Good noses in search for mould – Use and training of mould detection dogs in Germany

Where is the mould hidden?

Water damage and mould are potential health risks in indoor environments and should therefore always be removed quickly. Often the damage is hidden within the building and apparent only in the form of an unpleasant odour or health problems of the inhabitants. An alternative to costly removal of building parts to find hidden damage is the use of a mould detection dog. With their help hidden mould infestation can be detected and roughly localized without unnecessary damage to building materials.

On the mould track

Similar to detection dogs used by police and customs officials to track a whole range of odours (human, explosives, drugs, weapons, money, passports), a dog can be trained to detect mould odour. With their highly developed olfactory sense mould detection dogs can find areas with hidden damage and enable a more specific sampling.

Not an easy job for dog and human

Mould detection requires diverse skills by both detection dog and dog handler, since mould search is a more complex search task than searching for explosives or other odours. Mould is formed by hundreds of different fungal and bacterial species and grows on many different materials. Moreover, mould odour can differ depending on nutrient medium, concentration of the microorganisms and age of the damage. The mould detection dog must be able to detect and indicate all these diverse odours (**figure 1**).

Furthermore, mould damage varies in size and can grow in areas which a dog cannot reach, such as ceilings. Also in such difficult conditions the dog handler has to be able to correctly

Figure 1: A mould detection dog searching in a difficult spot. Source: Kerttu Valtanen.

read the dog's reactions and document the findings. This is essential for drawing conclusions as to the proper cleanup method, in consultation with a building expert if necessary.

Good training is half of the job

For optimal teamwork, the mould detection dog and its handler should train together. The practical training of a mould dog can begin at an age of a few months and the dog can be ready for use as mould detection dog at as young an age as one year. A well trained dog can detect approximately 10 to 20 fungal and bacterial species: The number of detected mould odours increases with further training and experience of the dog.

Figure 2: Mould detection dog Wilma at the age of three months during training. Source: Katja Krauß.

The training also includes teaching the dog the desired way of indicating its find, e.g. by holding its paw or nose on the spot or by scratching on it (**figure 2**).

Quality assured testing and exchange of experiences

At the moment there is no uniform training for mould dogs in Germany. Therefore it is important that the performance of mould detection dogs is tested in a standardized way and by independent testers. The German Environment Agency (UBA) has developed a guideline for the testing of mould detection dogs in cooperation with the German Mould Remediation Federation (Bundesverband Schimmelpilzsanierung, BSS) and experienced handlers of mould detection dogs.

The first quality assurance test of mould detection dogs in Germany took place in 2013. The one day test is carried out once in the year. The test contains two parts; a dog personality test and a search test. The test is judged by a five person examination board. Currently, ten dogs have a valid certificate.

In Finland the use of mould dogs has a long tradition. While the training of mould detection dogs in Germany is mainly conducted by private trainers, in Finland it is possible to receive training as mould detection dog handler in a public vocational school. The dog handlers can also participate in workshops to increase their skills.

The lively exchange of experience between UBA and Finnish mould detection dog professionals will improve our knowledge about the use and testing of mould detection dogs. Planning is already underway for the first German mould detection dog workshops.

Further information

▶ **Kauhanen E, Harri M, Nevalainen A, Nevalainen (2002): Validity of detection of microbial growth in buildings by trained dogs. Environment International (28): 153–157.**

Websites (in German)

▶ **German Mould Remediation Federation (Bundesverband Schimmelpilzsanierung, BSS): Information about mould detection dogs** [Kurzlink: http://bit.ly/1OegxKV]
▶ **Certification of mold detection dogs** [Kurzlink: http://bit.ly/1XownTX]
▶ **Test procedure for mould detection dogs** [Kurzlink: http://bit.ly/1YrTbob]