

**Highways Asset Management**  
**21<sup>st</sup> October 2013**  
**(Final Report)**

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### Report Distribution – Final Report issued 21<sup>st</sup> October 2013 to:

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## Executive Summary

### Background

This review has been carried out as part of the agreed Internal Audit Plan for 2013/2014, in order to provide assurance to the Board Director Service Delivery that Highway Asset Management is being effectively performed and the Council is meeting its statutory responsibilities to maintain the highway and that the business relationship between Highways and Transport and StreetSmart Services is effective.

As a unitary authority, Swindon Borough Council is also the local Highway Authority. Under the Highways Act 1980, a Highway Authority has a statutory duty to maintain the highways within its boundaries, except for strategic routes e.g. motorways, major trunk roads, which are managed by the Highways Agency. The accepted standard for highway maintenance is set out in the “*Well-maintained Highways: Code of Practice for Highway Maintenance Management*”; although not a statutory document, it is produced<sup>1</sup> and published with the backing of central and local government. There are separate codes of practice for highways structures (e.g. bridges) and lighting.

Responsibility for highway maintenance within the borough of Swindon is split between the Highways Agency (M4 and A419), the Highways and Transport Highway Asset Team, who are responsible for strategic, long term maintenance and StreetSmart Services for routine and safety maintenance. Through Streetsmart Services, the Council currently engage Swindon Commercial Services Limited (SCS) to undertake the day to day safety and routine highway inspections and maintenance work required under the Code of Practice, to ensure the roads are safe to use in the short to medium term.

The audit focussed on highway pavement maintenance management (this includes roads, cycle ways, pavements but not traffic signals, drainage or lighting) and bridges asset management and the business relationship between Highways and Transport and StreetSmart Services, it did not cover the StreetSmart relationship with SCS. The funding of highways maintenance will be the subject of a separate audit later in 2013/14.

In July 2013 the Council agreed to transfer certain SCS operational services back to the Council, including the highways maintenance activities. In accordance with an outline plan to reintegrate SCS service to the Council, the Board Director, Service Delivery will carry out a detailed examination of the individual services provided currently by SCS to SBC. The aim of which is to streamline and integrate processes operating both within services and between client and contractor to further reduce costs. This will have a significant impact

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<sup>1</sup> UK Road Liaison Group

on Highways Asset Management. A key concern raised in this audit regarding the relationship between Highways and Transport and StreetSmart/SCS, will be addressed through the Board Director Service Delivery's review.

## Audit Opinion

The impact and materiality of Highway Asset management is considered to be **high** and combined with the auditor's opinion that **significant improvements required** in system controls, gives an overall risk rating to the Council of **"of concern"**.

## Key Messages

### Risk: Business relationship management not in place

The Asset Management Team within Highways and Transport are the overall "owners" of the Borough's highways assets i.e. roads, pavements, structures, lighting and traffic signals. They manage the assets, including most aspects of the maintenance regimes required to ensure these assets remain fit for purpose. The exception to this, is the day to day maintenance to ensure that the highways (roads/pavements, cycleways and backways) are safe and functional, and that they meet the criteria under the Code of Practice; this is undertaken by StreetSmart Services, who have contracted this out to SCS. (StreetSmart is the "collective name for services provided to make the Borough...a safer, cleaner and smarter place to live, work and visit" (SBC Website)). StreetSmart, when established, were given the responsibility for this work, however Highways and Transport, as the asset owners, have no formal business relationship with StreetSmart regarding highway matters. As the asset owners, Highways and Transport should have influence on what work is undertaken, standards of the work, qualifications for Highway Inspectors etc. through the development of an appropriate governance structure.

StreetSmart has limited resources to validate that SCS are undertaking the necessary condition surveys and performing remedial action as required and that any key performance indicators, reported by SCS, are an accurate reflection of the situation (as StreetSmart Compliance Officers also manage the waste and leisure work that SCS undertake for them).

Highways and Transport currently are given no assurances that routine, day to day management and maintenance of the highway through SCS is on-going and that it meets the "*Well-maintained Highways: Code of Practice for Highway Maintenance Management*" expectations.

With the recent decision on the future of SCS, a decision will be needed on the future approach to road maintenance and a new delivery model for day to day highways maintenance will be required.

**Risk: Asset Management**

Capital expenditure on highways and bridge maintenance is the responsibility of the Asset Management Team in Highways and Transport. Based on the prioritisation processes in place, potential schemes are worked up and a business case has to be made. The business case is subject to the “Protocol for approving capital funded schemes (excluding major bid schemes)” process. This ensures all proposed schemes are subject to robust challenge (Officers Project Board/Leads Member) and are authorised by the Lead Member and Head of Highways and Transport before being implemented.

