3. Green urban spaces with integration of sustainable land use

3A. Current situation

Location Nijmegen
Nijmegen is pleasantly situated on a lateral moraine and by the river Waal, with quite a substantial relief for the Netherlands (80 metres). The Netherlands’ oldest city originated as a Roman border city. Until 1875 a garrison town/fortress, 23,000 inhabitants, 2,400 buildings, overpopulated, impoverished, polluted. Nijmegen developed as half a concentric circle until 1990: oldest centre by the river, with radial road structure. In Nijmegen west, densely populated, stone working-class areas were formed first mixed with (1900-1950), later (1950-1980) divided from the industrial sites with severe environmental problems. After 1880 with sustainable incorporation of attractive rural estates and monastery gardens. A lot of green was added, such as beautiful boulevards (approx. 1880/90) around the centre and the spacious Goffertpark (1939). After 1980 the Waalsprong was developed and Nijmegen gradually embraced the river. The Nijmegen territory (total 5,760 hectare) south of the Waal is completely urbanised and will be urbanised north of the Waal, now partly agricultural (map 1). Nijmegen currently has 171,000 inhabitants, 70,000 households.

Industrial activities are mainly situated on the edge of the city. Spacious residential areas are situated further from the centre than compact residential areas. From the centre, public green is increasing. Especially the districts Dukenburg and Lindenholt have a lot of natural green and water. 1950s districts have mainly simple green fields with many trees. Public green/house = 92 m² (target national government = 75 m²); Public green/inhabitant = 40 m².

Map 1: Overview map land use 2015
<table>
<thead>
<tr>
<th>Location</th>
<th>Green Area</th>
<th>% total</th>
<th>Inhabitants /ha 2015</th>
<th>% area</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nijmegen North of the Waal</strong></td>
<td>4.5</td>
<td>19</td>
<td>2.9</td>
<td>12</td>
<td>Public green</td>
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<td>Greenfield</td>
<td>11.6</td>
<td>50</td>
<td></td>
<td></td>
<td>New Developments Nijmegen-North</td>
</tr>
<tr>
<td>Blue Area</td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
<td>Public water</td>
</tr>
<tr>
<td>Industrial/economic area</td>
<td>0.2</td>
<td>1</td>
<td></td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Mixed living/working area</td>
<td>4.3</td>
<td>58.7</td>
<td></td>
<td>18</td>
<td>Homes/private area, roads</td>
</tr>
<tr>
<td>Centre and Downtown</td>
<td>0.2</td>
<td>10</td>
<td></td>
<td></td>
<td>Public green</td>
</tr>
<tr>
<td>Blue Area</td>
<td>0.3</td>
<td>14</td>
<td></td>
<td></td>
<td>Public water</td>
</tr>
<tr>
<td>Industrial/economic area</td>
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<td>0</td>
<td></td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Mixed living/working area</td>
<td>1.8</td>
<td>109</td>
<td></td>
<td>76</td>
<td>Homes/private area, roads</td>
</tr>
<tr>
<td><strong>Nijmegen South of the Waal</strong></td>
<td>20.1</td>
<td>27</td>
<td>4.6</td>
<td>6</td>
<td>Public green</td>
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<tr>
<td>Blue Area</td>
<td>0.5</td>
<td>1</td>
<td></td>
<td></td>
<td>New developments Waalfront</td>
</tr>
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<td>Industrial/economic area</td>
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<td>11</td>
<td></td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Mixed living/working area</td>
<td>41</td>
<td>61</td>
<td></td>
<td>55</td>
<td>Homes/private area, roads</td>
</tr>
<tr>
<td><strong>Nijmegen total</strong></td>
<td>24.8</td>
<td></td>
<td>7.8</td>
<td></td>
<td>Public green</td>
</tr>
<tr>
<td>Blue Area</td>
<td>11.6</td>
<td></td>
<td></td>
<td></td>
<td>New developments Nijmegen-North</td>
</tr>
<tr>
<td>Industrial/economic area</td>
<td>8.2</td>
<td></td>
<td></td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Mixed living/working area</td>
<td>47.1</td>
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<td></td>
<td>63</td>
<td>Homes/private area, roads</td>
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<tr>
<td><strong>Brownfield</strong></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td>New development</td>
</tr>
<tr>
<td><strong>Nijmegen surface 57.6 km²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**2015**

