

Construction Industry Council

**RISKS TO PUBLIC SAFETY FROM
FALLING MASONRY AND OTHER MATERIALS**
Report of Skills & Training Working Party



Working party

Barry Neilson Chairman	Construction Industry Council (CIC) / Chartered Institute of Building (CIOB)
Gary Mees	Chartered Institute of Architectural Technologists (CIAT)
Graham Ogilvy	Construction Industry Training Board (CITB)
Martin Reid	Construction Licensing Executive (CLE)
Ingval Maxwell	Historic Scotland
Gus MacDonald	Royal Incorporation of Architects in Scotland (RIAS)
Sue Bush / Bob Renton	Scottish Association of Building Standards Managers
Douglas Fergus	Scottish Building
Alan McKinney	Scottish Stone Liaison Group (SSLG)
Linda Sheridan	Scottish Building Standards Agency

In attendance

Foreword

Research into the issue of Falling Masonry was initiated by the Scottish Executive Development Department following a Fatal Accident Inquiry into the death of Christine Foster in Edinburgh in June 2000. The fatality occurred as a consequence of masonry falling from a building onto a pavement area, where she was working as a waitress. The research took the form of a scoping study which examined the issues surrounding risks to the public that can arise in and around buildings from poor maintenance, inadequate workmanship, latent defects in design or faults in the manufacture of components.

What do we mean by Risk?

Risk is generally defined as being the probability that an untoward event will happen, multiplied by the impact it could have if it did happen. 'Impact' is sometimes measured in terms of monetary value. However, Some events are almost entirely unquantifiable. For example, how much does one value a human life? So while it might be attractive to assess the risk associated with falling masonry by multiplying the probability of material falling onto people by the seriousness of injury that would be caused, in practical terms this can prove to be impossible even when the sufficient data is available. Placing a quantitative value on the risk has not therefore been possible in the context of the study.

Recommendations of the Original Report

The original report outlined various recommendations which included the control of quality in inspection, design & specification and execution of repairs. It also highlighted the need for those involved in maintaining, renovating and surveying our buildings to be adequately trained and developed in this specialised area. In particular, the report reflected the need for training in dealing with older buildings constructed using design methods and materials no longer in common usage. The report specifically commented: *“Workmanship and the control of quality on site are of central concern to this issue. The Ryan’s bar incident has demonstrated the important role that poor workmanship can have in relation to structural safety. Over the last 10 – 15 years we have seen a significant reduction in the level of site supervision provided by designers and a diminishing involvement with inspections by local authority building control staff. “*

Remit of the Working Party

The Scottish Building Standards Agency encouraged the CIC and CLE to establish the Working Group to consider and explore the issues of quality of workmanship, design and specification in carrying out works to buildings and to make recommendations on the training and development of those undertaking these works.

Background

The working party was established to carry forward some of the recommendations of the report 'Risks to Public Safety from Falling Masonry and Other Materials' by the Construction Industry Council for Scotland, the Professional Bodies College of the Scottish Construction Industry Group. The research was commissioned in 2003 by the Building Standards division of the Scottish Executive, following Sheriff Stoddart's enquiry into the death of Ms. Christine Foster at Ryan's Bar, Edinburgh.

The accident at Ryan's Bar, where coping stones slipped from a gable, was due not to lack of maintenance but a lack of skills and understanding of traditional construction on the part of the contractors who undertook a repair to the gable. Accordingly, the central focus of the group was to raise the level of skills and understanding of traditional construction in order to achieve the safe maintenance and repair of building exteriors, particularly buildings faced in stone. The group also considered schemes to gather information about incidents of structural and other external materials falling from buildings, and schemes to promote awareness of the need for maintenance.

The group benefited from two presentations. Murdo McLeod and Tim Rayner described the survey and repair programme of the Property Services Division of City of Edinburgh council. John Carpenter of the Standing Committee on Structural Safety (SCOSS) described a pilot project to establish a reporting scheme on structural safety.

This paper reports action to be taken and comments on selected recommendations from the original report.

Discussion & Findings of the Working Group

The working party considered those recommendations of the CIC / SCIG report that were concerned with identifying trends in incidents of structural materials falling from buildings and skills issues. Some of the other recommendations have been found to be impractical, whilst others are the subject of action or discussions elsewhere. In particular, the skills issues that arose from the report were reviewed by the working group from the perspective of the operatives carrying out works and the supervisory and design skills.

*Extract from original Study:
A standard format for recording dangerous building incidents should be introduced by local authorities across Scotland to enable improved data collation and analysis. The possibility of requiring all potentially dangerous incidents to be notified to local authorities by appropriate duty holders should be explored.*

The Scottish Building Standards Agency has provided £10,000 to the Standing Committee for Structural Safety (SCOSS) to develop a robust system for the reporting of falling masonry incidents which can be used by local authorities. This is as an adjunct to a project to study the feasibility of a system for Confidential Reporting of Structural Safety (CROSS, www.scoss.org.uk/CROSS/index.asp).

