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Getting early results from the FSEC Toolkit

Issued by:

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Addressed to:

The Chief Executive to the County Council
The Clerk to the Fire and Rescue Authority
The Clerk to the Fire and Civil Defence Authority
The Clerk to the Combined Fire and Rescue Authority
The Commissioner of the London Fire and Emergency Planning Authority
The Chief Fire Officer

Please forward to:

FRS FSEC Team Leaders

Summary

This Circular gives general advice to senior FRS managers (and more detailed advice to FRS FSEC Teams) on how the FSEC Toolkit can be used to give information in time to inform the preparation of year 2 IRMP Action Plans.

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1.0 Introduction

- 1.1 Further to my letter of 31 March, 2004, which covered IRMP Guidance Note 5, this circular comprises IRMP Guidance Note 8, which gives further information on how to get early results from the use of the FSEC Toolkit. It contains general information for principal officers and senior FRS management and more detailed information for FRS FSEC Teams.

2.0 Issues for senior FRS management

- 2.1 You will wish to note the following:

- risk management is a strategic issue which demands senior management's attention. (Feedback we have received indicates that senior FRS management are in many cases not engaging in the FSEC process.)
- at least one FRS has completed its year two action plan using FSEC. (Unfortunately, other FRSs have been slow to allocate resources to the introduction of FSEC and are now finding it difficult to gain momentum.)
- whilst use of the FSEC Toolkit is technically demanding, FRSs which have made an early start now seem to be achieving good overall results.

Nevertheless, there appear to have been some cases where the findings have been counter-intuitive. In such cases, before publishing the results widely, we recommend that FSEC teams should:

- (a) check they have used the Toolkit properly, and
- (b) seek the view of the FSEC help desk

since it can be embarrassing if it later transpires that the local FSEC team “got the process wrong”.

- despite having been submitted to the data cleansing process, the accuracy of some geocoded incident data is causing concern in some FRSs. (Unfortunately, whilst data cleansing can (and has) improved the quality of much of the data submitted by FRSs, where the original data was of poor quality this has inevitably limited the improvement that could be achieved. In such cases further manual scrutiny of the data by FRS staff will be required.)
- 2.2 For the future, the Office of National Statistics will shortly be providing a geo-coding tool and training free of charge to all local authorities. It is suggested that FRSs which are experiencing difficulties with ongoing geo-coding of data might make use of this tool. Further details are available from the FSEC Helpdesk and website.

3.0 Getting early results from FSEC: strategies for prioritising work

Many Fire and Rescue Services are keen to get outputs from the FSEC toolkit as soon as possible to assist with year 2 action plans, but they also want to ensure that the input data is right, otherwise the results will not be credible. Against this background, this section of the circular provides guidance to FRS FSEC Teams on how to get reasonable results in a reasonable timescale. The aim thereafter should be to continually maintain and improve the base data.

3.1 Incident data

- It is important that incident data for dwellings and special services where there was a casualty, fatality or rescue are geocoded as accurately as possible. This should not be too onerous to do.
- The dwellings module uses incidents where there was a casualty, fatality or rescue to determine casualty rates. These incidents are therefore the most important dwelling fire incidents to geo-reference as accurately as possible. (Note that there is a secondary indicator which considers the rate of fire per household and this is likely to give unreliable rate of fire results if all dwellings fires are not correctly located, but it will not affect the predictions of lives lost.)
- The special services module uses 'life risk' special service incidents to determine casualty rates. These incidents, in particular RTAs, are therefore the most important special service incidents to categorise and geo-reference as accurately as possible. There is no secondary indicator for special service incidents, so the accuracy of location of non-life risk incidents will not affect the predictions of lives lost. These locations can therefore be correctly assigned in slow time without adversely affecting the predictions from the module.
- The other buildings and major incidents modules do not rely on local brigade incident data for risk assessment. Therefore these types of incidents do not immediately need to be accurately positioned for the module to work, but they should be improved in the longer term.

3.2 Other Buildings data

- The five key types of buildings for societal life risk are hotels, hostels, HMOs, hospitals and care homes. These contribute the majority of the societal risk to life from fire in Other Buildings. It is important to get the number, location and occupancy of these buildings right. The relative risk of occupancies such as shops and offices means that both their locations and individual site assessments will have less impact on the predictions from the toolkit. It is therefore likely that these occupancies can be correctly located and site assessed in slower time without adversely affecting the results from the toolkit. Work on Other Buildings data should therefore prioritise on getting the number, occupancy and location of the key types of building correct.

