

MODULE 3

Technical implementation phase

3.2. Detailed planning

Interreg
Baltic Sea Region



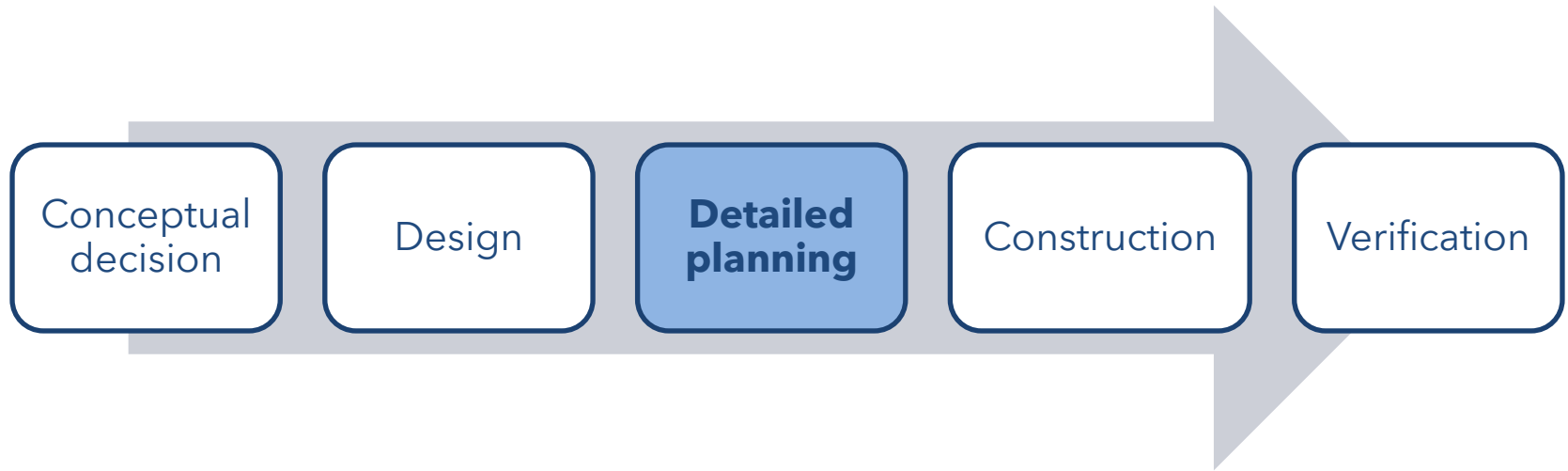
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Detailed planning



Product databases and platforms

Circularity platforms:

Loopfront (SE) and CCBuilds (SE)

The DGNB Navigator (DE)

Finnish environmental administration Ymparisto (FI)

The building information foundation RTS - M1 database

Sentinel haus (DE)

Requirements for substances to be avoided under Nordic Swan Ecolabelling

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Construction materials/products	Substance (groups) of concern											
	Phthalates	VOC, Formaldehyde	SCCP & MCCP	Nonyl-octyl phenols	PFAS	Brominated flame retardants	Boric acid (boric compounds)	BPA, BPS, BPF	Heavy metals	Organic tin compounds	Isothiazolinones	Total preservatives
Walls & slabs	Red	Red	Red	Red	Grey	Red	Red	Grey	Grey	Grey	Grey	Grey
Roofs	Red	Grey	Red	Red	Grey	Red	Red	Red	Grey	Grey	Grey	Grey
Windows	Red	Red	Red	Red	Grey	Red	Red	Red	Grey	Grey	Grey	Grey
Facades	Grey	Red	Red	Red	Grey	Red	Red	Red	Grey	Grey	Grey	Grey
Insulation	Red	Grey	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Floors	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Coatings *	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Adhesives	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Sealants	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Renders, plasters	Red	Red	Red	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Plates/ boards	Red	Red	Grey	Red	Grey	Red	Red	Red	Red	Red	Red	Red
Materials from PVC	Red	Grey	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
Other plastics	Red	Grey	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red

