Sustainable neighbourhoods in Brussels
An analysis of the difficulties for the (re-)development of sustainable neighbourhoods and suggestions of possible methods and solutions

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Abstract

In 2008 the Brussels-Capital Region, together with Brussels institute for the environment (BIM / IBGE) created the facilitator service “sustainable neighbourhoods” (quartiers durables). By 2010 a report was presented regarding the search for an experimental site in the Brussels-Capital Region where a sustainable neighbourhood could be developed. However, the research project showed that this one perfect experimental site didn’t exist; instead one can find, within the Brussels region, several locations, that could prove to be ideal candidates for a sustainable redevelopment.

This contribution will discuss the findings of this research project and will elaborate on the specific scenarios that were developed for a selection of the characteristic neighbourhoods. At the end some conclusions are drawn with regard to the possibility of realizing the sustainable city of tomorrow not via new developments but using the existing urban fabric and turning it (redeveloping it) sustainable.

Introduction

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‘Mixité’: an urban and housing issue?

However, the research project showed that this one perfect experimental site didn’t exist; instead one can find, within the Brussels region, several locations, that could prove to be ideal candidates for a sustainable redevelopment.

This contribution will discuss the findings of this research project and will elaborate on the specific scenarios that were developed for a selection of the characteristic neighbourhoods. Eventually these different scenarios are examined through the lens of the Memento and the “sustainable check-up”, two tools developed by Urbs that allow the assessment of housing projects regarding their sustainable character (on the three dimensions – ecological, social and economical).

At the end some conclusions are drawn with regard to the possibility of realizing the sustainable city of tomorrow not via new developments but using the existing urban fabric and turning it (redeveloping it) sustainable.

**Urbs and the search for the sustainable neighbourhood of future Brussels**

In 2008 the Brussels-Capital Region, together with the Brussels institute for the environment (BIM / IBGE) created the facilitator service “sustainable neighbourhoods” (quartiers durables). This service is taken on by Urbs, a collective of experts from two schools of Architecture in Brussels (La Cambre and Sint Lucas). From the start the mission of the facilitating service was to provide guidance and information for practitioners. Research into topics that are of relevance for the Brussels Capital Region has been conducted and has let to the creation of new, or the adaptation of existing, policy instruments.

During the first year of its existence Urbs developed a double instrument: the *Memento* and the *sustainable check-up*. Both are guiding principles for architects and developers, who want to create projects within Brussels in a sustainable way. The past years the service looked into the question of the possibility to develop one sustainable model neighbourhood. For this an elusive quest started to find the most perfect location for this exemplar pilot project.

Urbs worked together for this with IGEAT (the institute for environmental management and land-use planning of the University of Brussels) as the idea of the policy makers was that it would be possible to find the perfect spot for the development of the pilot project by superposing, in a GIS environment, several aspects that were considered important: zoning regulation, Natura 2000, accessibility criteria, together with the physical end natural restrictions (orientation, biological criteria, …) and human considerations (demographical elements, socio-economical parameters, presence of services and facilities). The objective was to develop a spatially coherent vision, which took into account the constraints and opportunities that frame the potential future sustainability of neighbourhoods.

In this first phase a number of maps were created, eg. sites within the Brussels Capital Region that are still constructible (differentiated based on their size and owner types), the accessibility of the neighbourhoods by public transport, the presence of open/green spaces. In a second phase the several areas that were selected were looked at in detail (see fig. 1).

