

**Manchester City Council
Report for Information**

Report To: Audit Committee - 31 August 2017

Subject: Highways Service Improvement – Update Report

Report of: Strategic Director, Highways, Transport and Engineering

Summary

This report provides an overview of service improvement within the Highways Service and provides specific updates in relation to action points highlighted in reports considered by Audit Committee on 6 October 2016 and 27 June 2017.

Recommendations

Members are requested to note:

- a) The capacity gaps at a senior level and positive progress against these gaps.
 - b) The scale and pace of change to create 'one team' in line with Our Manchester principles and approach.
 - c) The positive progress in implementing management and process improvements in multiple aspects of the service following a report of no assurance.
 - d) The ongoing work programme around clearing a historic backlog of work and embedding continual service improvement.
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Wards Affected:

All

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Background documents (available for public inspection):

- Highways Improvement Reports to Audit Committee in October 2016 and to Neighbourhoods and Environment Scrutiny Committee in November 2016.

1 Introduction and Background

- 1.1 This report provides a progress update on the management actions for Highway Maintenance following previous Audit Reports. As requested by Audit Committee on 17 June 2017, it includes an update on capacity and the investment programme is also included within the report.
- 1.2 Over the last 5 years, as with many other public services, Highways have incurred budget reductions as a result of central government cuts; these cuts resulted in a reduction in capacity and the loss of key skills which has had a detrimental impact on service delivery. Consequently, there is now an increasing emphasis and need for growth, in-part demonstrated via the approval of £100m capital investment in March 2016; £80m for maintenance and a further £20m for the delivery of major infrastructure schemes. This investment will bring the City's roads back to a good standard, to be delivered alongside a programme of proactive maintenance to restore quality and integrity of the highways asset over the more medium to long-term.
- 1.3 Furthermore, management and delivery of the Highways function had been dispersed across the organisation over many years and whilst this approach delivered some success, there have been limitations. Consequently, opportunities to sufficiently address issues of process, technology and people integration were not sufficiently maximised to prevent impact on service delivery. In order to address and enhance opportunities for integration and service improvement, it was agreed in May 2016 that all functionality should be brought together under the single leadership of a Director of Highways reporting to the Chief Executive.
- 1.4 By bringing together all elements of Highways, structural integration has been achieved. However given the somewhat fragmented model that had been in place previously, there is a significant amount of work still required to embed cultural change and to fully develop improved methods of working that better integrate process, technology and people across all aspects of the service; with the aim of improving planning, customer service and delivery. The scale of change required to fully integrate the service and embed cultural change should not be under-estimated and is evidenced through the work of this Audit review.

2 Strategic Context

- 2.1 Over the next ten years, Manchester will undergo significant changes to achieve the ambitions of Our Manchester and the Combined Authority's 2040 Vision and thereby become a world class city.
- 2.2 To secure ongoing sustainable growth and to continue to attract and retain skilled, aspirational, resilient and productive people, Manchester will need to build upon its strong reputation nationally and internationally as a cultural hub and a place where businesses can thrive. Central to growth will be continued investment in the City and its infrastructure aligned to the ambitions of the

Greater Manchester Combined Authority, the Northern Powerhouse and Core Cities.

- 2.3 The City will also need to continue to support residential growth. As the population continues to grow, a minimum of 25,000 new homes will be required between now and 2025; requiring a transport network and associated infrastructure that is resilient and capable of supporting both population and economic growth. Furthermore, the recent government announcement regarding the curtailing of petrol and diesel vehicles to improve air quality / reduce pollution will be heavily dependent on the leadership and support of the Highways Service.

3 Leadership and Management Capacity

- 3.1 In order to drive and deliver these ambitious objectives, a further Highways Service leadership structure was approved by Personnel Committee on 21 February 2017. This introduced the new post of Strategic Director, Highways, Transport & Engineering; recruitment to this post concluded with the incumbent joining the Council on a permanent basis with effect from 1 April 2017.
- 3.2 The revised leadership structure also introduced the new post of Director of Operations (Highways). Recruitment has progressed and an appointment has been made to the permanent post with an anticipated start date of early November 2017. This role was vacant until early July when an Interim appointment was made. It should be noted that operational management of Manchester Contracts reports directly into the Director of Operations (Highways) and before appointment to the Interim post, there was a critical capacity and dedicated skills gap in this respect.
- 3.3 There are three roles within the structure that report into the Director of Operations (Highways) – a Head of Citywide Highways (an already occupied post) and; Head of Delivery (now vacant with interim and permanent recruitment ongoing). The Head of Delivery is responsible for the highway portfolio design, commissioning and delivery, as well as the programme office function. Whilst significant progress has been made in this area, the current gap and scale of work will impact on the pace of improvement in relation to the development of a performance framework and programme reporting and delivery. In addition to these two technical posts, it was also agreed that the Strategic Business Partner, Corporate Core be reassigned for a two year period to Highways to provide dedicated capacity to lead the transformation programme. This move took place in April of this year.
- 3.4 It should be noted that the improvements being developed and delivered across the Highways Service span more than the individual actions identified herein. The service has prioritised capacity and focus to the areas of greatest need and risk which means that delivery is progressing at a varying pace.

4 Highways Maintenance Improvement Programme

4.1 Service Delivery – Progress to Date and Forward Programme

Further to the original 2016 Audit review and 2017 follow-up activity, work has been undertaken and remains ongoing around improving management arrangements; providing and embedding more appropriate processes and procedures; improving the configuration and use of supporting systems; and more effectively coordinating and prioritising the delivery of planned and reactive maintenance activity. It should be noted that the Audit Report of 2016 identified a number of areas requiring significant improvement. Whilst progress has been made across all areas, the level and pace of improvement varies with certain areas being prioritised. Given the scale of these improvements, Committee are asked to note that some of the transformation/improvements required will take up to 18 months to deliver.

- 4.2 At the strategic level, the original Audit review led to establishment of a Pothole and Drainage Improvement Programme which has since late 2016 encompassed a number of themed project Workstreams, including:
- Reviewing highway inspection routes and schedules;
 - Reviewing configuration and use of the Symology works ordering system, and implementing changes where appropriate to methods of working;
 - Improving the quality and cost of contractor works;
 - Considering medium and long-term options for enhanced delivery of the future Reactive Maintenance Service; and
 - Implementing a more effective cyclical cleansing approach encompassing every gully.
- 4.3 Several of these project Workstreams remain ongoing and have considerable synergy with many of the individual items identified within the Audit Action Plan – arising from both the original 2016 review and the 2017 follow-up. Key themes within this Action Plan, both embedded and ongoing, are helping drive real and lasting service improvements, providing such things as:
- Greater financial control and quality assurance;
 - Enhanced work identification, allocation and delivery;
 - More robust contractual specification and management;
 - Appropriate performance and change management systems;
 - Safe methods of working supported by tailored learning and development plans; and
 - Structural realignment of inspection and repair aspects of the service.
- 4.4 The Audit review identified 8 themed areas which improvement and reassurance is being sought, a summary of the 8 areas and update is provided in the table below. Supporting these is an underlying Action Plan covering a further 29 items, taking the total number of actions to 37 – detailed requirements and progress made against each is included within **Appendix A** of this Paper. These 37 actions incorporate all the improvements identified by Audit since 2016.
- 4.5 Of the 37 action points, it is the opinion of the service that 11 have been formally concluded with outcomes embedded with a further 22 part completed actions and 4 incomplete where work has been undertaken but is not yet

concluded. It should be noted that for the 26 outstanding actions, work has commenced across all areas but is not yet concluded and may therefore only be reported as partially complete at this stage – for each of these outstanding items, the service has a managed delivery programme in-place with defined Task Owners each having accountability, **see Appendix A**. It should be noted that there may be some minor discrepancies between the service and the audit assessment however this relates to evidence as opposed to implementation and progress.

