



FINAL INTERNAL AUDIT REPORT

ENVIRONMENT & COMMUNITY SERVICES DEPARTMENT

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS) AUDIT

Issued to: Garry Warner, Assistant Director (Highways)
Colin Brand, Director of Environment and Public Protection
Sarah Foster, Head of Performance Management and Business Support

Prepared by: Principal Auditor

Reviewed by: Head of Audit & Assurance

Date of Issue: 04 October 2019

Report No.: ECS/2/2018/AU

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

INTRODUCTION

1. This report sets out the results of our audit of the Highways Maintenance (Major works). The audit was carried out as part of the work specified in the 2018-19 Internal Audit Plan agreed by the Section 151 Officer and Audit Sub-Committee. The controls we expect to see in place are designed to minimise the Council's exposure to a range of risks. Weaknesses in controls that have been highlighted will increase the associated risks and should therefore be addressed by management.
2. In September 2016, the Executive approved capital funding of £11.8m for investment in planned highways maintenance. Members were informed that the carriageways and footways were identified for planned work using a prioritisation system based on highways condition, but also taking account of factors such as use, location on the network and frequency of reactive maintenance. Those roads with the highest overall priority were put forward for planned works programmes.
3. LBB's major highways contractor is responsible for delivering the planned highways maintenance programme. This contract started on 01/07/2018. There is no fixed fee for the major works contract and payments are made for agreed completed works.
4. Projects from the Members agreed planned works programmes are raised as jobs on the Confirm system by Highways Inspectors for action by the contractor. The contractor updates the Confirm system on completion. 100% of the major works completed are inspected before payment is made.
5. We would like to thank all staff contacted during this review for their help and co-operation.

AUDIT SCOPE

6. The original scope of the audit was outlined in the Terms of Reference issued on 7 December 2018. The objective of the review was to ensure that a risk based approach was in place for the maintenance of the LBB's highways infrastructure including setting levels of service, inspections and their outcome, resilience, priorities and programmes. The contract arrangements and contract payments were also reviewed to ensure compliance with the Contract Procedure Rules and Financial Regulations. Controls to mitigate the following key risks were reviewed:
 - Failure to manage highways leading to deteriorating conditions
 - Increased repair costs, insurance claims (trips, falls and road traffic accidents) and reputational damage
 - Value for money may not be achieved within the procurement process

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

- Established procedures are not complied with

AUDIT OPINION

7. Our overall audit opinion, number and rating of recommendations are as follows.

AUDIT OPINION	
Limited Assurance	(Definitions of the audit assurance level and recommendation ratings can be found in Appendix B)

Number of recommendations by risk rating		
Priority 1	Priority 2	Priority 3
3	2	0

SUMMARY OF FINDINGS

Recommendation of schemes for the Highways Investment Project

8. The Highways Investment Project was originally approved by the Executive in September 2016.

Phase one of the project was considered by Environment Services PDS (ES PDS) on 24th January 2017, phase two on 12th July 2017, phase three on 5th October 2017, phase four on 30th January 2018, phase five on 15th March 2018 and the final phase six on 18th June 2019.

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

9. At each of these meetings Members were informed that carriageways and footways for the proposed phase have been identified for planned work using a prioritisation system.
10. Management advised that in respect of the selection of schemes for the Highway Investment Project, a series of assessments were undertaken before recommendations were made to the ES PDS. The network survey was completed by external consultants to identify the maintenance need of all sections of carriageway, each of which is up to 500m long. Reports from Highway Inspectors, Councillors or members of the public are considered to establish requirement for maintenance. Once the full list for maintenance has been compiled from the above information, further surveys are undertaken by Council officers to identify the need for maintenance in the short-term, the extent of the works and likely cost. This data is used to prepare each phase of the investment project which is circulated to all Ward Councillors for comment before being submitted to the ES PDS committee for scrutiny, and finally the Portfolio Holder for approval. Management stated that officers are not the decision makers for these projects.
11. A sample of 8 schemes from the Highways Investment Project was randomly selected by Internal Audit (4 footways and 4 carriageways) to review the process followed by management before recommending the schemes to ES PDS committee for decision making.
12. Four of four carriageways were found to be in 'as new' condition or 'not requiring preventative maintenance for 5 years' by the external consultants (survey undertaken October 2015 to February 2016). On enquiry management advised that while the overall condition of carriageway may have been recorded as 'up to standard' or 'as new', reports from Highway Inspectors, Councillors or members of the public have identified areas of carriageway that require maintenance. Management were asked to provide reports from Highway Inspectors, Councillors or members of the public as evidence and issues arising were as follows:
 - No documentary evidence was available to confirm the reasons for recommendation of 1 of 4 carriageways (Hayes Lane). The actual spend on resurfacing this carriageway was £160,079.
 - An email from the former Highways Inspector dated 04/03/2018 stating that he has used the data from the survey undertaken by the contractor and Inspectors' data and Members comments to select the carriageways was provided as evidence for 3 of 4 carriageways. The information that the former Highways Inspector referred to in his email (survey data from contractor, inspector data and Members comments) and relied on to compile the

