



<u>Committee and Date</u>
Place Overview Committee
02/03/2021

<u>Item</u>
<u>Public</u>

HIGHWAY WINTER MAINTENANCE

Responsible Officer Professor Mark Barrow; Executive Director of Place
e-mail: Mark.Barrow@Shropshire.gov.uk Tel: 01743 258676

1. Summary

- 1.1. Winter Service is a significant aspect of the highways service both financially and in terms of its importance to residents and users of the highway network. It also has considerable implications for the overall procurement and management of highway maintenance services.
- 1.2. Shropshire Council undertake winter maintenance activities between the 1st October and the 30th April each year. The main priorities are to:
 - Make our road network safe for the public to use
 - Minimise delays and the financial impacts of winter weather
- 1.3. This winter has been very challenging operationally and routinely saw resources stretched. We have routinely experienced very low temperatures and January was recorded as the coldest in the last 10 years.
- 1.4. The Highways Service is intending to undertake a review of its Winter Maintenance Plan to ensure that the service better meets the needs of road users and derives greater value from available budgets ahead of the 2021/22 winter.
- 1.5. The purpose of this report is to outline the current arrangements, identify areas of concern and planned improvements to the service and engage with councillors to identify further areas for further consideration within the review of the Winter Maintenance Plan.

2. Decisions

The Committee is asked to;

- 2.1. Endorse a review of the current Winter Maintenance Plan

- 2.2. Identify areas of strategic concern for consideration within the review
- 2.3. Identify a mechanism to engage members further in the development of the plan.

REPORT

3. Risk Assessment and Opportunities Appraisal

- 3.1. Accessibility to key infrastructure and services across the county is essential to maintain the vitality of the county's residents and businesses. Incidents of severe ice and/or snow can at times compromise this access and therefore it is important that an effective Winter Maintenance policy and plan is in place to ensure that the highway network maintains access resilience.
- 3.2. Budget availability is however finite, and it is therefore important that the correct balance is struck between ensuring that accessibility is available and affordability.
- 3.3. Having a winter maintenance plan that does not reflect the contemporary needs of the county could mean that some key services or infrastructure is not available and therefore it is important that the plan is regularly reviewed to ensure that it is fit for purpose.
- 3.4. A fundamental review of the service, as opposed to an update, could identify opportunities to deliver more for less or better deliver against customer needs and increase the satisfaction with the winter maintenance service.

4. Financial Implications

- 4.1. Financial implications arising from a review of the Winter Maintenance Plan will be modelled and reported within future decision reports.
- 4.2. Significant changes to the current plan are likely to lead to higher costs and affordability will need to be a key constraint of any changes.

5. Climate Change Appraisal

- 5.1. The country has seen an increasing regularity of severe weather events over the last 15 years and this has resulted in increased demand for winter maintenance in recent years.
- 5.2. It is anticipated that these weather events will continue to increase in frequency and severity over the coming years and therefore it is essential that

the Council has an effective plan in place to maintain the resilience of the highway network.

6. Background

Winter Maintenance Service

- 6.1. The service currently delivers its winter maintenance service in accordance with its Winter Maintenance Policy and Operational Plan which are available on the council's web site. The Operational Plan and Policy were presented to the Place Overview Committee on 12th July 2018 and the Policy subsequently endorsed by Cabinet on 26 September 2018.
- 6.2. Current national good practice in respect to winter maintenance is included within the Code of Practice 'Well-managed highway infrastructure' produced by the Roads Liaison Group in October 2018.
- 6.3. Whilst there is a lot of synergy between the council's current approach and good practice there are areas where it could align better and the service intend to undertake a comprehensive review of the current policy to ensure that it aligns closer with best practice and also better meets the needs of Shropshire road users.
- 6.4. The service currently treats 1,428km of our highway network (28%), this is slightly below the national average but reflective of the higher proportion of rural roads that Shropshire has compared to many other authorities.
- 6.5. The Council has 25 gritters that are used to maintain defined routes with a further 5 reserve vehicles to ensure that there is resilience in the service delivery.
- 6.6. Kier also have 60 operatives who have the capability and training to undertake gritting operations and are therefore able to ensure that a 24hr service is available when required.
- 6.7. There are also over 100 private snow plough contractors from which the council can draw additional resource to ensure that more rural villages remain accessible by at least one route during times of heavy snow.