Fig. 2 shows the potential sites that are large enough to construct a new neighbourhood, a closer examination of this map already brings to the fore some of the considerations that proved to be of importance to address the question of a pilot project from a different angle. The map shows that there is a large concentration of potential sites in the second ring of development of the city (the former industrial belt) and more outwards at the edge of the region. This already implies two things: Firstly the gardens of the big villa developments stand out clearly, which indicate they are rather large, but on the other hand they are actually also not useful as they are in private hands. It nevertheless points out the fact that these developments are not sustainable in the long run, as it has become clear that higher densities will be needed in the future.
Secondly the high-rise estates and the large leftover spaces in between a clearly visible on the map. Two conclusions can be drawn from this, first of all there is again the interpretation of the map: although it shows the potential big open spaces it is clear that the left-over spaces between the high-rises have been left untouched precisely to create some balance between the high density in the buildings and the needed open space for people to compensate for this high density. Secondly it becomes clear that within the Brussels Capital Region quite a large number of these high-rise developments are present, already indicating the potential of a possible redevelopment of these kinds of estates.
A thorough analysis of the other maps and an overlay of them indicated clearly that working solely on the basis of a GIS driven cartographic analysis an innovative approach of developing sustainable neighbourhoods in Brussels will not be achieved. It is obvious that a multitude of other factors than those stated above or those assumed to be of importance also influence the choice for a site and the success of its development. From this moment on a more intense analysis and conceptualization started, besides numerous site-visits and intensive literature study a number of workshops were organized with policy-makers, stakeholders and designers. Based on some initial findings interviews were held with people from the social housing associations, as it was the idea that a large number of potential sites were owned by these associations.

This second phase of work confirmed our findings from the first phase. Selecting the perfect site to create one sustainable pilot project seemed not only impractical (because of the numerous parameters) but we also became convinced that within such a highly built-up area as the Brussels Capital Region it would be unethical and truly unsustainable to select one open spot on which to create a new neighbourhood. A true sustainable initiative would take into account the built reality. Additionally it became clear that certain ‘typological’ neighbourhoods could be detected within the Brussels region. If we look at the map (see fig. 2) that brings together these typologies we see that within the region we have potentially several typological neighbourhoods that could be redeveloped in a sustainable way. Thus let us, in the next section, look into these different scenarios.
Scenarios

The preceding part showed the difficulty in selecting only one potential site to create a sustainable district. The overlay of the various maps on a regional scales and the fieldwork done revealed the omnipresence of certain parameters. Several places appeared to us as having similar characteristics, in general related to the morphology of the district. We were convinced that these could be the subjects of strategic interventions in order to redevelop the area in a sustainable way. As such we agreed that it would be more interesting to study these similarities between the various morphological compositions, which form the existing city.

Five scenarios (see fig. 3), which all have a reproducible character, emerged from the research: the zones of reconversions (1), the garden cities (2), the large high-rise estates (3), the large urban scars (4) and the “virgin grounds” in the periphery (5). Sometimes, within a same district several scenarios emerge, which can create synergies. This part will elaborate on each scenario and discuss their typical problems and potentialities. For some of the scenarios instruments and planning tools have already been developed at the regional level. During the nineties the Brussels region has developed the planning tool of the neighbourhood contracts (contrats de quartiers). Its aim was, and still is, to regenerate deprived neighbourhoods. They focus on the population of the area and try to establish as much participation as possible. Not only will the area undergo serious physical alterations, it is also the ambition of the neighbourhood contracts to stimulate social cohesion and economical development. In numerous of the reconversion zones (scenario 1) these neighbourhood contracts are running or have been running in the past. For the large urban scars (scenario 4), often in areas where projects on these scars can be used as leverage for the broader area, the Brussels Region has already developed several development plans (des schémas directeurs), eg. for the Turn and Taxis neighbourhood.

In this contribution we will focus on the scenarios of the garden city neighbourhoods and the high-rise estates, as it will be necessary to develop additional planning tools for these types of neighbourhoods in order to guide them in a durable strategy of development.
Figure 3. Different scenarios

CINQ SCENARIIS

Zone de reconversion

Cités immeuble-tour

Cités jardin

Enclaves urbaines

Terrains vierges

Source: IBGE, PRAS, IVN, IGEAT; AMINAL, 1993 - Cartographie: URBS
Garden City neighbourhoods

