How do you renovate historic buildings in an energy efficient way without damaging the historic value? The project ‘Energieke Restauratie’ (Energy Efficient Restoration) was started in 2011 to take up this challenge. After two years of research this international conference focuses on sharing knowledge on a wide range of aspects concerning reduced energy consumption in historic buildings.

Date: Thursday 19 September 2013
Time: 9.30 - 17.30 h
Location: Academie Minerva Praediniussingel 59, 9711 AG Groningen, the Netherlands

Free access
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www.noorderruimte.nl
Welcome to Eric 2013!
Energy efficient Restoration International Conference.

We are happy to welcome you to the Hanze University of Applied Sciences. Today we have organised a diverse series of lectures on the subject of energy efficient restoration. The following are some of the questions that will be tackled by today’s speakers, who themselves come from a wide range of academic and professional backgrounds with experience from the Netherlands and abroad:
- How urgent is energy efficiency for owners of historic buildings?
  What are the important topics for owners of historic buildings and for other stakeholders including governmental organisations?
- What are possibilities from a heritage perspective? Or from an energy perspective? What opportunities to generate energy arise in the nearby area?
- What strategies can we use to reduce energy inefficiency in historic buildings?

Today’s theme of ‘reducing energy use in historic buildings’ was also the central theme of a two year research project, namely Energieke Restauratie (Energy efficient Restoration) at the Hanze Centre of Applied Research NoorderRuimte (Area Development). This was a comprehensive project that involved numerous organisations, students and researchers. The results of this project will also be presented during the conference. Further information can be found on the last pages of this program.

We trust that you will find lectures and discussions stimulating and thought-provoking, and that you will enjoy your day with us at the Hanze.

With kind regards,

Bate Boschma
Tineke van der Schoor
Ramon Alberts
Maarten Vieveen
Mieke Oostra

Researchers Energy efficient Restoration
PROGRAM

9.30 – 10.00  Registration

10.00 – 10.15  Welcome by Engbert Breuker (chairman)

10.15 – 10.30  Introduction Research Project Energieke Restauratie

10.30 – 11.00  Soki Rhee-Duverne (Researcher & Conservator) Building Conservation Department, English Heritage, United Kingdom.
Lecture: ‘The current English Heritage approach and future research on sustainable energy conservation’

11.00 – 11.30  Henk Schellen (Associate professor Building Physics) Department for the Built environment, Eindhoven University of Technology, the Netherlands.
Lecture: ‘Tensions between energy consumption, thermal comfort and conserving the historic value of listed buildings’

11.30 – 12.00  Elena Gigliarelli (Researcher) National Research Council, Institute of Technologies Applied to Cultural Heritage, Italy.
Lecture: ‘SECHURBA approach: modeling feasibility for reducing energy consumption in listed buildings’

12.00 – 13.00  Lunch

13.00 – 14.00  Presentation series 1 (at Zuiderkuipen)

14.10 – 15.10  Presentation series 2 (at Zuiderkuipen)

15.15 – 15.45  Break

15.45 – 16.15  Award for best commissioning client Energy efficient Restoration 2012 by Margreeth de Boer, former minister of Housing, Spatial Planning and the Environment

16.15 – 16.30  Closing plenary by Mieke Oostra, professorship Spatial Transformation Hanze Research Centre NoorderRuimte (Area Development)

16.30 – 17.30  Drinks and networking

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**PRACTICAL INFORMATION**

*Conference location*

The plenary part of the international conference will take place in the Academy Minerva at the Prediniussingel in Groningen. The presentation sessions in the afternoon (between the lunch and afternoon break) will take place in the Academy of Architecture at the Zuiderkuipen in Groningen.

