Rotherham Permit Scheme

Scheme Evaluation Review, Year 7 to 9, 2018-2021



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1 INTRODUCTION

1.1 Background

- 1.1.1 The Rotherham Borough Council Permit Scheme went live on 12th June 2012.
- 1.1.2 The scheme operated within the common permit scheme known as the 'Yorkshire Common Permit Scheme for Road Works and Street Works'. Yorkshire highway authorities participated in the creation of the common scheme (YCPS) for the Yorkshire Highways and Utilities Committee (YHAUC) area.
- 1.1.3 The scheme operated under the powers of the Traffic Management Act 2004 (TMA) and was introduced to help the Permit Authority to better manage their highway network, as well as minimising disruption caused by utility company street works and the Council's own highway works.
- 1.1.4 The common permit scheme included all streets within the authority area which are:
 - Reinstatement Category 0, 1 and 2 streets (as defined in NRSWA), or;
 - Streets where any part of the length of street is designated as Traffic Sensitive.
- 1.1.5 A variation was introduced in 2015 with the 'The Traffic Management (Rotherham Borough Council) Permit Scheme Order 2015'. The new order was introduced to confirm compliance with the amended permit scheme regulations as set out in the 'Traffic Management Permit Scheme (England) Regulations 2007 (as amended)' and the 'Traffic Management Permit Scheme (England) (Amendment) Regulations 2015'.
- 1.1.6 The Rotherham Borough Council Permit Scheme came into effect on the 1st October 2015.
- 1.1.7 The scheme was later extended to include Non-Traffic Sensitive category 3 and 4 streets within the Council area. Following an extensive review and consultation period, the revised scheme came into effect on 12th March 2020.

1.2 Previous Reviews

- 1.2.1 In line with the permit scheme regulations, annual reviews were carried out for the first three years of the scheme. The reviews were carried out jointly within the YCPS with data specific to each authority included in the appendices.
- 1.2.2 The following YCPS reviews were carried out:
 - 'Yorkshire Common Permit Scheme Annual Report, 2012 13'
 - 'Yorkshire Common Permit Scheme Annual Report, 2013 14'
 - 'Yorkshire Common Permit Scheme Annual Report, 2014 15'
- 1.2.3 Following completion of annual reports for the first three years, the permit scheme regulations require a review be carried out and reported every three years thereafter. The first 3-year review was carried out by the Council and reported in:
 - 'Rotherham Metropolitan Borough Council, Permit Scheme Evaluation, 2015 –
 2018'

2 SCHEME EVLAUTION 2018-21

2.1 Format of Review

- 2.1.1 This report presents the results and conclusions of the second three-year review, covering the period 12th June 2018 to 11th June 2021.
- 2.1.2 Previous reviews were carried out jointly within the YCPS common scheme with data specific to each authority included in the appendices. The YCPS reviews contain Key Parity Measures (KPM's) and Key Success Measures (KSM's). Detailed information and analysis on the KPM's and KSM's are set out in section 4 of this report.

2.2 Key Parity Measures (KPM's)

- 2.2.1 In the YCPS, permit authorities are also the highway authority, and the highway authority is a promoter of its own maintenance and other highway and traffic activities. Permit authorities need to separate these functions within their organisations and must demonstrate parity of treatment for all activity promoters, particularly between statutory undertakers and the highway authorities' own promoters. The aim of the KPM's is to ensure that permit authorities apply a consistent approach to all activities and activity promoters.
- 2.2.2 KPM's are drawn from Chapter 20 of the "Code of Practice for Permits", which sets out seven Key Performance Indicators (KPI's) that permit authorities can use to demonstrate parity of treatment. KPI's 1 and 2 are mandatory within all permit schemes, and then permit authorities must select at least two more KPI's on which to report.
- 2.2.3 There are five KPMs in the YCPS:
 - **KPM1** The number of permit and permit variations applications received, the number granted and the number refused.
 - **KPM2** The number of conditions applied by condition type.
 - **KPM3** The proportion of approved extensions.
 - KPM4 The number of agreements to work in Section 58 and Section 58A restrictions.
 - **KPM5** The percentage of PAA, permits and applications cancelled.

2.3 Key Success Measures (KSM's)

- 2.3.1 Any activity carried out in the street has the potential to cause disruption. The introduction of the YCPS provides an opportunity to realise a number of benefits to road users, local residents and businesses in the permit areas through better control.
- 2.3.2 Permit authorities have established a series of measures that link to the scheme objectives and that are designed to track delivery of these anticipated benefits.
- 2.3.3 There are five measured KSM areas in the YCPS:
 - **KSM1** Minimising delay and reducing disruption to road users arising from street and road works activity.
 - KSM2 Reduction in remedial measures.

- KSM3 Better information for road users.
- **KSM4** Improved compliance with the "Safety at Street Works and Road Works Code of Practice".
- KSM5 Improved activity planning.
- 2.3.4 Many of the success measures are more subjective in nature so are difficult to quantify from the key performance and works occupancy statistics.

2.4 Intangible Benefits

- 2.4.1 In addition to the measured benefits, the YCPS also anticipated a number of intangible, unmeasured benefits, including:
 - The need to book road space and undertake the activity within a specified time period would focus attention on improved planning and activity scheduling by works promoters.
 - Administrative improvements through more consistent consideration of factors relating to proposed activities would lead to improved certainty that the activity would take place as planned. Also, appropriate and correct information exchange would take place first time.
 - Improved standards of information between activity promoters and permit authorities would lead to improved relationships, cooperative working and mutual support.
 - Improved public perception of the way in which activities were planned and undertaken.

3 SCHEME OBJECTIVES

3.1 Key Objective

- 3.1.1 The Key Objective for the Yorkshire Common Permit Scheme (Rotherham) is:
 - Minimising delay and reducing disruption to road users arising from road and street works activity.

3.2 Parity Objective

- 3.2.1 The Parity Objective for the scheme is:
 - Ensuring parity between promoters of street works and works for road purposes.

3.3 Supplementary Objectives

- 3.3.1 Supplementary Objectives for the scheme are:
 - To protect the structure of the street and the integrity of apparatus in it;
 - To encourage proactive, rather than reactive, attitudes to activities by promoters. It will be easier to reject a permit application for non-supply of required information than it will be to impose a directive on a Notice. This change in culture will result in the supply of more information to RBC, which will better enable it to manage the network, coordinate activities within the borough and across adjacent authorities, and reduce disruption to users of the highway. This information is provided to the general public enabling informed journey choices;
 - To ensure safety for those using, living or working on the street, including those engaged in activities controlled by the Permit Scheme;
 - To improve activity planning by all promoters;
 - An aid to help improve public transport efficiencies.

3.4 Specific Authority Objectives

- 3.4.1 Specific Authority Objectives for the scheme are:
 - To reduce the disruption caused by road and street works, which will assist in tackling delays and unpredictable journey times;
 - To ensure best efforts in the co-ordination of road and street works and proactively encourage works at similar geographic locations by different promoters to be undertaken concurrently;
 - To encourage innovative working practices by road and street works promoters, in order to reduce the requirement for both time and space hence reducing delays.

4 WORKS DURATION

4.1 Methodology

- 4.1.1 Data sources available for this review are:
 - Permit Scheme works stopped notices, March 2019 March 2022 (Symology database)
 - KPI reports, March 2019 March 2022 (Symology database)
- 4.1.2 This review assesses the year-on-year change in the number of Permit applications and review the breakdown of key performance metrics. The main purpose of this analysis is to quantify the benefit of the Permit Scheme in terms of a reduction in number of days worked on the road network.
- 4.1.3 As well as comparing statistics between Years 4, 5 and 6, the average 3-year statistics are compared with the average for the previous 3-year period; Years 1, 2 and 3.

4.2 Number of permits

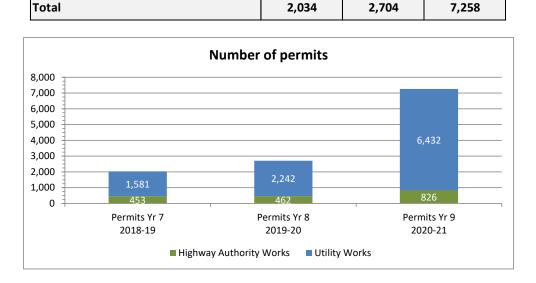
4.2.1 The following series of charts and tables present a comparison of the number of permits granted in each of the years considered in this 3-year period (Table 1).

 PROMOTER TYPE
 Permits Yr 7 2018-19
 Permits Yr 8 2019-20
 Permits Yr 9 2020-21

 Highway Authority Works
 453
 462
 826

 Utility Works
 1,581
 2,242
 6,432

Table 1 Number of permits granted

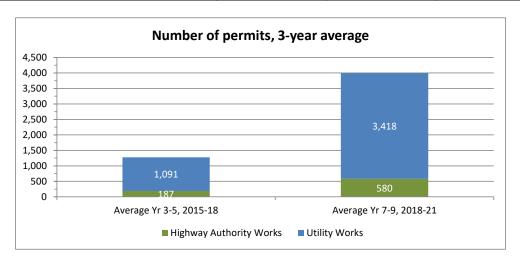


4.2.2 The number of permits has increased significantly during the last three years. The scheme was extended to include all streets the authority has responsibility for in March 2020. This change is reflected in the increase in number of permits granted towards the end of Year 8.

