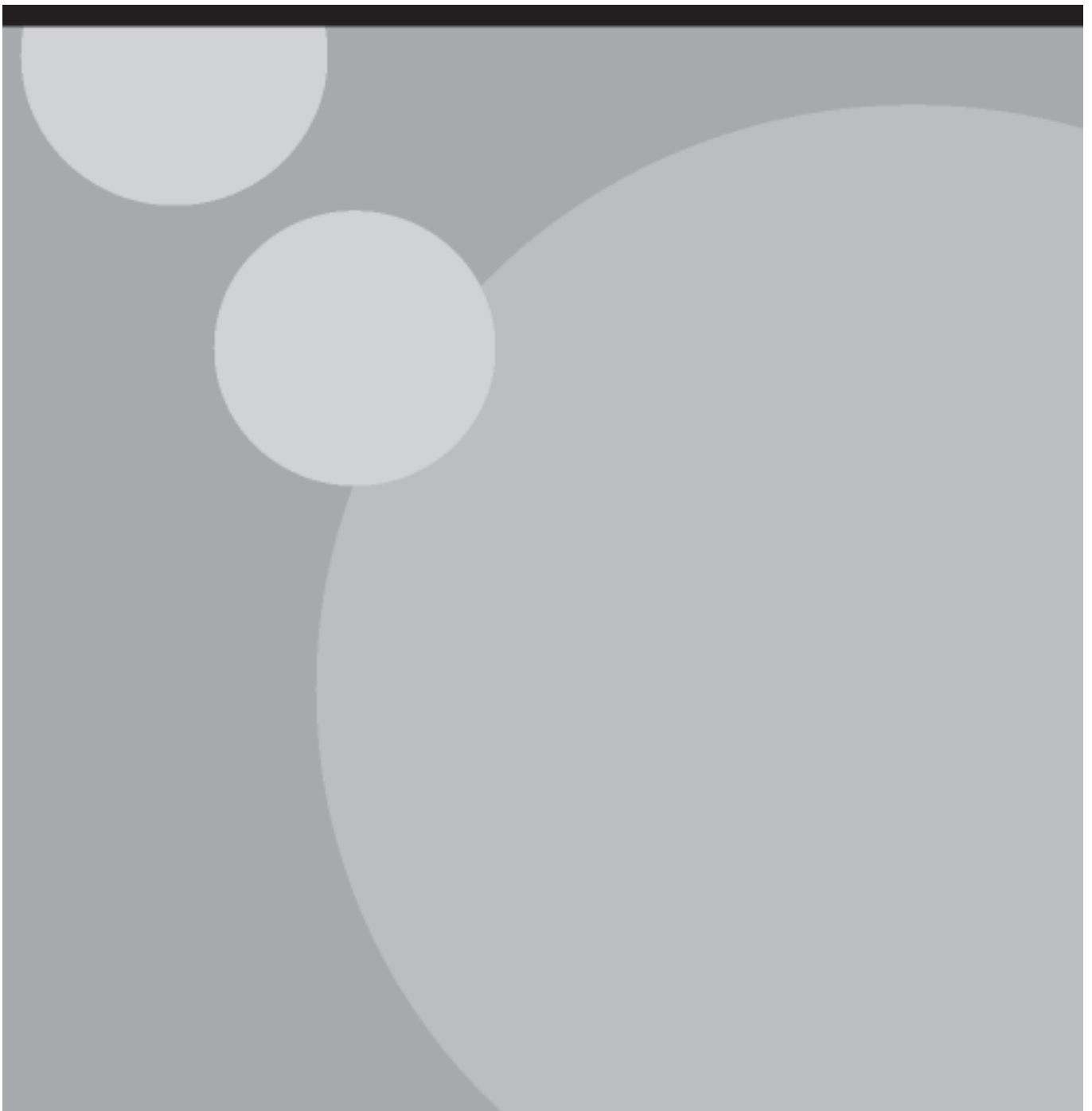# Communities
and Local Government

Risk assessment decision making tool for building control bodies

Summary report

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1 SUMMARY REPORT

1.1 Background

DCLG consulted on how best to reform the system of building control in 2007 to 2008, as summarised in "The Future of Building Control"[1]. The consultation and review indicated a need to reduce the level of inspection, focus inspections onto higher risk projects, increase levels of compliance as well as dealing with persistent offenders and simplifying the inspection process. Issues relevant to this research included:

- The nine Statutory Notification stages encourage unnecessary inspections with no regard to the particular details of the project, such as. size or complexity;

- Applicants are often left under the impression that Building Control Bodies (BCBs) will or should inspect at these stages, which they may not;

- The existing statutory notification stages are outdated and focus on health and safety; and

- Approved Inspectors are not covered by the statutory notification stages and often already take a risk-based approach to inspection which they communicate to customers.

