



DUTCH
SAFETY BOARD

Summary

Firebrands at Scheveningen



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Photo cover: L. Plasmeyer

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The Dutch Safety Board

When accidents or disasters happen, the Dutch Safety Board investigates how it was possible for these to occur, with the aim of learning lessons for the future and, ultimately, improving safety in the Netherlands. The Safety Board is independent and is free to decide which incidents to investigate. In particular, it focuses on situations in which people's personal safety is dependent on third parties, such as the government or companies. In certain cases the Board is under an obligation to carry out an investigation. Its investigations do not address issues of blame or liability.

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N.B. The full report is published in the Dutch language. If there is a difference in interpretation between the Dutch report and English summary, the Dutch text will prevail.

CONTENT

Reflection 5

Conclusions 8

Recommendations 11

The New Year's Eve celebration of 2018-2019 in Scheveningen ended with a rain of fire on the boulevard and adjoining buildings. Shortly after midnight, countless firebrands¹ descended on Scheveningen. These firebrands caused significant damage and caused several small fires. The inhabitants and visitors experienced a few anxious hours, as the fire and police departments made an all-out effort to prevent more serious damage and regain control of the crisis situation. The consequences were limited to material damage and a small number of slight injuries. The firebrands originated from a bonfire on the Noorderstrand in Scheveningen, which had been lit around midnight to ring in the new year. This huge stack of wood, which had a height of 45 metres, had been constructed in the last week of 2018.

The Dutch Safety Board investigated the firebrands, the bonfire and the organization of this annual event. The Board concluded that the municipality of The Hague and the fire department underestimated the risk of firebrands. The signals from, among others citizens living near the event, after the firebrands during the New Year's Eve celebration in 2017-2018 were not translated into safety measures. The primary cause, as revealed by the investigation, was the lack of an adequate safety organization for the event. The first beginnings of such an organization were made in the past decade, but these have been developed insufficiently in relation to the event's evolution.

There was no clear procedure in the preparation of the bonfires. The municipality of The Hague made unclear arrangements with diffuse organizing parties, which were then largely ignored and failed to be enforced. This was partially influenced by the historic context of the emergence of this event and the associated interaction between the stakeholders.

From anarchy to regulation

For decades, the New Year's Eve celebrations in The Hague involved violence, vandalism, and arson. The authorities were unable to safeguard public order and the safety of citizens and did not succeed in combating the countless fires. Tolerating bonfires in Duindorp and Scheveningen was one of the measures taken to reduce the large-scale disturbances around New Year's Eve.

In the past (approximately) ten years, the municipality of The Hague has, beside showing tolerance, tried to control the bonfires through active regulation. Agreements were reached with the builders, which were partly laid down in covenants. The municipality, for instance, also provided a stable surface for the bonfires. The stacks grew higher every year and the event drew ever greater crowds, not just on New Year's Eve but during

¹ Firebrands are burning objects generated by fires, lofted by updrafts caused by fire-induced buoyancy, and transported downwind with the potential to ignite new fires. International Journal of Wildland Fire 2012, 21, 396–417. Modelling firebrand transport in wildfires using HIGRAD/FIRETEC: Eunmo Koo, Rodman R. Linn, Patrick J. Pagni and Carleton B. Edminster.

construction as well. Meanwhile, the transition from tolerance to active regulation was never fully completed. As a result, the municipality never managed to get a grip on the process while the builders wished for the least possible amount of 'outside meddling'. This resulted in a situation in which the municipality believed it was realising a safer New Year's Eve celebration, whilst the dozens of builders did not feel accountable. It was, in fact, a situation of false security.

For years, the municipality and builders continued on this course. Incidents during previous New Year's Eve celebration, including toppling of the stack and firebrands, did not cause the municipality to insist on a fundamental review and change. Nor did the growth of both public interest and the stacks themselves, as well as the associated safety risks, cause the municipality to reconsider the conditions. The firebrands that occurred during the last celebration made it clear that such a review cannot be postponed any longer. All of the stakeholders must henceforth approach the bonfires as a large-scale public event involving safety risks.