It is with the publication of “Tomorrow - a Peaceful Path to Real Reform” in 1898 that the English town planner Ebenezer Howard introduced the concept of the “garden city”. These garden cities, conceived as autonomous districts in edge of the large industrialised cities, were designed to create a social and harmonious living environment for the labourers of the city. In its ideal model, the garden city is developed within a certain spatial limit and has a maximum number of inhabitants (30 000 inh/4 km² surrounded by a ribbon of 20 km² of agriculture land). The garden city is supposed to create a perfect symbiosis between the city and the countryside. The implementation of this urban model, proved economical, as all houses have the same lay-out and design, thus a large number of houses could be constructed in a short period of time, as such also answering the big housing needs of the period. In Belgium, it was only after the First World War that the government decided to invest massively in this garden city concept, precisely because of this lack of residences. The English models inspired the architects of the Belgian garden cities, but there is one big difference with their British counterparts. The have not been developed as autonomous entities, but rather as residential neighbourhoods in the edges of the cities. The typologies of the small country houses were either translated into a neo-rural style like that of Logis-Floréal at Watermael-Boitsfort (town planner L. Van der Swaelmen and architect J-J. Eggericx) or into a modernistic style like the “Klein-Rusland” neighbourhood in Zelzate (architect Huib Hoste) or the “Cité Moderne” in Berchem-Saint-Agathe (architect Victor Bourgois). The one-family houses, with two or three bedrooms and a garden, met the hygienic needs of the time. Communal spaces, such as meeting rooms, communal gardens, play areas, etc., were designed on the level of the neighbourhood to compensate for the rather small houses. Within the overall plan of the neighbourhoods a school or crèche was often provided.

The building of these neighbourhoods came to a stop at the beginning of the thirties. The lack of financing, the fear of the “red suburbs” and the reinforcement of the modernistic thought of the CIAM led to the end of the construction of social housing neighbourhoods following the model of the garden city.

Within the Brussels Capital Region we can find around twenty of these garden city neighbourhoods, mostly situated in the second belt of development (the so-called 19th century belt) or even really at the edges of the region. The first of these developments were built during the Twenties, often by co-ops, with the aim of offering a better life to the labourers, as they were moved from unhealthy and dense inner city areas to the airy and healthy garden cities in the edge (as it was of course in this edge that the land was still affordable). Although far from their place of work it was said that in these garden city neighbourhoods the labourers were offered a rural-like life, looking out onto an “idyllic” painting. However, the initial plan to connect these edge cities with the centre of Brussels with a public transport system was never (fully) realized, consequently the labourers were isolated from the city centre and their places of work. Even today we can see that these areas are still badly connected with the public transport system.

A second series of garden cities was constructed during the 40s and 50s. Despite the several typologies off different one-family houses these developments form a coherent whole in the city. Sometimes one or more apartment blocks supplemented these developments. Initially all these garden city developments belonged to several social housing companies, but today a large number of them has been privatised.

Although originally regarded as a whole of healthy residences, with communal services within the direct neighbourhood and offering a pleasant compromise between the advantages of the city and the countryside, the garden cities do no longer answer the needs of the current city dweller. Neither do they comply with the current standards of hygiene and comfort, nor with those of social housing. In Brussels, the dwellings that are not yet renovated do not have a bathroom, or toilet; the very small kitchen is not suitable to fulfil the needs of a family. Moreover, the neighbourhoods are not very well maintained (in particular with regard to the public spaces, of which the maintenance is very costly) and when a social housing company wants to renovate the dwellings they are confronted with very
high costs of restoration, as the Royal Commission of Monuments and Sites considers most of the
neighbourhoods of important historical value.

Looking at the emergence of “sustainable neighbourhoods” today we see that some elements that are
related to the concept of the garden cities are returning, both in the architectural typology as in the
organisational principles (eg. co-ops). If the Belgian government had, at the time, given up the
construction of the garden city neighbourhoods, in particular because of the threat of a growing power
of the tenants/owners, today one sees the reappearance of the co-ops and of new forms of dialogue and
participation. During the forties the Scandinavian countries had a tendency to develop a lot of
communal equipment (common wash-house, nursery, etc). The co-ops profited from these group
benefits and they developed interesting thoughts around the notion of citizenship. The dynamics that
developed, -eg. not only taking care of the private property but also of that of the community and the
communal spaces-, resulted in the knowledge of how to ‘manage’ these ways of communal living.
Citizens became more responsible and invested in the urban community. As such we can consider
these garden city neighbourhoods as the “sustainable neighbourhoods” avant-la-lettre, and one finds
these characteristics in most of the well-known contemporary sustainable neighbourhoods, like that of
Vauban to Freiburg (FRG) or BedZed (the U.K.).