- % inhabitants within 300 m
- 0.5 ha public green: 96%
- % inhabitants within 300 m public green: 100%
- Nijmegen: 96%
- Centre: 90%
Spatial developments

Leading in Nijmegen’s spatial development are the Structural Vision 2013 (Ecopolis strategy with long-term ambitions: energy neutral by 2045, climate-proof by 2050) and City Vision 2020 (expectations/problems regarding population development). Green and water as major structure bearers, and essential links with environment (river, lateral moraine, Ecological Main Structure) (map 2).
[Existing green areas, Waal and Maas-Waal channel, Search areas municipal green, Investing in green in and around city, Investing in blue structures, Water safety, Search areas wind energy, District heating route, Areas of intention climate change (heat + flooding), High quality public transport, Cycle superhighway, Park & ride, Development location Waalfront / Waalsprong]

Map 2: Sustainable Development (Structural vision 2013)
In the 1990s the State obliged Nijmegen to build a huge building task: 12,000 houses. Nijmegen did not want to sacrifice green and nature in and around the city. The solution: incorporating the agricultural neighbouring village of Lent, north of the Waal. The Waalsprong is getting a sustainable water system, strict energy achievement standards, urban heating from the residual heat of waste incineration and a robust green-blue framework, connected to the nature around Nijmegen.

Climate change leads to more river discharge. The Waal bend is a bottleneck. The State obliged Nijmegen to build a bypass straight through the Waalsprong. This obligation thwarted plans for the Waalsprong, but this was dealt with creatively and dynamically as a challenge for quality. A unique green-blue artery, with rugged nature, island, quay, space for events and water sports and a connection with nature on either side of city: Nijmegen embraces the Waal (figure 2, 10, 12). Nijmegen received the worldwide Waterfront Award for its vision and design of water management and urban renewal (New York, 2012).

Figure 2: Secondary channel and new city centre Waalsprong

Restructuring, sustainable use of space
Nijmegen has many restructuration projects, in the city centre, residential areas and industrial estates, but there are only a few brownfields left south of the Waal. The relocation of industrial estates provided space for attractive residential areas (map 2: Development location Waalfront). Renewal of campus (Radboud University + HAN University of Applied Sciences + Academic Hospital) is a huge project, with major public investments in public transport (train/bus), biking and the creation of attractive, sustainable, green living and working environment.

Functional changes in the city centre are accompanied by adding Green Allure (figure 5). Our participation in the European project Future Cities reflects our ambition and way of thinking, with a major focus on green and water in climate adaptation. Construction projects are tested on sustainability with the, nationally recognised, Environmental Performance Calculation methodology.

Quality green and blue zones
Green and water are essential for quality of living conditions, social cohesion and health (social sustainability). Together with cycling infrastructure, they form a basal, connective structure for urban development and for spatial cohesion with surrounding municipalities. Our city budget is focused on civilian satisfaction with (management of) green/water. Long–range score: on average 7.5; for stony districts 5.8. The aim is to increase the score of stony districts to the average.
This is why we have been using the following municipal budget indicator since 2011: 'half a hectare of adjacent green within 300 metres from each house’ (map 3). This now applies to more than 95% of Nijmegen’s residents. In addition, our local council decided (2013) to realise in districts enclosed by the main roads and railways, such as Rozenbuurt and Kolpingbuurt, more green, in spite of coming within the 300-metre norm.

Map 3:
Red: Houses more than 300 metres from 0.5 hectare adjacent green (2011)
Blue: New parks, with the completion date:
   1. Park Korenmarkt, completed 2012
   2. Truus Mastpark completed 2014
   3. Park Tollensstraat/Dichterspark, completed 2015
   4. Park Enkstraat, completed 2015
   5. Park Spechtstraat, completion 2016
   6. Park Noviokassen/food forest/permaculture, completion 2016
   7. Parkje wijkcentrum De Biezantijn, completed 2014

Satisfaction about green and water is closely related to the spread/quality of provisions for outdoor playing and recreational sport. Since 2003 we have been adopting the following norms: 1.5 play area/100 children up to the age of 12, one play area/100 children aged 12-18. Design and management of play areas are in accordance with stringent legislation. Design of play areas, but also spaces for youngsters (informal sports fields) and senior citizens (boule lanes, exercise parks) takes place in close consultation with target groups.

