



# BEDFORDSHIRE FIRE AND RESCUE AUTHORITY

## Data Quality – Incident Reporting System

FINAL

Internal Audit Report: 6.16/17

23 February 2017

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<b>Debrief held</b>	23 December 2016	<b>Internal Audit team</b>	Dan Harris, Head of Internal Audit Suzanne Lane, Senior Manager Lee Hannaford, Assistant Manager Rahi Rahman, Internal Auditor
<b>Draft report issued</b>	23 January 2017		
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		<b>Distribution</b>	Ian Evans, Area Commander – Head of Operations

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# 1 EXECUTIVE SUMMARY

## 1.1 Background

The Incident Reporting System (IRS) is a mechanism through which the UK government collects data on fire incidents nationally. Bedfordshire Fire and Rescue Authority use the Mobilising System when recording information on new incidents, such as their nature and how many appliances have been sent out.

The Authority completed a project on 29 November 2016 to replace the Mobilising System. The new mobilising system was required as the previous hardware and software was outdated and to enable the Authority to take advantage of new developments in technology and functionality e.g. using GPS based dynamic mobilising. The new Mobilising System was also required to further integrate the system to IRS in order to ensure the data reported is more accurate.

The Quality Assurance process is managed by the Control Team who perform checks on the IRS data input by Crew Managers a week after it has been input onto the system. All incidents recorded on the IRS system are also recorded on an internally managed 'IRS Checking and Publishing spreadsheet'.

The Authority use IRS data when assessing its own performance in quarterly Fire Authority meetings via a Service Delivery Performance Monitoring Report.

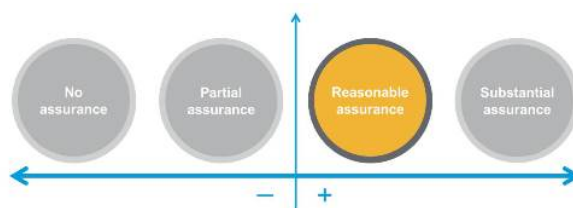
## 1.2 Conclusion

Our review identified gaps in the control framework for data quality from the Incident Reporting System. In particular, we found that there was no up to date IRS Quality Assurance procedure that is fully reflective of current working practices. Furthermore, a formal mechanism through which lessons are learnt from quality assurance checks and a training programme for IRS input was also not in place.

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### Internal Audit Opinion:

Taking account of the issues identified, the Authority can take reasonable assurance that the controls in place to manage this area are suitably designed and consistently applied. However, we have identified issues that need to be addressed in order to ensure that the control framework is effective in managing the identified area(s).



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## 1.3 Key findings

The key findings from this review are as follows:

We confirmed through discussions with the Head of Operations that the Control Team is responsible for the collation and cleansing of data input by Crew Managers when reviewing the data input onto IRS. We confirmed that there are multiple government produced guidance documentation and procedures with instructions on how to input information for staff. These were available to crews and the Control Team via the Authority's internal SharePoint system.

The Quality Assurance process is managed by the Control Team, who perform checks on the IRS data input by Fire Officers a week after it is input onto the system. All incidents recorded on the IRS system are also recorded on an 'IRS Checking and Publishing spreadsheet'. The spreadsheet is colour coded to identify the different shifts Control Team staff members rotate on. We reviewed the IRS Checking and Publishing spreadsheet and confirmed that the document was fit for purpose and adequately evidenced checks performed by the Control Team staff.

We selected a sample of 20 incidents from the Checking and Publishing spreadsheet and through testing we confirmed that 17 of the 20 incidents selected had been recorded as being published on IRS. However, through review of the IRS System audit reports we confirmed that two of the remaining three incidents had actually been published.

Therefore, the spreadsheet maintained by the Control Team was not fully up to date. For the 17 incidents in our sample that were recorded as being published on IRS we confirmed the date the incident was recorded and published had reconciled with the data reported on Incident Data Reports from the IRS system. We have included a suggestion below to improve efficiency in the process.

Service Delivery information is reviewed at quarterly meetings. KPIs are set to assess the performance of the Authority, and the information used to assess their performance is taken from the IRS website. The agreement of KPIs for the year is discussed at the beginning of each financial year at Fire Authority meetings. Through review of Fire Authority meeting minutes since April 2016 (months April, May, July and October 2016) we confirmed: The Proposed Service Delivery Indicators and Targets for 2016/17 had been discussed and approved by the Fire Authority in April 2016. A Service Delivery Performance Monitoring Report had been subject to sufficient discussion in meetings via the Service Delivery Policy and Challenge Group; the Group had presented a report in July, October and December 2016 meetings appropriately; and reports were fit for purpose in outlining the required KPIs as agreed.