As part of the Local Transport Plan, regular implementation plans are prepared, covering potential schemes for delivery in the short term and presented to Cabinet. The 2013/14 LTP implementation plan, including the Protocol mentioned above, went to Cabinet on 20<sup>th</sup> March 2013. The implementation plan indicates the overall budget available and lists schemes that will potentially be delivered, although this list is flexible. The schemes have, or will go through the process outlined in the Protocol.

Highways and Bridges had prioritised plans in place, which for 2013/14, were supported by business cases and were included in the Local Transport Plan Implementation Plan for 2013/14. Both areas, highways and bridges, had plans beyond the current year.

Condition surveys on highways and bridges are undertaken by external contractors. WDM Limited undertakes the highway surveys and Halcrow the bridge surveys. The condition surveys undertaken by WDM are for the long term health of a road and require the use of sophisticated electronic machines to provide data on the roads surveyed. This differs to the condition surveys performed by SCS which are more visual and are looking for immediate issues e.g. potholes, road signs being moved/obscured, which require prompt action to ensure the road is safe to use.

When condition surveys are undertaken on bridges, they result in a score out of 100. The Bridges and Structures Engineer is using the benchmark that a score of 85/100 and above is an acceptable standard. A score below 85 may require remedial action of some description, depending on the Bridges and Structures Engineer’s professional judgement. Overall the aim is to have an average score for all bridges of 85/100, although this approach is not documented or approved.

Day to day condition surveys of highways, and any resulting maintenance work is managed, on behalf of the Council, by StreetSmart Services. SCS has a contract with StreetSmart to undertake this work.

## Context

As a unitary authority, Swindon Borough Council is also the Highway Authority for the highway network that falls within the boundaries of the borough. However, this excludes roads that form part of the country's strategic network; these are the responsibility of the Highways Agency. Within the boundaries of the Borough Council the strategic routes are the M4 and the A419.

As a Highway Authority, the Council has a statutory duty under the Highway Act 1980 to maintain the highways. The standards for general maintenance are set out in the "*Well-maintained Highways: Code of Practice for Highway Maintenance Management*". Whilst not enforced by statute, it is produced by and published with the support of central and local government. There are separate codes of practice for structures/bridges and lighting.

Highway assets under management by the Council come from two sources, those transferred under the unitary transfer back in 1997 when Swindon Borough Council became a unitary authority, prior to that Swindon was part of Wiltshire, and through adoptions of new roads and associated assets since 1997. The most common route for adoption is through Section 38 of the Highway Act 1980.

Highway (roads, pavements, cycleways etc.) asset maintenance in Swindon is delivered through the Highways Asset Management Team (strategic maintenance) and StreetSmart/Swindon Commercial Services (day to day, safety and routine maintenance ensuring the roads are safe in the short term). There are other models used by other Councils, including contracting out maintenance services to civil engineering firms (Southampton City Council have a contract with Balfour Beatty) or entering into a Public Finance Initiative (Isle of Wight Council have done this). Structures are managed within the Asset Team and do not use SCS to undertake any inspections/maintenance work.

Highways maintenance policy is part of the Swindon Local Transport Plan 2011-2026. Within the plan there are several policies and policy C is to "*Achieve and sustain a high quality, resilient and well maintained highway network for all members of the community*". The Plan outlines the importance of the highways to Swindon, how decisions will be reached regarding investment in highways maintenance and the delivery options available. The later include:

- Annual maintenance programme on classified (major) roads.
- Annual maintenance programme on unclassified (minor) roads.
- Reactive maintenance across the network.
- Annual programme of maintenance of highways structures.

The Local Transport Plan is subject to an annual report to Cabinet to ensure transparency in the apportionment of the funding to the various aspects of highway maintenance and the delivery of the programme.

The Highway Asset Management Team is responsible for highways, bridges and structures, highway lighting, traffic signals and drainage assets. The highways and bridges were taken to be the main risk areas for this audit. Highways are generally defined as the roads, pavements, cycleways and backways. The Highway Maintenance Engineer is responsible for the prioritisation and planning of capital road and footway investment, to best manage the life of the assets within the available funding. However any work is subject to approval by the Lead Member and Head of Highways and Transport. Condition surveys of the highway network are undertaken by an external company, and from the data returned, maintenance plans are developed and implemented through the Local Transport Plan Implementation Plan. The day to day, safety and routine maintenance and meeting the Code of Practice are not Highways and Transport's responsibility, this lies with StreetSmart/Swindon Commercial Services. Although, Highways and Transport should be informed of what is being undertaken and how it is being performed, as ultimately, they are the asset owners.

