



Strategy for the underground

Status	Implementation
Location	The Netherlands, Gelderland, City of Nijmegen
Spatial info	Region, town with all parts
Measure type(s)	Green open spaces; Water drainage, water retention; Renewable energy
Contact	www.milieujaarverslagnijmegen.nl



Description and Aim

A vision for the city on how to protect and use the natural resources (deep underground) for sustainable development. Solutions are based on smart technical green/blue and energy combinations to achieve an optimal application and use of the underground. The main question is "What can the underground contribute to the sustainable development of the city of Nijmegen?" balancing in the long term between the 3 P's: People, Planet & Profit. Aim is a pleasurable and healthy living in the city of Nijmegen in a good environment and flourishing economy.

The report Benefits of the Underground gives information to city planners and project developers where and how to use energy storing in the ground (in water tables). Aim is to promote and make underground energy accessible.

Adaptation to climate change

The renewable energy of the underground is used in hot summers to provide cool temperatures in buildings. In cold periods the stored warmth in the ground (stored in water tables) is used in buildings.

Problems addressed:

Heat / heat wave, heavy precipitation / flooding, drought

Receptor(s):

Built environment, population

Experiences

Functionality:

The spatial framework underground will be part of the "Structure Vision". This is an instrument for city planning and guidance for city (re)developing projects. For an optimal development spatial planning (above ground) has to be linked to the underground conditions and possibilities.

Further synergies/benefits:

Energy saving, saving costs of soil cleaning.

Funding:

International and local. Subsidy of Future Cities for hiring a consultancy. Cofinancing by the municipality.

Stakeholder involvement:

Water Distribution Company, water board, regional and city planners and architects, archaeologists, green planners.

Obstacles/restrictions:

Changing legislation is necessary and takes long time; a policy needs to be backed up by law otherwise stakeholders are free to make choices and can decide not to take any adaptation measures.