

STRAW-BUILDING

SITUATION

Cañada Real is situated on the Cañada Real Galiana, one of the traditional cattle roads running from La Rioja to Ciudad Real and close to the M50 motorway, Madrid's third outer ring road. It was created in the Modern Age and as it was property of the State building was prohibited.

60s-70s

The modification of the law allowed:

- _ Vegetable gardens along the route.
- _ Small houses for the storage of farming tools and for the relaxing of the migrating shepherds.

CURRENT SITUATION

The village of Royal Cattle Route of Madrid:

- _ Succession of illegal constructions and shanties along 15km.
- _ It passes for the following municipalities: San Fernando de Henares, Coslada, Rivas Vaciamadrid, Madrid and Getafe.
- _ It a population of 8628
- _ Nowadays there is the possibility of legalizing certain housings that could be integrated inside the urban space, do not generate problems of delinquency or insalubrity or do not obstruct the foreseen urban developments.



STRAW-BUILDING

PROPOSAL

The idea is to regenerate this space dominated by the insalubrity, the illegal constructions and the conflicts. For it, it is necessary to begin creating a solid base of knowledge and self-sufficiency. Our idea is based on both the energetic and economic saving that take on a primordial role.

_ Vegetable gardens: _ Self-sufficiency

_ Planting wide fields of wheat will be important, since the straw that these fields produce is more recommendable for the construction of housings than the one that the fields of rice, rye...produce.

_ Prefabricated houses, where inhabitants themselves take part in the construction:

_ Wood modules with supporting capacity with the following measures:

5.84*3*0.42; 4.84*3*0.42; 6.84*3*0.42 m.

_ Straw-bales are being used as insulating material with the following properties:

_ Resistance to the fire F90

_ Material of construction B2 inflammable normal

_ Conductivity 0.0456W/mk

It can be built and closed with straw-bales habitable properties of up to two floors. Ideal for the autobuilder + it saves the cost of material.

MILDEW: in order that straw does not happen to use with <15 % dampness, interior barrier steam and exterior surface that allows the dampness cross in order that the condensation goes out.



STRAW-BUILDING

PLASTERING: dried rapid + thin layers. In very thick plasterings the first layers have to be dry before applying the ending plastering. Advisable to use plastering completion of organic matter (just land and sand for example).

BALES OF STRAW: the bales of straw can weigh very much, but getting small bales and moving them can influence very much in the final cost of the construction. It is better to use round bales, to unroll them and rebale with a small baling machine. Layers of 10cm of thickness are used, joined and stick with ropes. The measures we will use (42cm*50-120cm*32-35cm).

Inside the systems of self-supplying we will use the GEOTHERMIC: horizontal capturing (50*60cm) serves for cold and heat and supposes an energetic saving of 70%.

BUDGET

	amount €
<i>budget km² = 37400m²</i>	
01 PREVIOUS WORK	436
02 DEMOLITIONS	182717.18
03 EXCAVATIONS AND LAND PREPARATION	60000
04 CONTAINMENT AND FOUNDATIONS	45000
05 STRUCTURE	133000
06 FACADE	207500
07 COVER	6200
08 PARTITIONS	52723.74
09 COATING	31680
10 INSTALLATIONS	182571.82
11 QUALITY CONTROL	4500
12 HEALTH AND SAFETY	2500
TOTAL MATERIAL EXECUTION 908828.74€	
13% Overheads.....	118147.736€
6% Industrial Profit.....	54529.724€
TOTAL CONTRACTUAL BUDGET 1081506.2€	
16% IVA	173040.992€
GENERAL TOTAL BUDGET 12545470192€	

Base Price of Basque Government 2008

