



Internal Audit Report
Corporate & Democratic Services
Northgate Housing Information System
Assignment No.17-06
February 2018

Final Report

Legal and Governance
Corporate and Democratic Services
Perth & Kinross Council
Council Offices
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Internal Audit

“Internal Audit is an independent, objective assurance and consulting activity designed to add value and improve an organisation’s operations. It helps an organisation accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes”. Public Sector Internal Auditing Standards (PSIAS)

The Council’s Audit Committee approved the PSIAS as the relevant standard for its Internal Audit activity.

Background and Introduction

This audit was carried out as part of the audit plan for 2017/18, which was approved by the Audit Committee on 18 April 2017.

The Northgate information system is used by Housing and Community Safety [HCS] to manage clients’ information and provide services. It is also used by the Housing Options and Support Team to deliver frontline services for the Common Housing Register [CHR] Partners, including Caledonia Housing Association Ltd and Hillcrest Housing Association. The CHR Partnership Agreement defines responsibilities for the maintenance of accurate systems and records, and training for Partners who access the system. The cost of IT Charges is apportioned across the Partners who share the system and service. During the review, the Council upgraded to version 6.14 in November 2017.

The Northgate Housing system is managed by the Council’s IT Service with supplier support and bi-annual upgrades. Northgate holds personal and confidential data on clients; therefore management of Northgate data is subject to the provisions the Data Protection Act 1998 and the EU General Data Protection Regulation new legislation effective from May 2018 as well as the planned UK Data Protection Bill progressing through Parliament.

Scope and Limitations

The audit review consisted of the analysis of policies and procedures, sample checking of system data and interviews with relevant officers. The audit did not examine system data directly; extract reports and information were provided by officers with system administration access on request. As the new service for reporting repairs online was not live during the audit review, this was excluded from the scope.

Testing was carried out on-site during October 2017. Key officers interviewed included the Senior Systems Co-ordinator and members of the Housing Systems Team.

Control Objectives and Opinions

This section describes the purpose of the audit and summarises the results. A ‘control objective’ is a management objective that requires the maintenance of adequate and effective internal controls to ensure that it is achieved. Each control objective has been given a rating describing, on the basis of the audit work done, the actual strength of the internal controls found to be in place. Areas of good or poor practice are described where appropriate.

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Control Objective 1: To ensure that support and maintenance arrangements are in place for the system

Internal Audit Comments:

Northgate Housing system has been used by Perth & Kinross Council for over 10 years and the software is also utilised by many other Scottish Councils. The supplier provides an online user group forum for accessing information and communications. There are also regular meetings of the Northgate Housing end user group which representatives of the Housing Systems Support Team have attended and found helpful.

Corporate IT manages the hardware infrastructure that holds Northgate data. Full server backups for Northgate are made using Veritas NetBackup on a rotational basis – daily, weekly and 4 weekly and are retained for several months. Backup discs are stored in two different locations. In the event of any system failure, recovery of data up to the last working day is available through this process. For disaster recovery purposes a duplicate copy of each server backup is also held.

There is a documented System Recovery Plan which includes contact names and details in the event of a partial or total failure. Corporate IT updated these during the audit review.

Users report general satisfaction with supplier service; e.g. Corporate IT may request technical support when upgrades make changes to the Oracle database.

Strength of Internal Controls:

Strong

Control Objective 2: To ensure that adequate physical and logical access controls are in place for Northgate

Internal Audit Comments:

In advance of accessing the system, Northgate users have to be authorised to access the system and are required to undertake training. Users are also required to sign a formal agreement reminding them of their obligations for confidentiality of information and the Council's Employee Code of Conduct.

Access and security responsibilities of Council Partners sharing the Northgate system and data are described within the Partnership agreement for the Common Housing Register under section 3 – Partner Responsibilities. This refers to security controls for access to Northgate, including the requirement for a list of names of the people who access the system. The agreement also makes Partners responsible for notifying the Council of any breach in security arrangements or any unauthorised access to the service they are aware of.

