

Planning and Design WAAL river enlargement Nijmegen-lent

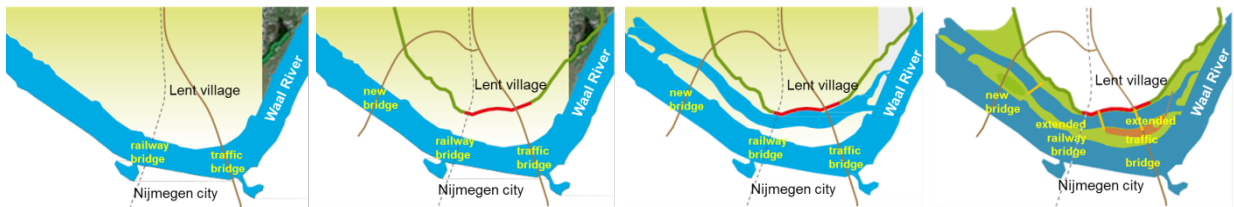
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Growing stakeholder influence in flood protection projects

The Nijmegen Room for the Waal River Project fits in the total Room for the River Rhine Programme in the Netherlands. Where the project is primarily the responsibility of the Rijkswaterstaat as the National River Authority and later Nijmegen as the local municipal authority, the planning and design process itself has been assigned to the engineering consultants Royal HaskoningDHV.

In order to understand the planning and design process it needs to be understood that flood protection is a continuous struggle in the Netherlands and so is the struggle to respect landscape, nature, cultural history and social aspects in the realisation of major infrastructural works in this densely populated country.

The highly necessary reinforcement of the river dykes has come to a total standstill twice in this struggle. Special Government commissions in 1977 and 1993 reduced the legally required flood protection level in an attempt to reduce the negative environmental impacts of dyke reinforcement. When the Rhine River struck again with floods later in 1993 and early 1995 the river and dyke authorities were convinced that true stakeholder consultation was essential in getting the flood protection job done and find public support for high impact infrastructural works.



1. Former existing situation, Nijmegen city on south bank of the Waal River and Lent village on the north bank. North bank is also the location for Nijmegen's urban expansion
2. Dyke relocation for river enlargement, partially improved flood protection. Affects the situation in the village and the city's expansion planning. New bridge solves traffic circulation during realisation and future bigger city.
3. Dredging of flood plain channel for improved river discharge and flood protection. Creation of river island and multiple river fronts with high environmental quality potential.
4. Completion of basic infrastructure with prolongation of traffic and railway bridges and new bridges connecting the river island to the main land.

From top-down planning and design to co-creation

The implementation of true stakeholder consultation in the planning and design process is however quite a challenge. Especially in the Nijmegen-Lent situation. Dyke reinforcement as such was no longer an option. The bottleneck in the Waal River required enlargement, implying strong social and environmental impacts on the north bank of the river. This meant disruption of the Lent village and its people and thwarting of Nijmegen municipality's expansion plans across the Waal. The imperative of river enlargement instead of dyke reinforcement for flood protection was disputed, but seemed inevitable, improvement of living environment had been adopted as an equally important project objective, the potential technical solutions were flexible and the willingness of the river authority to respond to environmental impacts was beyond doubt. Still the top-down planning process was destined to fail as it was unable to tackle the multitude of impacts on the village and the city expansion.

The actual process started in 2000 with focus on large scale river enlargements, and improvement of the natural values in, mind you, an urban environment created mostly concern if not fear in the Nijmegen and Lent for losing stakes in their process of city expansion and conservation of the village ambience and cultural history. These concerns were justified. High quality village and city life demands good connections, presence of a dense network of amenities, utilities and services, where a project on river enlargement has a different focus. In this context the conflicts of interests dominated the planning and design process, resulting in ponderous relations between national and local authorities and between the authorities, stakeholder organisations and population. Still, a period of acceptance came.

The design process, tedious as it may have been, revealed the importance of the interests of the respective stakeholders. Key element was an open design process, results were shared with all stakeholders and these results were open to amendment. Local stakeholders had the opportunity to add and fill in the core local qualities of the village and the history of this area that goes back to Roman times in the beginning of the Common Era. Slowly the second project objective of improving the environment became a true objective of improving the *local living* environment. Stakeholders were no longer the affected participants in the process, but initiating participants in defining the characterisation of design values and criteria, finding and combining solutions in support of their goals, not necessarily being flood protection or city expansion. Instead of opposing different solutions, they saw their ideas reflected in the design; they became co-creators and thus ambassadors advocating the objectives of the project.

Role of engineering consultants

The process described for Nijmegen is not unique in the Netherlands. Where flood protection projects used to be primarily (hydraulic) engineering projects in a sector approach, the ongoing development of democratic rights, improved education and information has made citizens more responsible and articulate in bringing forward their stakes and interests. Growing environmental consciousness has forced authorities to account for social and environmental impacts: projects become more integrated in their environment. The logical evolution is that projects become more interactive in their environment and thus truly integrated, with multiple objectives.

Hence, also the role of the engineering consultant changed over decades into a role of enhancing society together with national, regional and local authorities and with local stakeholders. HaskoningDHV was not only responsible for the engineering of the river, the dyke, the traffic circulation, the bridges, etc. The consultant played a key role in the presentation of the design to all stakeholders and managing the proposed amendments within the directives of the project objectives, financial and planning restraints as set by the principal authorities.

So, not only engineers from many different disciplines contributed to the assignment, but HaskoningDHV needed to provide input from environmental specialists, financial experts, specialists in public administration, lawyers. Communication experts completed the scene.

Joint elaboration of the project outline

In 2008 this resulted in a fundamental switch in the project. The basic outlines for flood protection and for city expansion had been formulated. The city of Nijmegen took the lead in the planning and design process as they were better positioned to fill in the local detailing than the national river authority Rijkswaterstaat.

These two major stakeholders had created so much confidence in their joint ambition of flood protection and environmental quality that the lead could be assigned to the municipal authority closest to most stakeholders, rather than to the principal financier, Rijkswaterstaat.

For the realisation of this major project, investment costs in the order of 300 million euros, intensive involvement at national level was required: expertise in complex tendering and contract supervision.

In 2015 the project is nearing its completion. Where Nijmegen had already a very attractive river front on the south bank, the north bank has become a serious competitor.

A city river island has come to life, the dynamics of changing water levels in the river have been added to daily life on the sloping north bank, new bridges connect distinctive parts of the city, history reveals itself at the location of an old fort and the required flood protection has been achieved. Nijmegen and Lent go into a new era with a totally renewed living environment with revitalised physical and historical values on the banks of a seemingly tamed river that the Dutch will always keep on respecting for its natural forces. A project to be proud of!

(Figure : Process of the Nijmegen-Lent river enlargement project in terms of stakeholder relationship, which is regarded as the basis for success.

Nijmegen-Lent project in a nutshell

source Nijmegen municipality, website: <http://www.ruimtevoordewaal.nl/en/room-for-the-river-waal/>

see also separate file: Nijmegen project in a nutshell2.png