





#### This document

is the English version of the document called "Leggere il Piano". It aims to provide an introduction to reading the general urban plan for Bologna (Piano Urbanistico Generale - PUG), drawing upon its main contents and making contextual references.

#### It illustrates

how the **vision, objectives and strategies** have been identified on the basis of the pool of knowledge used to draw up the city profile.

#### It describes

the documents comprising the urban plan, offering **different solutions for reading and using them.** 

#### It offers

ideas on how the urban plan works and its relationship with sectoral planning, illustrating the **organisation of the structure** that will manage it.

## Innovation and continuity

**Bologna met two challenges** when it drew up its general urban plan. On the one hand, the **challenge of innovation**, developing a new tool that marks out a future vision for the city, summarising the Administration's work. On the other hand, the **challenge of continuity** since the urban plan represents the completion of the contents of the previous plans, reinforcing the decisions in favour of urban regeneration.

With the objective of overcoming the period of urban expansion, the urban plan sets out the following regeneration prospects: **environmental resilience**; **making the city more attractive and ensuring the availability of good employment opportunities**; **the need to ensure liveability and inclusion**.

**Liveability is the real urban dimension and a key aspect of this urban plan**. It is interpreted as living together in harmony and equal opportunities. It is not associated with "residency" or "building", but instead regards the way in which the territory is able to guarantee good living conditions for its inhabitants and equal opportunities for accessing services, employment, natural spaces and social life.

The compilation of the urban plan represents the fulfilment of the **sustainable development goals** established by the United Nations and the Urban Agenda for the EU.

The urban plan is the point of arrival of a process that, over recent years, has seen numerous innovations in the city's governance, including the adoption of the Regulations on collaboration between residents and the administration for maintaining and regenerating urban public assets (2014), the Neighbourhood reformation (2015) and the introduction of the Participatory Budget (2017).

The urban plan fits into this process because the **city's regeneration must take into account the perception and wishes of the resident community**.

Comune di Bologna > Piano Urbanistico Generale >

# An interpretation of Law 24/2017

Bologna's urban plan was written in accordance with the provisions contained in Regional Law no. 24 of 21 December 2017 "Regional legislation on safeguarding and using the territory", which came into effect on 1 January 2018.

The law, continuing the process already started by the Region of Emilia-Romagna with Regional Law 20/2000, changes the paradigm of urban planning and definitively abandons the conformative planning model based on dividing the local area into zones and more or less directly attributing rights to landowners.

Bologna's urban plan embraces the challenge of change, working on the subjects put forward by the Law, particularly:

- the strategic scope of the urban plan associated with its **territorialisation**, namely the **relationship between strategy, legislation and assets**;
- comprehensive **adoption of sustainability and the international language associated with it** in the structure of the urban plan and not just in the assesment document;
- consistency between the vision of the city and the actions set out in the urban plan, essential for coordinating public policies and for transparent negotiation of the operational agreements used to implement the urban plan;
- the importance attributed to the Urban Plan Office as a tool for managing the urban plan, but above all for **coordinating sector-specific policies that affect the local area**;
- the importance of participatory processes in both the development of the urban plan and its adaptation over time, within a framework of continuous and rapid change.

Comune di Bologna >
Piano Urbanistico Generale >

# Relationship with regional and metropolitan planning

Following the introduction of the new level of metropolitan government (2015), the **Metropolitan strategic plan** (Piano Territoriale Metropolitano 2.0 - PTM, 2018), the **Urban Sustainable Mobility Plan** for the entire metropolitan area (2018) and the Metropolitan Agenda for Sustainable Development (2019) were written up.

Law 24/2017, in reference to the new institutional arrangement, established the principle of specific competence for **each planning tool that "has to be limited to exclusively governing the issues and objects attributed to it by this law",** overcoming the paradigm of "cascade planning" according to which the "superordinate" body guides the "subordinate" one

The metropolitan city approved the Metropolitan area development plan (Piano Territoriale Metropolitano - PTM) in May 2021 following a **process that ran in parallel with that of the urban plan**, trying out this new form of integration.

The PTM plays a significant role in identifying the objectives of territorial governance policies, which supplement regional territorial planning. Likewise the Municipality, operating through the urban plan, identifies (for its own territory) the structural invariances and the strategic urban planning and development decisions for which it is responsible, primarily aiming to regenerate the urbanised territory, to reduce land consumption and to ensure the environmental and territorial sustainability of uses and transformations.

## During the pandemic

Work began on writing Bologna's urban plan in June 2018 and the Draft the urban plan was accepted in February 2020, at the same time as the first news was arriving of the spread of the Sars-CoV-2 epidemic, which went on to become a pandemic over the weeks that followed.

The effects of the pandemic and how they would affect the city's prospects for development were studied in the considerations made by the **Fondazione Innovazione Urbana** (**R-innovare la città) and in the "Bologna riparte**. Oltre l'emergenza Coronavirus" report, written by the group of experts appointed by the mayor and presented to the city on 14 October 2020.

The report highlights how multiple risks emerged during the first phase of the pandemic, accentuating areas of weakness that had already been highlighted, such as income poverty, housing inequalities, health inequalities, the digital divide and the weakness of an economic system that lacking in a sufficient degree of autonomy.

Against the backdrop of these critical factors, we can infer how **technology and digitalisation have changed the concept of space**, causing new requirements to emerge, including green spaces near homes as a public health requirement, and connections to boost the **connectivity of areas, public and private spaces for community proximity**.

The urban plan has been improved on the basis of these issues highlighted by the pandemic, with the definition of urban and *Local strategies* that can help us get things started once again. The main priority is still to **improve the city's environmental quality**, which also has a decisive impact on the city's capacity to respond to the crisis.

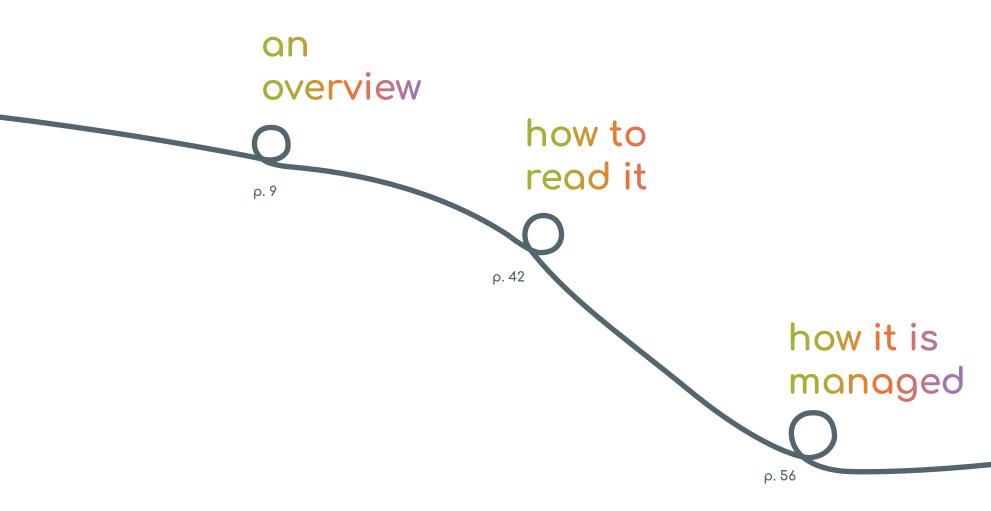
# Listening to and involving local residents

During the course of 2019–20, the Fondazione per l'Innovazione Urbana, together with the Municipality of Bologna, contributed to the development of a new urban planning tool involving **listening and engagement**. This began with a **discussion on the strategies in the urban plan** (face-to-face meetings with experts and stakeholders, neighbourhood walks, specific activities in the Neighbourhood Workshops), which then continued with the presentation of the urban plan and the **collection of contributions and reflections using digital methods** compatible with the Covid emergency (videos and other communication activities on digital interaction channels, online questionnaires, remote meetings providing further information on the main themes, remote meetings on the priorities of different areas of the city).

