DESCRIPTIVE MEMORY

A historical study.

1.1 Location and environment.

1.1.1 Location.

The country house that is going to be reformed, which is called "Can Puig", is located in Palafolls, town that belongs to “El Maresme”, province of Barcelona. The nearest towns to Palafolls are: Tordera, Malgrat and Blanes.

Palafolls’ surface is of 16,20 km² and there are about 251 inhabitants per km².
1.1.2 Geography

Relief:

Palafolls is located to the northeastern border in the Maresme region (Barcelona) by Tordera limit of frontier with the region of La Selva and while the province of Girona.

The Municipal term is 3.16 km², and it’s 16 m above the sea level. The first of December of 2006 population was 8,102 inhabitants. The most popular occupation in Palafoll is the tourism industry. The central core is called Ferreries and two of the main neighborhoods are Sta. Maria and St, Lluís. Palafolls also has the population of St. Genís Palafolls. The urbanizations of Mas Reixac and Mas Carbó are also considered Palafolls.

In relation to the geography there are two different well-defined part: The West one which limits with two valleys (St. Genís and Vallplana), just where the mountains Montnegre finish.

On both sides of the mountain facing the castle are in Tordera and with little space, a neighborhood of small houses id’escàs cultivation. And towards However, much more extensive and gently sloping, although the location of the village of Palafolls serves all derivations of ancient neighborhoods and new neighborhoods, ie, where today there are all very strong population.

The plane made the course of ongoing work by thousands of years the river and its tributaries, dragging the decomposition of the sandstone mountains of Montseny and William, who
Proposal of reform and change of use of the farmhouse "Can Puig" in Palafolls

n’arrosseguen without difficulties in making many huge and unique sand and saulons the plain. Some stores a large reserve aquifer has created a delta fertilíssim paper concludes with an excellent and unique sand.

**Weather:**

It has got a Mediterranean coast climate that encompasses part of the litoral zone and pre-littoral of Catalonia, the coastal and pre-litoral mountain in great part which prevents this type of climate region progresses towards the inside string. The main characteristic climate is Mediterranean coast winter softness to it of a band you rarely freezes years pass without various degrees as thermometer drops, the other scratch them and average temperatures of months the cold year (December, January and February) is located between the 9 °C.

The average summer temperatures are located between them the 24-25 °C with strong environmental and humidity (muggy) But with marinated to do to the average of them not reaching the maximum temperature 30 °C. The rainfall irregularity of them is typical Mediterranean climate.
Vegetation:

The Maresme region has a spontaneous vegetation that is basically established in corks and oak groves. In the upper slopes of the mountains of the Montnegre them in areas and shadows prevail them oak see oak Africa. The use is located Holm oaks, cork oaks, oaks and in the Montnegre, chestnut plantations.

In other areas we can find pine interspersed with heather and scrub oaks. Not so gradually, most land is occupied by crops, housing estates, and all that and be placed in areas high up

1.2 Historical evolution.

Palafolls’ origin is Roman. These deal in our country and colonized it in a rational way, they stumble upon a natural area: the river Tordera driveway to finally penetrate inside. At the mouth of it at the right bank of land, a plain full of lakes that are connected with escorrancs reaching the sea. All this caused by intermittent floods that periodically broke the banks and flood lands in the flood • pulled by the same river. Just saw a spot "lakes blowers" - Pallu Follis. So forever christened the site of the Palais-fucks current.

It is interesting to point out that Palafolls’ castle is considered one of the most important Medieval Castle of Catalunya.. Since few decades ago, a group that exists s’ in charge of employment maintenance and restoration of them is damaged Fort in December and then restores the chapel where you have an image of the Mother God Tordera. As regards out to events and festivals Palafolls lawsuits is not known is that many, unless you typical festivals of them.
2. Analysis of the current been "Can Puig (current state).

The house located at Palafolls Can Puig is in the Gothic center of the Ferreries. It was built around 1900.

Its use has been provided only for private use during 95 years, less in the years 1936-1939 during a period that goes be used as the central Red Spanish civil war. Nowadays nobody lives in the house as it is not possible having in mind its bad conditions.

2.1 Distribution:

The house with an almost square geometry consists of three floors, where the first and second are equal with a floor area of 210.83 square meters and floor with a floor area of 320.47 square meters. The distribution in the three plants are very similar, each floor consists of three rectangular buildings where the middle contains a large room with access to the stairwell and the sides are divided into different rooms according to the plant. On the ground floor of the aisles is divided by a kitchen and a dining room and one for an office and a room that gives access to parking and the old stables, the parking and the pictures are making increased surface area offloor on the other.
On first floor they with equal lateral naves are divided by two self-catering and second floor same each division have not any kind.