One of the proposals in the Future of Building Control was to introduce effective risk-based inspection and enforcement". Guidance has already been published for all BCBs in the Building Control Performance Standards which sets out the policy approach they should take to delivering their service but does not lay out a risk assessment method. These points led to the work reported here, which aimed to develop a risk assessment tool for use by Building Control Officers (BCOs) working for both Local Authorities and Approved Inspectors to assist in determining what to inspect and the number of inspections per building project.

It is understood that DCLG intend to consult on the issue of removing some of the statutory notifications and introducing risk based service plans as part of the 2013 changes to the Building Regulations.

In all cases in this report, the term risk is used to refer to the possibility and consequence for the health and safety of people and the environment of non-compliance with Building Regulations.

1.2 This study

A first stage of work in early 2009 involved workshops with over 112 surveyors, builders and architects at a series of workshops and over 300 respondents to an online survey, in addition to meetings with six stakeholder organisations. This first stage of review identified a number of risk assessment options. These options were consolidated and then reviewed in a second round of eight workshops with 140 delegates and by use of an online demonstrator (86 respondents) of draft risk assessment methods in June/July 2009.

The risk assessment method was revised after the second stage of review and then assessed by both the Project Steering Group and by a small sample of BCOs, culminating in a final draft of the risk assessment tool and guidance. The final draft was piloted in a fourth and final stage of work with 11 BCBs from December 2009 to April 2010.

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[1] http://www.communities.gov.uk/documents/planningandbuilding/pdf/futurebuildingcontrolconsult.pdf

1.3 Stage 1 findings

The main findings from the first stage of review in early 2009 were:

- Risk based inspection is an established practice in a number of areas of UK health, safety and environmental enforcement, with examples found in enforcement of food safety, fire safety, environmental pollution and occupational health and safety. In each case the frequency of inspection and associated enforcement action are based on a combination of:

  o The risk posed by the activity; and

  o The standard of management.

- A number of BCBs have drafted methods for developing building control inspection schedules. (As distinct from the statutory notification stages)

- There was agreement among stakeholders that the type of risk assessment discussed by respondents represented 'common' practice which would benefit from being formalised and communicated for the sake of consistency and transparency.

- A minority of respondents argued that the current statutory notification stages could be revised rather than revoked.

- Surveyors expressed a clear view that their role was to support builders in complying with Building Regulations, through a process of preventive inspections and advice. An advisory approach would be achieved by inspecting every project and applicable stages of projects.

- There was widespread support for a consistent approach being achieved by all BCBs.

1.4 Stage 2 findings

The examples of current and proposed risk assessment were combined with the feedback from stage 1 workshops, interviews and surveys to draft a first set of options on how to risk assess building applications. It is pertinent to note that some BCBs were already carrying out forms of risk assessment, using a range of ratings schemes.

The second stage of research, from Easter to Summer 2009, included a telephone mini survey of homeowners and builders from across England was completed to test their reaction to the initial proposals for risk assessment methods. Homeowners and builders consistently supported the proposed risk assessment approach. Homeowners indicated that they understood the proposed approaches and considered them to be reasonable.

The following core propositions were generally supported by workshop and online survey respondents, most of whom were BCOs:

- Having a structured risk assessment with a standard rating scheme for "common" domestic and commercial projects, but adopting a more expert judgement-based approach for larger commercial projects;

- Any service schedule that is developed from a risk assessment should be subject to change upon commencing inspections;

- Homeowners should be copied into the service plan and have the opportunity to consult with the BCO;
- The BCO should not be bound to complete the inspections laid out in the service plan, but that the plan should represent the inspections deemed to be necessary and which might be reasonably expected to be completed; and
- Clear guidance is needed to ensure consistency.

Whilst some respondents suggested that compliance and insurance data be used to guide risk assessments, it was noted that Local Authority BCOs do not have access to such data. Indeed, Local Authorities noted that they currently even lack information on enforcement action taken against builders outside of their Local Authority, and that the low frequency of formal enforcement action renders this a weak indicator. Therefore, the proposed risk assessment methods were designed to avoid reliance on historical compliance data or data on construction faults.

A minority of BCOs challenged the proposition to apply risk assessment to the scheduling of inspections on the grounds that all stages need inspection or that BCOs can make these decisions without referring to guidance.