Once the Login Request forms are completed and authorised by the Line Manager, they are sent to the Housing Systems Team who action requests as required. Accounts are locked until signed agreement is returned by the user to confirm that they have read the Looking After Information - Staff Awareness Leaflet and agreed to comply with password policy of not sharing passwords. Training is provided by specific business area requirements for users.

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Password policy default settings for Northgate system have been customised to match Council and Housing Services standards. For example, there is a forced change of password at first login; passwords require to be changed regularly and have a minimum password length of 8 characters of varying type.

Review of user access for change, including leavers is managed by the Housing Systems Team. Procedures for managing users are documented. Changes are confirmed from three different sources within PKC – through notifications from Area Co-ordinators and Managers, through matching usernames against HR quarterly reports of staff changes and through the quarterly business objects report run within Northgate to identify passwords that have not been changed within the required time period. For external partner contacts, in place of the HR internal report, a request is sent to Partners to confirm their contacts are still current every quarter. Changes to user access requested by email are verified with the relevant Manager by the Team before being actioned. Email requests for change are stored in the Team's generic account folder and change detail is also noted in the comments section against the User Account access control screens.

User Job Roles have financial limits applied for Rents and Repairs authorisation processes as an additional control. A sample of user's financial limits were cross-checked against another financial system's authorised limits to confirm if these were consistent; three out of four sample user job role codes matched.

Six system administrators have a high Job Role level to carry out their work in the Housing Systems Team. There are financial limits [£nil] for this job role for Rents and Repairs business areas.

It was reported that occasionally, the Housing Systems Team receive phone requests from users to change passwords.

Strength of Internal Controls:

Moderate

Control Objective 3: To ensure that there are adequate controls for data input and data integrity in Northgate

Internal Audit Comments:

Data input and integrity is controlled with the following:

To manage quality of data input, coded fields or pick-lists are used as much as possible where the system allows for this.

If an error is made at input stage and this is recognised, there is a short time period in which they can correct this e.g. in the Notepad area. After this time period has passed [30 minutes] a supervisor is required to correct errors.

Data that may be incomplete at the stage of an application being submitted by a client is completed when an applicant receives notice of a tenancy. For example, if there is a baby due at time of application, then the Tenancy Officer updates baby details when the tenant provides this.

A weekly report is run to identify potential 'Person' duplicates. Housing Systems Team procedures for managing potential duplicates are documented in Monitoring and Removal of Duplicate Party Records. Users who create a duplicate record may

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be instructed on how to mark the record non-current if this is a straight-forward case. More complicated cases may require un-picking of households and applications.

Cross-checks for validity of Northgate data are within processes for ensuring data quality for reporting in statutory annual returns to the Scottish Housing Regulator, performance indicators and performance reporting to tenants.

Housing Systems Team officers review Northgate job scheduler reports at the start of each working day to confirm that all jobs have been completed successfully. A copy of the job schedule for Northgate was provided detailing daily, weekly and other periodic batch runs over weekdays and also weekends. Also run on weekdays were interfaces for stock interface for repairs and rents cash receipting and Allpay files. These reviews have highlighted no failures for some time, however, if they did, Northgate users would be emailed to advise, with different instructions depending on the situation to give awareness of data integrity for decision making.

These processes are understood by the Team, but are not fully documented

Strength of Internal Controls:

Strong

Control Objective 4: To ensure that data is retained for as long as required and that Northgate output is adequate and reliable for PKC business requirements

Internal Audit Comments:

There is no separate archive storage area for Northgate data, which has the advantage of all data being in one place and no compatibility requirements with a separate storage area.

There are standard output reports within Northgate. Other reports can be created by Housing Systems Team administrators on request for users. These provide data for Scottish Government returns and performance indicators for example. Northgate can also generate business areas output such as Arrears Letters and Allocations Letters.

