

Crespi d'Adda. Beyond the Management Plan: regulatory instruments for the management of built heritage transformations.

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1. Crespi d'Adda: towards the Management Plan

1.1 Introduction

The UNESCO Management Plan is a tool aimed at preserving the Outstanding Universal Value (OUV) of World Heritage Sites, and promoting an integrated development of local resources. Since 2002, all sites inscribed in the UNESCO World Heritage List (WHL) are required to adopt a Management Plan.

In accordance with the guidelines drawn up by the Italian Ministry of Culture (MiBAC)¹, the Plan should identify management issues, strategies and actions to be put in place, their timing, the necessary resources, and a schedule of monitoring actions to be implemented over the years.

Despite its strategic value, however, in many cases the drafting of the Plan is considered a mere formality: therefore, its potential towards preservation improvement, and towards the dissemination of good practices by institutional actors and by heritage owners, is not adequately exploited.

The company town of Crespi d'Adda, part of the UNESCO WHL since 1995, has recently initiated the process for the adoption of the Management Plan².

1.2. The Company Town of Crespi d'Adda

Crespi d'Adda was built between the late nineteenth and early twentieth century around the activities of a textile industry owned by the Crespi family, which gave its name to the village.

The site, which lies within the administrative boundaries of Capriate San Gervasio municipality, is located halfway between Milano and Bergamo, alongside the motorway and not far from Orio al Serio airport.

The village, located in a low plain at the confluence of the rivers Adda and Brembo, is divided in two parts, separated from the main street: the factory



Fig.1 - A view of the village. On the bottom, the chimneys; Fig.2 - The factory

(about 60,000 square meters) and the residential system.

The latter consists of a hundred buildings, mostly detached houses surrounded by small gardens, made on a project by eng. Pietro Brunati and arch. Ernesto Pirovano. At the end of the main street stands the cemetery, with Crespi family's mausoleum, by arch. Gaetano Moretti (1908).

In 1878, at the time of the inauguration, the industrial plant was operated by hydraulic energy derived from Adda river, and employed about 300 workers, some of whom were staying in the first residential buildings.

Crespi's philanthropic vision led the progressive evolution of the settlement: at the time of its maximum expansion, it gave work up to 3600 people, and was equipped with all the necessary services for the life of the community. In addition to the school and the church, the village was provided with the cemetery, a public laundry, a medical clinic, a restaurant and a tavern. A hydroelectric power plant and a thermal power plant met the energy needs of the village.

After the economic crisis of 1929, Crespi had to assign the property to Commercial Italian Bank (BCI), and the village was taken over by a state holding company. However, it was only in the 50s that began the slow process of decline, which culminated, after several ownership changes, with the complete cessation of textile production (2003).

At the time of the inscription in the WHL, the industrial plant was still operating: Crespi d'Adda became part of the List on the basis of the criteria iv and v³, because of its exceptional value of systemic living totality, but also because of its vulnerability due to the rapid changes in textile industry and production relocation⁴.

In the mid-'70s, after the failure of the company at the time owner of the village, the entire property was put into liquidation, and residential buildings were purchased largely by residents.

The property's splitting was followed by capillary actions of plasters replacement, housing fragmentation and by a proliferation of accessory structures between the houses, which significantly changed urban space perception.

The disposal of factory activities has seriously upset the balance between industrial development, use of local resources and residential district's evolution. However, geographical features of the site, which had led it to isolation in some way, had at the same time protected it from the uncontrolled development that marked the surrounding area.

Today the village is inhabited by a community of about 400 people, mostly former workers or their descendants, and suffers decay conditions and functional obsolescence.

1.3. Managing change in a challenging context

The drafting of the Management Plan for Crespi d'Adda is a crucial step to guide the village towards sustainable evolutionary processes, contrasting the dynamics of decay and neglect that have affected the site over the past decades.

As the industrial activity ended, it is clear that site's values have to be safeguarded not only through physical preservation of buildings, but also through the finding of new uses for the factory and, accordingly, through new develop-

ment opportunities for the village. The Plan takes on this difficult but necessary task through the foreshadowing of some scenarios, assuming as a model some interventions already implemented in de-industrialization processes, where former industrial buildings were re-used, for example, as technological research hubs, art factories or advanced manufacturing laboratories.

