

Audit and Assurance Committee Meeting

Date of Meeting	Tuesday 17 January 2023
Paper Title	Internal Audit Report – Disaster Recovery
Agenda Item	8
Paper Number	AAC2-D
Responsible Officer	Jim Godfrey, Finance & Resources Director
Status	Disclosable
Action	For Noting and Comment

1. Executive Summary

- 1.1. The internal audit report on disaster recovery has been prepared by Henderson Loggie and is provided to the committee for consideration.

2. Recommendations

- 2.1. The committee is invited to:

- **consider** the internal audit report on disaster recovery and **comment** as appropriate.
- **note** that the level of assurance is 'satisfactory' and there is one recommendation arising from this review.

3. Report

- 3.1.** The Internal Auditor has provided a report on disaster recovery using the scope of works approved by this committee at its meeting in March 2022.
- 3.2.** The attached report shows the key findings and the level of assurance, which the internal auditor has stated is 'satisfactory'. There is one recommendation arising from this review.

4. Risk and Compliance Analysis

- 4.1.** The work of the Internal Auditor is informed by an assessment of risk. The approach to audit planning reflects an overall assessment of the relevant risks that apply to GCRB. This ensures that the audit focuses on the areas of highest risk.
- 4.2.** There are no legal implications as a result of this report.

5. Financial and Resource Analysis

- 5.1.** The internal audit programme 2021-22 is based upon a requirement of 18 days per annum. This report was scheduled to utilise 3 days of the 2021-22 allocation. The cost per day is based upon the price previously tendered by Henderson Loggie.

6. Equalities Implications

- 6.1.** There are no equalities implications as a direct result of this report.

7. Learner Implications

- 7.1.** Through the conditions of grant associated with the Regional Outcome Agreement, GCRB is required to conduct its affairs in accordance with the expected standards of good governance, which includes independent scrutiny and audit.

LEVEL OF ASSURANCE

Satisfactory

Glasgow College's Regional Board

Disaster Recovery

Internal Audit report No: 2022/06

Draft issued: 9 January 2023

Final issued: 9 January 2023



		Page
Section 1	Management Summary	
	<ul style="list-style-type: none"> • Overall Level of Assurance • Risk Assessment • Background • Scope, Objectives and Overall Findings • Audit Approach • Summary of Main Findings • Acknowledgements 	<p>1</p> <p>1</p> <p>1</p> <p>2</p> <p>2</p> <p>3</p> <p>3</p>
Section 2	Main Findings and Action Plan	4 - 7

Level of Assurance

In addition to the grading of individual recommendations in the action plan, audit findings are assessed and graded on an overall basis to denote the level of assurance that can be taken from the report. Risk and materiality levels are considered in the assessment and grading process as well as the general quality of the procedures in place.

Gradings are defined as follows:

Good	System meets control objectives.
Satisfactory	System meets control objectives with some weaknesses present.
Requires improvement	System has weaknesses that could prevent it achieving control objectives.
Unacceptable	System cannot meet control objectives.

Action Grades

Priority 1	Issue subjecting the organisation to material risk and which requires to be brought to the attention of management and the Audit and Assurance Committee.
Priority 2	Issue subjecting the organisation to significant risk and which should be addressed by management.
Priority 3	Matters subjecting the organisation to minor risk or which, if addressed, will enhance efficiency and effectiveness.



Management Summary

Overall Level of Assurance

Satisfactory	System meets control objectives with some weaknesses present
---------------------	--

Risk Assessment

This review focused on the controls in place to mitigate the following risks on the Glasgow Colleges Regional Board ('the GCRB') Strategic Risk Register:

Cross cutting risk 17 - Scenario planning and stress testing is inadequate to mitigate against major incidents (net risk score – 4)

Background

As part of the Internal Audit programme at the GCRB for 2021/22 we carried out a high-level review of all elements necessary to support continued operation of GCRB and the Glasgow Colleges to meet stakeholder, financial and regulatory expectations during unplanned events and service interruptions. This is an area where risk can arise and where Internal Audit can assist in providing assurances to the Executive Director and the Audit and Assurance Committee that the related control environment is operating effectively, ensuring risk is maintained at an acceptable level.