A web space – **Quaderno degli attori (Stakeholders' online panel)** – was also created, where all those concerned (institutions, public and private bodies, associations, informal groups, committees and individual residents) were able to send in their contributions to the discussion on the issues covered by the urban plan .

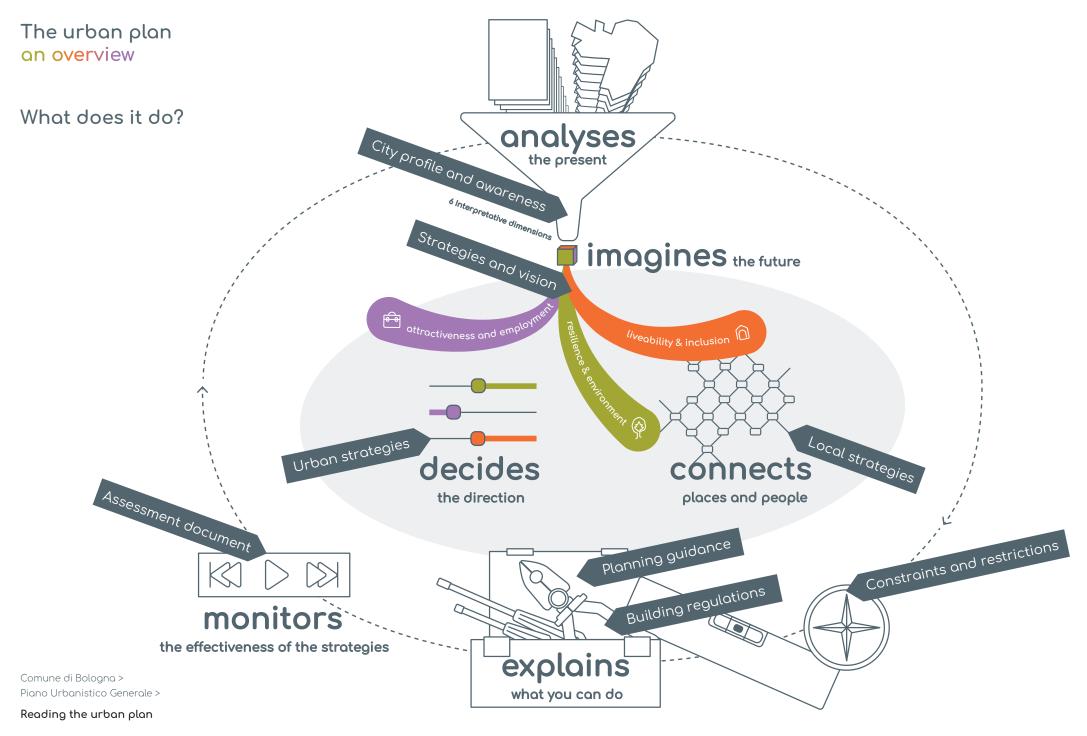
The process also sought to ensure the **transparency of the planning procedure and the sharing of common objectives and languages**, both inside and outside the Administration.

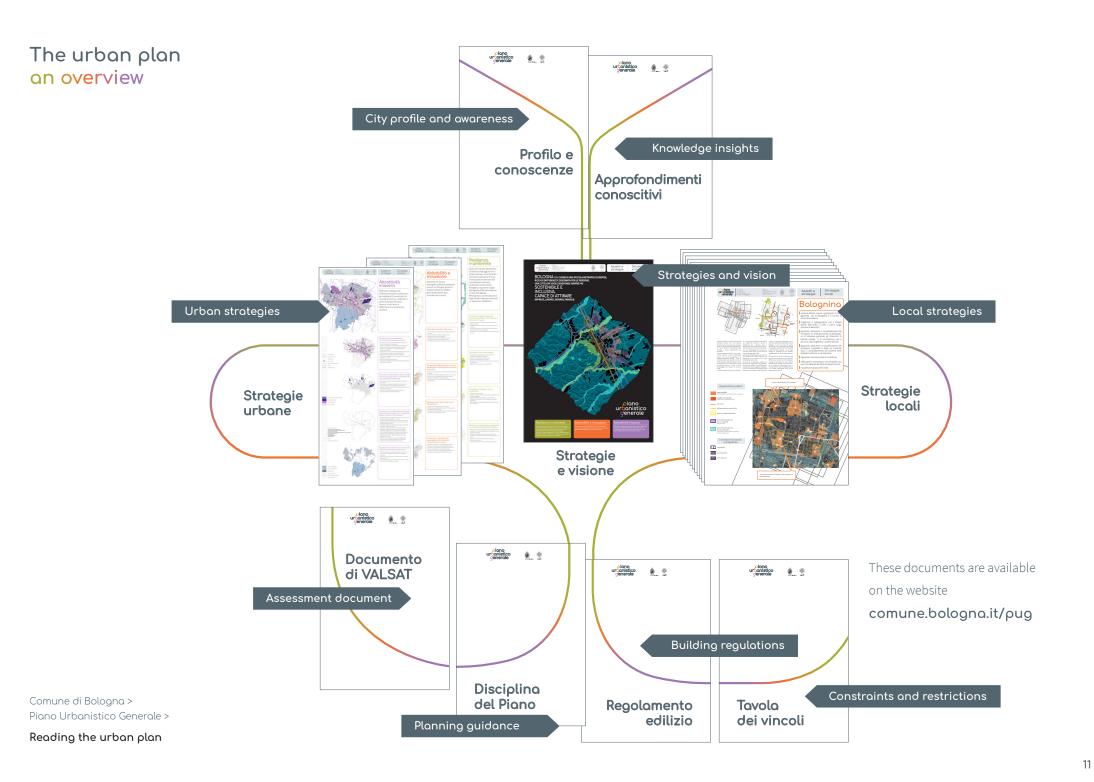
In the long term, the Neighbourhood Workshops, identified as structured listening and network promotion methods, will make it possible to periodically assess the urban plan strategies, adding to them and implementing them.



Comune di Bologna > Piano Urbanistico Generale >







#### City profile and awareness

A device for steering the urban plan and supporting its implementation.



Comune di Bologna > Piano Urbanistico Generale >

#### City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna >
Piano Urbanistico Generale >

Reading the urban plan

City profile and awareness represents **the cognitive framework** of the urban plan at the point of its construction. It is a compass for steering awareness of the conditions within which the new the urban plan will develop, subsequently acting as a **tool for checking** its progress.

The cognitive profile is comprised of **80 sheets** providing data used to describe Bologna. Each description offers an interpretation with concise texts that **emphasise the facts and the qualifying features of the subject in question, the trends and the priority aspects**.

