



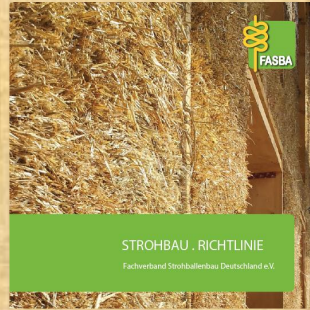
STROHBAU . RICHTLINIE

Fachverband Strohballenbau Deutschland e.V.

# SBR 2014 o Straw bale building Guidelines



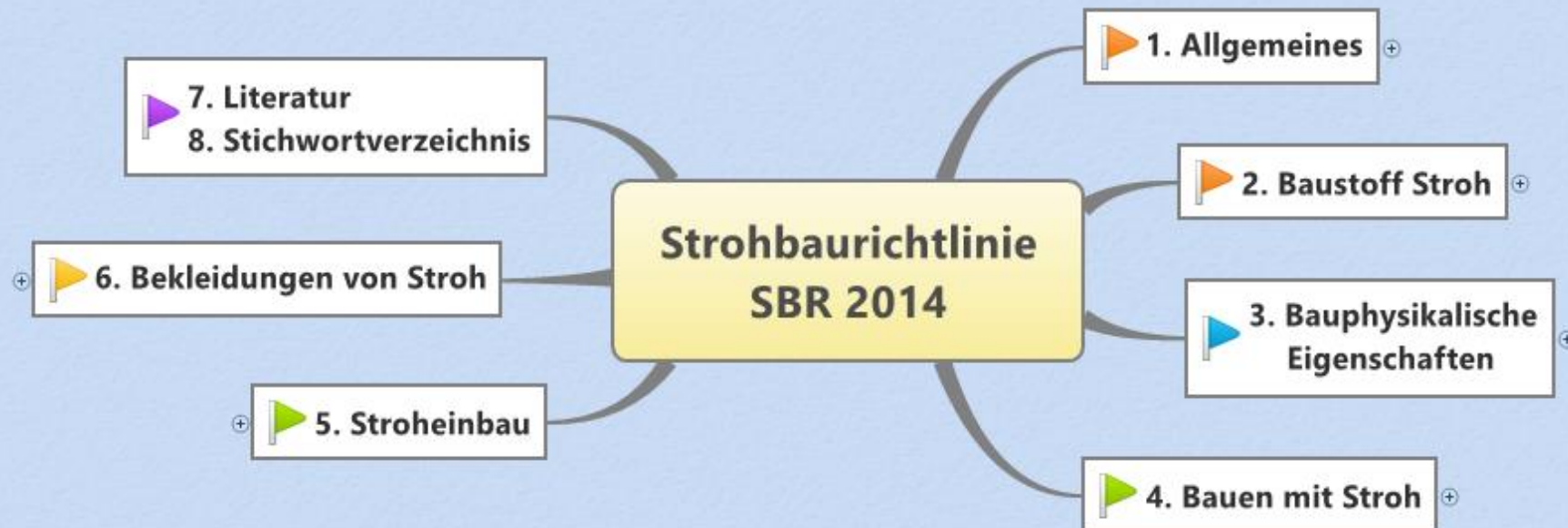
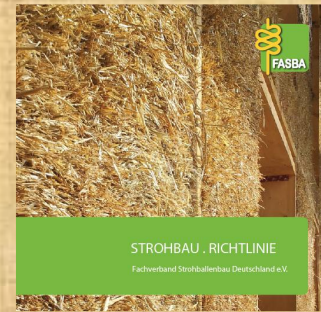
# BASIC PRINCIPLES



- This is an agreed standard among all members of FASBA
- This is an extract out of all previous experience and expert knowledge and certificates and approvals
- The frame of reference is the German Building code (LBO), the permissions (abz) and single case approval (ZiE)
- It requires expert knowledge and competence by all involved parties, no doing yourself handbook
- It requires accuracy from beginning to the end

