Scrutiny Review
Repairing Potholes and Other Defects – Process and Quality

Final report of the
Environment and Economy Scrutiny Committee

April 2016
Foreword by Councillor Philip Harding, Chair of the Scrutiny Review Panel

Potholes are, and have been, a perennial problem engaging residents, Elected Members and Officers in Stockport seeking to tackle the problems they create all over Stockport. The sheer scale of the number of jobs attended to gives an indication of the effort being put into resolving the issues. With limited resource and increasing traffic volumes and wetter winters, the damage to the road network is substantial. We hope this report goes some way towards a review of current practices with a view to producing a more comprehensible response to residents’ issues, while ensuring a prioritisation of work continues to deal with the most urgent repairs with full use of modern technology to monitor outcomes.
Introduction – The Local Context and Background to the review

1.1 The Council's highway network comprises approximately 945km of carriageway and approximately 1,500km of footway. There is around 179km of classified A, B and C road and 766km of unclassified road. There are approximately 75,000 carriageway gullies that assist with drainage of the highway.

1.2 The repair of potholes and other defects on the adopted highway is generally covered by the reactive/routine maintenance service which is revenue funded. Reactive repairs are associated with, but not exclusively, potholes, uneven footways, damaged or missing flags, damaged gullies or other ironwork, damaged kerbs, road/footway collapses. The Council's reactive repairs are carried out by its wholly owned company, Solutions SK.

1.3 The Council has an approved Highway Safety Inspection Policy and Plan in place which defines the intervention levels at which the Council will carry out a reactive repair. There are also established timescales that these repairs should be completed by which are detailed later on.

1.4 How potholes and other defects arise

Potholes form when the surface of the highway deteriorates leaving a void – this deterioration and other defects can occur through:-

- wear and tear, particularly on busy roads
- water ingress followed by the freezing and thawing process
- poor quality repairs and maintenance including those carried out by utility companies
- a lack of capital maintenance to prevent deterioration

1.5 Highway Safety Inspections

Under Section 41 of the Highways Act 1980 the Highway Authority (the Council) has a duty to maintain the adopted highway. Alongside this, Section 58 of the Highways Act 1980 provides a 'special defence' which can be used by the Council to defend any claims that are made for alleged failure to maintain. With this Act in mind the Council's Highway
Safety Inspection and Repairs Policy Statement and the Highways Safety Inspection and Repairs Plan have been produced.

1.6 Safety Inspections are designed to identify all defects likely to cause danger or serious inconvenience to users of the network or the wider community. Such defects include those that require urgent attention as well as those where the locations and sizes are such that longer periods of response are appropriate.

There are two main types of Safety Inspections in the Highway Safety Inspection and Repairs Policy Statement, and Highways Safety Inspection and Repairs Plan, namely:-

- Planned cyclic inspections to identify potential dangers; and
- Reactive safety inspections following complaints about the condition of the highway

1.7 Repairing Potholes and Other Defects

Potholes and other defects (that meet the intervention criteria outlined in Council policy) are identified during routine inspections by Highway Safety Inspectors or by Public Realm Inspectors following reports from the public, Councillors and other Officers. All defects are recorded on the ICT system, Confirm. Potholes and other defects identified during routine safety inspections are issued to the highway contractor, Solutions SK, via works orders.

1.8 Where a report is received from a member of the public etc, the Public Realm Inspector will carry out a site visit and assess the report against the policy and where the criteria in the policy are met a works order will be issued to the Highways contractor, Solutions SK. Once Solutions SK have received the works order, they will schedule repairs in areas and work to the prescribed timescales for repair on the order. When repaired, the work order is closed as completed.

1.9 Performance Monitoring

Performance reports are generated by the Client (Stockport Council) on a regular basis to monitor the completed timescales in each work category.

Productivity reports are generated by the Contractor (Solutions SK) to monitor the performance of repair crews.

In 2014/15 approximately 16,100 maintenance repair orders were issued following reactive/routine inspection.

1.10 Prevention

Stockport Council is undertaking a programme of repairs across the borough as part of the 'Investing in Stockport' initiative. There is a commitment to invest £100 million to improve roads and footpaths across the borough over a nine year delivery period.
The Highways Investment Programme (which commenced in 2014/15) will carry out a range of repairs in targeted ward areas aimed at providing a long term solution to the deterioration on the highway network.

