

**Manchester City Council
Report for Information**

Report to: Audit Committee – 6 October 2016
Subject: Response to Highway Reactive Maintenance Review
Report of: Director of Highways

Summary:

This report responds to comments made in an Internal Audit Report into Highways and Manchester Contracts that investigated Highways Reactive Maintenance processes and procedures.

Wards affected:

All

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Background documents (available for public inspection).

None

1.0 Background

- 1.1 The Highways Department were very aware that as a result of many years of under investment in the highway asset, the amount of repair work being undertaken and subsequently the value of works being passed to sub-contractors for pot-hole repairs was increasing exponentially. It was clear that it had become impossible to control and manage this volume of work without a major restructure of the process and management arrangements. During 2016 a review was commissioned involving Council staff and support from specialist external consultants to investigate the way the pothole and drainage repair service is undertaken. The review looked at all aspects of the service, from investigation of repairs through to the way the repairs are undertaken on site and customers are updated.
- 1.2 There is an on-going issue for the repair teams in attempting to balance competing demands of repairing potholes quickly and to an agreed quality (in line with our SLA's which allows us to defend accident claims) and restricting the quantity and volume of works to manage within a given budget.
- 1.3 The Highways department identified a number of areas where improvements were required in pothole repairs and it was clear that due to the large increase in volume of highway repairs and the greater reliance upon sub-contractors that a number of improvements were urgently required to deliver a fit for purpose and cost-efficient service. The Council Audit team were asked to support the review and were to carry out an internal review on the way the service manages repairs that are passed to sub-contractors and how this work is managed.
- 1.4 The Audit Report identified a series of problems in processes and management systems across the Reactive Maintenance and Repair Service and recommended that significant changes are required to ensure the ongoing effective delivery and management of this part of the service
- 1.5 The Highways department supports the findings of the reports and the work of the Audit Team. We recognise the issues raised and the challenges faced and have identified a number of actions, recommendations and other measures aimed at improving the management accountability and delivery of the service. A number of changes have already been made to ensure that sub-contractors works are better managed and audited and further changes are underway.

2.0 Governance

- 2.1 It has previously been recognised that strong and effective leadership is required to deliver the necessary improvements to the Highway Service. To achieve this all Highways Services (including Manchester Contracts) were recently brought under the common management of the new Director of Highways, within the Corporate Core, and reporting directly to the Chief Executive as detailed in a report to Personnel Committee on 10 May 2016. The previous management arrangements operated as a client and commissioning role, and whilst they successfully delivered programmes of

work, it is considered that the focus going forward must be to provide the best possible service with an agreed budget and resource allocation to respond to immediate, short term and long term asset management priorities.

- 2.2 An updated report was presented to the Personnel Committee on 28 July which built on the recommendations of the previous report and set out the future strategic direction of the Highways Directorate. The new structure brings together all asset management functions for the first time, meaning the inspection and delivery of reactive maintenance will be carried out within the same team in the future. This will create a closer working relationship between the Highway Inspectors and Manchester Contracts (and their sub-contractors) and will help to ensure better value for money, greater accountability, more customer focus and that maintenance targets are delivered in line with agreed timescales.
- 2.3 Whilst the high-level structure is now in place, the overall structure is still under development and will come in to place in 2017. This will ensure that the necessary skills, resources, contracts, governance and processes are in place to deliver the recommended improvements.

3.0 Highways Reactive Maintenance Improvement programme

- 3.1 The Pothole and Drainage Report made a total of 20 recommendations across 5 work streams aimed at improving service delivery, accountability, performance, and reducing costs. Some of the changes are already in place, and work is underway to implement the other changes. A Highways Asset Management project has been established which will report into the Highways Strategic Board, chaired by the Chief Executive. Additional staff have recruited to support this project and provide greater scrutiny and checking of sub-contractor works. The 5 work streams are listed below:

- Claims
- Inspections
- Symology (the highways inspection system)
- SLA Failures
- Drainage and Gullies

A list of the recommendations from the pothole and drainage report is provided in Appendix A.

- 3.2 Additionally and in response to the Audit findings a Management Action Plan was developed aimed at addressing the issues identified. Some of the actions identified in the Management Action Plan are already in place, and the others are currently being developed through the new Asset Management Board.
- 3.3 The Management Action Plan is provided in Appendix B, together with progress to date and timescales for implementation of other recommendations.

Key recommendations from the Management Action Plan that have already been introduced are:

- Greater scrutiny of sub-contractor invoices;
- Rejection of any invoices where “growth” is claimed unless previously agreed by the inspector;
- Order works in a more cost efficient manner;
- Highways inspectors spray areas for repair so they be easily identified by the works gangs;
- Manchester Contracts staff checking a sample of sub-contractors works and an additional Clerk of Works and Quantity Surveyor have been appointed;
- Neighbourhood Managers carry out checks on a sample of completed works and monitor on a recently developed spreadsheet;
- The sub-contractor can only claim for “enhanced” Traffic Management with prior agreement of Manchester Contracts;
- Neighbourhood Managers are performing post-inspection checks of the information recorded by the Highways Inspectors;
- The sub-contractor and Manchester Contracts are taking a photograph immediately before and after each repair so the works can be checked before any payment is made. This means that all works can be checked rather than just a random sample. Please see attached photo example in Appendix C.