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

list of schemes was not available. The actual spend on resurfacing these carriageways was £64,644 (Heathfield Road), £57,589 (Cudham Lane North) and £23,610 (Darrick Wood Road)

13. Therefore, the rationale for recommendation of the 4/4 sampled carriageways for Highways Investment Project which cost £305,921 in total could not be satisfactorily evidenced.

Management of delivery of agreed Highways investment schemes

14. Schemes from the Members agreed Highways Investment Project are raised as jobs on the Confirm system by the Highways Contract Manager following the site visit by the Highways Inspector. It was noted that there are no written procedure notes for agreeing work to be undertaken, raising and varying orders, inspections and rectification of defects.
15. A sample of 4 footway and 4 carriageway schemes was selected from the report of paid invoices for the period June 2018 to April 2019 to establish the current working practices. The following were noted:

Carriageway schemes

- No formal process is in place to establish the work to be undertaken as part of agreed schemes. The order is not supported by a formal record of the site visit to establish measurement of site and description of work.
- Where the order amount differed from the invoiced amount, no records of agreed variation were found.
- Insufficient evidence is retained for the monitoring undertaken by the Highways Inspectors.
- 4/4 re-measurement sheets for carriageway inspections which support payment of works were not dated.
- The inspections are not diarised and are not supported by photographs.
- The Highways Inspectors do not maintain a written record of defects and their rectification.

Footway Schemes

- No formal process is in place to establish the work to be undertaken as part of agreed schemes. The order is not supported by any formal record of the site visit to establish measurement of site and description of work.
- Where the order amount differed from the invoiced amount, no records of agreement of variation were found.

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

Reconstruction of vehicle crossovers

16. Before commencement of a major footways scheme, residents are notified of the timetable of the proposed footways work and are offered the opportunity to have their vehicle crossover reconstructed and/or widened at a reduced rate. It was noted that there is no documented procedure to manage requests for reconstruction/ widening of crossovers. Internal Audit was informed that these requests are dealt with at short notice and in some instances the work is agreed verbally by the resident with the Highways Inspector.
17. For one of the footways scheme in the sample (Lake Avenue footways scheme):
 - Five requests for the vehicle crossings to be reconstructed and/or widened were received as per the ad hoc records kept by the Highways Inspector.
 - From the information obtained from the cashier, payments for only 3 crossover requests could be evidenced.
 - No documents were available to establish if the prices charged were correct.
 - No reconciliation is undertaken to ascertain the number of crossovers actually reconstructed or widened by the contractor and the income received.

Segregation of duties

18. For the payment process it was noted that the agreement of work to be undertaken, interim and final inspection of work completed and agreement of payment is undertaken by the same Highways Inspector. The inspections records are not maintained and before and after pictures are not taken in all instances. The Highways Contracts Manager advised that he periodically undertakes joint inspections with the Highways Inspector. However, this could not be confirmed as no records of these monitoring visits are retained by the Highways Contracts Manager.

Training

19. On enquiry the Assistant Director (Highways) advised that training is provided to staff involved in contract management to increase an understanding of the contract. Some team managers have attended contract management training; however other LBB staff working on the contract may need to be trained in contract management.

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS / MANAGEMENT ACTION PLAN

20. The findings of this report, together with an assessment of the risk associated with any control weaknesses identified, are detailed in Appendix A. Any recommendations to management are raised and prioritised at Appendix B.