The provision of communal services and meeting places within garden city neighbourhoods are
stimuli for social interaction and form a base for a good quality of life. The social aspect of the
sustainable approach is embedded within the architecture of the garden cities, and the compromise
between city and nature has a calming effect on the neighbourhoods. Consequently these
neighbourhoods hold a strong potential to become the sustainable neighbourhoods of tomorrow.
However, the mobility problem will have to be solved first. Their location at the fringes of the city
makes them badly connected both in terms of public transport and soft mobility. As often the
inhabitants do not have the means to own a private car it will be necessary to invest in durable means
of displacement and to stimulate the use of these means (use of public transport, walking, use of
bicycles –eg. Villo City-, etc). As most of the inhabitants are disadvantaged social economy initiatives
need to be stimulated.

The reproducibility of this scenario is of course limited to other garden cities neighbourhoods.
Nevertheless, given the number of these areas in Brussels and the fact that social housing institutions
own most of properties, intervention in these neighbourhoods can have an impact. Currently the
garden city neighbourhoods need to be renovated and this study emphasizes that this renovation
should be a sustainable one. The zones could be densified or in any case reconsidered to meet the
current standards, which would also allow a diversification of their population. The main difficulties
for the restoration of the garden cities and their transformation into true durable districts are twofold.
First of all, there are difficulties of legal order. Indeed, the neighbourhoods are often protected as a
patrimonial heritage site. The intervention of the Royal Commission of the Monuments and Sites thus
is essential. The second difficulty is of a practical order, as the whole renovation/regeneration process
should be conducted in close dialogue with the inhabitants and taken into account their temporary re-
location.

*High-rises*

From 1945 until the end of the seventies (and even until halfway the eighties in Eastern Europe)
numerous high-rise estates have been constructed all over Europe. It is estimated that approximately
41 million people are living in such complexes (Dekker & Van Kempen, 2004). At the time of their
construction these estates were considered as the way forward, partly because of the impact of the
modernist doctrine. But very quickly these complexes were negatively associated with criminality,
precariousness, violence, dilapidation, etc (De Decker & Newton, 2010; Dekker & Van Kempen,
2004; Power, 1997; etc). In the research at hand these estates are considered as having a great potential
for sustainable redevelopment.

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*Mixité*: an urban and housing issue?
In Brussels more than 40 high-rise ensembles have been constructed after the Second World War, almost all of them are again situated in the 19th century belt of development. If we look at the atlas of deprived neighbourhoods (Kesteloot & Meys, 2008) we see that more than 50% of the high-rise developments are characterised from medium deprived to seriously deprived, and that the inhabitants more than often risk of being unemployed, have very low income or are single parent households. Just as with the garden city neighbourhoods most of these areas are situated at the edge of the city and are badly connected with the public transport system. The high-rise developments that are in the atlas of deprived neighbourhoods are all property of social housing institutions, (eg. le Foyer Bruxellois, owns five of these estates, of which four are in the atlas). A close collaboration between the Brussels Region and these estates thus also means that a successful redevelopment of one estate could be (easily) reproducible.

These high-rise estates are in great need of thorough renovation. The small amounts that are momentarily allocated to tackle this renovation are insufficient. It is very clear that both the ecological and social facets of the sustainable redevelopment of these areas are seriously intertwined. These tower buildings often house people with low-incomes, the residences are generally badly maintained, the development is in rupture with the existing districts, surrounded by degraded and badly managed public spaces.

The interest for a thorough restoration and reorganization of the tower estates is not only a recurring phenomenon in Brussels. In the Bijlmer in Amsterdam or Marzahn in Berlin, serious reorganizations already took place. Recent research initiatives like Restate, Urbes, Eurex, Ugis and Key Action 4 confirm this interest for the reorganization of these estates. The “Restate” report (Musterd & Van Kempen, 2005) showed that a wide range if redevelopment strategies have already been used, from large-scale interventions, such as in Marzahn to numerous small management initiatives. These reports offer a base of interesting information for the Brussels estates, but need to be supplemented with ecological concerns as well.

