


Access to the planning, the overheads and the examination questions: <http://www.cscsarl.ch>


<u>Date</u>	<u>Subject</u>	<u>Description</u>	<u>Teacher(s)</u>
18.09.2015	Introduction Natural Stone (or geomaterials)	Aims of the course – Notion of ethics of conservation Minerals	B. Rousset
25.09.2015	Natural Stone (or geomaterials)	Minerals – Rock classification, petrography	B. Rousset
02.10.2015	Natural stone (or geomaterials)	Rock classification, petrography	B. Rousset
09.10.2015	Natural stone (or geomaterials)	Rock classification, petrography – practical exercise	B. Rousset
16.10.2015	Mortars and a few "geopolymers"	Historic mortars and restoration mortars / Handling of samples	C. Bläuer
23.10.2015	Natural stone and mortars in the field	Observation of the three principal families of rocks and some mortars on the buildings in Lausanne	B. Rousset
30.10.2015	Petrophysics Examination subjects	Fluid transfer and mechanical properties of stones Selected case studies in the region of Lausanne	
06.11.2015	Petrophysics / soluble salts	Fluid transfer and mechanical properties of stones / problem of soluble salts	B. Rousset
13.11.2015	Stone weathering	Why and how stones are deteriorated	B. Rousset
20.11.2015	Stone weathering	Why and how stones are deteriorated	B. Rousset
27.11.2015	Stone weathering in the field	Identification of the stone deterioration patterns on the buildings in Lausanne	B. Rousset
04.12.2015	Methods and materials of conservation of stone	Methods and products used for consolidation, hydrofugation and protection of stone materials	B. Rousset
11.12.2015	Methods and materials of conservation of stone	Methods and products used for consolidation, hydrofugation and protection of stone materials	B. Rousset
18.12.2015	Oral examination	Selected case studies	B. Rousset



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STONE MATERIALS AND CONSERVATION OF THE BUILT HERITAGE

Stone Materials and conservation of the built heritage - Introduction - BR 1



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INTRODUCTION


What are the aims this course?

Objectives:

An approach to the sustainable development of the stone materials of the built heritage

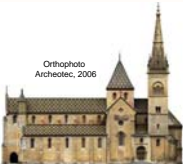
- ☐ to identify the stony materials
- ☐ to identify the weathered state of these materials
- ☐ to identify the reasons of the weathering
- ☐ to have a notion of building and conservation materials compatibility

Stone Materials and conservation of the built heritage - Introduction - BR 1/4

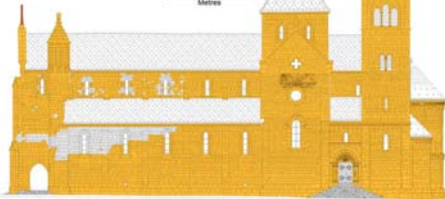


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Which material for which building phase?



Orthophoto
Archeotec, 2006



Collégiale de Neuchâtel

Façade sud

Rélevé pétrographique général

Plan de base : Archeotec

Rélevé pétrographique CSC - Conservation Science Consulting Sàrl

Octobre 2009

1:200 (A4)

0 5 10

metres

Non accessible

Non affecté

Pierre de la collégiale

Pierre de la nef

Pierre de la tour

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1

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Which material for which building phase?

Colégiate de Neuchâtel
Façade sud
Relièf pétrographique détaillé (provisoire)

Plan de base - Introduction
Relevé archéologique - Christian de Reynier, 2005 - Plan de base - Archéotech, 2006

Relevé pétrographique - CSC Conservation Science Consulting Sàrl, 2008

Relevé provisoire - Le relevé des pierres est provisoirement non daté. Les pierres sont classées en fonction de leur couleur, de leur forme et de leur taille.

Les pierres sont classées en fonction de leur couleur, de leur forme et de leur taille.

1:200 (A4)

0 5 10
Mètres

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Normal or abnormal weathering pattern?

FR, Fribourg, cathedral, 31.07.2010

FR, Fribourg, rampart, 28.03.2007


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Normal or abnormal weathering pattern?