Audit trail detail can be viewed by all users who can access specific fields on who last edited a Northgate record. In addition, audit [random sampling] and exception reporting on some business areas were available to run by the Senior Systems Co-ordinator. There was however no evidence of specific areas being regularly monitored.

The CHR Partnership Agreement defines responsibilities for Partners to ensure compliance with all applicable legislation relative to Data Protection and in particular the Data Protection Act 1998 and the Data Protection principles. New GDPR legislation becomes effective from May 2018 and the Information Commissioners Office recommends organisations prepare for this. Currently Northgate data management does not comply with one of the General Data Protection Regulation [GDPR] new principles – the right to be forgotten, which will enable individuals to delete and destroy data on request. The proposed UK Data

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Protection Bill to be considered alongside GDPR also has this 'right to be forgotten'.

Northgate holds details of Housing applicants and Person records which cannot be purged. Changes in the form of data updates to person records can be made when necessary. New software functionality which provides for the option to anonymise records, rather than deleting records is planned in the version 6.15 due out in February 2018. This assists in compliance with the new data protection legislation. The Council's Senior Systems Co-ordinator attends the Northgate User Group meetings and reported that the supplier is planning to introduce options to provide for this in future.

Retention periods for Housing data follow the SCARS guidance and these are noted for reference.

Strength of Internal Controls:

Moderate

Management Action and Follow-Up

Responsibility for the maintenance of adequate and effective internal controls rests with management.

Where the audit has identified areas where a response by management is required, these are listed in Appendix 1, along with an indication of the importance of each 'action point'. Appendix 2 describes these action points in more detail, and records the action plan that has been developed by management in response to each point.

It is management's responsibility to ensure that the action plan presented in this report is achievable and appropriate to the circumstances. Where a decision is taken not to act in response to this report, it is the responsibility of management to assess and accept the risks arising from non-implementation.

Achievement of the action plan is monitored through Internal Audit's 'follow up' arrangements.

Management should ensure that the relevant risk profiles are reviewed and updated where necessary to take account of the contents of Internal Audit reports. The completeness of risk profiles will be examined as part of Internal Audit's normal planned work.

Acknowledgements

Internal Audit acknowledges with thanks the co-operation of staff with Housing and Community Safety during this audit.

Feedback

Internal Audit welcomes feedback from management, in connection with this audit or with the Internal Audit service in general.

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Distribution

This report has been distributed to:

B Malone, Chief Executive

J Fyffe, Senior Depute Chief Executive

L Cameron, Interim Director of Housing & Community Safety

C Mailer, Head of Housing Services

A Taylor, Head of IST & Chief Digital Officer

K McNamara, Head of Strategic Commissioning and Organisational Development

L Simpson, Head of Legal and Governance Services

G Taylor, Head of Democratic Services

S Strathearn, Business Improvement Manager

D Henderson, Information Compliance Manager

L Montgomery, Senior Systems Co-ordinator, HCS Systems Support Team

D Turner, IT Co-ordinator (Applications)

L Robinson, Team Leader – Housing (Repairs & South Locality)

External Audit

Authorisation

The auditor for this assignment was N Duncan. The supervising auditor was J Clark.

This report is authorised for issue:

Jacqueline Clark
Chief Internal Auditor
Date: February 2018

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Appendix 1: Summary of Action Points

No.	Action Point	Risk/Importance
1	Northgate System Recovery Plan	Low
2	User Job Roles and financial limits	Medium
3	User Job Role with higher privileges	Medium
4	Verbal Requests to update passwords	Medium
5	Team processes for managing batch jobs	Low
6	Audit logs and exception reports	Medium
7	Northgate records and compliance to new legislation	Medium

Appendix 2: Action Plan

Action Point 1 - Northgate System Recovery Plan

There is a Systems Recovery Plan for Northgate Housing managed by the IT Systems Team. This describes procedures and expected timeframes for system restoration dependent on the issue. Responsible officers for each phase of restoration were named with contact details. The latest date of review of the Plan was January 2017; the Plan's author updated the contacts list during the audit review for recent changes in personnel.

