

Board of Management Audit Committee

Date of Meeting	Wednesday 13 September 2017
Paper No.	AC1-F
Agenda Item	8.2
Subject of Paper	Internal Audit Report – Planned Maintenance
FOISA Status	Disclosable
Primary Contact	Henderson Loggie
Date of production	August 2017
Action	For Discussion and Decision

Recommendations

The Committee is asked to consider and discuss the report and the management responses to the internal audit recommendations.

1. Purpose of report

The purpose of this review is to provide management and the Audit Committee with assurance on key controls relating to the curriculum and financial plans in place for City of Glasgow College and their alignment with the regional plan for Glasgow and the college student number targets.

2. Context and Discussion

Following the Audit Needs Assessment undertaken by Henderson Loggie in session 2016-17, and the consequent Internal Audit Strategic Plan 2016-2020, both approved by the Committee in March 2017, an operating plan was created for the year ended 31 July 2017.

This internal audit of Planned Maintenance provides an outline of the objectives, scope, findings and graded recommendations as appropriate, together with management responses. This constitutes an action plan for improvement.

The Report includes a number of audit findings which are assessed and graded to denote the overall level of assurance that can be taken from the Report. The 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.

3. Impact and implications

Refer to internal audit report.

City of Glasgow College

Planned Maintenance

Audit Report No: 2017/09

Draft issued: 28 July 2017
2nd Draft issued: 22 August 2017

Final issued: 30 August 2017

LEVEL OF ASSURANCE:

Satisfactory

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

1. Overall Level of Assurance

Satisfactory

System meets control objectives with some weaknesses present.

2. Risk Assessment

This review focused on the controls in place to mitigate the following risks on the City of Glasgow College ('the College') Risk Register:

- Failure to achieve New Campus objectives (net risk score: 5);
- Negative impact upon College reputation (net risk score: 10); and
- Negative impact of statutory compliance failure (net risk score: 5).

3. Background

As part of the Internal Audit programme at the College for 2016/17 we carried out a review of the planned maintenance framework in place over the College's premises. The Audit Needs Assessment, completed in March 2017, identified this as an area where risk can arise and where Internal Audit can assist in providing assurances to the Board of Management and the Principal that the related control environment is operating effectively, ensuring risk is maintained at an acceptable level.

The College's new campuses were funded through a Non-Profit Distributing (NPD) arrangement, whereby a private consortium, GLQ, designed, built and will maintain the campuses over a 25-year period. The College will make unitary charge payments to the consortium over this period. Under the contract GLQ is responsible for Hard Facilities Management (FM) services such as building and fabric maintenance (both planned and reactive). Responsibility for Soft FM, such as cleaning and grounds maintenance, is split between the College and GLQ.

Ensuring there is an appropriate level of planned preventative maintenance is important to ensure that whole lifecycle costs of the College's estate are minimised, as well as ensuring that statutory maintenance requirements are met.

There is a Project Agreement between the College and GLQ, which sets out the responsibilities of both the College and GLQ regarding planned maintenance. The Project Agreement includes a number of Performance Standards, some of which are relevant to planned maintenance. As part of the Project Agreement there is also a schedule of all items that need to be maintained and the frequency of their maintenance.

GLQ have sub-contracted some aspects of their contract with the College to a single main external contractor. This external contractor uses an asset management system, Maximo, to record the required planned maintenance, and each month planned maintenance jobs are assigned to operatives for completion. The College's Estates and Facilities teams are involved in monitoring completion of planned maintenance jobs by the external contractor. For the purposes of this report we will only refer to GLQ, rather than the external contractor, as the contractual arrangement is between the College and GLQ.

4. Scope, Objectives and Overall Findings

This audit reviewed the arrangements in place to monitor the performance of GLQ against the terms of the contract in relation to planned maintenance.

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

Objective	Findings			
	Assurance	1	2	3
The objective of this audit was to obtain reasonable assurance that:		No. of Agreed Actions		
1. Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme	Satisfactory	0	0	4
Overall Level of Assurance	Satisfactory	0	0	4
		System meets control objectives with some weaknesses present.		