- 4.6 This business transformation initiative is being further supported by the ICT Service who have for a number of months been working jointly with Highways in an Enterprise Architecture review of both existing 'as is' and aspirational 'to be' scenarios for enhanced management and more effective delivery of the Reactive Maintenance Service. This review and associated engagement remains ongoing and covers the end-to-end service delivery from enhancements to processing initial customer requests and work identification through planning and delivery phases to approvals, performance reporting and wider asset monitoring. It encompasses multiple facets including process and procedures, people, data and technology. This work reports directly into the Strategic Director for Highways, Transport and Engineering and very much aligns and supports the ongoing Action Plan delivery tasks documented herein. This is an example of positive progress, however there is still significant work to be undertaken, therefore it will take up to 18 months fully develop and implement any future changes.

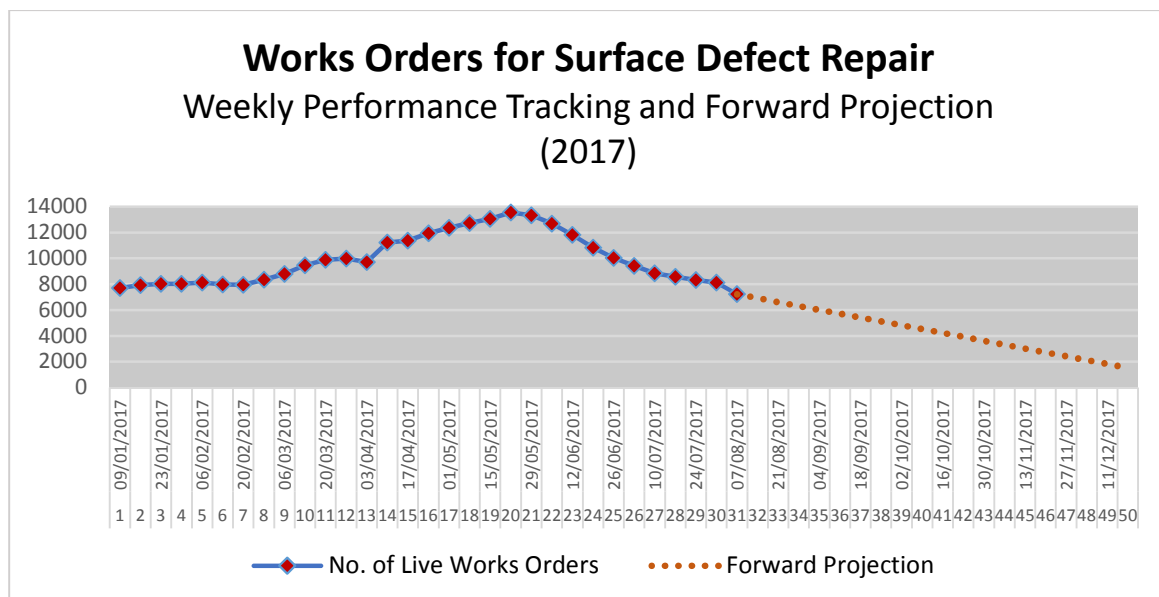
4.7 *Pothole Repairs – Performance Improvement and Results to Date*

The Service has been working with considerable focus over recent months to contain and reduce a historically growing backlog of pothole and associated repairs to the carriageway and footpaths. Significant work has been undertaken and remains ongoing around enhancements in both the allocation of work and in the monitoring of performance of individual repair teams – within Manchester Contracts and via sub-contractors.

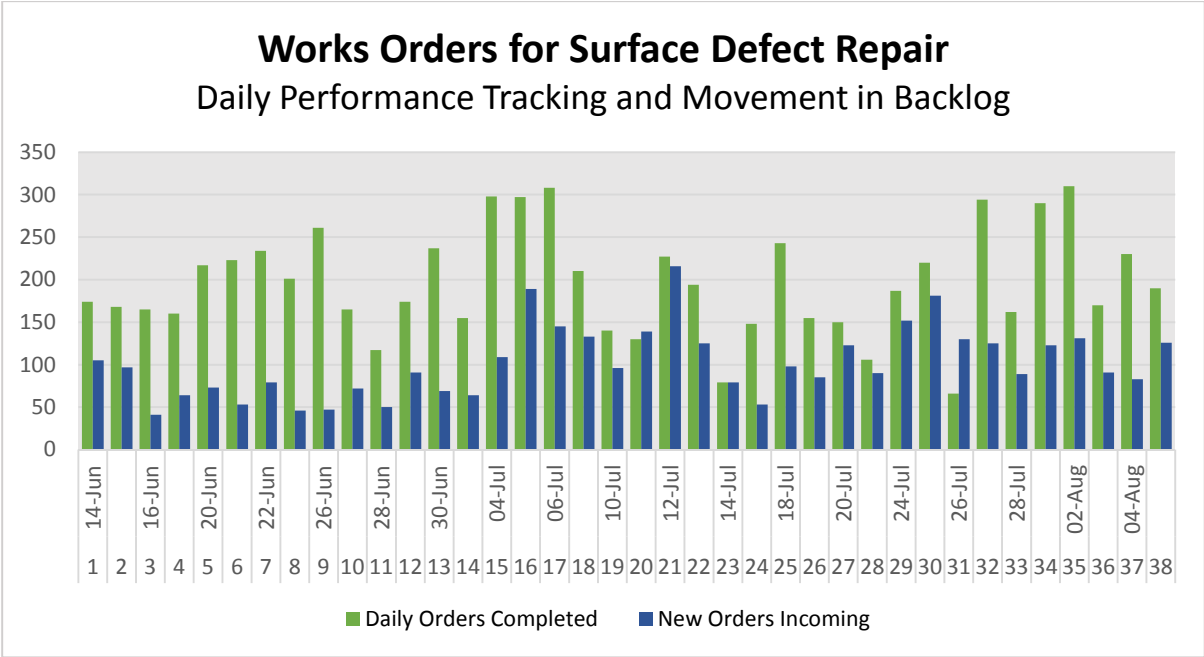
- 4.8 The operational management team responsible for delivery and recovery of the work backlog have been meeting each week since late March to baseline and monitor position and to effect an appropriate recovery plan. This has included the procurement of additional repair resource; enhanced weekly tracking of workflow; and the identification and embedding of more in-house technical and administrative resource to assist with work coordination, quality checking, financial certification, and permit applications.
- 4.9 Although the backlog was increasing earlier in the year, a significant amount of contingency planning has been undertaken in the intervening period that has now resulted in a larger number of repair teams (in-house and sub-contracted) being deployed across the City on a daily basis. The service has also procured for appropriate locations, two Jet Patching suppliers who bring additional cost-effectiveness to the service given their specialist methods of high volume repairs relative to conventional means. The Jet Patching process has the additional benefit of repairing in a quantity controlled and quality

checked way, a greater volume of defects than have been ordered, thereby providing further longevity and greater potential for future reduction in the numbers of Inspector identified defects. The management team is also undertaking work to streamline the historic lag between works being completed by the contractor(s) and records being received / updated within the Symology database.

