



Fire
University



Embassy of Finland
Warsaw



Ministry of the Interior
Finland



Ministry of the Interior and Administration
Republic of Poland

INTERNATIONAL CONFERENCE CIVIL PROTECTION AND CIVIL DEFENCE IN FINLAND AND POLAND 2025



Fire
University



Embassy of Finland
Warsaw



Ministry of the Interior
Finland



Ministry of the Interior and Administration
Republic of Poland

Planning and designing buildings with a protective function in Finland

Laura Sorri

Lukkaroinen Architects Ltd

LUKKA AROI NEN

1980

Year of foundation

~100

A team of professionals

10,8M€

Revenue in 2024

4

Offices in Oulu, Helsinki, Turku and Kokkola

+3000

Designed projects

2021 ➔

Part of the Solwers Group



Civil protection facilities in new building



Obligation to build civil defense shelters in new building, when

- Permanent building
- Floor area exceeds 1200 m² (housing, workplace)
- Floor area exceeds 1500 m² (assembly, industrial, warehouse) ¹

¹ Rescue Act

Design basis of civil protection facilities

Design basis according to the purpose of the building ²

- Housing, workplaces: 2 % of the floor area
- Industrial, retail, warehouses: 1 % of the floor area
- Assembly buildings: headcount basis ($0,75 \text{ m}^2$ per capita)

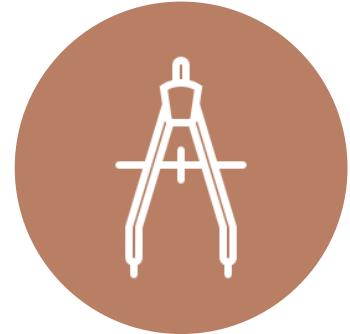


² Government Decree on Civil Defense Shelters

Designing civil protection facilities

Classification based on area ²

- Max effective floor area 135 m² - class S1 (minimum floor area 20 m²)
- Max effective floor area 900 m² - class S2
- Max effective floor area 4500 m² - underground rock shelter