3.4 Work relating to the recommendations of the Pothole and Drainage review is ongoing, and progress is summarised below.

3.4.1 Claims

The report recommends regular meetings between the Highways Inspectors and better monitoring of the reasons and locations for claims.

Meetings have been established between the two teams to promote better knowledge sharing with the aim of reducing the number of successful claims.

A long-term aim is to log details of claims on the same Symology GiS database that is used to record highway inspections. This will help to inform future inspection regimes and the development of future years’ highways capital programmes.

3.4.2 Inspections

The restructure of the highways service discussed previously is included in this work stream. This includes the integration of the highways inspection and maintenance teams and will ensure the future structure incorporates sufficient supervision and management staff. The service redesign is currently under development and will take account of these recommendations.

A longer term project would see highway condition data used to develop an improved inspection regime that is cognisant of the highway condition whilst

adhering to industry best practice with respect to the frequency of inspections. This will be a significant piece of work to merge databases and then ultimately develop new inspection routes. It is anticipated this will take 12-18 months to implement.

3.4.3 Symology

Symology is the software used by Highway Inspectors to provide details of their inspection routes, to log defects and raise works tickets to repair defects. A number of improvements have been made with immediate effect to improve the quality of information provided:

- Highways inspectors have been given additional training regarding the logging of defects;
- Managers are carrying out post-inspection checks to ensure the inspections provide sufficient detail to allow the works to be carried out accurately;
- Defects are being marked on the carriageway / footway so they can be easily identified.

Whilst these measures will provide some short-term improvements, some more significant improvements are required to develop Symology so that it can provide a more robust means of monitoring and managing the whole defect process. This will need to be done in collaboration with Symology over the next 12-18 months.

3.4.4 Service Level Agreement (SLA) Failures

Contract monitoring and quality control measures have been introduced by Manchester Contracts and Citywide Highways. Manchester Contracts, their sub-contractors and their supervisors have been given strict instructions not to carry out any additional works without prior authorisation from the Highway Inspection team.

In addition, regular inspections of a sample of repairs is being carried out by managers in both departments to ensure what is being claimed has been completed and the quality is to an agreed standard. Previously no post-works checks were carried out by Manchester City Council. Defects not repaired to the agreed standard are now returned to the contractor (or their sub-contractor) to repair.

The sub-contractor is taking photographs of repairs immediately before and after they have been made so that a record of the repair is held. Manchester Contracts are also doing this, and we are investigating ways for the Highways Inspectors to also complete this and 'close the loop'.

Longer term the report recommends an option appraisal is carried out to determine the most appropriate delivery method for the reactive maintenance service. This will require the interrogation of all data held in relation to inspections and condition surveys and then the drafting of a report that

considers options for the future delivery of the reactive maintenance service, making appropriate recommendations for consideration. It is anticipated this will be done over 6-9 months.

3.4.5 Drainage and gullies

The current problems with drainage are a consequence of a significant reduction in investment and the resources deployed in this area due to the need to reduce costs and make saving. Where previously there were 6 gully cleansing machines there are now only 2, meaning that only approximately 20% of the total gullies across Manchester are included in the cyclical cleansing programme.

It is worth highlighting that going forward we expect that even drains that are fully functional may have some capacity issues due to the unprecedented but now regular high rainfall events where current drainage and sewer capacity cannot cope with the amount of surface water run-off.

In accordance with best practice it is recommended that all gullies are cleansed at least every 18 months. To achieve this more gully machines will be required.

Consideration will be given to managing the cyclic cleansing process through Symology so that an accurate picture of the state of the network can be built up. This will help to inform future cleansing route strategies.

A study is required to determine the most effective delivery method for providing this cleansing strategy. The results of the study will be reported to the appropriate committee with recommendation to deliver the improved service, and the estimated cost of doing this. It is anticipated this study will be completed within the next 6-9 months. However early work suggests that at least 4 gully machines are required to move from a reactive to a programmed service.

4.0 Conclusions

- 4.1 The Highways Services welcomes the findings of the Internal Audit Report and recognises the challenges required to bring about a step change in the way services are managed and delivered and provide a manner that is transparent, accountable and robust.
- 4.2 The Highways Service is committed to working with partners and Internal Audit to deliver the recommendations of the various reports, and recognises the challenges in bringing about these changes.
- 4.3 It is recommended that progress of the Highways Service improvement programme is reported to the appropriate Committee in 6 months when improvements will have been made following the implementation of the new working practices.