Our review identified the following issues which have resulted in **three medium priority actions**:

A formal mechanism through which lessons are learnt from the quality assurance checks performed on incidents was not in place. There is a risk that common errors when reviewing the input of information on IRS, will not be identified in a timely manner should a formal lessons learnt log not be in place. This could impact the operational efficiency of the Control Team and could lead to inaccurate information being used, resulting in wrong decision making being made by management. **(Medium)**

We requested the last three IRS data reports provided to the Service Control Manager from the Control Team with regards to incomplete IRS data fields. We identified that this had only been completed in the month of November 2016 even though it is required to be completed on a monthly basis to be presented at Operational Delivery Team (ODT) meetings. There is a risk that the Control Team's performance will not be subject to the appropriate scrutiny should reports not be presented and discussed as per the agreed frequencies. **(Medium)**

A full programme of roll out training for the relevant staff who input data on IRS i.e. control room staff and fire officers, was not in place. Furthermore, we confirmed that neither control staff nor fire officers have any LearnPro/eLearning modules that relate to IRS completion. There is a risk that the Authority will be reporting information based on data input by insufficiently trained staff should appropriate training measures not be in place. This could lead inaccurate information being submitted onto IRS which could ultimately affect the delivery of the Authority's services. **(Medium)**

We have also agreed two low priority actions with management which are detailed further in sections 2 and 3 of the report.

## 1.4 Additional information to support our conclusion

Risk	Control design*	Compliance with controls*	Agreed actions		
			Low	Medium	High
If we have inadequate data management due to poor implementation, inappropriate specification of requirements or poor quality control measures then we are at risk of using the wrong information throughout the organisation and thus potentially affecting the delivery of our services.	3 (6)	4 (6)	2	3	0
<b>Total</b>			<b>2</b>	<b>3</b>	<b>0</b>

\* Shows the number of controls not adequately designed or not complied with. The number in brackets represents the total number of controls reviewed in this area.

## 1.5 Additional feedback

We have also identified suggestions that Bedfordshire Fire and Rescue Authority may wish to consider:

### **Suggestion:**

The Area Commander - Head of Operations will explore the possibility of transporting the IRS Checking and Publishing spreadsheet to the Authority's SharePoint system. This will ensure an audit trail is maintained when checks are performed by staff, and enable senior staff members to perform spot checks to ensure reviews are taking place at per prescribed frequencies.

## 2 ACTION PLAN

### Categorisation of internal audit findings

Priority	Definition
Low	There is scope for enhancing control or improving efficiency and quality.
Medium	Timely management attention is necessary. This is an internal control risk management issue that could lead to: Financial losses which could affect the effective function of a department, loss of controls or process being audited or possible reputational damage, negative publicity in local or regional media.
High	Immediate management attention is necessary. This is a serious internal control or risk management issue that may lead to: Substantial losses, violation of corporate strategies, policies or values, reputational damage, negative publicity in national or international media or adverse regulatory impact, such as loss of operating licences or material fines.

The table below sets out the actions agreed by management to address the findings:

Ref	Findings summary	Priority	Actions for management	Implementation date	Responsible owner
1.1	We confirmed that a procedure outlining the IRS Quality Assurance process has been developed, however, following sample testing of the process this was confirmed to have not been fully reflective of current working practices and out of date.	Low	The Service Control Manager will develop an IRS Quality Assurance procedure outlining the checking and publishing process for IRS data. This will include the frequency as to which checks take place in the Control Team and how often outstanding incidents will be followed up.	May 2017	Service Control Manager
1.2	We selected a sample of 20 incidents requiring communication to be made to Station Officers regarding incorrect input of data. We confirmed through testing that two incidents had been published on IRS but this was not correctly reflected on the IRS Checking and Publishing spreadsheet. Therefore, the monitoring spreadsheet maintained by the Control Team was not fully up to date.	Low	<p>The Head of Operations will ensure that the IRS Checking and Publishing spreadsheet is updated periodically and reconciled to the IRS system on a period basis.</p> <p>This frequency will be outlined in the aforementioned procedure and will be adhered to.</p> <p>This will be achieved via secondary checks performed by another member of staff in the Control Team and will be evidenced as such.</p>	May 2017	Area Commander – Head of Operations