Limited opening area -> limited number of doors and amount of daylight

Must be convertible to protective use within 72 hours

2 Government Decree on Civil Defense Shelters

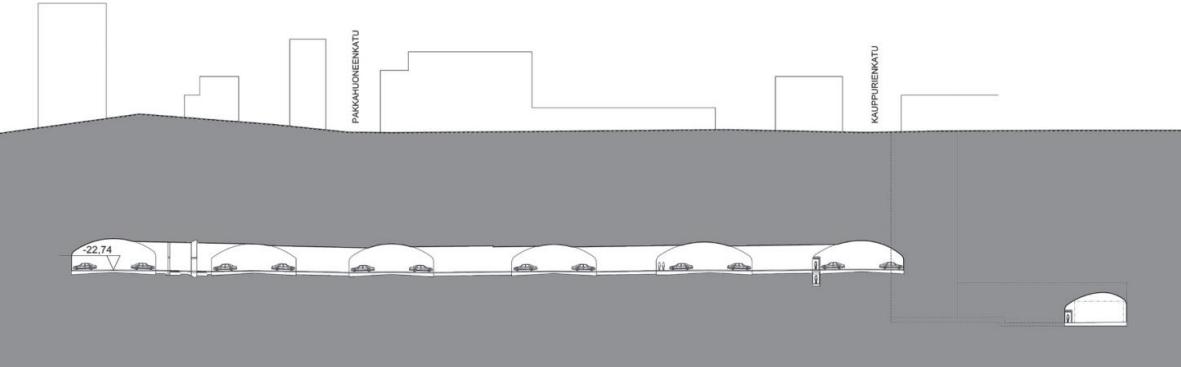
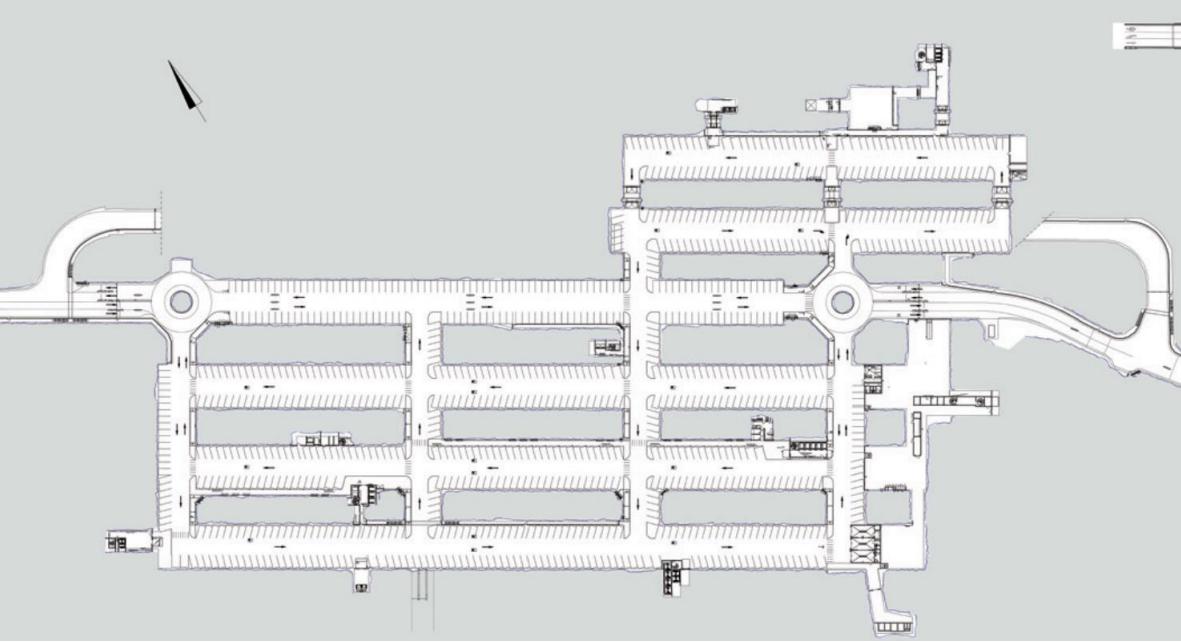