Management planning, therefore, has to provide integrated strategies, which pursue both valorization and protection. In terms of site enhancement, proposals must go beyond the simple revival of the image of a model company town, which is likely to make Crespi d'Adda victim of its own past without offering to local community new opportunities for development. The Plan should instead provide strategies for the development of cultural, educational and commercial activities to be implemented into the site, trying to maximize their impact at the local and regional level, in order to enhance residents' life quality.

Regarding protection objectives, the Management Plan has to systematize both regulatory and technical measures which have to ensure site conservation. Although cumulative effects of punctual actions on buildings and open spaces put at risk the perception of site values, it is clear that the village can be preserved only as living system, avoiding its "musealization". Management strategies, therefore, have to rule and guide the necessary transformations of the built system as a whole: this is the aim of the new regulatory instruments.

2. A brief review of present regulatory instruments

Despite the elaboration of Management Plan represents a critical and strategic step, not only for the fulfilment of UNESCO requests, but also to guide the village towards necessary evolutionary processes, the Plan itself has no binding character. In fact, it can only defer to existing regulatory instruments, and at most it can insert their revision into Action Plans.

At present, any intervention in Crespi d'Adda must be made in accordance with protection regulations and planning instruments.

2.1. Protection regulations

The system of protection currently in force, governed by national legislation, consists of:

- intervention restriction on listed buildings, ie Crespi's mausoleum⁵ and some buildings belonging to local authorities⁶ (the former school, the church, the residence of the priest);
- a binding decree⁷ for landscape protection which affects the western side of the territory of the municipality of Capriate San Gervasio, including Crespi d'Adda;
- an environmental restriction which affects a band of 150 meters along each side of the river Adda and the area included in the Adda Nord Regional Park⁸. Crespi d'Adda fully falls within the protected area.

Since 2004, for any intervention in protected areas which affects external image of buildings, the obligation of obtaining a special permission has been imposed. This permission⁹ is autonomous and higher-level than normal approval process of building practices. In case of interventions in Crespi d'Adda, the competence for issuing permits rests with the municipality, which established



Fig.3 - A recent intervention on external surfaces; Fig.4 - An ancillary structure used as storage and garage

a Landscape Commission.

Nonetheless, during last years, many interventions have been made that have endangered the overall perception of built system, as for example interventions on external surfaces through plaster's replacement, or the substitution of wooden frame windows with aluminium or PVC new ones.

The drafting of Management Plan was then assumed as an opportunity for reviewing and integrating protection instruments: the preparation of a new binding decree for landscape protection is in progress, which will affect the area of the UNESCO site, for which more specific requirements for interventions will be defined. Anyway, they can only affect interventions on vegetation, open space and buildings' exterior surfaces, although cumulative effects of individual changes on interior structures can prejudice both integrity and authenticity of each building, and the systemic value of the village.

2.2. Planning instruments

Interventions on buildings within Crespi d'Adda must comply with local planning instruments. They are:

- the Piano di Governo del Territorio (PGT) for the municipality of Capriate San Gervasio¹⁰;
- the Piano Particolareggiato (PP) for Crespi d'Adda¹¹.

The PGT recognize to the UNESCO site a "very high" class of landscape sensitivity.

The management of interventions within the village is fully deferred to PP, which is based on preservation criteria: it prohibits new constructions on the entire area surrounding the village, and aims to redefine and enhance village's identity, strengthening its traditional character through the regulation of intervention on buildings and green areas.

With regard to open private spaces, PP imposes the demolition of all ancillary structures and garages not consistent with district's original structure. It allows the construction of new structures, in accordance with a project model that the municipality would have to propose within six months of the Plan approval (the

instrument hasn't been prepared yet, and no structure has been demolished). Regarding the possibility of intervention on interiors and building structures, for most of the buildings a conservative renewal¹² is allowed, which includes interventions on stairs and attics recovery for residential purposes.

Until now, most of the buildings have been affected by modest interventions, which can be identified as ordinary and extraordinary maintenance. In the first case, there are no restrictions to the replacement of interior fittings and installations. Extraordinary maintenance also allows opening and closing of doors and rooms, walls replacement and reconstruction of floors.

PP is accompanied by instructions for the restoration of external elements (as for example cornices, windows, doors, shutters, downspouts, roofs, fences), and identifies morphological characteristics which have to be assigned to them in case of replacement¹³.