5. Audit Approach

We reviewed the terms of the contract with GLQ to identify what its responsibilities were in relation to planned maintenance. Through discussion with the College's Vice Principal Infrastructure, Head of Estates, Head of Facilities, Soft Services Manager and GLQ's Facilities Management Manager, and review of documentation, we then established the systems and controls which had been put in place to ensure that these responsibilities were met. We have included in this report any areas where expected controls were found to be absent or where controls could be further strengthened. Compliance testing was carried out where considered appropriate to ensure that the controls in place were operating effectively.

6. Summary of Main Findings

Strengths

- The responsibilities of GLQ regarding planned maintenance are clearly set out in the Project Agreement, including through Performance Standards and in a schedule of assets requiring planned maintenance and the frequency for their maintenance.
- The Maximo system is used to record the frequency when assets require planned maintenance to be undertaken, and this is used to produce job cards each month for preventative maintenance jobs. The job cards are sent directly to handheld Personal Digital Assistants (PDAs) used by GLQ operatives who are based on the College campus, or the job cards are printed out in hard copy for contractors.
- Monthly reports are provided which show the number of planned maintenance jobs that have been completed and these reports are monitored by the Soft Services Manager.
- Weekly operational meetings are held to discuss completion of the planned maintenance programme and these are supplemented by more monthly meetings which are attended by the Vice Principal Infrastructure and representatives from the appointed contractor.
- The Monthly reports are subject to scrutiny by the College and a detailed report is produced which allows clarification to be sought from the contractor on specific job cards. In addition, this report sets out any identified breaches of the terms of contract and highlights those areas where a deduction should apply and instructs the contractor to reissue the Planned Maintenance report once the deductions have been agreed.
- College staff have demonstrated a suitable level of understanding of the contract and have been successful at applying the existing facilities management standards to achieve recurring monthly deductions. This approach has resulted in significant clawbacks from the contractor, such as the £119K clawback on planned preventative maintenance achieved for the month of November 2016.

Weaknesses

- We noted that there were a number of opportunities for improvement in the planned maintenance systems operated by GLQ. Whilst these are operational issues outwith the direct control of the College it was felt appropriate to capture these issues and include them in a letter to the Vice Principal Infrastructure to ensure that the issues identified are raised through the appropriate channels with GLQ.
- There is currently no quality standard in place which sets out the level of detail required to be recorded and retained to evidence how planned maintenance work has been carried out. Agreement between the College and GLQ on the level of detail required and how and when this evidence will be shared would assist both parties in complying with the information requirements described in Performance Standards FM21 and FM51.
- Although the College does carry out 10% sample checking of planned preventative maintenance jobs there are no formal procedures for selecting the sample, no set criteria to ensure a focus on higher risk items, and no formal timetable agreed for ensuring that any queries identified are followed up timeously with the contractor to ensure that the underlying reasons for any failures are properly understood and recorded to prevent recurrence.
- Checks should be undertaken by the College to identify any planned maintenance items which have not been undertaken in line with the Annual Planned Maintenance Schedule, and these should be followed up on a timely basis.

7. Acknowledgements

We would like to take this opportunity to thank the staff at the College who helped us during the course of our audit visit.

8. Main Findings and Action Plan

Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme

Background and High Level Overview of Processes

GLQ have sub-contracted some aspects of their contract with the College to one main external contractor. This external contractor uses an asset management system, Maximo, to detail all the required planned maintenance.

There is a Project Agreement between the College and GLQ which sets out the responsibilities of both the College and GLQ regarding planned maintenance. The Project Agreement includes a number of Performance Standards, for which some are relevant to planned maintenance. As part of the Project Agreement there is also a schedule of all items that need to be maintained and the frequency of their maintenance. The College have had external consultants prepare a 'Contract Handbook' which summarises the key aspects of the Project Agreement for College staff to refer to. GLQ have created an 'Operations and Maintenance Manual' setting out for assets in the College a range of information, such as technical information and maintenance requirements (manufacturer's maintenance frequency and maintenance standards to be applied).

Under the Project Agreement Performance Standards there is required to be a five yearly and also Annual Planned Maintenance Schedule. GLQ has prepared these schedules in spreadsheets which set out what is required to be maintained (down the left) and graphically shows which week/s in the year planned maintenance is to be undertaken on these assets (weeks across the top).