Rock shelters



Photographs: YLE

Rock shelters



Drawings: Betoni 4/2015

Photographs: Oun Pysäköinti



Dual-use in class S1 and S2

Dual-use typically

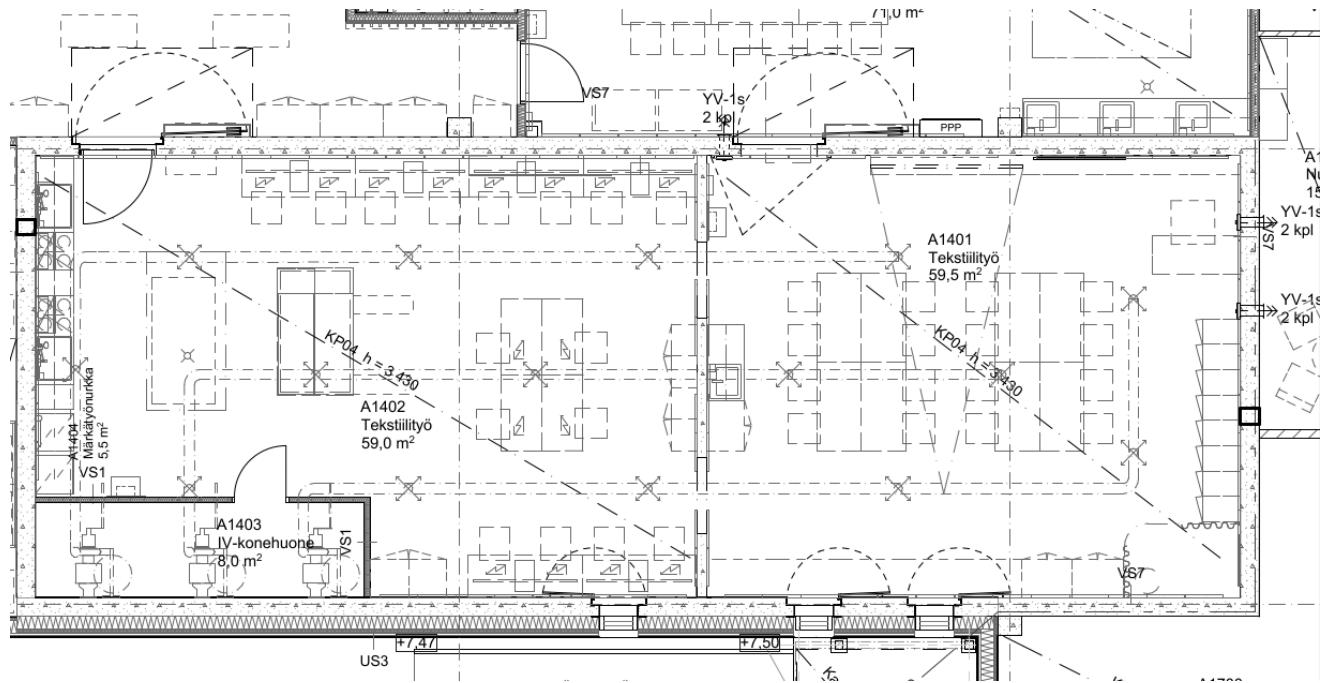
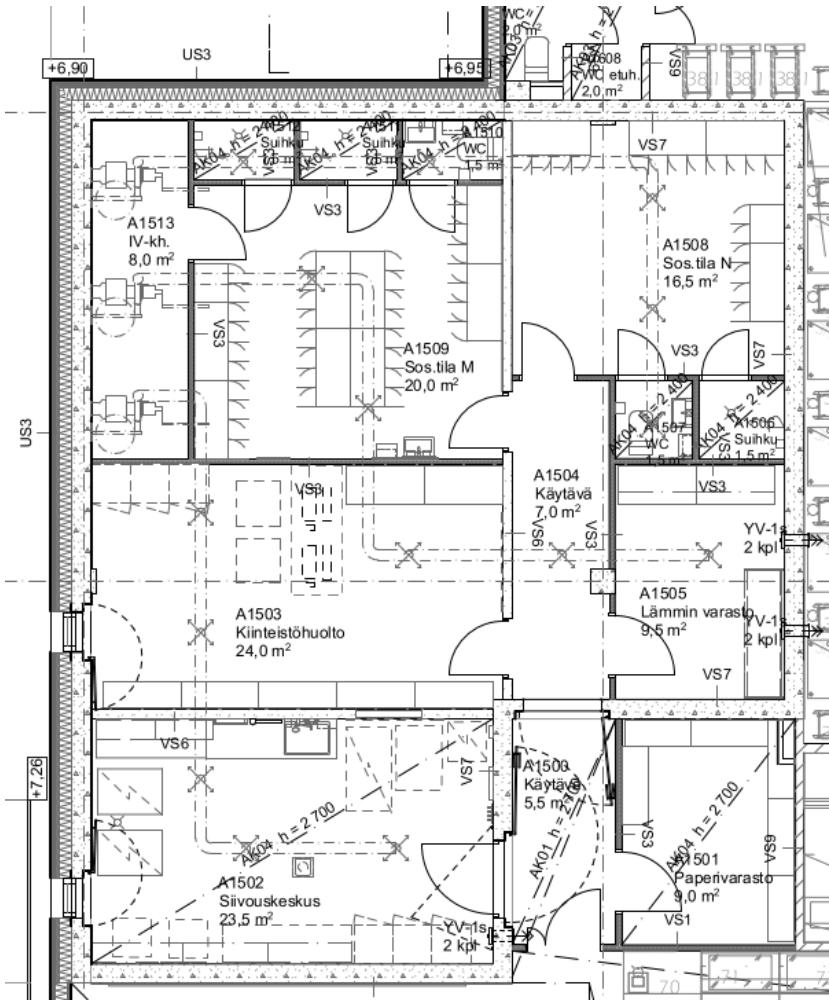
- Dressing rooms, showers, sauna
- Storage
- Storage space for each apartment

