

Environment & Transport Select Committee

15 December 2014

Surrey Highways – Safety Defect Year 1 Review

To provide Committee Members with an overview of the implementation of the first year of the Safety Defect project, which is used to inspect and repair council potholes and wider defects.

SUMMARY OF ISSUE:

1. Surrey Highways has a statutory duty to keep the highway safe, through the provision a proactive highway inspection regime and the delivery of an emergency defect/pothole repair service.
2. As is industry practice Surrey Highways is not funded to repair every defect on the network, only those which pose an immediate or high safety risk to road users that could cause personal injury or property damage.
3. The original contract to deliver this statutory service was awarded to Kier in April 2011. The contract provided a fixed price to repair all low and high risk potholes/defects regardless of volume and repeat visit, the contract was awarded on the assumption that we would repair 30,000 to 40,000 potholes per year.
4. As per national guidance Surrey Highway policy classed potholes/defects into two categories:

P2 (High Risk)	the defect presents a high risk to highway user and must be temporary repaired within 24 hours and permanently repaired within 28 days
P3 (Low Risk)	defect posed low risk to highway user and therefore permanently repair only required within 28 days

Categorisation of defects are based upon a strict Safety Matrix and defects that did not meet the intervention criteria are not repaired under the emergency reactive service, see appendix A for copy of Safety Matrix.

5. This approach was in accordance with UK policy and assisted in keeping the network safe and reducing the council insurance liability.

6. However, in 2012 the Department of Transport published new guidance in its report "Prevention is Better than Cure". This report recommended that it is more important for Highway Authorities to focus on resolving the long term problems rather than simply repairing the pothole/defect as quick as possible.
7. In tandem with the published guidance, an internal highway review also identified that the short 24 hour repair timescale for response meant that there was no opportunity to properly plan repairs. This results in increased travelling times for the repair gangs and reduced productivity. It also results in temporary repairs more often than is desirable and limits the scope of repair to individual defects rather than being able to group them together as larger, more substantial repairs.
8. The review also identified that a more prudent use of resource and energy would be in an increased proactive highway inspection regime rather than a reactive service focused on short term repairs.
9. In February 2013 the Surrey Cabinet therefore approved a change in Highway Policy and increased the minimum repair time from 24 hours to 5 days, see revised timescale below:

P2 (High Risk)	the defect presents a high risk to highway user and must be temporary repaired within 5 working days and permanently repaired within 20 working days
P3 (Low Risk)	defect posed low risk to highway user and therefore permanent repair only required within 20 working days

10. This revised policy was consequently introduced onto the network in November 2013. As part of implementing the new policy Surrey Highways launched a transformation project "**Safety Defects**". The project was to deliver the six anticipated benefits of the new policy as detailed below:

Benefit 1	Increase the frequency of highway inspections, ensuring defects are identified sooner
Benefit 2	Improve the planning of defect repairs, leading to an improved standard of repair and less repeat visits
Benefit 3	Improve the overall quality of repairs and quality control procedures
Benefit 4	Improve the overall condition of the network by carrying out larger scale repairs
Benefit 5	Improve the management of risk across the highway network
Benefit 6	Improve team working and remove silo working

11. Section Two provides details the performance against expected benefit and confirm if the benefit has been achieved by measuring the outcome against three assessments:

Fully Effective	Targets Achieved or Exceeded
Developing	Targets Partially Met – Action Plan in place to deliver improvements
Unsatisfactory	Targets not Met – Management Review in progress

DETAIL: SAFETY DEFECT BENEFIT REALISATION

BENEFIT ONE: INCREASED HIGHWAY INSPECTIONS

12. As detailed in the Cabinet Paper presented in Mar 2013, Highways intended to move to a more frequent inspection regime across the majority of roads. Similar changes were applied to footways and, Townpaths (some of which were previously not inspected) have been included in the regime.

SPN (2013)	Previous	New (2014)
SPN 1	Quarterly	Monthly
SPN 2		Monthly
SPN 3	Bi-annual	Monthly
SPN 4a	Annual	Quarterly
SPN 4b		Annual

Footway Network	Previous	New (2014)
Level 1	Quarterly	Monthly
Level 2	Annual	Quarterly
Level 3	Annual	Bi-annual
Level 4	Annual	Annual

This change is being implemented on an area by area basis which started in Woking in May and the final transitions being completed at the end of November – from that point the whole County will have moved over to the new regimes.

