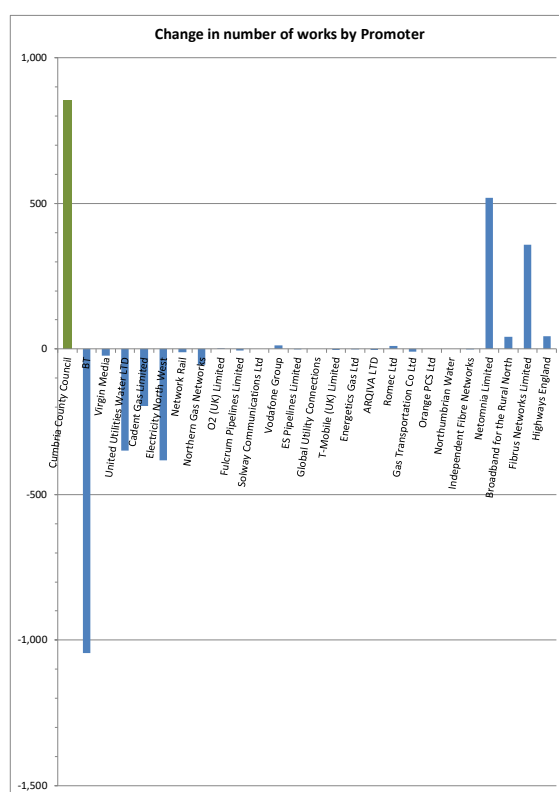


Table A.3: Number of works by traffic management type, year on year comparison

TRAFFIC MANAGEMENT TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
No c/w incursion	5,988	737	635	-102
Some c/w incursion	1,593	4,467	4,639	172
Give and take	1,380	2,501	2,407	-94
Priority working	87	166	178	12
Two-way signals	2,179	3,090	2,595	-495
Multi-way signals	1,110	1,409	1,361	-48
Stop/go boards	282	711	838	127
Convoy working	1	11	13	2
Lane closure	119	167	198	31
Contra-flow	1	10	6	-4
Road closure	696	2,132	2,287	155
Blank				
Total	13,436	15,401	15,157	-244

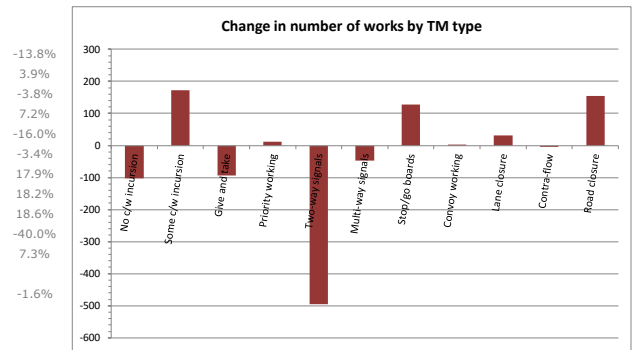


Table A.4: Number of works by works category, year on year comparison

WORKS STOPPED	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Major	606	1,621	1,480	-141
Standard	1,630	1,491	1,508	17
Minor	6,498	6,108	6,537	429
Immediate - Urgent	4,042	5,584	4,800	-784
Immediate - Emergency	660	595	832	237
Other		2		-2
Total	13,436	15,401	15,157	-244

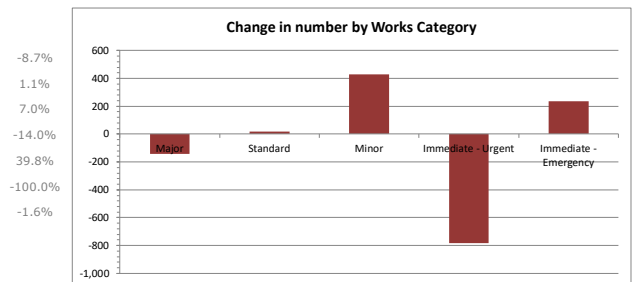


Table A.5: Traffic sensitivity, year on year comparison

REINSTATEMENT CATEGORY	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Category 0 - 2	1,300	2,867	2,764	-103
Category 3 - 4 TS	843	2,545	2,446	-99
Category 3 - 4 Non TS	11,053	9,709	9,737	28
Blank / other	240	280	210	-70
All works	13,436	15,401	15,157	-244