- 4.2.3 The first full year of operation for the extended scheme in Year 9, shows a more than threefold increase in the number of permits granted.
- 4.2.4 A comparison of the average number of permits granted in the last three years and the previous three-year period is shown in Table 2.

Table 2 Number of permits, change from Years 4 to 6 (3-year average)

| PROMOTER TYPE | Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|-------------------------|----------------------------|----------------------------|------------|
| Highway Authority Works | 187 | 580 | 394 |
| Utility Works | 1,091 | 3,418 | 2,328 |
| Total | 1,277 | 3,999 | 2,721 |



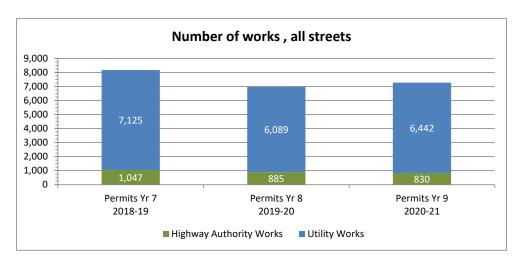
4.2.5 The large increase in the three-year average is a result in the extension of the scheme half way through the last three year period.

4.3 Number of works completed

- 4.3.1 The following tables present the number of works completed across the network, including both permits and notices outside of the scheme before the extension in March 2020.
- 4.3.2 The number of works completed and a breakdown by highway authority and utility company is shown in Table 3 and the accompanying chart.

Table 3 Number of works stopped records

| PROMOTER TYPE | Permits Yr 7 | Permits Yr 8 | Permits Yr 9 |
|-------------------------|--------------|--------------|--------------|
| PROMOTERTIFE | 2018-19 | 2019-20 | 2020-21 |
| Highway Authority Works | 1,047 | 1,047 885 | |
| Utility Works | 7,125 | 6,089 | 6,442 |
| Total | 8,172 | 6,974 | 7,272 |



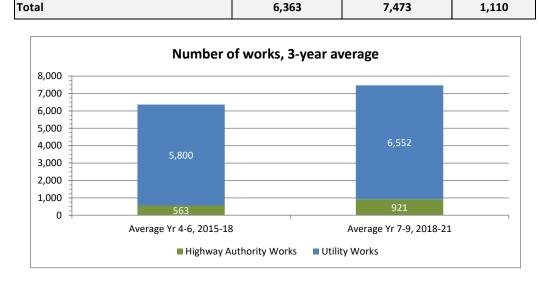
4.3.3 The highest number of works completed was in Year 7, the year before COVID-19 lockdown arrangements. The following two years show a reduction in works completed, which may in part be related to lockdown arrangements in 2020 and 2021.

 PROMOTER TYPE
 Average Yr 4-6, 2015-18
 Average Yr 7-9, 2018-21
 Difference

 Highway Authority Works
 563
 921
 357

 Utility Works
 5,800
 6,552
 752

Table 4 Number of works, change from Years 4 to 6 (3-year average)



The comparison of three-year average data shows that, despite this potential impact in the last three years, the average number of works completed between Year 7 and 9 is

4.4 Works promoter analysis

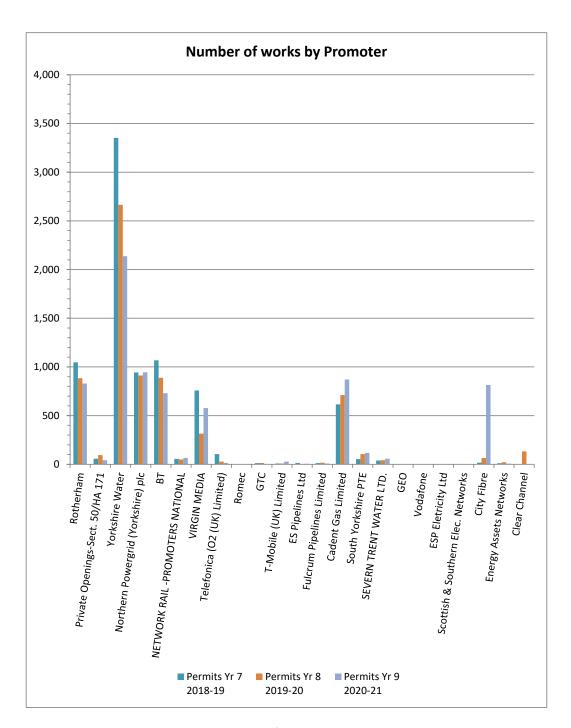
4.3.4

4.4.1 The change in number of works completed by each promoter is presented in Table 5 and the accompanying chart.

approximately 15% higher than the previous three-year period.

Table 5 Number of works completed by promoter

| PROMOTER | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Rotherham | 1,047 | 885 | 830 |
| Private Openings-Sect. 50/HA 171 | 57 | 95 | 41 |
| Yorkshire Water | 3,352 | 2,665 | 2,137 |
| Northern Powergrid (Yorkshire) plc | 943 | 913 | 944 |
| ВТ | 1,068 | 889 | 730 |
| NETWORK RAIL -PROMOTERS NATIONAL | 55 | 50 | 65 |
| VIRGIN MEDIA | 759 | 315 | 578 |
| Telefonica (O2 (UK) Limited) | 105 | 27 | 13 |
| Romec | 2 | 2 | 3 |
| GTC | 12 | 13 | 4 |
| T-Mobile (UK) Limited | 8 | 8 | 27 |
| ES Pipelines Ltd | 13 | 4 | 5 |
| Fulcrum Pipelines Limited | 12 | 16 | 8 |
| Cadent Gas Limited | 615 | 711 | 871 |
| South Yorkshire PTE | 53 | 104 | 117 |
| SEVERN TRENT WATER LTD. | 39 | 42 | 57 |
| GEO | | | 3 |
| Vodafone | 1 | | |
| ESP Eletricity Ltd | | | 1 |
| Scottish & Southern Elec. Networks | | | |
| City Fibre | 16 | 65 | 815 |
| Energy Assets Networks | 11 | 20 | 7 |
| Clear Channel | | 132 | |
| Other promoters | 4 | 18 | 16 |
| Total | 8,172 | 6,974 | 7,272 |



- 4.4.2 Over the three-year period, the number of works completed by Yorkshire Water shows a large reduction year-on-year; from 3,352 works to 2,317. The number of works completed by BT shows a smaller year-on-year reduction from 1,068 in Year 7 to 630 works in Year 9.
- 4.4.3 These reductions are offset to a degree in Year 9 by a large increase in works completed by Cityfibre from fewer than 65 in Years 7 and 8, to 815 works completed in Year 9.
- 4.4.4 A comparison of the number of works completed by promoter type is presented in Figure 1.

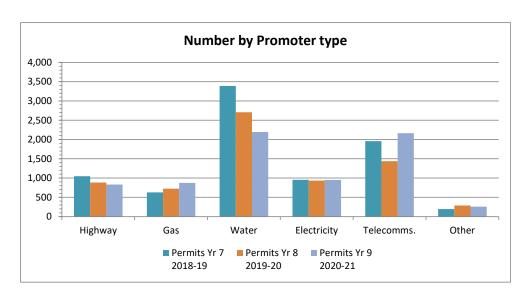


Figure 1 Number of works by promoter group

4.4.5 A comparison of the average number of works completed in each three-year period by promoter group is shown below in Table 6.

Table 6 Promoter groups, change from Years 4 to 6 (3 year average)

| WORKS STOPPED | Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|---------------|----------------------------|----------------------------|------------|
| Highway | 564 | | 357 |
| Gas | 792 | 742 | -50 |
| Water | 2,171 | 2,764 | 593 |
| Electricity | 876 | 946 | 70 |
| Telecomms. | 1,860 | 1,852 | -8 |
| Other | 99 | 248 | 148 |
| Total | 6,363 | 7,473 | 1,109 |

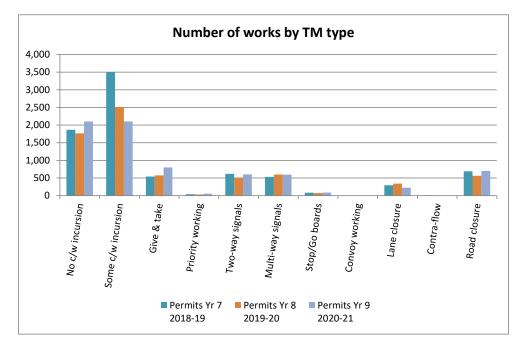
4.4.6 The above data shows that despite the reduction in works completed by the highway authority and Yorkshire Water from Year 7 to Year 9, the average number completed between Years 7 and 9 has increased compared with the previous three-year period, 2015-2018.

4.5 Detailed analysis

- 4.5.1 The following detailed analysis is presented for works completed by all promoters. The same analysis is presented separately in Appendix A for highway authority works and utility company works.
- 4.5.2 Table 7 and the accompanying chart presents a comparison of the change in number of all works completed by traffic management type.

