

# Internal Audit Report

## Reinforced Autoclaved Aerated Concrete (RAAC)

25 November 2024

PL2404

**Overall  
Assessment**

**Reasonable  
Assurance**

# Contents

- Executive Summary .....3
- Background and scope.....5
- Findings and Management Action Plan.....7
- Appendix 1 – Control Assessment and Assurance Definitions.....11
- Appendix 2 – Areas of Audit Focus and Control Objectives .....12

This Internal Audit review is conducted for the City of Edinburgh Council under the auspices of the 2024/25 internal audit plan approved by the Governance, Risk and Best Value Committee in March 2024. The review is designed to help the City of Edinburgh Council assess and refine its internal control environment. It is not designed or intended to be suitable for any other purpose and should not be relied upon for any other purpose. The City of Edinburgh Council accepts no responsibility for any such reliance and disclaims all liability in relation thereto.

The internal audit work and reporting has been performed in line with the requirements of the Global Internal Audit Standards (UK Public Sector) and as a result is not designed or intended to comply with any other auditing standards.

Although there are specific recommendations included in this report to strengthen internal control, it is management’s responsibility to design, implement and maintain an effective control framework, and for the prevention and detection of irregularities and fraud. This is an essential part of the efficient management of the City of Edinburgh Council. Communication of the issues and weaknesses arising from this audit does not absolve management of this responsibility. High and Critical risk findings will be raised with senior management and elected members as appropriate.

# Executive Summary

Overall  
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## Overall opinion and summary of findings

There is a generally sound system of governance, risk management and control in place to identify, assess, report, remediate and monitor the risks associated with presence of RAAC in Council-owned buildings.









The following improvement actions were identified:

- the Commercial Estates team have not yet reviewed the unoccupied buildings within their remit to identify those that are at risk of having RAAC present, and therefore have not yet performed any surveys of these properties
- Commercial Estates have not yet communicated with their lessees to inform them of their responsibility to survey their buildings for RAAC and perform any required restorative actions
- neither the Housing and Homelessness nor the Commercial Estates teams have developed formal, agreed programmes of work to identify the timescales, milestones, progress indicators, and budgets.

## Areas of good practice identified

- the Strategic Assets team have undertaken a wide-ranging physical review of all Council operational assets
- external surveyors used by the Strategic Assets team were provided with additional training on the required approach to identify and assess RAAC in buildings
- both Council and third-party surveyors were appropriately qualified to perform the work
- buildings affected by RAAC have been clearly flagged on the Council's electronic building database, with all relevant RAAC information recorded following surveys
- plans were put in place to manage disruptions to service where RAAC presence was deemed a risk to life and limb
- the Scottish Government was updated on progress with identifying and rectifying the presence of RAAC, as required
- the Council has established a [webpage](#) to keep the public informed on progress with resolving RAAC issues
- relevant Place risk registers have detailed entries relating to RAAC
- the Council liaised effectively with partner organisations to share RAAC information.

## Audit Assessment

Audit Area	Control Design	Control Operation	Findings	Priority Rating
1. Identification and Assessment of RAAC			Finding 1 – Initial identification of potentially RAAC-affected buildings	Medium Priority
			Finding 2 – Surveys of buildings for RAAC presence	Medium Priority
2. Monitoring and Remediation of RAAC			Finding 3 – RAAC remediation programmes	Medium Priority
3. Communication, Reporting and Financing			See finding 3	N/A
4. Risk Management			No findings	N/A

[See Appendix 1 for Control Assessment and Assurance Definitions](#)

# Background and scope

Reinforced Autoclaved Aerated Concrete (RAAC) is a lightweight aerated concrete, commonly used in the construction of public buildings between the 1950s and mid-1990s. It is mainly found in roof panels and occasionally in floors and walls. RAAC is aerated or 'bubbly' concrete and if water is allowed to enter into concrete material, the moisture can cause gradual decay to the reinforcement steel present in the concrete material. As a result, RAAC panels are susceptible to failure. RAAC is considered considerably weaker than traditional concrete. If the condition of RAAC has deteriorated, then it needs to be addressed to ensure the structural integrity and safety concerns of Council buildings, including schools, libraries, and public facilities.