Principal green structure
For municipal waterways, particularly in the districts Dukenburg and Lindenholt, the construction of eco-friendly banks and the improvement of water quality has been invested in on the basis of agreements and an investment programme with the regional Water board and the State water board (Water Plan 2001).
In our Principal Green Structure (map 4) image quality is essential alongside experiential value in our monumental parks and in the city centre. Restructuration affecting this undergoes a strict test by the local Image Quality Committee. In addition, our main parks are recognised and protected as State (archaeological) monuments.

Map 4: Connectivity: Urban Principle Green Structure connects to the Main Ecological Structure around the city
The Main Tree Structure is a connective part of the Principle Green Structure. In case of felling, replanting is compulsory (1 on 1). For trees outside the Main Tree Structure a replanting duty applies, depending on the type of tree and the specific situation.

**Green Allure City Centre (since 2009):** green renewal, the explicit wish of residents and entrepreneurs, with the following results until now: two car parks became parks (figure 3), green façade on lift shaft, avenue trees in five shopping streets and three residential streets, façade green in several streets created by residents/entrepreneurs, innovation with green and fountain esplanade (above car park) and a small park at a former factory site. Green Allure City Centre was partly made possible by the European Future Cities project.

![Figure 3: Green Allure City Centre: Korenmarkt park](image)

**Groen Verbindt (since 2015):** 2015 realisation of seven green projects at the request of resident groups and 12 ecology/nature projects (among others City Badgers), selection from 100 suggested projects. Ecology projects are closely linked to the construction of Nature Centre De Bastei, and aims to link national nature organisations (Natuurplaza Nijmegen University) to green projects in residential areas.

![Figure 4: Enthusiastic start of the Groen Verbindt Campaign with 30 organisations by our aldermen Renske Helmer and Harriët Tiemens](image)
Park Lingezegen (1,700 hectare)
Recreation and landscape park between Arnhem and Nijmegen, former agricultural area, with removal of local soil pollution and unexploded explosives from World War Two. Investment (phase 1) €68.5 million, of which €3.8 million from Nijmegen. Completion 90% in 2015, remainder by 2018. Currently in further development / second phase 2015-2025: in De Woerdt area, adjoining residential areas Nijmegen north, development of food forest/permaculture/nature conservation (approx. 50 hectare). On 24-28 November 2015 with the support of Nijmegen, international conference, speaker Mark Shepard (US, author Restoration Agriculture), including design sessions.
Investment and development Green and Water

Nijmegen north: €300,000,000 investment green, blue infrastructure, partly municipality, majority national government (2010-2020).
Lingezeegen Park: investment 1st phase: €68,500,000, of which €3,800,000 Nijmegen.

Nijmegen south of the Waal:
Management public green (main structure + district green): €6,000,000 annually.
Management + investments playing/informal sport in public green: €2,000,000 annually.

Specific green investments:
- new parks residential areas 2010-2015 period, realisation and planned: €5,000,000;
- new green city centre, 2008-2013: €2,500,000;
- investment volume private and public restructuring projects: no exact image.

Specific other investments Nijmegen south of the Waal:
- city waterways 2001-2012 €8,000,000;
- subsidy (approx. 33%) investment in green roofs private houses €100,000/year;
- subsidy (approx. 33%) investments disconnection of private houses €100,000/year;
- investments disconnection projects public space €200,000/year
- disconnection: up to 2006 55 hectare; 2007-2014 70 hectare (public and private);
- private green roofs 2010-2015 0.3 hectare.
- investment Nature Centre De Bastei €7,000,000; exploitation €500,000/annually
- participation project 'Groen Verbindt' 2015: €200,000; subsequently €300,000/annually.

3B. Previous performance objectives

Vision and objective: compact city, 0.5 hectare green within 300 metres from each house, a green ring around the city, easily accessible by bike, in accordance with City Vision and development Waalsprong (see 3A maps 2, 4), based on Ecopolis strategy.
For restructuration of land use legal environmental norms apply for soil, water, air, archaeology and noise. For green structures mainly municipal norms and ambitions apply.
Major involvement of residents, companies and institutes: on the basis of involvement legislation, but especially active participation planning, design and management.

House building and construction of industrial estates is regionally aligned: spatial concentration and optimum connection to public transport structure. For the city, the compulsory state responsibility of 12,000 new houses applies.
After 1950 the urban development process accelerated; urban work related areas transformed into residential areas; activity concentrated on the main transport network on the edge of the city. The input and wishes of civilians largely determined projects. Below are more recent restructuring projects, illustrative for the development of Nijmegen.