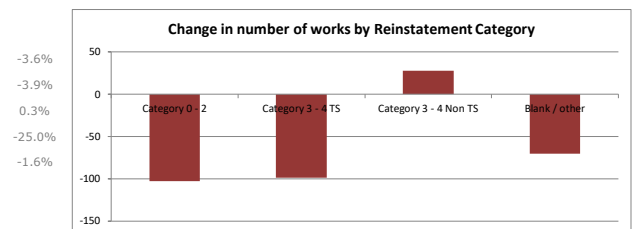


Table A.6: Average works duration, year on year comparison

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	4.3	3.6	3.4	-0.2
Total number of days worked	57,860	54,845	52,117	-2,728

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
9.3	6.6	1.9	2.7	4.0
13,835	9,892	12,268	12,832	3,290

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
10.3	5.4	1.7	2.7	5.2
16,736	9,616	10,467	14,943	3,083

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-1.0	1.2	0.2		-1.2
-2,901	276	1,801	-2,111	207

A.2 Highway authority works permits

Table A.7: Number of works by traffic management type, year on year comparison

TRAFFIC MANAGEMENT TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
No c/w incursion	339	36	62	26
Some c/w incursion		171	196	25
Give and take	14	204	497	293
Priority working	1	42	114	72
Two-way signals	26	587	693	106
Multi-way signals		191	182	-9
Stop/go boards		434	619	185
Convoy working		10	12	2
Lane closure	1	51	78	27
Contra-flow		1	4	3
Road closure	2	648	773	125
Blank				
Total	383	2,375	3,230	855

72.2%
14.6%
143.6%
171.4%
18.1%
-4.7%
42.6%
20.0%
52.9%
300.0%
19.3%
36.0%

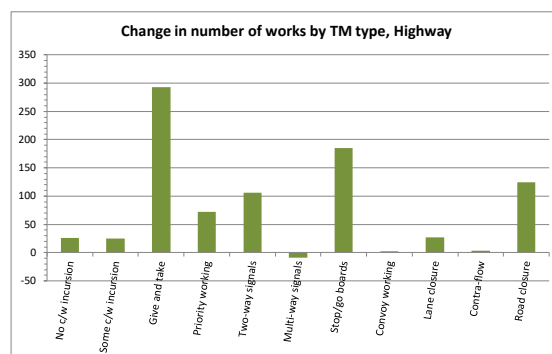


Table A.8: Number of works by works category, year on year comparison

WORKS STOPPED	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Major	2	690	740	50
Standard	285	558	705	147
Minor	93	1,001	1,503	502
Immediate - Urgent	3	82	218	136
Immediate - Emergency		42	64	22
Other		2		-2
Total	383	2,375	3,230	855

7.2%
26.3%
50.1%
165.9%
52.4%
-100.0%
36.0%

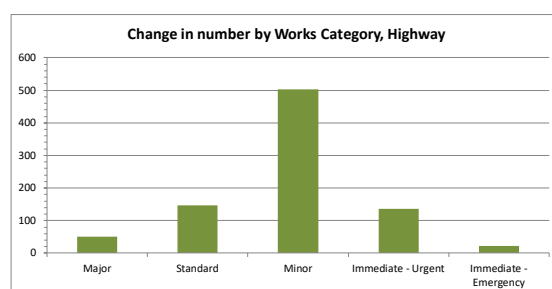


Table A.9: Average works duration, year on year comparison

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	6.1	5.6	5.8	0.2
Total number of days worked	2,344	13,407	18,704	5,297

3.6%
39.5%

Year 2, 2021-22, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
11.0	6.8	2.5	6.1	9.0
8,176	4,818	3,795	1,336	579