Scope of the Review

2.1 The Panel agreed that the scope of the Scrutiny Review on this topic would be:

- review of the repair process (potholes and other defects on the highway)
- review of the quality of reactive maintenance repair (potholes and other defects on the highway)
- review of Council's Safety Inspection & Repair Policy and Plan

Methodology

3.1 The Environment and Economy Scrutiny Committee appointed a Panel to carry out the Review comprised of the following members:

Councillor Philip Harding (Lead Councillor)
Councillor Richard Coaton
Councillor Christine Corris
Councillor Graham Greenhalgh
Councillor Suzanne Wyatt

3.2 As part of the Review, the Panel had the support and assistance of:

- Ian O'Donnell – Head of Public Protection
- Johanna Smith – Public Realm Manager: Clean and Inspect
- Andrew Suggett – Network Assets Manager
- Pete Price – Interim Head of Highways and Transportation
- David Clee – CSS Manager (Democratic Services)

3.3 The Panel met on five occasions between September 2015 and March 2016 and followed the timetable set out below:
Meeting One – Scope the Review (23 September 2015)

Meeting Two – Aspect 1: Review of the repair process (potholes and other defects on the highway) including the 'back office' process to help determine if there are opportunities for changes and/or efficiency. (4 November 2015)

Meeting Three – Aspect 2: Review of the quality of reactive maintenance repair (potholes and other defects on the highway) (11 January 2016)

Meeting Four – Aspect 3: Review of the Council’s Safety Inspection and Repair Policy and Plan (3 February 2016)

Meeting Five – Draft Final Report and Recommendations (23 March 2016)

Review of the repair process (potholes and other defects on the highway)

4.1 **Inspection of the Adopted Highway**

4.1.1 The Panel was presented with an overview of the inspection system covering the adopted highway network. The adopted highway is inspected at regular intervals in order to identify any actionable defects on the network. There are also service or ad hoc inspections that take place in response to requests from the public, Members and other stakeholders. The system excluded the A555, which is maintained by Cheshire East Council on a rechargeable basis, and all unadopted roads.

4.1.2 Highway Safety and Public Realm Inspectors check the adopted and maintained highway in line with the Council’s Safety Inspection and Repair Policy. The entire network is recorded on the Council’s asset register. This ensures that the Council does not use limited resources inspecting land that is not the Council’s responsibility.

4.1.3 The Council’s adopted highway records have been transferred to an electronic GIS layer and can be viewed via the Council’s mapping system. The adopted highway is updated when the Council takes responsibility for the maintenance of new roads within housing developments or linked to commercial developments.

4.1.4 The highway network is divided up for inspection purposes using a defined road hierarchy (which dictates inspection frequency in line with ‘Well Maintained Highways’, the national code of practice). This is recorded as information on the Local Street Gazetteer (LSG). The LSG is a single line that is plotted in the centre of each street or footway. The inspection routes are held as a layer within GIS which is downloaded through the Council’s Confirm system onto the Safety Inspectors hand held devices. Any defects found on inspections are plotted directly onto the Confirm mapping system on the hand held devices.
4.1.5 Work is ongoing in the development of online forms for reporting potholes and other defects in the highway in a similar way to currently exists for street lights.

4.2 Monitoring the Quality of Highway Reactive Maintenance Repairs

4.2.1 The Council employs three Safety Inspectors who carry out cyclic safety inspections of the adopted highway network to proactively identify actionable defects that meet the Council's intervention limits. This provides a special defence (Section 58) against highway related public liability claims. The Council also employs nine Public Realm Inspectors who respond to a diverse range of service requests and enquiries relating to the public realm. A proportion of their work involves the investigation of highway related cases and the issue of reactive repair orders. The Highway Safety Inspectors and Public Realm Inspectors issue over 16,000 individual works orders in a year. These works orders are issued to Solutions SK for completion within the timescales outlined in the Council's policy (two hours, forty eight hours, twenty eight days and fifty six days).