1.5   Stage 3: Draft method

The draft approach for risk assessing *common projects* such as domestic extensions included:

- A checklist of common construction stages per type of project, such as foundations and superstructure;
- A three band High, Medium, Low risk rating based on scoring design, complexity, size and the build risk; and
- An indication of the number of visits per type of project (e.g. extensions versus underpinning), linked to the risk assessment, but with a flexible range of site visits per risk grade, such as 6 to 9 visits for high risk extensions.

The stages to be selected would be based on:

- The guideline on the number of site visits per project, such as 4 or 5 for a medium risk loft conversion; and
- The identification and rating of items to inspect per stage – if the number of inspections is less than the number of stages, the rating of items may inform which stages to select.

The number of guideline site visits may exceed or be less than the number of stages. This allows for additional visits for higher risk projects, and not separately visiting all stages for lower risk projects.

It was also suggested that, as an option, selected items to inspect (such as most critical ones) are included on service schedules as additional "notes" – rather than as a comprehensive list of items.

As previously noted, the approach to assessing more complex projects, such as hotels, would follow the same steps as common projects but the determination of the number of site visits would be based on expert judgement and scrutiny of project specific construction programmes. The BCO would be advised to review the design and programme of works and through their expertise deduce:

- The key stages of construction;
- What might 'go wrong' at each stage (potential items that might fail to comply with building regulations);
- The point when these items are open to inspection;
- The criticality of these items for the purpose group of the building; and
- The number of site visits needed per stage to assure compliance.

A list of construction stages would be offered as a checklist along with guidance, but without indicating the potential number of site visits.

1.6 Piloting

1.6.1 Overview

A draft risk assessment guide for Building Control was issued in December 2009. The pilot aimed:

- To test the draft method;
- To indicate how to support the implementation of the risk assessment and service schedule nationwide; and
- To assess the costs and benefits of the method, and make any final amendments to the method and associated service schedule.

The pilot method involved eight Local Authority BCBs and three Approved Inspector BCBs carrying out risk assessment of building applications. An online risk assessment piloting tool was developed to support this pilot. As many building works take longer to complete than the 6 months allowed for the pilot, it was necessary to complete retrospective risk assessments for most building projects, i.e. assessing recently completed works. In total 536 risk assessments were completed, 490 using the Common Project risk assessment method and 28 using the Complex Project risk assessment method. Extensions and loft conversions were the most common types of building works.

1.6.2 Pilot findings

It was found that:

- The vast majority of the responding BCOs (19 respondents from the 11 BCBs) regarded the time taken to complete a Common Project Risk Assessment to be short and acceptable.
- The vast majority of BCOs said it was easy to rate Design, Size and Complexity, but only 22% said it was easy to rate Builders as most builders were unknown to the surveyors. There were very few suggestions for revising the criteria for size, design and complexity.
- 94% of respondents said it was easy to select stages and 83% said that this was useful.

- BCOs agreed with the suggested number of site visits for the majority (79%) of risk assessments. On average, Local Authority BCOs reported actually doing one more site visit than suggested by the risk assessment (5 versus 4 across all types of works), and Approved Inspector BCOs reported 0.3 more visits than the risk assessment guideline (3.3 versus 3 per application, averaged across all types of works). This may be in part because Approved Inspectors tended to assess works such as office/shop refits which require fewer visits compared to domestic extensions and loft conversions.

- There was mixed opinion on the value of assessing individual items to inspect. Whilst some said it was time consuming and did not alter the number of site visits, others said it was useful, especially for more complex buildings. However, this option was rarely used in the pilot, in just 3.6% of risk assessments.

- Few respondents cited problems with completing the risk assessments.

- Surveyors cited uses of the risk assessment such as:
  o "It is useful to asses and set fees for inspections and gives a clear and standard method of doing so for everyone. It should help standardise the process across different authorities".
  o "Useful as a notification framework."
  o The cited uses matched the intent of the method.

- The complex project risk assessment generally took longer but was judged to be acceptable by 50% of users compared to 17% who said it was unacceptable;

- Most BCOs said that the complex project risk assessment was useful but there was mixed opinion on its practicality and one argued against the method; and

- Whilst some BCOs expressed reservations with the complex project risk assessment method, the cited uses matched the intent of the method.

1.6.3   Service schedules

Owners sought information to enable them to understand the BCO's work, check on builders' compliance with the inspections and to be able to contact the BCO. Builders tended to say, on the one hand, that they do not need to be told the stages as they already know them but, on the other hand, if they knew what needed to be inspected at each stage this might reduce the number of site visits, by ensuring work was ready and open to be viewed at the time of the BCO's visit.

Both homeowners and builders welcomed information on when site visits may occur. Both builders and homeowners welcomed information on the risk rating, but BCO's said that they were concerned about stating the risk rating in the service schedule.