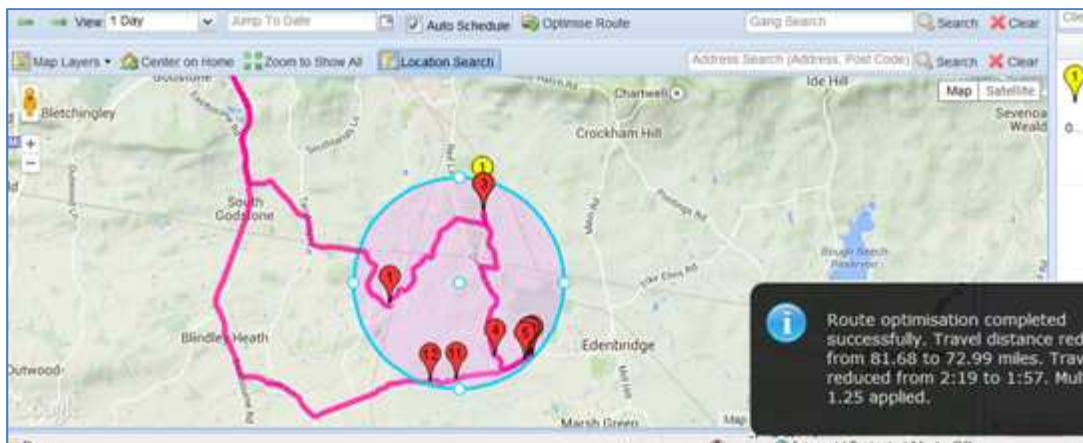
13. As different roads will deteriorate at different rates and there is no simple quantitative measure to determine the impact of this change, it is hard to provide data to support the position. What the initial data does show is that whereas when roads were inspected even on a quarterly basis, an Inspector would generally record at least one defect in a road. Now, when carrying out monthly inspections, there are numerous inspections where no defects are found during the visit.
14. Furthermore by the virtue of inspecting more frequently, where defects are found, intervening sooner means the defect is much more likely to be classified as a low risk defect than a high risk defect.
15. Although the last few districts/boroughs will complete the transition to the new Inspection regime fully from 1 Dec, the process has successfully reduced the impact of a defect on the travelling public. Identifying the defect earlier means it is less severe, will provide Kier more time to efficiently plan and carry out the repair and so make the network safer on a day to day basis. We therefore consider this to be Fully Effective.
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BENEFIT TWO: IMPROVED PLANNING & SCHEDULING OF REPAIRS

16. The introduction of the Works Manager System (WMS) has brought with it a dynamic set of Scheduling Tools which enable a far more efficient Scheduling Process. By comparison, WMS provides a number of functionality changes over Maximo. These include;

- Geographical representation - displaying defects on a map to aid in a visual understanding of the schedule and defect location.
- Optimised routeing tool enabling the scheduler to optimise the driving route taken by the gang to reduce driving time and increase working time.
- Improved data provision. WMS enables more data captured by the inspections teams to be visible to the Scheduler thus allowing a more informed decision on scheduling.
- Performance. The new system captures both defect size from the Inspection teams and repair patch sizes from the gangs enabling more thorough defect & performance analysis.
- Auditing. The data capture & transparency of the WMS system enables more in-depth auditing to ensure that both the Inspections & Scheduling processes are adhered to and developed for continuous improvement.

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** Screen shot from WMS depicting the time saved optimising a gangs route. Travelled distance reduced from 81.68 miles to 72.99 miles

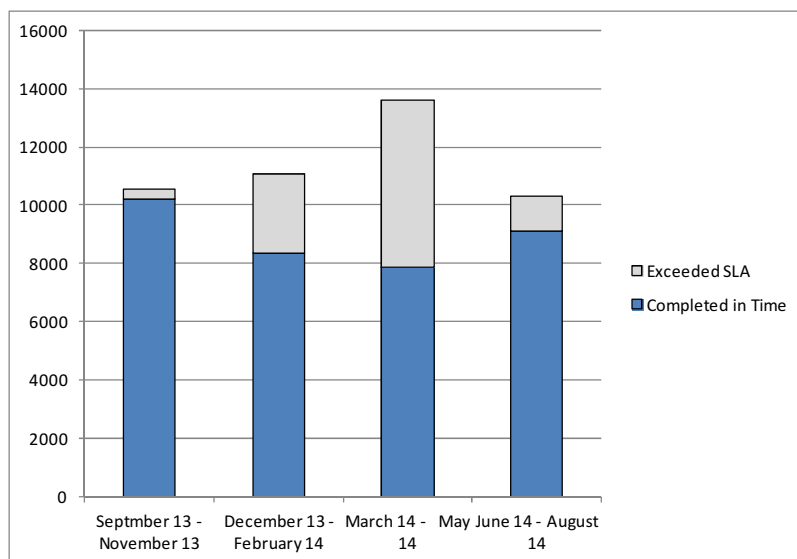
17. Given the recent transition from Maximo to WMS, it will take a period of time to fully explore & develop the new functionality and understand its full potential. The new system certainly provides a solid platform from which to further explore other efficiencies in the future for example using the Defect/Patch size information captured to better manage materials use & wastage. We therefore consider this to be developing.