In public facilities for example

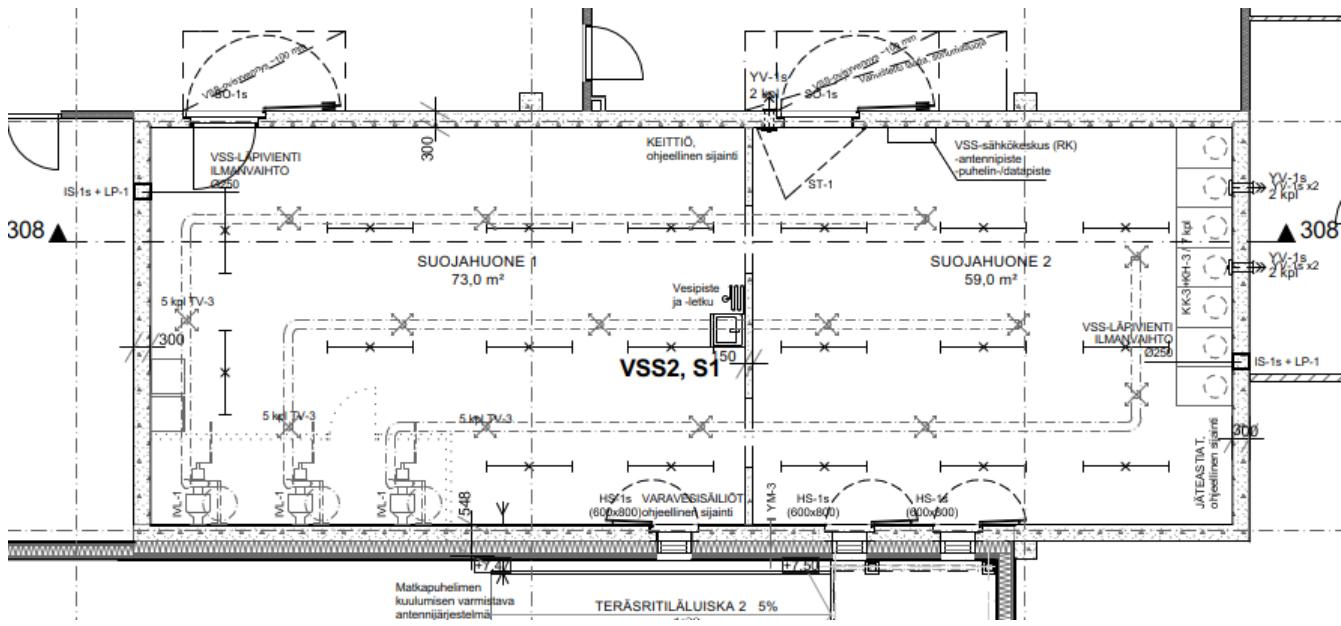
- Practice space for band rehearsals
- Classroom for home economics, arts, handicrafts
- Library corner
- Etc.



