

## Summary of inspection report of fire along De Kelders in Leeuwarden, 19 October 2013

On Saturday 19 October 2013 at 17:21 hours the Incident Room for North Netherlands received a call about a fire in the Freestyle clothing store situated at 31 De Kelders in the old inner city of Leeuwarden. The adjacent premises contain, amongst other things, a clothing store and a hairdressing salon on the ground floor. Residences are situated above all these premises.

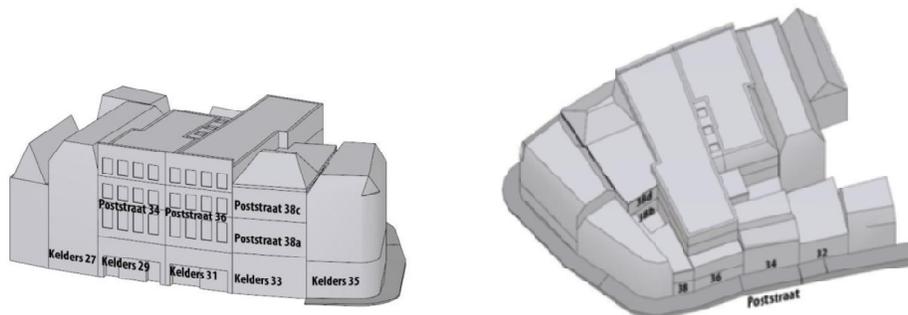


Illustration 1: Positioning of the premises and addresses in respect of each other (drawing: Tjalling Graafsma).

On arrival, the fire brigade discovered a raging fire at Hajarita Fashion, situated at 29 De Kelders, this is the clothing store next door to Freestyle. The fire brigade cannot prevent the fire from spreading to the adjacent and upper premises. Shortly after the fire brigade's arrival it became known that the resident of 38b Poststraat was still in his home and was enclosed by the smoke. The fire brigade was eventually not in a position to rescue him. Furthermore, at this fire a total of five shops and eleven homes were lost.

The municipal (emergency) services scaled up to an 'extremely vigorous' status and in the GRIP structure to GRIP 2. Eventually it lasted until 06:00 hours the following day before the 'all clear' signal could be given. Bringing the fire under control still lasted until the Monday afternoon. A few municipal processes such as relief support and after-care still remained active for a while.

The fire in Leeuwarden featured some remarkable and/or particular attributes, being:

- The fire happened in old, high-density inner city premises with shops on the ground floor and occupied homes above.
- The fire developed extremely rapidly to adjacent premises.
- In the first instance the fire was combated with compressed-air foam (DLS) as the extinguishing agent. The use and the effectiveness of this extinguishing agent had received countrywide attention in the media in mid 2013 and at this fire the media also paid attention.
- At the commencement of the fire a number of residents were present in the premises, of which only one resident was fatally injured, whereas he was not present in any of the premises where the fire was raging.

### The investigation

The specific characteristics and the possible lessons to be learned nationally were a cause for the Inspectorate for Security and Justice (Dutch Inspectorate S&J) to conduct an investigation into this fire. The Inspectorate S&J does this jointly with the Fire Service Academy and the fire investigators of the Fire Department of the Netherlands. Since 2013 the Fire Service Academy has investigated fires that are possibly relevant for the development of study and course materials for trainings at the fire department. This fire is of importance regarding the proper or non-functioning of fire prevention facilities, the behaviour of the fire and the actions by the fire brigade.

The Safety Region Friesland (VRF) has indicated to the inspectorate that they also want an external investigation into this fire and the functioning of the chain of emergency services. The Inspectorate S&J

therefore also conducts this investigation at the request of VRF, as agreed to by the mayor of Leeuwarden.

For this investigation the Inspectorate S&J maintains the following key question:

What lessons are there to be learned by the Municipality of Leeuwarden and the Safety Region Friesland concerning the incident on 19 October 2013 along De Kelders in Leeuwarden, and are these also applicable for the rest of the country?

#### Conclusion

On the basis of the investigation, the Inspectorate S&J and the Fire Service Academy conclude that the poor fire prevention condition of the premises played a significant role (which is not to be underestimated) in the fire development and smoke dispersion at this fire. At various points the constructional situation did not comply with the fundamental requirements of resistance to fire penetration and flash-over (WBDBO), resistance to smoke penetration (WTRD) and escape routes pursuant to the Building Decree 2012 level of existing construction.

The action by the fire brigade and other emergency services was adequate and primarily geared towards the rescuing of the resident. An extremely unfortunate series of different circumstances led to the fact that the resident could not bring himself to safety, but also that the fire brigade was not in a position to rescue him.

The fire fighting proceeded effectively, making use of available fire-fighting equipment, available potential and the eventual deployment of limitation lines. During the repressive action adequate attention was paid to the safety of own personnel. Subsequent to the incident, the after-care of the fire brigade's own personnel was adequately set up and implemented.