*) indoor paints, pigments, varnishes



3 pillar criteria in technical specifications

Pillars	Requirements in technical specification/terms of reference
Tox-free	<ul style="list-style-type: none">▪ Avoiding certain hazardous substances e.g., Phthalates, TVOC, Formaldehyde, SCCP, MCCP, PFAS, APEO, Flame retardants, Boric acid (boric compounds), BPA, BPS, BPF, Heavy metals (e.g., Cu, Cd, Hg), Organic tin compounds, MIT/CMIT, PVC plastic in materials completely or setting maximum allowed concentrations of HS▪ Eco-certified (eco-labelled) materials▪ Eco certification of a buildings e.g. Nordic Swan▪ Indoor air quality requirements
Circular	<ul style="list-style-type: none">▪ Use of re-used and easy to recycle materials▪ Materials used should be recyclable/ reusable/easy to repair▪ Waste management at the construction site, including storage of recyclable construction waste
Climate neutral	<ul style="list-style-type: none">▪ Low embodied energy of material▪ Preference for local materials▪ Energy performance standards, e.g., low energy building, passive house▪ Water saving devices▪ Machinery at site only with non-fossil fuels



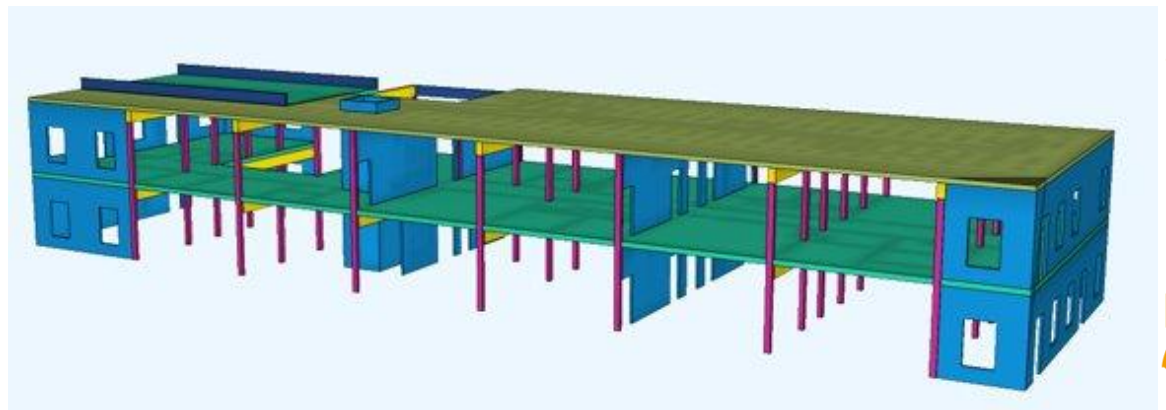
Checking compliance, examples

Building elements	Aspects to be checked
Construction materials	<ul style="list-style-type: none">▪ meeting the standard of an ecolabel or certificated material (BVB/Nordic swan etc.), or avoiding hazardous substances
Walls	<ul style="list-style-type: none">▪ installation of windows/connection to insulation/ceilings to prevent unwanted air exchange▪ insulation material fitting to energy calculations.▪ material thickness/thermal conductivity▪ cladding inside and outside the wall to prevent moisture
Roof	<ul style="list-style-type: none">▪ layers of the construction fitting to building physics (vapour barrier etc.)▪ characteristics of insulation material should also prevent overheating in summer (thermal mass)
Floors	<ul style="list-style-type: none">▪ floor construction and surface▪ layers of construction, avoiding glues