# CONTENT of the SBR 2014

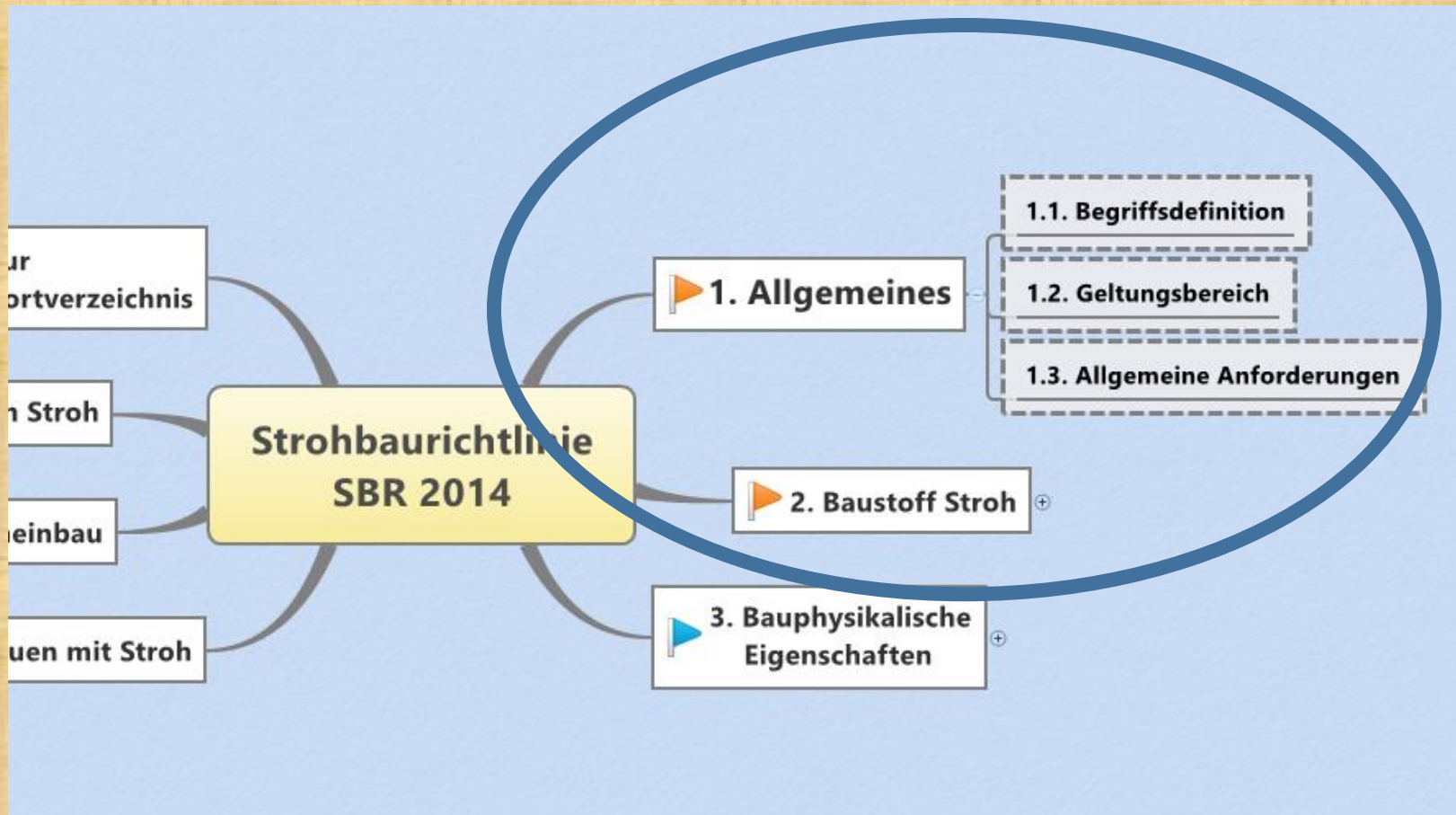
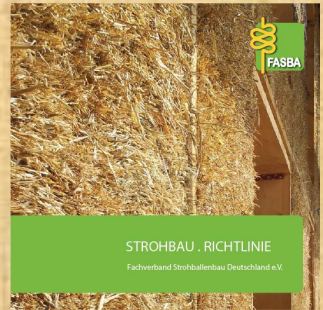
Project funded by FNR, Agency for sustainable building material



- Introduction
- The material
- Building physics properties
- Building with straw
- Installation of Straw
- Coverings and finishes



# 1. GENERAL INTRODUCTION



The SBB guidelines are meant to be used as a supplement advice to the accepted rules of technology.