Until today a profound renovation of these areas have not been on the agenda because of the financial impact this will have, while their appearance in the atlas of deprived neighbourhoods is a noteworthy indication that intervention is needed. Often the buildings have been constructed in a short period of time, with poor quality materials and construction details that have not been carried out as they should have been. Local repairs only partially solve the troubles and do not go to the root of the difficulties. While a thorough renovation will be able to also solve the ‘collateral’ problems that are related to the degraded state of the buildings, such as health problems, due to moisture, the feeling of unsafety, vandalism, etc. A renewed connection with the surrounding neighbourhoods might also change the often negative image of these units.

The large surfaces between the buildings, initially envisaged as public spaces and green areas are degraded today. The esplanades of the cité model in Laeken for example are only a sad remembrance of the initially designed space. Various authors emphasise that the attractivity of a district is strongly determined by the quality of its public space. The work of Carmona et all. (2008) shows that the “better” design principles exist certainly. In parallel, several studies note that often the inhabitants and users of certain districts identify the same factors that, according to them, contribute to a better quality of public space. These factors are: a pleasant, clean and easy use; a sufficient offer of diversified activities and identity and character (Carmona, and Al, 2008; Davies, 2000; Smith, Nelischer, & Perkins, 1997). These factors are precisely the elements that are missing in public spaces around the tower buildings, as they are desolated open plains, contributing to a feeling of unsafety. The revalorization of these open spaces will also be beneficial for the larger image of these estates, which would then create the possibility for the inhabitants to identify themselves with this positive redevelopment and the new image of high-rise estates as the sustainable neighbourhoods of the future.

These problematic areas are seldom the objects of regeneration initiatives, while the potential for reproducibility is noteworthy. If a successful redevelopment strategy could be developed a large number of problematic areas could become future sustainable neighbourhoods. Until today none of
these estates has been integrated in the “neighbourhood contracts” and as such a planning tool is truly needed. As it are the social housing companies who manages the various high-rise estates of Brussels, it would be rather easy to repeat a pilot experiment. The heavy restoration of this type of buildings seems possible and several experiments in Belgium and in other countries can be an inspiration. On the plain of Droixhe at Liege, some of the towers were renovated successfully. Various restoration projects in Sweden are also exemplar. The way in which the French architects Lacaton and Vassal intervene by creating a second outer skin, as such offering more interior and external spaces is rather innovating and inspiring. Difficulties similar to those met in the “garden cities” are to be envisaged, mainly the need for rehousing during work and a rotation system. The first phase of the restoration of the 180 Florair residences in Brussels (Prize winner 2008 of the Call to Exemplary Buildings) will hopefully proof to be a very useful experiment for Brussels: the building will be insulated from the outside, equipped with new double glazed windows and ventilation for each apartment will be realised. Construction will begin at the beginning of 2011 and all the tenants will remain in their flats during the works. The management of the common parts and the gardens will be part of a participation process with the tenants.

On the other hand we also need to acknowledge that, although the tower estates have often a negative image in the public media, their inhabitants also experience the potentials of the neighbourhoods, as was illustrates in the research of Henk Meert (1998): “The Moroccan population experiences moving to Peterbos (a high rise estate) from downtown areas as social advancement. They appreciate both the comfort of the apartments, the green areas and the plays areas around the buildings and the proximity of the countryside”.

Now let us, in the following part, synthesise the different scenarios and relate them to the work done in the Memento.

