

KA's work on fire safety for the Norwegian churches

My name is Ingrid Staurheim, and I am a Senior Adviser in KA, with responsibility for fire safety and theft prevention.

KA is an employer and interest association for the church owners in Norway. We are working with different organizations to prevent the church maintenance and security.

I will tell about church fire challenges in Norway and how we work to prevent fire.

CHURCH CONTROLL

Every 4 years, KA conducts a bigger control for all the 1600 Norwegian churches. We check the lightning system, the electricity system, and the fire and theft security in every church.

This gives us a lot of useful information, that we store/keep in a database, and use in our preventative work.

We have given each church warden a username and password, so they can get information about their churches.

The church warden register information, so that we can get an overview over all the churches in Norway, and adapt our work to what needs to be done.

The biggest threat to the churches is fire.

Many of the churches in Norway are built of wood, - wood which is old and very dry. That means that a fire in these building often get big very quickly.

We often see that the fire is impossible to stop for the fire brigade – even when they come just after a few minutes

Too often the result is like here In Porsgrunn in 2011. The fire brigade came to the burning church just 10 minutes after the alarm started – but it was too late.

ARSON

As a result of several church controls, we see that the fires caused by electric problems is less of a problem today than before.

Today the biggest church fire issue is arson – that someone actually put fire on churches on purpose.

In the 1990s, we had a big problem with a group of young people with a kind of Satanistic ideology. They set fire to several churches. Luckily, today the satanistic days are past – but we still have challenges with arson.

Mostly it is young people who commit arson. They put churches on fire as a kind of protest or revenge to a society that they don't fit in to.

Today, most of the arsons starts outside of the churches. As we can see on this picture, the arsonists used the garbage container to start a fire.

They put the burning container close to the church wall – and as you can see [HERE](#) - - - the fire spread quickly to the attic and roof.

To prevent the arson, we have made a guidance to the church warden, to make them aware about things they can do to make arson more difficult.

For example to lock up the garbage several meters from the church wall – this little thing can make a big difference. Because it makes it much more difficult to use the garbage container as material to put a church on fire.

The police tell us that the pyromaniac's normally only take with them fire matches, and they put on fire where they find it easiest. So when we train the church warden and his staff, we teach them to understand the issue, and make them do useful measures. We work after this philosophy: the more difficult is it to commit a crime, the less chance is it that the crime will be done.

On the security matters, we work broadly. We have a good contact with the police and fire brigade. We cooperate with the **Police** who is responsible for prevent art heritage crime, and I give lectures to the **The Norwegian fire academy** – to make the fire officers get to know the value of churches, and to better be able to cooperate with the church warden on security matters.

Together with my work for getting better fire safety and theft prevention in the Norwegian churches, I work on a PhD where I study two local societies where the churches has been lost in fire. At both places, it was arson which caused the fire. The purpose of my project is to understand the underlying reasons for why some people set fire to churches, , and how to manage it in the best way for the local societies.

We think that this study can give us deeper information which is useful in our work to prevent church arson.

But still, this is not enough.

Information and Preventative work is not enough alone.

We also need technical systems which actually can save the building if the fire starts. Of course, the most important thing is to save the lives of people– but this is not usually a problem since most of the fires starts at night.

So we need more than just alarm systems – we need systems which start extinguishing immediately after the fire starts.

Many places in Norway, it is a long distance from the fire stations to the churches.

In many of the church fires we have had, the fire brigade comes too late. As I told you earlier - we have several times seen that 10 minutes is too late.

AND - “Too late” is not the only challenge.

The church place can have a fence surrounding the church, and old tombs close to the church wall, which make it difficult for the fire brigade to move their cars, close enough to the church.

The tower and attic is often quit windy, and the fire spreads quickly and easily. It is very hard to stop a fire on the attic.

A quick fire spread makes the fire brigades work dangerous – often they don't have a chance to save the church, they must concentrate on the buildings surrounding the church, - and wait for the tower to fall.

Today - It is only about 10 percent of the churches, which have any kind of automatic sprinkler or water mist systems.

Therefore, we are working together with the Directorate for Cultural heritage, and other organizations.

In this work Sintefs competence have been very useful.

But this is not an easy work – it is a lot of challenges when it comes to churches and sprinkler or water mist systems.

The churches have a different construction than most other buildings

Many of the churches are quite large. The outside wall is high and the Norwegian climate can be tough.

Most of the churches have a high tower. That can be problematic.

Another challenge is the church room – the most important room in the church is often quit big, and has a lot of empty space.

Another quit important point - is that the churches have a lot of fragile and valuable heritage.

And a lot of this heritage is decorated, and is sensitive for water.

SO - We need systems which stop the fire early, systems which are not more complicated than necessary, and systems which don't harm the heritage, and systems that we can trust – systems which don't start and spread water when it is not supposed to – BUT start when a real fire occurs.

For this challenge we have worked together with the Directorate for Cultural Heritage for several years, and Sintef and Ragnar Wighus have been an important part in this work.

So I will let Ragnar tell more about this project.