

# Making our Rural Landscape visible. A way to defend Anonymous Cultural Heritage

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## Abstract

*As a result of the energy transition, traditional rural landscapes are being threatened by renewable energy macro-projects, often promoted by foreign companies. In response to this threat, our project aims to bring to light the cultural heritage concealed in these landscapes, built over centuries by wise hands and minds, using the natural resources available at the time, in order to highlight their value and later defend them from this threat. The specific case under analysis are the surroundings of El Perelló and L'Ametlla de Mar, in Baix Ebre (Tarragona, Spain), a site with Neolithic, Iberian and Roman settlements, in a calcareous geography, situated between the mountains and the Mediterranean Sea. This is a rural landscape, built on a human and family scale, protected by the mountain of Tossal de Montagut, its agrarian mosaic drawn by winding paths and dry-stone walls, with beautiful geometric outlines. A series of domestic elements (houses, wells, hunting shelters and farmyards) represents an organic complex and defines a settlement in balance with nature. It is a place that, if we give in to the threat of these projects, will become an industrial estate, destroying its cultural heritage. We propose reflection on the identity and fragility of these anonymous places, the need to keep alive their memory and their cultural heritage, both natural and built. From the viewpoint of their architecture, we aim to contribute to the debate on the current conflicts between rural landscapes and renewable energies. Our project aims to analyse, record, catalogue, redraw, etc. the architectural elements in the affected landscape (approx. 800 Ha), highlighting the historical value of the place by means of historic archival work and recording the tradition and daily life of local people.*

**Keywords:** dry-stone, vernacular architecture, rural landscape, Terres de l'Ebre

## 1. Introduction

Fragile rural Mediterranean landscapes, made up of a very fragmented parcellation structure, and a minor, anonymous, traditional architecture with no protection or any kind of registration are being threatened by renewable wind and photovoltaic energy macro-projects (Saladié, 2018). Landscapes of great beauty and dignity, shaped by men and women in the course of recent centuries, that reside in the memory of the people and build our identity,

now, with the energy transition, in times of democracy, are in danger of disappearing (Nogué, 2010).

The project presented here seeks to value one of the hidden territories affected: to review its history, emphasising the contribution of the community to its configuration, and highlighting its formal, architectural and environmental values for its consideration as cultural heritage (López Daufí, 2010), affording with the appropriate tools to defend it.

A case study is presented of a rural area located to either side of the old N-340 road (Via Augusta) where it passes through the municipalities of El Perelló and L'Ametlla de Mar, in the Baix Ebre county, south of Tarragona. In this specific area, the records of built heritage are very scant (Navarro, 2007) and do not represent the weight of history perceived when passing through it.

A place built some centuries ago by the local peasant farmers, who harnessed its resources to transform an inhospitable place, a desert, into a habitable and fertile place, a paradise (Martínez, 2021). They did so by following patterns of behaviour and construction adapted to the climate, the place and the time: "built by the inhabitants of a territory on the basis of shared models, created collectively over generations" (Gencat, 2018).

This territory remains practically intact and continues to be inhabited, with its inherited culture and ways of life, an example of sustainability, with an economic and social system that keeps it alive. And it remains a place rich in biodiversity: flora, fauna, soil, air, water. Because when people settled there, they established a pact of balance with nature.

With this project we aim to explore the characteristics of this pact from the point of view of built heritage, to propose strategies for its protection, and, finally, highlight the risks involved in implementing this type of project in historic rural landscapes.

We aim not only to create a register of traditional architectural elements, but also to take into account the communal structure of the settlement: the paths, the stone walls, the terraced crops, the water catchment and climate protection systems, and, finally, the buildings related with living and working.

## **2. A brief historical and geographical description of the place**

The town of El Perelló is located on a hillside (150m) on the N-340 road that connects the entire Mediterranean coastline, while L'Ametlla de

Mar (which split from El Perelló in 1891 and is also known as La Cala) is located on the coast, between the castle of Sant Jordi d'Alfama and the river Ebro delta.

The area in which study is concentrated is located on the inland plain, between the historic centres of the two towns. The calcareous crust of this rocky geology often outcrops, forming caves that have been used for refuge since Neolithic times (Cova del Duc, Cova de la Masa), including during the Spanish Civil War (Cal Català). The need to collect water in this area crisscrossed by streams prompted ingenious feats of construction and beauty.

The original town of El Perelló has a founding charter dated 1294. It was a walled city, and a royal hospital was built there (1313) (Boyer & Pallarés, 1978). A difficult and perilous journey through the Alfama desert ended at Les Fonts (original name), on the road between Tarragona and Tortosa.