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
1	<p>Recommendation of schemes for the Highways Investment Project</p> <p>The Highways Investment Project was originally approved by the Executive in September 2016.</p> <p>Phase one of the project was considered by Environment Services PDS (ES PDS) on 24th January 2017, phase two on 12th July 2017, phase three on 5th October 2017, phase four on 30th January 2018, phase five on 15th March 2018 and the final phase six on 18th June 2019.</p> <p>At each of these meetings Members were informed that carriageways and footways for the proposed phase have been identified for planned work using a prioritisation system.</p> <p>Management advised that in respect of the selection of schemes for the Highway Investment Project, a series of assessments are</p>	<p>Failure to adequately manage highways leading to deteriorating conditions</p> <p>Unnecessary expenditure on schemes that do not require it</p> <p>Members may not receive sufficient information for decision making</p>	<p>Management should ensure that:</p> <p>i) The process of recommendation of schemes for the Highways Investment Project to Environment Services PDS is evidenced as compliant to the prioritisation system agreed by the Executive.</p> <p>ii) The rationale for recommendation of the schemes for the Highways Investment Project should be documented and retained.</p> <p>iii) Summary of reasons for recommendation of schemes for Highways Investment Project should be included in the reports presented to Environment Services PDS for decision making.</p> <p style="text-align: center;">Priority 1</p>	<p>i) The procedure for selecting future planned highway maintenance schemes will continue to be compliant to the prioritisation system agreed by the Executive, but the process will be fully documented and records retained to provide transparency of decisions taken.</p> <p>ii) The results of all surveys and inspections will be retained centrally to show justification for recommendations to Councillors.</p> <p>iii) The reasons for recommendation of future planning Highways maintenance projects will be included in reports to ES PDS for decision making.</p>	<p>November 2019 - AD (Highways)</p> <p>Immediate - AD (Highways)</p> <p>Immediate - AD (Highways)</p>

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>undertaken before recommendations were made to the ES PDS. The network survey was completed by external consultants to identify the maintenance need of all sections of carriageway, each of which is up to 500m long. Reports from Highway Inspectors, Councillors or members of the public are considered to establish requirement for maintenance.</p> <p>Once the full list for maintenance has been compiled from the above information, further surveys are undertaken by Council officers to identify the need for maintenance in the short-term, the extent of the works and likely cost. This data is used to prepare each phase of the investment project which is circulated to all Ward Councillors for comment before being submitted to the ES PDS committee for scrutiny, and finally the Portfolio Holder for approval. Management stated that officers</p>				

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>are not the decision makers for these projects.</p> <p>A sample of 8 schemes from the Highways Investment Project was randomly selected by Internal Audit (4 footways and 4 carriageways) to review the process followed by management before recommending the schemes to ES PDS committee for decision making. The following were noted:</p> <p>4 of 4 carriageways were found to be in 'as new' condition or 'not requiring preventative maintenance for 5 years' by the external consultants (survey undertaken October 2015 to February 2016). On enquiry management advised that while the overall condition of carriageway may have been recorded as 'up to standard' or 'as new', reports from Highway Inspectors, Councillors or members of the public have identified areas of carriageway that require maintenance. Management were</p>				

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>asked to provide reports from Highway Inspectors, Councillors or members of the public as evidence and</p> <ul style="list-style-type: none"> ○ No documentary evidence was available to confirm the reasons for recommendation of 1 of 4 carriageways (Hayes Lane). The actual spend on resurfacing this carriageway was £160,079. ○ An email from former Highways Inspector dated 04/03/2018 stating that he has used the data from the survey undertaken by the contractor and Inspectors data and members comments to select the carriageways was provided as evidence for 3 of 4 carriageways. The information that the former Highways Inspector referred to in his email (survey data 				

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>from contractor, inspector data and members comments) and relied on to compile the list of schemes was not available. The actual spend on resurfacing these carriageways was £64,644 (Heathfield Road), £57,589 (Cudham Lane North) and £23,610 (Darrick Wood Road)</p> <p>Therefore, the rationale for recommendation of the 4/4 sampled carriageways for Highways Investment Project which costed £305,921 in total could not be satisfactorily evidenced.</p>				
2	<p>Management of delivery of agreed Highways investment schemes</p> <p>Schemes from the Members agreed Highways Investment Project are raised as jobs on the Confirm system by the Highways Contract Manager following the site</p>	<p>Loss to the Authority due to poor management of contracts</p>	<p>Management should ensure that for both carriageways and footways schemes:</p> <p>(i) Written procedure notes are produced for agreeing work to be undertaken, raising and varying orders, inspections and rectification of defects.</p>	<p>(i) Procedure notes to be prepared to record all decisions taken by Officers once schemes have been approved by</p>	<p>November 2019 - AD (Highways)</p>