Ref	Findings summary	Priority	Actions for management	Implementation date	Responsible owner
1.3a	A formal mechanism through which lessons are learnt from the quality assurance checks performed on incidents is not currently in place at the Authority.	Medium	The Head of Operations will undertake periodic lessons learnt exercise to ensure that frequent issues can be identified with regards to the input of data.  Action plans to address these issues will then be developed and monitored.	May 2017	Area Commander – Head of Operations
1.3b	We requested the last three monthly IRS data reports provided to the Service Control Manager from the Control Team with regards to incomplete IRS data fields.  We confirmed that this had only been completed in the month of November 2016.	Medium	The Control Team will ensure that data on the number of outstanding IRS to be checked is produced and provided to ODT meetings on a monthly basis as prescribed.  The Head of Operations will ensure that findings are actively discussed in meetings.	May 2017	Area Commander – Head of Operations
1.4	A full programme of training for the relevant staff who input data on IRS i.e. control room staff and Fire Officers, is not currently in place.  Furthermore, we confirmed that neither control staff nor Fire Officers have any LearnPro/eLearning modules that relate to IRS completion at present.	Medium	The Head of Operations will consider whether full programme refresher training will be beneficial for all staff involved in the input of IRS data.  The Head of Operations will progress development of a training package to support induction of new control staff and new fire officers.	May 2017	Area Commander – Head of Operations

### 3 DETAILED FINDINGS

This report has been prepared by exception. Therefore, we have included in this section, only those risks of weakness in control or examples of lapses in control identified from our testing and not the outcome of all internal audit testing undertaken.

Ref	Control	Adequate control design (yes/no)	Controls complied with (yes/no)	Audit findings and implications	Priority	Actions for management
<p><b>Risk: If we have inadequate data management due to poor implementation, inappropriate specification of requirements or poor quality control measures then we are at risk of using the wrong information throughout the organisation and thus potentially affecting the delivery of our services.</b></p>						
1.1	<p>A procedure outlining the process for reviewing data accuracy and quality at the Authority has been developed at the Authority but is not up to date in reflecting current working practices.</p> <p>The current process is as follows:</p> <p>The Control Team updates the Mobilising system with information relating to an incident from a call, arranging for the appropriate appliances to be sent out based on a recommendation given from the Mobilising system.</p> <p>The Control Operator mobilises an incident before crews can input further details onto IRS. The IRS is not populated until an incident is finished and closed by the Control Team. When Crews arrive back to their home stations from an incident they complete the IRS form for incidents electronically;</p> <p>The Control Team will perform their checks a week after forms have been</p>	No	N/A	<p>Through discussions with multiple staff in the Control Team, we confirmed that they are involved in the process for reviewing the data input onto the IRS system.</p> <p>We confirmed that there are multiple government produced guidance documentation and procedures with instructions on how to input information. This is available on the available to crews via the Authority's internal SharePoint system.</p> <p>We also confirmed that a procedure outlining the checking process has been developed, however, following sample testing of the data reviewing process in the Control Team, this was confirmed to have been out of date not fully reflective of current working practices.</p> <p>Although the Control Team does not comprise of a large number of staff, there is a risk that new staff will not be aware of current working practices should an up to date IRS Quality Assurance procedure not be in place. This could lead to inadequate checks taking place which could ultimately lead to inaccurate information being submitted onto IRS.</p>	Low	The Service Control Manager will develop an IRS Quality Assurance procedure outlining the checking and publishing process for IRS data. This will include the frequency as to which checks take place in the Control Team and how often outstanding incidents will be followed up on.