All the Scottish local authorities have been invited to participate in a project which is exploring the value of such recording, entitled 'SCOTCROSS'. The pilot project was designed in collaboration with the Scottish Association of Building Standards Managers (SABSM) and is run from the members' area of the SABSM website. The project will report in September 2006.

[Extract from original Study:](#)
An evaluation of public sector investment and support for construction skills training should be undertaken to identify opportunities for strengthening the skills base for masons and others involved in maintenance and repair activities.

The availability of skills based training aimed at maintenance and repair activities should be investigated and training schemes introduced where necessary to reflect this significant area of work.

The working party believes the Construction Forum should identify and support a body capable of delivering a project to develop and disseminate good practice guidance on the maintenance and repair of existing buildings. It is proposed that the guidance should be in electronic format and will address the need for well informed supervision of maintenance work. Supervisors must be able to adequately inspect and diagnose problems and understand what constitutes good practice in maintenance and repair. The package should also provide advice on the selection and use of appropriate materials for designers and specifiers of repair works. There is no need for research into good practice, only to deliver it in an effective manner to people who can affect the quality of maintenance and repair work. The Scottish Construction Forum, as the lead body in developing excellence in the construction sector need to recognise that the issues around the perception of the construction industry lie substantially within the RMI sector, as this is the area the public deal with most. Unless this area is given the same consideration as major construction works, the performance may improve, but the image will not, and the issues around recruitment of quality people to the industry will remain.

The Construction Forum has discussed this issue and declined to take action at this time, However, the Working Group maintain that it has a responsibility to address the RMI sector as well as the new build to ensure the industry serves all its customers equally.

The group also proposes that the Construction Forum should support the CITB initiative to introduce flat bed lorry mobile training rigs, bearing a mobile maintenance and repair rig as a resource for contractors throughout Scotland. Training can be taken to the workplace of both supervisors and operatives. The working party urges such provision, particularly for the Highlands and Borders. In such areas, travel to a central training facility is not a viable option, meaning that operatives are deprived of training opportunities. A mobile training rig, allied to information in electronic format, should address specific maintenance and repair issues, for example the correct re-fitting of a dormer window.

The Scottish Stone Liaison Group is undertaking a research project which will determine the skills and age profile of people working for the masonry companies on the CITB-ConstructionSkills database in order to enable the appropriate planning of training schemes.

The working party advocates the introduction of a procurement policy that requires companies wishing to tender for government funded work to prove that they have a training programme and that they recruit, or support recruitment of, trainees in their respective trade. Public sector procurement procedures must comply with EU rules and should not be susceptible to challenge by potential bidders as being discriminatory. The Construction Procurement Manual (see www.scotland.gov.uk/Topics/Planning-Building/construction/Manual) issued by the Construction Advice and Policy Division of the Scottish Executive does make specific reference to clients obtaining information from potential tenderers regarding the level of skills of

[Extract from original Study: Improved guidance should be available to building owners on how to select competent building companies to undertake repairs.](#)

the workforce, and questioning if this is continued throughout the supply chain. It also states that clients should seek an indication of the proportion of the workforce who are registered under industry-recognised skills registration schemes to determine their suitability. The Construction Procurement Manual also has a complete section on Health and Safety. One of the key points of this section is to promote the appointment of contractors who have a demonstrable performance record in H&S matters, which would include the identification and management of risk. Setting quotas is likely to breach EU rules for procurement.

The working party was concerned that most training in colleges addresses new building, with too little attempt to serve the needs of the repair and maintenance market which constitutes approximately 50% of the total spend within the construction industry. CITB is investigating the development of a VQ in repair and maintenance.

CITB recognises the importance of the maintenance and repair sector. The working party has been invited to contribute to CITB's forthcoming review of VQ's.

The Construction Licensing Executive and TrustMark offer building owners the opportunity to identify competent contractors who are licensed by accredited organisations. CLE requires that all operatives must hold CSCS cards and employ appropriately qualified operatives to carry out the works.

The working party recommends that procurement policy for government funded work should include acceptance of registration schemes which assess and monitor the performance of companies.

Insurance companies, banks and mortgage lenders have a vested interest in the standard and quality of the maintenance of the building envelope. Whilst they may not cover claims that result from lack of maintenance, they do nothing to promote good quality in maintenance work. The working party calls on the insurance industry to require that repair work should only be undertaken by competent contractors registered with recognised schemes which monitor the performance of companies.