The System Owner was reported to be aware of the expected restoration timeframes if the system suffered any failure.

Due to speed of change in the Council, there is a risk of the Plan being out of date for contact names if the Plan is not regularly reviewed

Management Action Plan

Review the Northgate Recovery Plan bi-annually to ensure it is up to date and takes into account changes including personnel contact details.

Importance:	Low
Responsible Officer:	D Webster, IT Coordinator (Applications)
Lead Service:	Corporate & Democratic Services
Date for Completion (Month / Year):	September 2018
Required Evidence of Completion:	Evidence of review of Recovery Plan to ensure it is up to date.

Auditor's Comments

Satisfactory

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Action Point 2 - User Job Roles and financial limits

User job roles can have added financial permission limits set up in Repairs and Rents business areas. For example:

Job Role Limits of Users with access to Rents Account Adjustments business area can have Job Role limits which can be defined at two levels; the maximum limit is set at £999.99.

Job Roles used to control operational and authorisation limits for groups of users with access to Repairs area have been set up with debit and credit limits between £0.00 up to £75,000.00. These were reported to be set up in line with Pecos Procurement limits.

A sample check of several Authorised Signatures officers in Integra for users who may carry out financial authorisation tasks for Repairs found 3 out of 4 financial limits in both systems were consistent. The fourth sample appeared to have a lower limit in Northgate which may not have been updated.

Management Action Plan

The level of financial limits will be routinely reviewed [prioritise highest] to confirm these are still in line with current procurement procedures

Importance:	Medium
Responsible Officer:	L Montgomery, Senior Systems Co-Ordinator
Lead Service:	Housing & Community Safety
Date for Completion (Month / Year):	March 2018
Required Evidence of Completion:	Evidence that level of financial limits have been reviewed

Auditor's Comments

Satisfactory

Action Point 3 - User Job Role with higher privileges

Housing Systems Team administrators require a high level access job role to carry out their work. This allows access to most business areas with actions to write, over-ride and create manual adjustments; override assessment outcomes; and delete invoices and conflicts of interest for example.

As a control to manage this high level access, there are financial limits set at £nil for this job role in Repairs. Any changes by high level access users for areas such as Rents Account Transactions and Repairs authorisations will be identified by other business specific processes, for example - Rent account data reconciliation. Non-financial processes can also be carried out with the administrators' job role however.

There may be potential lack of separation of duties in other non-financial areas resulting from the high level access. For example:

Allocations and applications data: users with highest level access can amend questions and answers in the Allocations business area; that is Allocations business area questions amendments and Offers data amendments. Access to these business areas provides access to change the points allocated to a tenancy application and therefore may affect an outcome such as an Offer of a Tenancy to an applicant. This level of access may be required for operational purposes; however the effect of this access reduces expected separation of business processes. Any error in data amendments in Northgate may be identified by applicants who have the right to view the information held about them through a subject access request.

Controls to manage risks from privileged or significantly greater access rights are described in the international standard on Information Security ISO27002:2013 section 9 - User Access Management. This standard recommends steps for managing privileged access rights, including for example, a regular review to verify these access rights are in line with requirements of the job and more frequent review of authorisations of privileged access rights.

Management Action Plan

The System Manager will undertake a review to highlight any potential risk areas resulting from the high level access of the Housing Systems Team officers and what functionality is used in Northgate. Where any potential risk areas are identified, the manager may ask for reports to be created to monitor actions in these areas.

Importance:	Medium
Responsible Officer:	S Strathearn, Business Development Manager
Lead Service:	Housing & Community Safety

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Date for Completion (Month / Year):	May 2018
Required Evidence of Completion:	Evidence of review having taken place and the outcomes thereof

Auditor's Comments

Satisfactory

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Action Point 4 - Verbal Requests to update passwords

Housing System Team staff occasionally receive requests by phone from users to re-set their passwords. It was reported that if the Team didn't know the user who called, or recognised their voice, then a changed password is emailed to the user as a security control.