SCS, based on the criteria in the Code of Practice for Well Maintained Highways, carry out safety and routine inspections across the highway network in Swindon. The type of inspection and frequency of inspection are defined in the Code of Practice. They then make good any defects identified. There is an annual budget for this work, as part of the Council's overall agreement with SCS. The annual budget resides with the Council's SCS Commercial Manager. SCS bill for one twelfth of the budget amount every month.

Highway bridges and structures are solely the responsibility of the Highway Asset Team. Condition surveys are undertaken by a third party over a three year cycle. From the returns and results, maintenance plans are developed for bridges with scores below an acceptable benchmark score and maintenance plans are developed and implemented through the Local Transport Implementation Plan. It was noted during the audit that an issue had arisen around bridges and structures that are not the responsibility of the Highway Asset Team to manage, and that these had not been maintained by their service areas e.g. the bridge in the Town Gardens which is the responsibility of parks team within StreetSmart. This has been raised through the Corporate Health and Safety Risk Register and a paper was presented to Corporate Board, 20<sup>th</sup> May 2013 to propose a way forward including having all structures surveyed. The likely recommendation in a report back to Cabinet is that Highways and Transport will have the bridges surveyed and the service areas will make the decision on appropriate actions.

Funding for highways maintenance has always been an issue for local authorities. In the 2012 the Asphalt Industry Alliance's "Annual Local Authority Road Maintenance Survey" found that *"if adequate funding and resources were in place to clear the current backlog of maintenance work, highways departments reported that the estimated amount of time required to catch up would be 11 years"*<sup>2</sup>. In 2012/13 the capital budget for highway maintenance work (roads, structures etc.) through the Local Transport Plan was £4.96 million. In

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<sup>2</sup> Taken from "Roads: maintenance, repairs and street works" – Louise Butcher (Standard Note House of Commons Library).

2013/14 this budget has been reduced to £4.55 million. The revenue budget held by StreetSmart is £1.7 million for 2013/14. When the Highways Asset Management plan was drafted in 2008/09, it was then estimated, that to maintain all categories of roads, footways, cycle tracks, backways etc., in a steady state of maintenance at their 2009 condition, that approximately £12 million per annum was required. The steady state of maintenance costing is not updated annually to reflect current year costings. For bridges and structures, a figure of £2 million per annum is estimated as being required, over a 30 year period, for “unplanned reactive” maintenance. This is based on guidance provided by the Highways Asset Management Financial Information Group and the CIPFA requirements for ‘Whole of Government Accounts’ which is applied to the Atkins Structures Asset Management Planning Toolkit.

### Risk Areas Examined and Findings

In accordance with best practice, a risk-based approach was adopted that identified the key risks to the business objectives and those mitigating actions/controls that should be in place. The auditor then assessed the effectiveness of the mitigating controls through examination of relevant documents, procedures and detailed testing.

The key risks to the achievement of the business objectives were discussed and agreed with the Board Director Service Delivery and the Head of Highways and Transport before the commencement of the audit. The table below summarises the Risk Areas examined during the review and provides an assessment of the adequacy of controls in place for each area of risk examined:

<i>Risk Area Examined and Findings</i>	<i>Audit Conclusion</i>
<p><b>Risk: Business relationship management not in place</b></p> <ul style="list-style-type: none"> <li>• There is no formal governance structure e.g. service level agreement, management meetings, performance reporting, in place between Highways and Transport and StreetSmart to cover the highways maintenance activity undertaken through the StreetSmart contract with SCS. Highways and Transport do not have a line of sight over the activity undertaken, yet they are the asset owners. (AP 1.1)</li> <li>• StreetSmart have limited capacity to validate any of the work undertaken by SCS and don't check the accuracy of the KPIs. Instead, StreetSmart rely on the regime of self-monitoring SCS claim to have in place. (AP 1.1)</li> <li>• There are no key performance indicators on condition surveys, balance between safety and routine inspections or percentage of category 1 and 2 faults (defined in the Code of Practice) resolved within the agreed timescales. Outside of gully cleaning, the KPIs provide limited assurance over road maintenance activity. (AP 1.1)</li> <li>• Nearly all of the Highways Inspectors who transferred over to SCS from Highways and Transport/StreetSmart have left. They have not been replaced by experienced inspectors; indeed they cover a wide range of other areas besides highways as part of their role. Furthermore, there are no agreed education/training criteria in place for</li> </ul>	<p><b>Significant improvements required</b></p>