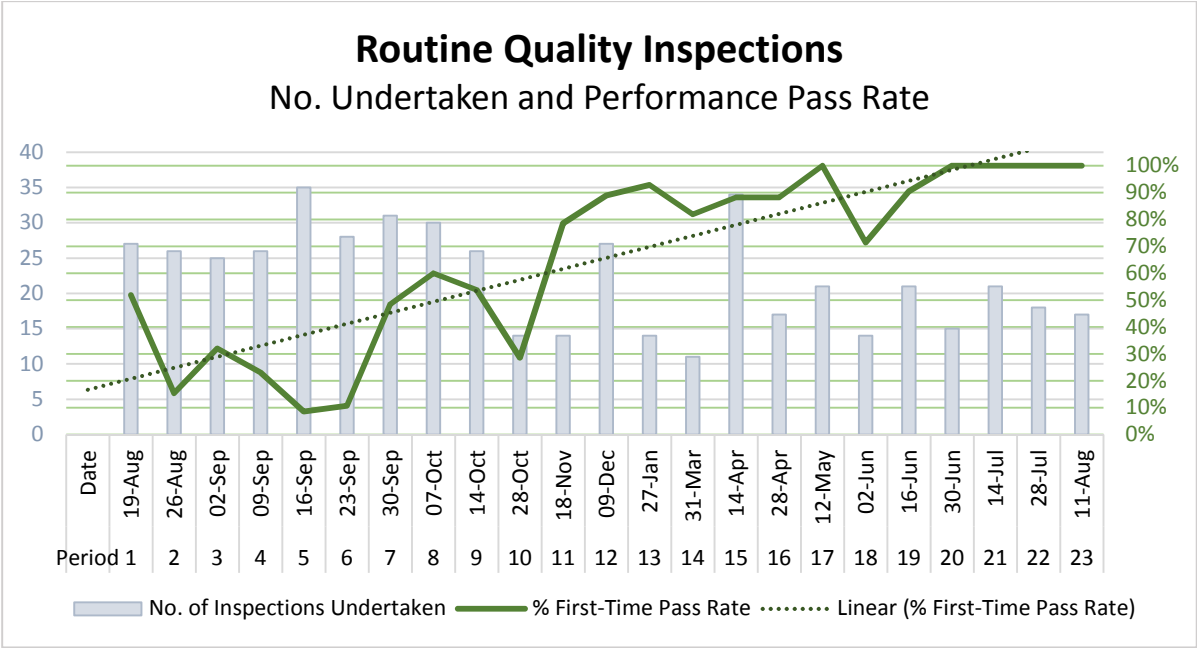
- 4.10 Backlog performance and projection moving forward is shown in the following charts and demonstrates very clearly an improving week-on-week situation since late May when the additional resource became fully deployed. By the end of August, it is estimated that the backlog will be around half that of late May. The forward projection included within the following chart (based on a current net weekly reduction figure of circa 300) is estimated to return the number of live works orders back to a manageable operational level by late 2017.



- 4.11 Since June, Manchester Contracts have also been undertaking daily monitoring of both work allocated and delivered by each respective service provider. This is dis-aggregated by each individual repair team such that the service can track any over or under-allocation of work and likewise identify and mitigate any specific matters of either poor or under performance. The net effect of this activity is evidenced further in the following chart.



4.12 In addition to the increased numbers and greater efficiency around the quantity of repairs being undertaken, the service has also since August 2016 been completing regular random sample inspections around the quality of repairs delivered. Assessed against criteria such as being sawn-cut and squared-off; the use of like-for-like materials; being compacted and levelled; and edge sealed, checks undertaken jointly with inspection and Manchester Contracts repair representatives have awarded a Pass or Fail rating and any that are failed have been returned to the contractor for explanation and remediation at their cost. To date, this quality inspections have sampled circa 500 defects and as evidenced below, this process has contributed to a significant improvement in the generalised quality of work delivered from an average pass rate of around 30% during the first 4 inspections rising to in-excess of 90% during the most recent 4.



4.13 Cyclical Drainage Programme

A comprehensive review of existing cyclical drainage process and activity was undertaken through late 2016 and early 2017 as part of the Pothole & Drainage Improvement Programme. This review identified a considerably under-resourced service with a very limited cyclical capacity that was being regularly re-deployed to deal with reactive work, thereby further increasing pressure on the delivery of a planned cleansing programme.

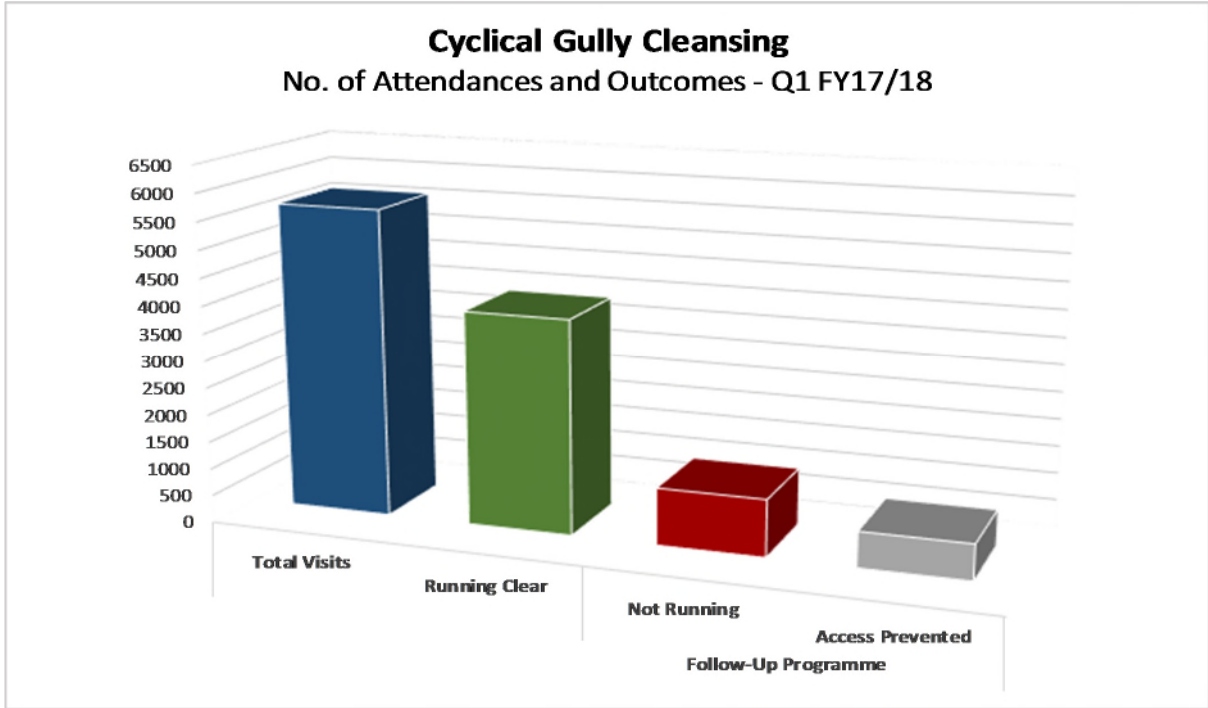
- 4.14 Inefficiencies were noted also in the scheduling of cleansing activity and the recording of outcomes together with very limited performance management and poor follow-up activity around jetting and excavation / repair.
- 4.15 The review sought to understand current best practice and lessons learned from other Greater Manchester Districts and Core City Authorities similar to Manchester and as part of this process there was proactive engagement with several in the formulation of a more appropriate future strategy for the Council – one which will aim over the coming 18-24 months for the service to visit and cleanse every gully across the City, encompassing more appropriate performance management and forward programming of jetting and excavation / repair activity as necessary in a more coordinated and prioritised way.
- 4.16 A proposed strategy (referred above as the 18-24 month forward programme) was reported and subsequently agreed earlier this year. In order to meet the objectives of a targeted clean of every one of the recorded 116,000 gully assets and to thereby significantly enhance the standard of the gully network, this strategy outlined the need for a dedicated management resource and increased operational team (sub-contracted as is presently the case) comprising an additional 6 no. gully tankers with 3 no. dedicated jetting crews and 2 no. dedicated excavation / repair teams each providing prioritised follow-up. The strategy also proposed to undertake follow-up monitoring after a

period of months to determine silt level build-up rates and provide more robust intelligence to underpin any future prioritised programme of cleansing.

4.17 Based around more effective management together with improvements in the efficiency of delivery and greater accuracy around the recording of outcomes, this proposed strategy would build-on on the circa £1.45m annual spend in FY2016/17 to project a significant enhancement to the highway drainage network for an additional £1.1m bringing the proposed two-year programme to circa £4m (£2m per annum).

4.18 With a considerably enhanced network and much improved future intelligence on condition, it is hoped and intended that the service will be in a much stronger position through 2018-19 to consider future maintenance priorities and cost-effective methods of delivery.