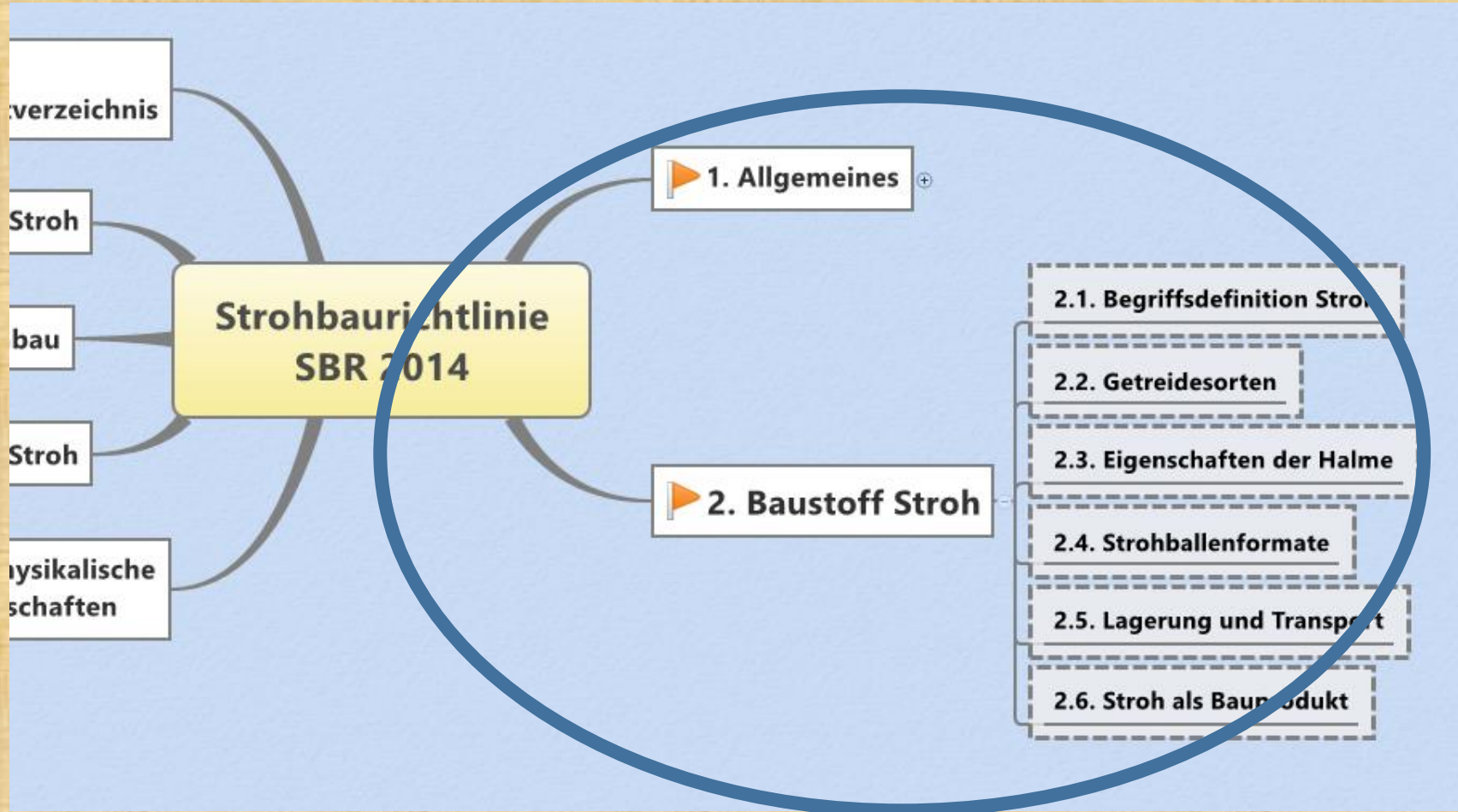
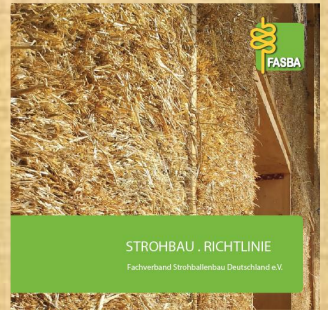
The use of the following verbs have the following meaning in this guideline:

**Must:** an instruction that has to be fulfilled

**Shall:** an instruction that ought to be met, unless there is a reason in this specific case to choose another procedure.