Mortgage lenders have an interest in the maintenance of the properties in which their money is invested. The working party calls on the Council for Mortgage Lenders to advise its members to issue guidance to purchasers to use competent contractors, registered under a recognised and proactive quality scheme, to undertake maintenance and repair.

Many building owners do not know how to approach repair and maintenance. The Royal Incorporation of Architects in Scotland (RIAS) offers a client guide to surveyors and Historic Scotland also publishes a document entitled 'Maintaining your home – a short guide for homeowners'. Both of these publications would be valuable to domestic and commercial property owners in assessing and maintaining their properties.

[Extract from original Study:](#)
A more detailed risk assessment, extending the data collection beyond that available to local authorities, should be undertaken with a view to obtaining a more quantitative assessment than has been possible from this scoping study

Scottish Stone Liaison Group research, entitled the “Glasgow Project” will visually examine some 200 buildings and record the type of stone used in over 100 of these. This should identify the need for repairs and facilitate appropriate repairs in future. Once completed, this should also provide a model for other cities in Scotland.

The work of the Property Services department of City of Edinburgh council to identify potentially dangerous buildings and promote building maintenance and repair is to be applauded and should be used as a model across Scotland. The SCOSS and SSLG projects should help to quantify the need for such a programme.

The nature of property ownership, with homes being purchased as opposed to let/factored, has resulted in the minimum amount of maintenance being undertaken. Generally only roofs are repaired when there is water ingress. More often or not gutters are not cleaned and this is evident by the growth of grass or other vegetation from gutters and other parts of buildings - the fabric of the building is, in the main, ignored.

There is a need for education of building owners. The greater part of the works involving repair and maintenance of Scotland’s building stock does not involve consultants in any capacity. It is left to the contractor to decide on the nature of the work required and the standard to which it is undertaken. The short term “cheap option” of “patch and mend” is often preferred by the client. The Working Group welcomes City of Edinburgh’s initiative in assessing the effectiveness of differing approaches to building owners in identifying and remedying problems with masonry.

This is not solely an urban problem affecting the main cities. The working group recommends local authorities to work together to introduce a consistent approach to the assessment, specification and execution of repair work.

Property owners need to adopt a more proactive role in the maintenance of their properties and the working group recommends that some “compulsion” in this respect is necessary. It is here where the insurance industry, banks and mortgage lenders could be more proactive, by stressing the manner in which regular maintenance requires to be carried out in order that the property owner retains the insurance cover and protects the financial investment. Simply by requiring the owner to use only registered contractors to undertake repairs would go a long way to address this matter. Failure on behalf of the owner, and it being proven that the work completed led to an incident, could result in the owner having insurance cover withdrawn

Insurers should require building owners to ensure that they, or their agents, employ the services of only suitably qualified professionals, who in turn must ensure that they only engage companies which can demonstrate that its workforce has the necessary skills and abilities. However, that having been said, the responsibility should remain with the property owner at all times for all matters relating to the maintenance of their property.

Clients must recognise the need for competence and development of all involved in the assessment, specification and execution of repair and maintenance work. They must recognise that training costs money and that this has to be recovered in the contract price. Employers may be willing to develop the skills of their operatives but will also want to compete with other companies that currently fail to recognise any such responsibilities and thereby have a price advantage. For example, currently there are only two major private contractors in Scotland regularly recruiting trainees for the stone masonry trade. Until the clients require that only operatives with the appropriate skills and development programmes work on their properties will the situation be corrected? The need to ensure the certification of all operatives, coupled with the concept of “Master craftsman” (currently being pursued by the National Heritage Training Group), will require Colleges to take the training to the people rather than the other way about.

Recommendations

R1

The working group recommends that COSLA should convene a forum of Local Authorities to develop a consistent approach to delivering safety from items falling from buildings.

Action required by: [COSLA, Local Authorities](#)

R2

The working party believes the Construction Forum should identify and support a body capable of delivering a project to develop and disseminate good practice guidance on the maintenance and repair of existing buildings which highlights the need for integration between investigation, design, materials and execution of work.

Action required by: [Scottish Construction Forum](#)

R3

The working Group applaud the CITB initiative to introduce mobile training rigs and recommend the principle should be extended to include all sectors of the RMI of the external envelope of buildings.

Action required by: [Scottish Construction Forum](#)

R4

Public procurement projects in the Repair and Maintenance sector should include a requirement on the successful firm to undertake training and development programme for all levels of their workforce.

Action required by: [Scottish Executive](#)

R5

The working party recommends that mortgage lenders and insurance companies require home and building owners to maintain a log book of work carried out on their properties which also provides sources of advice on maintenance.

Action required by: [Council of Mortgage Lenders / Scottish Construction Forum](#)