4.19 In the interim, the service is continuing to deliver priority cleansing and associated follow-up activity. As shown in the following chart, more than 5,600 individual gully sites were visited in the first quarter of FY17/18 with circa 70 percent of these left running clear. Of the remainder, circa 1,000 gullies have been added onto an emerging list for follow-up jetting and/or excavation and repair. A further 650 gullies could not be attended due to the presence of parked vehicles or other access difficulties and again, operational managers are in the process of programming follow-up attendance either for different times of the day or via targeted engagement with residents, Neighbourhood and/or Parking Teams.



5 £100m Investment Programme

5.1 As reported to Members, the cost of bringing the Council’s highway network to a standard of good condition would be in the region of £160m. However, the

service only has Member approval for £80m over 5 years and this highways capital investment allocation will be primarily spent on improving the condition of Manchester's roads, footways and drainage, as well as supporting maintenance of the bridge network.

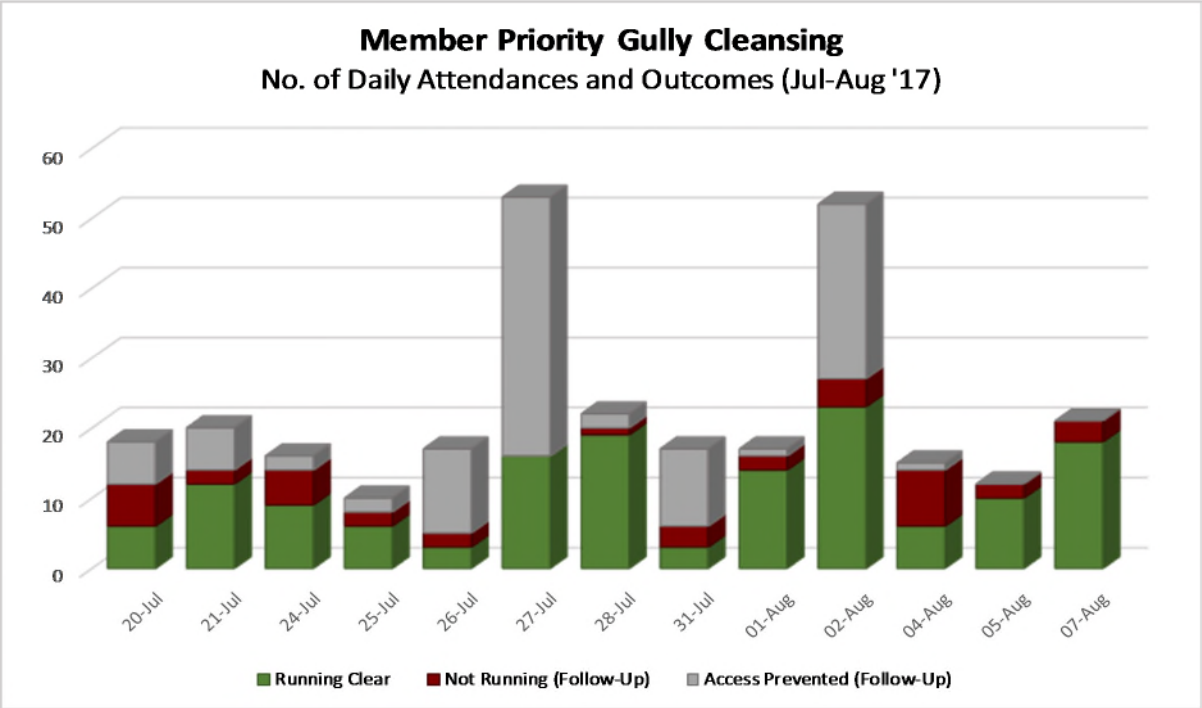
- 5.2 An additional £20 million of the funding has been allocated to support the delivery of major transport scheme priorities that will accommodate the wider growth priorities across the Regional Centre. The funding will be used to identify short, medium and longer-term priorities that support commercial and residential growth over the next 20 years. Schemes and Investment Cases will be developed which can then be used to secure additional funding for the delivery of these transport priorities (essentially used for pump-priming).
- 5.3 In terms of scheme prioritisation and delivery, the Council's Highway Asset Management Strategy (HAMS), approved at Executive in December 2015, details the approach to prioritising roads that are most important to the Council's Growth objectives – the greatest priority for maintenance funding is the Key Route Network (KRN), followed by roads of local significance for growth classified as the Community Network (CN). The CN captures about 35 percent of Manchester's overall highway network.

The following proposed annual programmes of work are included:

- 1 **Road resurfacing programme** – using the principles outlined in the Highway Asset Management Strategy, prioritising the worst condition roads on the Key Route and Community Networks.
 - 2 **Footway reconstruction programme** – prioritising worst condition footways on the KRN and community networks, targeting around 5 Wards per year and tying-in with the road resurfacing programme where possible. Works would also include kerb repairs.
 - 3 **Road and footway preventative programmes** – targeting about 6 Wards each year (different from those in the resurfacing programme) and selecting all roads suitable for these treatments (predominantly 'mid-life' condition) within each Ward. This approach will reduce set-up costs and help delivery in terms of coordinating diversion routes and reducing disruption.
 - 4 **Drainage improvement programme** – repairing broken or defective drainage gullies and pipework will help prevent future damage such as potholes, and reduce the amount of maintenance that is required. This is additional to gully cleaning operations before and after resurfacing works.
 - 5 **Bridges and structures** – the existing capital and revenue funding levels were not adequate to allow the Council's structures to be inspected and maintained to a 'good' condition. However, an additional £7.2m capital allocation over-and-above the £100m Investment Programme will help us complete the required inspections and programme prioritised capital repairs.
- 5.4 Individual schemes, comprising the road and footway resurfacing programmes, will be selected based on the latest condition information (50

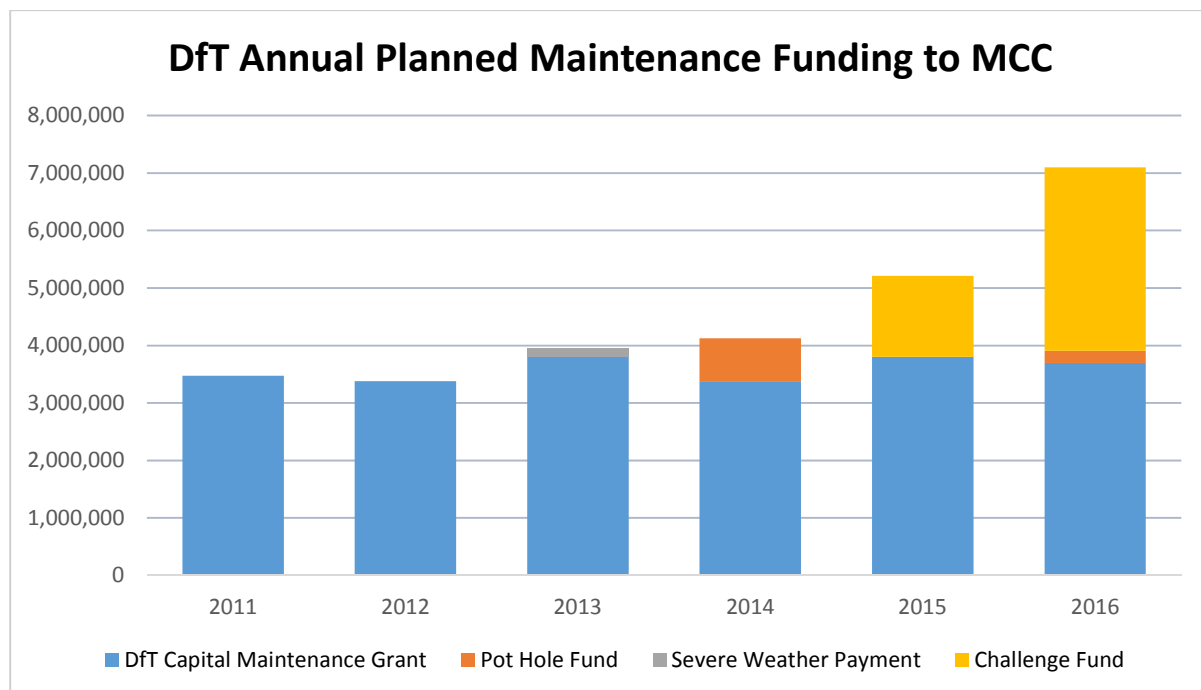
percent of the highway network is surveyed each year), prioritised in-line with the HAMS, and on a Ward-by-Ward basis to help delivery. Coordination with other infrastructure works across the City will also be checked using GMRAPS (Greater Manchester’s Road Activity Permitting System) in order to minimise disruption. The service proposes to use existing frameworks to deliver these works.