Ref	Control	Adequate control design (yes/no)	Controls complied with (yes/no)	Audit findings and implications	Priority	Actions for management
	<p>completed by crews via an IRS Checking and Publishing spreadsheet; and</p> <p>The Control Team will then publish data to IRS once they are assured there are no errors with the inputted data</p>					
1.2	<p>All incidents recorded on the IRS system are also recorded on an 'IRS Checking and Publishing spreadsheet' which details the following:</p> <ul style="list-style-type: none"> <li>• Incident number</li> <li>• Date of incident</li> <li>• Date checked and initials</li> <li>• Query section no./Details</li> <li>• Email Sent To/Date</li> <li>• Date Query Sorted</li> <li>• Published (initials)</li> <li>• Changes Logged on SharePoint</li> </ul> <p>The spreadsheet is colour coded to identify the different shifts Control Team staff members rotate on.</p>	Yes	No	<p>We reviewed the IRS Checking and Publishing spreadsheet and confirmed that the document was fit for purpose in adequately evidencing the checks performed by the Control Team staff.</p> <p>We also confirmed that all incidents had been reviewed by staff other than incidents which had been greyed out. Through discussions with the Crew Commander in the Control Team we confirmed that these incidents were not IRS related incidents and as a result they had not been published on IRS.</p> <p>We selected a sample of 20 incidents requiring communication to be made to Station Officers regarding incorrect input of data. We confirmed the following through testing:</p> <ul style="list-style-type: none"> <li>• 17 of the 20 incidents selected had been recorded as being published on IRS. However through review of the IRS System Audit reports we confirmed that two of the remaining three incidents had actually been published. Therefore, the spreadsheet maintained by the Control Team was not fully up to date;</li> </ul>	Low	The Head of Operations will ensure that the IRS Checking and Publishing spreadsheet is updated periodically and reconciled to the IRS system on a period basis. This frequency will be outlined in the aforementioned procedure and will be adhered to. This will be achieved via secondary checks performed by another member of staff in the Control Team and will be evidenced as such.

Ref	Control	Adequate control design (yes/no)	Controls complied with (yes/no)	Audit findings and implications	Priority	Actions for management
	<p>The Watch Commander produces a spreadsheet which identifies the stations with trends with particular failures with the submission of IRS data on a monthly basis.</p>			<ul style="list-style-type: none"> <li>For the 17 incidents selected in our sample that were recorded as published on IRS via the spreadsheet we confirmed the date the incident was recorded and published had reconciled with the data reported on Incident Data Reports from the IRS system in all 17 cases.</li> </ul> <p>Through discussions with the Service Performance Manager, we were advised that the Authority did have a separate department within the control room (the Emergency Response Support Team), and one of their tasks was to check the IRS data and the data input on the Mobilising system by Fire Officers. However due to staffing issues this department is not currently in place. We were informed that there are currently plans to move additional staff to the control room function to ensure this check is performed in addition to the current checks performed by the Control Team to ensure the information in IRS is reliable and accurate.</p> <p>Furthermore, through discussions with the Software and Integration Engineer, who was involved in the design of new interface which ensures IRS and the new Mobilising system communicate effectively, we confirmed that Software Engineers are currently notified via email if mandatory fields are not completed in the IRS system. As such the Software Engineers act as the second security line behind the control room team should they miss instances of incomplete/incorrect fields.</p>		

Ref	Control	Adequate control design (yes/no)	Controls complied with (yes/no)	Audit findings and implications	Priority	Actions for management
1.3	<p>The Control Team report the number of outstanding IRS data entries that are deemed incomplete to the Service Control Manager on a monthly basis. This information requires correcting by crews on a monthly basis and is reported at the monthly Operational Development Team (ODT) meetings.</p> <p>Trends are highlighted in ODT meetings with regards to the number of outstanding IRS data to be checked by stations in the Bedfordshire area and the amount of IRS entries returned to each station and awaiting update.</p> <p>A formal process for recording lessons learnt from quality assurance checks incidents entered onto IRS is not currently in place at the Authority.</p> <p>General control feedback is presented in ODT meetings.</p>	No	N/A	<p>Through discussions with the Watch Commander in the Control Team, we were advised that staff communicate information on incidents with regards to lessons being learnt on an ad hoc basis and no formal process was in place.</p> <p>We requested ODT meeting minutes since April 2016, however, we could only obtain minutes from the month of November 2016 during the audit. Through review of November meeting minutes for the ODT we confirmed that a section on Control feedback had been detailed and findings from the Control Team had been discussed. However, general control feedback was deemed to have been presented in ODT meetings and not found to be sufficiently detailed.</p> <p>We also requested the last three reports provided to the Service Control Manager from the Control Team with regards to incomplete IRS data fields. We confirmed that this had only been completed in the month of November 2016 however, although it is required to be completed on a monthly basis.</p> <p>There is a risk that common errors input errors will not be rectified should a formal lessons learnt log not be in place. This could impact the operational efficiency of the Control Team and could lead to inaccurate data being used should common errors not be shared across the Authority.</p>	Medium	<p>The Head of Operations will undertake periodic lessons learnt exercise to ensure that frequent issues can be identified with regards to the input of data. Action plans to address these issues will then be developed and monitored.</p> <p>The Control Team will ensure that data on the number of outstanding IRS to be checked is produced and provided to ODT meetings on a monthly basis as prescribed. The Head of Operations will ensure that findings are actively discussed in meetings.</p>