Restructuring projects
Hessenberg
Urban, former site of newspaper office/printer (4 hectare), 140 apartments, ground level car-free, underground car park, extremely energy efficient, built-in accommodation for swifts; integration old, monumental orphanage; district next to historical Kronenburger park (5 hectare). At the request of residents in 2014 a modest amount (100 m²) of extra local green was planted and also a monumental lime tree.

Housing project Dobbelman
On the site of the former soap factory (1.5 hectare), 2012, 200 houses (of which 50 sheltered houses), work project for the disabled, workshops, car free ground floor, indoor car park, with use of factory body; prominent factory chimney (1920) integrated; near Thiemepark, Vondelpark and Natuurtuin.
Parks in Bottendaal

Bottendaal, densely populated district near city centre, near station, enclosed by radial arterial roads and railway. Since 1970 also process of relocation activity and new houses. Since 1995 addition of green at the insistence of residents:

- At the location of cardboard factory no new housing but **Nature Garden Bottendaal** (1995; 0.18 hectare), managed by local residents.
- **Thiemepark**: busy meeting place (1999; 0.5 hectare), after demolition of printing office (figure 6).
- **Vondelpark** (2007; 0.4 hectare), previously wholesale building materials, near newly built school for vocational education and Railway station.
- Extensively used **Kraaiennest playground** (0.35 hectare), former soap factory site, local resident initiative, now plan for integration exercise garden (demented) senior citizens (realisation 2016).
- **Spoorkuil Bottendaal**, ruderal, property of the railway, 2.2 hectare, at the initiative of local residents construction of sports field, dog walking field, benches; residents see to green management (among others rare Field Wormwood) (from 2005).

![Figure 6: Thiemepark](image)

![Figure 7: Park West, map 1995](image)

Park West

In densely built-up, stony districts (1920-50) with a lack of green, environmental damage caused by adjoining industrial estates. Urban development concept ‘Park West’ (figure 7) comprises connected parks, allotments, sports fields, playgrounds, dog walking fields (total 50 hectare). Realisation simultaneously with reconstruction residential areas and industrial estates, construction of traffic bridge and ring road, retention basins for rainwater and dealing with environmental problems (reducing air and noise nuisance). Realisation almost completed. 2016 realisation public food forest on extra 0.5 hectare (now greenhouse area).

Limos

Former barracks Limos: houses in monumental buildings and new apartment complexes (also for weak target groups, asylum seekers), primary school, restaurant and art studios, underground car park (2008; 15 hectare). 10 Hectare public green, from which densely built-up residential areas benefit. Several bunkers now bat caves. Locals manage small natural forest.
Reconstruction Waalfront

Restructuring Heijendaal Country Estate (100 hectare)
In 1995-2015 obsolete buildings university and academic hospital were replaced by modern facilities with higher operating pressure and with high sustainability standards. Addition of student accommodation, making existing student flats more sustainable (solar energy) and total renewal of university sports centre. Among others by energy extraction from soil. The aim is to fit in and develop the old structure of Heijendaal Country Estate (figure 8). Here too newly built HAN University of Applied Sciences (previously spread over city). Most sustainable school building in the Netherlands (2014). Public transport system adapted (special bus and bike routes). Modernisation Heijendaal train station.

Figure 8: Campus Heijendaal Country Estate

Restructuring Hatert
Working-class area Hatert, 132 hectare, 9,700 inhabitants, 1950-1960, uniform houses and flats, almost fully rental, in dull green, developed into social problem district. District declared as one of the 40 Dutch problem districts in 2006. Since then the state, province, city, housing corporations and health institutes have invested in physical and social sustainability. Physical: renovation Park along Maas-Waal channel and creation of colourful flower borders in all public gardens (total 2.5 hectare). Disconnection of rainwater discharge (10 hectare) road paving and house building (investment of €1.8 million) (figure 9). Realisation completed in 2012.
In stony districts: **Truus Mastpark**, location of former swimming pool, after removal of soil pollution; 0.5 hectare, investment €600,000 (without costs land purchase), 2014; and **Dichterspark** location former school, 0.2 hectare, investment €200,000 (without costs land purchase), 2015, developed and managed with residents.