The broad availability of data and sector-specific assessments, together with the integrated, cross-sector approach required by law, demand a new way of conceiving knowledge. **All-inclusiveness is no longer admissible**, meaning that information has been selected giving rise to a structured space in which the cognitive elements comprising **the interpretation of the profile can be arranged.** 

#### City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

City profile and awareness offers information on the **physical components of the urban space and the services associated with it**. These relationships need to run smoothly in order for the necessary sustainability to be in place for the transformations described in *Assets and strategies*.

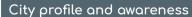
The information is subject to **periodical updates** that take into account cognitive insights regarding the indicators, the observation of any changes that could affect the city and the different social significance attributed over time to the individual aspects (in relation to the Neighbourhood Workshops or other forms of public consultation, or to steering public policies).

This update process and the monitoring of the urban plan are reported on in the **Environmental and Territorial Sustainability Assessment** (Assessment document), which identifies the methods for assessing the urban plan implementation tools. Furthermore, some of the City profile and awareness information is used to monitor the Assessment document in its turn.

Useful information for developing the profile relative to the eighty forms is grouped together by **theme: population**, **economic system**, **individual services**, **urban dimensions**, **residential heritage**, **environment**, **landscape**, **mobility**, **governance and social dimension** (the latter has been added with respect to the cognitive framework of the previous urban plan).

These groups therefore permitted a comparison with the cognitive framework of the pre-existing plan, for the purpose of facilitating a reflection on the changes that had taken place over the ten-year period. Cross-referencing the eighty forms made it possible to develop a **multidisciplinary profile** of the contemporary city.

The quantitative data on population and services is accompanied by information of a qualitative nature, obtained through the **participatory process**, revealing the viewpoint of the city's users, their needs and their ideas.



Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan



the city and its territory healthy environment

the environmental risks a safe place

liveability a different home

proximity a space for everyone

new economies a network economy

attractions
a multifaceted role

Interpreting the cognitive framework makes it possible to come up with a diagnosis, a judgement regarding Bologna's most critical issues. The diagnosis reveals the city's state of health, its problems and the challenges that determine its current profile.

The profile is defined by the **city's characterisations** and **qualifying trends**, but also by its **critical issues** and **problematic aspects**. Every section of this profile is accompanied by a title that suggests the key to reading it, viewing challenges in a positive light.

#### City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

#### > a healthy environment

Adaptation to climate change, energy transition, sustainability, ecosystem services and green and blue eco-networks describe the potential responses to the environmental challenges facing the city and its territory within a logic of resilience. The link between the quality of the urban environment and health is made even more evident by the spread of the Sars-Cov-2 virus pandemic.

#### > a safe place

The territory is interpreted in an integral fashion in order to reduce the population's exposure to the risk: recognising the parts of the territory where natural phenomena occur; updating the seismic, hydrogeological, hydraulic and flood risk, as well as the industrial risk; monitoring the state of infrastructures and the built-up heritage.

#### > a different home

The difficulties associated with the major transformations of the last ten years and, on the other hand, the dynamism of the building sector reveal new characteristics and dynamics of the real estate market and go hand in hand with a slightly growing population that demands accommodation in the area. A new residential issue seems to emerge due to the competition for accommodation in the area between residents, students and tourists. Quality of living remains the order of the day even after the pandemic.

#### > a space for everyone

The quality of the public spaces is threatened by wear and tear, but it remains a fundamental resource for proximity relations and the liveability of the city as a whole, or rather for the habitability of Bologna.

#### > a network economy

New trends describe an urban economy with positive indicators in terms of employment figures in the tertiary sector, firms linked to services and to tourism. A network economy model has established itself characterised by interrelated economic subjects that demand different spatial organisation of the city, which needs to be multicentric with services spread across the territory.

#### > a multifaceted role

Its diverse make-up continues to be one of the city's distinguishing features and this multifaceted aspect, without marked specialisations, **characterises its metropolitan**, **national and international role**. Bologna can be compared with analogous cities in Europe, as can be inferred from the various international 'charts', which act as a key and a stimulus for a critical interpretation useful for grasping Bologna's strengths and weaknesses as a European city.

Strategies and vision

Strategia e visione

**The profile of Bologna**, which emerged from *City profile* and awareness, reveals the forward-looking nature of the interpretation of the city and introduces the Vision for Bologna that can be conveyed through two statements:

Bologna is the heart of a small European metropolis, rich in diversity and designed for people.

A city that wants to become more and more sustainable, inclusive and able to attract businesses, employment, young people and families.

Comune di Bologna >
Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Together with the statements, the Vision for Bologna is conveyed by means of an ideogrammatic drawing that links the urban plan with the former urban plan (Piano Strutturale Comunale - PSC) of 2008. The structural components of the 7 Città (Seven Cities) are illustrated in an abstract manner and reinterpreted in the light of the strategic objectives proposed by the urban plan, highlighting their prevalent nature.

This makes it possible to identify the **consolidated** layout of the city (water, hills, empty and built-up spaces) and allows for the schematic identification of the parts of the territory on which the urban plan objectives have an impact.

The Assets and strategies – Strategies and vision table sets out the statements, the objectives and the design.



Comune di Bologna > Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

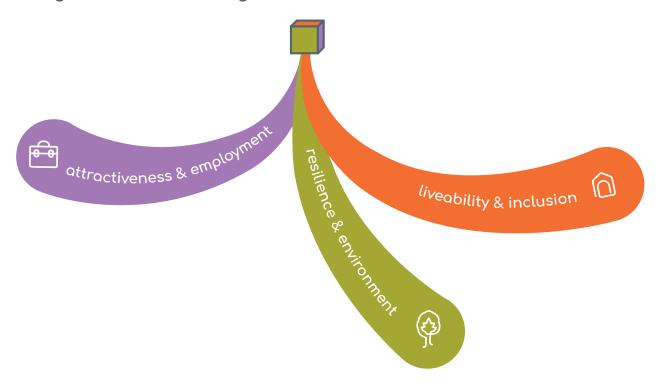
Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

On the basis of the vision of the city, the urban plan adopts three objectives that convey an integrated vision of sustainable development (environmental, social and economic) and translate the goals of the 2030 Agenda.



City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

# Resilience and environment

Ensuring health and wellbeing for everyone living in the city today and those who will live here in the future, minimising risks for people and objects, including risks deriving from climate change, and supporting the energy transition. Adopting the targets of the United Nations 2030 Agenda and the Metropolitan Agenda as an interpretation of the urban plan's objectives according to a metabolic approach.



City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

# © Liveability and inclusion

Supporting demographic growth by offering homes and services that families, young people and students can access, as well as guaranteeing innovative work spaces.



City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

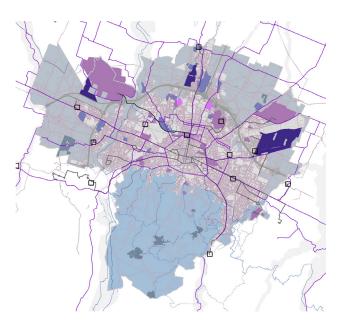
Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan



## Attractiveness and employment

Improving and adapting the infrastructure above and below ground to support innovation and economic growth, promoting local dynamics, supporting the creation of new jobs and establishing a circular economy.



City profile and awareness

Knowledge insights

#### Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

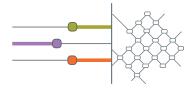
Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

# Urban strategies and local strategies for achieving the urban plan's objectives

Having identified the three objectives upon which the vision of the city is based, the urban plan seeks to achieve them by relying upon its **urban and ecological/environmental strategy, which acts as a support for public policies**. It is a tool designed for players operating within the territory and a reference point for interested residents.