Year 1, 2020-21, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
9.8	6.6	1.9	8.6	8.9
6,792	3,685	1,852	704	374

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
1.2	0.2	0.6	-2.5	0.1
1,384	1,133	1,943	632	205

A.3 Utility works permits

Table A.10: Number of works by traffic management type, year on year comparison

TRAFFIC MANAGEMENT TYPE	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
No c/w incursion	5,644	701	573	-128
Some c/w incursion	1,593	4,296	4,443	147
Give and take	1,366	2,297	1,910	-387
Priority working	86	124	64	-60
Two-way signals	2,153	2,503	1,902	-601
Multi-way signals	1,110	1,218	1,179	-39
Stop/go boards	282	277	219	-58
Convoy working	1	1	1	
Lane closure	118	116	120	4
Contra-flow	1	9	2	-7
Road closure	694	1,484	1,514	30
Blank				
Total	13,048	13,026	11,927	-1,099

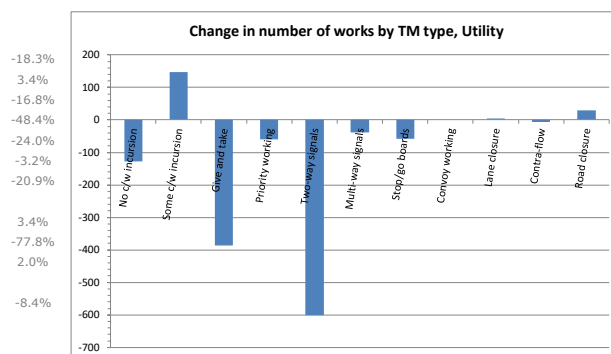


Table A.11: Number of works by works category, year on year comparison

WORKS STOPPED	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Major	604	931	740	-191
Standard	1,342	933	803	-130
Minor	6,403	5,107	5,034	-73
Immediate - Urgent	4,039	5,502	4,582	-920
Immediate - Emergency	660	553	768	215
Other				
Total	13,048	13,026	11,927	-1,099

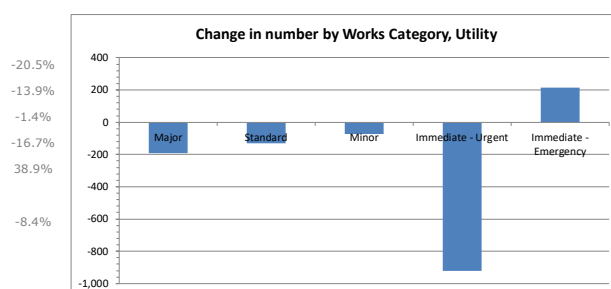


Table A.12: Average works duration, year on year comparison

DURATION	Noticing, 2017-18	Year 1 2020-21	Year 2 2021-22	Difference
Average duration (days)	4.3	3.2	2.8	-0.4
Total number of days worked	55,516	41,438	33,413	-8,025

-12.5%
-19.4%

Year 2, 2021-22, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
7.6	6.3	1.7	2.5	3.5
5,659	5,074	8,473	11,496	2,711

Year 1, 2020-21, Duration by works category

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
10.7	6.4	1.7	2.6	4.9
9,944	5,931	8,615	14,239	2,709