FR, Fribourg, Rue du Tilleul, 29.05.2008

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Normal or abnormal weathering pattern?



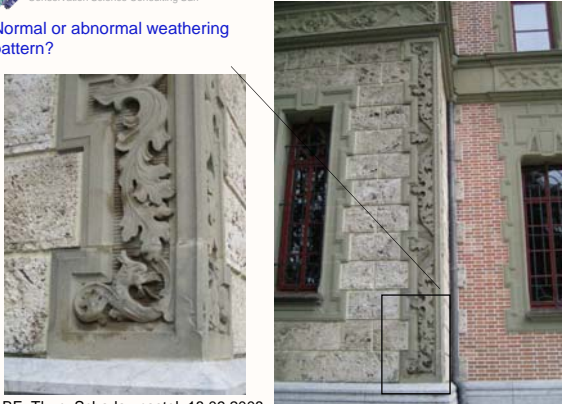
FR, Wünnewil, church, 04.09.2011

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Normal or abnormal weathering pattern?



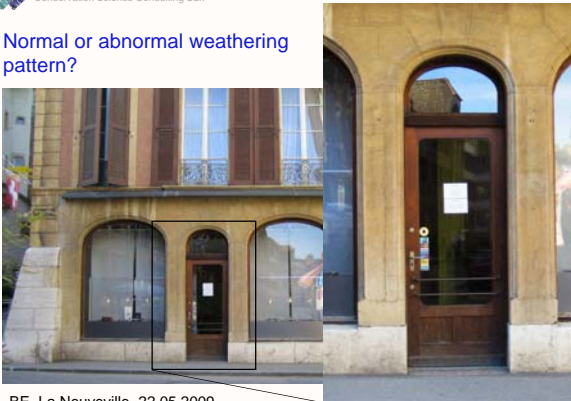
BE, Thun, Schadau castle, 18.09.2008

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Normal or abnormal weathering pattern?



BE, La Neuveville, 22.05.2009

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Material compatibility?



FR, Fribourg, St Maurice church, 23.05.2008

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Material compatibility?

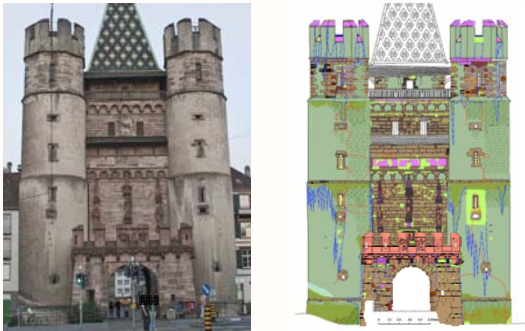


FR, Mézières castle, 01.07.2009

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Which material and deteriorations? What can be done?



BS, Basel, Gate of Spalen (Spalentor) 2010, Erick Schmid

Material and deterioration patterns cartography, CSC juli 2011

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NOTION OF ETHICS

International charters and conventions

- **1931** The **Athens** Charter / Restoration of Historic Buildings
- **1954** **Hague** Convention / Protection of Cultural Property in the Event of Armed Conflict
- **1964** The **Venice** Charter / Conservation and Restoration of Monuments and Sites



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www.icomos.org/en/charters-and-texts

16.09.2015

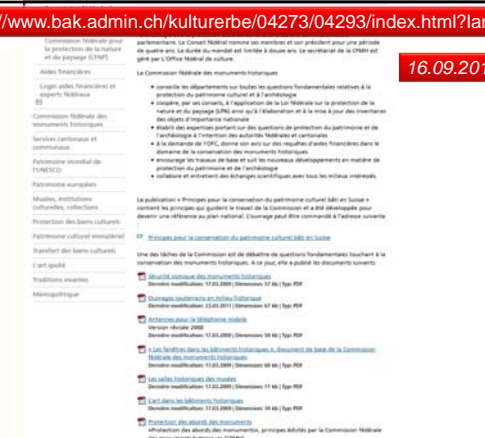


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<http://www.bak.admin.ch/kulturerbe/04273/04293/index.html?lang=fr>

16.09.2015



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