## Swindon Internal Audit Services: Highways Asset Management

<p>highways inspectors in Swindon. The Borough and SCS should agree an approach to this issue. The Institute of Highway Engineers offer a course or guidance on what training should be given. There is also a City and Guild qualification (6033) – Highway Inspection and Monitoring. (AP 1.2)</p> <ul style="list-style-type: none"> <li>• There is no policy in place between the Council and SCS over inspections, safety v routine and types of work undertaken, reactive v routine maintenance, covering what is expected, type of materials to use, training and reporting expectations. (AP 1.1)</li> <li>• The output specification between StreetSmart and SCS has never been finalised and signed. The two organisations have, since February 2012, been operating to a draft version of the specification.</li> </ul>	
<p><b>Risk: Asset Management</b></p> <ul style="list-style-type: none"> <li>• Asset management plans are in place for highways and bridges. The Best Value Performance Indicator 130-01 (condition of principal roads (A routes)) indicates that 1% of the principal road network is rated as red risk (plan maintenance soon) and 11% as amber (plan investigation soon) and 87% are green (generally good condition). These results are based on condition survey work undertaken by a contractor. The 1% is very small areas of road which would be uneconomical to repair in isolation according to Highways. However, if included in wider, larger maintenance work the cost would be circa £325k. The estimate cost to renew the asset life for all 'A' class road sections is estimated at £7.93m. For bridges, based on 2011/12 data seen (none was available for 2012/13), the average score for all bridges in Swindon was just above the overall benchmark score, 85/100, aimed for by Highways and Transport.</li> <li>• There is no, one, database used to record highways assets and all aspects relating to them e.g. condition surveys undertaken, remedial action, residents' complaints etc. A system called Confirm is used to record most assets (highways, lighting, bridges and drains) however, traffic signals are on a standalone database. Although highways are recorded on Confirm, the Highway Maintenance Engineer uses a system UKPMS (a Pavement Management System provided by another company) to record condition survey data used to develop maintenance plans for the highway network (AP 2.5).</li> <li>• SCS also have access to Confirm to update relevant records with work undertaken e.g. inspections, remedial work. However, since lighting assets were transferred onto the Confirm database, SCS have been unable to access the lighting element to record inspection work and remedial action taken. (AP 2.5)</li> <li>• Confirm has not been fully populated. It has been configured, but not all record fields have been completed e.g. ownership details for the bridge stock. (AP 2.5)</li> <li>• Recently, it came to light that there are about 150 non-highways bridges and structures that were not being inspected and maintained. A project was set up and a paper was presented to Corporate Board on the 20<sup>th</sup> May 2013 with a way forward. The bridges in question are not Highways and Transport's responsibility, as they are not</li> </ul>	<p><b>Satisfactory</b></p>

part of the highways network e.g. one of the bridges is in the Town Gardens in Old Town, this has been surveyed and was closed immediately, the service owner is StreetSmart. Highways and Transport assist and can arrange for condition surveys to be undertaken and provide advice on how the structures can be managed. The final decision on the structure rests with the service provider. (AP 2.1)

- It was not possible to obtain up to date data on the condition of the highway bridge stock, as not all condition surveys had not been input into Confirm. The bridge listing seen during the audit was dated 2011/12. The five year plan reviewed was dated May 2012. (AP 2.4)
- Following input of the data from a condition survey, two scores are generated for a bridge out of one hundred. An overall one for all aspects of the bridge and another for the main critical elements of the structure. The Engineer works on a score of eighty five out of one hundred as the benchmark, anything below this potentially requires attention. The overall aim is to manage the bridge stock so that the average score for all bridges is 85/100; there is no policy in place to support this score and approach. (AP 2.3)
- The Engineer responsible for bridges and structures stated that the Council has limited records on retaining structures, embankments, cuttings and safety barriers not associated with a structure. (AP 2.2)
- There is a three year, prioritised plan for capital road and pavement works. The planned works for 2013/14 is supported by a business case and is included in the Local Transport Plan Implementation Plan for 2013/14.
- There is a five year plan for bridges and structures dated May 2012. There was a business plan for 2013/14 supporting the work included in the Local Transport Plan Implementation Plan for 2013/14. Although the data on bridge conditions is not fully up to date.
- The Council is unaware of all its drainage assets and following requirements under the Flood and Water Management Act 2010 introduced after the floods of 2007, is currently undertaking a data asset collection survey. With current resourcing it is anticipated that this could take 15-20 years. (AP 2.7)
- There is no strategic programme of drainage work, it is all reactive. This has been the position since the 1990s. (AP 2.6)
- The Local Transport Plan 2011-2026 is difficult to find on the Council's internet site. The Highways Asset Management Plan 2009, which is the latest one, is not on the Council's internet site. (AP 2.9)
- Insurance data on claims is not routinely provided to either Highways and Transport or StreetSmart/SCS. It is only provided when requested, which is rarely. (AP 2.8)