Although handsets may identify the phone number / person requesting a login reset, there is a risk of impersonation if this control ever failed. This control is also not written into Team procedure documents.

Management Action Plan

This practice to be written into procedure notes – that phone calls are not acceptable and that email requests should be made for secure transfer of password authentication to the named user's mailbox.

Importance:	Medium
Responsible Officer:	L Montgomery, Senior Systems Co-Ordinator
Lead Service:	Housing & Community Safety
Date for Completion (Month / Year):	Completed
Required Evidence of Completion:	Procedure notes updated

Auditor's Comments

Satisfactory

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Action Point 5 - Team processes for managing batch jobs

Housing Systems Team officers manage a substantial volume of batch jobs and monitors the batch scheduler for Northgate. The Team check to confirm that all the jobs detailed on the Job Schedule have run correctly and take any necessary action, including investigation and rectification to correct any batch failures highlighted. These processes are understood by the Team but are not fully documented.

This may result in the risk of knowledge being lost or misunderstood when staff change.

Management Action Plan

Processes for managing batch jobs to be documented.

Importance:	Low
Responsible Officer:	L Montgomery, Senior Systems Co-ordinator
Lead Service:	Housing & Community Safety
Date for Completion (Month / Year):	May 2018
Required Evidence of Completion:	Evidence that processes for managing batch jobs has been documented

Auditor's Comments

Satisfactory

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Action Point 6 - Audit logs and exception reports

Audit logs were available to view within Northgate to identify who last edited a record. Audit and exception reports can also be run by the Senior Systems Co-ordinator as required. There was no evidence of specific areas being regularly monitored.

Northgate holds some data that is classified as personal and sensitive under data protection regulations. No records in the system are considered to be sufficiently sensitive to require regular exception reporting or monitoring.

Management Action Plan

a) Periodic checking of higher risk areas reported in the audit reporting function would be a useful control to act as a deterrent to potential unauthorised use/access in Northgate.

b) Review data fields to confirm if any records require exception reporting or monitoring of audit logs and access.

Importance:	Medium
Responsible Officer:	a) & b) L Montgomery, Senior Systems Co-ordinator
Lead Service:	Housing & Community Safety
Date for Completion (Month / Year):	a) & b) 31 July 2018
Required Evidence of Completion:	a) Evidence of periodic checking of higher risk areas b) Evidence of review of data fields

Auditor's Comments

Satisfactory

Action Point 7 - Northgate records and compliance to new legislation

Retention schedules for Housing records are available to refer to, based on Scottish Council on Archives (SCA) retention schedules. In practice, Person records can be amended to update new information, and categorised as current/non-current which reduces non-current records appearing in a search. However, they cannot be purged or deleted from Northgate. Therefore the system's functionality currently does not comply with the EU General Data Protection Regulation commencing in May 2018. This legislation includes the new principle – the right to be forgotten, which will enable individuals to delete and destroy data on request. The proposed UK Data Protection Bill, to be considered alongside GDPR also includes the right to be forgotten.

New functionality for this principal is planned in the next software release versions 6.15 and 6.16 due out from February 2018.

The Senior Systems Co-ordinator who attends the Northgate User Group meetings will be updated on what the supplier is planning to introduce to provide for this in future.

Management Action Plan

a) Continue to monitor supplier's progress with development of new functionality for GDPR compliance and Subject Requests processes before the new requirement legislative requirements effective in May 2018.

b) Continue to liaise with the Information Compliance Manager regarding progress with this

Importance:	Medium
Responsible Officer:	S Strathearn, Business Improvement Manager
Lead Service:	Housing & Community Safety
Date for Completion (Month / Year):	March 2018
Required Evidence of Completion:	<p>a) Evidence of monitoring suppliers progress with development of new functionality for GDPR</p> <p>b) Evidence of liaising with Information Compliance Manager regarding progress with GDPR</p>

Auditor's Comments

Satisfactory