BENEFIT THREE: IMPROVED QUALITY OF REPAIRS & AUDITING

18. Over the previous 12 months, the Council has repaired around 85,000 defects however this is not evenly spread across the year. This figure includes defects reported by members of the public and by the Council's Highway Inspectors:

	Sept 13 - Nov 13	Dec 13 - Feb 14	Mar 14 - May 14	Jun 14 - Aug 14
Total Defects	16402	25758	26412	16374
Reported via SCC Website	3085	12677	11183	6134
% Reported by Public	19%	49%	42%	37%

19. The above table shows a significant increase in the volume of defects being reported during the winter months (c.60% inc). The majority of these were reported via the website rather than through the Council's planned Inspections. This increase is a direct result of a number of prolonged periods of severe weather culminating in the significant flooding in a number of locations across the County December to February. As described in the introduction, these figures are in excess of the expected volumes the contract was awarded on and performance against KPIs was in turn affected.
20. The graph below shows the volume of defects repaired within time compared to those completed outside the SLA:



As can be seen, although the volume in the summer months was still in excess of the "expected" volumes, the vast majority of defects were completed within the required SLA. A detailed breakdown of performance across the year is included in Annexe Two which includes performance across individual Districts and Boroughs.

21. Following the severe winter, flooding and the ever increasing volume of defects being reported, a short term initiative known as "find and fix" was introduced March to June. Rather than attending defects which had been reported earliest, resources were reassigned to carry out a more efficient programme of repairs:
- Rather than gangs moving across an area to multiple roads repairing the longest standing defects (and likely leaving others to be repaired another day), gangs were scheduled to carry out all repairs in a road ensuring the whole road was made safe at the end of the visit. Working in this way means that on average gangs can complete more repairs per day due to the reduction in travelling time
 - Gangs were supported by a trained Highways Officer (often the local CHO) to ensure all safety defects were captured and repaired ensuring the work was completed to the expected standard
22. As part of the find and fix solution, a different type of repair was introduced in some areas which uses a spray technique to first clear the defect of loose material, spray binder to ensure a lasting repair and lastly to lay the repair material compacting it at the same time. Rather than taking 30-60 minutes to repair using a hand laying gang, these repairs are completed in a matter of minutes.

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23. Whilst this method is much more expensive than hand laying gangs, the output is far higher meaning large volumes can be repaired in a much shorter time resulting in a safer network quicker and limiting the Council's Insurance liability.
 24. As part of the new integrated team, a Governance/Quality Assurance team was introduced. Whilst the quality of defect repairs were previously deemed to be an improvement on the previous contracts and generally of a good standard, there was limited documented evidence to either support or challenge this.
 25. The team was formed from existing staff and new appointments and began work in September 14. Their focus extends beyond simply checking completed defects and includes auditing Highways Inspectors to ensure accurate reporting, auditing scheduling to ensure orders are planned to meet SLAs and ensuring that opportunities to "cluster" defects into larger more effective repairs are taken.
 26. Significant improvements have been made in our ability to respond to defect reports and the introduction of the new Works Manager System, hand-held devices for gangs to record completed work and the Governance Team is providing real-time information to enable evidence based assessment on the quality of the service. These improvements are evidenced by the "settling" of both defect volumes and performance against KPIs over the summer months. However as both the IT improvements and the commencement of the Governance team came into effect in September, further improvements are expected and as a result, we consider this area to be developing.

BENEFIT FOUR: COMPLETE LARGER/MULTIPLE REPAIRS

27. Since the implementation of WMS, 3% of all carriageway defect repairs have been greater than 2msq.
28. Due largely to the delayed implementation of WMS, the Cluster Defect process was not introduced until September 2014. Following a 4 week trial we were able to identify that the criteria for classifying a Cluster Defect was far too stringent which meant that very few defects were being reported as part of this process. We have since expanded the qualifying criteria of Cluster Defects and are currently trialling the revised process to ensure that larger repairs are identified & completed.
29. The Cluster Defect process is still being trialled and therefore will be on-going and as a result is developing.