Many BCO's indicated that they already serve inspection notification frameworks onto builders or applicants which are similar to the proposed service schedules. BCO feedback on the information to include on schedules included:

- Stages to be notified and/or (by exception) key elements to be inspected;

- Contractor, owner and surveyors contact details; and

- Other documentation to be seen, e.g. test results.

1.6.4 Implementation support

The main actions cited by BCOs as being useful to support national implementation, if made mandatory, included:

- Having a system that provides historical performance data on builders;
- IT support, such as a risk assessment tool and database of past site visits;
- Clarifying some aspects of the method;
- Training of BCOs, such as a one hour briefing;
- Making a software version of the risk assessment available to all BCOs; and
- The risk assessment is policed" and monitored to ensure that it is being used correctly.

1.6.5 Impact

BCOs generally said that the use of risk assessment and service schedules should:

- Lead to better targeting of inspections and reducing unnecessary visits;
- Improve agreement between builders and BCOs regarding the number of site visits;
- Make the inspection process clearer, better defined and more transparent;
- Help to determine the number of visits and help determine appropriate inspection charges;
- Achieve greater consistency across all BCBs and a level playing field with regards to inspections (e.g. same number of site visits for similar projects);
- Help to ensure compliance first time; and
- Improve relationships between builders and owners – as requirements would be clarified.

There was mixed feedback on whether the risk assessment would impact the number or duration of site visits. Many thought there would be no impact as the guidance was consistent with current practice. Some thought it might lead to a reduction in the duration and number of site visits as inspections would be more focused. Also, some BCOs thought the use of service schedules might reduce the number and duration of visits as they would clarify requirements and reduce the frequency of visiting sites when work is not ready to be inspected.

Most respondents cited benefits. The cited risks included:

- Needing to update risk assessments upon commencing site visits due to an observed change in the risk;
- Risk assessment may be inaccurate if completed at the time plans are received due to lack of information regarding who will be undertaking the work;
- BCOs relying on the risk assessment rather than site observations to determine their inspection schedule;
- May add to paperwork; and
- Creating an obligation for BCOs to complete site visits which they then fail to meet (despite guidance to the contrary).

1.6.6   Costs

Other than the time taken to complete the risk assessment, no other significant costs were reported. The common project risk assessment was said to take 5 to 10 minutes by most respondents and the complex project risk assessments a few tens of minutes. With regard to service schedules, most BCOs said they already send an inspection plan to builders and so would incur little extra cost. Some said they would need to set up an administration system for issuing service schedules. These costs were said to be minimal.

1.7   Conclusions

There are current examples of risk assessment methods used by BCBs and other regulators that demonstrate the practicality of risk assessment. Whilst a small minority of BCOs cite potential concerns with the proposal to complete risk assessments and the method proposed here, the majority of respondents agree that the approach is practical and meets their needs. Most organisations that piloted the method reported it to be practical and useful, particularly with respect to its intent to produce service schedules. The service schedules were welcomed by owners, builders and BCOs as a means of making decisions more transparent and better communicating notification needs. Therefore, it was recommended that:

- The draft risk assessment is taken forward and implemented;

- The method has the status of guidance;

- Commencement and completion stages remain compulsory notification stages;

- The pilot suggested some amendments to the guidance, including:

    o   Minor amendments to the guidelines on the number of site visits;

    o   Clarifying when to apply the complex project risk assessment; and

    o   Advising on how to use the method for multi-building applications and applications with multiple elements.

- Service schedules are introduced; and

- Training and IT support could perhaps be offered by organisations such as the LABC and ACAI (although this is outside the scope of the research project).

An electronic version of the risk assessment was suggested by some respondents but others relied on a paper system. Therefore, whilst an IT version of the risk assessment offers advantages, it is not essential.

The use of risk assessment would be facilitated by development of systems to provide a history of builders' performance (number of site visits, re visits and informal actions), even if this is limited to builders within a Local Authority's area or to an Approved Inspector's own clients. This is considered to be the most important issue as the assessment of builders has repeatedly been cited as the main challenge.

1.8   Next steps

It is recommended that DCLG consider:

- Publishing the final version of the guidance (attached as a separate document) for use by all BCBs ;

- If the guidance is to be made mandatory, working with industry organisations such as the Building Control Alliance, LABC (the body that represents Local Authority Building Control) and the Association of Consultant Approved Inspectors to develop an implementation plan, potentially including training and IT support;

- Whether ownership of the guidance could be taken on by an industry body such as the Building Control Alliance or the Building Control Performance Standards Advisory Group, who would take on responsibility for amending and updating the guidance as necessary in the future.