5.5 With specific regard to drainage and gully cleansing improvements ongoing, the service is currently working through a list of recently identified priority locations offered by Members. Performance and outcomes are presented in the following chart and show that through the course of late July / early August, the team has visited circa 290 individual gully hotspot locations and have left 50 percent running clear. Of the remainder, circa 45 locations have been identified for inclusion within an emerging follow-up programme (comprising further investigation, jetting and/or excavation and repair) and approximately 105 locations need a re-visit due to access restrictions and as per the cyclical programme referenced earlier, attendance will either be undertaken at alternative times of the day or via a targeted engagement with residents, Neighbourhood and/or Parking Teams.



6 Securing Value for Money (VFM) for Planned Maintenance Works

6.1 The following chart demonstrates that although the Council has been successful in securing additional central government funding for planned maintenance over recent years, this has not necessarily increased flexibility around where monies are spent due to the fact that submissions are tied to specific business cases; i.e. Challenge Funding was secured specifically to deliver Key Route Network (KRN) improvements on routes including Hyde Road, Stockport Road and Palatine Road.



Herein, we examine further how the service aims to achieve greater value (VFM) moving forward through each of the following key steps:

- a) Determining the type of planned maintenance implemented;
- b) Ensuring that the contractor undertaking the work is both efficient and effective; and
- c) Managing the quality of the work undertaken.

6.2 ***Determining the type of planned maintenance implemented***

The life expectancy of a brand new road is approx. 40 years but obviously this figure varies greatly based on volume and type of traffic, weather conditions and any utility repairs. Through its life, small potholes may appear which result in water ingress and this becomes much more frequent with age. The decision on appropriate type of planned maintenance arguably has the biggest impact on VFM and in this respect, there are 3 main options:

Option One: Only undertaking reactive repairs on a road – it might be assumed that just repairing potholes reactively when they appear would be the best way of maintaining our roads; however these reactive repairs cost around £50 per pothole, and often only last a relatively short period of time when the overall road condition is deteriorating. They therefore provide poor value for money and often undermine the structural integrity of the road. Also, from a reputational point of view, letting roads deteriorate and only carrying out reactive repairs is not acceptable as at some point, the road becomes unrepairable and would need to be reconstructed (which is very costly).

Option Two: Resurfacing / reconstruction of the road when it has reached its end of life – these treatments are expensive but are the only feasible option when the road has deteriorated to a very poor condition. An

experienced engineer will be able to estimate the likely depth of replacement material required, however until the surface layers have been removed, we cannot be 100 percent sure as to the depth required (core samples can improve the cost estimate but in themselves are costly to undertake).

Resurfacing involves replacement of the surface layers of the road and generally comprises either Hot Rolled Asphalt (HRA) or Dense Bituminous Macadam (DBM) material; HRA is generally used on busier roads (with higher proportions of HGV's and buses) and is harder wearing, costing about £40 per m² compared to DBM at £25 per m². A resurface will typically extend the life of the road by 20 years.

If the road has deteriorated to the extent that the underlying structural layers have failed, full reconstruction is needed. This involves excavation and replacement of all the Bitmac layers and the sub-base underneath, which costs at least £100 per m², plus significant additional costs from drainage reconstruction. This will restore the road to new and restore a lifespan of around 40 years. In Manchester this type of work has very rarely been undertaken over the last 20 years due to costs and disruption; however it could be argued that we are storing-up problems for the future.

Option Three: Carrying-out preventative treatment when the road has reached its end of life – such treatments usually comprise a thin overlay of the existing road surface, which seals and delays deterioration. It can only be effectively applied just before a road has started to fail. Although it might seem that we are treating roads that do not need it, in terms of VFM, this is the most cost-effective method of maintaining the Council maintaining its road network. We can treat a lot more roads using the same budget, which will prolong their life and reduce the need for expensive resurfacing / reconstruction year-on-year.

The treatments usually comprise either microasphalt or surface dressing, which cost about £8 per m² or £5 per m² respectively compared to about £35 per m² for an average resurface. They will generally extend the road life span for 7 to 10 years. Preventative treatments can only be applied however a certain number of times before some structural failure will inevitably occur and resurfacing will be required.

Microasphalt has been the preferred method of treatment in recent years, as surface dressing was unpopular in Manchester due to loose chippings and the sticky nature of the tar after treatment. Improvements to the product have now reduced these issues.

- 6.3 An important element of improving the lifespan of all roads is to make sure that any utility repairs are undertaken before the Council undertakes any resurfacing or preventative work. The GMRAPS system provides a controlled and precise way to advance notify utility companies of our planned works. Where utility companies have work planned they can either accelerate their programme or we can delay ours such that the resurfacing is undertaken after the utility repair work.

6.4. *Ensuring that the contractor undertaking the work is both efficient and effective*

Each road scheme is subject to a site visit by an experienced engineer to check that the condition data is up to date and to determine the best value option for treatment. For major schemes (such as those undertaken recently along the Oxford Road and Wilmslow Road corridor), the Council will undertake core samples to determine condition of underlying layers to enable more robust cost estimates.

In Year 1, any resurfacing and preventative works will have to be undertaken using existing frameworks in order to enable us to commence the Year 1 programme in a timely way – the frameworks are TC040 for resurfacing and TC041 for preventative works. Both frameworks have 3 appointed companies who have been through a competitive selection process based on cost and quality criteria. Detailed estimates are produced for each site using the contractor's tendered rates and work is normally awarded to the contractor with the lowest overall price. There are occasions when the lowest contractor is unavailable to deliver the specified programme of works and the second lowest contractor is approached, and so on.

While existing contracts will be used for Year 1, we need to determine the best option for the procurement of Years 2-5. The Major Infrastructure Framework should be in place this summer and provides wider opportunity to procure future resurfacing contractors at a competitive rate; another option would be to go to market with the works as a total package. We need to determine further which option provides us with the best value and least risk.

6.5. *Managing the quality of the work undertaken*

A key element of VFM is checking the quality of the work both during and after completion of the works. Final payment is not made until the works have been satisfactorily completed. We also put in-place contractually, a two year guarantee and retain 5 percent of the contractor's agreed fee until the expiry of the two-year period.

7 Conclusion

7.1 In summary, following the initial investigation and report to Committee in October 2016, a significant amount of work and effort has been undertaken to improve the 37 actions/areas identified. This work is ongoing and has resulted in some significant improvements across some of these areas, however given the scale of the challenge progress continues and is ongoing to implement the required improvements and putting the necessary controls and process in-place to improve areas across Manchester Contracts and Reactive Maintenance (as set out above and in the detailed Appendix attached).

7.2 Given the wide array of aspects originally identified for improvement, work was initially prioritised with capacity being focused on high priorities. Whilst some improvements have already been implemented and embedded within

business process, the service fully recognises that further change and improvement remains required and this work is now being prioritised for completion through the course of the 2017 calendar year.