**Synthesis and Memento check**

**Back to the memento**

Not all urban forms are equally sustainable, by now we all know that urban sprawl for example is a unsustainable way of developing the city, as it takes up to much space, increases the costs of infrastructure, energy and CO2 emission. If we want to (re-)develop the sustainable neighbourhoods of the future we have to take all these elements into account, especially since the gap between the rich and the poor is increasing in Brussels. Brussels is the economical engine of the country, with 20% of the GDP, but the average income per capita is 15% lower than the national average and the region has the highest unemployment rate (22%). More than half of the Inhabitants of Brussels is eligible for social housing, but 8% of the dwellings is social housing, more than 30.000 additional social dwellings are needed and between 2007 and 2010 the price of the real estate further increased by 10%. From the environmental point of view, cities in general and Brussels in particular have a large ecological footprint. The city is faced with increasing operational costs (oil, materials, work) and at the same time has to try and comply with the political engagements (Belgian and European level) taken to deal with global heating, deal with air and sound pollution, water retention, waste management, etc. This environmental management of the urban metabolism is a vital element of good governance, whereas the consumption of energy in Brussels moved back overall of 4% between 1998 and 2008, the energy bill however increased by 76%.

Sustainable redevelopment of the neighbourhoods has to make the city healthy, equal and a good place to live. The neighbourhood is the place to reconstruct the social links. The proximity of the users on the neighbourhood scale allows a collective and durable redevelopment based on its socio-economic profile, geography (topography, exposure, winds, vegetation and water, architectural and urban characteristics) and environment (construction materials, mobility, reduction of air pollution, reinforcement of the biodiversity, water cycle management, etc).
A durable district is economically realistic and realizable while being sustainable from the environmental and the social point of view. It brings the fundamental services necessary to the inhabitants, from an economic standpoint (living, consuming, moving), environmental (control the flows of air, water, heat, light, etc) and social and political (identity, vicinity, proximity, etc), while at the same time it respects the cycles of nature and human life.

Looking at the experiences of sustainable and ecological neighbourhoods today it becomes clear that there is not one universal method, but that a multitude of approaches are being used, which are embedded in a local and historical context. One intangible, universal or historically given urban form does not exist, instead there is multitude of urban morphologies, and they are all formed by the context in which they developed. Likewise there is not one sustainable solution, but a multitude of possible answers, depending on the context.

To present these possibilities we will work along the lines of the Memento, as such the different scenarios that emerged through the research will be crossed with the criteria of the Memento.

The Memento for sustainable neighbourhoods was designed to support the development of new sustainable neighbourhoods. Two approaches are used: first one needs to define a creative vision of how the new neighbourhood is envisaged; secondly the sustainability (across its three axes) is checked using a whole series of questions (the Sustainable Check Up). Like any checklist, this tool checks only the means implemented (buildings, public spaces, greenery, services, etc.): it is useful only within the given context of a project. The Memento for Durable Districts is a tool project developers (public and private) can use to make an assessment of the sustainable character of their proposed project. The analysis start from two assumptions: First that there does not exist one single model of the “durable city”, it stimulates each project to be a practical model, answering to the needs of the stakeholders and secondly it is embedded in its specific context on a specific scale, taking into account the neighbouring areas. Since its start-up in 2008, the facilitator service has provided guidance for projects in Woluwé-Saint-Pierre, Neder-Over-Hembeek, Ixelles, Molenbeek, Uccle, etc.

The Memento is structured around the 3 pillars of sustainability: 3 sets of themes are identified for the ecological, the social and the economic pillars and thus 9 sets of primary criteria/questions were developed (see fig. 4). In a second part of the Memento these primary questions are elaborated upon, thus creating 2 levels of checking the durable approach of the project.

Figure 4. Sustainable Check-up

![Figure 4. Sustainable Check-up](source: Urbs)

The primary questions should be considered as some sort of go/no-go questions. Answering negative to one of these nine questions is an indication that a fundamental aspect of a sustainable approach is missing and that the proposed project is not to be considered as a sustainable neighbourhood. When all nine questions are answered in a positive way, one can move on to the next level. On this second level 50 detailed questions should allow one to make an evaluation and summary of the sustainable character of the project, they can also serve as a way to trigger the further sustainable development of the project.
The approach of the Memento is of interest because it takes into account the different pillars of the sustainability concept as it was developed by the Brundtland commission in 1987: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987). Within the work of Urbs and the formulation of the Memento it is imperative to understand that all these different dimensions need to be developed in an equilibrium, as the focus on only one of the elements will not result in the sustainable development of a neighbourhood in the long run. Now let us look into these different dimensions and see how they can be developed in the different neighbourhood typologies (scenarios) that emerged during the research.