**Can be:** an instruction that can be chosen as an opportunity

# 1. STRAW AS BUILDING MATERIAL



2.1 DEFINITION OF STRAW

2.2 TYPES OF GRAINS

2.3 PROPERTIES OF THE STALKS

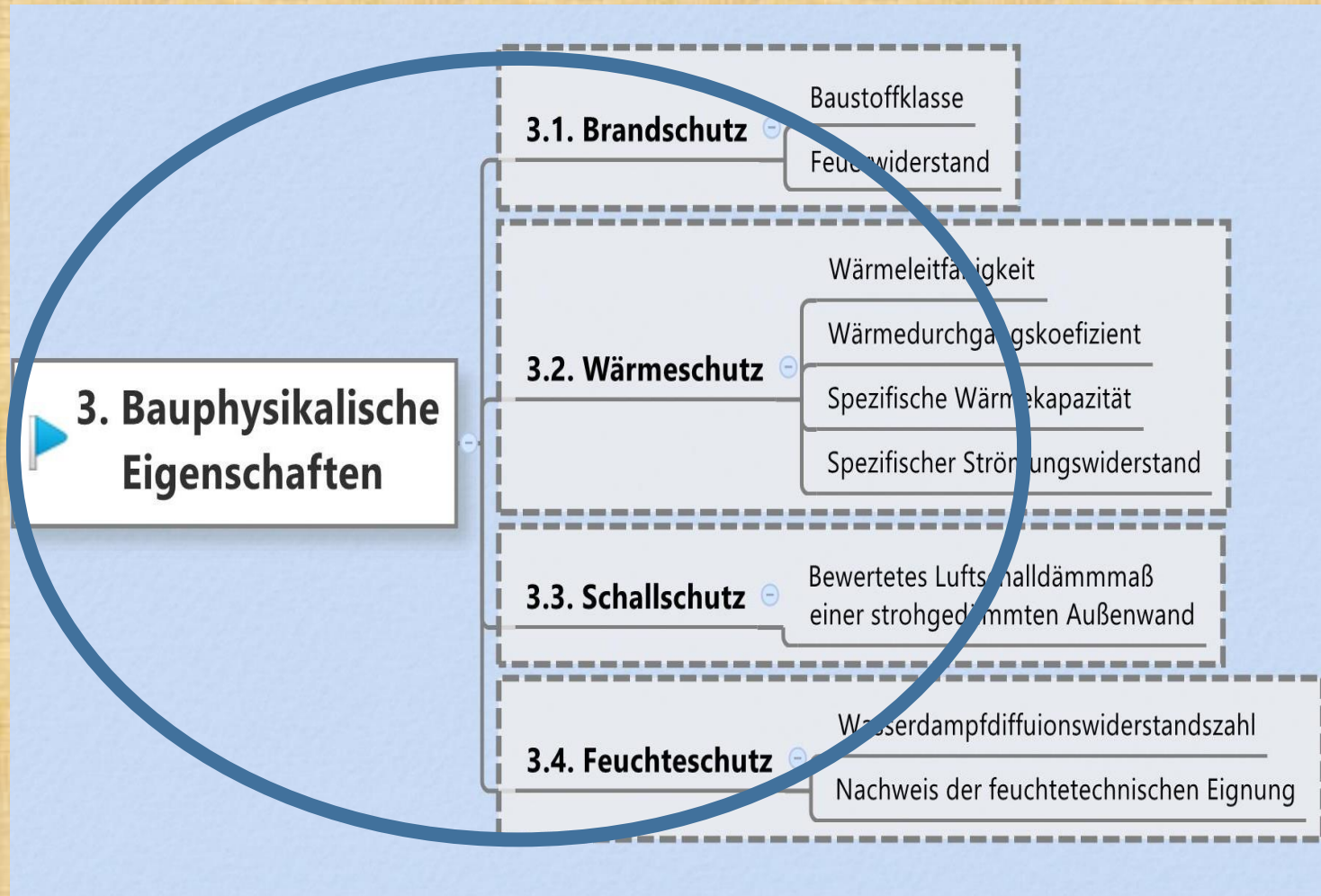
2.4 DIMENSIONS OF STRAW  
BALES

2.5 STORAGE AND TRANSPORT  
OF STRAW

2.6 STRAW AS CONSTRUCTION  
PRODUCT



# 3. BUILDING PHYSICAL PROPERTIES



## 3.1 FIRE PROTECTION

### 3.1.1 Classification of building materials

Building materials may only be used if they are at least classified as normally flammable according to DIN 4102 - B2 or classified "E" according to DIN EN ISO 11925-2