Scope, Objectives and Overall Findings

The objectives of this audit were to assess the ability of GCRB and the three Glasgow Colleges to execute backup plans and operate critical priority operations during an unplanned event and recover to business as usual (BAU) after the unplanned event.

The table below notes each separate objective for this review and records the results:

Objective	Findings			
	1	2	3	
The objective of our audit was to obtain reasonable assurance that	No. of Agreed Actions			
1. There are effective arrangements in place around: <ul style="list-style-type: none"> • Documentation of business continuity and disaster recovery requirements and procedures; • Identification and prioritisation of business operations; • Identification of requirements for continued operations in the event of an emergency or service disruption; • Backup/scenario and workaround planning; • Testing of backup and recovery systems, locations and personnel; and • Tracking and reporting of business continuity testing results. 	Satisfactory	-	1	-
Overall Level of Assurance	Satisfactory	-	1	-
		System meets control objectives with some weaknesses present		

Audit Approach

Through discussions with the GCRB Finance and Resources Director, and review of supporting information communication provided by two of the three assigned Colleges, we have reviewed the extent to which the arrangements in place across the three Colleges meet the objectives above, recognising that the absence of a response to our request for information from Glasgow Clyde college limits our ability to present an up to date picture around the college's arrangements or the extent to which they have been tested and reported.



Summary of Main Findings

Strengths

- The GCRB risk register contains a specific cross cutting risk around scenario planning and stress testing to mitigate against major incidents;
- In GKC the Audit and Risk Committee now receive a bi-annual report on the Business Continuity Plan (BCP);
- The adequacy of the Business Continuity Plan for GKC was reviewed in early 2020, as part of the Internal Audit programme for 2019/20. The College also commissioned a separate review of the Business Continuity Plan, which was conducted by external consultants as part of the contract with UMAL, the College's insurance provider. Both internal audit and UMAL reported that the Business Continuity Plan was robust and was operating effectively.
- In GKC a tabletop exercise was conducted in May 2022 which created a scenario of a major power outage affecting central Scotland. The exercise allowed the College to rehearse the incident management and business continuity response and rehearse the ability of the team to respond and recover to the incident;
- In January 2019 COGC engaged external consultants to conduct a full cross-College business impact analysis, to inform the development of detailed Business Recovery Planning across all College teaching and support functions;
- In CoGC, the IT Management Team participated in a National Cyber Security Centre (NCSC) supported BCP\Cyber Response exercise on 15 September 2022 to run through how the College would cope with a ransomware attack. This exercise was conducted in advance of an externally facilitated scenario test of the ICT recovery plans, which was conducted by Ashton Resilience in October 2022; and
- In GCC, Business Continuity Planning was subject to internal audit review as part of a review of Risk Management conducted in the College as part of the 2020/21 programme of internal audit activity. The grading of this report was Satisfactory. This report (issued in May 2021) confirmed that a Business Continuity Plan was in place, which was subject to ongoing review by the Senior Leadership Team. We also confirmed that a business continuity test exercise was undertaken in February 2020, in advance of the COVID-19 pandemic.

Weaknesses

- Although regular updates are provided to the GCRB Audit and Assurance Committee, regarding issues discussed at the College Audit Committees, there is no systematic process in place to allow GCRB to obtain confirmation that there are effective disaster recovery arrangements in place and that these disaster recovery arrangements have been subject to appropriate testing.

Acknowledgments

We would like to take this opportunity to thank the staff at GCRB, GKC and CoGC who helped us during our audit.



Main Findings and Action Plan

Objective 1 - There are effective arrangements in place around:

- **Documentation of business continuity and disaster recovery requirements and procedures;**
- **Identification and prioritisation of business operations;**
- **Identification of requirements for continued operations in the event of an emergency or service disruption;**
- **Backup/scenario and workaround planning;**
- **Testing of backup and recovery systems, locations and personnel; and**
- **Tracking and reporting of business continuity testing results.**

GCRB

GCRB require confidence that an effective review process is in place for business continuity planning and disaster recovery and that there is an effective mechanism for identifying and disseminating lessons learned. In practice, this should link into risk management reporting.