Table 7 Traffic management type

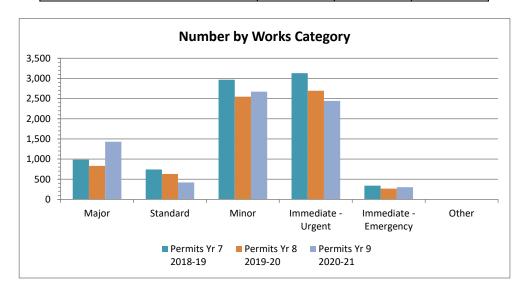
| TRAFFIC MANAGEMENT TYPE | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|-------------------------|-------------------------|-------------------------|-------------------------|
| No c/w incursion | 1,865 | 1,763 | 2,102 |
| Some c/w incursion | 3,498 | 2,508 | 2,101 |
| Give & take | 542 | 574 | 798 |
| Priority working | 40 | 32 | 55 |
| Two-way signals | 618 | 511 | 601 |
| Multi-way signals | 530 | 600 | 595 |
| Stop/Go boards | 83 | 73 | 86 |
| Convoy working | 1 | 3 | 3 |
| Lane closure | 295 | 343 | 226 |
| Contra-flow | 10 | 5 | 4 |
| Road closure | 688 | 562 | 701 |
| Blank | 2 | | |
| Total | 8,172 | 6,974 | 7,272 |



- 4.5.3 Other than a reduction in the number of works recorded as operating with some carriageway incursion the number of works recorded in the other traffic management types has been relatively stable year-on-year.
- 4.5.4 The total number of works completed by category is shown in Table 8 and the accompanying chart.

Table 8 Works categories

| Total | 8,172 | 6,974 | 7,272 |
|-----------------------|-------------------------|-------------------------|-------------------------|
| Other | 2 | | |
| Immediate - Emergency | 341 | 269 | 304 |
| Immediate - Urgent | 3,130 | 2,694 | 2,444 |
| Minor | 2,969 | 2,548 | 2,673 |
| Standard | 744 | 632 | 420 |
| Major | 986 | 831 | 1,431 |
| WORKS STOPPED | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |



- 4.5.5 The number of Major works completed in Year 9 is 50% higher than the two previous years; increasing from between 831 and 986 to 1,431. The number of Major works completed by utilities in Year 9 has almost doubled to 1,079.
- 4.5.6 Other works categories have reduced generally in line with the overall reduction in works numbers from the high recorded in Year 7.

4.6 Works occupancy

4.6.1 Table 9 shows a comparison of the average works duration for all works completed in each year.

Table 9 Average works duration and occupancy

| DURATION | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|---------------------------------------|-------------------------|-------------------------|-------------------------|
| Average duration (days) | 4.2 | 3.9 | 4.2 |
| Total number of days worked | 34,048 | 27,373 | 30,474 |
| Total number of days worked (Permits) | 7,638 | 8,956 | 29,823 |

- 4.6.2 Average works duration ranged from 3.9 days to 4.2 days, with the lowest value being achieved in Year 8, 2019-2020.
- 4.6.3 The above table shows the total number of days worked for all works completed across the network in row 2 and the total number of days recorded for works requiring a permit in the third row.
- 4.6.4 Since the scheme was extended to include all streets three months before the end of Year 8, a direct comparison of permit occupancy is not possible.
- 4.6.5 The large reduction in days worked for all works in Year 8 is a combination of the low average durations and the 15% reduction in the number of works completed.
- 4.6.6 The total number of days worked in each year is compared in Figure 2.

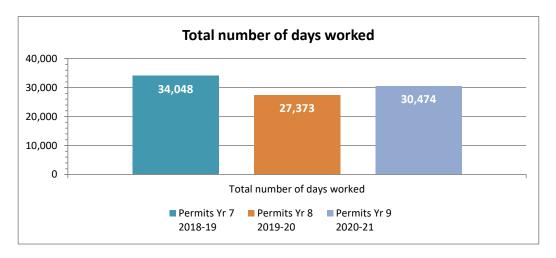


Figure 2 Number of days on all works

4.6.7 Table 10 shows a comparison of the average works duration and occupancy for Years 7 to 9 and the previous three-year period.

| DURATION | Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference | |
|---------------------------------------|----------------------------|----------------------------|------------|--|
| Average duration (days) | 4.6 | 4.1 | -0.5 | |
| Total number of days worked | 29,533 | 30,632 | 1,098 | |
| Total number of days worked (Permits) | 5,057 | 15,472 | 10,416 | |

Table 10 Average duration and occupancy comparison, 3-year average

4.6.8 The average number of works completed in Years 7 to 9 was 17% higher than the previous three years. The reduction in average duration from 4.6 days to 4.1 days reduced has limited the increase in total occupancy to 4%.

4.7 Scheme Benefit

4.7.1 The average duration of all works in each of the last 6 years is shown in Figure 3.

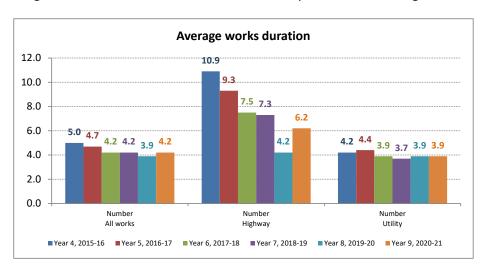


Figure 3 Average duration of works

- 4.7.2 The trend for overall average works duration has been generally downwards, other than a small increase in Year 9. The average duration for utility works has followed this downward trend, with average durations appearing to stabilise at around 3.9 days in the last few years.
- 4.7.3 Average durations for highway works have fallen rapidly since Year 4, other than a large rise in the last year from 4.2 days in Year 8 to 6.2 days last year. This increase is a result of an increase in the average duration of Major and Standard works from 8.0 days and 2.2. days in Year 8 to 1.4 days and 7.6 days in Year 9.

Recommendation Yr9-01: Monitor the estimated duration of Major and Standard highway works in the current year and challenge where appropriate.

4.7.4 The total number of days worked in each of the last six years is presented in Figure 4.

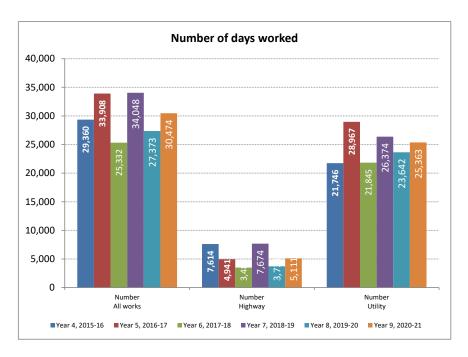


Figure 4 Number of days worked per annum

4.7.5 The total duration of all works across the network has been relatively consistent in each year. This is despite a near 20% increase in the average number of works completed in the last three years.

5 KPI MONITORING

5.1 Introduction

- 5.1.1 The analysis of the Year 7 to 9 KPI data is presented for the following Key Performance Indicators;
 - **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 4, the number of early start requests and the number granted and refused
 - KPI 7, the number of inspections carried out to monitor conditions
- 5.1.2 The above data should be presented separately for highway authority and utility company applications to demonstrate parity in the application of the Scheme.
- 5.1.3 Since the scheme was extended to include all streets during the middle of the review period, in March 2020, the absolute numbers will have changed significantly year-on-year, therefore this review will focus on the percentages and rates for each KPI.
- 5.1.4 The following additional metrics have also been reported;
 - AM5, the number of Fixed Penalty Notices (FPN) given, and a breakdown by works promoter
 - OM6, the number of collaborative works and the number of working days saved
 - **OM7**, the number of deemed permit applications

5.2 KPI review

KPI 1, Permit & Permit Variation applications

5.2.1 The number and proportion of Permit and Permit Variation applications received and refused. A breakdown of the number of permit applications received and the refusal rate is shown in Table 11.

Table 1 KPI 1, Permit applications granted and refused

| PROMOTER TYPE | Year 7, 2018-19 | | | Year 8, 2019-20 | | | Year 9, 2020-21 | | |
|-------------------|-----------------|---------|-----------|-----------------|---------|-----------|-----------------|---------|-----------|
| PROMOTERTIFE | Granted | Refused | Refused % | Granted | Refused | Refused % | Granted | Refused | Refused % |
| Highway Authority | 469 | 24 | 4.4% | 910 | 71 | 6.6% | 1,564 | 67 | 3.7% |
| Utility | 2,482 | 650 | 17.1% | 5,734 | 822 | 10.6% | 9,463 | 1,405 | 10.2% |
| ALL PROMOTERS | 2,951 | 674 | 15.5% | 6,644 | 893 | 10.1% | 11,027 | 1,472 | 9.5% |

- 5.2.2 The number of permits granted has increased year-on-year due to the extension of the scheme in March 2020.
- 5.2.3 The refusal rate has reduced in each year for utility applications reducing from 17% in Year 7 to 10% in Year 9. The refusal rate for highway applications has been relatively consistent at between 4% and 7% over the same period.
- 5.2.4 The refusal rates are presented graphically in Figure 5.