Appendix A

Recommendations	
Claims	
1	Regular meetings are held between the relevant claims and inspections staff to ensure a fuller understanding of the issues and the decision made in relation to claims.
2	A mapping exercise is undertaken, and regularly updated, using Symology to identify any hotspots in relation to claims
Inspections	
3	The structure of the team is reviewed to incorporate sufficient supervision and management to develop and implement a performance management framework for the inspectors.
4	Route optimisation is undertaken with respect to the condition survey data to try and smooth the spikes in work orders.
5	A project is undertaken to appraise the merits, and costs, of implementing a risk based approach to inspections which will complement the national guidance.
6	Integration of the maintenance and inspection teams is undertaken following the reorganisation of the Highways service.
Symology	
7	A visit is undertaken to Conwy Council to assess their implementation of the Symology system to inform our development of the system.
8	A schedule of rates is incorporated into the system to provide visibility around committed expenditure and enable the forecasting of reactive maintenance expenditure.
9	The devices used by the inspectors should be reviewed, in conjunction with ICT, based on the latest technology to ensure they are provided with equipment that is fit for purpose and ensures that Symology can be used consistently in the field.
10	Photographs of defects should be recorded on the system where appropriate.
11	Manchester Contracts fully implement the system to support both work scheduling and the live recording of completed jobs.
12	Recording of jobs is reviewed to ensure clarity to the reactive maintenance team and to enable the accurate reporting of the number of defects.
13	The methodology of how jobs which will require both a temporary and permanent repair due to the type of defect, the location, or both, is developed that ensures progress is accurately reflected in the system.
14	Further work is undertaken to determine how the data within the Gaist condition survey can be linked to the information within Symology.
SLA Failures	
15	An ongoing analysis of works missing the service level agreement needs to be completed following the implementation of a number of the other recommendations within above.
Rectification of Defects	
16	Contract monitoring and quality assurance checks are implemented immediately in respect of all work undertaken by sub contractors. This could include:- <ul style="list-style-type: none"> • The requirement to provide sufficient photographic evidence to support all work claimed in respect of repairing defects is added to the framework contract.

	<p>In the event it is not possible to make this amendment to the current contractual arrangements, then:-</p> <ul style="list-style-type: none"> Resources are diverted to the on site management and checking of all sub contractors work at a level sufficient to provide assurance that only work that is delivered is paid for.
17	An option appraisal is undertaken of the long term approach to reactive maintenance to include the scope of works to be delivered in-house, the potential for collaboration with other Greater Manchester authorities, and, the potential to appoint an external contractor.
<i>Drainage and gullies</i>	
18	A cyclical cleansing approach is adopted with a minimum frequency of 18 months for every gully.
19	An options appraisal is completed considering the cost of the previous recommendation and the most effective delivery method to both introduce this frequency of cleansing and address the current backlog of work.
20	Symology is used to record data in respect of cleansing to build up a picture of the condition of the network and to optimise the cyclical cleansing regime in future.

Appendix B

Item	Action	Status	Priority
1	Invoices from contractors / subcontractors where there is a discrepancy between works ordered and works claimed will be scrutinised and agreed before payment is made	In place	High
2	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	In place	High
3	Contractors / subcontractors should be contacted and formally brought in to discuss invoices where there are potential discrepancies.	6 weeks	High
4	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	In place	High
5	Managers will now accompany each inspector on-site over the coming weeks to ensure that marking out is being undertaken in accordance (and consistently) 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	2 weeks	High
6	Highways Inspectors to spray paint areas for repair	In place	High
7	Manchester Contracts staff to undertake checking on sub-contractors work (site visit) to review both quality and the amount of work claimed and completed (until Quantity Surveyors and Clerks of Works are appointed)	In place	High
8	A monitoring template has now 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.	In place	High
9	Inspectors photographing each defect where an order is being raised and the contractor taking before and after photographs to support the checking process.	2 to 3 months	Medium
10	Review of alternative charging / contract models that may provide better value for money	1 month	Medium
11	Recruit a Clerk of Works and a Quantity Surveyor to support Manchester Contracts in the checking of repairs	1 month	Medium
12	Structural changes to embed Manchester Contracts repair teams into other new Asset Management Team	9 months	Medium
13	New Contract for sub-contractors is required – which will look at partnering with contractors to provide a better more aligned approach	9 months	Medium
14a	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	In place	High
14b	Highways Inspectors will highlight on works orders where extensive Traffic Management is required	1 month	Medium

Item	Action	Status	Priority
15	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 passed to subcontractors and Manchester Contracts	1 month	High
16	Manchester Contracts have a supervisor in place undertaking checking and training of the in-house operational teams	In place	Medium
17	Clear Change Control process implemented using Symology to manage any 'growth' that may be deemed necessary	3 months	High

Appendix C



Before



After



Before



After