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>visit by the Highways Inspector. It was noted that there are no written procedure notes for agreeing work to be undertaken, raising and varying orders, inspections and rectification of defects.</p> <p>A sample of 4 footway and 4 carriageway schemes was selected from the report of paid invoices for the period June 2018 to April 2019 to establish the current working practices. The following were noted:</p> <p>Carriageway schemes</p> <ul style="list-style-type: none"> No formal process is in place to establish the work to be undertaken as part of agreed schemes. The order is not supported by a formal record of the site visit to establish measurement of site and description of work. Where the order amount differed from the invoiced amount, no records of agreed variation were found. 		<p>(ii) Orders are supported by formal record of the site visit and agreement of work to be undertaken.</p> <p>(iii) Any changes to the order should be supported by records of agreed variation.</p> <p>(iv) Evidence should be retained for the inspection visits undertaken by the Highways Inspectors. The inspections should be diarised and supported by photographs. Re-measurement sheets for carriageway inspections should be dated and completed in full.</p> <p>(v) Defects identified should be noted and remedial action by the contractor should be verified before payment of invoice.</p> <p style="text-align: center;">Priority 1</p>	<p>Councillors.</p> <p>(ii) Formal site records to be retained centrally rather than Officers diaries to record site visits and instructions to contractor</p> <p>(iii) Changes to orders will continue to be recorded on re-measurement sheets, but supported by records as (ii)</p> <p>(iv) As (ii). Re-measurement sheets will continue to be signed and dated by the supervising officer and Contracts Manager, with name and signatures before payments are processed.</p> <p>(v) Defects identified during construction and agreed remedial actions will be recorded formally. Records of defects identified during the warranty inspection will be recorded centrally</p>	<p>Immediate - AD (Highways)</p> <p>Immediate - AD (Highways)</p> <p>Immediate - AD (Highways)</p> <p>Immediate - AD (Highways)</p>

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<ul style="list-style-type: none"> • Insufficient evidence is retained for the monitoring undertaken by the Highways Inspectors. • 4/4 re-measurement sheets for carriageway inspections which support payment of works were not dated. • The inspections are not diarised and are not supported by photographs. • The Highways Inspectors do not maintain a written record of defects and their rectification. <p>Footway Schemes</p> <ul style="list-style-type: none"> • No formal process is in place to establish the work to be undertaken as part of agreed schemes. The order is not supported by any formal record of the site visit to establish measurement of site and description of work. • Where the order amount 			rather than Officers diaries, including null returns when no defects found.	

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	differed from the invoiced amount, no records of agreement of variation were found.				
3	<p>Reconstruction of vehicle crossovers</p> <p>Before commencement of a major footways scheme, residents are notified of the timetable of the proposed footways work and are offered the opportunity to have their vehicle crossing reconstructed and/or widened at a reduced rate. It was noted that there is no documented procedure to manage requests for reconstruction/ widening of crossovers. Internal Audit was informed that these requests are dealt with at short notice and in some instances the work is agreed verbally by the resident with the Highways Inspector.</p> <p>For one of the footways scheme in the sample (Lake Avenue footways</p>	<p>Loss due to poor management of contracts.</p> <p>Potential for fraud to occur and remain undetected.</p>	<p>Management should ensure that:</p> <p>(i) Written procedure notes are produced to manage requests for reconstruction/ widening of crossovers as part of footways schemes.</p> <p>(ii) All vehicle crossovers reconstructed and/or widened should be supported by</p> <ul style="list-style-type: none"> • Application/Request form • Site measurement by the Highways Inspector and the agreed price • Date of instructions to the contractor (This should postdate the receipt of payment) • Inspection record following completion. <p>(iii) The number of crossovers</p>	<p>(i) Written procedure notes will be produced to manage requests for reconstruction/ widening of crossovers as part of footways schemes.</p> <p>(ii) Full records to be retained for all applications, including before and after photographs. Formal instructions to be issued to the contractor following receipt of payment, although works will be included in original orders and measured as part of project.</p>	<p>November 2019 - AD (Highways)</p> <p>Immediate - AD (Highways)</p>