Ref	Control	Adequate control design (yes/no)	Controls complied with (yes/no)	Audit findings and implications	Priority	Actions for management
1.4	<p>Fire Officers are subject to the following training with regards to data input:</p> <ul style="list-style-type: none"> <li>Electronic training system – PDRPro</li> <li>E-Learning system – LearnPro</li> </ul> <p>A full programme of training for the relevant staff who input data on IRS i.e. control room staff and Fire Officers, is not currently in place at the Authority.</p> <p>Staff have access to guidance documentation developed by the Communities and Local Government with regards to the accurate data input on IRS. These include the following:</p> <ul style="list-style-type: none"> <li>IRS Guidance</li> <li>IRS Incident Scheme – Questions and lists</li> <li>Web Form questions for incident types</li> </ul> <p>Documents are available to staff via the IRS Training room which is accessible on the Authority's SharePoint system.</p>	No	N/A	<p>Through discussions with the Workplace Development Manager, we confirmed that there has not been a direct roll out of training with regards to the input of data on IRS and there are not any plans to provide training on the new mobilising system. We also noted that neither control staff nor Fire Officers have any LearnPro/eLearning modules that relate to IRS completion.</p> <p>We did confirm that a Crew Manager development programme requires the role to 'Demonstrate the use of the Incident Recording System and the use of IRS to record a range of incidents'. The Workplace Development Manager advised that this is a competency required for the role and evidence is not required to be obtained to demonstrate completion of this competence.</p> <p>There is a risk that the Authority will be reporting information based on data input by insufficiently trained staff should appropriate training measures not be in place. This could lead inaccurate information being submitted onto IRS which could ultimately affect the delivery of the Authority's services.</p>	Medium	<p>The Head of Operations will consider whether full programme refresher training will be beneficial for all staff involved in the input of IRS data.</p> <p>The Head of Operations will progress development of a training package to support induction of new control staff and new fire officers.</p>

# APPENDIX A: SCOPE

## Scope of the review

To evaluate the adequacy of risk management and control within the system and the extent to which controls have been applied, with a view to providing an opinion. The scope was planned to provide assurance on the controls and mitigations in place relating to the following risks:

Objective of the risk under review	Risks relevant to the scope of the review	Risk source
To ensure that the service is supplied with accurate and up to date information upon which decisions can be made which impact on service delivery.	If we have inadequate data management due to poor implementation, inappropriate specification of requirements or poor quality control measures then we are at risk of using the wrong information throughout the organisation and thus potentially affecting the delivery of our services.	Risk Register

When planning the audit, the following areas for consideration and limitations were agreed:

### Areas for consideration:

A new incident reporting system is in the process of being implemented; our review will focus on the following areas:

- A review of the processes for collecting and cleansing data and the process for reviewing data accuracy and quality;
- The Quality Assurance process to ensure it is effective and findings from the reviews are reported and followed up;
- We will assess how the Authority ensures that the information in the system is reliable and accurate;
- The process for identifying lessons learnt;
- Evidence of training provided to staff to ensure data is input accurately;
- Reporting to management.

### Limitations to the scope of the audit assignment:

The following limitations apply to the scope of our work:

- The appropriateness of decisions made.
- We have not assessed the accuracy of data on the system but instead the processes in place at the Authority to assure themselves that the data can be relied upon
- We have not commented on the findings reported in the QA reports.
- Our work does not provide absolute assurance that material errors, loss or fraud do not exist.
- All testing was undertaken on a sample basis.

## APPENDIX B: FURTHER INFORMATION

Persons interviewed during the audit:

- Ian Evans, Area Commander - Head of Operations
- Adrian Turner, Service Performance Analyst
- Jason Tysoe, Software and Integration Engineer
- Jane Clarke, Service Control Manager

# FOR FURTHER INFORMATION CONTACT

Suzanne Lane, Senior Manager

[Suzanne.Lane@rsmuk.com](mailto:Suzanne.Lane@rsmuk.com)

07720 508148

**rsmuk.com**

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