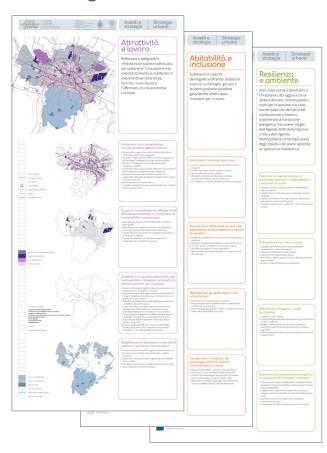
The strategy is made up of *Urban strategies* and *Local strategies*.



#### Urban strategies

The urban plan features twelve strategies to be understood as sets of thematic and territorialised actions, which can be interpreted both in terms of the municipal territory as a whole and in relation to each individual part. An urban outlook is required to coordinate the outcomes of the strategies, which are nevertheless firmly tied to the interpretation of the existing city in all its parts. Urban strategies are represented in graphic format in a series of three tables (Assets and strategies - Urban strategies) associated with each of the urban plan's objectives.

#### Strategie urbane



Comune di Bologna >
Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

#### Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

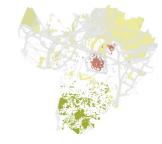
Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

## 4 strategies for resilience and environment









Restoring degraded soils and addressing land take Developing the urban eco-network Preventing and mitigating environmental risks Supporting the energy transition and circular economy processes

City profile and awareness

Knowledge insights

Strategies and vision

#### Urban strategies

Local strategies

Planning guidance

Assessment document

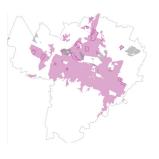
Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

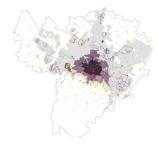
Reading the urban plan

## 4 strategies for liveability and inclusion









Extending access to homes

Guaranteeing the spread of a balanced network of quality equipment and services Redesigning spaces and equipment Preserving
the character
of the historic
urban
landscape
while
updating its
role

City profile and awareness

Knowledge insights

Strategies and vision

#### Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

# 4 strategies for attractiveness and employment









Supporting comprehensive urban infrastructure redevelopment

Fostering the widespread establishment of environmentally compatible businesses

Supporting
the
qualification
of integrated
metropolitan
centres
in residential
areas within
the setting

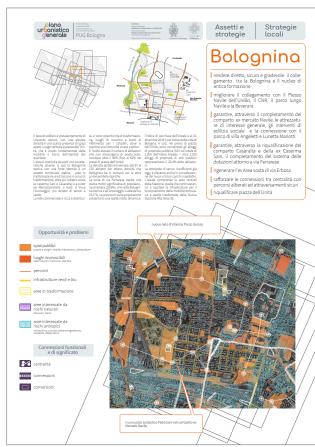
Defining the relationship between urban and extra-urban territory

#### Local strategies

In addition to the *Urban* strategies, the urban plan also sets out the *Local strategies*. They can be described as guidelines for actions within the territory, which make it possible to connect parts of the city, public places, places of memory and sedimented identity, establishing a relationship between them and creating synergies.

Considering the strategic arrangement of the urban plan, they indicate requirements and performances to be guaranteed in the transformation of urban spaces, without setting out the form in which they are to be developed. They are illustrated by twenty-four tables, corresponding to twenty-four frames of parts of the city recognised as reference points for those who live there.

#### Strategie locali



Comune di Bologna >
Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

#### Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

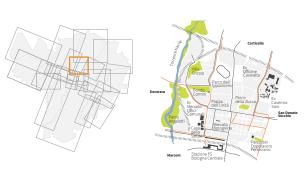
#### The urban plan implements the strategies within the municipal territory, divided into twenty-four areas.

They represent the project of **relationships** to be looked after, **connections** to be promoted, **links** to be made and knowledge to be developed.

They offer **information of a spatial nature** for the improvement of urban and ecological/environmental quality; from urban policies to public projects and urban regeneration and building proposals.

The are the **outcome of the listening and co-planning process** conducted over the years by the Fondazione Innovazione Urbana with the Municipality of Bologna.

The Administration undertakes to continue monitoring them and keeping them up to date.



Il tessuto edilizio è prevalentemente di ta, vi sono opportunità di trasformazio-

quartiere.

"Unique of tree il 40% (fino a la 52% ne l'alloggi di proprieta di enti pubblici ristiche diverse: a sud la Bolognina storica con una forte identità e un 120 abitanti per ettaro, densità che la sasetto territoriale stabille, are in Bolognina ha in comune con le altre consorti della consorti di supplicationati di sassitati di supplicationati di supplicationati

Intessuo edilizio e previaentemente al mipianto storico, con una elevata ne, luogini di incontro e punti di diembre 2019 in più basso della cittati densità e una scarsa presenza di spazi riferimento per i cittadini, dove si Bologna. A sud, nei pressi di piazza aperti. Luogo centrale e ipiazza dell'Uni- espriene una comunità viavoce e attiva.

di mobilità e fundo dell'indentità dei che non dispongono di posto auto, 1 opo dell'intera Areale, I circa 1200 quattier.

viacque controli dell'alcantità dei che non dispongono di posto auto, 1 opo dell'intera Areale, I circa 1200 quattier. alloggi di proprietà di enti pubblici rappresentano il 20,4% delle abitazio-

reasonnazione, aire più interio cone
e caserma Sain e Casariata le avest quota molto significativo il popolazio
e (ex Mercato)mentre a nord si trova
nestraniera (29,4%), che nella Bologni
no a ospitare le infrastrutture per il
l'Arcoveggio, più dotato di servizi e
nastorica e all'Arcoveggio, si attesta sul
3,3 %, Le previsioni sulla popolazione
ra e quelle trasformate dalla Nuova
presentano una realtà molto dinamica:
Si accione d'attendori no di propiera di considera d



#### Area profile description

**Identification** of the specific area with respect to all the frames of the municipal territory

Outline of the main elements recognisable in the territory and indication of the main place names used as references by the people who live there

**Description** of the main characteristics of the territory and the changes that have taken place over recent years

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

#### Local strategies

Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

#### Bolognina

rendere diretto, sicuro e gradevole il collegamento tra la Bolognina e il nucleo di antica formazione

migliorare il collegamento con il Plesso Navile dell'UniBo, il CNR, il parco lungo Navile e la Beverara

garantire, attraverso il completamento del comparto ex mercato Navile, le attrezzature di interesse generale, gli interventi di edilizia sociale e la connessione con il parco di villa Angeletti e Lunetta Mariotti

garantire, attraverso la riqualificazione del comparto Casaralta e della ex Caserma Sani, il completamento del sistema delle dotazioni attorno a via Ferrarese

rigenerare l'ex Area sosta di via Erbosa

rafforzare le connessioni tra centralità con percorsi alberati ed attraversamenti sicuri riqualificare piazza dell'Unità



# Current or scheduled projects

Localisation of the main public works to improve communal infrastructures. These are works that are currently underway or already included in the municipal programme.



#### Strategy

#### **Priority local actions**

List of local actions designed to improve functional and meaningful connections. This "Agenda" is ordered according to the priorities established with the City Neighbourhoods.

#### Opportunities and problems

Selection of certain elements of the *Urban strategies* that are particularly relevant on a local level, the issue of habitability, the quest for physical connections and the areas to be promoted.

