

CBSL

ICT Review of the ICT Disaster Recovery Arrangements

Police and Crime Commissioner for
Wiltshire and Chief Constable of Wiltshire
Police

FINAL



June 2014

2013/14

ICT Review of the ICT Disaster Recovery Arrangements

- EXECUTIVE SUMMARY -

INTRODUCTION

1. We have reviewed the ICT Disaster Recovery arrangements at Wiltshire Police. The review was carried out in May 2013 as part of the planned internal audit work for 2013/14.

SUMMARY

2. One Key Risk Control Objective was identified and tested and based on the findings from this work an evaluation of the overall adequacy of the internal controls was established. (Figure 1 below).

Figure 1 - Evaluation of the Effectiveness of the Internal Controls



KEY FINDINGS

3. The key control and operational practice findings that need to be addressed in order to strengthen the control environment are set out in the Management and Operational Effectiveness Action Plans. Recommendations for improvements should be assessed by the Authority for their full impact before they are implemented. The priorities of the recommendations are summarised below (figure 2):

Figure 2 - Summary of Priorities of Recommendations

Urgent	Important	Routine	Operational
4	1	-	4

RELEASE OF REPORT

4. The table below sets out the history of this report.

Date draft report issued:	31 st May 2013
Date management responses recd:	18 th June 2014
Date final report issued:	18 th June 2014

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MANAGEMENT ACTION PLAN
PRIORITY 1, 2 AND 3 RECOMMENDATIONS

Rec.	Risk	Finding	Recommendation	Priority	Head of Finance Comments	Treasurer Comments	Implementation Timetable (dd/mm/yy)	Responsible Officer (Job Title)
1	Failure to direct the process through approved policy and procedures and/or losses arising from unauthorised action.	Wiltshire Police's existing BRP is out of date and needs to be updated by a new BRP that should be fully tested to ensure that all issues identified during the recent DR test have been fully addressed.	A new BRP be prepared at the earliest opportunity and then be fully tested once the remedial actions identified to address the issues found during the recent BR test have been completed.	1	<i>The BRP is currently under review following ICT improvements. A Complete review is due in September 2014 with a new BRP produced at that time. Over the last 3 months we have completed 2 full tests of our plans with minimal problems. This now needs to be documented and published.</i>		Oct 2014	<i>ICT Service Manager in agreement with the Major Incident Planning Officer</i>
2	Failure to direct the process through approved policy and procedures and/or losses arising from unauthorised action.	The new BRP needs to consider all possible DR events including the total loss of or the inability to access the Headquarters site.	The new BRP consider all potential DR events including the total loss of or the inability to access the HQ and WES buildings and their infrastructures.	1	<i>This is accepted. On a positive note the Force has recently been refurbishing areas of the HQ site which has required us to rely on the Swindon site. This has been a good test with positive outcomes.</i>		Oct 2014	<i>ICT Service Manager in agreement with the Major Incident Planning Officer</i>

PRIORITY GRADINGS

1	URGENT	Fundamental control issue on which action should be taken immediately.	2	IMPORTANT	Control issue on which action should be taken at the earliest opportunity.	3	ROUTINE	Control issue on which action should be taken.
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Rec.	Risk	Finding	Recommendation	Priority	Head of Finance Comments	Treasurer Comments	Implementation Timetable (dd/mm/yy)	Responsible Officer (Job Title)
3	Failure to direct the process through approved policy and procedures and/or losses arising from unauthorised action.	The BT Room at the Headquarters building is a known single point of failure. A short term interim solution needs to be implemented to address this risk whilst a permanent solution is investigated and implemented.	Short term temporary and long term permanent solutions be investigated to address the current risks relating to the loss of the BT Room at Headquarters.	1	Where possible Systems are gradually being moved out of this room to the WES building where the environment is more appropriate. Where single points of failure remain the BRP will detail which systems these are and ensure plans are in place to deal with any loss of service.		Oct 2014	ICT Service Manager in agreement with the Major Incident Planning Officer
4	Failure to direct the process through approved policy and procedures and/or losses arising from unauthorised action.	Wiltshire Police's current backup strategy does not provide a solution that would ensure that systems would be available in the event of the total loss of the Headquarters site.	A backup solution be implemented that would ensure that systems would be available in the event of the total loss of the Headquarters site.	1	This is currently being documented. We have recently used the Swindon Gablecross site as backup so the risk is now reduced.		Oct 2014	ICT Service Manager in agreement with the Major Incident Planning Officer