At present, GCRB is reliant on City of Glasgow College (CoGC) for the provision of Estates, IT and Financial processing services and therefore this places an increased emphasis on GCRB to ensure that there are effective arrangements in place to execute backup plans and operate critical priority operations during an unplanned event and recover to business as usual (BAU) after the unplanned event.

The GCRB risk register contains a specific cross cutting risk around scenario planning and stress testing to mitigate against major incidents and the mitigating action in place is as follows “Planning and responsive actions were put in place to establish Executive Team, Committee and Board ways of working through the impact of Covid-19. These plans continue to be developed and tested to include Disaster Recovery and Scenario Planning activity. Ways of working are regularly considered and discussed by the Executive Team”.

Glasgow Kelvin College

The Audit and Risk Committee now receive a bi-annual report on the Business Continuity Plan (BCP). The latest iteration of the BCP (version 0.4.4) was issued in January 2022 following submission to the Audit and Risk Committee in November 2021. This iteration of the BCP contains the ICT Recovery Plan as an appendix.

The adequacy of the Business Continuity Plan was reviewed in early 2020, as part of the Internal Audit programme for 2019/20. The grading of the internal audit report was Good. The College also commissioned a separate review of the Business Continuity Plan, which was conducted by Ashton Consultancy as part of the contract with UMAL, the College’s insurance provider. Both internal audit and UMAL reported that the Business Continuity Plan was robust and was operating effectively.



Objective 1 - There are effective arrangements in place around:

- **Documentation of business continuity and disaster recovery requirements and procedures;**
- **Identification and prioritisation of business operations;**
- **Identification of requirements for continued operations in the event of an emergency or service disruption;**
- **Backup/scenario and workaround planning;**
- **Testing of backup and recovery systems, locations and personnel; and**
- **Tracking and reporting of business continuity testing results. (Continued)**

Glasgow Kelvin College (Continued)

A tabletop exercise was conducted in May 2022 which created a scenario of a major power outage affecting central Scotland. The exercise allowed the College to rehearse the incident management and business continuity response and rehearse the ability of the team to respond and recover to the incident. We reviewed the planning documentation, the slides for the scenario workshops and the lessons learned document produced and confirmed that the exercise was comprehensive and was delivered in line with the planned approach.

The November 2021 Audit and Risk Committee update provided to GCRB by Glasgow Kelvin College advised that *“Members were provided with a copy of the Business Continuity Plan and received assurance that this plan was regularly tested every 6 months covering a range of scenarios. A member of the corporate team was also now BCI qualified, achieving the qualification with distinction”*.

City of Glasgow College

Similar to GKC, City of Glasgow College commissioned Ashton Resilience to conduct a strategic review of business continuity management in March 2018, for the College insurers UMAL. In summary the report found that the College had a “well-developed operational response to incidents, however there was a need for all departments “to develop, implement and maintain a functional recovery process”.

Business Continuity Planning arrangements were reviewed as part of the 2021/22 programme of internal audit activity. The review of business continuity planning considered whether there were adequate plans in place to minimise disruption to College operations following loss of life, buildings or equipment. The review also included a specific focus around the work that was undertaken to allow College operations to continue during the COVID-19 pandemic and reopen College campuses as the lockdown was eased. The review also looked at the student experience through the lockdown period. The grading of the report was Good.

In January 2019 Ashton Resilience were engaged to conduct a full cross-College business impact analysis, to inform the development of detailed Business Recovery Planning across all College teaching and support functions. This work was completed in September 2019. 16 departmental Business Recovery Plans (BRPs) are now in place, which cover all of the College’s activities and locations. The ICT BRP is supported by a number of related plans.



Disaster Recovery

Objective 1 - There are effective arrangements in place around:

- **Documentation of business continuity and disaster recovery requirements and procedures;**
- **Identification and prioritisation of business operations;**
- **Identification of requirements for continued operations in the event of an emergency or service disruption;**
- **Backup/scenario and workaround planning;**
- **Testing of backup and recovery systems, locations and personnel; and**
- **Tracking and reporting of business continuity testing results. (Continued)**

City of Glasgow College

We were advised that the BRPs proved extremely valuable during the COVID-19 pandemic and have been subject to regular review, most recently in February 2022 when a process commenced to revise the BRPs to include lessons learned from implementation. We confirmed that BRPs have been prepared using a consistent format, which reflects recognised good practice.