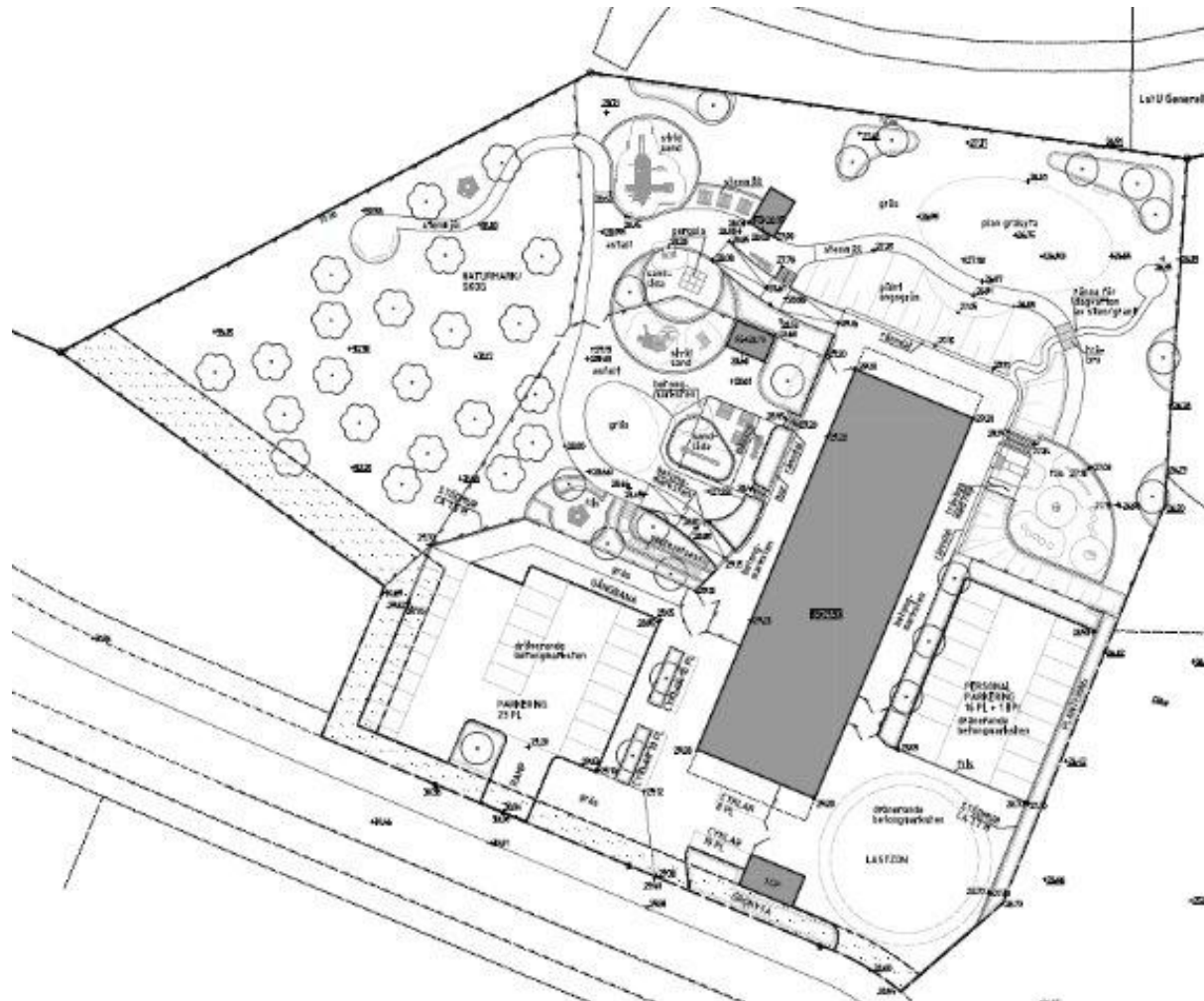


Best practice: Västerås – From concept to design and detailed planning (1)

- **Model cooperation agreement:** construction company, architects, and subcontractors work together to ensure sustainable solutions throughout the process.
- The main structure will be **wood** to lower the building's carbon impact.
- Facades and interiors will prioritise **renewable and reused materials** wherever possible.
- **Avoid PVC flooring** due to its release of plasticizers into indoor air.
- A new method was introduced: **logging all products in kilograms** to calculate hazardous substances per built m².



Best practice: Västerås (2)



Best practice: Västerås (3)

- **The building will be certified to Miljöbyggnad Silver, with Gold standards for energy, circularity, and chemicals.**
- The use of materials is strictly monitored through the BVB (Byggvarubedömningen) logbook.
- Target: 20% of the products will be assessed as "Recommended" according to BVB.
- Products assessed as "To be avoided" should be limited as far as possible.



Where to look further?

Step-by-step guide for the **process management** of toxfree, circular and climate-neutral construction at municipalities

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Step-by-step guide for the process management of toxfree, circular and climate-neutral construction at municipalities

The NonHazCity guide for design & construction of tox-free, circular & climate friendly municipal buildings

Practical Guide

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The NHC guide for design & construction of tox-free, circular & climate friendly municipal buildings presents practical insights from pilot projects conducted under the NonHazCity3 initiative



Thank you!

Explore further:
[NonHazCity 3 - Interreg Baltic Sea Region](#)



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