PRIORITY GRADINGS

1	URGENT	Fundamental control issue on which action should be taken immediately.	2	IMPORTANT	Control issue on which action should be taken at the earliest opportunity.	3	ROUTINE	Control issue on which action should be taken.
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Rec.	Risk	Finding	Recommendation	Priority	Head of Finance Comments	Treasurer Comments	Implementation Timetable (dd/mm/yy)	Responsible Officer (Job Title)
5	Failure to direct the process through approved policy & procedures and/or losses arising from unauthorised action.	Wiltshire Police does not currently have detailed DR procedures in place to support the BRP.	A detailed DR procedure be prepared to support the BRP and to provide guidelines of all necessary actions to be undertaken in a DR situation.	2	<i>This is being documented as part of the Business Recovery Plan.</i>		Oct 2014	<i>ICT Service Manager in agreement with the Major Incident Planning Officer</i>

PRIORITY GRADINGS

1 **URGENT** Fundamental control issue on which action should be taken immediately.

2 **IMPORTANT** Control issue on which action should be taken at the earliest opportunity.

3 **ROUTINE** Control issue on which action should be taken.

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OPERATIONAL EFFECTIVENESS MATTERS

Ref	Item	Management Comments
1	Copies of all server, switch, router and firewall configurations be stored securely off site and be updated whenever any changes are made to existing configurations.	<i>Due by September with key systems being reviewed by July.</i>
2	Copies of staff contact lists and supplier contact details be held in the off-site data repository along with hardware configurations.	<i>Due by September with key systems being reviewed by July.</i>
3	Detailed post test reviews be undertake after every DR test to ensure that all issues identified during the test have been captured so that they can be addressed.	<i>Planning for a significant test will start once the planning is complete in September.</i>
4	DR tests be undertaken once all of the issues identified during the previous test have been addressed to confirm that these issues have been fully addressed.	<i>Planning for a significant test will start once the planning is complete in September.</i>

ADVISORY NOTE

Operational Effectiveness Matters need to be considered as part of management review of procedures, rather than on a one-by-one basis

- DETAILED REPORT -**SCOPE AND LIMITATIONS OF THE REVIEW**

5. The review considered the extent to which Wiltshire Police has put into place arrangements which provides reasonable but not absolute assurance that the impact on the organisation of any major incident will be minimised. The scope of the review does not include providing assurance that the actual testing of hardware/software etc has been carried out effectively. The review did not include consideration of the local disaster recovery arrangements at individual stations.
6. The review has been carried out by TIAA Ltd as the nominated sub-contractor of Capita Business Services Ltd ('CBSL'). The limitations and the responsibilities of management in regard to this review are set out in the Annual Plan.
7. The matters raised in this report are only those that came to the attention of the auditor during the course of the internal audit review and are not necessarily a comprehensive statement of all the weaknesses that exist or all the improvements that might be made. This report has been prepared solely for management's use and must not be recited or referred to in whole or in part to third parties without our prior written consent. No responsibility to any third party is accepted as the report has not been prepared, and is not intended, for any other purpose. CBSL and TIAA neither owe nor accept any duty of care to any other party who may receive this report and specifically disclaims any liability for loss, damage or expense of whatsoever nature, which is caused by their reliance on our report.

ASSESSMENT OF THE KEY RISK CONTROL OBJECTIVE

8. This review identified and tested the controls that are being operated by the Authority and an assessment of the combined effectiveness of the controls in mitigating the key control risks is provided. The assessments are:

Substantial Assurance	Robust series of internal controls in place which should ensure continuous and effective achievement of the control objective.
Reasonable Assurance	Reasonable number of internal controls in place, however may not be operated all the time.
Limited Assurance	The controls in place are not sufficient to ensure the continuous and effective achievement of the control objective.
No Assurance	Fundamental breakdown or absence of core internal controls.

MATERIALITY

9. Wiltshire Police needs to have disaster recovery processes in place to ensure that its critical systems would continue to be available during any business continuity event to enable operations and services to be provided at an acceptable level.

AUDIT FINDINGS

Risk	Failure to direct the process through approved policy & procedures and/or losses arising from unauthorised action.
Risk Control Objective	Arrangements in place for the process provide for direction through established policies, procedures and provide for safeguarding the organisation's assets and interests from avoidable losses.
Evaluation	Limited Assurance

10. The following matters were identified in reviewing the Key Risk Control Objective:

Risk: Failure to direct the process through approved policy & procedures.