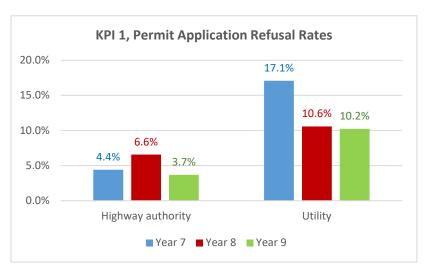


Figure 5: KPI 1, Permit Application Refusal Rates

5.2.5 Where possible, permit modification requests have been used in preference to refusing the initial permit application. This demonstrated in Table 12 and Figure 6 which shows the number of PMR issued and the proportion of PMR to permit applications received.

Table 12 KPI 1, Permit modification requests

| PROMOTER TYPE | Year 7, | | | Ye | Year 8, 2019-20 | | | Year 9, 2020-21 | | |
|-------------------|--------------|-----|-------|--------------|-----------------|-----------|--------------|-----------------|-----------|--|
| PROMOTERTIFE | Applications | PMR | PMR % | Applications | Refused | Refused % | Applications | Refused | Refused % | |
| Highway Authority | 592 | 36 | 6.1% | 1,144 | 67 | 5.9% | 1,856 | 119 | 6.4% | |
| Utility | 3,604 | 318 | 8.8% | 7,512 | 599 | 8.0% | 13,284 | 1,521 | 11.4% | |
| ALL PROMOTERS | 4,196 | 354 | 8.4% | 8,656 | 666 | 7.7% | 15,140 | 1,640 | 10.8% | |

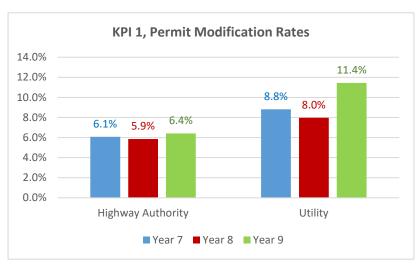


Figure 6: KPI 1, Permit Modification Request Rates

KPI 2, Permit conditions

5.2.6 The number of conditions applied for highway and utility permit applications is shown in Table 13.

Table 13 KPI 2, Permit Conditions

| | Year 7, 2018-19 | | | Year 8, 2019-20 | | | Year 9, 2020-21 | | |
|----------------|-----------------|-------|-------|-----------------|-------|-------|-----------------|--------|--------|
| All Conditions | НА | PU | All | НА | PU | All | НА | PU | All |
| TOTAL | 352 | 5,638 | 5,990 | 337 | 7,340 | 7,677 | 789 | 21,049 | 21,838 |
| | 6% | 94% | | 4% | 96% | | 4% | 96% | |

- 5.2.7 The majority of conditions are applied to utility applications. Approximately 1 in 20 of conditions are applied to highway permit applications in each year.
- 5.2.8 The number of conditions applied by condition type for utility permit applications is shown in Figure 7.

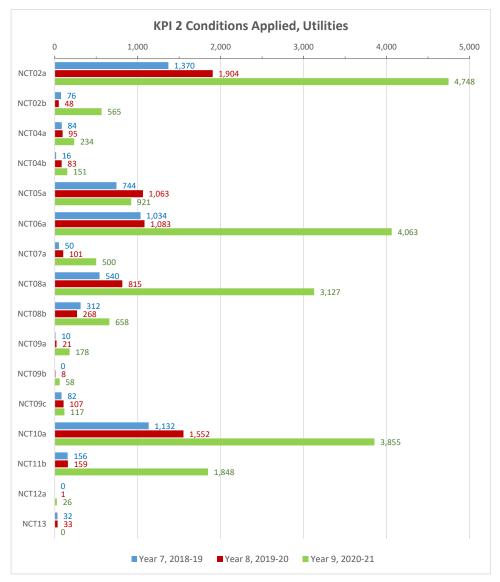


Figure 7: KPI 2, Conditions Applied

- 5.2.9 While the number of conditions applied in Year 9 is higher due to the large increase in the number of permits submitted and most of the conditions have increased in proportion to the change, the proportion of the following conditions has increased more:
 - NCT06a, road space available to traffic and pedestrians through the works

- NCT08a, the requirement for traffic management control
- NCT11b, publicity and consultation relating to the works

KPI 3, Duration extension requests

5.2.10 The number of duration extension requests granted and refused, is shown in Table 14 for all promoters, and separately for highway authority applications and for statutory undertakers.

Table 14 KPI 3, Permit Extension requests received and refused

| PROMOTER TYPE | Y | Year 7, 2018-19 | | Year 8, 2019-20 | | | Year 9, 2020-21 | | |
|-------------------|---------|-----------------|-----------|-----------------|---------|-----------|-----------------|---------|-----------|
| PROMOTER TIPE | Granted | Refused | Refused % | Granted | Refused | Refused % | Granted | Refused | Refused % |
| Highway Authority | 23 | 0 | 0.0% | 7 | 0 | 0.0% | 75 | 3 | 3.7% |
| Utility | 270 | 18 | 6.1% | 379 | 31 | 7.5% | 1,014 | 51 | 4.7% |
| ALL PROMOTERS | 293 | 18 | 5.7% | 386 | 31 | 7.4% | 1,089 | 54 | 4.6% |

- 5.2.11 The refusal rate for extension applications is relatively consistent in each year, at between 5% and 7%. Only 3 requests submitted for highway works were refused, but fewer than 1 in 20 requests submitted were related to highway works.
- 5.2.12 The number of requests has increased significantly in Year 9, from 300 to 400 in Years 7 and 8 to more than 1,000. The change in scheme to include all streets has increased the number of permitted works undertaken, but the number of extension requests has increased at a higher rate.
- 5.2.13 COVID-19 lockdown measures through the Summer and Autumn of 2020 may have contributed to the high number of requests received in Year 9.

Recommendation Yr9-02: Monitor the number of extension requests in the current year to see if these have reduced following the removal of all COVID-19 restrictions.

5.2.14 The number of extension requests agreed for highway authority and utility permits is shown in Figure 8.

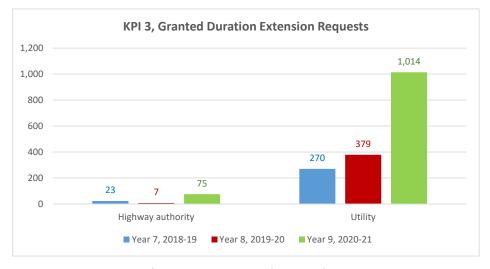


Figure 8: KPI 3, Permit Extensions

KPI 4, Early start requests

5.2.15 The number of requests to start early and the number agreed is shown in Table 15.

 Refusal %

 Year 7
 Year 8
 Year 9

 Highway authority
 211
 152
 18

 Utility
 66
 132
 251

277

284

269

Table 15 KPI 4, Early start requests

- 5.2.16 The number of highway works started before the end of the notification period without agreement has reduced significantly year-on-year from a high of 211. This equated to almost 50% of highway permits granted in Year 7. Only 18 works started early without agreement in Year 9, fewer than 2% of permits granted.
- 5.2.17 The converse is true for utility works, where the number of works started without agreement has increased in each year. The increase however, is roughly in line with the increase in the number of permits granted, and equates to approximately 2.5% of permits granted in each year.
- 5.2.18 The number of early starts without agreement are shown in Figure 9.

ALL PROMOTERS

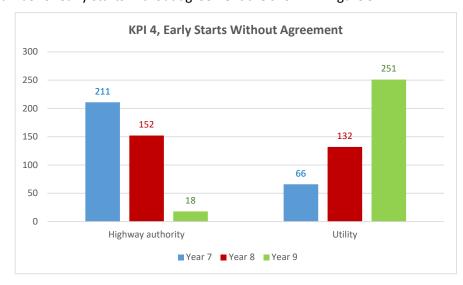


Figure 9: KPI 4, Early Starts Without Agreement

KPI 7, Permit inspections

5.2.19 No data was available in the system for the number of permit condition inspections carried out. Data related to the number of FPN given for non-compliance with permit regulations (AM5) has been used in place of permit inspection reports.

AM5, FPN given

5.2.20 The number of FPN given in each year is shown in Table 16.

| FPN TYPE | Year 7 | | Year 8 | | Year 9 | |
|-----------|---------|---------|---------|---------|---------|---------|
| FFIN TTPL | Highway | Utility | Highway | Utility | Highway | Utility |
| 54(5) | 0 | 3 | 0 | 1 | 0 | 0 |
| 55(5 & () | 0 | 11 | 8 | 18 | 0 | 0 |
| 57(4) | 0 | 2 | 0 | 1 | 0 | 0 |
| 70(6) | 0 | 0 | 0 | 40 | 0 | 0 |
| 74(7B) | 0 | 23 | 8 | 32 | 0 | 11 |
| 19(1) | 0 | 31 | 0 | 67 | 1 | 115 |
| 20(1) | 0 | 8 | 1 | 26 | 0 | 12 |
| TOTAL | 0 | 78 | 17 | 185 | 1 | 138 |

Table 16 AM5, Fixed Penalty Notices given

- 5.2.21 During the last three years the number of FPN given to utilities has varied from 78 in Year 7 to 185 in Year 8. The number of FPN given has not increased in line with the increase in the number of permits granted in Year 9 the number of FPN fell from 185 in Year 8 to 138 in Year 9, while the number of permits granted almost doubled from 6,644 to 11,027.
- 5.2.22 Approximately half of the FPN given in each year were for working without a permit or a breach of permit conditions.
- 5.2.23 The number of FPN given for Section 19(1) operating without a valid permit and Section 20(1) a breach of permit conditions is shown in Figure 10.