Lack of clear distribution of responsibilities

Ever since the bonfires started, the municipality has vacillated between tolerating and regulating the event. This is also the light in which the resulting mix of roles and responsibilities of the municipalities should be seen. Are the bonfires a municipal measure against the disturbances elsewhere in the city, or rather, as the builders argue, local cultural tradition? And who is actually organizing the event? The municipality subsidises the bonfires, determines the location, creates a stable surface, and cleans up the beach afterwards. The local builders take responsibility for bringing in pallets, constructing the stack, and, eventually, lighting the fire. This puts both parties into a diffuse position. The municipality is an advocate of the bonfires, facilitates and funds them in part, but must also safeguard other societal interests, such as public order and safety, and the interests of citizens living near the bonfire sites. In the interest of safety, it could in some cases be important to cancel the bonfires or suspend construction. While the covenant provided for this, it has never been a credible scenario in the eyes of the parties involved in the covenant. The wish to have the bonfires lit was great among the organizing foundations, and the municipal council expressed its desire to continue the event at the annual review of the New Year's Eve celebrations. This creates tension with the legal responsibility that the successive mayors bore in relation to public order and safety.

Permit: necessary but not sufficient

In every sense, the bonfires in Scheveningen and Duindorp can be characterized as a large-scale public event with the corresponding safety risks. This requires a thorough preparation in which the safety risks are assessed and mitigated to the greatest possible extent by means of safety measures. The risk of firebrands, for instance, which occurred during the previous New Year's Eve, did not lead to further investigation. There was no response or action whatsoever after citizens and experts alerted the municipal council to this risk. Contrary to the non-public covenant, a public permit grants citizens the right to exert their influence and submit objections and appeals. This means all interests, objections and concerns are put on the table explicitly and the police and fire departments have an autonomous advisory function.

However, a permit does not in and of itself guarantee that no problems will occur during the event. Earlier incidents (such as the deadly accident with the monster truck in Haaksbergen) demonstrate that issuing a permit is a safety-critical process that must be executed with all due care. The application process must make it sufficiently clear what precisely the event will involve, who the organizers are and what risks are associated with it. The mayor, as the party issuing the permit, must also ensure compliance and, in case of violation, enforcement. On the other hand, the organizers will have to take actual responsibility ('demonstrate ownership') and organize matters in a professional and safe manner: from applying for the permit to building the stack in line with safety guidelines. This will allow both the organizers and the mayor to get a grip on the process, each from the perspective of their own responsibilities.

Lessons for other municipalities

It is rare for a large-scale event to be organized in the Netherlands without the need for a permit. This notwithstanding, the Board discerns mechanisms that may also play a part in the organization of events in other parts of the country.

For instance, the dilemma of stimulating a local initiative and allowing the organizers a degree of freedom versus safeguarding the general interests of public order and safety presents itself more frequently. Particularly with regard to New Year's Eve, some believe that 'everything should be permitted'. It is the role of the authorities to impose proportionate preconditions without extinguishing all local initiative.

A second phenomenon is the slow but sure expansion of an annually recurring event. What once started out on a small scale may evolve into a massive public event over the years. In such cases, it is vital to remain alert instead of issuing the permit annually as a matter of routine, and to evolve one's safety considerations along with the scope, reviewing matters as necessary.

Moreover, a municipality must ascertain the parties involved. This involves the matter of whether the party applying for an event permit is indeed also the party who is organizing the event. Furthermore, it involves the matter of the extent to which the organizer understands (the risks associated with) the event and has actual control over the parties which must comply with the regulations in actual practice.

In conclusion

Events do not revolve around safety. Safety does, however, constitute a precondition. The Dutch Safety Board starts from the principle that the organizer of an event is the party which bears primary responsibility to ensure that the event it organizes proceeds in an orderly and safe fashion compliant with municipal guidelines and national legislation. While the notion that all risk can be excluded is an illusion, organizers must have adequate insight into the risks involved and mitigate these to the extent possible. Subsequently, the mayor is responsible for making a well-considered decision as to what presence of risks outweighs the other interests at stake in the organization of events. For the bonfires in The Hague, this means they cannot be organized in their current form any longer. They have evolved into large-scale public events, the risks of which must be controlled on the basis of a transparently structured process.