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>scheme):</p> <ul style="list-style-type: none"> • Five requests for the vehicle crossings to be reconstructed and/or widened were received as per the ad hoc records kept by the Highways Inspector. • From the information obtained from the cashier, payments for only 3 crossover requests could be evidenced. • No documents were available to establish if the prices charged were correct. • No reconciliation is undertaken to ascertain the number of crossovers actually reconstructed or widened by the contractor and the income received. 		<p>actually reconstructed/widened and invoiced by the contractor as part of the individual footways schemes should be reconciled to the income received.</p> <p style="text-align: center;">Priority 1</p>	<p>(iii) Full details of crossovers reconstructed/widened as part of the individual footways schemes will continue to be reconciled with the income received and contractors invoice, although details to be recorded centrally.</p>	<p>Immediate - AD (Highways)</p>
4	<p>Segregation of duties</p> <p>For the payment process it was noted that the agreement of work to be undertaken, interim and final</p>	<p>Lack of segregation of duties may lead to fraud or error being undetected</p>	<p>Management should ensure that</p> <p>i) The agreement of work to be undertaken, interim and final inspection of work completed and</p>	<p>(i) where site inspections and valuations are agreed by a Contract Monitoring</p>	<p>Immediate - AD (Highways)</p>

REVIEW OF HIGHWAYS MAINTENANCE (MAJOR WORKS)

DETAILED FINDINGS AND ACTION PLAN

APPENDIX A

No	Finding	Risk	Recommendation and Priority *Raised in previous Audit	Management Response	Agreed timescale and responsible manager
	<p>inspection of work completed and agreement of payment is undertaken by the same Highways Inspector. The inspections records are not maintained and before and after pictures are not taken in all instances.</p> <p>The Highways Contracts Manager advised that he periodically undertakes joint inspections with the Highways Inspector. However, this could not be confirmed as no records of these monitoring visits are retained by the Highways Contracts Manager.</p>		<p>agreement of payment for Highways projects should be undertaken by more than one officer.</p> <p>ii) All inspections and monitoring visits by Highways officers and their observations are recorded and retained.</p> <p style="text-align: center;">Priority 2</p>	<p>Officer, monthly audits will continue to be undertaken by the Contracts Manager or another responsible officer, but the results of the audit will be recorded centrally</p> <p>(ii) Formal site records to be retained centrally rather than Officers diaries to record site visits and instructions to contractor</p>	<p>Immediate - AD (Highways)</p>
5	<p>Training</p> <p>On enquiry the Assistant Director (Highways) advised that training is provided to staff involved in contract management to increase an understanding of the contract. Some team managers have attended contract management training; however other LBB staff working on the contract may need to be trained in contract management.</p>	<p>Loss due to poor management of contracts</p>	<p>Management should identify necessary training needs for contract management staff and ensure that these training needs are fulfilled. Records of training should be maintained.</p> <p style="text-align: center;">Priority 2</p>	<p>(i) the requirement for training in contract management and project management to be considered as part of personal development plans and discussed at regular appraisal meetings.</p>	<p>Immediate - AD (Highways)</p>

Assurance Level

Assurance Level	Definition
Substantial Assurance	There is a sound system of control in place to achieve the service or system objectives. Risks are being managed effectively and any issues identified are minor in nature.
Reasonable Assurance	There is generally a sound system of control in place but there are weaknesses which put some of the service or system objectives at risk. Management attention is required.
Limited Assurance	There are significant control weaknesses which put the service or system objectives at risk. If unresolved these may result in error, abuse, loss or reputational damage and therefore require urgent management attention.
No Assurance	There are major weaknesses in the control environment. The service or system is exposed to the risk of significant error, abuse, loss or reputational damage. Immediate action must be taken by management to resolve the issues identified.

Recommendation ratings

Risk rating	Definition
<div style="background-color: red; color: white; padding: 2px; display: inline-block;">Priority 1</div>	A high priority finding which indicates a fundamental weakness or failure in control which could lead to service or system objectives not being achieved. The Council is exposed to significant risk and management should address the recommendation urgently.
<div style="background-color: yellow; padding: 2px; display: inline-block;">Priority 2</div>	A medium priority finding which indicates a weakness in control that could lead to service or system objectives not being achieved. Timely management action is required to address the recommendation and mitigate the risk.
<div style="background-color: lightgreen; padding: 2px; display: inline-block;">Priority 3</div>	A low priority finding which has identified that the efficiency or effectiveness of the control environment could be improved. Management action is suggested to enhance existing controls.