Appendix A – Highways Management Action Plan 2017
Report on Position
18 August 2017

Item	Action	Outcome	Status	Requirements and Programme	Owner
1.	Consideration of the findings in relation to the operational practices of a sub-contractor and the need for a commercial discussion with the Director. This should include legal opinion and evidence to support any contractual claim.	An evidence file has been collated and Highways have approval from the City Solicitor to commence discussions with the particular sub-contractor.	Complete	<i>Confidential discussions are currently taking place with Legal / Litigation teams.</i>	J. Lamb
2.	Review the existing framework arrangements and pricing structures to ensure they are 'fit for purpose'. Continue to progress the workstream looking at contracting arrangements, which should be informed by the results of the on-going procurement exercise to appoint a contractor(s) to clear the current backlog of work.	The prices tendered through TC036 remain valid with no mechanism currently to vary from these with any of the appointed suppliers. Clearance of the backlog of pothole repairs has however recently engaged multiple sub-contractors through tender procurement process and this is helping test the market price prior to future replacement of the current TC036 Minor Works Contract.	Partially Complete	<ul style="list-style-type: none"> • Tied in to work around replacement of the TC036 Minor Works Contract. • A thorough review of TC036 alongside development of a new more appropriate contract specification is ongoing and expected to conclude by the end of October 2017. • A replacement framework contract may then be appropriately procured with a view of becoming 	K. Gillham

				live and operational by FY18/19.	
3.	<p>Introduction of contract monitoring and quality assurance checks. The current position around missed SLAs need to be given significant attention. There are also significant improvements to be made around the quality checking of works delivered by the in-house teams.</p>	<p>Contract monitoring through formal cost comparison (supporting the award of work) is embedded and this is supported by quality assurance checking across all providers, including photo and on-site checking of works undertaken by sub-contractors.</p> <p>With regard to performance around SLAs, significant work has been ongoing for some months now and has culminated in:</p> <ol style="list-style-type: none"> 1) Manchester Contracts having procured additional resource capacity – now with multiple external providers to reduce backlog of work, including re-focus on clearing those within SLA. 2) An operational management team has been established and meets weekly to track productivity and performance which has improved significantly since monitoring began. 	Partially Complete	n/a	J. Kelly

		3) The Pothole & Drainage Improvement Programme work is reviewing the Inspection Code of Practice from a risk perspective and this will reduce the future SLA burden on the Council with more prioritised and realistic repair timeframes.			
4.	Ensuring all orders for repairs under 5m ² clearly define the number of defects / metres required against pricing schedules in TC036. Further guidance is required on orders to ensure a better description is recorded on orders.	Inspectors were notified in Autumn 2016 of the minimum contract requirements for 2m ² ordering and for the need to identify the number of defects when ordering an area repair(s). There has been partial compliance with this action and further work is ongoing around incorporating more description and improved clarity in future ordering of repairs.	Partially Complete	<ul style="list-style-type: none"> • Tied in to work around re-configuration of Symology data capture system and replacement of the TC036 Minor Works Contract. • Symology configuration improvements are expected to be implemented with appropriate training delivered to system users by the end of 2017. • A revised Minor Works Contract specification is expected by the end of October 2017 with an aspiration to have a TC036 replacement framework contract in-place by the start of FY18/19. 	C. Lunn

5.	Begin the process for removing ambiguity over the precise location of defects, which may include the use of spraying and/or photographs.	Inspectors have been marking-out defects on-site since August 2016 and this has proven effective. The additional control that will be afforded by photographing all defects for which orders are raised will only be resolved once a move towards inspection recording with hand-held electronic device is negotiated and concluded.	Partially Complete	<ul style="list-style-type: none"> In-house (inspection and repair) photographing is expected to be fully operational across all disciplines by the end of 2017. 	<p>C. Lunn (Inspection)</p> <p>J. Kelly (Repair)</p>
6.	Initiate a formal change control and sign off process to control growth and additions which involves the budget holder or Highways inspectors. Before any further structural changes within the teams are proposed, it will be important to clearly define and consistently apply change control, including who agrees, tolerances, where information is held and what is updated on Symology, particularly if it impacts on price. The change control should be recorded on Symology.	Any repairs that are attended by the contractor and found to be inconsistent with the ordered dimensions are reported back to the Manchester Contracts management and supervision team before any repair is actioned; the contractor is typically instructed to continue with a repair but to ensure that all photos are representative of the patch repaired – and the Symology order must have the change noted and the name of the Manager / Supervisor who agreed it. This is then cross-referenced against Symology through the checking and	Partially Complete	<ul style="list-style-type: none"> Tied in to work around Symology re-configuration with improvements in methods of change control and recording expected to be implemented with appropriate training delivered to system users by the end of 2017. 	<p>C. Lunn (Inspection)</p> <p>J. Kelly (Repair)</p>

		certification process prior to the payment of any claim.			
7.	Implement a more robust process to effect and document a permanent repair where temporary repairs have been completed. A process for linked orders needs to be defined and implemented, including the backlog of any tickets that have been returned.	Compliance in linking orders still falls short of the required standard. An improved and more formalised process is however being developed as part of the Symology system enhancement project under the ongoing Pothole & Drainage Improvement Programme.	Partially Complete	<ul style="list-style-type: none"> Tied in to work around Symology re-configuration with improvements in methods of change control and recording expected to be implemented with appropriate training delivered to system users by the end of 2017. 	C. Lunn
8.	Implement weekly operational / management meetings to drive through improvement actions.	Weekly meetings have been held since late 2016, focussed on delivery, productivity, quality, and procurement of additional resource. This has culminated in the mobilisation of a larger resource and daily tracking on orders raised versus work completed.	Complete	<i>Effective from 17 August, all weekly meetings to maintain and share a Record of Actions demonstrating appropriate progress and compliance.</i>	J. Kelly
9.	Clarifying when both traffic management and restricted working can be applied and the appropriate rates that should be applied. Further work is required to determine who should identify the requirement for TM, who determines what TM is to be used, the cost of the TM and	Since Autumn 2016, the Highways Inspectors have taken an early judgement call on potential TM / RW requirements and this is recorded within the Symology works order. Under CDM regulations however, the ultimate decision remains with the Principal Contractor	Partially Complete	<ul style="list-style-type: none"> Tied in to work around replacement of the TC036 Minor Works Contract, expected to conclude work around a revised specification by the end of October 2017 with a new contract to be operational by FY18/19. 	C. Lunn (Inspection) J. Kelly (Repair)

	<p>the recording of this cost on the orders. This needs to be tied into the permitting process via the GMRAP to ensure that TM does not become a reason for delays in completing work.</p>	<p>(Manchester Contracts) who then seeks to batch and schedule work accordingly working with sub-contractors under the terms of the current TC036 contract. All works requiring TM are now formally tied-in to the GMRAPS permit system, requiring approval before works are undertaken.</p>			
<p>10.</p>	<p>Start to record on Symology details of work completed by the in-house teams to allow on-going assessments to be made over productivity and value for money. Sufficient information needs to be recorded on Symology to enable effective performance management of the in-house teams and comparison of productivity with subcontracted work.</p>	<p>Symology is now being used to record which in-house team and which sub-contractor has been allocated work. This is supporting the ongoing development of a fit-for-purpose performance management system. In the interim, daily tracking on numbers of gangs per contractor and number of orders completed by day is also providing valuable baseline information though more work is required to separate out the number of individual defects from the number of works orders – many orders currently have multiple defects therein and this method of recording needs resolving.</p>	<p>Partially Complete</p>	<ul style="list-style-type: none"> One of the key upgrades being considered and shall be resolved through the Symology improvements project is a move towards a single defect being recorded on a single works order. This will provide far more accessible and meaningful performance data on daily productivity and this project is expected to conclude with improvements by the end of 2017. 	<p>C. Lunn</p>

11.	Each invoice from KB where there is a discrepancy between works ordered and works claimed will be scrutinised and agreed before payment is made.	A robust system is now in-place for checking and QS certification on receipt of all invoices from all sub-contractors. All invoices are evidenced against photographs and the Clerk of Works undertakes follow-up on-site for 50 percent of all works to validate quality and quantity.	Complete	n/a	J. Kelly
12.	No work outside the scope of the works order is agreed unless MCC officers agree a change (and this change is recorded). If it is unclear from the works order then clarification must be sought.	Any repairs that are attended by the contractor and found to be inconsistent with the ordered dimensions are reported back to the Manchester Contracts management and supervision team before any repair is actioned; the contractor is typically instructed to continue with a repair but to ensure that all photos are representative of the patch repaired – and the Symology order must have the change noted and the name of the Manager / Supervisor who agreed it. This is then cross-referenced against Symology through the checking and certification process prior to the payment of any claim.	Partially Complete	<ul style="list-style-type: none"> Although an interim system is in-place, there remains too much reliance on recording outside of the Symology database. More formalised recording will be embedded once the Symology re-configuration work is concluded with appropriate training delivered to system users by the end of 2017. 	<p>C. Lunn (Inspection)</p> <p>J. Kelly (Repair)</p>