Guidance on RAAC has been provided by regulatory bodies, such as the Health and Safety Executive for building landlords and owners [to 'identify, assess and manage' risk from RAAC](#), and professional bodies such as Institution of Structural Engineers on [information about RAAC](#) along with guidance on [investigation and assessment](#). In addition, the Department of Education (UK Government) have provided non-statutory guidance for local authorities and other educational bodies to [identify RAAC in their estate](#) and [actions to take when its presence is confirmed](#).

The City of Edinburgh Council (the Council) commenced a programme to inspect Council buildings for RAAC in March 2023, with initial focus on the learning estate, progressing to other operational properties and the housing estate. The Council have so far identified 12 operational buildings (which includes schools, libraries and leisure centres) which have confirmed RAAC presence, with ongoing implementation of contingency and short-term mitigation measures underway including replacement of roofs and use of temporary facilities. RAAC has also been confirmed as present in 44 council homes with survey work underway to assess the condition of these properties.

The Scottish Government (SG) requires [transparency on information related to schools](#), where RAAC has been identified and mitigations are in place. Local authorities have been asked to publish the data relating to impacted schools in their area and ensure that this data is freely available. The SG has

also established an RAAC Cross Sector Working Group for key stakeholders to discuss the latest information about RAAC. The Council is a member of the working group and its 'RAAC in Housing' subgroup.

The Council's RAAC update report presented to the [September 2024 Finance and Resources Committee](#), projects 2024/25 revenue expenditure across RAAC sites at £655,000 with £14.9m capital cost budget allocated during the 2024 budget setting process.

## Scope

The objective of this review was to assess the adequacy of design and operating effectiveness of the key controls established to identify, assess, report, remediate and monitor the risks associated with presence of RAAC in Council-owned buildings.

## Alignment to Risks and Business Plan Outcomes

The review also provided assurance in relation to the following Corporate Leadership Team (CLT) risks:

- Property
- Financial and Budget Management
- Programme and Project Delivery
- Health and Safety (Including Public Safety)
- Supplier, Contractor and Partnership Management
- Governance and Decision Making
- Regulatory and Legislative Compliance
- Reputational Risk

### [Business Plan Outcomes:](#)

- Edinburgh is a cleaner, better maintained city that we can all be proud of.
- People have decent, energy efficient, climate proofed homes they can afford to live in.

## Limitations of Scope

The following areas were excluded from scope:

- integrity and completeness of the survey/inspection/ structural assessment of Council estate and accuracy of the technical assessment thereof.

## Reporting Date

Testing was undertaken between 1 October 2024 and 18 October 2024

Audit work concluded on 25 October 2024, and the findings and opinion are based on the conclusion of work as at that date.

# Findings and Management Action Plan

## Finding 1 – Initial identification of potentially RAAC-affected buildings

Finding Rating	Medium Priority
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The Council has divided the responsibility for determining which properties could have RAAC across three different teams:

- Strategic Asset team – covering operational buildings (e.g. schools and community centres), and leased-in buildings (where the Council is a tenant)
- Housing and Homelessness team – covering all housing owned by the Council
- Commercial Estates team – covering investment properties, which are leased to other organisations.

This involves reviewing lists of buildings and identifying those which could have RAAC in them, e.g. those built between the years 1930 and 2000.

When carrying out their reviews, each team considered all of the properties within their remit, apart from the Commercial Estates team who only initially reviewed leased properties which were occupied, and not those which were unoccupied.

Where a property is occupied, they are leased on a full repairing and insuring lease, meaning the tenant is responsible for repairs to the whole building fabric, including any surveys to detect the presence of RAAC. However, where these properties are unoccupied, the responsibility for surveys and repairs lies with the Council.