On the basis of its investigation, the Dutch Safety Board has reached the following conclusions.

Causes of firebrands

A combination of factors caused the firebrands at Scheveningen: the height of the bonfire stack, the stepped pyramid shape, the volume and the rapid full combustion of pallets made from dry, combustible pine. The use of fire accelerants (including diesel) and the presence of loose pallets at the foot of the stack caused the bottom of the stack to catch on fire rapidly. As a result, the stack did not burn gradually from the top down like a candle. To the contrary, the entire stack caught fire very quickly. Together, these factors resulted in a very large and intense fire. The resulting thermics and turbulence ripped both small and large pieces of burning wood from the stack, with the westerly wind distributing them over Scheveningen.

Assesment of safety risks

The municipality of The Hague and the fire department did not recognize the risk of firebrands in a sufficient manner. The Efectis report from 2015 gave no reason to do so. While a certain amount of firebrands is to be expected when burning wood; the extent to which the firebrands occurred on New Year's Eve 2018-2019 took the parties by surprise. This is noteworthy since experience on New Year's Eve 2017-2018 had shown that significant firebrands occurred and landed on the boulevard. At the time, citizens living in residences near the boulevard expressed their concerns to the municipality and Efectis, the research agency. The occurrence of these earlier firebrands, the concerns expressed in this regard and the proposal formulated by Efectis to investigate these matters did not cause the municipality and fire department to explore the risk further and implement measures. The municipality's Safety Council and fire department had an limited view of their task in this regard. In their roles as safety consultant and fire expert, respectively, they could have alerted the mayor to the potential risks of firebrands on their own initiative. In addition, the mayor did not insist on such advice.

Two other safety risks – toppling of the stack and radiant heat – had been recognized as such. Several measures were taken as a result, such as an agreement as to the maximum height and volume of the bonfire stack. We should note that compliance with these two agreements could also have limited the amount of firebrands.

Controlling safety risks

After risks have been assessed, it is important to do the following to ensure adequate risk control:

- Reach a transparent agreement on the safety approach to control the safety risks
- Ensure compliance with this agreement
- Monitoring for compliance and enforcement in case of non-compliance

The Dutch Safety Board concludes that the parties have fallen short on all these components.

Unclear agreement with regard to safety

It was difficult for the Board's researchers to find out what the exact arrangements between the builders and the municipality involved. This was caused by the unorganized manner in which the arrangements and covenant were made and maintained. The covenant was several years old and initially applied exclusively to New Year's Eve 2016-2017. Later on, various separate arrangements were made with regard to the bonfire stacks in addition to and divergence from the covenant. The non-transparent way in which these arrangements were recorded has led to questioning whether all of the stakeholders were aware of the arrangements and had accepted them as such. The builders in Scheveningen have stated that they were unaware of many arrangements – and even the whole covenant – due to complete replacement of the board of directors of the Stichting Vreugdevuur Scheveningen in 2017. The municipality's file does not contain any document specifying all of the agreements and supplements, including a list of the parties involved, in preparation for the bonfires for New Year's Eve 2018-2019. We should note that a foundation organizing such a large-scale event should be expected, when the entire board of directors is replaced, to ensure that all relevant matters are transferred to the new board in an orderly fashion. The fact that the builders in Scheveningen did not make any effort to ascertain these facts points to a lacking sense of responsibility.

Agreement with whom?

The municipality did business with what amounted to an almost fictional party; the Vreugdevuur Scheveningen foundation was primarily a 'paper construction' for discussing safety arrangements and subsidies with the municipality. The many dozens of builders did not have any ties to this foundation and did not always feel properly represented by it. The question is therefore: with whom did the municipality reach an agreement, and who felt bound by it? This incoherent organization of builders can be explained historically. In the past few years, however, the bonfires have evolved into a more regular large-scale public event.