## Overall Opinion

**Materiality and impact: High.** The capital budget for highways maintenance work is with the Asset Team and was £4.96 million in 2012/13 financial year, although for 2013/14 this has been reduced to £4.55 million. The Council, through StreetSmart, engage Swindon Commercial Services to deliver day to day maintenance and ensure the highways are safe. The revenue budget for this work is £1.7 million for 2013/14. Materiality is therefore **high**. The state of the Borough's highway network is vital to the movement of vehicles and residents and attracts significant public interest and comment. Impact is therefore **high**.

**Changes since last audit:** Highway Inspectors have transferred over from Highways and Transport to StreetSmart/Swindon Commercial Services.

**Opinion on system controls: Significant improvements required** (see Appendix A) i.e. the auditor completing the review concluded that existing procedures needed to be improved to ensure that they are fully reliable. A number of significant recommendations have been made to improve missing or failing controls.

**Overall assessment of risk:** the combination of the high impact of the system, along with the opinion on the system controls gives an overall risk assessment to the Council as being **of concern**:

		MATERIALITY AND IMPACT		
SYSTEM CONTROL		High	Medium	Low
1	High standard	Moderate	Minimal	Minimal
2	Satisfactory	Moderate	Moderate	Minimal
3	Significant Improvements required	Of Concern	Moderate	Moderate
4	Fundamental weaknesses identified	Significant	Of Concern	Moderate

## Action Plan

The purpose of this action plan is to provide a summary of the matters arising during the audit of Highways Asset Management, together with the recommendations to mitigate risks, the manager's response to the recommendations, along with the officer responsible and timescale for implementation. In order for you to identify the most significant matters arising, which affect the reliance that can be placed on the controls reviewed, the recommendations have been prioritised.

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>1</b>	<b><i>Risk: Business relationship management not in place</i></b>			
1.1	<p><b>Governance Arrangements between Highways and Transport and StreetSmart</b></p> <p>Highways and Transport Asset Management team are responsible for the Borough's highways assets. This includes maintaining asset registers, carrying out condition survey work on highways (ascertaining the overall long term condition of the highways) and planning, prioritising and delivering major maintenance schemes (capital expenditure).</p> <p>Day to day, routine maintenance activity, including routine/safety condition surveys, to ensure the highways (roads, pavements etc., but not bridges) are safe and the Council meets the requirements of the "Code of Practice for Well-maintained Highways", is undertaken by SCS. This is through a contract between StreetSmart and SCS. Highways and Transport are not involved in the process, despite being the asset owner.</p> <p>Although Highways and Transport are the asset owners they have had no formal input into the StreetSmart and SCS relationship i.e. outlining policies to follow, balance between inspection types, types of material/standards to be followed when repairing different</p>	<p>Highways and Transport and StreetSmart should agree a way forward and implement an appropriate governance arrangement. This should then be encapsulated in a Service Level Agreement.</p> <p>The arrangements should cover:</p> <ul style="list-style-type: none"> <li>• The coverage and split of types of work expected from SCS.</li> <li>• How SCS's performance should be measured, as the current key performance indicators don't reflect fully highway maintenance requirements e.g. nothing on undertaking condition surveys.</li> <li>• Management information required e.g. in what circumstances SCS should report, via StreetSmart, issues to Transport and Highways that may affect the long term condition of a road or a where a larger piece of maintenance work is required.</li> </ul>	<p>Head of Highways and Transport in conjunction with the Service Manager Highway Infrastructure Management</p> <p>March 2014</p>	<p><b>Agreed</b></p> <p>Recommendations to be included in Swindon Commercial Services (SCS) Re-integration work-streams.</p>

## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>1</b>	<b><i>Risk: Business relationship management not in place</i></b>			
1.1 (cont.)	<p><b>Governance (cont.)</b> Classes / categories of road, training of inspectors, ideal key performance indicators which Highways and Transport could rely on for assurance etc.</p> <p>Whilst StreetSmart manage the relationship with SCS, on behalf of the Council, there are no policies/standards in place regarding the work expected from SCS for safety inspections, reactive maintenance, and routine repairs, particularly what and when they need to report to Highways and Transport. There are a series of Key Performance Indicators in place by which SCS report to StreetSmart.</p> <p>Currently, StreetSmart has limited capacity to validate any of the work undertaken by SCS and don't check the accuracy of the KPIs. Instead, StreetSmart rely on the regime of self-monitoring SCS claim to have in place.</p> <p>No confirmation could be found that the current KPIs had been agreed with the Highways Asset Management Team and were fit for purpose in providing evidence that condition surveys were being undertaken and appropriate remedial action taken.</p> <p>Risk: Highways and Transport have no assurance that the highway network is being maintained adequately and safely.</p>	<ul style="list-style-type: none"> <li>• Meetings between Highways and Transport and StreetSmart, meeting frequencies, employees involved and their roles and responsibilities.</li> <li>• The policies expected to be followed e.g. balance between safety inspections and routine inspections, reactive versus routine maintenance and how they should be reported.</li> <li>• The evidence StreetSmart would be expected to see as verification that SCS were carrying out the tasks.</li> </ul> <p><b>Priority: High</b></p>		

## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>1</b>	<b><i>Risk: Business relationship management not in place</i></b>			
1.2	<p><b>Highway Inspectors Training</b></p> <p>There is no guidance is on the training and education needed for Highways Inspectors. All the experienced Highways Inspectors that were transferred over to SCS have left and been replaced by less experienced people. Whilst the output specification just says the employees should be competent, the exact nature of what that means is left to SCS. As they act as the “eyes and ears”, on behalf of the Council, as the Highway Authority, in maintaining a safe and well maintained highway network, guidance from the Council on minimum training standards should be drawn up and agreed with SCS.</p> <p>Risk: insurance claims against the Council may not be defensible if inadequate training in place</p>	<p>Guidance should be provided on the training and education needed by Highways Inspectors.</p> <p>Consideration to be given for Inspectors to take the City and Guilds 6033 (Highways Inspection and Monitoring) qualifications.</p> <p><b>Priority: High</b></p>	<p>Service Manager Highway Infrastructure Management.</p> <p>March 2014</p>	<p><b>Agreed</b></p> <p>Recommendations to be included in SCS Re-integration work-streams.</p>

## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>2</b>	<b>Risk: Asset management</b>			
2.1	<p><b>Bridges and structures – non Highways and Transport Assets</b></p> <p>An issue was been identified by Corporate Health and Safety regarding bridge/structure assets, which are not the responsibility of Highways and Transports to maintain, not being managed appropriately. This has meant that they have not had regular condition surveys undertaken and no maintenance to ensure they are fit for purpose. This issue is now recorded in the Corporate Health and Safety Risk Register.</p> <p>A paper was taken to Corporate Board (May 2013) and arrangements made by Highways to have the structures surveyed. Following this action, another paper will go to the Board with the results and a proposed way forward.</p> <p>Risk: insurance claims against the Council/adverse publicity</p>	<p>That the non-Highways structure assets identified as not being appropriately managed are added to the Highways asset register. This is to ensure they are regularly surveyed. The results of the surveys should be forwarded to the appropriate service area to take any necessary decisions over future action required, based on the results/recommendations arising from the survey.</p> <p><b>Priority: High</b></p>	<p>Service Manager Highway Infrastructure Management.</p> <p>December 2013</p>	<p><b>Agreed</b></p> <p>Interim arrangements are in place, e.g. asset identification and condition survey as agreed with Corporate Board. This is a recent and on-going project to resolve risks and management of these non-highway assets.</p>

## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>2</b>	<b>Risk: Asset management</b>			
2.2	<p><b>Bridges and Structures – non bridge assets</b></p> <p>The Council has limited records or is not aware of some of the following types of highway asset that it is responsible for. Therefore these structures may not be monitored and maintained. They are:</p> <ul style="list-style-type: none"> <li>• Retaining structures</li> <li>• Embankments</li> <li>• Earthworks</li> <li>• Cuttings</li> <li>• Safety barriers</li> </ul> <p>The engineer concerned stated he received 2-3 reports a year of potentially dangerous structures which he had no previous record of.</p> <p>Risk: insurance claims made against the Council</p>	<p>All retaining structures, embankments, earthworks, cuttings and safety barriers that are owned by the Council, should be identified, recorded and maintained.</p> <p>A risk based plan should be developed to achieve this, including appointing an officer to manage it.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p>	<p><b>Agreed</b></p> <p>Asset data and condition survey will be collected for all retaining walls once the recently agreed bridge inspector post is filled in circa March 14.</p> <p>A Policy should be developed for management of structural earthworks.</p> <p>Safety barrier asset has been identified along with essential repairs undertaken. Responsibility for maintenance rests with StreetSmart.</p> <p>Recommendations to be included in SCS Re-integration work-streams.</p>



## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>2</b>	<b>Risk: Asset management</b>			
2.3	<p><b>Bridges and Structures – condition surveys</b> When a bridge's condition is surveyed, it is given a score out of 100. Scores below 85 may require some remedial work depending on the professional judgement of the Bridges and Structures Engineer. The current thinking in the Asset Management Team is that the average score for the entire bridge stock should be 85/100. This approach has not been formally agreed.</p> <p>Risk: expenditure on bridges will fluctuate, depending on the score adopt as a benchmark</p>	<p>A formal decision should be made on what the benchmark score should be for bridges before it is considered that remedial action is required / undertaken.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>February 2014</p>	<b>Agreed</b>
2.4	<p><b>Bridges and Structures – records</b> The asset register for bridges and structures is not up to date with latest condition surveys and remedial action undertaken. The latest list of bridge scores provided during the audit was for 2011/12 and had not been updated to reflect surveys/work carried out in 2012/13. The five year plan provided was dated May 2012.</p> <p>Risk: records may get misplaced and not updated leading in incorrect data being held leading to wrong business decisions being made</p>	<p>Bridge condition surveys should be processed promptly to ensure an accurate up to date record can be produced as required.</p> <p>The five year plan should be updated to reflect the current position in 2013.</p> <p><b>Priority: Low</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p>	<p><b>Agreed</b> Proposed SBC bridge inspector role will speed up the processing of inspections which are currently biased towards end of year completion.</p>

## Swindon Internal Audit Services: Highways Asset Management

Ref.	Finding	Recommendations Priority (High/Medium/Low)	Responsible Officer and Timescale	Management Response
<b>2</b>	<b><i>Risk: Asset management</i></b>			
2.5	<p><b>Confirm database</b></p> <p>The Asset Management Team use a modular database called Confirm as its asset register to record assets, inspections and maintenance on the assets. Although, highways and traffic signals use separate databases. The Highway Maintenance Engineer uses a Pavement Management System database supplied by another supplier, to retain condition survey data. This supplier currently undertakes all the surveys. Confirm also has a Pavement Management System module. According to the Highway Maintenance Engineer, the annual cost of licences for the current Pavement Management System is £17k.</p> <p>The traffic signals engineer also does not use Confirm.</p> <p>Confirm has been configured but not all fields have been populated e.g. for bridges, areas such as ownership have not been completed plus backlog data on bridge conditions.</p> <p>Since the street lighting records transferred to Confirm, SCS have not been able to update the records with work they have completed.</p> <p>Risk: there is no single database containing all highway asset records/information is duplicated/omitted.</p>	<p>A decision should be made on what fields should be populated in Confirm database and what fields can be left unpopulated.</p> <p>A plan should be drawn up to ensure that agreed fields can be populated.</p> <p>Consider the cost benefit of operating a separate Pavement Management system or switching to using the Confirm system, thus having everything on one database.</p> <p>SCS access to Confirm to update street lighting records should be resolved. When resolved it should be ensured that any data not processed should be retrospectively keyed to Confirm.</p> <p>Consider adding traffic signals to the Confirm database.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>March 2014</p>	<b>Agreed</b>

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<b>2</b>	<b>Risk: Asset management</b>			
2.6	<p><b>Drainage assets – only reactive maintenance</b></p> <p>There has not been a budget for a programme of strategic maintenance for drainage since the 1990s, all work is reactive. In recent years the adverse weather conditions has led to increased flooding and damage to properties in Swindon. There is now a requirement under the Flood and Water Management Act 2010 to establish and maintain a register of structures/features which have an effect on the flood risk management in its area. When identifying SBC owned elements of these structures, maintenance may be required.</p> <p>Risk: flooding in Swindon and damage to property</p>	<p>Consideration should be given to introducing a budget for strategic drainage maintenance.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p>	<p><b>Agreed</b></p> <p>Recommendations to be included in SCS Re-integration work-streams.</p>
2.7	<p><b>Drainage Assets – records</b></p> <p>Currently the Council is unaware of all its drainage assets. Following the floods of 2007 and the passing of the Flood and Water Management Act 2010, subsequent new requirements have been placed on the Council as a lead local Flood Authority. One of the requirements is to establish and maintain a register of structures/features which have an effect on the flood risk management in its area.</p> <p>To this effect the Council is identifying its drainage assets. It is undertaking, what is termed, a data asset collection survey. The Drainage Engineer has stated that with current resources this could take over fifteen years.</p> <p>Risk: unaware of assets</p>	<p>A decision should be made as to whether this is an acceptable timescale or whether an additional resource is allocated to reduce the time frame to carry out the exercise.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p>	<p><b>Agreed</b></p> <p>The approach to drainage data asset collection will be addressed in the Local Flood Risk Management Strategy.</p>