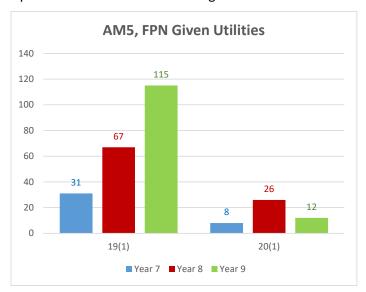


Figure 10: AM5, Fixed Penalty Notices Issued

- 5.2.24 The number of FPN given for works operating without a valid permit Section 19(1) has increased roughly in line with the increase in the number of permits granted in each year.
- 5.2.25 However, the number given for breaches of permit conditions Section 20(1) appears low compared with schemes in other similar sized authorities, particularly in Year 9.

Recommendation Yr9-03: Review how permit inspections are carried out and recorded to ensure that all potential breaches of condition are identified, and consideration given to raising an FPN when appropriate.

OM6, Collaborative working

5.2.26 The number of works delivered collaboratively is shown in Figure 12.

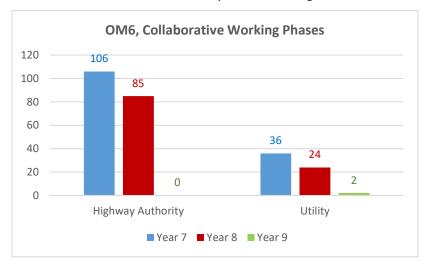


Figure 11: OM6, Collaborative Working Phases

5.2.27 Only two collaborative works phases were recorded in Year 9, from a high of 142 in Year 7. It is possible that lockdown measures during 2020-21 had an impact on the number of opportunities to work collaboratively.

Recommendation Yr9-04: Monitor opportunities to work collaboratively in the current year.

OM7, Deemed permit applications

5.2.28 The number of deemed permit applications in each year is shown in Figure 12.

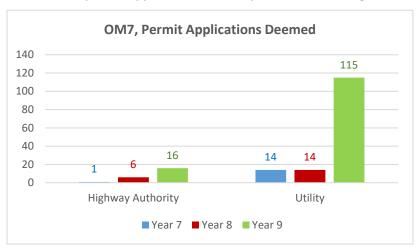


Figure 12: OM7, Deemed permit applications

- 5.2.29 The data shows a large increase in applications deemed in Year 9 from 15 to 20 in previous years to 131.
- 5.2.30 This could be related to either a change in working practices during lockdown (e.g. working from home) or a result of the large increase in the number of applications received following the extension of the scheme to include all streets a few months earlier. Most

were deemed between July and December 2020, so either effect or a combination of both is possible.

Recommendation Yr9-05: Monitor the number of applications deemed in the current year.

6 STAFFING & RESOURCE

6.1 Summary

- 6.1.1 The review of permit fee income and scheme operating cost considers the period 2015 to 2021. The YCPS common scheme review reported the fee income review annually from 2012 to 2015.
- 6.1.2 A full Cost Benefit Assessment (CBA) was carried out in 2018 in support of the extension of the scheme to include all streets within the Council area. This assessment used permit and notice records for the period 2015 to 2018 and the data presented in the Scheme Evaluation Review for 2015-18.
- 6.1.3 The same data has been processed for the current review period 2018-21.
- 6.1.4 The DfT Fees Matrix used to estimate staff numbers and set the permit fee charges at the outset of the scheme has been re-run with the actual number of permit applications granted, to calculate the number of staff required and the operating cost of the scheme in each year.
- 6.1.5 No change in permit fee has been implemented since the scheme went live in June 2012.

6.2 Permit Activity

- 6.2.1 The number of permits granted between 2015 and 2018 was relatively consistent at 1,200 to 1,378. Year 7, 2018-19 saw a 50% increase to 1,870 permits granted. The number of permit variations granted also increased by approximately 50%.
- 6.2.2 Year 8 saw a further increase to 2,434 permits granted, due to the extension of the scheme to include Category 3 and 4 Non-Traffic Sensitive streets ion 12th March 2020.
- 6.2.3 The first full year of the extended scheme saw a threefold increase to 7,657 permits granted.
- 6.2.4 Permit variations granted were between 40% and 50% of the number of all permits granted in each year.
- 6.2.5 The number of permits and permit variations granted between 2015 and 2021 is listed below:
 - Year 4, 2015-16; 1,200 permits granted & 658 variations
 - Year 5, 2016-17; 1,378 permits granted & 763 variations
 - Year 6, 2017-18; 1,254 permits granted & 702 variations
 - Year 7, 2018-19; 1,870 permits granted & 951 variations
 - Year 8, 2019-20; 2,434 permits granted & 1,162 variations *
 - Year 9, 2020-21; 7,657 permits granted & 3,107 variations *
 - * Scheme changed to cover all streets on 12th March 2020

6.3 Staff Resource

6.3.1 Using the actual number of utility and highway authority permit applications granted in each year, the same Fees Matrix spreadsheet calculates the total number of FTE staff requirement as follows in Table 17.

Utilities **Highway Works** PERSONNEL LEVEL Year 7 Year 8 Year 9 Year 7 Year 8 Year 9 Street Works Officer 0.3 0.2 0.5 0.5 0.7 2.1 Street Works Co-ordinator 0.4 0.3 8.0 0.6 0.9 3.4 Traffic Manager 0.2 0.1 0.2 0.2 0.2 0.7 **Total employees** 0.9 0.7 1.6 1.4 1.9 6.2

Table 17 Years 7 to 9 staff resource, 2018-2021

- 6.3.2 The total number of staff required is calculated at 2.3 FTE in Year 7, 2.6 FTE in Year 8 and 7.8 FTE in Year 9, the first full year with the scheme covering all streets. This compares with 1.4 to 1.7 FTE between Years 4 and 6.
- 6.3.3 The number calculated from the Fees Matrix for the six years considered in this fee review is shown in Figure 13.

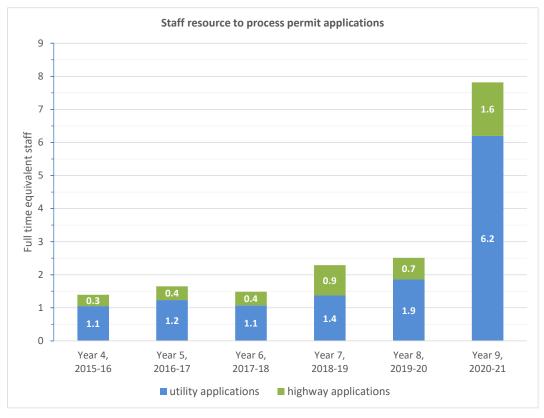


Figure 13: Number of full-time staff required, Years 4 to 9

6.3.4 The additional resource required in the last 3 years is reflected in additional cost to the Council to process utility permit applications.

6.4 Operating costs

6.4.1 Using the same Fees Matrix spreadsheet, the operating costs to process all permits granted in the first year are shown in Table 18.

EMPLOYEE COSTS NUMBER OF SCHEME ALLOWABLE **PERMIT** PERMIT STAFF COST **OVERHEADS APPLICATIONS** VARIATIONS £71,072 Year 4, 2015-16 1.4 £106,388 £27.260 £8,056 Year 5, 2016-17 1.7 £125,816 £84,728 £31,565 £9,523 Year 6, 2017-18 £111,973 £74,429 £29,063 £8,481 1.5 Year 7, 2019-20 1.4 £146,705 £96,462 £39,124 £11,119 Year 8, 2020-21 £192,355 £132,216 £45,597 £14,542 1.9 £109,895 Year 9, 2021-22 £607,061 £451 491 £45,675 6.2

Table 18 Years 4 to 9 operating costs, utility permits 2015-21

- 6.4.2 The total cost to process all permits and variations granted ranged from £106,000 to £607,000.
- 6.4.3 The permit fee surcharge to recover the utilities share of the allowable overheads recovered between £8,056 in Year 4, when the scheme covered Category 0-2 Traffic Sensitive streets only, to £45,675 the first full year with the scheme covering all streets in Year 9. The surcharge is approximately 8% of the total annual income.
- 6.4.4 Staff salaries have increased by 9.7% on average over the period 2015 to 2021. This is reflected in the increase in operating costs also.

