

INTERNAL AUDIT REPORT



HIGHWAYS WINTER MAINTENANCE 2018/19

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Highways Winter Maintenance

EXECUTIVE SUMMARY

1. INTRODUCTION & OVERALL OPINION

The Council has a statutory duty to maintain highways, and to ensure, so far as is reasonably practicable, that safe passageway along the highway is not endangered by snow or ice. The Code of Practice for Well-Managed Highway Infrastructure was published on 28th October 2016, and supersedes the Code of Practice for Well-Maintained Highways. It is recognised that changing from reliance on specific guidance and recommendations involves appropriate analysis, development and Member approval; as such, Councils could choose to continue with existing practices until October 2018.

The Council has recently produced a Winter Service Policy (WSP) in accordance with the requirements of both Codes of Practice, and revised their operational procedures; the WSP was approved by Cabinet on 18th September 2018.

The winter risk period runs from 1st October to 30th April, and, whilst the Council’s responsibilities include providing road salt and the decision-making process, a contractor (Tarmac) is responsible for the delivery of all winter service operations.

Whilst a risk assessment process had been undertaken to determine which routes should be included in a programme of treatment during the 2017/18 winter season; it is understood that the latest risk assessment had been undertaken during 2015, and there is a lack of documentary evidence held on file to support the data or the scoring methodology which is detailed within the workbooks provided. In addition, whilst the WSP has defined the minimum winter network, it does not include matters in relation to trigger points and / or stakeholder engagement.

Suitably skilled and experienced duty officers are responsible for daily decision-making in relation to winter service operations, and sample testing identified that the majority of controls are operating as intended.

Gritting vehicles are fitted with electronic tracking devices to monitor location, speed, and spread widths. Sample testing identified that gritting operations had been undertaken by the contractor within the agreed timescale in all cases.

A minimum of 4,000 tonnes of salt is held in stock at the start of the winter season, it is understood that this is approximately 25% more than the total amount of salt used in any one of the last 10 winter seasons, and as such, would provide resilience in the event of severe winter weather conditions.

The audit was carried out in accordance with the agreed Assignment Planning Record (APR), which outlined the scope, terms and limitations to the audit. The auditor’s assurance opinion is summarised in the table below:

Internal Audit Assurance Opinion			
Control environment	Satisfactory ●		
Compliance	Good ●		
Organisational impact	Minor ●		
Risk	High	Medium	Low
Risk 1: A resilient and minimum winter service network is not determined through a robust risk assessment process.	1	1	0
Risk 2: Robust forecasting arrangements do not exist.	0	0	0
Risk 3: Winter gritting is not undertaken in a timely manner.	0	0	0
Risk 4: Salt spread rates are not consistent with the Code of Practice.	0	0	0
Total Number of Recommendations	1	1	0

2. SUMMARY OF FINDINGS

Risk 1: A resilient and minimum winter service network is not determined through a robust risk assessment process

The Council's 'Winter Service Operational Plan 2015-16' (WSOP) was developed in accordance with the recommendations of The Code of Practice for Well-Maintained Highways. The Code of Practice for Well-Managed Highway Infrastructure was published on 28th October 2016, and supersedes the Code of Practice for Well-Maintained Highways. It is recognised that changing from reliance on specific guidance and recommendations involves appropriate analysis, development and Member approval; as such, Councils could continue with existing practices until October 2018.

The Council has recently produced a Winter Service Policy (WSP) in accordance with the requirements of both Codes of Practice, and revised their operational procedures (appended to the WSP); the WSP was approved by Cabinet on 18th September 2018.

The winter risk period runs from 1st October to 30th April, and whilst the Council's responsibilities include providing road salt and the decision-making process; a contractor (Tarmac) is responsible for the delivery of all winter service operations. Client and contractor responsibilities are detailed within the WSOP and recently approved WSP. Contractor responsibilities are consistent with those detailed within the 'Term Service Contract for Highways Maintenance Works'; and it is noted that staff in the Highways team have undertaken training relevant to their role.

Risk assessments should be undertaken to determine which routes should be included in a programme of treatment during winter, in particular, the treatment of carriageways, footways and cycle routes must be considered, taking account of risk to all highway users and consideration of the available resources. It is noted that whilst the WSOP did not include matters in relation to cycle routes, the WSP does confirm that cycle ways will not receive a precautionary treatment.

It is understood that, at the time of the audit, the latest risk assessment to be held on file had been undertaken by two previous Council employees during 2015. There is a lack of documentary evidence held on file to support any of the data, or the scoring methodology which is detailed within the workbooks provided; and it is not known whether the decisions in relation to the risk assessment process had been subject to independent review and approval.

A review of the risk assessment worksheet identified that of the 176 roads detailed, 19% do not include a road number and 12% do not include a road name. Whilst it is understood that this information may not be required in all cases, it is not clear whether such information is required in the cases detailed, based on the information which has been provided.