Prompted by this audit, the Commercial Estates team have now reviewed the unoccupied buildings to identify those that are at risk of having RAAC present.

### Risks

- **Property** – RAAC may be present in properties which have not been reviewed by the Council
- **Health and Safety** – although vacant, if contractors or other individuals are present in the property for various reasons, the risk of RAAC being present can represent a life safety risk if not identified and mitigated
- **Reputational** – reputational damage if individuals in vacant properties are injured due to RAAC.

## Finding 2 - Surveys of buildings for RAAC presence

Finding Rating	Medium Priority
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Following the initial identification of the buildings which could have RAAC in them, the Council undertook surveys to determine if RAAC was present in these buildings. As per Finding 1, the three teams responsible for performing this work are the Strategic Asset team, the Housing and Homelessness Team, and the Commercial Estates team.

The Strategic Asset team surveyed their properties using a mix of in-house surveyors and external suppliers, and the Housing and Homelessness team used solely external suppliers.

However, the Commercial Estates team have not yet performed any surveys of the relevant properties within their remit. One reason for this is that properties which have been leased out are the responsibility of the lessee. The Commercial Estates team have stated the intention to communicate with these lessees to inform them of their responsibility to survey their buildings for RAAC, perform any required restorative action, and require that they communicate to the Council the results of this work. The other reason is that the team only considered vacant properties after a prompt by Internal Audit in early October 2024 (see Finding 1).

### Risks

- **Property** – properties may not receive mitigation measures to prevent additional deterioration of RAAC
- **Health and Safety** – the risk of RAAC being present can represent a life safety risk if not mitigated
- **Reputational** – reputational damage if individuals in vacant properties are injured due to RAAC.

## Recommendations and Management Action Plan: Surveys of buildings for RAAC presence

Ref.	Recommendation	Agreed Management Action	Action Owner	Lead Officers	Timeframe
2.1	The Commercial Estates team should review the vacant properties identified as having the potential to contain RAAC and initiate surveys to confirm this and, where necessary, carry out works to mitigate and rectify its presence.	All surveyors made aware of the importance of considering RAAC in vacant properties. Vacant property checklist will be updated to include a section on RAAC.	Interim Executive Director of Place	Service Director - Sustainable Development Head of Estates	31/03/2025
2.2	The Commercial Estates team, should communicate with their lessees to inform them of their responsibility to survey their buildings for RAAC, perform any required restorative action, and request that they confirm to the Council when this has been done.	Tenant handbook updated to include section on RAAC. The handbook will be issued to all commercial tenants with appropriate follow ups.			31/12/2025



## Finding 3 – RAAC remediation programmes

Finding Rating	Medium Priority
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Once surveys of buildings are complete, a remediation programme should be undertaken. The Strategic Asset team have developed plans to rectify buildings within their remit which are affected by RAAC. These plans include detail on the buildings to be rectified, the costs, timescales, and the responsible officers and external suppliers.

The Housing and Homelessness team have received the results of the surveys of their buildings performed by external suppliers, which included recommendations to mitigate the risks of RAAC presence in the property, and from these reports have initiated a pilot project to establish best practice guidelines, costs, and timescales for the rectification of RAAC in their buildings. However, a formal, agreed programme of works identifying timescales, milestones, budgets, and responsible officers to remediate the RAAC presence in these buildings is not yet in place.

As the Commercial Estates team have not yet performed surveys of their vacant properties which could have RAAC (see Finding 2), they have not yet developed plans to resolve any issues within buildings which contain RAAC that are the Council’s responsibility.

### Risks





- **Programme and Project Management** – lack of milestones and project governance will lead to project delays and missed deadlines, leading to budgets being exceeded
- **Financial and Budget Management** – lack of dedicated RAAC budgets could prevent a clear understanding of the costs of mitigation
- **Property** – properties may not receive timely rectification measures to prevent additional deterioration of RAAC, or have the material removed in good time where no project management is in place.