Archaeological remains found in both municipalities place the Via Augusta (Izquierdo, 1989) on the layout of the old N-340 road, today still the backbone of the territory. This is, then, a place of transit and defence, of a mixture of peoples, which in modern times was on the front line of the Battle of the Ebro. Later, in the 1960s, the curves of the N-340 as it passed through the town mark the memories of our parents and grandparents first tourist trips along the Mediterranean coast.

This territory is a small example of the transformation of the Mediterranean coast, beginning in the early eighteenth century, promoted by an economic-legal system of contracts, the *censals*, and real property-useful property, which, together with a major demographic increase, the *fam de terra* or hunger for earth, allowed access to land and, as a result, economic independence for a very large sector of farmers and their families (Congost, 2010). This immense collective effort "was the people who changed the face of the landscape" (Olivas, 2010), which meant razing the scrubland: uprooting bushes, flattening

terraces, removing stones and building walls gave the territory the form it still has today. An absolutely visual, geometric, organic shape, built on a human scale.

Scattered across these small properties, of a size that was manageable for each family with their manual work or the help of livestock, are constructions for living, sheltering, farming and animal husbandry, and collecting and supplying water. A cultural heritage written in the margins, a traditional architecture that names no builders, “older by far than any school or any academy” (Sert, 1934), is the foundation of a great Mediterranean culture.



Fig. 1. Map of landscape elements: roads, dry-walls, and buildings. (Source: Authors, 2021)

This type of landscape based on the dry-stone construction technique extends throughout the Mediterranean and was listed as Intangible Cultural Heritage of Humanity by UNESCO in 2018, since “Such structures testify to the methods and practices used by people from prehistory to today to organize their living and working space by optimizing local natural and human resources. They play a vital role in preventing landslides, floods and avalanches, and in combating erosion and desertification of the land, enhancing biodiversity and creating adequate microclimatic conditions for agriculture [...]. Dry-stone structures are always made in perfect harmony with the environment and the

technique exemplifies a harmonious relationship between human beings and nature” (UNESCO, 2018).

Almost 300 years later, buffeted by the mistral wind, this territory between El Perelló and L’Ametlla de Mar, included in the Terres de l’Ebre Biosphere Reserve (2013), is still alive, with a mixed traffic of cars, tractors, bicycles and walkers, and people who produce quality oil and honey, collect almonds and carob beans, and live in small scattered houses that, in the twenty-first century, remain self-sufficient in water and energy consumption, retaining their original free, family character. It is a place with very high levels of silence, clean air and clear light, with a great diversity of fauna and flora, one of its assets being the traditional constructions and dry-stone walls. They include plant and animal species that are protected or in danger of extinction, such as the European fan palm (*Chamaerops humilis*), bats and eagles.

### 3. Functions and Values of the landscape

The dry-stone landscape of the Terres de l’Ebre is considered a Landscape of Special Attention by the Generalitat de Catalunya Catalan Government, due to its territorial range (65% of the territory), and for the fact of having a high productive, cultural and aesthetic value that forms part of the identity, the sense of belonging to a place and the landscape imagery of the county (Observatori, 2010).

The transformation of this landscape in the area under study has been minimal, a sign of its resilience as a result of the pact of balance between humans and nature. Characteristics of this current place are:

#### 3.1. Elements in the landscape

- The Cardó-Boix and Tivissa mountains dominate the plain, which extends to the coastline with the river Ebro delta beyond. The closest mountain is the Tossal de Montagut (394 m), the Cathar pass between the Ebro and the Mediterranean, and the backdrop to the lowlands (Observatori, 2010).

These rocky mountains are a reference to the landscape and memory of the place, because each mountain has a symbolic meaning that anchors us to the territory. They are a sacred place and the home to return to. To keep their silhouette clear is to preserve the memory of the place.

- The ravines of La Figuera de l'Hora and Les Bordes, El Sabre and L'Arreversador, and L'Estany and Pixavaques crisscross the territory. These ravines are almost always dry and force the road and the paths to wind between their straight sections across the plain.

- On the cultivated terraces, hundred-year-old carob and olive trees, planted in regular, orderly layouts by wise minds, produce an oil with a delicate balance of species and flavours, their *rails* (roots) exposed in a dry, windy terrain. A continuous horizontal plane, a few metres above the ground, that of their canopies, protects the farmers and bind them to the earth. They have a high aesthetic value thanks to the order of their planting, the lines that define the dry-stone walls, and the contrast of colours (Observatori, 2010).