Given the scale of financial and other resources involved in delivering the winter service, it is not considered reasonable to provide the service on all parts of the network. As such, a robust risk assessment process must exist to determine which routes should be included in a programme of treatment during winter.

Recommendation one addresses these findings.

As part of their contingency planning, authorities should define a minimum winter network. This resilience network may be a subset of their normal treatment network and should provide a minimum essential service to the public, including links to the strategic network; access to key facilities; and other transport needs.

The trigger point and protocol for activating the minimum winter network should be agreed within the authority, and documented and communicated as appropriate. In doing so, agreement should be made with the emergency

planning department and senior officers. The decision to activate the minimum winter network may also be made in conjunction with other authorities and the overall approach should be detailed within the Winter Service Plan.

The audit has identified that the WSOP does not include matters in relation to a minimum winter network, and whilst the WSP states that the minimum winter network will be defined as all A and B class roads throughout the County, it does not include matters in relation to trigger points and / or stakeholder engagement.

Recommendation two addresses this finding.

Based upon these findings, the assurance rating for the controls in respect of this risk is **Satisfactory Assurance**.

Risk 2: Robust forecasting arrangements do not exist

MetDesk provided weather forecasting services during the 2017/18 winter season, and a review of the end of season report identified that the required target for accuracy (95%) had been exceeded by 3.5% (98.5%). It is understood that as the formation of frost is dependent on both temperature and dew point, gritting will not necessarily be carried out when the road surface temperature falls below zero, on a dry road surface, or when residual salt levels are sufficient to deal with the expected conditions.

Suitably skilled and experienced duty officers are responsible for daily decision-making in relation to winter service operations, as such; an independent review and approval process is not deemed to be appropriate and / or required, particularly with limited resources. Daily decisions are based on forecasting information and are in accordance with the 'Decision Flowchart', as detailed within the WSOP. All decisions are recorded / communicated via the Council's winter maintenance system (Vaisala Manager), whilst gritting operations are recorded via the 'Exactrak' GPS tracking system, which is integrated with Vaisala Manager.

Sample testing of 15 winter maintenance runs identified that daily decisions in relation to winter maintenance had been made by a suitably skilled and experienced officer within the agreed timescale, in all cases.

Sample testing did identify that the decision-making process in relation to salt spread rates was not consistent with the 'Decision Flowchart' in 13% of the cases, whilst matters in relation to 'marginal conditions' and the use of a 'plough' are not detailed within the 'Decision Flowchart'; as such, details of this have been shared with management for their information.

Based upon these findings, the assurance rating for the controls in respect of this risk is **Good Assurance**.

Risk 3: Winter gritting is not undertaken in a timely manner

It is recognised that appropriate consultation and communication with other highway authorities is required in order to improve winter service delivery. As such, cross boundary arrangements were in place with Leicestershire County Council; Lincolnshire County Council; and Northamptonshire County Council during the 2017/18 winter season.

As detailed above, the Council's contractor is responsible for the delivery of all winter service operations; therefore, additional contract arrangements are not required for extreme weather conditions. A range of vehicles, plant and equipment is used to deliver the Council's winter service and it is understood that all equipment is well maintained, calibrated and reliable, and repairs must be carried out within two hours, whilst replacement vehicles must be provided within 24 hours, if / when required.

Gritting vehicles are fitted with electronic tracking devices to monitor location, speed, and spread widths. Sample testing of 15 winter maintenance runs identified that gritting operations had been undertaken by the contractor

within the agreed timescale in all cases; whilst the relevant KPI target of 97% had been achieved during the 2017/18 winter season.

A 'Grit Bin Assessment Form' exists to ensure that grit bins are allocated in accordance with agreed procedures, and following a report which was presented to Cabinet on 18th September 2018, it is understood that any grit bins which have not been utilised by the 2021/22 winter season will be removed, in order to maximise value for money.

Based upon these findings, the assurance rating for the controls in respect of this risk is ***Substantial Assurance***.

Risk 4: Salt spread rates are not consistent with the Code of Practice

A minimum of 4,000 tonnes of salt is held in stock at the start of the winter season, it is understood that this is approximately 25% more than the total amount of salt used in any one of the last 10 winter seasons, and as such, would provide resilience in the event of severe winter weather conditions.

As detailed above, gritting vehicles are fitted with electronic tracking devices to monitor location, speed, and spread widths, and whilst sample testing identified that the majority of controls are operating as intended, it is noted that the decision-making process in relation to salt spread rates was not consistent with the 'Decision Flowchart' in 13% of the cases. As such, details of this have been shared with management for their information.

It is recognised that given the scale of financial and other resources involved in delivering the winter service, it is not reasonably practicable to ensure running surfaces are kept free of ice and snow at all times, even on the treated parts of the network. As such, it is understood that the condition of routes is not monitored following treatment, due to limited resources.