- In addition to the key types of buildings, you should also consider amending the site assessments from the default for all buildings with over 1,000 occupants. (The default setting was given to all buildings in the Toolkit 'as supplied'.)
- You should ensure that any HMOs you have in your F&RS area are included in the Other Buildings module. HMOs are one of the highest risks of Other Buildings and therefore need to be included in assessments, but were not part of the Valuation Office supplied. Some local authorities maintain this data and are the best source. However, a method for identifying potential HMOs where no other data is available, such as by using multiple AddressPoint records as an indicator, can be accessed from the FSEC helpdesk and FSEC website.

3.3 Sensitivity analysis

- The impact of the respective modules (and the data they use) on the outputs from FSEC will vary according to the distribution and intensity of risk in a particular brigade area. If one or more modules make little impact, there will be scope for leaving completion of the full dataset for that module to a later stage. A good starting strategy would be to create a base dataset using corrected incident data (see above), but with the other data supplied during the rollout uncorrected, and run the FSEC Model. Then examine the outputs from all the modules to assess which indicate a significant contribution to the predicted outcomes. Make refining the input to these latter modules the first priority and follow up later with the other modules.
- The impact of different data might then be examined. For example, running the FSEC model in datasets where all the Other Buildings site assessment final scores were changed to high risk and then low risk, would provide information on the maximum impact of improved site assessment data.
- The impact of road network data can also be examined in a similar way. Different default road speeds for classes of road can be applied and their impact on results determined using a few runs of the FSEC Model.

3.4 Geographic areas of concern

- Many brigades will have known areas of concern where they consider the provision of fire cover is either above or below what it might be. Where decisions are to be made about these areas, it might be useful to target the data associated with them first for more detailed assessment and analysis, following up with the data for other areas when time permits.

3.5 The impact of FSEC relationships and outputs

- The Dwellings module and the RTA aspects of the Special Services module usually provide the most predictions of lives lost. These should therefore be as complete as possible in all datasets.
- The property predictions of the Other Buildings module usually provides considerable impact on cost benefit analysis. The key data for the Other

Buildings module are the number, occupancy type and location of buildings. These should be checked for correctness, even if time does not permit checking all the data in the first instance. See above for discussion of Other Buildings data issues. Default site assessments can usually be used to provide good approximations for property loss (although sensitivity analysis can also be carried out, see above).

- The Dwellings module usually produces the most impact in terms of predictions of the numbers of lives lost in fire.
- The predictions for the number of lives lost in the Other Buildings module tends to be appreciably smaller than in the Dwellings module. The five key contributors to societal life risk in Other Buildings are: hotels, hostels, hospitals, care homes and HMOs.
- The Special Services module can have a major impact on the predicted total number of lives lost. The majority of this is from RTAs.
- The Major Incidents module has no impact on the outputs of the FSEC toolkit, other than to provide a check that the amount of resources specified as being required can be delivered.
- The impact of planning scenarios, especially weight of attack, is difficult to examine. The FSEC toolkit assumes that whatever resources are planned will be sufficient to deal with the incident. The planning scenarios therefore need to be determined using professional judgement and they must be as realistic as possible, justifiable and auditable.

3.6 CFS Targeting

The Toolkit can be used to target Community Fire Safety initiatives at those most at risk from dwelling fires. The 2001 census data, brigade incident data, and 'at risk' groups supplied as part of the Toolkit provide an effective planning tool for identifying the community groups and areas that will most benefit from targeted Community Fire Safety activities, particularly home fire safety checks. These areas can then be targeted for CFS initiatives and the activity recorded within the Toolkit software for later analysis.

4.0 Personal

- 4.1 Finally, on a personal note, you might wish to know that I shall be retiring later this month after almost 30 years of association with the fire service on research and development, not least the FSEC work referred to above. My successor will be my colleague Cath Reynolds, on temporary appointment until the outcome of a review of all research in ODPM has reported to the ODPM Board, probably about the end of this calendar year.
- 4.2 I thank you and your colleagues for making my time at the Home Office, and latterly at the ODPM, such a satisfying, albeit challenging, experience.

David Peace