6.5 Fee income

- 6.5.1 The total permit fees billed in each year, after applying discounts for major works with duration less than 10 days and for working at non-traffic sensitive times, was;
 - Year 4, 2015-16; £158,151
 - Year 5, 2016-17; £152,115
 - Year 6, 2017-18; £174,408
 - Year 7, 2018-19; £154,611
 - Year 8, 2019-20; **£161,120**
 - Year 9, 2020-21; £610,494
- 6.5.2 Allowable costs for purchase and maintenance of IT hardware and software products was £67,781 between Years 4 and 8. The costs increased to £93,076 in Year 9, following the introduction of Street Manager and the Symology API.
- 6.5.3 The utilities share of allowable costs is between £50,378 and £78,498. The cost is shared pro rata based on the number of permits granted in each year.
- 6.5.4 The relatively low income generated prior to extension to include all streets in 2020 resulted in the allowable costs being under-recovered by around £40,000 in each year

between Year 4 and Year 8. The higher fee income generated in Year 9 resulted in a higher proportion of costs recovered via the permit fee surcharge, with costs only under-recovered by £23,553.

6.5.5 The adjusted loss/surplus in each year is presented in Table 19 and Figure 14.

Adjusted Loss/Surplus Year 4, 2015-16 loss/surplus £8,665 Year 5, 2016-17 loss/surplus -£17,807 loss/surplus Year 6, 2017-18 £19,648 Year 7, 2018-19 loss/surplus -£28,557 Year 8, 2019-20 loss/surplus -£74,768 Year 9, 2020-21 loss/surplus -£20,120 TOTAL ACCUMULATED LOSS/SURPLUS, -£112.940 TO END OF YEAR 9

Table 19 Years 4 to 9 operating loss/surplus

6.5.6 Following surpluses in two of the first three years in this review period, the scheme has made a loss in each of the last three years.



Figure 14: Reported annual loss/surplus, 2015-21

- 6.5.7 The accumulated losses over the period 2015 to 2021 are £112,940 or 18.5% of current annual income.
- 6.5.8 These losses are projected to increase in subsequent years, as salaries and other staff costs increase further, therefore it is recommended that consideration is given to adjusting the permit fee charges to;
 - avoid further losses in subsequent years, and;
 - recover losses accumulated since the start of the scheme.

- 6.5.9 Increasing the permit fees by 10% on average would recover approximately an additional £60,000 per annum of fee income (based on the permit activity recorded in Year 9). This would avoid further on-going losses and recover a proportion of the £112,940 loss accumulated since 2015.
- 6.5.10 The increase available for many of the permit categories are capped at between 8% and 12% due to the maximum fee level permitted in the regulations. Therefore, an increase of 15% is required to increase the forecast fee income by 10% on average.
 - Recommendation Yr9-06: Consider increasing permit fees by 15% in the current year to recover losses accumulated to the end of Year 9 and avoid further losses accruing as staff and other costs increase incrementally each year.
- 6.5.11 A further full review of fees would then be carried out at the end of Year 12 to determine whether the fee change continues to be appropriate.

7 CONCLUSIONS

7.1 Background

- 7.1.1 The Rotherham Borough Council Permit Scheme went live on 12th June 2012. The scheme operated within the common permit scheme known as the *'Yorkshire Common Permit Scheme for Road Works and Street Works'*.
- 7.1.2 A variation was introduced in 2015 with the *'The Traffic Management (Rotherham Borough Council) Permit Scheme Order 2015'*. The new order was introduced to confirm compliance with the amended permit scheme regulations of 2015. The Rotherham Borough Council Permit Scheme came into effect on the 1st October 2015.
- 7.1.3 The scheme was later extended to include Non-Traffic Sensitive category 3 and 4 streets within the Council area. Following an extensive review and consultation period, the revised scheme came into effect on 12th March 2020.

7.2 Summary

- 7.2.1 The number of permits granted has increased significantly during the last three years. The scheme was extended to include all streets the authority has responsibility for in March 2020. This change is reflected in the increase in number of permits granted towards the end of Year 8.
- 7.2.2 The first full year of operation for the extended scheme in Year 9, shows a more than threefold increase in the number of permits granted.
- 7.2.3 The following tables present the number of works completed across the network, including both permits and notices outside of the scheme before the extension in March 2020.
- 7.2.4 Over the three-year period, the number of works (including both permits and notices outside of the scheme before the extension in March 2020) completed by Yorkshire Water shows a large reduction year-on-year; from 3,352 works to 2,317. The number of works completed by BT shows a smaller year-on-year reduction from 1,068 in Year 7 to 630 works in Year 9.
- 7.2.5 These reductions are offset to a degree in Year 9 by a large increase in works completed by Cityfibre from fewer than 65 in Years 7 and 8, to 815 works completed in Year 9.
- 7.2.6 The data shows that despite the reduction in works completed by the highway authority and Yorkshire Water from Year 7 to Year 9, the average number completed between Years 7 and 9 has increased compared with the previous three-year period, 2015-2018.
- 7.2.7 The number of Major works completed in Year 9 is 50% higher than the two previous years; increasing from between 831 and 986 to 1,431. The number of Major works completed by utilities in Year 9 has almost doubled to 1,079.

7.3 Scheme benefits

7.3.1 The trend for overall average works duration has been generally downwards, other than a small increase in Year 9. The average duration for utility works has followed this downward trend, with average durations appearing to stabilise at around 3.9 days in the last few years.

- 7.3.2 Average durations for highway works have fallen rapidly since Year 4, other than a large rise in the last year from 4.2 days in Year 8 to 6.2 days last year. This increase is a result of an increase in the average duration of Major and Standard works from 8.0 days and 2.2. days in Year 8 to 9.0 days and 5.5 days in Year 9.
- 7.3.3 The total duration of all works across the network has been relatively consistent in each year. This is despite a near 20% increase in the average number of works completed in the last three years.

7.4 Recommendations

- 7.4.1 Six recommendations have been made following during this review.
- 7.4.2 These are broken down as follows:

Duration and occupancy;

Recommendation Yr9-01: Monitor the estimated duration of Major and Standard highway works in the current year and challenge where appropriate.

Key Performance Indicators;

Recommendation Yr9-02: Monitor the number of extension requests in the current year to see if these have reduced following the removal of all COVID-19 restrictions.

Recommendation Yr9-03: Review how permit inspections are carried out and recorded to ensure that all potential breaches of condition are identified, and consideration given to raising an FPN when appropriate.

Recommendation Yr9-04: Monitor opportunities to work collaboratively in the current vear.

Recommendation Yr9-05: Monitor the number of applications deemed in the current year.

Permit fee income;

Recommendation Yr9-06: Consider increasing permit fees by 15% in the current year to recover losses accumulated to the end of Year 9 and avoid further losses accruing as staff and other costs increase incrementally each year.

7.5 Conclusions

- 7.5.1 This review has demonstrated a substantial reduction in the number of days worked on the network has been achieved.
- 7.5.2 The Key Performance Indicators demonstrate that the scheme continues to provide parity of operation between highway authority and external works promoter permit applications.
- 7.5.3 This review has demonstrated that Scheme has achieved its stated objectives relating to reduced occupancy of the road network in each year.
- 7.5.4 There are further benefits derived from reduced occupation of the highway, including;
 - improves safety at road and street works

- reduces noise and air pollution
- 7.5.5 Furthermore, the benefits derived from operating the Permit Scheme include;
 - improved coordination of activities
 - improved communication between authority and utility companies
 - improved accuracy of works records recorded in the Register
 - reduction in customer complaints

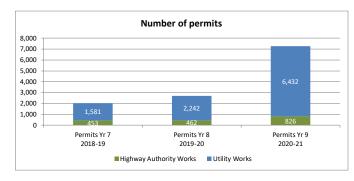
APPENDIX A. YEARS 7 TO 9 DETAILED ANALYSIS

All works promoters

ANNUAL DATA ANALYSIS

Table A.1: Number of permits p.a.

| Utility Works Total | 1,581 | 2,242 | 6,432 |
|-------------------------|--------------|--------------|--------------|
| | 2,034 | 2,704 | 7,258 |
| Highway Authority Works | 453 | 462 | 826 |
| PROMOTER TYPE | Permits Yr 7 | Permits Yr 8 | Permits Yr 9 |
| | 2018-19 | 2019-20 | 2020-21 |

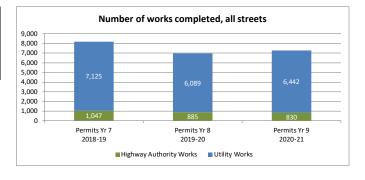


3-YEAR AVERAGE COMPARISON

| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 187 | 580 | 394 |
| 1,091 | 3,418 | 2,328 |
| 1,277 | 3,999 | 2,721 |

Table A.2: Number of works completed p.a.