13.	A sub-contractor should be contacted and formally brought in to discuss – we are potentially looking at invoices where work has been claimed but not completed.	Highways have approval from the City Solicitor to commence discussions with the sub-contractor.	Complete	<i>Confidential discussions are currently taking place with Legal / Litigation teams.</i>	J. Lamb
14.	The framework contract rates mean that better value can be attained by ordering works in 1m ² blocks, with a minimum order of 2m ² . Improved guidance on ordering is required.	Inspectors have been notified of the minimum contract requirements for 2m ² and there has been partial compliance with this action. Where a group of defects are present, the Inspectors are ordering 2m ² minimum; however for isolated defects, Inspectors have been instructed to work to 0.5m ² minimum blocks in order to preserve the integrity of good condition adjacent carriageway / footway.	Partially Complete	<ul style="list-style-type: none"> • Continue with arrangements as described as an interim measure until this can be rectified through development and procurement of a revised Minor Works Term Contract to replace TC036. • Timescales for TC036 replacement being driven by Pothole & Drainage Improvement Programme ongoing – new specification expected by end of October 2017 with a new contract operational by FY18/19. 	C. Lunn
15.	Managers will now accompany each inspector on-site over the coming weeks to ensure that marking out is being undertaken in accordance (and consistently)	Managers visited site over a number of weeks following the formal move to marking-out in August 2016. Since this time, the quality of Inspector work (in terms of identification, marking,	Complete	n/a	C. Lunn

	with the recent office briefing; that appropriate PPE is being used; and that any typical issues faced by Inspectors are being clarified and answered first hand.	and compliant ordering) has been included within the routine quality checking which is now embedded as process.			
16.	Highways Inspectors to spray paint areas for repair. If the Highways Inspectors cannot spray the defect they should note on the ticket where / how they have marked the defect to avoid tickets being returned. An effective repair size should be agreed, ordered and sprayed consistently for small defects.	For all walked inspections since mid-August 2016, Inspectors have marked-out defects by way of spray (and crayon within City Centre) either around the defect or on the adjacent kerb. Driven inspections are not marked but an agreement is already in-place for ManCon to undertake all such repairs. All orders also now include the number of individual defects if required by a large single repair.	Complete	<i>Anomalies noted recently by Audit are being investigated through Managers and the relevant Highways Inspectors. Additional measures will be put in-place should these be deemed necessary.</i>	C. Lunn
17.	Manchester Contracts staff to undertake checking on subcontractors work (site visit) to review both quality and the amount of work claimed and completed (until QS and CoW are appointed).	As per Item 11, a robust system is now in-place for Clerk of Works checking and QS certification on all work undertaken by multiple subcontractors. All invoices submitted are evidenced against photographs and the Clerk of Works subsequently undertakes follow-up on-site for	Complete	n/a	J. Kelly

		50 percent of all works to validate quality and quantity.			
18.	A monitoring template has been established to undertake a weekly sample of orders against works undertaken with a pass / fail outcome and commentary on corrective actions back to ManCon. This will involve managers undertaking independent quality inspections on-site. The template is currently being refined between the managers and we will have circa 30 sites covered each week.	Since August 2016, appropriate in-house resource from both inspection and repair teams have been jointly deployed in undertaking routine checking on the quality of repairs. Against agreed criteria, each defect is awarded either a 'Pass' or 'Fail' and any falling into the latter category are returned to the sub-contractor for remediation at their own cost. This process also records any prevailing trends for formal discussion with the respective sub-contractor.	Complete	<i>Audit have noted a lower than originally specified number of checks are now being undertaken. After checking for circa 12 months and experiencing a significant improvement in quality compliance (e.g. the most recent 4 checks all returned 100% quality compliance), the risk and need to check such a volume has reduced from the original 2016 levels. That said, the service have embedded this process and will continue to undertake checking.</i>	C. Lunn
19.	Inspectors photographing each defect where an order is being raised and the contractor taking before and after photographs to support the checking process. This ties in with the device refresh project. Consideration should be given to ensuring both the Highways Inspectors and the in-house teams are also	All sub-contractors are taking photographs on arrival, during and after each repair and this supports the cost certification and payment process. Inspectors and ManCon operatives (in the main) are still not taking photographs when placing an order or completing a repair. This will however be resolved by senior management with a move to	Partially Complete	<ul style="list-style-type: none"> Continue with current arrangements until a formal process is agreed around a formal move to mobile working. Under the Pothole & Drainage Improvement Programme, work continues around improved Symology system configuration and testing of new and 	C. Lunn (Inspection) J. Kelly (Repair)

	taking photographs as this will greatly improve the process.	mobile working with hand-held devices in the near future.		improved hand-held devices. <ul style="list-style-type: none"> Photographing is expected to be fully operational across all parties and teams by end of 2017. 	
20.	The current contract does not really support the volume of work being passed through it. Alternative charging models are available and an immediate review has suggested that moving to a day works model with a gang with labour and plant may provide better value for money. Consideration to a new contract should also include the methods of fixing defects. The current procurement process to select a contractor to clear the backlog of orders may inform future contracting models.	Future contracting models are being considered as part of the work ongoing around review / replacement of the TC036 Minor Works Term Contract. In the interim however, the Service has procured 4 no. additional sub-contractors and have multiple teams now engaged in repairs on a combination of schedule of rates and day works (with productivity targets) basis.	Partially Complete	<ul style="list-style-type: none"> Tied in to work around replacement of the TC036 Minor Works Contract, expected to conclude work around a revised specification by the end of October 2017 with a new contract to be operational by FY18/19. 	J. Lamb
21.	Recruit a Clerk of Works and a Quantity Surveyor to support Manchester Contracts in the checking of repairs. Workload and roles and responsibilities need to be	Current working aligned with additional resource to deliver a backlog of repairs, engages 2 no. Clerks of Works and the Service is also currently seeking an additional QS.	Complete	n/a	J. Kelly

	considered in the new ways of working.				
22.	Structural changes to embed Manchester Contracts repair teams into other new Asset Management Team. All of the action points need to be considered under any structural changes to ensure the positive steps taken are continued.	Work has been ongoing since late 2016 to co-locate all inspection and repair operatives (now complete) with a view to moving towards area-based joint teams – each area with its own Manager and Supervisor accountable for performance and quality. The joint service will also be supported with more robust governance arrangements and specific additional resource to bolster such things as commercial management and administration, Health & Safety, and learning and development.	Incomplete	<ul style="list-style-type: none"> • Currently in a period of service stabilisation following the co-location of inspection and repair staff. • There remains however an aspiration to move towards more area-based joint inspection and repair teams with dedicated management / supervision and clearly defined accountability. Timescales for this to be confirmed. 	K. Dorrington
23.	New Contract for subcontractors is required which will look at partnering with contractors to provide a better more aligned approach.	As part of the Pothole & Drainage Improvement Programme, a review is ongoing around the replacement of the TC036 Minor Works Contract. In the meantime and with the support of Procurement, additional contractors have been engaged through separate contracts.	Incomplete	<ul style="list-style-type: none"> • Tied in to work around replacement of the TC036 Minor Works Contract, detailed action plan developed however given the work involved this will take some time to conclude. A revised specification will be completed by the end of October 2017 with a new 	K. Gillham