Non-transparency has also been encouraged by the fact that the municipality, contrary to its own events policy, did not go through the required permit procedure even though this is very obviously a large-scale public event with the attendant safety risks. The Dutch Safety Board, in an earlier investigation², demonstrated that a permit as such does not constitute sufficient safeguards. However, an event permit would have laid the framework to create openness, transparency and a voice for all stakeholders (including citizens living nearby) with regard to the risks of the event and the measures that should have been implemented to mitigate these risks. This would also have increased the chance that the municipality would have taken seriously such concerns regarding firebrands as were expressed by citizens living nearby. It would also have strengthened the position of enforcers and cast the fire department in a formal advisory role.

2 <https://www.onderzoeksraad.nl/en/page/3687/monster-truck-accident-haaksbergen>

The Dutch Safety Board concludes that statements as to what moved the parties to act as they did diverge widely. A historically evolved pattern of imposing boundaries and facilitation emerges on the part of municipal services and officials responsible for public order. The municipality failed to properly examine the outlined manner of preparation of this event, which continued to increase in scope and size, nor did it undertake a thorough reorganization, even though there were clear reasons to do so in the past few years.

Non-compliance with agreements

The builders did not comply with many provisions in the covenant. According to the covenant, the maximum height of the bonfire stack was 35 metres. The Dutch Safety Board has calculated that a height of 45.2 to 47.0 metres was reached, violating this provision by at least 10 metres. The maximum volume of 10,000 m³ was also exceeded: the final volume of 11,839 m³ was well above the limit. A third important agreement was the prohibition to use fire accelerants. Adding barrels of diesel to the stack was in violation of this provision as well. While these provisions in the covenant had not been imposed to control the risk of firebrands, compliance would have reduced the amount and size of firebrands.

Non-enforcement of agreements

In order to enforce the covenant, it is of course important to be aware of the level of compliance. Based on its own measurements, the municipality knew that the height and volume of the bonfire stacks exceeded the agreed standard. The municipality was not formally aware of the diesel, but it was no secret that fire accelerants had been used in both bonfires for years. The municipality did not enforce the rules in any of the detected cases of non-compliance. It could have required partial deconstruction of the bonfire stack or removal of the barrels. The municipality could also have decided to prohibit lighting the bonfire for reason of non-compliance with the agreements that were supposed to mitigate the safety risks. The covenant explicitly states that enforcement may involve a ban on lighting the bonfire. None of these measures were implemented, however.

In conclusion

Originally, the bonfires constituted a municipal measure to channel the disturbances in The Hague on New Year's Eve. The municipality was not just the initiator but also fulfilled an important role in facilitating and financing the bonfires in the years thereafter. This also means that the municipality, from the outset, took on a certain form of ownership based on the premise that the bonfire must continue to keep the peace. The builders, on the other hand, demonstrated little sense of responsibility: agreements were violated because the builders did not feel bound by them, the standard with regard to the height was difficult to reconcile with the bonfires' competitive element and the builders' ambitions to break records, and due to the pattern of moving along with the builders on the part of the municipality.

RECOMMENDATIONS

The Dutch Safety Board has come to the following recommendations.

To the mayor of The Hague:

1. Define requirements for the safety organization commensurate with the large-scale public bonfire events. This means:
 - a. Choose the (legal) procedures, constructions and organizational safeguards that favour the process of risk assessment, transparency and comprehensibility of the safety measures and their monitoring and enforcement to the greatest possible extent. Do this whilst considering transparency, respect low-threshold participatory options for third parties, and make use of the assessments. The existing permit procedure for events of the municipality of The Hague may serve as a starting point in this respect.
 - b. Ensure that the permit applicant is able to implement the responsibilities deriving from the permit.
 - c. To the greatest possible extent, avoid commingling of the roles of supervisor, permit provider and facilitator.

To future bonfire organizers:

2. Provide insight into the safety risks associated with the bonfires for builders, local residents, and public and ensure implementation of an adequate safety approach to control the risks.

To Fire and Police departments of The Hague:

3. Issue advice on the safety risks of the bonfires, upon request and on your own initiative, in an autonomous manner.

To The Netherlands Fire Service:

4. Organize the collection and sharing of knowledge regarding the risk of organized fires (such as bonfires and Easter fires) within the fire brigade's organization. Refer to international expertise as well.



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