## 3.2 THERMAL PROTECTION

### 3.2.1 Thermal conductivity

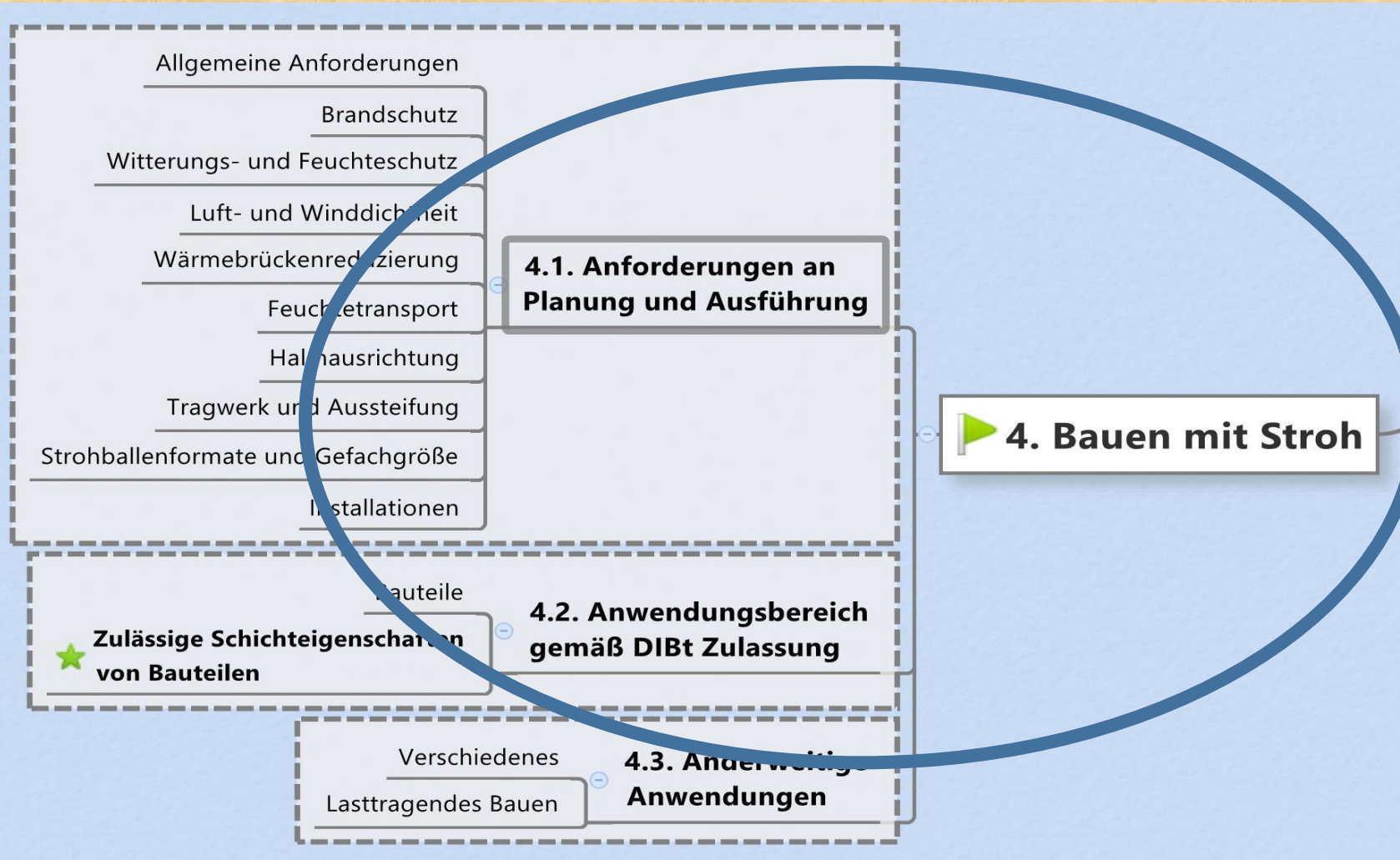
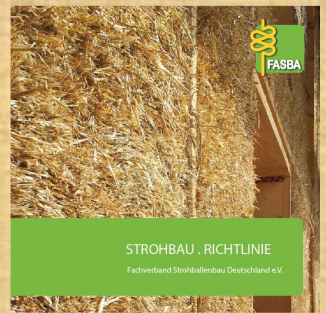
$\lambda = 0.052 \text{ W/ (m} \cdot \text{K)}$  according to Z-23.11-1595

## 3.3 SOUND PROTECTION

### 3.4 HUMIDITY PROTECTION

$\mu = 2$  according to approval Z-23.11-1595

# 4. BUILDING WITH STRAW



## 4.1 DEMANDS ON PLANNING AND EXECUTION

Air and wind tightness/  
thermal bridges, humidity  
transport, structural  
bracing.....