- This cultivated plain is the visual link between the environmental unities of mountain and coast, and has proven its value as a defence against fire.

### 3.2. Territorial structure

- The old N-340 road (popularly known as the Via Augusta), structures the territory, following the same layout in the plans drawn during the Mancomunitat of Catalunya (1914 c.), and in the Cadastre of 1931 c. Narrow paths to either side, between stone walls, follow the topography, closing circular circuits, and crossing along the territory when they become paths for livestock: *pasos de ligallo*, *veredas* and *cordeles*. The superimposition to current plans shows a structure of paths in balance with the landscape, valid then and still in use today.

- A land division that forms an attractive Mediterranean agro-environmental mosaic based on a small plot (over 40% are less than 2 Ha) called *lo tros* (a size), that can be worked by a family, its

boundaries marked by dry-stone walls. Unlike those of other areas, this land division has been consolidated and increased.

- The landscape places no limits to the passage of people or animals, or to the views that extend into the distance, beneath the canopy of olive and carob trees. The perception of a unitary space underscores the sense of belonging to a community, of shared property and joint laws.



Fig. 2. Historic map from the census of properties of L'Ametlla de Mar (Source: Authors, 2021)

- The dry-stone walls organize the land in horizontal terraces to retain the scant rain and prevent the soil from being washed away. Their layouts shape the topography with their pure geometry: straight and staggered lines, sinuous curves. They were built by the peasant farmers, some of whom specialized in the profession of *marger*, or dry-stone wall builder.

There are different types of walls: The *marges*, one-sided walls, are built to retain earth. The two-sided *parets* mark the boundaries of the property and paths, and, within a property, form stone storehouses, as much as 2-3 metres wide with considerable heights. These walls also provide the basis for shelters for hunters, huts or bee hives, housed in spaces built inside them. They may integrate steps, and gateways or *portells* when they cross a path.

They are built using simple practices of loading and bonding, without *cues de sargantana* (lizard tails), that use all formats of stone. The role of the reble, or infill, is fundamental, often carried out by children and women, and consists of introducing small stones mixed with gravel, sand and mud into the centre-rear and upper part of the wall, which, due to friction and solidification, helps to strengthen it. Crowning the wall with a *rastell*, large stones placed on edge from side to side of the wall, with variable depths for better bonding, is specific to this area.



Fig. 3. Dry-stone wall (Source: Anna Martínez, 2021)

### 3.3. Built elements: Character, Typologies, Forms

The constructions of the place are smaller in size, but no less serviceable or lacking in architectural quality. Simple built elements form organic complexes, with close relations and shared geometries. Some of the elements, with a high level of abstraction, are specific to this county.

The *mas* is the small, permanently inhabited farmhouse. It takes the name of the place, or the owner's name or nickname: Mas Pons, Mas del Metge, Cal Català, Mas de Molinos, El Bon Mosso, El Ventero or La Peixo. The central volume, facing south, has one or two floors, with an Arabic-tiled shed or ridge roof and doors made of painted wooden boards, surrounded by auxiliary buildings: sties and farrowing pens, haylofts, workers' homes, circular threshing floors, porches or shelters, cisterns and bread ovens. Masia Pons is an exception in this area for its size and importance, a vestige of an old farmstead that stands beside the N-340 road.



Fig. 4. Mas del Metge, El Perelló (Source: Anna Martínez, 2021)

The *caseta de tros* or *tortosina* is a small building that offered shelter to the family during sustained periods of work, so they did not have to go back and forth every day. South-facing, its position in the property varies, though it is generally central with a rocky foundation; on sloping farms they stand on the lower terraces, working with gravity for harvesting.

The basic typology specific to these counties is the rectangular floor plan, with a steeply sloping shed roof, a central door under a timber lintel in the side façade, protected from the wind, and a small square opening for the loft. It is built of clay masonry, a wooden log structure, reed-mesh ceilings, a ceramic tile roof, and clay or mortar rendering. On the inside, which may be white-washed, the floor is compacted earth or rock, with a fireplace with a hood and chimney in the corner, at the lowest end.

The same typological solution, unvarying, extends throughout the area, one per plot. Its characteristics are minimum dimensions, harmonious lines and proportions, pure geometry, proportioned openings in the façade, and a simple and exquisite sense of form.