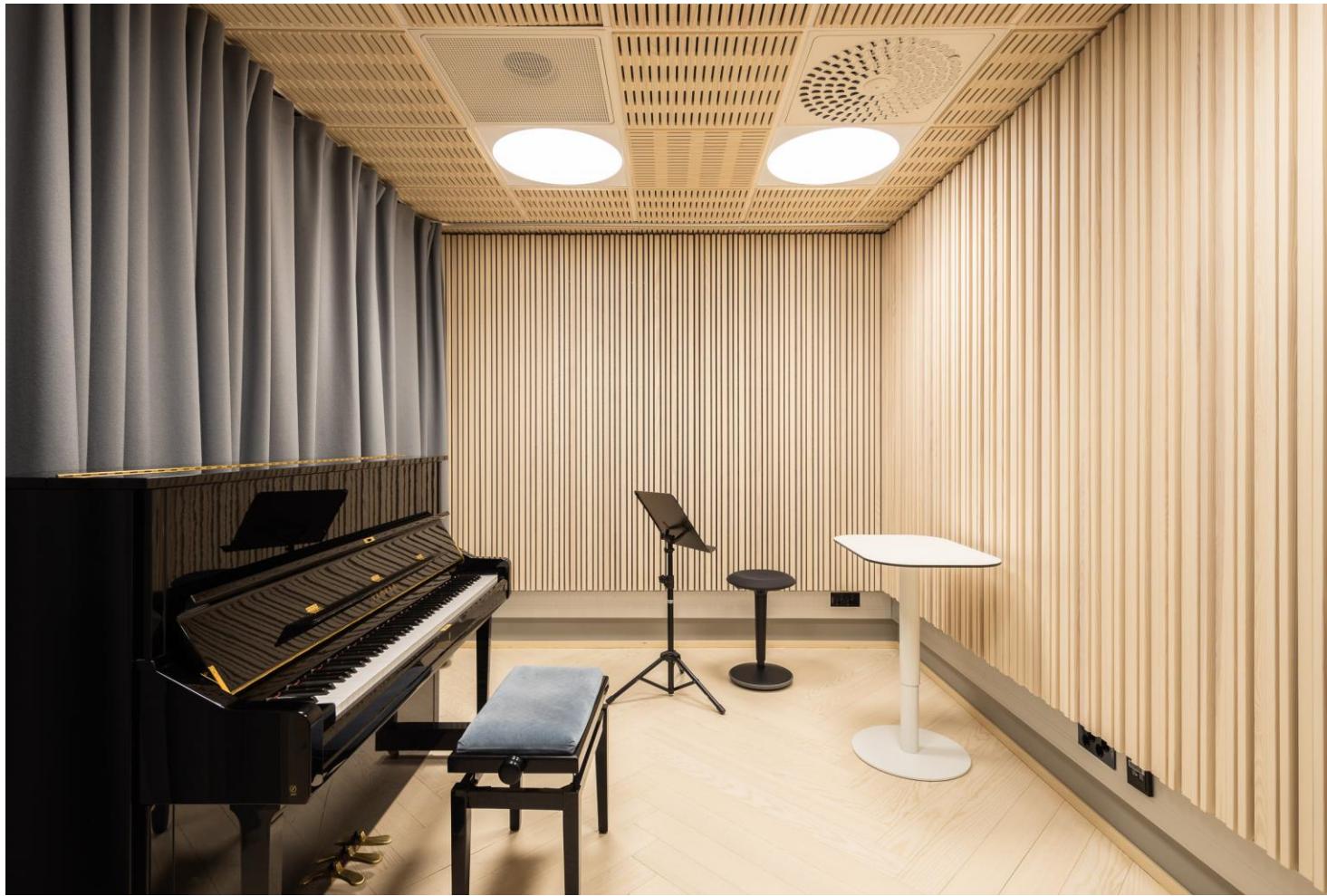
Dual-use example: school building



Dual-use: crisis layout



Dual-use: music rehearsal room



LUKK AROI NEN



Laura Sorri
Architect SAFA
(+358) 50 438 0626
laura.sorri@lukkaroinen.fi

www.lukkaroinen.fi

Oulu
Kauppurienkatu 12b
90100 Oulu

Helsinki
Bulevardi 5 A 10
00120 Helsinki

Turku
Linnankatu 49 kon 3
20100 Turku

Kokkola
Pitkänsillankatu 1
67100 Kokkola

 [@lukkaroinenarchitects](https://www.instagram.com/lukkaroinenarchitects)
 [@lukkaroineninteriors](https://www.instagram.com/lukkaroineninteriors)

 Lukkaroinen Arkkitehdit

 in