Ecological dimension

The first dimension is the ecological one; it is probably also the dimension that has caught most of the attention in the past. The concern about the way we have been using the earth and its resources has finally raised the awareness that we need to think, live and act differently. Although often the rapid urbanization is being considered as problematic there are also some authors who point to the fact that a well-designed urban area has ecological potential. Timmermans (2001) argues that the relation city-nature needs to be reconsidered. The urban condition has more potential than the rural to further sustain the ecological dimension and diversity. As an example he explains that high-rise developments can have their proper rainwater retention systems, green roofs, etc. Thinking out-of-the-box about these possibilities is precisely what this first dimension of the Memento tries to incorporate. More specifically we speak about energy, biotopes and water, materials and waste management.

Social dimension

In the Encyclopaedia of Global Environmental Change we can read “Social sustainability means maintaining social capital” (Goodland, 2002). Putnam (1995, p. 67) defines social capital as “social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit”. For Putnam, social capital can contribute to democratic government and economic growth. He also states the importance of the concept to community development in a particularly bold manner. Networks, reciprocity and trust are important, even necessary, for the well being of individuals, communities and cities (Putnam, 1993a:185 & 2000:349). Goodland (2002) argues that social capital is imperative to create a socially sustainable community. The Memento brings these elements into account. Close cooperation between neighbours is an important element, but also the role of a well designed and good working public space is taken into consideration. A healthy mix of functions, people and architecture is of importance. Jane Jacobs (1961) drew our attention to the fact that a diverse and complex area (social as well as architectural) creates a vivid neighbourhood wherein people like to be on the streets and in the public domain. The diverse neighbourhood is also a sustainable one, which creates opportunities for its inhabitants (Jacobs, 1960; Scott, 1998:136-139; Newton, 2009).

When we look back at the study through this lens it becomes clear that embedding a pilot project within an existing and very diversified context holds more potential than trying to find a virgin ground in the periphery to develop the “sustainable neighbourhood of the future”. The existing context is something that needs to be at the core of the development of a pilot project. Some areas are part of the neighbourhood contracts, other areas have a very active community, engaging in numerous activities and grassroots mobilization. The Brussels government needs to connect with these initiatives and construct strong partnerships with the local community and social actors. Looking at the garden city neighbourhoods and high-rise estates we see that from their conception attention has been paid to green and open areas. Today they are dilapidated, but they have the potential in them to be renovated and re-invigorated. But also the other scenarios have potential to create a qualitative public space. The large urban scars can incorporate enough public open spaces and meeting facilities, not only for the new projects but also for the larger neighbourhood, enhancing the quality of life. Another factor is the identity of the neighbourhoods. The areas that emerged from the mapping exercise and the related scenarios that came out hold the potential to develop strong identities. For this several typical characteristics can be used. With regard to both the garden city neighbourhoods and the high-rise estates the typical architecture will play an important role. But also in certain other areas the
architecture has important potential, for example in Turn and Taxis where the very characteristic buildings are now already attracting people and functions. Of course we have to be alert for the potential risk of gentrification, pushing the more vulnerable groups out of the area.

A potential problem when it comes to the redevelopment of some areas will be to attract enough different functions and (public) services. A vivid neighbourhood does not consist of only housing, but needs other activities that make sure people come into the public domain and as such also build social networks.

The social mix debate is one that remains active and despite the critique it is considered as an important factor in the realization of liveable neighbourhoods. A good social mix is considered as a stimulus for social mobility, integration of immigrants and social harmony (De Decker, 2005; Sarkissian, 1976; Commissie voor Onderwijs en Gelijkende Kansen, 2010). However the government has to keep in mind that in a regenerated neighbourhood gentrification processes might start. Even in neighbourhoods with a high number of social dwellings the more vulnerable groups might be pushed out. Social housing institutions are also trying to attract not only the poorest in order to have a more stable income base (De Decker, 2005). Consequently it will be difficult to maintain a good balance in the several scenarios, whether it is to create a more mixed neighbourhood (as is the case in the garden city neighbourhoods and the high-rise estates) or to attract the more vulnerable in areas with gentrification on the way (eg. Turn and Taxis).