10.1 Wiltshire Police's Business Recovery Plan (BRP) was most recently reviewed in July 2010. The BRP was due for review in July 2011 but this review was not undertaken. The BRP is now so out of date that its value is very limited. The current BRP is based upon the continued availability of the Headquarters and WES building and existing infrastructure and does not address a DR event where access to these buildings and their infrastructure is not available. This has been recognised by the Operational Systems Improvement Manager. A list of existing systems has recently been to Operational Managers requesting that they identify those systems that are mission critical systems around which the new BRP will be formulated. A BR test was undertaken by Wiltshire Police during the week that this review was undertaken as the requirement to shut down the electrical supply to the Headquarter's site to undertake required electrical works provided an ideal opportunity for a BR test. The new BRP will be prepared using the experience obtained during the BR test.

Recommendation: 1

Priority: 1

A new BRP be prepared at the earliest opportunity and then be fully tested once the remedial actions identified to address the issues found during the recent BR test have been completed.

Recommendation: 2

Priority: 1

The new BRP consider all potential DR events including the total loss of or the inability to access the HQ and WES buildings and their infrastructures.

10.2 Discussions with the Operational Systems Improvement Manager identified that the BT Room in the Headquarters building is a known single point of failure as the loss of this room would result in the loss of Wiltshire Police's land line telephony resulting in the loss of voice and data links to all other sites including the WES building other than through the use of mobile telephones. Wiltshire Police needs to investigate both short term solutions to address the loss of the BT Room in the interim period and a long term solution to permanently address this risk. Wiltshire Police are investigating the

opportunities for developing a closer working relationship with Wiltshire Council including the possibility of sharing IT networks and this relationship may provide an opportunity to address the risks relating to the failure of the BT Room.

Recommendation: 3**Priority: 1**

Short term temporary and long term permanent solutions be investigated to address the current risks relating to the loss of the BT Room at Headquarters.

- 10.3 A detailed operational plan was prepared for the recent DR test that detailed all of the necessary actions to back up and shut down systems prior to bringing them back up in DR mode. A similar detailed DR procedure needs to be prepared to support the BRP to be used as guidelines in a DR situation.

Recommendation: 4**Priority: 2**

A detailed DR procedure be prepared to support the BRP and to provide guidelines of all necessary actions to be undertaken in a DR situation.

- 10.4 Wiltshire Police needs to ensure that details of all existing server, switch, router and firewall configurations are recorded and stores off site so that they would be available during any DR event and that change control processes are implemented to ensure that any changes to existing configurations are recorded and added to the off-site configuration depository.

Operational Effectiveness Matter: 1

Copies of all server, switch, router and firewall configurations be stored securely off site and be updated whenever any changes are made to existing configurations.

- 10.5 Copies of staff contact lists and supplier contact details be held in the offsite repository along with hardware configurations.

Operational Effectiveness Matter: 2

Copies of staff contact lists and supplier contact details be held in the off-site data repository along with hardware configurations.

- 10.6 The current DR test around the planned power shut down at the Headquarters and WES sites identified a number of problems with converting existing systems into DR mode. A detailed post test review needs to be undertaken after this and every future test to ensure that all issues experienced during the tests are captured and subsequently addressed to prevent their re-occurrence. Future DR tests need to be undertaken once all identified issues from the previous test have been addressed to ensure that the identified issues have been fully addressed.

Operational Effectiveness Matter: 3

Detailed post test reviews be undertake after every DR test to ensure that all issues identified during the test have been captured so that they can be addressed.

Operational Effectiveness Matter: 4

DR tests be undertaken once all of the issues identified during the previous test have been addressed to confirm that these issues have been fully addressed.

- 10.7 Wiltshire Police's current backup process is to backup systems between servers at the HQ and WES building on the Headquarter's site augmented by a partial backup to tape. Tapes are not taken from the HQ site but are stored in a different building on the HQ site. This strategy does not address the situation where access to the HQ site and its systems would not be available. In this instance, Wiltshire Police would be extremely vulnerable as it would not have access to existing systems or to backup tapes. A backup strategy needs to be implemented that ensures that sufficient off-site data would be available to re-build existing systems in the event of the total loss of the Headquarters site. Wiltshire Police does not currently have sufficient hardware available off-site to enable systems to be rebuilt even if full tape-backups were available and it is estimated that it would take at least one week to obtain sufficient hardware to enable this to happen. The possibility of sharing systems with Wiltshire Council may provide a medium term solution to this problem but Wiltshire Police needs to implement a short term solution to this problem.

Recommendation: 5**Priority: 1**

A backup solution be implemented that would ensure that systems would be available in the event of the total loss of the Headquarters site.