Winter 2020/21

- 6.8. The current winter has been one of the county's worst in recent years and comes off the back of a similarly bad winter in 2018/19 (Beast from the East) and also significant flooding events in the preceding weeks.
- 6.9. Since the start of the winter period (1st October 2020), the service carried out treatments on 56 days and used 12,979 tonnes of salt, as detailed below.

2020/21	October	November	December	January	February	Total (to end of February2020)
No. of treatments	0	152	620	1,277	339	2,388
No. of Days treated	0	6	16	24	10	72
Salt used (tonnes)	0	577.5	3,234.6	7,304	1,863	12,978.5

6.10. Whilst the total number of days where treatment was undertaken and amount of salt used was similar to the previous year (see table below); the bulk of the demand this winter was focussed on a short 6 week period in December and January across the whole county, rather than a more evenly spread demand across the whole of the winter period.

2019/20	October	November	December	January	February	Total (to end of February2020)
No. of treatments	95	361	611	453	595	2,115
No. of Days treated	4	14	19	16	19	72
Salt used (tonnes)	400.49	2,009.59	3,208.16	2,183.36	3,504.94	11,306.5

6.11. There are approximately 1,200 grit bins in Shropshire, where identified as empty by members of the public, councillors or staff, these were prefilled prior to the winter season and the majority of which were filled 3 times during this winter period.

6.12. The forecasted spend this winter including purchase/hire of the gritter fleet is £2,152,000.

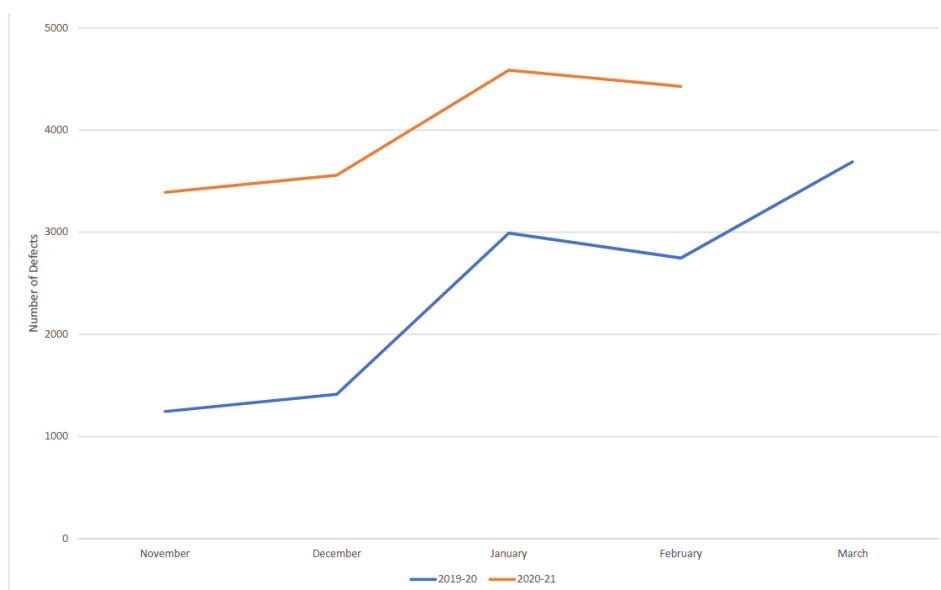
6.13. Understandably, the service also experiences a significant increase in the number of service requests to address the impact of ice, snow and thawing water run off. This winter saw a similar increase in demand the themes of which are summarised in the table below;

No. of Enquiries	Month		Total
	2020	2021	

Enquiry Subject	Nov	Dec	Jan	Feb	Mar
Ditch:blocked	16	32	77	32	157
Drain:blocked	143	209	422	230	1,004
Flood	25	87	180	92	384
Property flooding issue	5	2	7	0	14
Run-off of Land	0	0	2	0	2
Water:standing	5	4	0	2	11
Watercourse	3	0	3	4	10
Salt bins/piles new	2	10	38	11	61
Salt bins/piles replenish	2	22	171	53	248
Treatment request:carriageway	1	24	79	22	126
Treatment request:footway	0	4	13	0	17
Total	202	394	992	446	2,034

6.14. The service received 452 customer enquiries during the winter period which related to salt bins or requests to treat the network. This represents a 253% increase on the previous year.