**Ecopolis Waalsprong (12,000 houses) (realisation 2005-2025)**

Design from Ecopolis strategy: Sustainable water structure and robust green structure, with connection to local environment (figure 10). Strategy initially met with aversion of private developers.
The Ecopolis strategy works perfect for water: rainwater recovery in sustainable water system (lakes, pools and wadis). The robust edges are in development for green. Green in the districts (300-metre norm) remains essential to offer spatial living quality. Sustainable development and quality of living conditions integrated in plan and project development via GPR sustainability methodology. Connection to green-blue structures along Waal and in Park Lingezegen (= landscape park between Arnhem and Nijmegen; 1,700 hectare, €68.5 million investment, basic equipment ready by 2018). New residents of Nijmegen north actively plea for the preservation of historical green (orchards, tree avenues, old farms), good cycling connections and extra green in newly built districts.

**Sustainability agenda**

Our structural vision is based on sustainable development. This sustainable approach also applies to economic development (energy and environmental technology) and demographic development (binding people to the city, houses for all stages of life) and climate change (adaptation measures). Our ambitious Sustainability Agenda (2011) distinguishes five pillars, including the sustainable urban development pillar (among others, climate adaptation, sustainable construction, space for sustainable green and water). This pillar is closely connected with the other four pillars (mobility, energy, economy and municipal organisation). With these five pillars we are also adapting the area south of the Waal to the Ecopolis strategy. Renovation of urban space is linked to making houses more energy efficient and improving the quality of public space, improving the structure of public transport and bike traffic.

With the 2001 Water Plan Nijmegen we decided with our water partners to cooperate more on a sustainable water chain, with the objective of a healthy and resilient water system and an attractive living environment at the lowest social cost. From this Water Plan and the sewer system plans (see indicator 8/9) dynamically disconnecting was focused on: no longer transporting rain water in the sewer, but filtering it. Meanwhile, 130 hectare has been disconnected (from 700 hectare paving that flows into the mixed sewer system). The Water Plan also led to more water awareness among residents, via our Water Service Point. Several works of water art have been realised that make water visible in public spaces.

**Policy on green and blue areas**

There are no legal requirements for the amount and spread of green; green is mainly a local ambition. This green policy was laid down in policy plan De Groene Draad (2007), with opportunities and frameworks for Nijmegen green on an urban level and divided according to district, horizon to 2020. Spread, scope and quality of green and blue areas must meet requirements such as climate, leisure and sports, social cohesion, health, city marketing. Specific elaborated in the City Tree Handbook, with regulations and municipal policies. In the budget we converted the green policy into specific indicators. For water policy there is compulsory European and national legislation, converted into our Water and Sewage Policy Plans. The public investments in green and blue always take place in consultation with resident groups. There is major involvement in active societal green management (approx. 230 projects).

**3C. Plans for the future**

Nijmegen is opting for sustainable spatial development, with sustainable energy (solar panels, energy saving, smart grids, heat network, transition coal-fired power station GDF Suez and wind energy) and climate adaptation (secondary channel, Delta programme) as supporting structures (figure 11). Many of the current restructuration will be completed over the next few years. Below is an overview of the main developments and plans:
Figure 11: GDF SUEZ site (coal-fired power station closes; transition to sustainable energy location) and Room for the Waal (construction of secondary channel, dyke relocation)

Waalfront and Waalsprong
Economic crisis and –now gradually improving – housing market can mainly be felt at large building locations; which is why there is a focus on small construction flows and extension of time horizon (figure 12). Market and consumer demand distinguishing quality, also with regard to sustainability.

Figure 12: Urban development vision Waalsprong
In Waalsprong also a focus on collective private commissioning, for instance: private persons are building very sustainable houses of straw (figure 13). In addition, a housing corporation realised 50 sustainable housing units together with a resident group: units made of loam and straw, low parking availability ratio, low energy costs and new sanitation concept. Space around it, is arranged as food forest/permaculture. Urban island, secondary channel, green, main water system and main infrastructure (including heat network) as well as provisions, schools and health institutes are designed according to plan, attractive for future developers, builders and residents.

Figure 13: Waalsprong: building one of the straw houses

In the Waalfront (among others in the former Honig soup factory (figure 14) and in former textile spinning mill Vasim) empty commercial properties temporarily (eight years) have a different use (for artist studios, skate hall, catering establishments), also intended as ‘placemaking’. The project organisation focuses on opportunities offered by the market: more organic, gradual area development instead of large-scale top-down construction. The potential turns out to be enormous, due to the excellent location near water, near city centre and good accessibility.