Based upon these findings, the assurance rating for the controls in respect of this risk is ***Good Assurance***.

3. LIMITATIONS TO THE SCOPE OF THE AUDIT

This is an assurance piece of work and an opinion is provided on the effectiveness of arrangements for managing only the risks specified in the Audit Planning Record.

The Auditor's work does not provide any guarantee against material errors, loss or fraud. It does not provide absolute assurance that material error; loss or fraud does not exist.

4. ACTION PLAN

The Action Plan overleaf provides two recommendations to address the findings identified by the audit. If accepted and implemented, these should positively improve the control environment and aid the Council in effectively managing its risks.

ACTION PLAN

Rec No.	ISSUE	RECOMMENDATION	Management Comments	Priority	Officer Responsible	Due date
1	<p>There is a lack of documentary evidence held on file to support any of the data, or the scoring methodology which is detailed within the risk assessment workbooks provided; and it is not known whether the decisions in relation to the risk assessment process had been subject to independent review and approval.</p> <p>A review of the risk assessment worksheet identified that of the 176 roads detailed, 19% do not include a road number; whilst 12% do not include a road name.</p> <p>The omission of a robust risk assessment process may lead to poor decision-making and / or a loss of confidence in Council services, both of which could result in financial loss and reputational damage to the Council.</p>	<p>A robust risk assessment process must exist and must be consistently exercised to provide assurance that all decisions in relation to the Council's winter service are based on accurate and complete information.</p> <p>Supporting documentary evidence and system notes should be retained on file to provide an appropriate audit trail and to demonstrate how all decisions in relation to the Council's winter service have been made.</p>	<p>Completed as part of Winter Service Review, approved by Cabinet on 18/09/2018.</p>	<p>High</p> <p style="text-align: center;">●</p>	<p>Senior Highways Manager</p>	<p>Complete – Senior Highways Manager to provide supporting documentary evidence in relation to this (To be followed up as part of the standard Internal Audit process).</p>

Rec No.	ISSUE	RECOMMENDATION	Management Comments	Priority	Officer Responsible	Due date
2	<p>Whilst the 2018/19 WSP states that the minimum winter network will be defined as all A and B class roads throughout the County, it does not include matters in relation to trigger points and / or stakeholder engagement.</p> <p>The omission of such information and / or procedures may lead to poor decision-making and / or a loss of confidence in Council services, both of which could result in financial loss and reputational damage to the Council.</p>	<p>In order to demonstrate compliance with the Code of Practice for Well-Managed Highway Infrastructure (B.7.3.4), the trigger point and protocol for activating the minimum winter network should be formally agreed, and in doing so, agreement should be made with the emergency planning department.</p> <p>The decision to activate the minimum winter network may also be made in conjunction with other authorities. The overall approach should be detailed within the Council's Winter Service Policy.</p>	<p>Review with LLR Resilience Forum to ascertain their view prior to updating policy.</p>	<p>Medium</p> <p>●</p>	<p>Senior Highways Manager</p>	<p>31/03/2019</p>

GLOSSARY

The Auditor's Opinion

The Auditor's Opinion for the assignment is based on the fieldwork carried out to evaluate the design of the controls upon which management rely and to establish the extent to which controls are being complied with. The tables below explain what the opinions mean.

Compliance Assurances			
Level		Control environment assurance	Compliance assurance
Substantial	●	There are minimal control weaknesses that present very low risk to the control environment.	The control environment has substantially operated as intended although some minor errors have been detected.
Good	●	There are minor control weaknesses that present low risk to the control environment.	The control environment has largely operated as intended although some errors have been detected.
Satisfactory	●	There are some control weaknesses that present a medium risk to the control environment.	The control environment has mainly operated as intended although errors have been detected.
Limited	●	There are significant control weaknesses that present a high risk to the control environment.	The control environment has not operated as intended. Significant errors have been detected.
No	●	There are fundamental control weaknesses that present an unacceptable level of risk to the control environment.	The control environment has fundamentally broken down and is open to significant error or abuse.

Organisational Impact		
Level		Definition
Major	●	The weaknesses identified during the review have left the Council open to significant risk. If the risk materialises it would have a major impact upon the organisation as a whole.
Moderate	●	The weaknesses identified during the review have left the Council open to medium risk. If the risk materialises it would have a moderate impact upon the organisation as a whole.
Minor	●	The weaknesses identified during the review have left the Council open to low risk. This could have a minor impact on the organisation as a whole.

Category of Recommendations

The Auditor prioritises recommendations to give management an indication of their importance and how urgent it is that they be implemented. By implementing recommendations made managers can mitigate risks to the achievement of service objectives for the area(s) covered by the assignment.

Priority		Impact & Timescale
High	●	Action is imperative to ensure that the objectives for the area under review are met.
Medium	●	Requires actions to avoid exposure to significant risks in achieving objectives for the area.
Low	●	Action recommended to enhance control or improve operational efficiency.