6.15. In addition, to the winter specific demand the cold weather has had a significant impact on the carriageway condition with a significant number of potholes occurring due to water entering cracks in the road and then going through a freeze/thaw cycle. As water expands when it freezes this breaks away the surrounding road structure and eventually resulting in a pot hole. Despite the largest surfacing programme that the council has undertaken in many years, during the summer, the number of potholes reported each month over the winter period was almost 2,000 more per month than the same period last year.



Comparison of defects reported 2019/20 and 20/21

- 6.16. The service was also still addressing issues arising from the flooding that had occurred a matter of weeks earlier and as such this three-pronged increase in demand placed Shropshire Council officers and contractor staff under significant strain and meant that there were at times significant delays in officers being contactable or service requests being enacted.

7. Additional Information

Benchmarking

- 7.1. The Service have worked closely with the Midlands Service Improvement Group (a group of local authorities who work together to share highway good practice) to better understand how the service compares with other local authorities.
- 7.2. The 22 authorities who participated completed a detailed questionnaire on Winter Service and the key findings are included in the table below.

	Total			County only			Shropshire
	Average	Highest	Lowest	Average	High	Low	
Proportion of Treated Network	40%	100%	25%	36%	48%	25%	28%
Cost per km/ treated network	£1,140	£4,870	£200	£1,280	£2,539	£777	£1,113

- 7.3. The benchmarking shows that in general the service delivers good value for money for the budget it has with a lower cost per km than the average authority. This becomes even more stark when only considering the 3 other more rural counties who contributed where the average cost per km rises to £1,955/km.
- 7.4. Shropshire does treat substantially less than most authorities with only 1 authority treating a lesser proportion of the highway network although when only comparing against the 3 other most rural authorities the average is only 29%.

Improvement Plans

- 7.5. The highway team has seen a new management team come in the summer and the team has already identified areas across the highways service where improvements can be made, including winter maintenance.
- 7.6. A review is a comprehensive piece of work that requires a significant series of iterations to understand the affordability of changes in order that members are able to make informed decisions for changes. A review will begin at the end of

the current winter period to ensure that all current learning is captured within the review.

7.7. The review will consider the councils approach to the following areas;

- Commissioning model: Delivering winter service through the term-service Contractor (Kier)/ Private snow plough contractors
- Resource management and Out of hours service
- Alignment with current Code of Practice
- Treated Network/Contingency routes
- Decision and management information processes
- Salt management
- Grit bins review
- Devolved local services / SLA
- Financial modelling
- Local engagement/ snow wardens
- Communications
- Alignment with other council policies

7.8. It is recognised that local and timely knowledge and engagement can be invaluable during times of severe weather. The service has previously committed to the introduction of snow wardens to provide more accurate local knowledge and it is proposed that the new plan incorporate this resource into its future approach.

7.9. The current gritted network is based on historic information to ensure that key destination points such as schools, hospitals, transport routes, large employment sites etc. remain accessible. It is intended that the current network be reviewed to ensure that it reflects contemporary needs and that the service aim to make this network more dynamic so that it continues to reflect the needs of the county as the county changes through growth.

8. Conclusions

8.1. The highway service is undergoing a broader change programme to improve overall service delivery. Winter Maintenance is a key part of the highway service and should be an integral part of this improvement programme so that it is embedded within the way that the service is structured and its ways of working. A fundamental review of the winter maintenance policy and plan would be timely.

- 8.2. It is important that the service reflects the contemporary needs of road users and therefore improved engagement is essential to inform a future approach.
- 8.3. The winter maintenance policy and plan should undergo a fundamental review to ensure that they meet the contemporary and future needs of the county.

List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)

Winter Maintenance Policy 2018

Winter Maintenance Plan 2018

Cabinet Member (Portfolio Holder) - Cllr Steve Davenport

Local Member - All

Appendices - None