Highlighting areas that require particular caution due to natural and manmade risk factors.

#### Functional and meaningful connections

Ideogrammatic markers to highlight project strategies to be interpreted in relation to the local priority actions:

- recognition of synergies established between places,
- identification of trajectories designed to create or facilitate relationships,
- regeneration opportunities.

The map follows the orientation of the overall image of all the areas.

#### Planning guidance

In order to define the conditions needed to implement the transformations within the urban territory, the urban plan is accompanied by *Planning guidance* that comprises the regulatory part of the urban plan .

The *Planning guidance* groups together and describes a set of actions, which lay out the structure of each urban strategy.



Comune di Bologna > Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

#### Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

The Actions are the reference point within which to construct and implement urban policies, plan and develop city transformation operations, and maintain and improve the existing building heritage.

The action is described within the *Planning guidance*, identifying the parts of the city in which it applies and referring to three different approaches:

- **urban policies** the *Planning guidance* provides guidelines to the Municipality and the other parties implementing local policies to improve urban quality and sustainability;
- **urban planning interventions** the *Planning guidance* establishes the sustainability conditions for urban densification and replacement interventions, in keeping with the *Assessment document*;
- **building interventions** the *Planning guidance* establishes the prescriptions that allow the individual interventions for the recovery of existing structures to be carried out directly, in keeping with the *Urban Strategies*.

The initial part of the *Planning guidance*, termed **Procedures and Processes, contains the general provisions and indicates the implementation methods provided for by the urban plan**. Particular attention is paid to the process triggered by the building and soil regeneration.

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

#### Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

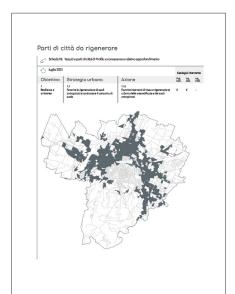
#### Catalogue of cartographic data

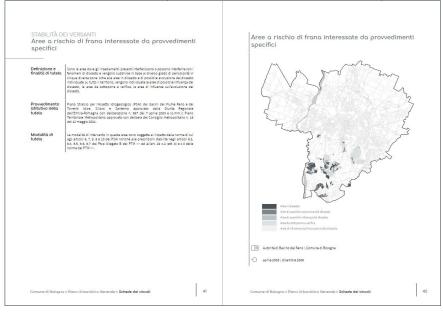
In order to make it possible to consult the indications contained in the Actions, the *Planning guidance* is accompanied by the *catalogue of cartographic data*, collected from the territorial layers that represent the field of application of the individual actions within the urban plan .

By consulting the *catalogue of cartographic data* it is possible to **match up the actions and the portions of territory to which they apply**.

Some of the actions in the urban plan can also have certain layers of the *Constraints and restrictions* as their field of application.

The representations contained in the *catalogue* of *cartographic* data can only be interpreted as unique cartographic representations when they provide the reference material for direct interventions.





City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

#### Planning guidance

Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

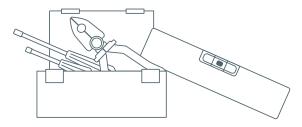
Reading the urban plan

# Consulting the urban plan: Planning guidance and the catalogue of cartographic data

The urban plan has been conceived in such a way that it can be easily consulted online, drawing upon all the levels of information (corresponding to the elements that characterise the urban plan's structure) starting from any point of the territory, either identified on the map or by means of an address or other coordinates.

In greater detail, the *Planning guidance* and the functionality of the *catalogue of cartographic data* is entrusted to a GIS web application, which makes it possible to navigate the cartographic layers, overlapping them and reading them on different scales.

This permits a **dynamic and customised approach** to consulting the urban plan and its indications.



sitmappe.comune.bologna.it/PUG

#### Assessment document

The Assessment document is the Strategic Environmental Assessment of the urban plan, in accordance with the provisions of Legislative Decree 152/2006 and art. 18 of Regional Law 24/2017.



Comune di Bologna > Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

#### Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

The urban plan was constructed by means of an ongoing and circular process of interpreting the environmental conditions, interpretation through a profile and a vision, the construction of scenarios, the identification of objectives, strategies and actions, and the establishment of monitoring.

This process was placed within the reference framework comprised by the numerous international and local political and programmatic documents promoting sustainable development, to which we can add the stimuli deriving from the participation activity that has involved the city on various levels and in different ways.

By "sustainability" we therefore mean a broad approach that, in addition to the significant effects of the transformations on the environment and the territory, also considers social and economic matters.

The **Assessment document** sums up this process and **establishes the timescales** for the sustainability assessment. Indeed, the assessment and monitoring process are closely tied to the structuring of the urban plan in terms of actions, strategies and objectives, making it possible to continuously evaluate the city's transformation and the efficacy of its policies for the transition of the settlement and its inhabitants towards greater resilience.

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

#### Assessment document

Table of restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

The Assessment document has a number of characteristics that are substantially different from those of the planning tools produced under the pre-existing legislation, because the size and location of the interventions cannot be determined uniquely by the urban plan.

The sustainability of the urban transformations is guaranteed by the regulatory indications on "sustainability conditions" in the *Planning guidance*, while the *Assessment document* identifies the **further studies to be produced in order to carry out building interventions that demonstrate the lack of obstacles to transformation**, or rather that take the sustainability results achieved into account.

The urban plan monitoring prefigures the continuous evaluation process fuelled by the update of the environmental framework data and their critical interpretation. In order to monitor the specific outcome of the urban plan strategies, at least one indicator has been identified per action, thereby introducing the possibility of proceeding with updates to the set of indicators, in the awareness of the continuous evolution of the thematic data collection and processing systems.

The Assessment document also contains the elements for an initial "Health Assessment", exploring the link between certain environmental themes, which "affect health", and their effective impact on the health of Bologna's residents. Steps can then be taken to add to and develop the health theme, including as regards the impact that has been had by the pandemic. The Document concludes with the "Incidence Assessment", which considers the impact of the urban plan policies on Sites of Community Importance / Special Areas of Conservation within the European Natura 2000 network.



The urban plan an overview

### Constraints and restrictions

The Constraints and restrictions document is designed to illustrate all the restrictions, whatever their origin, that can affect the transformations of the territory in different ways. It seeks to "simplify the presentation and control of building permits and all other transformation compliance checks".



Comune di Bologna > Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

### Constraints and restrictions

Building regulations

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

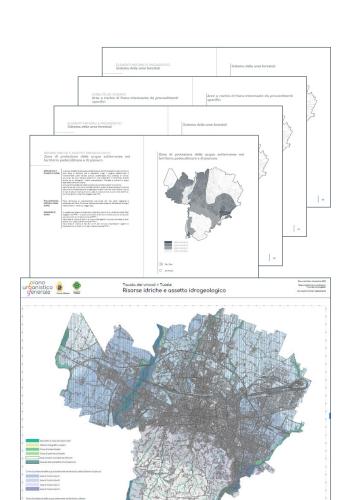
The Constraints and restrictions in force today has been updated and included in the new urban plan, as a constitutional element. The structure has been confirmed, which subdivides the cartographic layers and regulatory forms into "protections", "restrictions" and "other delimitations" (relevant for the application of regulations).

The protections illustrate the delimitations on a local level together with the relative regulatory references deriving from plans or documents from other administrations, whose indications affect building and urban planning interventions, or from the Comune's duties as attributed by higher level plans or legislative provisions.