4.2.2 The Council checks a proportion Solutions SK repair work each month. The size, quality and timeliness of repairs are reviewed on a sample of sites which are selected on a random basis. Highway Safety Inspectors check a batch of previously issued work while inspecting an area. A revised system for checking the quality of reactive repairs had recently been agreed with Solutions SK. A random sample of 2% of completed works is selected for inspection each month. Solutions SK has also agreed to review all completed work carried out on one day of each month. This will cover the work of all crews undertaking reactive highway repairs on the selected day.

4.3 Streetworks Inspection

4.3.1 The Council employs three Streetworks Inspectors who carry out routine and ad hoc inspections of utility openings in the highway, issue defect notices where appropriate and arrange remedial work with the responsible party. They also monitor sites that overrun beyond the agreed period of occupation on the highway.

4.3.2 Under the New Roads and Streets Works Act and in line with the Code of Practice for Inspections, Highway Authorities are able to inspect completed road works and if deemed necessary issue a defect notice to utilities when a reinstatement has visually failed. Alternatively a core sample can be taken of the reinstatement for testing.

4.3.3 A charge notice is submitted to the Utility company when a defect notice is issued by the Council. The charge varies depending on the number of site inspections and response from the Utility company.

4.3.4 If a core sample fails to meet the minimum standard of material type, construction depth, skid resistance, air voids etc, the Highway Authority is able to charge all reasonable costs and for further inspections associated with remedial works. Coring provides evidence that a reinstatement of the highway by an undertaker is to the quality required and in accordance with legislation. Coring is also a valuable tool available to Highway Authorities to drive a positive change in the quality of reinstatements and therefore
support maintaining the condition of the highway network. The Council has recently agreed to a twelve months trial coring arrangement with Salford City Council, where they will act as lead Authority.

4.3.5 If a Utility over runs on a site without an agreement from the Council, a daily charge can be made by the Council for each working day.

Review of the repair process (potholes and other defects on the highway)

5.1 The Panel met with Stephen Morris, Managing Director of Solutions SK, who outlined the reactive maintenance repair work (potholes and other defects on the highway) which are carried out by Solutions SK. Mr Morris stated that the reactive maintenance repair work carried out by Solutions SK currently amounts to approximately 2,000 repairs a month. The jobs are submitted to Solutions SK from the Council via its Confirm system and then interface into Solutions SK’s SAP system. It was acknowledged that the interface between the two computer systems still required work carrying out on it so as to reduce the number of manual interventions. Although 2,295 jobs showed up on Solutions SK’s SAP system for November, the same number would not show up on Stockport’s system. From the Council’s perspective it raised over 16,000 jobs per year for Solutions SK to repair and therefore the figure provided for November should not be assumed to be a typical month across a period of twelve months.

5.2 Following the jobs submitted via the Confirm system, Solutions SK scope the work and then schedule it with regard to the timescales outlined in the Council’s Policy (2 hours, 48 hours, 28 days and 56 days). Most of the work is carried out by staff from Solutions SK. Solutions SK state that they achieved 90% of the repairs within the timescales they were supposed to. This percentage had been significantly improved as a result of the joint working between Solutions SK and the Council.

5.3 There is no system for reporting on work carried out to the same pothole. There were either permanent repairs to potholes or temporary repairs. There was also the situation where a temporary repair had been carried out and then one of the utility companies carried out work in the same area shortly afterwards.

5.4 The number of quality checks carried out had increased. The latest Council quality audit had been completed on 4 December 2015 for Quarter 2. Joint quality checks had also been carried out between the client Officer and one of the supervisors from Solutions SK.

5.5 The last annual client satisfaction survey had been carried out in May 2015. Self audits of work were also now carried out by Solutions SK with photographs taken before and after the work for a selection of repairs. Significant improvements had been made since the formation of the improvement group.
5.6 Of the 2,295 repairs carried out in November, there had been four queries with regard to the quality of the repairs from members of the public. The number of compliments far exceeded the number of complaints.

5.7 Of particular concern to Members of the Panel were the number of times Solutions SK had to go back to a repair on certain occasions.

5.8 A problem of perception occurred when, for example, a resident had two potholes on the highway outside their home and only one of them was being repaired. This maybe because Solutions SK had only received an order for one pothole to be repaired. This was one of the reasons why photographs were taken before and after repairs were carried out. One of the major problems was that of public perception and members of the public believing that a permanent repair was being carried when it was, in fact, a temporary or small scale patch repair. The issue of permanent repairs as opposed to temporary repairs was an issue.