At the start of each month the College's Soft Services Manager identifies the planned maintenance tasks to be undertaken that month from the Annual Planned Maintenance Schedule and send this to GLQ to remind them of their planned maintenance jobs for the month. GLQ administration staff assign the planned maintenance tasks to either a) GLQ operatives in their Maximo system, with the operatives assigned based on GLQ administration staff knowledge of what each operative can do or b) if the work is to be done by a contractor, then GLQ will contact the contractor (if not already contacted by them) and arrange a time for the contractor to come in and do the work.

If the work is to be done by GLQ operatives then the Maximo system automatically sends the job to the GLQ operative's handheld PDA when this is assigned to them. The GLQ operative has until the end of the month to complete the job and it is up to them as to when they schedule this. When the operative starts the job they will look for an appropriate maintenance standard to use on their PDA, with PDAs having a list of maintenance standards from the 'SFG20' maintenance standards. We noted that there may not always be appropriate SFG20 standards for all planned maintenance items. In addition, the SFG20 standards may not be in line with manufacturer's maintenance guidance (which are set out in the Operations and Maintenance Manual). Furthermore, from detailed testing we noted that not all assets requiring planned maintenance had manufacturers' maintenance instructions in the Operations and Maintenance Manual, despite attempts from the College to complete this. Once the job is finished the GLQ operative closes this off on their PDA and then this updates Maximo on a real-time basis.

Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Background and High Level Overview of Processes (Continued)

If work is done by external contractors then when the contractor comes on site they must sign in, have any Permits to Work completed, and provide evidence of appropriate training or qualifications (for higher risk work) before being allowed to work. After the work has been completed the relevant paperwork is provided to the GLQ administration staff for input into Maximo and closure of the job.

A monthly report is provided by GLQ to the College and sets out the number of planned maintenance jobs scheduled for the month, and identifies the number of any outstanding scheduled planned maintenance items.

The Soft Services Manager selects approximately 10% of the planned maintenance jobs for that month (from a report attached to the monthly report) and checks on Maximo that these have been completed, that appropriate documentation has been attached, and that the description of the work done is adequate. Where there are queries or insufficient documentation then this information is sent to GLQ to provide the documentation and explanations for any queries. We noted that, at the time of audit fieldwork in early July 2017, that although these checks had been completed for February to May 2017 the queries had only been forwarded to GLQ for comment in June 2017 and that responses had not been received at the time of the audit fieldwork. We note that the Performance Standard requires that replies to queries should be made within one business day.

We confirmed that there were regular internal College meetings, and meetings with College, GLQ and representatives from the main external contractor where issues could be raised.

The Head of Estates advised that a number of areas for improvement regarding planned maintenance and other areas had been noted by the College and that a Quality Improvement Plan was being put together to highlight to GLQ in order for them to rectify these issues.

Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Control and Process Weaknesses Noted

We noted from review of processes and from detailed testing a number of weaknesses including:

- The Annual and Five Yearly Planned Maintenance Schedules did not set out the maintenance standard to be used and the location of the maintenance requirements from the Operations and Maintenance Manual. As a result, the GLQ operative or external contractor undertaking the maintenance may select and apply the incorrect maintenance standard;
- GLQ were required to undertake a quarterly review and update of the Annual Planned Maintenance Schedule but this had not been completed. When there are changes to the Annual Planned Maintenance Schedule there would be benefit in a change log being used to record all changes to the previous iteration;
- The Operations and Maintenance Manual was not complete, with some assets on the Annual Planned Maintenance Schedule not able to be identified in the Operations and Maintenance Manual. We identified one instance where although the asset was found in the Operations and Maintenance Manual the maintenance requirements reference logged related to a document that could not be located;
- Where there are multiple numbers of the same asset robust procedures were not in place to identify all of these assets and provide operatives undertaking planned maintenance with aids to ensure that all such assets were maintained;
- There was not always evidence that checks had been undertaken to ensure that GLQ staff and contractors assigned to jobs had the required experience, skills and qualifications to undertake the maintenance tasks they were assigned to. The training matrices which were required to be completed for GLQ operatives setting out the skills and experience of their staff had not been completed at the time of audit fieldwork;
- The level of detail of the narrative held on Maximo regarding maintenance work completed by GLQ operatives and on contractors' paperwork was inconsistent, but often did not set out which maintenance standard or maintenance instructions had been applied, and this in turn made it difficult to determine whether adequate planned maintenance had been undertaken;
- Not all hard copy paperwork to support work completed, such as contractors' paperwork, was scanned and attached to the planned maintenance jobs on Maximo;
- We found that although there were some planned maintenance activities related to assets requiring statutory maintenance, it was not clear whether the planned maintenance work being undertaken was adequate to cover all of the statutory requirements;
- GLQ were not undertaking internal quality checks over planned maintenance apart from periodic supervisor visits to operatives or contractors whilst planned maintenance work was being carried out, although it was identified that these checks by the supervisor were not formally recorded;
- Although there were quality checks completed by the College, there was no check undertaken to determine whether the monthly list of completed and outstanding maintenance jobs was in line with the Annual Planned Maintenance Schedule.; and
- Although checking mechanisms have been in place within the College for some time and the outcomes from these checks and reviews are used to inform the discussion at weekly and monthly meetings with the contractor, the College does not have formal procedures setting out how planned maintenance monitoring under the contract with GLQ will be undertaken to ensure consistency in the approach.

Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Observation	Risk	Recommendation	Management Response	
<p>Areas for Improvement Relating to GLQ Areas of Responsibility</p> <p>A number of the weaknesses noted above relate to operational areas where GLQ is responsible for processes and controls. Therefore, to ensure that a) the issues identified during the course of our fieldwork are not lost and that b) members of the Audit Committee gain assurance (through the formal internal audit Follow Up process) that the issues identified have been followed up with GLQ, a letter has been provided to the Vice Principal Infrastructure setting out the issues identified which relate to GLQ areas of responsibility.</p>	<p>GLQ may not be in a position to demonstrate to the College that planned maintenance undertaken is adequate, is timely, is carried out by appropriately skilled individuals, or can be adequately documented as evidence of work being done.</p>	<p>R1 Raise with GLQ the matters highlighted in our separate letter which documents the operational issues identified during our fieldwork, which lie within their areas of responsibility, and obtain assurances from GLQ on how and when they will take the action required to address the areas for improvement noted.</p>	<p>This recommendation (the contents of which will help us and FES going forward) is sensible, accepted and will be actioned.</p> <p>To be actioned by:</p> <p>Fares Samara, Vice Principal Infrastructure (as the named responsible person within the Project Agreement).</p> <p>No Later Than:</p> <p>Immediately</p>	
			<p>Grade</p>	<p>3</p>

Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Observation	Risk	Recommendation	Management Response			
<p>Areas for Improvement Relating to College Areas of Responsibility</p> <p>The College has introduced planned maintenance checking, in the form of random sampling and checking of a) information from Maximo on the completion of monthly planned maintenance requirements (via the review of monthly reports from GLQ) and b) checking of the appropriateness of the planned maintenance undertaken (through review of planned maintenance job descriptions on Maximo or from contractors' hard copy documentation).</p> <p>We have been provided with evidence of detailed review of the Monthly Reports submitted for planned preventative maintenance to the College by the contractor. The output from this monthly review provides the opportunity to seek clarification from the contractor on specific job cards. It also provides the opportunity to highlight areas where contractual obligations have not been met and where improvements are required or where deductions should apply in relation to contract failures.</p> <p>Both the sample checking and the monthly review procedures would benefit from further development and formal documentation.</p>	<p>Existing planned maintenance monitoring controls may be insufficient to consistently determine whether a) all planned maintenance has been undertaken b) the planned maintenance undertaken was adequate and completed to the required standard.</p>	<p>R2 Existing informal procedures covering the College's planned maintenance monitoring framework and planned maintenance checks should be enhanced and formally documented. Specific enhancements should include: defining the process which should be followed to select the 10% sample checks (including a requirement that sample testing should include a number of higher risk items); set out the agreed process for ensuring that queries are followed up in a timely fashion; and require the recording of reasons for performance issues identified so that lessons can be learnt and appropriate action (such as targeted training for example) to prevent a recurrence.</p>	<p>This recommendation is accepted and will be actioned. A full and formal procedure for monitoring the planned maintenance will be created. The 10% sampling approach will ensure that over the year as much of the PPM is covered by the sampling approach and will focus on higher risk items and on statutory compliance items.</p> <p>To be actioned by: Steven Giannandrea, Manager supported by Fergal MacAulay, Head of Service</p> <p>No Later Than: Procedure completed by 31 October 2017 10% Sampling adjusted & ongoing</p> <table border="1"> <tr> <td>Grade</td> <td>3</td> </tr> </table>		Grade	3
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Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Observation	Risk	Recommendation	Management Response		
<p>Areas for Improvement Relating to College Areas of Responsibility (Continued)</p> <p>From discussion with the GLQ Facilities Manager it was noted that GLQ does not have any quality standard setting out what level of detail is required to be documented to evidence undertaking the planned maintenance work, such as the stating the maintenance standard applied and recording readings taken for tests (where appropriate), and including notes about any issues raised and how these have been resolved. This would be applicable for both GLQ operatives and external contractors.</p> <p>Performance Standard FM51 states 'Project Co shall ensure all information and records are up to date, accurate, in the agreed format and available for inspection by the College.' We note that the format of records (which we consider also includes the level of detail) has not been formally agreed between GLQ and the College.</p> <p>Performance Standard FM21 states 'Request for Information responded to in a timely fashion in accordance with Clause 62'. We note that such information is required to be provided by GLQ within one business day however this was not being complied with.</p>	<p>Without a shared understanding of the level of information which requires to be captured and recorded, on planned maintenance jobs completed, it may not be possible to determine whether planned maintenance undertaken has been completed to the required standard.</p>	<p>R3 There would be benefit in the College and GLQ agreeing the level of detail, the availability of records, and the processes to be followed to ensure timely provision of information as required by Performance Standards FM21 and FM51. Guidance should be issued on recording information on job cards, such as the maintenance standard used and issues noted, including follow up requirements. This should apply to all job cards, irrespective of whether they are completed by GLQ operatives or a sub-contractor.</p>	<p>We agree that the PPM schedule will benefit greatly from the suggested level of detail. The recommendation correctly focuses on the relevant performance standard within the PA as failure to meet these standards will result in deductions.</p> <p>To be actioned by: Heather Taylor, Manager supported by Leslie Paterson, Head of Service</p> <p>No Later Than: 31 December 2017</p> <table border="1"> <tr> <td>Grade</td> <td>3</td> </tr> </table>	Grade	3
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Objective 1: Appropriate controls have been put in place to ensure that GLQ is carrying out the agreed planned maintenance programme (Continued)

Observation	Risk	Recommendation	Management Response		
<p>Areas for Improvement Relating to College Areas of Responsibility (Continued)</p> <p>Currently after each month has finished a list of the outstanding planned maintenance tasks, as identified from Maximo, is reviewed by the College and noted on a spreadsheet for follow-up. We noted however that there was no check done to ensure that the planned maintenance jobs on Maximo for that month agreed to the list of items on the Annual Planned Maintenance Schedule.</p>	<p>If some of the required planned maintenance jobs from the Annual Planned Maintenance Schedule are not entered onto Maximo then the required planned maintenance may be delayed or may not be undertaken.</p>	<p>R4 The College should undertake a more comprehensive reconciliation of planned maintenance work undertaken each month against planned maintenance work planned for that month. This could be through:</p> <ul style="list-style-type: none"> having a standard Maximo report (which the College would have access to) showing planned maintenance jobs raised, their completion status, and date of completion (where completed). The list of planned maintenance jobs should be compared to the Annual Planned Maintenance Schedule spreadsheet to ensure that all required planned maintenance was raised on Maximo for that month; or use spreadsheet comparison tools to compare the planned maintenance jobs for that month (from the Annual Planned Maintenance Schedule spreadsheet) to planned maintenance jobs scheduled and completed for that month (from Maximo). This would be able to identify any jobs entered onto Maximo and any jobs not closed off. <p>Any items not completed within the required month should be followed up with GLQ to identify the reason for any delays and to ensure they are rolled forward.</p>	<p>This recommendation is accepted and will be actioned.</p> <p>A reconciliation exercise comparing actual events against planned will be undertaken. Any planned maintenance jobs outstanding in the month reported will be reported and checked in the following month</p> <p>To be actioned by:</p> <p>Steven Giannandrea, Manager supported by Fergal MacAulay, Head of Service</p> <p>No Later Than:</p> <p>31 November 2017</p> <table border="1"> <tr> <td>Grade</td> <td>3</td> </tr> </table>	Grade	3
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