*Please consider the walk takes about three minutes*

*Praediniussingel*  
*Zuiderkuipen*
SPEAKERS

Soki Rhee-Duverne is an Architectural Conservator in the Building Conservation Research Team, National Planning and Conservation Department at English Heritage, UK. She is one of a team of building professionals undertaking research in relation to adaptation and mitigation of climate change for traditional buildings. Prior positions include, Conservation Scientist for the Historic Properties Department at English Heritage and Researcher for the Education Department of the Getty Conservation Institute in Los Angeles.

English Heritage is the United Kingdom Government’s statutory adviser on the historic environment. Officially known as the Historic Buildings and Monuments Commission for England, English Heritage is an Executive Non-departmental Public Body sponsored by the Department for Culture, Media and Sport (DCMS). Although sponsored by DCMS, English Heritage works with a range of Government Departments, notably Communities & Local Government and the Department for Environment, Food and Rural Affairs, to help realise the potential of the historic environment.

Since 2004 Henk Schellen has been an associate professor on building physics of monumental buildings at Eindhoven University of Technology. He is specialized in heat and moisture transfer in buildings. His main expertise is in building physical measurements and simulation. He became interested in, and worked on, building physical heat and moisture problems in monumental buildings, such as churches and museums. His research resulted in a PhD thesis “Heating Monumental Churches; Indoor Climate and Preservation of Cultural Heritage”.

Henk is frequently invited to give his opinion on building physical and indoor climate problems in Dutch monumental buildings, including the Anne Frank House, the Rembrandt House, Maurits house, Fortress Fort Aan de Hoek van Holland and some 30 monumental churches. As a result of the experience gained on these subjects, he is often invited to give lectures on subjects related to monumental buildings.
Elena Gigliarelli is currently a researcher at the Institute for Technologies Applied to Cultural Heritage, where, from 1992 she has been promoting and developing national and international projects in protection and enhancement of architectural heritage. She graduated in architecture in Rome and has attended the School of Specialization in Restoration of Monuments, Department of Architecture University of Rome "La Sapienza".

Her research arises from the objective to integrate the application and development of new diagnostic techniques and important historic buildings with the deepening of conservation design strategies for a “comprehensive model of knowledge and conservation of built heritage.” She also teaches and is scientific tutor and curator of degree thesis of the Faculty of Architecture in Rome and teaches at several courses of Higher Education.
PRESENTATION SESSION 1

A1 Approaches for Reducing Energy consumption in listed heritage buildings

13:00-13:20 (EN)
Hielkje Zijlstra (University of Technology, Delft)
Jeruzalems way to eternity.
ABCD (in time) research method, case study Jeruzalem, Amsterdam

13:20-13:40 (EN)
Maarten Vieveen (Hanze University of Applied Sciences, Groningen)
A design strategy for energy measurements in historic buildings

13:40-14:00 (EN)
Annemarie de Groot (Libau)
QuickScan Energy efficient Monument, case: Borgers church

A2 The actors ambitions for reducing energy consumption

13:00-13:20 (EN)
Bate Boschma (Hanze University of Applied Sciences, Groningen)
Ambitions versus Energy characteristics

13:20-13:40 (EN)
Birgit Dulski (Nyenrode Business University) / Giovanni Litti (University of Antwerp)
Government policy, differentiated on local level/Energy efficiency and the indoor climate

13:40-14:00 (EN)
WORKSHOP by Birgit Dulski and Giovanni Litti

A3 Innovatieve Energieconcepten en systemen

13:00-13:20 (NL)
Michel Trompert (Van Ruysdael glas en venstertechniek)
Isoleren in Balans (NL)

13:20-13:40 (EN)
Ramon Alberts (Hanze University of Applied Sciences, Groningen)
Carbon Footprint reduction in Historical Buildings

13:40-14:00 (NL)
Van der Brug (FEBA verwarming / BOMAR bronboring)
Bodemwarmte, een integraal proces
PRESENTATION SESSION 2

B1 Motives for Reducing energy consumption

14:10-14:30 (EN)
Maarten Vieveen (Hanze University of Applied Sciences, Groningen)
Reducing energy use: urgency and motives