5.9 There was now increased accountability in the process. If an error had occurred it could now be traced, for example, whether it was the fault of the gang involved or the incorrect materials had been ordered. Unsatisfactory repairs were rectified as soon as possible.

5.10 The current system of quality audits, which had started in the last six months, were a significant step forward, although it was too early to assess any trends which may be emerging. Currently approximately 2% of jobs were checked. The ultimate goal would be to reach a point where no checks were needed. The pride of the workforce in the job they were carrying out was of great importance.

5.11 The Council was continually looking at alternative methods, processes and materials for carrying out the repairs to the potholes, both with colleagues in Greater Manchester and around the country.

5.12 A significant percentage of the work associated with the Highway Investment Programme (HIP) was preventative and one of the principles behind the programme was that ward areas were targeted. Primarily this would be the long term engineering solution to repairs of potholes and other defects. The HIP programme was reviewed by the Executive portfolio holder following condition surveys carried out of the network.

5.13 The situation had improved in relation to the quality of repairs since the annual satisfaction survey in May 2015. In addition, there had been an improvement especially in rectifying problems as a result of the improved liaison between Officers from the Council and Solutions SK.

5.14 There could be significantly more cost as a result of accidents incurred by pedestrians on footways than as a result of damage to vehicles from potholes.

Review of the Council's Safety Inspection & Repair Policy and Plan

6.1 Proposed New Code of Practice for Highway Maintenance
The Panel was advised that the current Code of Practice for Highway Maintenance (‘Well Maintained Highways: Code of Practice for Highway Maintenance Management) which had been in operation since 2005 was currently being revised by the Government and it was advised that a draft revised code would be published later in the year.

6.2 **Highway Safety Inspection and Repairs Policy Statement**

The aim of the Highway Safety Inspection and Repairs Policy Statement is to establish an effective regime of inspection, assessment and recording to support highway maintenance. The safety inspection regime provides the basic information for addressing the first core objective of highway maintenance, network safety.

6.2.1 Safety inspections are designed to identify all defects likely to cause danger or serious inconvenience to users of the network or the wider community. Such defects include those that require urgent attention as well as those where the locations and sizes are such that longer periods of response are appropriate. The safety inspection regime forms a key aspect of the Council’s strategy for managing liability and risk.

6.2.2 There are two main types of safety inspections:-

- Planned cyclic safety in sections to identify potential dangers
- Reactive safety inspections following complaints about the condition of the highway.

6.2.3 The Council defines actionable defects as those identified in the Highways Safety Inspection and Repairs Plan. These are as follows:-

- Category 1: those defects that require prompt attention because they represent an immediate or imminent hazard or because there is a risk of short term structural deterioration.
- Category 2: All other defects

6.3 **Highway Safety Inspection and Repairs Plan**

6.3.1 The Highway Safety Inspection and Repairs Plan (2011/12) provides guidance on the way in which highway defects are identified and recorded, and the timescales for subsequent repair work. The plan is used in conjunction with the Highway Safety Inspection and Repairs Policy Statement and the most recent inspection routes.

6.3.2 The Code of Practice sets out frequencies for Safety Inspections based upon categories within the network hierarchy as set out in Table 1 below. These have been linked to the Council’s network hierarchy to determine the frequency of safety inspections on the Council network.
### Table 1

<table>
<thead>
<tr>
<th>Route Classification</th>
<th>Description</th>
<th>Frequency</th>
<th>Method of Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Town Centre &amp; Pedestrianised Areas</td>
<td>Monthly</td>
<td>Walked</td>
</tr>
<tr>
<td>2</td>
<td>Strategic Route</td>
<td>Monthly</td>
<td>Walked / Driven</td>
</tr>
<tr>
<td>3a</td>
<td>Main Distributor</td>
<td>Monthly</td>
<td>Walked / Driven</td>
</tr>
<tr>
<td>3b</td>
<td>Secondary Distributor</td>
<td>Monthly</td>
<td>Walked / Driven</td>
</tr>
<tr>
<td>4a</td>
<td>Link Route</td>
<td>Quarterly</td>
<td>Walked</td>
</tr>
<tr>
<td>4b</td>
<td>Local Access Route</td>
<td>Annually</td>
<td>Walked</td>
</tr>
<tr>
<td></td>
<td>Adopted Back Streets / Passageways</td>
<td>Annually</td>
<td>Walked</td>
</tr>
</tbody>
</table>

6.3.3 Where appropriate the following considerations are taken into account:-

- Classification of route in the network management plan
- Level of pedestrian and vehicle use
- Location
- Incident or insurance history
• Characteristics of adjoining network elements
• Wider policy and operational considerations.