Services distributed in plants, two plants and are below the other first formed by auxiliary constructions in the subsequent crane breaking completely with the geometry of the farmhouse. As part of the services that occupy them as tables and the parking will not be built in the time that will make the house is else is done later as an addition.
2.2 Structure:

The roof structure according to the different characteristics of each plant is: In the nave floor is formed by an arc-type carpanell throughout its length and the aisles were well when first arch carpanell but are currently on slabs of metal beams in the vaulted Catalan, lights 4.75 m and 0.75 m of interest, where the spaces between the beams (entrebigat) to turn the plans were installed bricks touching each other through the depth and space above the vaults Living in order to make the upper floor were filled with light material (mortar with pieces of pottery) and once there were arranged horizontally on the top floor pavement.

In relation to the first floor’s structure, the nave roof and the sides of them are with unidirectional and in floor slabs, but in this case beams are riding them. Both of them beams and floor slabs supported by first floor facade and an end to the other are to them dondeee of work 15 cm thick which separated and ships, a fact that we allow these partitions unchanged.

The last wrought inclined to form the roof with two waters to 30% slope, formed by tiles and ceramic tiles backed by riding all purposes might crop supported by beams and rakes. Is the roof generally been found in good Conserving tea but the disadvantage that there have waterproof, which made for s’ must modify.

The garage roof and floor panels them is the same way but with built in slope to 22% from a single water
The structure of the services is one-way first floor with wrought metal beams and “entrebigat”, Catalan vault on an edge to support crane and the other part is in a cantilever, 80 m reinforced metal profiles and Subtract it which supports them dondeee 15 cm floor.

The scales in all the sections are built to typical Catalan traditional construction that consisted airfare in space by a masterly bricks placed flat fixed by plaster around and had a quick scrub.
2.3 Facilities:

The part of the facilities, apart from those that were there were very poor and very old are also in very poor condition.

The water was obtained from a well, and Don was extracted using a water pump led to tanks that were stored on a second floor by gravity and went to places of service. The hot water was through a butane gas boiler located on the landing of the first floor level.

Rainwater is collected by subsequent canal the ridge of the facade were reused; entered the ducts to roof lowered by crane subsequent where the second to lead the water plant tanks. Nowadays the water that can be used in the house comes from storms.
The raw wastewater was conducted in a septic tank that was outside the house next to the bathroom. Based on the needs or usually did once a year cleaning and maintenance of septic tank for subsequent reuse.

The electrical installation is a very simple system. It is an all electric circuit which gives energy to the whole house.

There is no natural gas installation man since the kitchen and the hot water used to work with butane gas.

The word Pathology comes from the Greek root pathos and logos. In terms of constructing this word means: the science that studies the problems that can appear in a building and its corresponding ways of acting.

Of all possible Pathologies that a building can suffer, those which are related to foundations are more difficult to repair and are very expensive too. To that end, have great social impact, which makes obvious the month: for service, because they suggest an alteration of its own complexity and may use property because I usually break even strong neighbouring powers involving public i.

For such bond proposal out to REFORM inspection is performed at the farmhouse with his BEEN detemine the end, giving more importance to the load as the walls, ceilings or roof structural elements.

As to the inspection result I picked up an injury that I grouped in series cards with the following information.

The injury-Location : House Place them where injury is found. Are indicated in the map with texture, line, or circle them affected areas.

- Picture: Photography which is perfectly reflects injury.

- Description: Describe the injury is such as voice, Unnoticed analysis of causes them than the cause.

- Cause: Describe the cause that it has been injured, whether directly or indirectly, (i) the his if evolution can not be repaired.

- Diagnosis: Analyze and assess the injury severity as mild, moderate, or severe and indicate if your s’ you have to Act or not. In case you intervene, which we will indicate where or whether the cause being directly to the injury.

- Performance: Solutions have taken much for them to cause them injury.

- Maintenance: If you need maintenance, define how to do - and what the frequency.
3.1. Settlement of the rear

**Description:** In the two side walls you can see some cracks of a certain width in some sections, ranging from roof to ground (the entire height of the building) and located in the same place on each facade.

**CAUSE:** These cracks occurred in the settlement of the foundation of the front later. In this injury unless they provide a repair because the cause to the collapse of the façade and part of the side.

**Diagnosis:** Analyzing the injury occurred and that could be produced, this will be valued as a serious injury. The action would directly cause (the rear bases) and then repair the cracks that have occurred to prevent water leaks and possible landslides.

**Performance:** The solution would be to perform a emphasizes the fundamentals of the front and rear part of the side for the ladies 50cm. Having acted in the cause solucionariem lesions (cracks) using a galvanized steel clamps.