Nevertheless, PP is lacking instructions for the safeguarding of building elements' authenticity, although historical materials contribute to the exceptional universal value of the site and require adequate protection.

The Management Plan was assumed as an opportunity to make a further step in this direction, giving to conservation a primary role within management strategies for the site. Because of its non-binding character, however, Management Plan can only act as a framework within which new regulatory instruments can be proposed.

3. Beyond the Management Plan

In April 2012, with the contribution of Cariplo Foundation, the project "Definition of regulatory instruments for the management of the processes of conservation / transformation of the UNESCO site of Crespi d'Adda"¹⁴ was launched. It involves the development of regulations for the management of built system's transformations, as well as involvement actions directed towards local community¹⁵.

The new regulations aim to suggest operational criteria for intervention on buildings and open spaces, supporting the design phase rather than imposing a priori solutions¹⁶.

3.1 Exterior surfaces and public spaces

The first instrument, prepared in 2008 during a preliminary research phase¹⁷, deals with interventions on exterior surfaces of buildings and public spaces. Within past interventions on residential buildings, old plasters and paintworks have been replaced with new ones, whose colours have significantly altered the overall image of the context. Nevertheless, while the management of interventions is assumed as a necessity, the regulation assumes as culturally and methodologically impossible to determinate a priori, and ideologically, built environment's color.

This topic has been faced from another point of view, a technical one: a survey conducted on all residential buildings of Crespi d'Adda proved that negative outcomes of past interventions, in many cases, were caused by technical inadequacy of materials. An overview of suitable materials and technical suggestions for their usage has then been provided, while choices about colour

are left as exclusive responsibility of the designer, who however will need to fully document decision process and technological means, in order to obtain the permission. The regulation also provides four typical scenarios in order to support the design phase.

The same approach has been adopted for the interventions on public space's paving materials.

3.2. Internal transformations of residential buildings

The second regulatory tool deals with residential buildings internal transformations, in order to improve their performances towards new comfort and liveability requirements.

At present, interventions on interiors are not subject to any constraint. Moreover, the upgrading of users' needs will probably lead to, and partially already did it¹⁸, a wide process of transformation of housing layouts and upgrading of existing technological elements and systems.

Nevertheless, conservative approach assumes that loss of historical matter has to be considered as a damage to heritage integrity and authenticity, and should be minimized. Therefore, the new regulation aims to manage conservation and transformation needs by providing, for each building typology,