Another typology, of more recent tradition, is the *caseta de volta*, popular at the time of the railways (García Lisón & Zaragoza, 1983), covered with a lengthwise barrel vault. Combinations of the two typologies serve to enlarge the basic small house.

Rainwater is collected via a system of special ceramic pieces leading to a cistern at the side, covered by a barrel vault. A small water tank is built against the façade, next to the door.

In the space in front of the house there is an olive or carob tree at a short distance, with a low circular wall that contains the roots. This marks out a protected domestic space which the family uses to celebrate, rest and eat, “as is the tradition, a house for working, celebrating and meeting” (GenCat, 2014).



Fig. 5. Caseta del tros (Source: Anna Martínez, 2021)

There are also separate cisterns on the plot, the cocós or aljubs, used to supply water for livestock. They were situated according to natural hollows in the rocky crust, or wells were dug to collect runoff water. They are enclosed with walls and vaulted ceilings or corbel vaults. An earthenware jug was left to offer water to passers-by.



Fig. 6. A cistern covered by ceramic vault (Source: Anna Martínez, 2021)

Other separate constructions are the folds and the stone huts. The large Corral de Molinos still stands in the centre of the area, at the foot of the Arrevensador path. The huts, with a circular or square floor plan, and a vault or corbel vault of stone and clay, are built into edge walls, or free-standing. They were used to keep tools in, as drying sheds, and for temporary accommodation.

This area, beyond La Figuera de l’Hora, or the One-hour Fig Tree (the time needed to get to the town of El Perelló), has few huts compared to the large number of *casetes* it has.



Fig. 7. An *aljub* made by dry-stone walls and vault (Source: Anna Martínez, 2021)

#### 4. Possible shared actions for protection of anonymous architecture

Recording this landscape structure and its anonymous architecture (drawing it, photographing it, understanding it) is the first step to appreciating its value, making it visible, and promoting its maintenance as a result of the appreciation of its people. There are still steps in the project to be taken, in recording architectural elements (walls and constructions), dating them chronologically and, for example, determining the geographical extension of the *tortosina* type and the existence of possible documents with guidelines for its construction.

This architecture of the landscape, in the logic of its implementation and constructive solutions, must continue to be useful and appropriate for its inhabitants and their current ways of life.

The ultimate aim of the project is to provide the owners, local councils and associations, with simple tools to maintain this living tradition (Coderch, 1961).

The following actions are proposed:

- To extend the practice of dry-stone construction. Specific training courses to recover the trade, but also workshops to teach owners the basic principles to recover terraces and constructions. An initial workshop was carried out in collaboration with L’Ametlla de Mar Council and

the Cova de la Masa association during Dry-stone Week 2021 (Col·labora per paisatge, 2021).

- To provide architectural guidelines for measurements and forms to transform the houses and adapt them to current uses and parameters, maintaining the traditional laws of implantation, scale, volumetric fragmentation, geometry, etc.
- To incorporate and use traditional heating and cooling systems (thermal inertia, ventilation and breathability), lighting, sun protection, natural building materials (stone, ceramics, mortars, and lime and clay rendering), and to recover water collection circuits.
- To organize outreach actions to promote the value of this landscape, its balance with nature, in order to maintain and be aware of the fragility of this living system.

## 5. Final reflection and harsh reality

What began 300 years ago with a collective transformation of the territory, through the achievement of individual freedom, maintaining patterns of behaviour and construction adapted to the place, and facilitated by a prevailing legal regime, could now, in the renewal energies implementation, be repeated by means of the dissemination of knowledge about the place, and an fair distribution of public funds.

On the contrary, a company from outside the territory has proposed the installation, in the area described, of a macro-wind farm, comprising 10 wind turbines located to either side of the N-340 road, each 180 metres high, 3.6 MW and 115.5 dB, between the two existing HV lines. In a diameter of 500 m around the tower, each turbine affects an average of 10 casetes or masos that are inhabited or in use. The over 7km of tracks built in the mosaic of farmland to access the blades of the turbines, each 64m long, the assembly platforms at the foot of each turbine, each 1Ha, the foundations and the troughs to house cabling, the power plant and the new evacuation section and its connections have been designed with no

attention to the layout of the territory, its history, nor its inhabitants. If this project, like others in our country, goes ahead, it will turn a rural landscape, community and human-scale built area into a noisy, private and industrial estate, made for machines, and possibly deserted, empty of people. In short, we are facing the destruction of a historical heritage site and, with it, part of our memory, our collective imagination and our identity.



Fig. 8. Superposition of the wind farm project over the rural landscape (Source: Authors, 2021)

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