14:30-14:50 (EN)
Vera Franken (University of Technology, Delft)
Valuation of heritage and energy measurements by owners

14:50-15:10 (EN)
Erwin Mlecnik (University of Technology, Delft)
Criteria to track nZEB housing renovation in the Netherlands

B2 Verduurzamen van monumenten: succes- en faalfactoren

14:10-14:40 (NL)
Martijn Braunstahl (MTB architecten)
Tips voor het verduurzamen van monumenten

14:40-15:10 (NL)
Victor Ackerman (DAAD architecten)
Energiebesparing bij herontwikkelen, een aanpak voor Industrieel Erfgoed

B3 Energieke Restauratie: case studies

14:10-14:30 (EN)
Tineke van der Schoor (Hanze University of Applied Sciences, Groningen)
New scripts for old buildings: conserving both identity and energy

14:30-14:50 (NL)
Cees Leenaerts (W/E adviseurs) en Willem-Jan Paijmans (Molenaar & Co architecten)
Case study: Justus van Effen

14:50-15:10 (NL)
Bart Kellerhuis (ZECC architecten)
Energieneutraal monument te Driebergen
AWARD

for the Best Commissioning Client Energy Efficient Restoration 2012

To recognise the effort that clients have given to the principle of energy efficient restoration, the Hanze Centre of Applied Research NoorderRuimte (Area Development) have organised a contest for the Best commissioning client Energy efficient Restoration 2012.

The most innovative clients and those with the best cooperation between stakeholders are published in a book. The award winning client will not only be presented with a plaque but will also receive publicity on a national scale.

The award is presented by Margreeth de Boer, former minister of Housing, Spatial Planning and the Environment.

She has certainly gained experience and respect in this field for her influence in the Kyoto protocol, as former Queen’s Commissioner for the province of Drenthe and as mayor for the cities of Leeuwarden and Zwolle.
RESEARCH PROJECT: ENERGIEKE RESTAURATIE 2011-2013

Achieving energy efficiency during restoration of historic buildings is an immense challenge due to their vulnerable nature. Nevertheless, present energy policies and user preferences create pressure to incorporate energy measures when restoring these buildings. Yet how does one renovate these buildings in an energy efficient way, without damaging the historic value?

To take up this challenge the project Energieke Restauratie (Energy efficient Restoration) was started in 2011 at the Hanze Research Centre NoorderRuimte (Area Development) at the Hanze University of Applied Sciences with a SIA RAAK MKB funding (an organisation for applied research in the Netherlands)

Participants and research themes
In the project researchers and students of the Hanze Research centre worked together with owners, institutions and enterprises in the north of the Netherlands to come up with solutions to raise comfort and reduce energy use in historic buildings without damaging heritage qualities. A wide range of issues in sustainable heritage has been investigated:

A. Case studies on energy efficient or energy neutral restorations, such as farms, churches, concert halls, prisons, hospitals etc.
B. Characteristics for Energetic Restoration focussed on the historic value and clients' ambitions
C. Innovative energy concepts, including the use of monitoring software for historic buildings
D. The developer’s view on sustainable reuse; design strategies and influencing factors for the energetic (re)development of historic buildings.

Results
Some of the results of the research project Energieke Restauratie will be presented during the conference today and later on in the proceeding:
- A movie Energieke Restauratie (subtitled in English)
- Papers presented by the researchers during the presentation sessions in the afternoon
- The award for ‘Best commissioning client Energy efficient Restoration 2012’

Further research?
During the research project a wide range of issues were investigated, but also new issues arose. Although the external funding has stopped, research has not. Therefore we would like to know if you are interested in further research on energy efficient restoration, for example as a participant or by addressing interesting topics and questions. You can contact us by sending an email to: c.van.der.schoor@pl.hanze.nl or m.c.vieveen@pl.hanze.nl.
ORGANISATIONS THAT PARTICIPATED IN THE RESEARCH PROJECT