Figure 14: Honig complex: partial development location living and working; next eight years temporary innovative placemaking at former industrial estate

Delta programme
With its new National Delta programme (2015) the national government wants to properly prepare the Netherlands for climate change in this century, also essential for Waalsprong and Waalfront. The Delta programme includes proposals and stringent norms for water robust development (alongside Water Safety and Fresh Water plans), based on the Ecopolis strategy which Nijmegen has been basing itself on for many years. The Spatial Adaptation Delta Decision, to which Nijmegen actively contributed, includes concrete recommendations for cities. The Spatial Adaptation Delta Decision demands climate resilience from cities by 2050 (withstanding increasing precipitation, drought and heat). This also offers extra opportunities for our plan development in the Waalfront.
Vision and plans
Nijmegen also has substantial, compulsory construction tasks, but the limits are coming into view. Development-oriented management of the city is becoming more important. Over the next few years the focus remains on the preservation of what has already been built, priority for biking and public transport and providing space for sustainable energy. The basis is our 2020 City Vision (drawn up in 2013) and the Spatial Structural Vision (2013). Both visions are the result of alignment with neighbouring communities, higher authorities and German authorities, on the basis of elaborate consultation with civilians, companies and institutions.

The 2020 City Vision lists ten basic principles:

1. We cherish our special history, our unique location, our identity as knowledge and student city and the headstrong and social attitude of the people of Nijmegen.
2. The city’s strength lies in experiment and innovation, in companies, institutes, breeding ground and networks alongside everything we built up in our long history and is still successful.
3. Nijmegen wants to be a modern social city with space and opportunities for all.
4. Nijmegen will become even more attractive by working on the spatial quality of special places, with respect for the personal character of the districts.
5. We are improving the accessibility of and in the city with a priority for high-grade public transport and cyclists.
6. Together with companies and residents we are investing in a sustainable city: energy neutral, clean and green.
7. We are mainly reinforcing our top position in the area of life sciences by focusing on the connection between health, nutrition and exercise.
8. Nijmegen wants to be a European city with cross-border working, learning and living.
9. Nijmegen stands for regional cooperation where the choice for partners and form depends on the subject.
10. The municipality of Nijmegen wants to be a modern, reliable and righteous authority.

The new city administration (from 2014) retains the City Vision and Sustainability Agenda (such as the 2045 energy neutrality objective). The green ambition for the next four years is:

- Urban green in the framework of ‘300 metre green norm’ in accordance with the municipality’s decision of October 2013, where locations and finances have been laid down.
- Additional credit (2018) for extra green in Nijmegen Oud-West (€1,000,000).
- Working on the green ring around the city together with neighbouring municipalities and other partners: completing realisation of first phase Park Lingezegen; and start-up next phase.
- Continuing the green-blue axis in the centre of the city, in coherence with nature and river landscape outside the city.
- Management of large green area in and around the city should be in the hands of nature conservation organisations (figure 15) as much as possible. We are involving more and more civilians in urban green management.
- From 2016 and subsequent years (€300,000/year): stimulating resident projects, geared towards ecology (such as badgers, butterflies, bees, swifts, otters and peregrines) and urban agriculture, green for grey and tree campaign (10,000 extra trees; now approx. 60,000).
- €375,000 annually for green improvement in public spaces in residential areas.
- We are preparing the next Municipal Sewage System Plan (2017-2022): we will continue to invest in disconnecting rainwater, sustainable water use and stimulating green roofs.
Figure 15: Web page Vereniging Natuurmonumenten, administrator Nijmeegs Heumensoord
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http://www.klimaatbestendigestad.datadownload.nl/dbra.html (Delta Decision Spatial Adaptation)
http://parklingezegen.nl/ (Park Lingezeigen)
http://mozaartbuurt.nl/groene-parel/ (Truus Mastpark)
http://www.adaptablecities.nl/?p=298 (Adaptable Cities; Ecopolis strategy. Author Tjalingii: theoretic framework)

Government and treatment Delta Decision Spatial Adaptation

Statistical information
http://www2.nijmegen.nl/gemeente/onderzoekencijfers/stads-_en_wijkmonitor
http://nijmegen.buurtmonitor.nl/