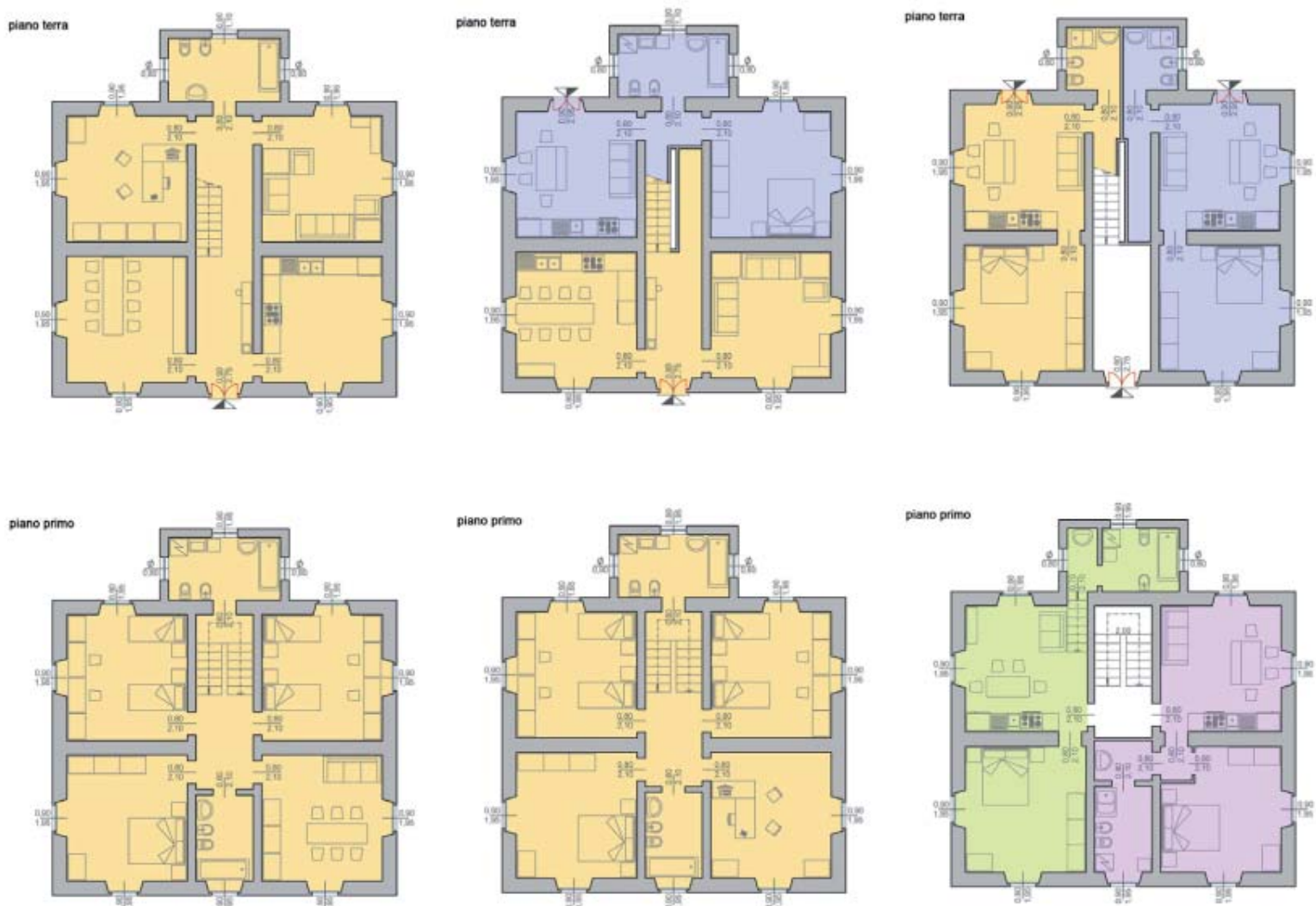


Fig.5 - Three project suggestions for the same building typology, with different layout solutions and incremental transformation rate

some allowable project suggestions with an incremental transformation rate (Fig.5), according to different user's needs scenarios. It also includes tips for intervention on technological elements (such as roofs, floors, windows and doors), in order to maximize their preservation.

3.3. Energy efficiency of residential buildings

The third regulation deals with interventions aimed to increase the energy efficiency of buildings, in order to respect conservation needs. It evaluates different scenarios, composed by sets of interventions on building envelope and systems.

While heating systems in Crespi d'Adda generally need a replacement with more efficient ones, the intervention on building envelope should be directed towards elements whose transformation is compatible with architectural character of buildings. For example, external overcladding has been excluded as it would entail a radical transformation of building's external surfaces.

The regulation provides to private owners suggestions on possible interventions and the related energy saving potential, which has been calculated with energy performance simulation tools.

The regulation also defines, in agreement with the authorities responsible for landscape protection, the possibilities for the installation on roofs of PV systems and solar thermal systems for water heating.

3.4 Outdoor private spaces, storages and garages

The fourth regulatory tool is aimed at the management of outdoor private spaces, and particularly of structures used as storages and garages which prejudice overall urban space perception.

At present, a complete survey of the status quo has been completed. The strategy pursued by the municipality would be to propose a model project for the new constructions, although the undue permanence of old ones represents a considerable limit. An alternative path is being explored, which could give some general criteria for the design of new structures and introduce a constraint strategy (for example, linking building permissions to the removal of unauthorized structures).

4. Conclusions

The four new regulatory instruments for Crespi d'Adda aim to manage built heritage transformation adopting a performance-based rather than prescriptive approach. The intent is to stimulate the development of good practices through the suggestion of technical rather than formal solutions, considering that a strict prescriptive approach could inhibit any form of interventions, with negative outcomes on buildings' liveability and maintenance.

Nevertheless, the adoption and implementation of new regulations should be accompanied by complementary action, such as a process of involvement and training of local technicians, for the increasing of authorization processes' effectiveness, and a wide communication campaign directed towards residents, in order to share the values and criteria which guided the elaboration of regulations. Experiences developed by other UNESCO sites may provide an

useful starting point: for the city of Edinburgh, for example, simple handbooks were distributed to residents, with suggestions for interventions on historic buildings which underlined individual and collective benefits derivable from the adoption of a conservative approach.