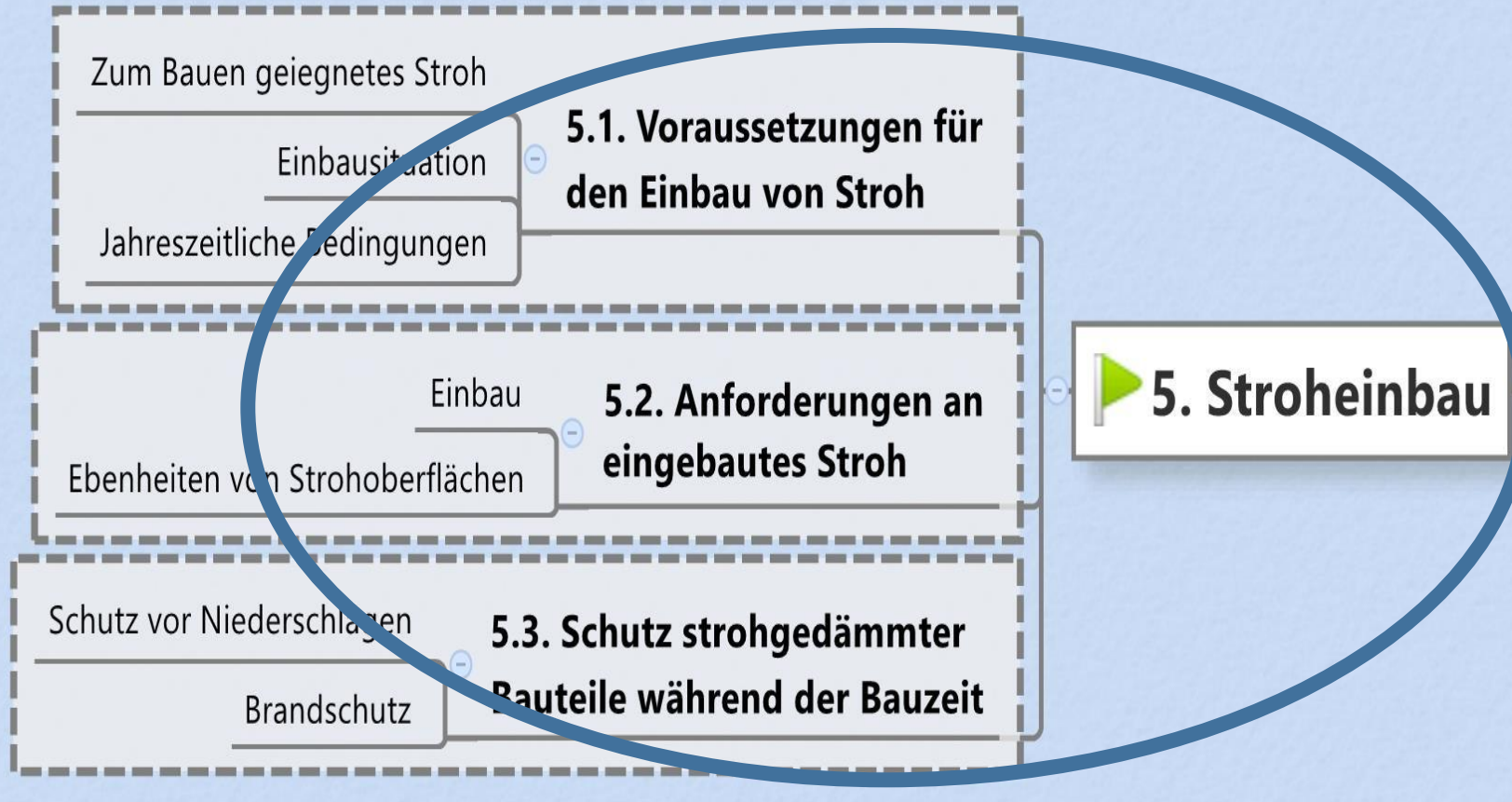
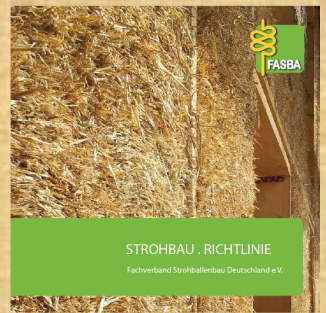
## 4.2 FIELDS OF APPLICATION ACCORDING TO THE GENERAL APPROVAL

## 4.3 ANY OTHER APPLICATION

Wrapping, Loadbearing....



