

A systematic look at deconstruction measures is often forgotten in planning

Sustainable Deconstruction

The checklist provided here helps everyone involved in a (partial) deconstruction to consider the aspects that make up a sustainable building deconstruction right from the start of planning and to implement them systematically.

This checklist is an extract from the knowledge module "Sustainable deconstruction".
Further information can be found here: <https://wissensstiftung.eu/en/knowledge-nuggets/sustainable-deconstruction>

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Checklist for your project

Sustainable deconstruction

Deconstruction planning

Anchoring the key aspects of sustainable deconstruction as early as the concept phase

- Inventory and assessment of the environment (emissions such as dust, noise, vibrations)
 - Recycling and disposal concept
 - Deconstruction and dismantling planning
 - Logistics concept (environmentally and resident-friendly)
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Sustainability aspects in the tender

Anchoring the key aspects of sustainable deconstruction in the tender

- High data quality at the time of the tender
 - Integrate planning specifications into the tender
 - Definition of quotas in the tender
 - Implement restricted tendering if necessary
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Identify and separate hazardous substances

Promoting preservation of building fabric, but not shifting pollution issues into the future

- Building diagnosis: Carry out as-built analysis (on-site inspection of all rooms, assessment of all building components, opening of ceilings and floor structures, taking material samples if necessary)
 - Systematically record hazardous substances and assess risk
 - Create and implement a concept for the remediation of hazardous substances
 - Do not introduce hazardous substances into the cycle
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Increase appreciation of existing resources and secure expandable resources

Gain transparency about the resources available at the end of life and recognise their value

- Which components and building products, fixtures or furniture are potentially upgradable?
 - Are these resources functional and in good condition (Do they have value)?
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Increase appreciation of existing resources and secure expandable resources

Get to know and utilise the market for reusable components and materials

- Is there a potential market for this?
 - Who are the potential customers?
 - Secure and expand resources for later reuse (consider the possibility of interim storage)
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Optimise recycling and minimise disposal

Gain transparency about the masses generated during deconstruction and optimise their recycling; actively promote reuse

- Create and implement a recycling and disposal concept in line with the circular economy
 - Select high-quality recycling routes for waste materials (material flow balance) and avoid disposal
 - Actively influence reuse, recycling and disposal routes
 - Establish/realise take-back logistics
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Separate according to type

Avoid contamination and mixtures

- Check separation by type on the construction site (implementation of the Commercial Waste Ordinance)
 - Document separate collection (document everything digitally if possible)
 - Reduce construction waste and mixed construction waste
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Reduce transport distances and environmental impact

Gain transparency about the masses and transport routes generated during deconstruction and optimise them. Reliable data as a planning basis for deconstruction friendliness and recyclability of new buildings

- Create a material flow balance (masses and transport distances)
 - Reduce transport distances and thus environmental impact
 - Reuse, recycle/reprocess and dispose of as close to the site as possible
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Assess risks and achieve cost certainty

Create transparency for the client and enable a realistic risk assessment by providing a sound basis for decision-making

- Differentiated estimate of the deconstruction costs
 - Identify uncertainties associated with the estimate and assess financial risks
 - Transparent supplementary management
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Internal and external communication

Involve all those affected by and involved in the deconstruction and communicate progress and changes regularly

- Sensitise those involved in the project (consideration of the local environment)
 - Regular internal project coordination
 - Inform the general public before deconstruction begins and during the deconstruction process
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Implement deconstruction sustainably (construction site)

Ensure implementation of requirements on the construction site and high-quality execution

- Construction site quality and management, avoidance of misconduct

- Measures and training of construction workers to prevent site-specific risks and implementation (noise, dust, hazardous substances, vibrations)

- Construction site logistics, plant and machinery on the construction site

Safe construction site

Train those involved and ensure implementation of safety requirements

- Analyse potential hazards and train personnel accordingly

- Check implementation of safety requirements and ensure order on the construction site

- Restrict access to the construction site

Quality assurance and documentation

Check and document the implementation of requirements

- Plan and implement release, acceptance and change management

- Document compliance with requirements

- Weigh up the use of digital methods