**Economic dimension**

A sustainable development means a constant search for a balance between three objectives (Dalal-Clayton): it needs to be socially desirable (the satisfaction of cultural, material and spiritual needs), ecologic (long term liveability) and economically feasible. Consequently projects need to be able to generate some own income to be sustainable in the long run. Today to many projects focus on only one of the aspects (often the ecological) and if these projects cost more than they are able to generate they cannot be sustained. As such projects need to be monitored for the financial site of the story.

One of the factors that play an important role here is the connectivity of the neighbourhoods studied. Within the Brussels Capital Region the selected areas are often badly connected. This is a serious point of attention, and future extension of the public transport net need to go to the edges of the region were high living densities are created (eg. high-rise estates, garden city neighbourhoods,...). An additional positive evolution is the further development of the vélo city project.

The mono-functional living areas, such as the high-rise estates and garden city neighbourhoods should incorporate other functions that are related to the area (eg. social economy projects, such as ironing services, repair facilities, ...).

**Reflecting on the existing planning tools. (see fig. 5)**

Since the creation of the Brussels Capital region several planning and operational tools were created. The neighbourhood contracts and the strategic plans are two, the first dealing with the regeneration of disadvantaged districts, the second with the planning of the large urban scars. Two of the scenarios detected through the mapping research thus already are equipped with a planning tools on the regional scale. Rather than multiplying the tools, it is interesting to see how to existing tools can integrate a “durable” dimension. A first step was taken, this year, as the new neighbourhood contracts, since the new ordinance, are reoriented towards “sustainable neighbourhood contracts”. The follow-up of the strategic plans for the development of the large urban scars (zones levers, strategic zones) is ensured by the Territorial Development Agency (ADT). They use different working groups, of which one is devoted exclusively to sustainable development. The scenario of the garden city, the high-rise estates and the small patches of un-build land do not have any specific tool. Our proposal is to develop a toolbox to help the responsible agencies with the restoration and/or the sustainable development of these districts. The Memento and the check-up are centred on the development of the new districts. The large urban scars and the virgin grounds can thus already make use of it. A Memento for the re-development of the existing districts is under way.
To conclude

Starting from the demand of the Brussels Capital Region to find the perfect location for the development of a pilot project for sustainable neighbourhoods has generated several new insights. First of all it became clear that the selection of one site was not possible. Within the Brussels Capital Region several areas were detected that hold this potential. Starting from this existing context we believe a pilot project might be far more useful than starting from an empty page. The tabula rasa approaches of the modernist planners are far behind us.

Attention then needs to be paid to the more vulnerable districts are neighbourhoods that are under increasing pressure. The SUN-project (http://www.sun-euregio.eu), with realisations in Liège and Verviers are good illustrations of what sustainability –in all its dimensions- could be within an existing urban morphology.

Thinking about Brussels we really have to ask ourselves the question if it is justifiable to develop a pilot neighbourhood in the open edge of the city, using the most high-tech technologies while in other areas the deprivation is increasing. An overall balance of the sustainable character of the region as a whole would not be positive: These hypothetical new neighbourhoods would need to be connected with the transport system, and zones of employment. They will attract those who are already better of and would thus increase the segregation of the whole region. Existing deprived areas will come under increasing pressure and economical and social deprivation will grow. If Brussels want to realize its dream of becoming the sustainable city of the future the challenge is to take on precisely these neighbourhoods that are currently under pressure and not create flashy projects in the periphery.

Taking all this into account the rephrasing of the current Memento in order to incorporate the existing neighbourhoods is a priority. Additionally it needs to be acknowledged that it will not suffice to handle this solely from a planning or architectural angle. Experts from several domains will need to be included in the debate. We also believe that a more balanced approach is needed and that the social dimension will be a key factor. In several workshops discussing the possible redevelopment of the high-rise estates this social dimension always turned out to be the arch stone on which all other interventions rested.
References


Dalal-Clayton, B. What is sustainable development. IIED.


‘Mixité’: an urban and housing issue?

Press.


