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This document is a translation made by SHK of the original response in Swedish to the safety recommendation. In case of discrepancies between this translation and the Swedish original text, the Swedish text shall prevail in the interpretation of the response.

Swedish Accident Investigation Authority

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Report on roof collapse in Tarfalahallen, 7 March 2020, in Kiruna, Norrbotten County

In view of the recommendations that the Swedish Accident Investigation Authority (SHK) has addressed to the National Board of Housing, Building and Planning in Final Report RO 2021:01 Collapse of the roof of Tarfalahallen in Kiruna, Norrbotten County, 7 March 2020, the National Board of Housing, Building and planning renders here the following response.

Introduction

The National Board of Housing, Building and Planning has studied SHK's report and shares the assessment that where it has been established that there are construction errors, these have passed unnoticed due to inadequate inspections, that there are systemic failings in the regulatory framework for the planning and building process in terms of safety, and that there is therefore a significant risk of new building collapses taking place with loss of life and serious injury as a result.

Provisions and potential changes to these

The National Board of Housing, Building and Planning notes that the report does not indicate there being deficiencies in the material rules for load-bearing capacity, stability and durability, in other words the National Board of Housing, Building and Planning's regulations and general advice (2011:10) on the application of European construction standards (Eurocodes). The problems are instead attributed to the procedural rules for inspection and supervision, which are currently mainly set out in the Planning and Building Act (2010:900) and the Planning and Building Ordinance (2011:338).

In the report, SHK recommends that the National Board of Housing, Building and Planning take necessary action for the purpose of achieving and maintaining sufficient safety with respect to the load-bearing capacity of buildings. Examples of action that is specified are changes to regulations and guidance.

When it comes to changes to regulations, the National Board of Housing, Building and Planning does not have the authority for such action proposed by SHK, in other words, independent bodies and recurrent inspections. However, the National Board of Housing, Building and Planning is authorised within a couple of areas relating to inspection in other ways in the building process and this gives some room for manoeuvre with regard to action to enhance safety with respect to load-bearing capacity of buildings. This involves the right to issue regulations pursuant to the Planning and Building Ordinance in the following areas:

- Inspection plans, in accordance with Chapter 10, Section 22 of the Planning and Building Ordinance.
- Inspection supervisors and Certified Experts, in accordance with Chapter 10, Section 23 of the Planning and Building Ordinance.
- Inspection of the implementation of construction, demolition and ground works, in accordance with Chapter 10, Section 24 of the Planning and Building Ordinance.

However, all of these areas could be affected by proposals from an investigation that the Swedish Government could initiate regarding the implementation of the recommendations directed at the Government by SHK. The National Board of Housing, Building and Planning therefore intends to hold off on taking any action within the authority it has. In this context, it may be mentioned that, on 11 October this year, the Government has tasked the National Board of Housing, Building and Planning with analysing the economic impact of SHK's recommendations.¹ The purpose of this assignment is to supplement SHK's report with various pieces of factual information no later than 21 January 2022 and is thus not such an investigation that is being awaited.

Guidance

Pending an investigation and the Government's subsequent position on changes at the level of acts and ordinances, The National Board of Housing, Building and Planning sees an opportunity to develop guidance. The National Board of Housing, Building and Planning works continually on various types of guidance material and other initiatives to improve expertise (all free of charge), of which the following may be mentioned specifically with regard to load-bearing capacity, inspection and personal safety:

- Training package intended for building inspectors
Since May 2020, the National Board of Housing, Building and Planning has been offering training material in the form of 16 online lessons in how the building process is regulated and on the role of the building inspector, as well as aspects relating to assessment of whether the requirements in respect of technical properties can be deemed met. Around 790 people have studied all or parts of the material about the building process and the role of the building inspector. Around 320 people have also studied the material about the requirements concerning technical properties. There is also a

¹ See government decision of 07/10/2021, file no. Fi2021/02693 (partially), Fi2021/03285 – Assignment as a consequence of the collapse of the roof of Tarfalahallen, Kiruna Municipality. National Board of Housing, Building and Planning file no. 4989/2021.

separate online training programme for introduction to European construction standards.

- **Better risk assessments and inspection plans**
In 2020, the National Board of Housing, Building and Planning published updated guidance on the Planning and Building Act's construction and supervision process (the inspection system). Among other things, this guidance highlights risk assessment as an important aspect of preparing an inspection plan in accordance with the Planning and Building Act. Despite the fact that risk assessment is an essential element, it has been established that this is often missing when preparing an inspection plan, something that the guidance aims to correct. The National Board of Housing, Building and Planning also plans to launch a new online training programme at the end of 2022 in order to improve understanding of risk assessment and appropriate application of inspection plans so that damage and construction errors are reduced.
- **Construction Damage Function**
Within the scope of the government assignment Good Indoor Environment 2018–2021², the National Board of Housing, Building and Planning has established a specific function, the Construction Damage Function, which aims to identify and prevent systematic faults. Through this function, the National Board of Housing, Building and Planning identifies and investigates faults within construction and widespread damage in the building stock that may have an impact on human health or safety. While implementing the assignment, the National Board of Housing, Building and Planning is conducting a continual dialogue with affected parties such as construction companies, manufacturers of construction products, trade organisations, public authorities, research institutes, insurance companies and the social partners (industry and labour organisations).
- **Behavioural change**
Together with organisational psychologists and engineers, the National Board of Housing, Building and Planning has conducted a pilot project in 2021 in three municipalities (Lund, Kristinehamn and Skellefteå), the aim of which is to create behavioural change relating to the application of the rules for inspection in the building process. Through this, the National Board of Housing, Building and Planning wants to demonstrate that behavioural changes can be brought about throughout the entire construction sector and that this may be of great significance to the number of faults, defects and damage in construction projects.

In this case, Director-General Anders Sjelvgren signed the document electronically. The rapporteur has been Tomas Carlsson, Building designer. Yvonne Svensson, head of legal affairs, and Anders Larsson, lawyer, have also participated in the final administration.

² See government decision from 07/12/2017, file no. N2071/07419/PBB – Assignment to the National Board of Housing, Building and Planning to enhance work to promote a good indoor environment. National Board of Housing, Building and Planning file no. 7260/2017.

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