



Primary Tool



Urban Renewal

Green building and retrofitting in neighbourhood revitalization

What this tool does:

This tool lists and describes a number of approaches of green building instruments which can be used for improved energy-efficiency of older neighbourhoods. These approaches draw upon extensive European and Chinese experiences in urban renewal.

How does it work:

Green building approaches can be converted into a large variety of project initiatives, as listed in the second column, below. These green building initiatives can be applied in historic neighbourhoods, or in more recent modern heritage contexts. These green building approaches can be part of an integrated 'area approach', or they can be implemented as single-sector interventions.



Ecological building: Earth construction by Gernot Minke in Kassel, Germany. (K. Mathey)



Eco house in Turino, Italy

Entry point for the "greening" of neighbourhoods:

- (1) renewable energy with solar elements (challenge to marry architectural conservation guidelines with technology requirements);
- (2) utilization of "Passivhaus" technology (better insulation of walls, windows, and roofs),
- (3) rain water collection (rain water harvesting) facilitated by sloping roofs and open courtyard spaces;
- (4) neighbourhood-based waste separation and participation in ecological waste management schemes;
- (5) greening of industries through the use of renewable "new" energy sources, and clean(er) production processes;
- (6) urban agriculture activities.

Area of Activity	Type of Projects
Reduction of Non-Renewable Energy Demand	<ul style="list-style-type: none"> • Retrofitting through thermal roofs; • Additional floors with new high quality roofs
Energy – Recycling	<ul style="list-style-type: none"> • Area conservation with high-tech energy concepts
Clean and renewable energy	<ul style="list-style-type: none"> • Use of embodied energy through heat exchangers; • Biogas from waste products; • Smart solutions for district heating
Micro climate improvement / Heat island reduction	<ul style="list-style-type: none"> • Greening of streets and outdoor spaces; • Greening of roofs; • Greening of facades
Flood protection	<ul style="list-style-type: none"> • Sustainable urban drainage system; • Water proofing of ground floors and access above street levels
Drought prevention	<ul style="list-style-type: none"> • Rainwater harvesting; • Green Roofs; • Climate Adaptation Action Plans
Clean and ecological building materials	<ul style="list-style-type: none"> • Green procurement of building materials

Process: The preparation of urban renewal and revitalization projects follows the following procedure:

- Preparation of a project brief, for inclusion in the city's urban master plan (or similar planning document);
- Preparation of draft project design;
- Public consultation with local stakeholders (residents; local business; infrastructure service providers; business associations, etc.);
- Endorsement of urban renewal/revitalization project as part of master plan;
- Preparation of detailed project design;
- Second round of public consultations;
- Preparation of improved urban renewal-revitalization plan.

Credentials:

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Literature / further information:

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