

Protection buildings for ruins and monuments

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Protection Buildings for Ruins and Monuments

Bâtiments de protection pour des ruines et monuments

Schutzbauten für Ruinen und Monumente

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INTRODUCTION

The degradation of our cultural heritage has been increasing rapidly during the last decades. Examples from Italy clearly demonstrate the increased rate of degradation.

There are a number of cases that warrant the concern shown in recent years, and if urgent measures are not taken, historical buildings of great significance will inevitably be lost.

The obvious conclusion is that the increasing air pollution must be the cause of this disturbing development. Therefore, the problem of preservation has met with new challenges.

During the last decade a few proposals for protection buildings for cultural objects have been presented, e.g. a shed roof over Parthenon on Acropolis, Athens, and a protective shell over the Column of Marcus Aurelius in Rome, (Museum, Quart. rev., Unesco, I53, 1987).

In Norway, the ruins of the ancient cathedral at Hamar have been degrading since 1567, when the church roof burned down. During the last decade the Norwegian Central Office of Historical Monuments and Sites decided to build a protection building over the ruin, and an architectural competition was held in 1987.

In 1990 a research project, Eurocare Carebuild, was started, having the objective of developing a technology package which may serve custodians having objects that need protection.

THE PROTECTION BUILDING AT HAMAR

The protection building at Hamar, designed by the architects Lund & Slaatto is an aluminium/glass building having warped, skew glass walls, see Fig. 1.

For the project a new aluminium space deck system for triangular glass panels has been developed. The system can adjust itself to form a warped surface, see Fig. 2.

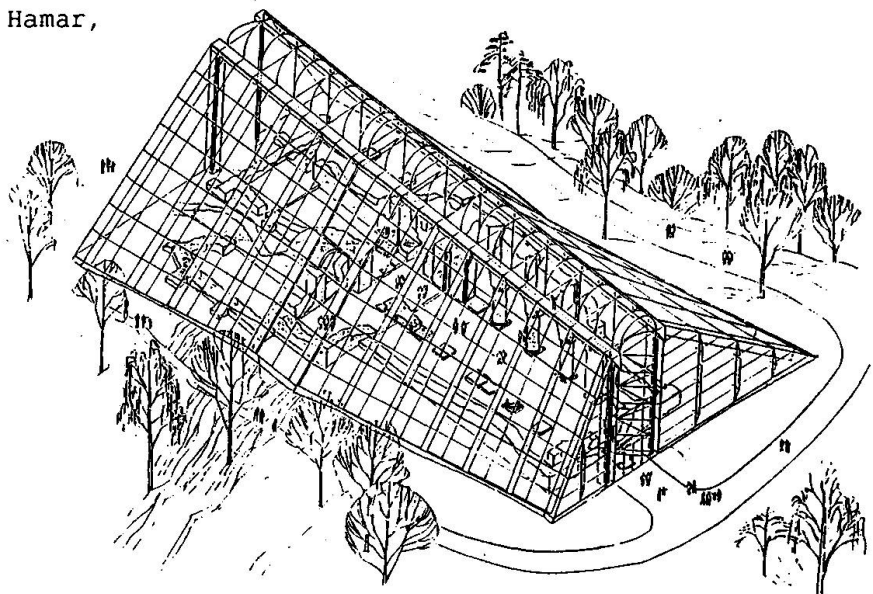


Fig. 1 Drawing of the protection building

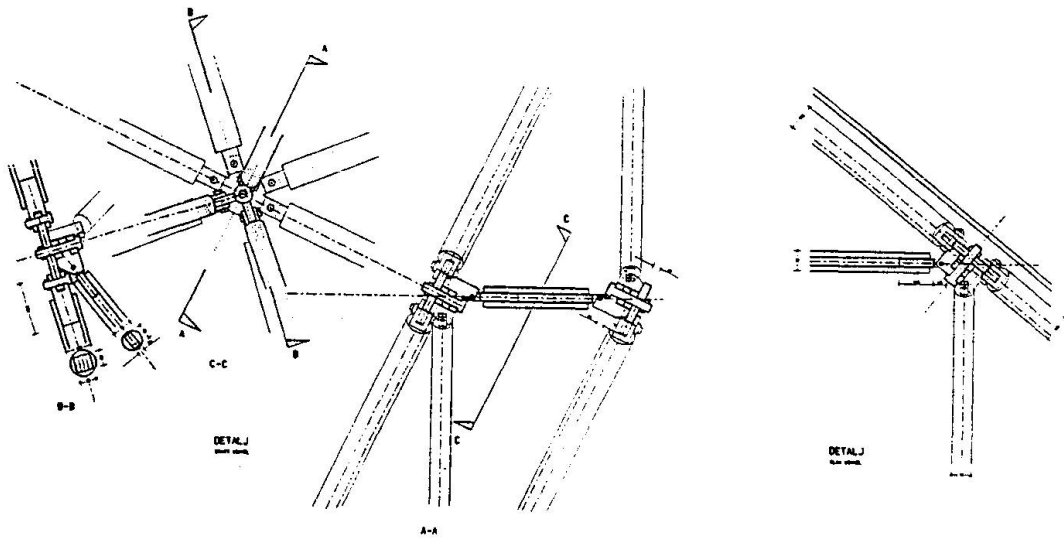


Fig. 2 Joints of the designed protection building at Hamar

EU 446 EUROCARE CAREBUILD

The research project has the following project profile, see Fig. 3, and is planned to run till 1995.

Title	: EUROCARE CAREBUILD Envelope buildings for historic buildings, monuments, stone ruins, etc.
Supported by	: Norwegian Council for Scientific and Industrial Research
Participants	: Norwegian Central Office of Historical Monuments and Sites NILU (Norwegian Institute of Air Research) Lund & Slaatto Arkitekter A/S Erichsen & Horgen A/S, HVAC-consultants Dr.techn. Kristoffer Apeland A/S, structural consultants University of Lund, Sweden (Professor Bo Adamson)
Project leader	: Professor Kristoffer Apeland, Oslo School of Architecture

Fig. 3 EU 446 Eurocare Carebuild Project Profile

So far, interesting results have come up in connection with:

- Consequences for archeological layers when a protective shell is built over the layers (published in Norwegian).
- Special energy use and conservation aspects for protective shells over stone ruins and buildings (to be published).
- Application of RILEM/CIB method for prediction of service life.
- New design of space decks in aluminium for warped surfaces.

The technology package will be further developed during the project.