Difference, Year 2 - Year 1

MAJOR	STANDARD	MINOR	IMMED. (URGENT)	IMMED. (EMERG.)
-3.1	-0.1		-0.1	-1.4
-4,285	-857	-142	-2,743	2

B. PROMOTER DURATION ANALYSIS

TRAFFIC MANAGEMENT & DURATION, BT (BC)										WORKS CATEGORIES														
NO C/W INCURSION	DURATION AVE	SOME C/W INCURSION	GIVE & TAKE	PRIORITY WORKING	TWO-WAY SIGNALS		MULTI-WAY SIGNALS		STOP/GO BOARDS		CONVOY WORKING		LANE CLOSURE		CONTRA-FLOW		ROAD CLOSURE		Major	Standard	Minor	Immed. (Urgent)	Immed. (Emerg.)	
					Duration Ave	Min	Max	Duration Ave	Min	Max	Duration Ave	Min	Max	Duration Ave	Min	Max	Duration Ave	Min						Max
1.6	1.5	2.1	1.6	1.7	1.3	1.7	1.3	1.8	3.0	1.4	1.7	6.0	1.5	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
43.0	9.0	37.0	3.0	15.0	3.0	15.0	3.0	5.0	3.0	10.0	3.0	3.0	3.0	10.0	17.0	18.0	6.0	43.0	6.0	17.0	18.0	6.0	6.0	
>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>30	>30	>30	>30	>30	>30	>30	>30	>30	
2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	
>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>60	>60	>60	>60	>60	>60	>60	>60	>60	
>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>180	>180	>180	>180	>180	>180	>180	>180	>180	
>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>365	>365	>365	>365	>365	>365	>365	>365	>365	
198	527	251	10	389	59	599	10	16	1	367	143	68	1,051	68	246	407	1,433	126	246	407	1,433	126		
324	807	538	16	664	79	799	16	29	3	509	246	407	1,433	126	246	407	1,433	126	246	407	1,433	126		
TOTAL WORKS																								
2,417																								
Ave Duration																								
1.6																								
No. days worked																								
3,768																								

TRAFFIC MANAGEMENT & DURATION, UNITED UTILITIES WATER LTD. (HZ)														WORKS CATEGORIES								
NO C/W INCUSSION	SOME C/W INCUSSION	GIVE & TAKE	PRIORITY WORKING	TWO-WAY SIGNALS		MULTI-WAY SIGNALS		STOP/GO BOARDS		CONVOY WORKING		LANE CLOSURE		CONTRA-FLOW		ROAD CLOSURE		Major	Standard	Minor	Immed. (Urgent)	Immed. (Emerg.)
				Duration Ave	Max	Duration Ave	Max	Duration Ave	Max	Duration Ave	Max	Duration Ave	Max	Duration Ave	Max	Duration Ave	Max					
2.1	2.1	2.3	2.1	2.4	2.0	1.6	1.6	1.6	2.8									3.6	6.7	1.6	2.7	1.6
																		Minimum	2.0	Minimum	Minimum	Minimum
																		Maximum	20.0	Maximum	Maximum	Maximum
																		45.0	20.0	7.0	17.0	20.0
>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>30	>30	>30	>30	>30	
>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	2	>60	>60	>60	>60	>60
>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>180	>180	>180	>180	>180	>180
>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>365	>365	>365	>365	>365	>365
Number	166	1,292	30	863	417	68	64	776	Number	Number	Number	Number	Number	Number	Number	Number	209	76	2,303	2,979	284	
Days Worked	349	4,645	62	2,083	820	107	102	2,200	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	742	512	3,742	7,934	461	
TOTAL WORKS	5,851																					
Ave Duration	2.3																					
No. days worked	13,391																					

TRAFFIC MANAGEMENT & DURATION, ELECTRICITY NORTH WEST (JG)													WORKS CATEGORIES				
NO C/W INCUSSION	SOME C/W INCUSSION	GIVE & TAKE	PRIORITY WORKING	TWO-WAY SIGNALS	MULTI-WAY SIGNALS	STOP/GO BOARDS	CONVOY WORKING	LANE CLOSURE	CONTRA-FLOW	ROAD CLOSURE	Major	Standard	Minor	Immed. (Urgent)	Immed. (Emerg.)		
Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Average	Average	Average	Average	Average		
3.8	3.9	3.4	1.0	4.1	5.9	1.1	5.2	4.0	6.7	6.7	9.2	5.6	1.3	4.4	10.4		
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Minimum	Minimum	Minimum	Minimum	Minimum		
Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Maximum	Maximum	Maximum	Maximum	Maximum		
13.0	14.0	14.0	1.0	16.0	30.0	4.0	31.0	4.0	44.0	44.0	44.0	19.0	5.0	24.0	30.0		
>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>30	>30	>30	>30	>30		
5	1	8	1	1	1	1	1	1	1	1	3	>60	>60	>60	>60		
>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>60	>60	>60	>60	>60		
>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>180	>180	>180	>180	>180		
>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>365	>365	>365	>365	>365		
Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number		
20	456	84	2	172	104	40	23	1	158	158	97	256	261	433	13		
Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked		
76	1,801	283	2	698	612	43	119	4	1,054	1,054	889	1,439	343	1,886	135		
TOTAL WORKS																	
1,060																	
Ave Duration																	
4.4																	
No. days worked																	
4,692																	