We confirmed that a College wide Business Continuity Plan (Incident Management Plan) was in place, which is subject to regular review and updating. We also confirmed that on 15 September 2022, the IT Management Team participated in a National Cyber Security Centre (NCSC) supported BCP\Cyber Response exercise to run through how the College would cope with a ransomware attack. This exercise was conducted in advance of an externally facilitated scenario test of the ICT recovery plans, which was conducted by Ashton Resilience in October 2022. The outcomes from this session will inform future discussion at the Audit and Assurance Committee around Risk Map 12 (Failure of Business Continuity) and Risk Map 25 (Failure of IT System Security).

Glasgow Clyde College

We did not receive a response to our request for information regarding the business continuity/ disaster recovery arrangements for the College.

However, Business Continuity Planning was subject to internal audit review as part of a review of Risk Management conducted in the College as part of the 2020/21 programme of internal audit activity. The grading of this report was Satisfactory. This report (issued in May 2021) confirmed that a Business Continuity Plan was in place, which was subject to ongoing review by the Senior Leadership Team. We also confirmed that a business continuity test exercise was undertaken in February 2020, in advance of the COVID-19 pandemic. We were advised that business continuity activity during the COVID-19 pandemic had been guided by the Business Continuity Plan, initially through a separate Project Group (originally with five sub-groups) and latterly through SLT with updates provided by nominated leads.



Disaster Recovery

Objective 1 - There are effective arrangements in place around:

- Documentation of business continuity and disaster recovery requirements and procedures;
- Identification and prioritisation of business operations;
- Identification of requirements for continued operations in the event of an emergency or service disruption;
- Backup/scenario and workaround planning;
- Testing of backup and recovery systems, locations and personnel; and
- Tracking and reporting of business continuity testing results. (Continued)

Observation	Risk	Recommendation	Management Response
<p>As highlighted above, although regular updates are provided to the GCRB Audit and Assurance Committee, regarding issues discussed at the College Audit Committees, there is no systematic process in place to allow GCRB to obtain confirmation that:</p> <ul style="list-style-type: none"> • There are effective disaster recovery arrangements in place; and • That these disaster recovery arrangements have been subject to appropriate testing. 	<p>There is a risk that GCRB will not obtain regular assurances regarding the business continuity planning / disaster recovery arrangements in place and the extent to which these arrangements have been tested and lessons learned.</p>	<p>R1 – All three Colleges should be asked by GCRB to complete an annual return which confirms that there are effective disaster recovery arrangements in place and that these have been subject to appropriate testing during the year in question.</p> <p>The lessons learned from these testing exercises should also be gathered from each of the Colleges to allow GCRB to determine whether a regional approach would be beneficial to address any issues identified. The outcomes from this annual exercise should be reported to the GCRB Audit and Assurance Committee.</p>	<p>GCRB would be happy to undertake this course of action by requesting an annual return from the Glasgow colleges.</p> <p>An appropriate timescale for the request and annual cycle will be agreed with the Audit and Assurance Committee chair, and this will be discussed with the relevant committee chairs of the Glasgow colleges.</p> <p>This plan will be completed by June 2023.</p> <p>To be actioned by: Executive Director / AAC Chair</p> <p>No later than: 30 June 2023</p>
			<p>Grade 2</p>



Aberdeen 45 Queen's Road AB15 4ZN

Dundee The Vision Building, 20 Greenmarket DD1 4QB

Edinburgh Ground Floor, 11-15 Thistle Street EH2 1DF

Glasgow 100 West George Street, G2 1PP

T: 01224 322 100

T: 01382 200 055

T: 0131 226 0200

T: 0141 471 9870

F: 01224 327 911

F: 01382 221 240

F: 0131 220 3269

Henderson Loggie LLP is a limited liability partnership registered in Scotland with registered number SO301630 and is a member of PrimeGlobal, a global association of independent accounting firms, the members of which are separate and independent legal entities. Registered office is: The Vision Building, 20 Greenmarket, Dundee, DD1 4QB. All correspondence signed by an individual is signed for and on behalf of Henderson Loggie LLP. Reference to a 'partner' is to a member of Henderson Loggie LLP. A list of members' names is available for inspection at each of these addresses.