**Maintenance:** In the solutions made not to carry out any maintenance. "Description of the construction processes in the" 2-pathologies "constructive memory"
3.2 Collapse of the roof of ground floor

**Description:** As seen in the photograph the arc of the roof floor of the nave has been acute since the long shore can reach collapse.

**Cause:** The beginning of the collapse was caused because the bow can be transmitted forces were absorbed by the ends and arches that were in the aisles, but as I mentioned in paragraph structure of memory, aquets arches were replaced by slabs which affected the distribution of forces of the arch.

**Diagnosis:** Analyzing the injuries that might occur (the collapse wrought) that is valued as a serious injury. The performance would be directly in the lesion (ground floor ceiling) since the source was replaced by slabs of the vaults.

**Performance:** The solution can be forged a completely new, so there will be a replacement of the arch formed by a unidirectional fly with the Catalan, as was done in the aisles.

**Maintenance:** In the solutions made not to carry out any maintenance.

*Description of construction processes in the "2-pathologies" constructive memory*
3.3- Insolation of the roof

**Description:** A sloping roof formed by two water element of support beams which are above their wooden rakes are some that support ceramic tiles to finally put it in dry tiles.

**Cause:** The cover from the standpoint of conservation is in very good condition, but regarding to the construction system used, the face does not meet acoustic and thermal isolation.

**Diagnosis:** As for the gravity would be slightly longer poses no danger of collapse or structural, but to use it as such service does not meet the requirements of sound and thermal insulation currently present in some areas of water leaks.

**Performance:** To know the regulations and eliminate water leaks, s'optarà system to put the plates of "ONDULINE" tile below.

**Maintenance:** Because of the constant aggression of the environment over the surface, regular maintenance is required to pay a cover. When accumulated leaves, soil or other elements that drag the wind and deposited on the roofs, can clog storm drains, so it should make at least two annual visits to the roof, one after the rainy season in purpose of repairing the water and winds arise.

*Description of construction processes in the "2-pathologies" constructive memory*
3.4 Insulating exterior walls

**Description:** The front walls are 45cm thick brick 28x13.5x5cm solid, yet their thickness does not have any privacy.

**Cause:** As in the previous case of the roof, from the standpoint of conservation are in good condition within the area of cracks in the section 3.1. But as regards the construction system used, the face does not meet acoustic and thermal isolation.

**Diagnosis:** As for the gravity would be slightly longer poses no danger of collapse or structural, but to give a service as such use does not meet the requirements of sound and thermal insulation.

**Performance:** To meet the regulations and that its interior may be habitable, s'optarà trasdosat to put a plate with plasterboard systems "PLADUR.

**Maintenance:** In the solutions made not to carry out any maintenance. Just in case you damage some of the plasterboard panels by a blow or impact, then there will be only the replacement of the plate damaged.

*Description of construction processes in the "2-pathologies" constructive memory*
4 - Project Description (Proposal).

4.1 Purpose of the project.

The project main aims are: to reform the house "Can Puig" and to change its usage into a "casa rural" with 8 rooms and equipment relevant to this type of tourism. It has been done trying to integrate the traditional image that characterizes the historical centre of town and trying to keep the original appearance of the house.

4.2 - Relation with the environment

The house is located in the perimeter Palafolls urbanization. It is surrounded by iron streets, their access is through a path that leaves the street below and flows into the house. The main facade is facing in a south-easterly direction. In the south-eastern part of the house is Palafolls with its old town and other developments. In the north there are mountains where there is the famous castle.

The surrounding area in general, excepting the mountain where is the castle, is full of fields and orchards. In the photo below you can see both the green and simply close the camps and the bottom pieces of the mountain castle.

Views from one bedroom’s window.

Views from the main entrance of the garden.
There are countless ways among the mountains near the centre for hiking. One thing to note is that the location of the house allows the direct contact with nature. From the home and through the carriage roads to access fields there are many combinations of trails for hiking, you can even walk or bike to the same Castle of Palafolls without passing through any road with car traffic.

4.3-Geometry of the building.

The exterior of the house, geometrically, is a square of three floors with a roof of two on the ground floor where water is added to one side, throughout its length, a rectangle, where there will be room versatile, with a water cover. The openings on the facades are equal in all plants but these were decreased in surface hole to plant size that is uploaded. The northwest face of the square is another square adhered with much smaller dimensions. The interior is divided in the same way as it was divided when it was built, as it is explained in section "2.1- Distribution", where each square on each floor is clearly divided into three nearly equal rectangles. In the lower ground floor to be should add a fourth rectangle (multipurpose room).
4.4- Zoning of the house.

The zoning of the house was divided according to the original distribution, keeping the central premises of each floor with lounges and sides for different uses as it is defined in the following functional program:

**Ground floor**: nave: living room, staircase and lift. 
aisles: dining room, kitchen, reception, two bathrooms adapted access to the multipurpose room, multipurpose room divided into two distinct areas.