The restrictions represent the areas restricted by law, generally due to the presence of infrastructure. The other parameters are those needed to support the regulations regarding restrictions and protections (urban territory, residential settlements, etc.).

In the *Constraints and restrictions* document, the content, regulatory references and relative graphic illustration of the layer are provided for every protection and restriction.





### The urban plan on overview

### Building regulations

Building regulations are not a component of the urban plan, inasmuch as this tool has now been reassigned to its original role of guidance and monitoring for building transformations. However, the Building Regulations are indispensable for reading the urban plan and its territorialised regulation of transformations, because they contain the defining and prescriptive legislation on urban materials, regardless of their location...



Comune di Bologna > Piano Urbanistico Generale >

City profile and awareness

Knowledge insights

Strategies and vision

Urban strategies

Local strategies

Planning guidance

Assessment document

Table of restrictions

### Building regulations

Comune di Bologna > Piano Urbanistico Generale >

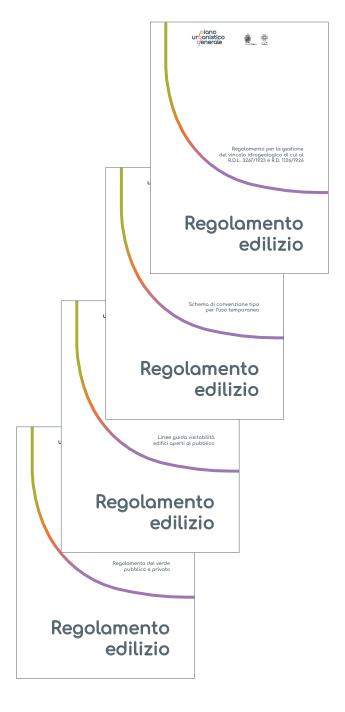
Reading the urban plan

The binding reference regulation used for its compilation is the Building regulation scheme (Schema di Regolamento edilizio tipo), approved in 2017 by the Regional Council, with the general objective of simplifying and aligning building legislation.

The Regulation has also been interpreted as a place of convergence, where possible, from other sector-specific regulations, such as the Municipal regulation on public and private green spaces (Regolamento comunale del verde pubblico e privato) and the Regulation on hydrogeological restriction (Regolamento per l'applicazione del vincolo idrogeologico).

The Municipal Building Regulation is divided into two parts:

- general principles and general legislation for building activity, which refers to the general legislation for building activity implemented uniformly across the national and regional territory;
- municipal regulatory provisions on building matters, which gather together building legislation of municipal competence, arranged according to a general uniform structure that applies across the regional territory.



# how to read it

Comune di Bologna > Piano Urbanistico Generale >

Who are you?

0

Local resident, association, business... Tell us who you are and we'll tell you what could be of interest to you.

What are you looking for?

0

Do you want a general overview or do you want to explore a specific subject?

Discover where to find what you're **looking for**.

A reading example

The urban plan is made up of various documents all linked together.
Learn how to **move between the documents** making up the urban plan.

Comune di Bologna >
Piano Urbanistico Generale >

Who are you?

What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

### A circular process

The urban plan introduces new approaches, languages and content designed to respond to complex local issues and the current environmental, climatic and health emergencies.

The urban an documents are all linked together to highlight the **circular process of knowledge**, **evaluation and monitoring**.

A system of references encourages the **digital communication** for which it was designed.

Some paths for finding your way around the urban plan are put forward here. The paths vary according to the requesting party (local resident, association, committee, business, investor, designer, etc.) and the object of the request (profile, strategies, maps, etc.).

Lastly, a reading example is provided which, through key passages, facilitates navigation between the various documents on the subject of urban planning and building interventions.

### Who are you?

What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

## Local residents, associations and/or committees

### Not to be missed

Look at the strategies and find out how Bologna will change.

### Do you want to get involved?

Here's how to take part in the regeneration process and the decisions on urban planning and public space transformations.

### Further study

The urban plan also contains the monitoring system that will make it possible to evaluate its implementation over time.

### City profiles and awareness

for browsing figures and data on Bologna

### Urban and Local strategies

to discover the transformations planned for your part of the city

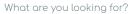
### Planning guidance

to find out about the policies needed to achieve the urban plan 's objectives

#### Assessment document

to learn more about the monitoring system proposed by the urban plan

### Who are you?



A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

### **Public administrations**

### The urban plan contains the policy guidelines.

Public investments and regulation tools will be programmed and planned in order to achieve the objectives.

The resulting guidelines will be absorbed by the sector-specific policies that all the various organisational structures within the Comune are required to translate into actions.

### City profiles and awareness

further studies have been produced in part by sectors of the Administration and they are responsible for updating them

### Urban and Local strategies

territorial orientation of the sector-specific policies

### Planning guidance

"guidelines for urban policies" is targeted at the Administration to focus its action on the objectives

#### Assessment document

a tool for evaluating the policies and monitoring their effects

### Who are you?



What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

### Businesses and private organisations

### The urban plan outlines the city's prospects for development.

This therefore makes it possible to target investments so as to serve the public good, with particular reference to the growth of existing businesses and the establishment of new ones. The same can be said for private organisations and institutions working in education, healthcare and culture.

### City profiles and awareness

for analysing, sharing and discussing, and contributing to improving the city

### Urban and Local strategies

for checking and discussing, according to your view point, specific policies in relation to the achievement of objectives

### Planning guidance

urban policy guidelines

#### Assessment document

monitoring

### Who are you?

What are you looking for?

A reading example

Comune di Bologna >
Piano Urbanistico Generale >

Reading the urban plan

## Building owners and technical designers

The urban plan acts as a reference point for building improvement work, making it possible to link the objectives of individual interventions with those of the city as a whole.

### City profiles and awareness

to gain an understanding of the differences between various parts of the city as regards the achievement of the general objectives, while also putting them into context

### Urban and Local strategies

prescriptions for building interventions work and regulations for individual interventions, which establish the methods and procedures for the development of widespread transformations

#### Constraints and restrictions

a synoptic tool that is easy to consult to check all the restrictions and safeguards in place that affect building interventions

### Planning guidance

setting out the legislation, identifying the performance or dimension-related requirements of work and providing definitions and procedures to allow for their implementation

#### Assessment document

establishes the methods for evaluating the urban plan implementation tools

### Who are you?



What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

### Property investors and technicians

The urban plan contains the general framework of objectives and strategies for urban regeneration, as well as specifying the sustainability conditions required for work to be carried out.

### City profiles and awareness

for understanding the interpretations of society and market trends on which the objectives have been based

### Urban and Local strategies

for planning a well-framed intervention both from a thematic and a territorial point of view

#### Constraints and restrictions

establishes the sustainability conditions that guarantee compatibility between the intervention and the territory, determining much of the content of the urban project, with reference to the actions in the urban plan. It also identifies processes and procedures for planning and implementing urban planning interventions

### Planning guidance

establishes the methods for evaluating the urban plan implementation tools

### Assessment document

a synoptic tool that is easy to consult to check all the restrictions and safeguards in place that affect building interventions

Who are you?

## What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

Here are some suggestions to help you read the urban plan, perhaps even when just looking a certain passages in these documents.

