

Mélanie Riauté

SUPPORTIVE GUIDELINES AS A TOOL FOR THE CONCEPTION OF LOCAL URBAN PLANS

BUILDING TOMORROW'S SUSTAINABLE CITIES

Nowadays, building on unbuilt land and urbanization is a core issue. In France 600 km² of land are built on every year. In addition, the increase of built-up land is four times faster than population growth. This massive and probably unnecessary urbanization leads to a significant loss of agricultural and natural areas, which are essential to maintain.

The urban environment is home to over more than half the world's population, consumes about 75% of energy resources and generates 80% of greenhouse gas emissions. Urban areas, highly energy consuming, are increasing up every day, mainly at the expense of agricultural areas and contributes to the degradation of the ecological footprint.

Moreover, the compactness that characterised the cities of the past has for many decades now been abandoned, as typified by the dormitory towns and tower blocks of the fifties. The city is, by definition, a place where you need to promote exchanges and interactions between residents in order to contribute to their further cultural and general development and progress.

As urban planners, we have to ask ourselves the question: how can we build the sustainable city of tomorrow? What are the most effective urban forms to create an efficient city in terms of space and energy consumption, whilst respecting the lives, development, progress and culture of the people. This is a reality, the concern for sustainable development should not clash with architectural and landscape heritage. On the contrary, the principles of sustainable development must be carried out simultaneously with the redevelopment of the old neighbourhoods, which are often synonymous with urban environmental quality and liveability.

A COMMON MISSION SHARED BY MANY ACTORS

Planners and architects, but also politicians, have an important role to play as agents of territorial development. Urban policy is now based on different regulatory tools such as a local urban plan. The development and implementation of such local plans require special attention because their function is to guarantee quality urbanization, respecting the environment as well as the city's inhabitants. A local urban planning scheme overlays the specificities of a territory with development issues, an adaptation of different landscape and urban circumstances to municipal development ambitions.

The Territorial Service of Architecture and Heritage (STAP) is a part of the French Ministry of Culture and Communication with offices in each *département* of the country. The areas of action of STAP are numerous and cover architecture, heritage, landscape and urban planning. STAP's mission is diverse and very important as it ensures both the quality of construction and the enhancement of natural areas. Its role is to promote architecture and the quality of urban planning in harmony with the environment. The service contributes specifically to urban planning near to historic monuments and protected areas. STAP has an advisory role towards the owners of property to ensure that the development and implementation of projects in which their property is involved is carried out in line with the objectives of the Service.

THE REALIZATION OF SUPPORTIVE GUIDELINES FOR THE ELECTED OFFICIALS

As a 5th year student at the Planning and Environment Department of the Engineering School Polytechnic Tours, I did my internship

graduation in the STAP office at Indre-et-Loire and I worked on *fiches d'aide* or 'supportive guidelines' to assist elected officials in putting together a local urban plan. Actually, because it is necessary for STAP to work with local elected officials on this matter, a *porter à connaissance*¹, is compiled, a document consisting of a number of supportive guidelines which assist elected officials in the writing or revision of their local urban plan. This document provides the basic rules and principles to produce a complete planning document, which both enables the implementation of a good quality, coherent city policy in order to face the many urbanization and territorial development issues at hand, and which deals efficiently with the use of urban space whilst respecting the wishes and aspirations of the city's inhabitants and natural and architectural heritage.

These supportive guidelines have been produced following the questions identified during work meetings the past five years and are in fact a response for the local politicians. It is not a binding instrument but a supportive tool which offers to the local decision makers a methodology of local urban planning schemes elaboration. This document was conceived in a very educational way: each supportive guideline is short and illustrated. These sheets are intended to elected officials who want information beforehand to the realization of their local urban planning scheme and these sheets can also be attached to the consultation workbook of consulting offices that respond to tenders for the development or revision of local urban planning scheme.

The *porter à connaissance* document is structured into 5 parts, each of them divided into several supportive guidelines.

1. The main principles of a local urban plan are set out: definitions, legal texts, objectives, various components, developments, stages of

development and procedure, compatibility with other urban planning documents.

2. “How to analyse your territory?”, a methodology to identify the strengths, weaknesses and opportunities and threats of the area to be developed in order to establish the main development issues on which direct policy. Three levels of study are addressed:

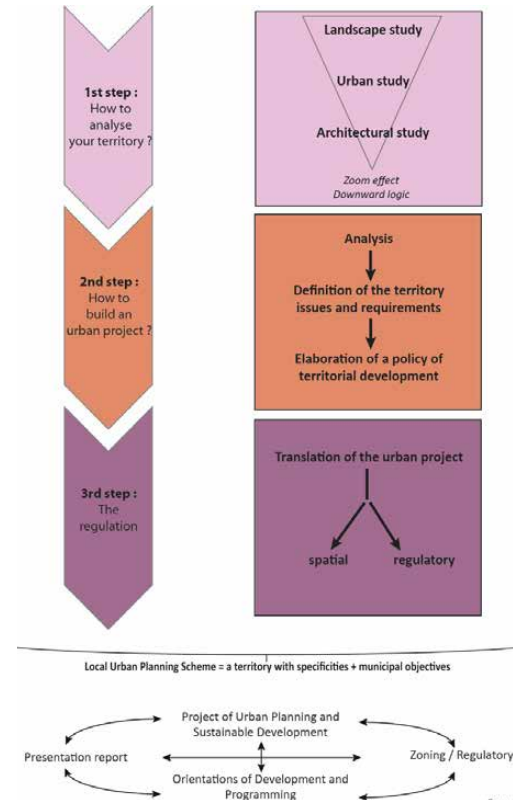
- The landscape study: to identify the larger scale issues to protect nature areas.
- The urban study: to understand the historical development of the city on the basis of an analysis of roads, land parcels and building patterns.
- The architectural study: to identify precisely the heritage features which need to be preserved and restored and to support the development of future architectural projects.

3. An outline of the steps to follow in order to establish an urban development project :

- The reasoning behind different development approaches: density and compactness, form of the urban area, public spaces, location of new building, roads etc...)
- The development choices given the territorial challenges being faced
- And at the end the project finalization with the plot design and buildings implementation.

4. The regulations which a local urban plan has to abide by. The writing of a local urban plan has to be thoughtful, consistent and convincing, especially regarding heritage issues and sustainable development. It is necessary to state very precisely how things are regulated, such as how to improve the eco-efficiency of old buildings, integrate solar panels, the use of different colours etc.

5. The fifth part is devoted to legislative and regulatory matters.



1. Scheme of the structure of the porter à connaissance.

Source : Mélanie Riauté

These supportive guidelines were composed at the instigation of the Indre-et-Loire STAP office. The document was presented to the *Prefect* of Indre-et-Loire, who reacted favourably and positively. They will be submitted for consideration by other regional offices of State Services, notably the Departmental Directorate of Territory and the Regional Directorate of Environment, Planning and Housing. Once it has been validated by these Services, it will be sent to all elected officials of Indre-et-Loire.

The *porter à connaissance* includes all components identified as essential to help the conception of a PLU. In this context and in a heritage-dense environment like in the *département* of Indre-et-Loire, a number of recommendations address specifically the relationship between heritage conservation and the implementation of sustainable development.

OLD BUILDINGS CONTRIBUTE TO SUSTAINABLE DEVELOPMENT

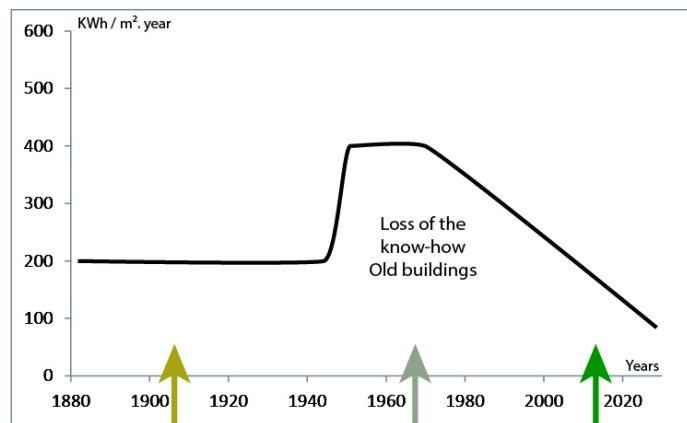
These supportive guidelines are a reminder that we can harmonise heritage and sustainable development; it is possible to reconcile protected areas, old buildings, eco-neighbourhoods and solar panels. However, each individual project must be precisely studied and must respect the sometimes delicate rules that the territorial integration of such elements bring.

Buildings emit 23% of greenhouse gas emissions, compared to 30% for industry and 16% for transport. The building sector is influenced by the Grenelle Environment Forum. This Forum sets out a maximum emission of 50 kW / m² / year for each housing to be achieved within 20 years (currently, a regular home consumes 240KWh / m² / year). Several solutions exist today to reduce the consumption by household consumption consequently the emission of greenhouse gases: insulation, wind turbines, solar panels ...

However, it is important to distinguish between recent and old buildings because they have quite different characteristics, and therefore solutions will differ as well.

If we take the most recent article of law (Grenelle II, article L. 111-6-2) in the Town Planning Code relating to materials and construction methods the aim of which is to reduce the emission of greenhouse gases and to protect heritage and buildings, we discover that it rules that: any planning decision-making (building permits or renovation permissions)

cannot object to the use of renewable materials or devices to reduce the emission of greenhouse gases, even if the PLU prohibits it.