# 5. INSTALLATION OF STRAW



## 5.1 CONDITIONS FOR THE INSTALLATION OF STRAW

Appropriate straw bales, seasonal conditions....

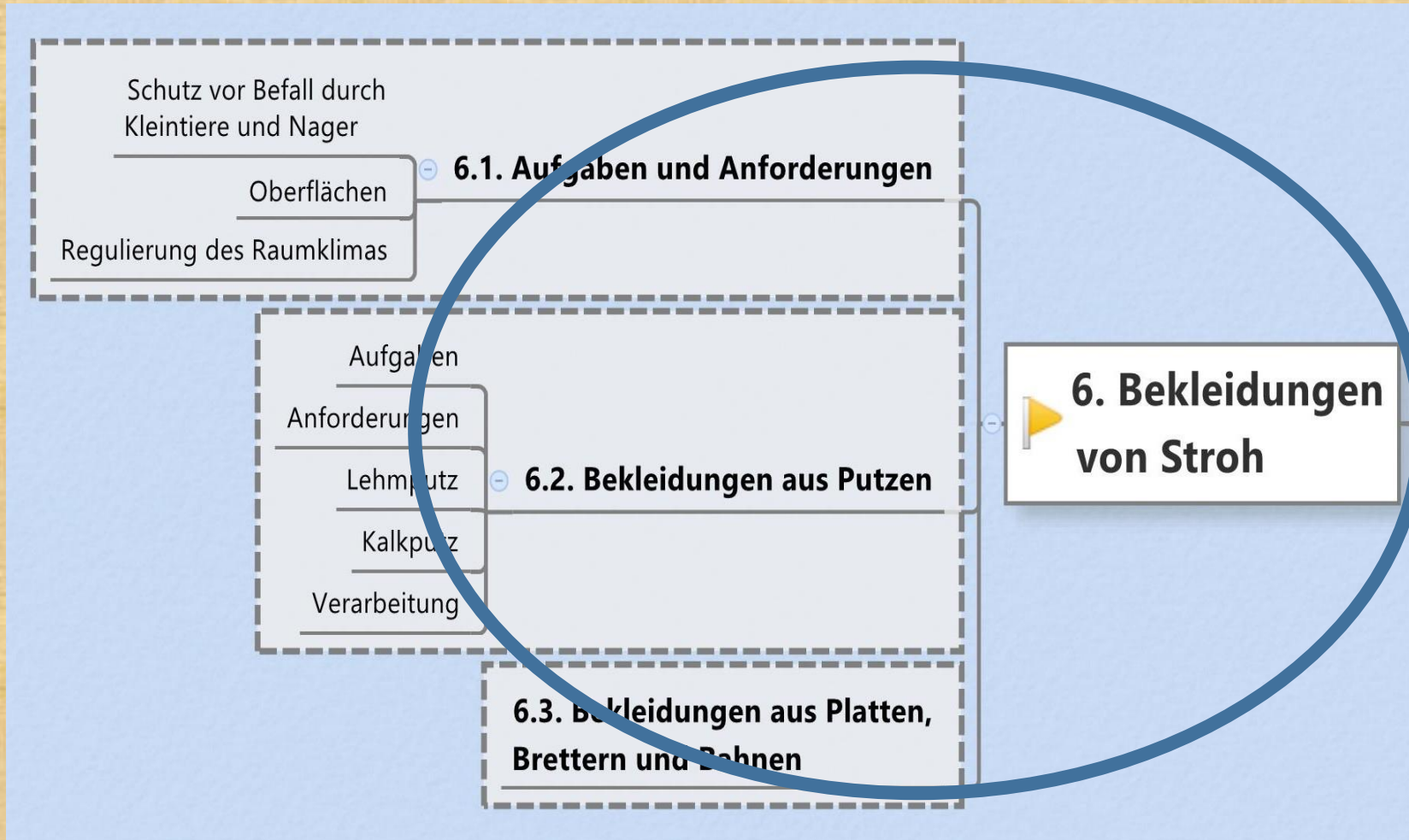
## 5.2 REQUIREMENTS FOR BUILT-IN STRAW

Fitting, gaps, secure setting, density, compression

## 5.3 PROTECTING STRAW DURING THE CONSTRUCTION PERIOD



# 6. FINISHES ON STRAW



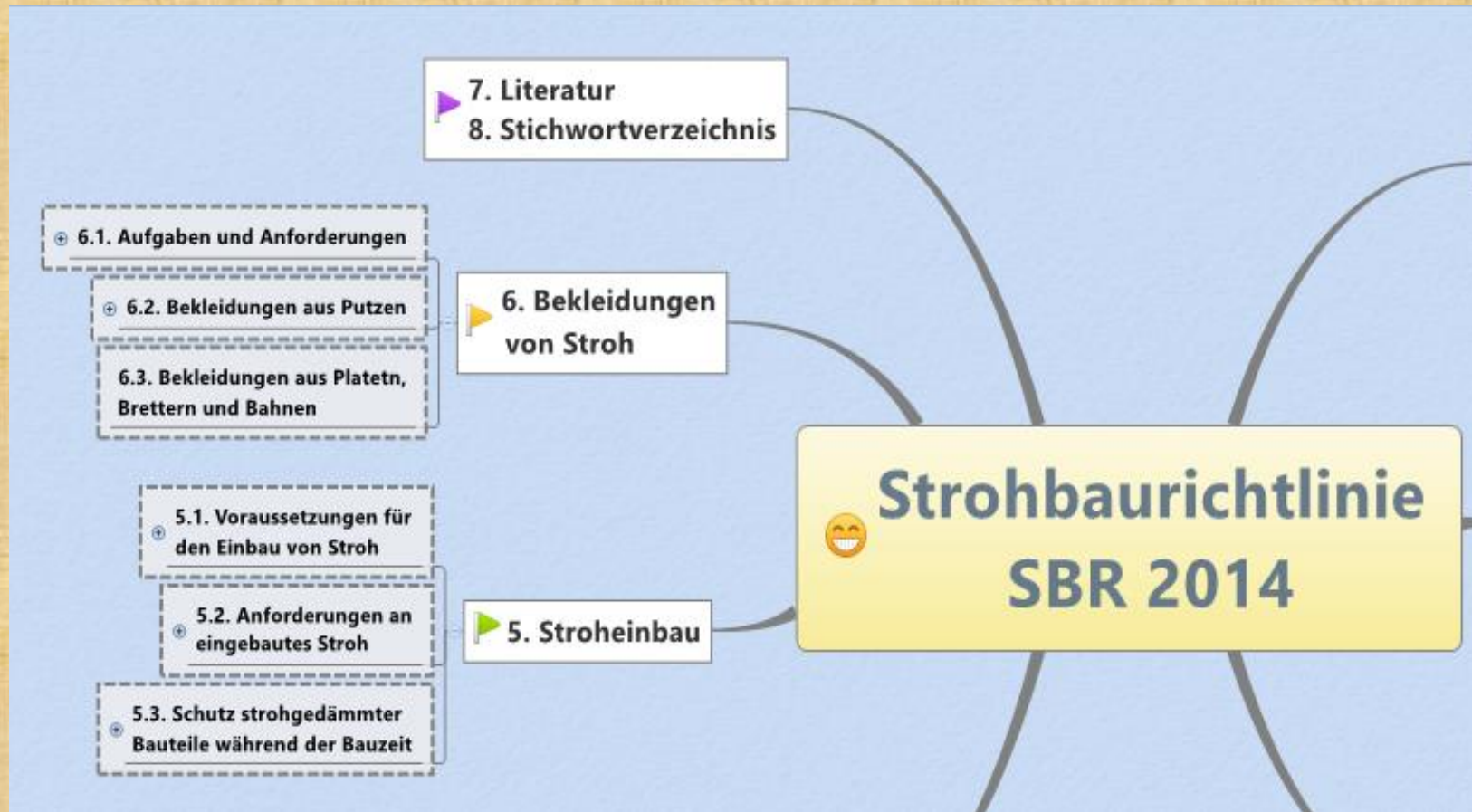
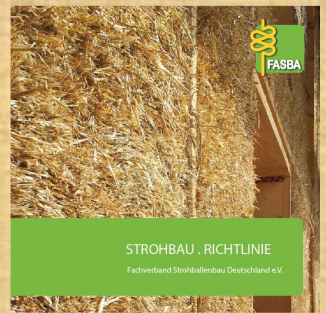
## 6.1 TASKS AND REQUIREMENTS

Protection against small animals and insects

## 6.2 CLADDINGS/ FINISHES

## 6.3 CLADDINGS OUT OF PLATES, BOARDS OR SHEETS

# 7. LITERATURE AND INDEX



APPENDX WITH THE  
GENERAL APPROVAL AND  
INDEX OF LITERATURE AND A  
SUPPLEMENT ADVICE ABOUT  
THE  
INSTALLATION OF STRAW

[www.fasba.de](http://www.fasba.de)