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Collection Storage Environments in the National Museum of Denmark

The use of *MyClimateData* web-based information system

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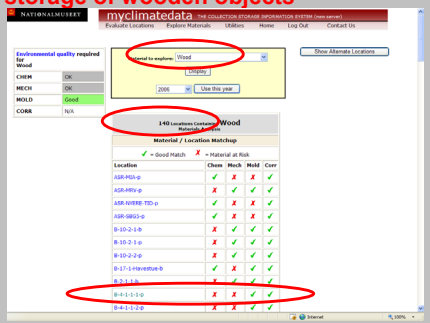
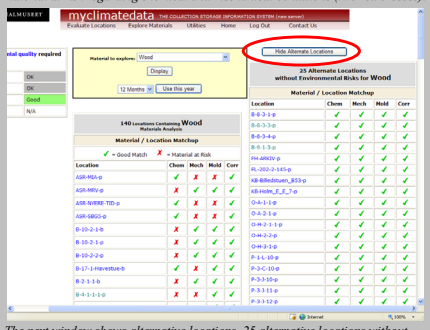
Aim: To find an alternative store for a collection of wooden furniture

Existing bad store mainly containing wooden objects.

The information system *MyClimateData* was used to investigate alternative locations for storage of wooden objects



Wood is selected as the material to explore. Wood is stored in 140 locations. The bad store in question is B-4-1-1-p.This is listed at the bottom of the table detailing material at risk regarding chemical and mechanical conditions (two red crosses).



The next window shows alternative locations. 25 alternative locations without environmental risks for wood show up. Unfortunately, the locations were not large enough to contain the wooden objects in question.

F16 shelter abandoned by the Danish military and evaluated by the National Museum of Denmark for store use.

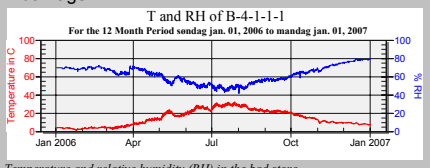
For more information

See conference preprint *Documenting and optimizing storage conditions at the National Museum of Denmark* by Reilly, Johnsen & Jensen (2007).

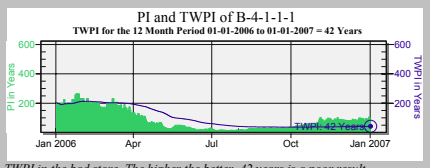
Bad storage climate - Facts

The parameters used to compare different storage facilities are:

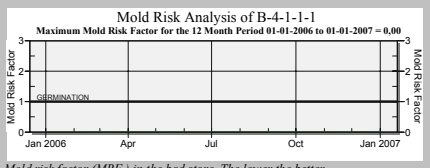
- Climate: Temperature and relative humidity (RH)
- Time-Weighted Preservation Index (TWPI) – Relative life expectancy
- Mold Risk Factor (MRF) – Biological decay
- Dimensional Change Metrics (DCM) – Mechanical damage



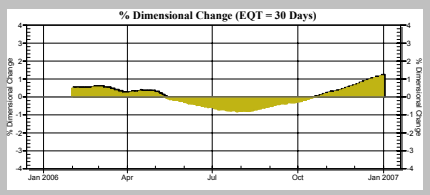
Temperature and relative humidity (RH) in the bad store.



TWPI in the bad store. The higher the better. 42 years is a poor result.



Mold risk factor (MRF) in the bad store. The lower the better.

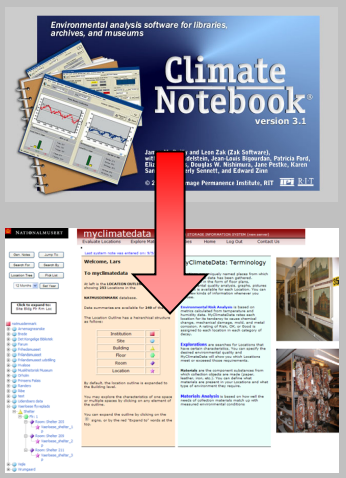


Dimensional change (DCM) in the bad store. The lower the better.

The observations show unacceptable cycling of the temperature and RH, risk of chemical decay and mechanical changes.

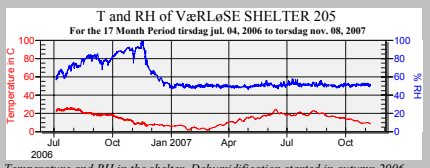
Tool

The web based information system *MyClimateData* makes the information from *Climate Notebook*® easy accessible.

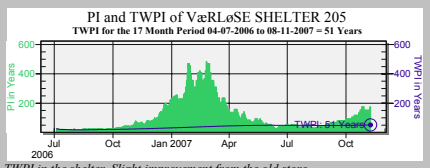


Good storage climate - Solution

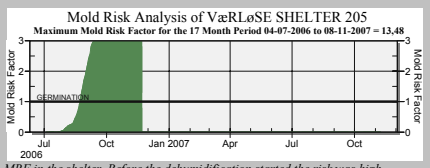
Monitoring of the climate in the shelter started in the summer 2006. In autumn 2006, it was evident that dehumidification was necessary and RH was stabilized around 50%. Consequently, MRF and DCM improved greatly and the store started to be used in November 2006.



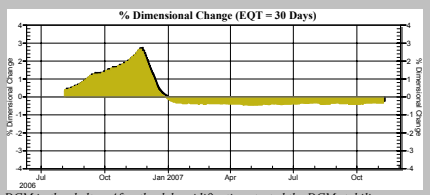
Temperature and RH in the shelter. Dehumidification started in autumn 2006.



TWPI in the shelter. Slight improvement from the old store.



MRF in the shelter. Before the dehumidification started the risk was high.



DCM in the shelter. After the dehumidification started the DCM stabilises .

The shelter in use as a store.

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