				contract to be operational by FY18/19.	
24.	Any Traffic Management required that is more extensive that can be carried out by the mobile repair team needs to be approved by Manchester Contracts.	As Manchester Contracts now have to apply and have a granted a permit for all works that require traffic management, there is a formal record on the GMRAPS system – needing MCC approval. Such work is then scheduled and monitored in accordance with the permit requirements.	Partially Complete	<ul style="list-style-type: none"> Recent testing undertaken by Audit has identified a number of occasions where formal recording of change is insufficient. These instances are being raised with supervision and inspection staff with an immediate emphasis to improve electronic recording. 	J. Kelly
25.	Highways Inspectors will highlight on works orders where extensive TM is required.	Following written instruction and briefing in Autumn 2016, all Inspectors now identify TM requirements within Symology orders as either 'basic', 'enhanced' or 'none' – and this guidance has been communicated also to the repair Supervisors / Works Coordinators. A more refined approach will be incorporated into any successor to TC036.	Incomplete	<ul style="list-style-type: none"> More formalised recording will be embedded once the Symology re-configuration work is concluded with appropriate training delivered to system users by the end of 2017. 	C. Lunn
26.	Detailed specification of works required will be captured within the works order to clarify – depth of excavation / repair material / depth of surfacing etc. A standard repair detail will also be	Current inspection arrangements identify number of defects, area and repair material. Excavation requirements and depths etc. needs more consideration in	Incomplete	Whilst work has been undertaken to progress this is tied in to work around re-configuration of Symology data capture system and replacement of the TC036 Minor Works	J. Kelly

	passed to subcontractors and Manchester Contracts.	the context of any replacement of TC036.		Contract which are incomplete - both expected to conclude towards the end of 2017.	
27.	Manchester Contractors have a supervisor in place undertaking checking and training of the in-house operational teams. Additional information needs to be recorded. Additional quality checks and inspections of the in-house teams need to be put into place.	Manchester Contracts now have appropriate resource and procedures in-place for commercial checking of all invoices; for quality checking of all repairs; and work is ongoing around improving Health & Safety compliance, training and daily checking.	Partially Complete	<ul style="list-style-type: none"> Independent review of ManCon Health & Safety ongoing and process will report findings, including gaps and suggested priorities, by September 2017. Prioritised training delivery programme ongoing providing operatives with required training. 	J. Kelly
28.	Clear Change Control process implemented using Symology to manage any 'growth' deemed necessary. This needs to be considered by the Symology workstream.	Change in scope is now being more robustly managed – and has been sufficient to substantially eliminate any financial growth. However, a lot of change management records remain outside of Symology and more work is needed to rectify this through a fully embedded system.	Partially Complete	<ul style="list-style-type: none"> Tied in to work around re-configuration of Symology data capture system and replacement of the TC036 Minor Works Contract – the former expected to conclude by end of 2017; the latter expected to be operational by FY18/19. 	C. Lunn
29.	Define and agree the definition of a quality repair.	This has been agreed in accordance with specification of the current TC036 Minor Works Contract and supports all quality checking and commercial approvals. A	Complete	n/a	C. Lunn J. Kelly

		quality repair is defined as edges being squared and sawn cut; compacted and levelled; use of like-for-like materials; and edges being sealed. Both inspection and repair teams understand the criteria and work to the same benchmark when undertaking quality checks.			
30	Missed SLA's	<i>A backlog of uncompleted work, issued to the sub-contractor since September 2016 has developed. As a result, the sub-contractor is currently failing to meet the majority of target SLA's</i>	Partially Complete	<p>Several key items are relevant and work is ongoing as follows:</p> <p>4) Manchester Contracts have procured additional resource capacity – now with multiple external providers to reduce backlog of work, including re-focus on clearing those within SLA.</p> <p>5) An operational management team has been established and meets weekly to track productivity and performance which has improved significantly since monitoring began.</p> <p>The Pothole & Drainage Improvement Programme</p>	J Lamb

				work is reviewing the Inspection Code of Practice from a risk perspective and this will reduce the future SLA burden on the Council with more prioritised and realistic repair timeframes.	
31	Returned Incomplete Orders	<i>Orders that the sub-contractor has not been able to complete are returned to Manchester Contracts. However, there is no robust process for how these orders are resolved and tracked</i>	Partially Complete	Better specification and definition at source of inspection is helping to reduce the volume of Works Orders returned incomplete. This is being further bolstered by the development of more robust processes around the identification and prior agreement of appropriate working arrangements and requirements between ManCon Supervisors / Works Co-ordinators and their Contractor counterparts. More work is still to be done around the formal recording of any agreements made to ensure clear accountability and appropriate audit trail and this is being picked-up as part of the P&DI Symology project workstream.	J Kelly

32	Open Orders	<i>The sub-contractors have unpaid orders for which the works have been completed.</i>	Complete	The ManCon Commercial Team now have a robust mechanism in-place to validate all incoming applications for payment and this is informed by photographic review of all repairs undertaken with follow-up site checks by a Clerk of Works across a sample of items before final payment is approved. Any items where quality is identified as sub-standard and/or where remediation remains necessary are returned to the sub-contractor without payment until evidence is provided of satisfactory completion.	J Kelly
33	In-House Team	<i>Sufficient information is not being produced to enable effective performance management of the in-house team and comparison of productivity with the sub-contractor.</i>	Partially Complete	As evidenced herein, improved operational management and weekly tracking is now being used to more effectively direct and monitor performance of in-house workflow, quality and productivity between and relative to sub-contractors. Some early work has been undertaken by the Manchester Contracts	J Lamb

				<p>management team around the establishment of a set of appropriate Standard Minute Values (SMV's, employed by other local authorities elsewhere) to benchmark and provide an effective productivity and performance management tool for team outputs – to be monitored daily, reviewed weekly and acted upon monthly. A sample of typical outputs has been measured recently and the next stage will require senior management to agree the principles, justification and benefits for employing such an SMV system.</p>	
34	Highways Inspectors	<p><i>Potential improvements could be made in ensuring consistent and quality orders from Highways Inspectors</i></p>	Partially Complete	<p>A number of key changes have been introduced since August 2016 to enhance the robustness of inspections. These include a return to marking-out of defects; better specification of repair area against TC036 payment schedules; and early definition of potential Traffic Management requirements to assist works allocation and programming. The Service is</p>	C Lunn

				also working currently towards the formalised use of mobile hand-held devices to record live the outcome of safety inspections – this will enhance accuracy of repair specification at source and will also provide photographic evidence of the marked defect to improve workflow and provide transparency in the end-to-end inspection, repair and payment process.	
35	Traffic Management	<i>Clarity is required over responsibility for identification and type of Traffic Management and how both this and Restricted Working are captured on work orders.</i>	Partially Complete	Since Autumn 2016, the Inspectors have been formally providing an early judgement identification on potential traffic management requirements to assist the Contractor’s coordination of work activity – and to promote more efficient and effective working. In addition, future operational arrangements are being considered and developed further under the Pothole & Drainage Improvement Programme ongoing, particularly the Symology and TC036 Renewal project workstreams	K Gillham

36	Capacity of Individuals	<i>Further work is required in determining officer priorities and implementation of effective and efficient processes. This will outline the requirement for further resourcing.</i>	Partially Complete	Work ongoing over a number of recent months has sought to enhance how the service delivers its inspection and repair function. This has included recent co-location of in-house inspection and repair staff to reduce some barriers and historic inefficiency around ensuring and delivering a quality repair successfully within SLA. This has been supported with the identification and progression of recruitment to key operational management and business support roles to provide appropriate capacity, greater accountability and resilience that will bolster service continuity and reduce any potential single points of failure.	K Dorrington
37	Working Outside of Symology	<i>There is a project considering how Symology is used and potential changes to methods of working. This should help address the additional areas identified (i.e. Returned incomplete orders, open orders and monitoring Missed SLAs)</i>	Partially Complete	The Service is continuing significant work with the Symology service provider and internally with system users to better configure and more accurately manage work progress and report outcomes. This work is being driven forward through the	C Lunn

				<p>Pothole & Drainage Improvement Programme 'Symology Workstream' and once concluded will provide a more robust platform for the accurate management of operational, commercial and quality aspects of highway repairs. Bolstered by much improved process / procedures with more clearly defined ownership and accountability, the service continues in the meantime to manage some of its delivery outside of Symology (for example, recording the sample checking around the quality of inspections and repairs) but this is only as an interim measure pending the refinement and embedding of an upgraded Symology system.</p>	
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