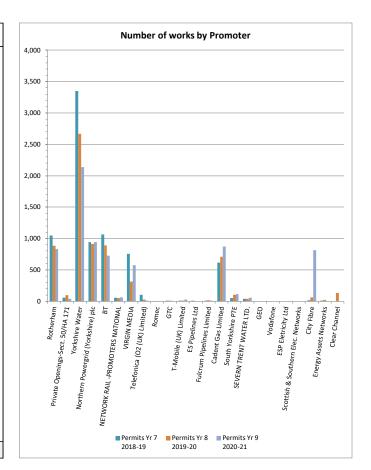
| PROMOTER TYPE | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Highway Authority Works | 1,047 | 885 | 830 |
| Utility Works | 7,125 | 6,089 | 6,442 |
| Total | 8,172 | 6,974 | 7,272 |



| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 563 | 921 | 357 |
| 5,800 | 6,552 | 752 |
| 6,363 | 7,473 | 1,110 |

Table A.3: Number of works by Promoter

| PROMOTER | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Rotherham | 1,047 | 885 | 830 |
| Private Openings-Sect. 50/HA 171 | 57 | 95 | 41 |
| Yorkshire Water | 3,352 | 2,665 | 2,137 |
| Northern Powergrid (Yorkshire) plc | 943 | 913 | 944 |
| вт | 1,068 | 889 | 730 |
| NETWORK RAIL -PROMOTERS NATIONAL | 55 | 50 | 65 |
| VIRGIN MEDIA | 759 | 315 | 578 |
| Telefonica (O2 (UK) Limited) | 105 | 27 | 13 |
| Romec | 2 | 2 | 3 |
| GTC | 12 | 13 | 4 |
| T-Mobile (UK) Limited | 8 | 8 | 27 |
| ES Pipelines Ltd | 13 | 4 | 5 |
| Fulcrum Pipelines Limited | 12 | 16 | 8 |
| Cadent Gas Limited | 615 | 711 | 871 |
| South Yorkshire PTE | 53 | 104 | 117 |
| SEVERN TRENT WATER LTD. | 39 | 42 | 57 |
| GEO | | | 3 |
| Vodafone | 1 | | |
| ESP Eletricity Ltd | | | 1 |
| Scottish & Southern Elec. Networks | | | |
| City Fibre | 16 | 65 | 815 |
| Energy Assets Networks | 11 | 20 | 7 |
| Clear Channel | | 132 | |
| Other promoters | 4 | 18 | 16 |
| Total | 8,172 | 6,974 | 7,272 |



| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 564 | 921 | 357 |
| 29 | 64 | 36 |
| 2,148 | 2,718 | 570 |
| 875 | 933 | 59 |
| 1,099 | 896 | -204 |
| 0 | 57 | 56 |
| 746 | 551 | -196 |
| 8 | 48 | 40 |
| 4 | 2 | -1 |
| 11 | 10 | -1 |
| 3 | 14 | 11 |
| 3 | 7 | 4 |
| 12 | 12 | |
| 782 | 732 | -49 |
| 51 | 91 | 40 |
| 24 | 46 | 22 |
| 0 | 2 | 1 |
| 2 | 1 | -2 |
| 1 | 1 | 0 |
| 1 | | -1 |
| 1 | 299 | 298 |
| 0 | 13 | 12 |
| | 132 | 132 |
| | 13 | 13 |
| 6,363 | 7,562 | 1,199 |

Table A.4: Number of works by promoter type

| Total | 8,172 | 6,974 | 7,272 |
|---------------|-------------------------|-------------------------|-------------------------|
| Other | 196 | 289 | 258 |
| Telecomms. | 1,957 | 1,436 | 2,163 |
| Electricity | 954 | 933 | 952 |
| Water | 3,391 | 2,707 | 2,194 |
| Gas | 627 | 724 | 875 |
| Highway | 1,047 | 885 | 830 |
| WORKS STOPPED | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |

| | 8,172 | 6,974 | 7,272 | |
|------------------|-------|-------|-------|--|
| | | | | |
| ghway percentage | 13% | 13% | 11% | |
| gay percentage | 20/0 | 20/0 | /- | |

Number by Promoter type 4,000 3,500 3,000 2,500 2,000 1,500 1,000 500 Highway Water Electricity Telecomms. Other ■ Permits Yr 7 ■ Permits Yr 8 ■ Permits Yr 9 2019-20

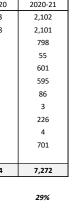
| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 564 | 921 | 357 |
| 792 | 742 | -50 |
| 2,171 | 2,764 | 593 |
| 876 | 946 | 70 |
| 1,860 | 1,852 | -8 |
| 99 | 248 | 148 |
| 6,363 | 7,473 | 1,109 |

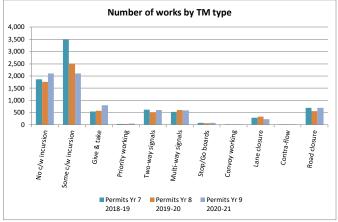
9% 12% 32%

Table A.5: Number of works by traffic management type

| TRAFFIC MANAGEMENT TYPE | Permits Yr 7 | Permits Yr 8 | Permits Yr 9 |
|-------------------------|--------------|--------------|--------------|
| THATTE WAIVAGEWENT THE | 2018-19 | 2019-20 | 2020-21 |
| No c/w incursion | 1,865 | 1,763 | 2,102 |
| Some c/w incursion | 3,498 | 2,508 | 2,101 |
| Give & take | 542 | 574 | 798 |
| Priority working | 40 | 32 | 55 |
| Two-way signals | 618 | 511 | 601 |
| Multi-way signals | 530 | 600 | 595 |
| Stop/Go boards | 83 | 73 | 86 |
| Convoy working | 1 | 3 | 3 |
| Lane closure | 295 | 343 | 226 |
| Contra-flow | 10 | 5 | 4 |
| Road closure | 688 | 562 | 701 |
| Blank | 2 | | |
| Total | 8,172 | 6,974 | 7,272 |

43%



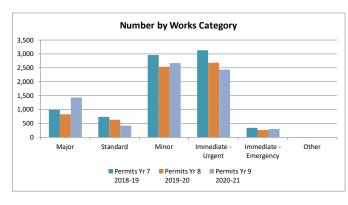


| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 1,868 | 1,910 | 42 |
| 2,692 | 2,702 | 10 |
| 328 | 638 | 310 |
| 54 | 42 | -12 |
| 425 | 577 | 151 |
| 233 | 575 | 342 |
| 64 | 81 | 17 |
| 2 | 2 | |
| 82 | 288 | 206 |
| 6 | 6 | 1 |
| 346 | 650 | 304 |
| 262 | 2 | -260 |
| 6,363 | 7,474 | 1,111 |

42% 36% 1%

Table A.6: Number of works by works category

| Total | 8,172 | 6,974 | 7,272 |
|-----------------------|-------------------------|-------------------------|-------------------------|
| Other | 2 | | |
| Immediate - Emergency | 341 | 269 | 304 |
| Immediate - Urgent | 3,130 | 2,694 | 2,444 |
| Minor | 2,969 | 2,548 | 2,673 |
| Standard | 744 | 632 | 420 |
| Major | 986 | 831 | 1,431 |
| WORKS STOPPED | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |

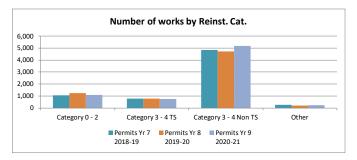


| 6,363 | 7,474 | 1,111 |
|----------------------------|----------------------------|------------|
| 262 | 2 | -260 |
| 241 | 305 | 64 |
| 2,551 | 2,756 | 205 |
| 1,829 | 2,730 | 901 |
| 714 | 599 | -115 |
| 766 | 1,083 | 317 |
| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |

Table A.7: Reinstatement categories

| REINSTATEMENT CATEGORY | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|------------------------|-------------------------|-------------------------|-------------------------|
| Category 0 - 2 | 1,071 | 1,255 | 1,091 |
| Category 3 - 4 TS | 779 | 772 | 758 |
| Category 3 - 4 Non TS | 4,860 | 4,736 | 5,192 |
| Other | 264 | 211 | 231 |
| All works | 6,974 | 6,974 | 7,272 |

70% 68% 71%



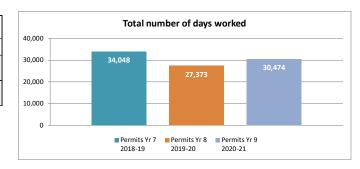
| - | | |
|----------------------------|----------------------------|------------|
| 6,363 | 7,073 | 710 |
| 232 | 235 | 3 |
| 4,738 | 4,929 | 192 |
| 589 | 770 | 180 |
| 804 | 1,139 | 335 |
| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |

74% 70% 27%

Table A.8: Average works duration

| DURATION | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|---------------------------------------|-------------------------|-------------------------|-------------------------|
| Average duration (days) | 4.2 | 3.9 | 4.2 |
| Total number of days worked | 34,048 | 27,373 | 30,474 |
| Total number of days worked (Permits) | 7,638 | 8,956 | 29,823 |

Non-Permit occupancy 26,410 18,417 651



| Average Yr 4-6, 2015-18 | Average Yr 7-9, 2018-21 | Difference |
|----------------------------|----------------------------|------------|
| 4.6 | 4.1 | -0.5 |
| 29,533 | 30,632 | 1,098 |
| 5,057 | 15,472 | 10,416 |