2. Different age of buildings, different thermic behaviours.

Source : Mélanie Riaut

Old buildings

- Natural thermal and hydric qualities
- Lives with its environment
- It «breathes»
- Use of natural resources and materials
- Sustainable and reusable)
- Local sourcing
- Top thermal performances

Modern buildings

- Strong use of the concrete
- Isolated of its environment
- Industrial materials
- Not reusable
- Energy-consuming

Ecological buildings

- To define in the urban project

However, this does not apply to:

1. Conservation areas
2. Architectural, Urban and Landscape Heritage Protection Areas (ZPPAUP)
3. Architecture and Heritage Development Areas (AVAP)
4. Perimeters of protection of a building listed or registered as a historical monument
5. Listed or registered sites (natural heritage)
6. Areas defined by the municipal council (often called “perimeters Article 12” or “perimeters Grenelle II”).

Without denying the legitimacy of sustainable development, the legislator has decided to give municipalities the ability to impose rules on harmonious integration in some specific areas under the control of STAP.

Some of the modifications and improvements to a building can specifically affect its aesthetics, certainly with old high-value heritage buildings. This includes in particular two categories of works:

Insulation: old and the new buildings do not possess the same characteristics in terms of energy performance. Built with durable materials, old buildings offer the opportunity to be repaired and renovated. On the contrary, given the materials used in their construction, it is likely that more recent housing (especially what was built between the 50s and the 70s) has a lower life expectancy.

Solar panels: in terms of application of these facilities, the guidelines suggest that the Territorial Service of Architecture and Heritage is not opposed to solar panels. However, they must ensure good integration in the urban or rural landscape. As such, the solar panels should therefore not be regarded only as disparate technical elements but as truly architectural and landscape features. It is therefore necessary to achieve a consensus between architectural integration and energy efficiency.

The guidelines also suggest and detail the three tools that are to be studied in order to successfully integrate solar panels:

1. The feasibility study
2. The various possible types of installation of solar panel
3. The main principles of composition for a proper integration

In conclusion, the aim of this paper was to present an approach to good practices of cooperation between state services and local institutions and to the concept of supporting simple and innovative tools for decision-makers. The example of these “guidelines” illustrates a simple and accessible facility. The implementation of the approach has mobilized several public services at several levels, in order to achieve a finished

product that can be communicated to stakeholders who need to take quick decisions on land use. The compendium is therefore an informed, comprehensive and ready to use product.

REFERENCES:

BERNARD, Michel, DE MONTIGNY, Arnaud, VIEIRA, Ludovic, *L'Indre-et-Loire : Balades aériennes, Éditions patrimoines et médias*, 2003.

BRIAIS, Bernard, *Les maisons tourangelles, Romorantin-Lanthenay, Communication-presse-Edition*.

COURSALUT, René, *L'habitat en Val de Loire : La demeure tourangelle*, Paris, Editions Maisonneuve & Larose, 1988.

COIGNET, Jean, COIGNET, Laurent, *La maison ancienne : construction, diagnostic, interventions*, Eyrolles, 2005, *Au pied du mur*

DDE37, *Direction Régionale l'environnement Centre, Mosc-Pigot Architectes Paysagistes, Étude des paysages d'Indre-et-Loire*.

Direction Régionale des Affaires Culturelles de Bretagne, Service Territorial de l'Architecture et du Patrimoine d'Ille-et-Vilaine, Fiches d'aide à l'élaboration d'un Plan Local d'Urbanisme, 2013.

ENERPLAN, ADEME, *Guide d'intégration architecturale des capteurs solaires*.

FILY, Joël, *Plan d'action pour la croissance verte en Indre-et-Loire*, Tours, Mondial : *Préservation et réhabilitation du bâti traditionnel*, Département d'Indre-et-Loire.

LEVEQUE, Paul-Jacques, *Belles demeures de Touraine*, C.L.D Normand & Cie, 1978.

LOISEL, Jean-Jacques, *L'Indre-et-Loire autrefois*, Horvath, 1994, *Vie quotidienne autrefois*.

Ministère du Logement et de l'Égalité des Territoires, *Loi ALUR*, 2014.

Service Territorial de l'Architecture et du Patrimoine d'Indre-et-Loire, *Développement Durable et Patrimoine*, 2010.

SCHWEITZ, Arlette, *La maison tourangelle au quotidien : Façon de bâtir, manière de vivre (1850-1930)*, Paris, Publication de la Sorbonne, 1997.

TRIOLET, Laurent, *Trogodytes du Val de Loire*, Alan Sutton, 2001, *Passé Simple*

-
1. The term “porter à connaissance” has its origin in article L.121-2 of the town planning code and is linked to land development plans and local urban plans. Article L.121-2 specifies that the State has the obligation to supply municipalities with all information necessary to exercise their responsibilities regarding town planning. The term “porter à connaissance” is now used even in the absence of any procedure to elaborate or revise a town plan. It is used when the Prefect (the representative of central government in the region) officially informs the mayor or the president of the competent group of municipalities of existing issues and possible risks which need to be taken into account in the decisions of town planning.