TRAFFIC MANAGEMENT & DURATION, CADENT GAS LIMITED (AZ)														WORKS CATEGORIES					
NO C/W INCUSSION	SOME C/W INCUSSION	GIVE & TAKE	PRIORITY WORKING	TWO-WAY SIGNALS	MULTI-WAY SIGNALS	STOP/GO BOARDS	CONVOY WORKING	LANE CLOSURE	CONTRA-FLOW	ROAD CLOSURE	Major	Standard	Minor	Immed. (Urgent)	Immed. (Emerg.)				
Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Average	Average	Average	Average	Average				
5.7	4.6	3.3	6.9	16.9	12.0	8.0					17.6	6.7	2.3	3.9	4.3				
Min	1.0	Min	1.0	1.0	Min	Min	Min	Min	Min	Min	Minimum	Minimum	Minimum	Minimum	Minimum				
Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Maximum	Maximum	Maximum	Maximum	Maximum				
40.0	24.0	22.0	71.0	46.0	30.0	25.0					71.0	41.0	5.0	8.0	24.0				
>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>30	>30	>30	>30	>30				
2	11	2	5	25	1	6					13	1							
>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>60	>60	>60	>60	>60				
1			2	11							1								
>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>180	>180	>180	>180	>180				
>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>365	>365	>365	>365	>365				
Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number				
24	282	69	45	53	3	28					80	89	158	41	137				
Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked				
136	1,287	229	309	897	36	224					1,411	593	359	160	595				
TOTAL WORKS																			
505																			
Ave Duration																			
6.2																			
No. days worked																			
3,118																			

TRAFFIC MANAGEMENT & DURATION, NORTHERN GAS NETWORKS (XX)														WORKS CATEGORIES					
NO C/W INCUSSION	SOME C/W INCUSSION	GIVE & TAKE	PRIORITY WORKING	TWO-WAY SIGNALS	MULTI-WAY SIGNALS	STOP/GO BOARDS	CONVOY WORKING	LANE CLOSURE	CONTRA-FLOW	ROAD CLOSURE	Major	Standard	Minor	Immed. (Urgent)	Immed. (Emerg.)				
Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Duration Ave	Average	Average	Average	Average	Average				
4.0	6.2	6.9	3.3	7.8	13.4	0.6	9.2	8.5			16.6	6.5	1.8	3.0	5.5				
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Minimum	Minimum	Minimum	Minimum	Minimum				
Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Maximum	Maximum	Maximum	Maximum	Maximum				
15.0	47.0	35.0	5.0	140.0	49.0	2.0	18.0	34.0			140.0	35.0	5.0	7.0	24.0				
>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>15	>30	>30	>30	>30	>30				
20	3	3	7	14	1	1	10	13	1	1	13	1	1	1	1				
>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>30	>60	>60	>60	>60	>60				
>60	4	1	1	5	3	3	3	1	3	3	1	1	1	1	1				
>180	>60	>60	>60	>60	>60	>60	>60	>60	>60	>60	>180	>180	>180	>180	>180				
>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>180	>365	>365	>365	>365	>365				
Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number				
47	290	36	4	102	45	5	6	89			108	180	86	8	242				
Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked	Days Worked				
190	1,805	249	13	793	604	3	55	753			1,791	1,173	152	24	1,325				
TOTAL WORKS																			
624																			
Ave Duration																			
7.2																			
No. days worked																			
4,465																			

C. SCHEME BENEFITS