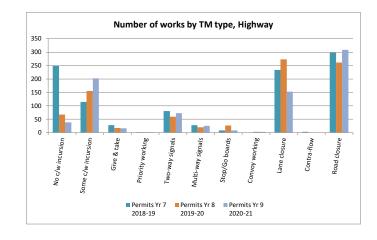
24,477 15,159 -9,317

Highway authority works promoter

ANNUAL DATA ANALYSIS

Table A.9: Highway works by tm

| Total | 1,045 | 885 | 830 |
|-------------------------|--------------|--------------|--------------|
| Blank | | | |
| Road closure | 298 | 261 | 309 |
| Contra-flow | 3 | | |
| Lane closure | 234 | 273 | 152 |
| Convoy working | | 3 | 3 |
| Stop/Go boards | 9 | 27 | 8 |
| Multi-way signals | 28 | 20 | 26 |
| Two-way signals | 80 | 60 | 73 |
| Priority working | 1 | 1 | 1 |
| Give & take | 28 | 17 | 16 |
| Some c/w incursion | 114 | 155 | 203 |
| No c/w incursion | 250 | 68 | 39 |
| TRAFFIC MANAGEMENT TYPE | 2018-19 | 2019-20 | 2020-21 |
| | Permits Yr 7 | Permits Yr 8 | Permits Yr 9 |

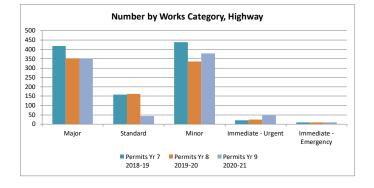


3-YEAR AVERAGE COMPARISON

| Average Yr 3-5, 2015-18 | Average Yr 7-9, 2019-22 | Difference |
|----------------------------|----------------------------|------------|
| 183 | 119 | -64 |
| 19 | 157 | 138 |
| 21 | 20 | -1 |
| 1 | 1 | |
| 55 | 71 | 16 |
| 32 | 25 | -8 |
| 8 | 15 | 7 |
| 2 | 3 | 1 |
| 37 | 220 | 183 |
| 1 | 3 | 2 |
| 204 | 289 | 85 |
| | | |
| 563 | 923 | 360 |

Table A.10: Highway works by works category

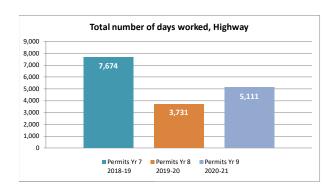
| WORKS STOPPED | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|-----------------------|-------------------------|-------------------------|-------------------------|
| Major | 418 | 352 | 352 |
| Standard | 158 | 163 | 44 |
| Minor | 439 | 336 | 378 |
| Immediate - Urgent | 21 | 25 | 47 |
| Immediate - Emergency | 9 | 9 | 9 |
| Other | | | |
| Total | 1,045 | 885 | 830 |



| Average Yr 3-5, 2015-18 | Average Yr 7-9, 2019-22 | Difference |
|----------------------------|----------------------------|------------|
| 267 | 374 | 107 |
| 176 | 122 | -55 |
| 89 | 384 | 295 |
| 26 | 31 | 5 |
| 5 | 9 | 4 |
| | | |
| 563 | 920 | 357 |

Table A.11: Average works duration, highway works

| DURATION | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |
|---------------------------------------|-------------------------|-------------------------|-------------------------|
| Average duration (days) | 7.3 | 4.2 | 6.2 |
| Total number of days worked | 7,674 | 3,731 | 5,111 |
| Total number of days worked (Permits) | 2,772 | 1,419 | 4,678 |



Permits Year 7, 2018-19

| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |
|-------|----------|-------|--------------------|--------------------|
| 11.4 | 7.6 | 3.7 | 2.6 | 4.3 |
| 4,773 | 1,195 | 1,612 | 54 | 39 |

Permits Year 8, 2019-20

| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |
|-------|----------|-------|--------------------|--------------------|
| 8.0 | 2.2 | 1.3 | 2.3 | 6.1 |
| 2,830 | 353 | 436 | 57 | 55 |

Permits Year 9, 2020-21

| 3,169 | 240 | 473 | 263 | 966 |
|-------|----------|-------|--------------------|--------------------|
| 9.0 | 5.5 | 1.3 | 5.6 | 107.3 |
| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |

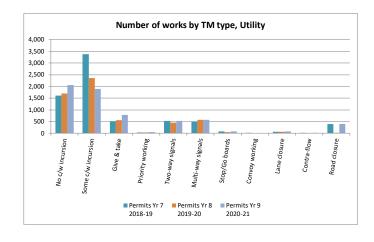
| Average Yr 3-5, 2015-18 | Average Yr 7-9, 2019-22 | Difference |
|----------------------------|----------------------------|------------|
| 9.2 | 5.9 | -3.3 |
| 5,347 | 5,505 | 158 |
| 1,435 | 2,956 | 1,521 |

Utility works promoters

ANNUAL DATA ANALYSIS

Table A.12: Utility works by tm ty

| TRAFFIC MANAGEMENT TYPE | Permits Yr 7 | Permits Yr 8 | Permits Yr 9 |
|-------------------------|--------------|--------------|--------------|
| TRAFFIC MANAGEMENT TYPE | 2018-19 | 2019-20 | 2020-21 |
| No c/w incursion | 1,615 | 1,695 | 2,063 |
| Some c/w incursion | 3,384 | 2,353 | 1,898 |
| Give & take | 514 | 557 | 782 |
| Priority working | 39 | 31 | 54 |
| Two-way signals | 538 | 451 | 528 |
| Multi-way signals | 502 | 580 | 569 |
| Stop/Go boards | 74 | 46 | 78 |
| Convoy working | 1 | | |
| Lane closure | 61 | 70 | 74 |
| Contra-flow | 7 | | 4 |
| Road closure | 390 | 5 | 392 |
| Blank | | 301 | |
| Total | 7,125 | 6,089 | 6,442 |



Average Yr 3-5, Average Yr 7-9, Difference 2015-18 2019-22 1,791 1,685 106 2,673 2,545 -128 307 618 311 53 41 -12 370 506 135 201 550 349 56 66 10 0 1 45 68 23

6

262

301

6,755

121

38

956

5

142

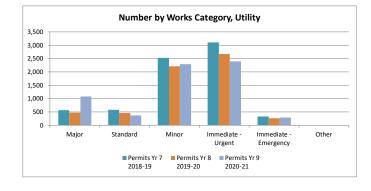
263

5,800

3-YEAR AVERAGE COMPARISON

Table A.13: Utility works by works category

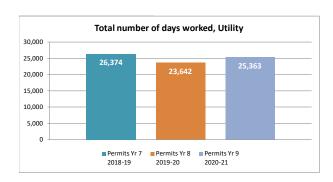
| Total | 7,125 | 6,089 | 6,442 |
|-----------------------|-------------------------|-------------------------|-------------------------|
| Other | | | |
| Immediate - Emergency | 332 | 260 | 295 |
| Immediate - Urgent | 3,109 | 2,669 | 2,397 |
| Minor | 2,530 | 2,212 | 2,295 |
| Standard | 586 | 469 | 376 |
| Major | 568 | 479 | 1,079 |
| WORKS STOPPED | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |



| 5,800 | 6,552 | 752 |
|----------------------------|----------------------------|------------|
| 263 | | -263 |
| 236 | 296 | 60 |
| 2,525 | 2,725 | 200 |
| 1,740 | 2,346 | 606 |
| 538 | 477 | -61 |
| 499 | 709 | 210 |
| Average Yr 3-5, 2015-18 | Average Yr 7-9, 2019-22 | Difference |

Table A.14: Average works duration, utility works

| Total number of days worked (Permits) | 4,866 | 7,537 | 25,145 |
|---------------------------------------|-------------------------|-------------------------|-------------------------|
| Total number of days worked | 26,374 | 23,642 | 25,363 |
| Average duration (days) | 3.7 | 3.9 | 3.9 |
| DURATION | Permits Yr 7 2018-19 | Permits Yr 8 2019-20 | Permits Yr 9 2020-21 |



Permits Year 7, 2018-19

| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |
|-------|----------|-------|--------------------|--------------------|
| 12.7 | 5.5 | 1.7 | 3.2 | 4.7 |
| 7,224 | 3,248 | 4,319 | 10,012 | 1,571 |

Permits Year 8, 2019-20

| 7,228 | 2,873 | 3,705 | 8,732 | 1,104 |
|-------|----------|-------|--------------------|--------------------|
| 15.1 | 6.1 | 1.7 | 3.3 | 4.2 |
| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |

Permits Year 9, 2020-21

| 11,006 | 2,161 | 4,013 | 7,027 | 1,156 |
|--------|----------|-------|--------------------|--------------------|
| 10.2 | 5.7 | 1.7 | 2.9 | 3.9 |
| MAJOR | STANDARD | MINOR | IMMED. (URGENT) | IMMED. (EMERG.) |

| Average Yr 3-5, 2015-18 | Average Yr 7-9, 2019-22 | Difference |
|----------------------------|----------------------------|------------|
| 4.2 | 3.8 | -0.3 |
| 24,186 | 25,126 | 940 |
| 3,622 | 12,516 | 8,894 |

APPENDIX B. SCHEME BENEFIT SUMMARY

