



RISE Research Institutes of Sweden AB (former SP)

The RISE institutes Innventia, SP and Swedish ICT have merged in order to become a stronger research and innovation partner for businesses and society.

SUSTAINABLE LOAD BEARING OUTDOOR WOOD

Contact

Anna Pousette, anna.pousette@ri.se

Karin Sandberg, karin.sandberg@ri.se

RISE Research Institutes of Sweden

BUILT ENVIRONMENT

WOOD BUILDING TECHNOLOGY



PROJECT IDEA

AIM

- To develop new models and methods for assessing aging and life expectancy of large wooden structures, e.g. timber bridges, in the outdoor environment to ensure safe load bearing structures
- To develop new cost-effective improvement measures in case of damage or for renovation to meet changing needs in the future
- Measurement methods to facilitate inspections, damage investigations and warranty issues

OBJECTIVES

- The project develops methods and tools to assess the remaining life and evaluate various restraining measures
- Guidelines for sustainable construction, renovation and reconstruction of large wooden structures.

METHODS USED

- Evaluation of field tests of beams and posts
- Verification/validation and testing
- Studies of existing structures of different age

EXISTING PARTNERS/EXPERIENCE

- **RISE Wood building technology**
- Field test with beams and poles in outdoor environment for about 10 years
- Experiences from inspections and the field test: moisture changes, cracking, impact of impregnation and surface treatment
- Design and construction, glued wood, timber production processes
- Moisture in wood, inspections and measurement technology

MISSING PROFILES

- **Field tests in other regions/climates**
- **Experts in simulation of moisture in wood and wood properties**
- **Expertise in renovation**
- **Builders, producers, manufacturers**