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<b>2</b>	<b>Risk: Asset management</b>			
2.8	<p><b>Insurance data</b> Data regarding insurance claims against the Council citing the state of the highways (roads, pavements etc.) is not routinely requested, or provided, to Highways and Transport and StreetSmart/SCS.</p> <p>Risk: not aware of level of claims or potential high risk areas</p>	<p>Details of insurance claims made against the Council citing the condition of the highway should be provided at least annually to Highways and Transport and StreetSmart and SCS.</p> <p><b>Priority: Medium</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p>	<p><b>Agreed</b> Recommendations to be included in SCS Re-integration work-streams.</p>
2.9	<p><b>Provision of information to residents</b> The Government encourages Councils to produce their Local Transport and Highways Asset Management Plans and publish these to enable residents to see how the Council goes about its highway maintenance responsibilities.</p> <p>The Local Transport Plan 2011-2026 is difficult to locate on the Council's internet website and it appears on the second page of links.</p> <p>The current version of Council's Highways Asset Management Plan, dated 2009 could not be found on the internet site.</p> <p>Risk: residents have no reference point and unaware of the Council's strategy and plans</p>	<p>The Local Transport Plan 2011-2026 should be easy to locate on the Council's internet site.</p> <p>The current Highways Asset Management Plan should be made available on the Council's internet site and be easy to locate.</p> <p><b>Priority: Low</b></p>	<p>Service Manager Highway Infrastructure Management</p> <p>December 2013</p> <p>March 2014</p>	<p><b>Agreed</b></p> <p><b>Agreed</b> - subject to officer review and Cabinet Member support.</p>

### Standard Audit Opinions

The audit opinion is based on two different criteria the first is the materiality of the system and its impact on the Council if there was a system failure. This has been spilt into High, Medium or Low.

The second criteria, is the standard of control found within the system audited. This has been categorised into 4 different levels i.e. high; satisfactory; significant improvements required and, fundamental weakness. Each of these categories has a standard opinion (see below).

The combination of these two factors gives an overall risk assessment to the Council of one of four scores i.e. significant, of concern, moderate or minimal (see Overall Opinion section in the main report).

### Standard Audit Opinions on System Control

#### **Audit Opinion 1. *High standard***

The auditor completing the review concluded the significant system controls are in place and operating effectively and only minor recommendations have been made.

#### **Audit Opinion 2. *Satisfactory standard***

The auditor completing the review concluded that most of the significant controls are in place and operating satisfactorily although some non-compliance was identified and therefore there is scope for improvement.

#### **Audit Opinion 3. *Significant improvements required***

The auditor completing the review concluded that existing procedures needed to be improved to ensure that they are fully reliable. A number of significant recommendations have been made to improve missing or failing controls.

#### **Audit Opinion 4. *Fundamental weaknesses identified***

The auditor completing the review concluded that the matters arising from the review are sufficiently significant to place doubt on the reliability of the procedures reviewed. Implementation of the recommendations made is a priority to ensure that reliance can be placed on the system.

## Acknowledgements

Internal Audit would like to acknowledge and thank the following Officers for their contribution to this review

Name	Title/Organisation
Tim Price	Service Manager Highway Infrastructure
Richard Fisher	StreetSmart Service Delivery Manager
Gary Hewitt	Highway Maintenance Engineer
Alan Frost	Bridges and Structures Engineer
Lisa Willoughby	Highway Information Technician
Simon Masters	Highway Asset and Drainage Engineer
Andrew Parfitt	Traffic Signals Engineer
Heather Lane	Structures Technician
Rosie Halpin	Highway Records Officer
Bhesh Thapa	Highway Asset Data Technician
Rachel Ind	SBC Commercial Partnership Manager SCS
Sue Connaghan	Senior Procurement Officer
Peter Greer	Insurance Manager