## Recommendations and Management Action Plan: RAAC remediation programmes

Ref.	Recommendation	Agreed Management Action	Action Owner	Lead Officers	Timeframe
3.1	In line with the Council’s <a href="#">Project Management Toolkit</a> , following identification of best practice, timelines and the costs associated with RAAC mitigation in Council properties, the Housing and Homelessness team should establish specific budgets, milestones, progress indicators and governance for their programme of works.	The Housing and Homelessness team will establish a formal programme of works and will include budgets, milestones, progress indicators and governance. This will be in line with the Council’s <a href="#">Project Management Toolkit</a> and best practice.	Interim Executive Director of Place	Service Director, Housing & Homelessness Head of Area Based Regeneration & Shared Repairs	28/02/2025

3.2	Once the Commercial Estates team have surveyed their vacant properties for RAAC (as per Finding 2), and RAAC has been confirmed as present, they should create remediation action plans as required, which should include specific budgets, milestones, progress indicators, and governance for the programme of works.	There are a limited number of vacant properties that require further investigation. Should RAAC be identified then an appropriate remediation action plans will be created, which will include budget identification, milestones, progress indicators, and governance for the programme of works.		Service Director - Sustainable Development Head of Estates	31/03/2025
3.3	Where leased Council buildings are returned to the Council, and no actions have been agreed with the previous tenant to inspect and report on the presence of RAAC, the Commercial Estates team should consider establishing specific budgets, milestones, progress indicators, and governance arrangements for any surveying and rectification of RAAC within their building portfolio.	In this instance, a survey of the building will be carried out in accordance with the revised vacant property checklist (management action 2.1) and if RAAC is identified a remediation action plan will be created (as per management action 3.2).			31/12/2025

# Appendix 1 – Control Assessment and Assurance Definitions

Control Assessment Rating		Control Design Adequacy	Control Operation Effectiveness
Well managed		Well-structured design efficiently achieves fit-for purpose control objectives	Controls consistently applied and operating at optimum level of effectiveness.
Generally Satisfactory		Sound design achieves control objectives	Controls consistently applied
Some Improvement Opportunity		Design is generally sound, with some opportunity to introduce control improvements	Conformance generally sound, with some opportunity to enhance level of conformance
Major Improvement Opportunity		Design is not optimum and may put control objectives at risk	Non-conformance may put control objectives at risk
Control Not Tested	N/A	Not applicable for control design assessments	Control not tested, either due to ineffective design or due to design only audit

Overall Assurance Ratings	
<b>Substantial Assurance</b>	A sound system of governance, risk management and control exists, with internal controls operating effectively and being consistently applied to support the achievement of objectives in the area audited.
<b>Reasonable Assurance</b>	There is a generally sound system of governance, risk management and control in place. Some issues, non-compliance or scope for improvement were identified which may put at risk the achievement of objectives in the area audited.
<b>Limited Assurance</b>	Significant gaps, weaknesses or non-compliance were identified. Improvement is required to the system of governance, risk management and control to effectively manage risks to the achievement of objectives in the area audited.
<b>No Assurance</b>	Immediate action is required to address fundamental gaps, weaknesses or non-compliance identified. The system of governance, risk management and control is inadequate to effectively manage risks to the achievement of objectives in the area audited.

Finding Priority Ratings	
<b>Advisory</b>	A finding that does not have a risk impact but has been raised to highlight areas of inefficiencies or good practice.
<b>Low Priority</b>	An issue that results in a small impact to the achievement of objectives in the area audited.
<b>Medium Priority</b>	An issue that results in a moderate impact to the achievement of objectives in the area audited.
<b>High Priority</b>	An issue that results in a severe impact to the achievement of objectives in the area audited.
<b>Critical Priority</b>	An issue that results in a critical impact to the achievement of objectives in the area audited. The issue needs to be resolved as a matter of urgency.