## Do you want a general idea of the topics covered by the urban plan?

#### Urban strategies

Download and consult the three Urban Strategy illustration tables. Each table refers to an objective and contains:

- the description of the four strategies, which comprise a total of fifty-five the urban plan actions;
- the representation of the most relevant aspects for each strategy on the map of Bologna.

## Do you want to find out what is planned for the area you live in?

### Local strategies

Consult the *Local strategies*! As well as establishing three general objectives, the urban plan is interested in the **liveability of the individual parts of the city**, mapping risks, opportunities and specific objectives for each one. For example, public and private spaces are identified as central features and connections between them are encouraged.

Local strategies help to guide public and private improvement works within the territory. Regeneration proposals can therefore be made by private parties as well as by the Administration. The Local strategies were identified after listening to the city's residents and will be updated with the implementation of the urban plan.

Who are you?

## What are you looking for?



A reading example

Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

## Do you want to explore a specific theme?

### City profile and awareness

Download the *City profile and awareness* document and consult the Profile of Bologna section.

Depending on the subject you want to explore, here you will find indications to guide you through the forms making up the cognitive picture, offering information used as the starting point for the urban plan.

### Planning guidance

The second document to be downloaded to find out about the urban plan 's objectives in this area and the methods by which it aims to achieve them, is the *Planning guidance*.

- Consult the index to find the point where the topic of interest to you is discussed: the three objectives are the primary chapters in the document, with each one divided into four strategies and the relative actions.
- For example, **if you're interested in the subject of social housing**, look at the second objective "liveability and inclusion", where you will be interested in strategy 2.1 "Extending access to homes" and, more in detail, action 2.1b, "Fostering an increase in the social housing offer".
- Each action contains: a general description, a definition and the field of application (which help to contextualise the subject in question), the guidelines for urban policies cover the forthcoming period and the rules for urban planning and building interventions.

Who are you?

## What are you looking for?

A reading example

Comune di Bologna > Piano Urbanistico Generale >

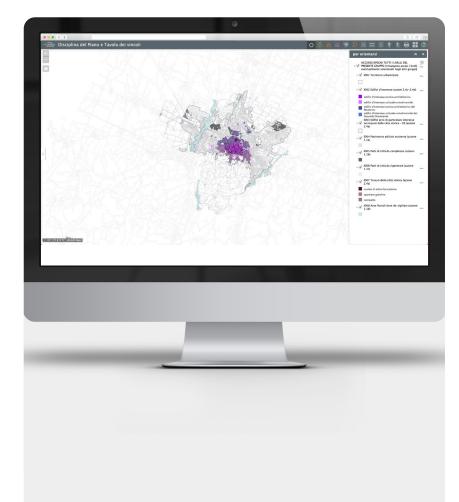
Reading the urban plan

### Are you good at using maps?

The interactive maps can be consulted on sitmappe.comune.bologna.it/The urban plan

On the top right, select the *Urban* strategies or *Local strategies* you're interested in. A sidebar will appear

where you can select the information you want to view on the map. You can zoom in on areas of interest to see them in more detail.



Who are you?

What are you looking for?

## A reading example



Comune di Bologna >
Piano Urbanistico Generale >

Reading the urban plan

### A healthy environment

### City profile and awareness

Here is a summary of three City profile and awareness forms that illustrate certain aspects of the existing building assets.







### Real estate assets

#### > Form 27

There are over 400,000 real estate units in the Cadastre: over 50% are residential, around 10% pertain to the tertiary, commercial and manufacturing sector, while the remaining 40% are appurtenances.

Between 2009 and 2018 the overall cadastral stock in the municipality grew by 3% (more than 11,500 real estate units): new constructions, divisions or fusions of existing units, or rectifications.

## Age of the real estate assets

### > Form 28

Areas from less recent times, regarding which there is a perceived need to modernise the buildings, if not already subjected to building interventions.

Some of the necessary work regards adaptations to comply with energy and seismic regulations, but also adaptations in terms of accessibility, particularly as regards the installation of lifts.

## Abandoned and underused areas and buildings

#### > Form 25

The Municipality of Bologna has embarked on a process of surveying and mapping abandoned and underused buildings present in the urban territory.

Who are you?

What are you looking for?

## A reading example



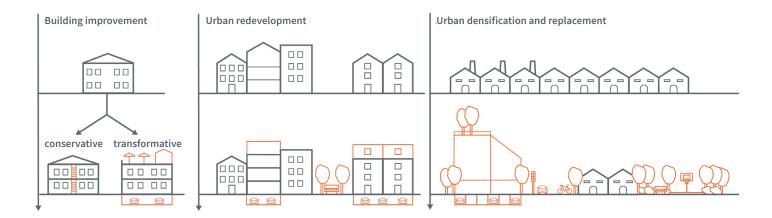
Comune di Bologna > Piano Urbanistico Generale >

Reading the urban plan

### Urban planning and building interventions

### Planning guidance

Based on the picture that emerged from the information forms, the urban plan seeks to **foster the regeneration of the existing city avoiding the development of farmland** (urban strategy 1.1). Urban reuse and regeneration work is regulated in such a way as to **favour the renovation of existing buildings** (action 1.1a), **filling in gaps within the city** (action 1.1b) and **encouraging urban densification and replacement interventions** (action 1.1c).



Who are you?

What are you looking for?

## A reading example



Comune di Bologna >
Piano Urbanistico Generale >

Reading the urban plan

### Environmental and territorial assesments

#### Assessment document

The "sustainability conditions" contained in the *Planning guidance* represent an obligatory regulatory reference point for all urban transformations. The various types of work that can transform the city are assessed in terms of sustainability, meaning that an assessment is carried out on the accompanying studies that tackle the subjects and issues the urban plan has identified as necessary in terms of sustainability, which are set out in the various Actions of the urban plan itself.

## Environmental assessment

## Assessment procedure



For certain work relative to establishment of particular

**uses**, specific studies are required to check the effective possibility of establishing these uses with respect to the urban context.

The check is carried out by the Single Building Office, as part of the approval request, or by means of a preventive assessment requested by the interested party pursuant to article 9 of the Building Regulations.



#### For smaller urban transformation

work, which can be classed as "urban renovation", studies are required to check the territorial and urban compatibility of the proposed transformations. As part of the licensed construction permit procedure (point c1.2 of the Building Regulations), the Urban Plan Office checks the contents of studies agreed for the intervention in question and checks their compatibility in

preparation for signing the agreement.



For more significant urban transformation interventions, which can be classed as "urban densification and replacement", as in the case of the public initiative implementation plans, the programmed agreements and individual localization procedures, numerous studies are required to check and assess the environmental and

territorial sustainability of the work.

If the intervention is to take place inside the urban territory, the procedure for drawing up the operative agreement takes place as part of the

check to find out whether it is subject to Assessment document (article 39 of Regional Law 24/2017), by the authority responsible for the environmental assessment (Città Metropolitana di Bologna). If the work is planned for outside the urban area, this procedure will include the Assessment document (article 18 of Regional Law 24/2017), carried out by the same authority. In the other cases mentioned, this is all done through the Assessment document procedure, wherever the work is located.

# how it is managed

### Relationship with sector-specific plans

Over recent years, environmental issues, first and foremost those associated with climate change, have guided city policies. This was partly thanks to the initiative of communities that implemented dedicated actions and partly as a result of international strategies promoted by the European Union and by the Italian Ministry for the Environment and the Protection of Land and Sea.