6.3.4 All routes are inspected in line with Table 1 above.

6.3.5 The intervention levels for defects identified during safety inspections are as indicated below:-

Carriageways - A sharp edged depression (pot hole) greater in depth than 40mm and extending in any one direction greater than 300mm may constitute a safety hazard and should be repaired in accordance with the response timescales outlined in the Highway Safety Inspection and Repairs Plan.

> 40mm

> 300 mm

Footways – Defects in line with the intervention level indicated below will create a safety hazard for pedestrians, a useful guide is as follows:

Trips more than 25mm
Rocking flags greater than 25mm
Rapid change of footway profile greater than 25mm and extending in plan dimension less than 600mm and should be repaired in accordance with the response timescales outlined in this Plan.

Trips greater than 25mm.
6.3.6 Categorising defects & Response times

Two main categories of defect are used:

Table 2
<table>
<thead>
<tr>
<th>Category</th>
<th>Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make safe by end of next working day with a follow up permanent repair, where appropriate, within 28 days</td>
</tr>
<tr>
<td>2</td>
<td>Class 2, 3a, 3b, 4a, Town Centre &amp; Pedestrianised Routes Repaired within 28 days Class 4b &amp; Passageways Repaired within 56 days</td>
</tr>
</tbody>
</table>

**Key Findings**

7.1 **Repeat visits to a repair**
Concern was expressed about the number of times Solutions SK had to go back to a repair on certain occasions.

**Recommendation One**
That Solutions SK be requested to establish a system to monitor repeat visits and review repair methods with the Client.

**Permanent and Temporary Repairs**
7.2 When a temporary repair is carried out, this could be indicated, for example, by the letter 'T' being painted on the highway so that people were aware that it was not a permanent repair. Officers agreed to investigate whether the distinction between a temporary repair and a permanent repair could be recorded on the Council's website.

**Recommendation Two**
That Officers investigate whether the distinction between a temporary repair and a permanent repair can be recorded on the Council’s website.

**Intervention Levels**
7.3 The intervention levels with regard to the depth of highway which have a defect which needed repairing should remain the same.

**Recommendation Three**
That the intervention levels with regard to the depth of highway which have a defect which needs repairing remain the same.

Response Times

7.4 All repair work on local district roads have a target completion of 56 days or less.

Recommendation Four

That the system be closely monitored to see if there is any scope for reducing the 56 day response time as the Highways Investment Programme progresses.

Inspectors who walk routes and drive vehicles

7.5 There were no defects on work carried out under the Highway Investment Programme as all work under the scheme had to be 'signed off'. As the Highway Investment Programme developed, it was anticipated that there would be less defects and less reactive, temporary repairs would be needed. It was also suggested that an increase in the number of inspectors who walked routes would reduce the number of driven inspections where it is more difficult to identify actionable defects. However, there was a significant amount of work involved in defending insurance claims and there was a risk involved in changing the Council's processes. The balance was what the Council could do to improve its procedures without affecting the procedures in place for defending claims.

Recommendation Five

That the ratio of 'walked inspections to 'driven' inspections be examined and that the processes be permanently kept under review.

Conclusion

8.1 The recommendations from the review will be included in a forthcoming systemic review of the Council’s processes for repairing potholes and other defects.

8.2 The Panel was keen to express its view that significant improvements had been made since the increase in joint working between the Council and Solutions SK.

8.3 The Panel particularly found invaluable the evidence provided by Stephen Morris, Managing Director of Solutions SK, which greatly assisted the Panel in its deliberations and wished to extend its thanks and gratitude to Mr Morris for his participation in the Review.
8.4 The Review Panel also wished to extend its thanks and gratitude to those representatives from the Public Realm and Highways and Transportation Services, and Democratic Services who attended and supported meetings of the Panel for their help, support and knowledge which assisted the Panel in the conduct of the Review.