## Appendix 2 – Areas of Audit Focus and Control Objectives

Audit Areas	Control Objectives
<p>Identification and Assessment of RAAC in Council Buildings</p>	<ul style="list-style-type: none"> <li>• <b>Identification:</b> The Council has performed a comprehensive survey of all Council owned properties to identify the presence of RAAC, utilising the existing Council information on age, design, previous construction records of the building etc.</li> <li>• <b>Assessment:</b> Where RAAC is identified/suspected, qualified and adequately trained structural engineers have been appointed to perform detailed inspections, assess the safety of buildings/houses, and provide recommendations that are developed into a Council action plan.</li> <li>• <b>Risk Assessment:</b> A defined risk assessment procedure exists to assign a risk rating to each building, based on the level of risk and to prioritise remediation of buildings presenting immediate or high-risk concerns. The risk assessment to evaluate RAAC's impact on building safety and usability is consistently applied in the inspection of all Council properties across the Corporate and Housing estates.</li> <li>• The Council's surveys and inspections have been performed as per the guidance from regulatory and professional bodies, and include best practices noted from the Council's participation in Scottish Government working group.</li> <li>• Appropriate health and safety measures, in accordance with HSE guidance, have been taken to organise surveys/inspections, including identification of asbestos risk in the building and completion of suitable actions to mitigate this risk.</li> <li>• Suitable data recording and management procedures exist to ensure that complete and accurate data related to survey findings, inspection results, structural assessments and remediation activities is maintained on Council systems, with reliable functionality for data reporting to the Executive Committees, Scottish Government and regulatory bodies.</li> </ul>
<p>Monitoring and Remediation of RAAC in Council Buildings</p>	<ul style="list-style-type: none"> <li>• Contingency plans have been agreed with the Council's Resilience Service to plan for the impact of a sudden damage to a Council building, and emergency measure such as vacating premises, decanting building or cordoning off an effected part of a building, have been taken for buildings considered structurally unsafe.</li> <li>• A comprehensive remediation plan has been agreed to address RAAC impact on Council properties, outlining short and long-term measures with defined timelines, budgets, and assigned responsibilities.</li> <li>• Key performance indicators (KPIs) have been established to record and measure the progress of remediation actions with regular progress reports submitted to Senior Management and a relevant Executive Committee.</li> <li>• A monitoring plan is in place to monitor the implementation of mitigating actions recording the frequency of reviews, individual roles and responsibilities, and escalation routes if timescales are missed and/or significant issues are noted.</li> </ul>

<p>Communication, Reporting and Financing</p>	<ul style="list-style-type: none"> <li>• Clear communication plans have been established to inform all affected stakeholders of RAAC risks and planned actions, including a) regular reporting on RAAC-related risks, assessments, and remediation efforts to senior management, executive committees and regulatory bodies, and b) transparent communication with the public and tenants to manage expectations and safety concerns.</li> <li>• Data relating to impact of RAAC in identified schools along with remedial actions is regularly updated and provided to citizens through the Council website.</li> <li>• Complete and accurate RAAC status update reports are submitted to the Scottish Government, as required.</li> <li>• A dedicated budget has been identified to provide funding for survey and inspections, specialist structural engineering services, data management and reporting and required emergency remedial measures. The spend against budget is routinely monitored through financial monitoring controls to ensure effective oversight of RAAC related spending.</li> </ul>
<p>Risk Management</p>	<ul style="list-style-type: none"> <li>• Risks related to Reinforced Aerated Autoclaved Concrete are identified, recorded and managed within service risk registers, and regularly reviewed to ensure appropriate mitigating actions are in place and remain effective, with escalation to divisional and directorate level risk committees where required.</li> <li>• The Council has considered risks related to the potential presence of RAAC in third-party buildings used for the provision of Council services such as NHS buildings and ALEOs operational estate. Where possible, the Council has highlighted the impact of RAAC in third party buildings through participation at joint governance forums and presence in ALEO boards.</li> </ul>