BENEFIT FIVE: IMPROVE RISK MANAGEMENT / INSURANCE CLAIMS

30. The new 5 working day Policy was introduced on 4th November 2013. It was always envisaged that this would lead to an expected increase in claims volumes by 25% given that defects would be left on the network for longer periods of time. It is anticipated that the increase in defects would be defensible under the 5 working day policy. To date, there have been no test cases on the 5 working day policy in court.
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Surrey County Council			
Nov 12 to Oct 13	(to date)	Nov 13 to Oct 14	(to date)
Total Claims	2701	Total Claims	4216
Passed to Kier	801	Passed to Kier	1186
SCC Settled Claims	599	SCC Settled Claims	796
SCC Settlement Total	£ 574,899	SCC Settlement Total	£ 281,512

Kier Services			
Nov 12 to Oct 13	(to date)	Nov 13 to Oct 14	(to date)
Total Claims	801	Total Claims	1186
SCC Settled Claims	677	SCC Settled Claims	1015
SCC Settlement Total	£ 178,323	SCC Settlement Total	£ 301,672

*Note: there are still claims for the above periods under consideration so overall the values could increase

31. To mitigate the risk of defects that fall outside of the Emergency Response process but are deemed to require a more urgent response than 5 working days, a new priority of 'P2+' was introduced to 'internally' flag such defects and help the scheduling teams to prioritise the repair as soon as possible. This has been managed in a number of ways including the introduction of a Hotline for Inspections Teams to report defects meeting the P2+ criteria, enabling Inspection teams to select the new priority within the Handheld devices and a manual review of all Portal raised defects to pick up on key words which would suggest a more urgent response is required. To date the number of P2+ defects represents 5.2% of the total defect volume.
32. It is not yet possible to determine if the new policy has improved or worsened the County's position due to the timing of the implementation of the revised Policy coinciding with both the Winter Season and a succession of 200 year storm events which have made data comparisons impossible and a further period of review is required. We therefore consider this to be developing.

BENEFIT SIX: IMPROVED TEAM WORKING / REMOVAL OF SILOS

33. Project Safety Defect commenced on 4th November 2013 and a number of measures were taken to integrate the Client, Contractor & Subcontractor teams. In the East of the network co-locating the teams occurred almost overnight due to the existing seating & working arrangements whereas in the West of the network, the teams were unable to co-locate until March 2014 due to the need to review existing seating/working arrangements. Two sets of Integrated Team workshops have been held to help break down barriers between teams and promote the one team approach. An exercise was undertaken prior to the first workshop in December 2013 and all attendee's rated the current position on collaborative working with a traffic light system where Red was little or no collaboration and Green was a fully functional, collaborative team. The results of the first workshop showed a predominantly Red result as could be expected however the results of the recent workshop in October 2014 showed a progression to predominantly Amber result.
34. The integration of the teams has enabled a greater awareness of concerns for all parties concerned helping to understand the 'drivers' & 'blockers' of each organisation. Integration has dramatically improved the collaborative approach

to reducing 'blockers' and identify 'enablers' to delivering a successful service.

35. We are currently 12 months into Project Safety Defect and the team has delivered month on month improvements to Service Delivery. As we continue forward and with the implementation of the new WMS System, progress should start to pick up pace as we continue to develop both the relationships and Service Processes. We therefore consider this to be developing.

CONCLUSION & SUMMARY

36. The review therefore confirms considerable success:
- Routine Highway inspections have significantly increased resulting in defects being identified sooner and in many cases allowing repair intervention sooner limiting the impact of the defect.
 - New IT and processes is allowing much more effective planning of resource allowing more repairs to be made sooner as well as increasing the transparency of data to improve auditing resulting in quality to be assessed and improvement plans to be created.
 - The new integrated team is showing signs of success with each function being a component part of the process and contributing to its success rather than individual team's responsibility ending upon completion of their part in the process.
 - To date, there is no evidence that this change has had an adverse impact on the claims paid out by the Council or Kier.
37. However, as many of the initiatives are either still under implementation or in their infancy, the review recognises that there is work still to be achieved to fully embed the project objectives and create a fully effective service. Each of the initiatives has its own implementation plan and review and allowing for the expected increase in defect reports over Winter, all areas are expected to be fully embedded by the Summer of 2015.
38. The approach Surrey County Council has adopted was also validated by the recent Pothole Challenge Fund. The fund was developed by the Department of Transport and allowed local highway authorities to bid for a £200m fund to repair potholes. Based upon bid submission summarising council policies, procedures and resource for defects, councils were then ranked, with the highest scoring authorities awarded bonus funding, on top of the standard allocation determined on road length.
39. Surrey Highways was ranked joint 9th in the county out of 148 councils, which placed Surrey Highways in the top band for highway defects and enabled additional funding over and above the standard grant allocation
40. The Safety Defect project provides an excellent platform to build on, and the service will continue to embed and deliver continuous improvement to deliver enhanced service to surrey residents.

WHAT HAPPENS NEXT

41. Select Committee members are invited to visit Incident Response Centre in Merrow to view the operation in action and make any specific comments.
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42. Year 2 Safety Defect Report submitted to Select Committee in November 2015.

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Annexes: Annex One: Cabinet Paper – New Approach to Highway Maintenance
Annex Two: Performance Data (Safety Defects) Sept 13-Aug14
Annex Three: Highway Safety Inspection Policy Defect Categorisation Nov 13

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