The disaster and crisis organisation functioned as could have been expected, in which the need for leadership and coordination was paramount in the manner and the level of scaling up and scaling down. The processes Relief support, Care and Communications were applied quickly and effectively and carried out properly. Aside from the municipal (emergency) services the community also provided a strong and social contribution in the assistance to the affected parties: the Frisian 'Mienskip'.

#### Lessons to be learned

A study of the various elements that have played a role in this incident (fire prevention, behaviour of the fire, fire fighting, smoke dispersion, attempts to escape, rescue efforts, the forming and establishing of a disasters and crisis organisation and the after-care of own personnel) provides answers to the key question about which lessons can be learned and formulated for the Municipality of Leeuwarden and the Safety Region Friesland and whether this also applies to the rest of the country.

#### Lesson to be learned 1

An adequate fire safety is a joint responsibility of owners, users and the public authorities. The public authorities establish the rules and the onus is on them to monitor it, whereas owners have a responsibility in complying with those rules. At the moment the legislator is trying to create a certain (preventative) level of fire safety in existing buildings and primarily places the responsibility for this on the owners of the buildings. However, these owners don't appear to automatically (be able to) take that responsibility, whereas the public authorities don't follow-up in this respect. This study shows that the absolute minimum for existing buildings in this case, is not even achieved and recent studies by the Dutch Human Environment and Transport Inspectorate and the VROM Inspectorate (Ministry of Housing, Spatial Planning and the Environment) show that this is not unique for Leeuwarden. So owners on the one hand, should specifically be addressed about their responsibility and obligation to ensure fire safety, and should alternatively be assisted in bearing such responsibility. Municipalities are the designated institutions to fulfil such an informative, stimulating and advisory role. Having regard for the risks in the existing buildings, the Inspectorate S&J thinks that municipalities should draw up an inventory of these risks and incorporate its results in the compilation and implementation of the municipality's policy to be maintained, as is also done for a large part in Leeuwarden.

#### Lesson to be learned 2

In the high-density area of the old inner city the Leeuwarden fire brigade immediately alerts the crews of

two fire engines and a rescue vehicle ('moderately vigorous fire potential'). This provides the capability to tackle a starting fire in this vulnerable built-up area, together with a capacity to carry out any rescue operations. At present this warning of 'moderately vigorous fire potential' for fire detections in vulnerable built-up areas already takes place in other municipalities and deserves to be taken up in municipalities where that is not yet the standard.

#### Lesson to be learned 3

The Duty Officer (OvD) at De Kelders opted for two limitation lines and mobilised sufficient repressive resources by way of fire engines and high flow jets from aerial appliances and access platforms. Furthermore, he had the left-hand limitation lines checked for temperature rises with thermal imaging cameras on the 'cold' side. The Duty Officer from the Fire Department chose the correct intervention tactic: the defensive external deployment. This ensured that time was created to effectively stop the spreading of the fire. The researchers consider this a wise decision which was well implemented.

#### Lesson to be learned 4

It is useful that operational information (like a photograph by Google-Earth) which was made available in the incident room but not in the field, will also be made available in the field, e.g. to the Incident Commander at the scene. A number of initiatives have already been developed for this purpose in the Netherlands. In study and course materials and especially in trainings, more attention should have to be paid to the importance of this information and for taking enough time to be able to absorb and to interpret this information.

#### Lesson to be learned 5

Although matters went well in Leeuwarden, it is recommended, in principle, not to deploy officers that have not been alerted, but who arrive spontaneously anyway. This could cause problems in the relief. If spontaneously arriving officers are deployed anyway, then explicitly consider whether this could lead to problems when relieving others of their duty.

#### Lesson to be learned 6

From the moment that the incident was qualified as a 'major fire' the municipality of Leeuwarden immediately alerted the OvD-BZ. This person can initiate the necessary actions to mobilise the municipal processes to inhibit the consequences of the incident as quickly as possible. That could be the arranging of fencing for cordoning off the area, but also the required municipal contingency plan processes. This works in an accelerating manner and contributes to an efficient completion of the incident. It's for this reason that this course should be followed in other municipalities.

#### Lesson to be learned 7

In the contingency plan the fire brigade is responsible for the disinfection process. This not only applies to humans and animals, but also for vehicles and infrastructure. During an incident control, adequate measures must be taken for the prevention of exposure to asbestos fibres for citizens and relief workers. As a rule, the Ministry of Social Affairs and Employment [SZW] maintains that premises dating back prior to 01 January 1994, by definition, are asbestos-suspected. Measures will have to be taken at the scene in respect of the disinfection of people and vehicles (in conformity with asbestos procedures from the Ministry of Housing, Spatial Planning and the Environment [VROM]) unless it is conclusively ascertained that there is no asbestos present.

#### Recommendations

On the basis of the study, the Inspectorate S&J has the following recommendations to municipalities in general:

1. Emphasise to owners of buildings that they have a responsibility and an obligation to ensure fire safety and assist them in bearing such a responsibility.
2. Take on an informative, stimulating and advisory role in respect of fire safety and property owners.
3. Draw up an inventory of the fire safety risks in the existing built-up area and incorporate its results in the compilation and implementation of the municipality's enforcement policy, as is also done for a large part in Leeuwarden.