The regulations presented in this paper affect only the residential system. To overcome this limitation, it is necessary to enlarge the scale of observation, by integrating the industrial area within systemic strategies, that may prove more effective than the sum of many individual interventions. The industrial plant may in fact offer the opportunity to give in a collective solution to some criticalities, such as the uncontrolled spread of storages and garages and the limitations for integration of individual renewable energy systems on roofs.

The Management Plan could introduce similar considerations within an overall strategy for the site of Crespi d'Adda, by providing suggestions for coordination between the new regulations and planning instruments.

Notes

¹ MiBAC (2004), Guidelines drawn up by the Advisory Commission for UNESCO Management Plans and local tourist systems.

² In charge: Department A.B.C. (formerly B.E.S.T.) of Politecnico di Milano. Coordination: Profs. S. Della Torre and P. Gasparoli. The working group includes, as well as profs. Della Torre and Gasparoli, arch. PhD M.P. Borgarino, arch. PhD C. Livraghi, arch. PhD A.T. Ronchi, arch. PhD M. Scaltritti, arch. PhD F. Pianezze.

³ Cfr. UNESCO, World Heritage Centre (2012), Operational guidelines for the Implementation of the World Heritage Convention, p. 20-21.

⁴ Resolution of UNESCO Committee, December 5, 1995: "Crespi d'Adda is an outstanding example of the 19th and early 20th century phenomenon of the "Company town" in Europe and North America, which was an expression of the prevailing philosophy of enlightened industrialists towards their employees. It survives remarkably intact, and part is still in industrial use, though changing economic and social conditions inevitably pose a threat to its continued survival."

⁵ Binding Decree n° 597, 09/19/1985, attributed with Law 1089/39, now D. Lgs. 42/2004.

⁶ Under the D. Lgs. 42/2004, Part 2, Title I, Cap. I, Art. 10, c. 1: "Cultural Heritage".

⁷ Attributed with DM of 07.31.1969 under the Law 1407/1939, now D. lgs. 42/2004.

⁸ Under the D. Lgs. 42/2004, Part 3, Title I, Cap. II, art. 142, c. 1/c e 1/f: "Protected Areas".

⁹ Pursuant to Art. 146 of Legislative Decree 42/2004.

¹⁰ Adopted by DCCN ° 24 of 21/10/2011.

¹¹ Adopted by DCC No. 5 01/03/1995 and subsequently amended and supplemented with variant approved by DCC No. 9 of 05/04/2004.

¹² Piano Particolareggiato del villaggio di Crespi d'Adda (1995), Article 19, "Degrees of intervention on buildings".

¹³ Among the indications are, for example: restoration of brick string courses and preservation or restoration of brick openings' frames; prescription of centralized antennas (one per building); prohibition of the insertion of double doors; ban on replacement of shutters with blinds or other window treatments; ban on creating new openings (except in correspondence with false windows) and prohibition of openings infill on main facades. It is not allowed the entry on facades onto which originally there were no openings.

¹⁴ The project has been funded by Fondazione CARIPLO within the call "Promoting

innovative methods for conservation planning” (2011).

¹⁵ These actions have different purposes: 1) to enhance heritage awareness, through public meetings, exhibitions, school involvement in training activities within the site; 2) to promote territorial animation, through the opening of a local office, in order to facilitate communication between municipality and residents, and to coordinate socio-cultural initiatives to be developed within the village; 3) to support good practices and constant care of buildings. It will be created a technical support service for owners and local professionals during the first months after the adoption of new regulations.

¹⁶ The tools are supported by a complete analysis of the status quo which has allowed the creation of a complete data sheet for each building (identification and property; past interventions on: external surfaces, internal layout, technological systems; state of conservation; survey of garages and other storages). Except for the first tool, which has yet been completed, the others will be ready by the end of 2013.

¹⁷ Politecnico di Milano, B.E.S.T. Department (2008), Rules for the design of buildings' external surfaces and public spaces of Crespi d'Adda. The bylaw was the result of a consultancy for Capriate San Gervasio municipality developed in preparation for the drafting of the Management Plan for Crespi d'Adda. Research leaders: Profs. S. Della Torre, P. Gasparoli.

¹⁸ A survey on past interventions has been conducted by analyzing all building practices stored in municipal archives.

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