In 2012, Bologna approved the SEAP - Sustainable Energy Action Plan (Piano d'Azione per l'Energia Sostenibile - PAES), followed in 2015 by the Climate adaptation plan (Piano di Adattamento ai Cambiamenti Climatici - BLUE AP project). These were taken into consideration when drawing up the urban plan and were subsequently merged in the new **SECAP - Sustainable Energy and Climate Action Plan** (Piano d'Azione per l'Energia Sostenibile ed il clima - PAESC), approved in April 2021.

Over recent years, various sector-specific planning tools have been approved both locally and on a regional level. They include the **Flood risk management plan** (Piano di Gestione del Rischio Alluvioni - PGRA) **and the SUMP - Sustainable Urban Mobility Plan of metropolitan Bologna** (Piano Urbano della Mobilità Sostenibile - PUMS).

Meanwhile, in the case of the Green plan (Piano del Verde - PdV), the urban plan paths have become intertwined since the urban plan also takes on the content of the PdV, a strategic tool with which the municipality outlines and implements its decisions regarding green spaces in the city, considered a primary factor for the resilience, safety and health of the territory.

Comune di Bologna >
Piano Urbanistico Generale >

### The urban plan over time

The new urban plan is based on strategies, knowledge and its implementation, monitoring and assessment, and participatory processes. Each of these components has to deal with a constantly evolving city, meaning that the introduction of dynamic and flexible elements is of primary importance.

For this purpose, while maintaining traditional-style variations to the urban plan, there will also be new update methods that are not expressly indicated by Law.

It will be possible to update the urban plan for **two reasons** and by following **two procedures**:

- when the update is of a cognitive nature, or rather in the case of information that affects the urban plan, the update be made by means of a **recognition document**;
- when the update derives from the absorption of sector-specific policies that affect the urban plan, there will be an integration mechanism linked to the City Council resolution that approves the sector-specific plans and updates the urban plan.

Comune di Bologna >
Piano Urbanistico Generale >

### Monitoring and regeneration

The Assessment document is a decisive part of the mechanism for adaptation to the changes taking place in the context in question. The urban plan itself has to be resilient and able to regenerate itself in line with the city. The monitoring of the implementation of the urban plan and its effect on environmental and territorial systems will lead to the consequent revision of the urban plan on the basis of an ongoing circular process. The procedural dimension of the urban plan will require constant updates to its information and assessment-related aspects.

Monitoring therefore plays a very important role in checking the level of attainment of the objectives and in checking the need to realign the strategies when the objectives are not achieved. **The assessment process is constantly accompanied by discussions with local residents and by ongoing information campaigns.** 

Another type of mechanism should allow the municipality to gather outcomes of the public discussions on the regeneration of the city, coordinating activities in the neighbourhoods. Because of this it will continue with the ongoing discussions between the Urban Plan Office and the Fondazione Innovazione Urbana, the body that looks after the management of the participatory processes in the city on behalf of the municipality and thanks to the technical support of the university.

Through the urban plan, the municipality promotes urban regeneration processes to accompany the conversion of abandoned buildings, the connection of detached parts of the city, and the creation of centres through the reinforcement of relations between open spaces and public equipment. The outcome of the regeneration processes, together with the implementation of projects of public interest that descend from sector-specific policies, will lead to the need to supplement the urban plan documents in order to bring them into line with the city's new expectations.

Comune di Bologna > Piano Urbanistico Generale >

### The Urban Plan Office according to Law

The Urban Plan Office and the Communication and Participation Guarantor are "organisational measures" provided for by Regional Law 24/2017. The Municipal Administration initially established the office when the City Council adopted the "the urban plan Proposal" after a period of experimentation that coincided with the urban plan planning process.

The Urban Plan Office is a structure that benefits from **organisational autonomy**, entrusted with all the tasks pertinent to the municipality's urban functions. The Law establishes a principle of completeness of professional expertise present in the Office and indicates the need to appoint a Communication and Participation Guarantor for all urban planning procedures.

### Bologna's Urban Plan Office

In addition to the application of the profiles deriving from Law and the applicative resolution of the Regional Council, the Municipality of Bologna's the Urban Plan Office has been designed to be closely integrated with the urban plan, so that it can be used to manage it effectively.

**The Urban Plan Office is responsible for coordinating urban policies,** operating under the political responsibility of the Mayor and a delegate councillor and carrying out work organisation tasks, responsibilities and secretarial duties.

The Office is therefore the site for the coordination of the sector-specific policies drawn up by the urban plan for the achievement of objectives such as urban quality and sustainability. **The achievement of specific objectives, through the implementation of the urban plan actions, involves all the municipal structures.** 

Comune di Bologna >
Piano Urbanistico Generale >

### colophon

#### Mayor

Virginio Merola

#### Deputy Mayor

Councillor for urban planning, private building, the environment, protection and regeneration of the historic city, climate agreement, porticoes UNESCO status bid Valentina Orioli

Cross-sector work team appointed by the Head of the Urban planning, Home and Environment Department

Marika Milani

### Head of the procedure

Francesco Evangelisti

#### Group members

Monica Cesari, Giuseppe De Togni (coordinator until 30/09/2020), Giovanni Fini (until 30/05/2020), Chiara Girotti, Marco Guerzoni, Chiara Manaresi, Claudio Savoia, Giancarlo Sgubbi, Silvia Silvagni, Samantha Trombetta (coordinator and participation guarantor since 01/12/2020)

### The following people also helped to write the urban plan

The employees of the Sector-specific Urban Planning Unit, Urban Plan Office:
Luciana Africani, Valentina Ballotta,
Valentina Disarò, Gabriella Marra, Silvia
Scarabelli, Thaina Correa Da Mota, Morena
Gamberini (until 30/05/2021), Riccardo
Roletti (from 01/05/2021)

#### The interns

Luca Carta, Ana Maria Diac, Lucrezia Ferrecchi, Francesca Mancia, Margherita Masi, Susanna Patata, Marta Ronzoni, Edoardo Seconi, Luca Sirri

#### And other Urban Plan Office employees

Claudio Bolzon, Maria Grazia Fini, Davide Fornalè, Rosalba Iannantuoni, Stefania Naldi, Claudia Nicodemo, Irene Sensi

#### Collaborations

The following people contributed to drawing up the urban plan: the directors and employees of the Environment and Green Spaces, Residential Policies, Building Services, Sustainable Mobility and Infrastructures, Building and Heritage, Economic Area and Employment, the urban plan ning Area, Controls and Statistics, Digital Agenda and Information Technology Sector, Culture and City Promotion Department, Education, Training and New Generations Area, Welfare and Promotion of Community Wellbeing Area

#### Methodological contributions

Patrizia Gabellini, Bertrando Bonfantini and Cecilia Saibene – Department of Architecture and Urban Studies, Politecnico di Milano, with the collaboration of Caterina Gfeller

Maria Berrini and Lorenzo Bono - Ambiente Italia srl

#### Contributions

Alma Mater Studiorum - Università di Bologna

Department of:

- Architecture
- Civil, Chemical, Environmental and Material Engineering
- Sociology and Economic Law ARPAE Hydro-Meteo-Climate Facility

C.N.R. - Consiglio Nazionale delle Ricerche IBIMET- Istituto di Biometeorologia

Fondazione Innovazione Urbana Nomisma

Studio Sangiorgi – applied geology

#### Graphics and communication

BAM! Strategie Culturali with the collaboration of Beatrice Moretti