**First Floor**: nave: lounge, staircase and lift. 
aisles: four complete rooms throughout the floor.

**Second floor**: nave: living room, staircase and elevator. 
aisles: four complete rooms throughout the floor with a mezzanine on each.
Proposta de reforma i canvi d’ús de la masia “Can Puig” a Palafolls

PLANTA PRIMERA

PLANTA SEGONA
4.4.1-Distribution:

The distribution, as I mentioned before, is very similar to the original one. In the main room was left free keeping an open ward with appropriate furniture to sit and relax. At the right side of the main room there is a room for all guests and the kitchen with all the appropriate equipment. At the left side of main nave there are a small reception room where you can leave your luggage when you reach or leave the room empty. There are also two services and a room adapted for disabled access a multipurpose room divided into two different areas according to the activity carried out. At the end of the nave there is the stairwell and the lift to access the rest of the plants.

On the first floor accessed via stairs or lift, in the nave there is a big living on the ground floor and two rooms on the sides. Rooms 1 and 2 are very similar with a small difference between surfaces with a bathroom built into each. Rooms 3 and 4 are very different because the 4 is because of greater surface is adapted for disabled guests.

On the second floor, a deck can be found. We can also find a living room much like the others but with a pool table, and as in the aisles with a first floor room. The four rooms on the ground are very similar with small differences between these surfaces, all with bathrooms built in the rooms. These rooms are built around mezzanine to put it in principle a single bed but can be modified according to customer needs.

Here is the useful surface of each room, separate plants, as proposed to be conducted:

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4.4.2-Structure:

In virtually the entire house structure is the same as the current state that are less in some cases:

- Ceiling floor of nave
- Forged mezzanine.
- Cover.

The roof of the nave floor of the vault will be replaced by a new forged a unidirectional beam of wood in the central premises of other plants. This substitution will be made as explained in section "3 - Study of diseases" that refers to "l’esfondrament" the ground floor ceiling.

The mezzanine floors of the second floor rooms will be made through the walls of bathrooms as support element comprising plasterboard panels supported by a self-supporting structure of steel beams. The item that will feature both wrought and pavement will be constituted by a section of wood 12x4cm “encadellats” supported and fixed to the aforementioned self-supporting walls.
Regarding the structure of the roof there will be no change although it will reform to isolate it. The insulation system to be carried out with plates of "Onduline" tile below; this reform is also explained in detail in the "Study of 3-pathologies" which refers to the insulation of the roof.
4.5-Implementation of CTE. Regulations.

Regarding the rules, first of all, I was qualified to investigate how the land in question by type of system, type of soil and other possible qualifications. So I went to the website of the municipality of Palafolls where I found only the zoning map.

The next photo is a cut of the map covering the area that interested me.

For this project I had problems due to lack of information regarding regulations. One of the main things that had to be clear is the municipal regulations to be applied according to the land of ground, etc..

The municipal regulations deal with only isolated single-family homes, as most existing homes in the village. The regulations don’t deal with any information related to tourism, or any installation public policy.

For this reason, I concluded that the Code should only apply technical building I found only one document relating to rural tourism is the "Decree 313/2006 of 25 July regulating the rural tourism establishments. You can see all existing municipal regulations and Decree 313/2006 Annex.

Since this is an old building is considered part of the architectural heritage of the town, the reform attempt at all times maintaining the original aesthetics.

For the realization of this project of reform and change of use were taken into account most of the technical sections of the code.
4.6 Plan, health and security.

To carried out in a safe and effective work of reform, I felt it appropriate to do the following safety plan the needs of the project: "Implantació de l’obra”

- Signage:
Before the start of work must have services and facilities necessary to facilitate the correct execution of the work in safe conditions. The contractor will use a galvanized mesh fence on concrete footers. "That fence is rigid enough. At the same it will place a gateway for traffic to the work with a width of 4m. and / or other pedestrians by 1m. both are marked accordingly.

The signal will be necessary risks:
- Traffic signs: Stop, and out of vehicles allowed to park. SIGNS OF-rich electric risk, falling objects.
- Warning signs: the forbidden step beyond the work of any person, prohibited fire, compulsory helmet use.
- Illuminated signs: facilities with bright beacons lit at night in areas close to the path tangent.

Hygiene facilities and services:
The workplace must have the facilities for sanitation and first aid if necessary, meeting the conditions established in the study of S + S and in all cases:
- Provide a prefabricated form for the work at least 2 people for health services.
- It is recommended that workers have an area of 2m² per worker.
- The ceiling height must be at least 2.30 m.
- The services must be in good order and cleanliness in order to be used by all personnel who work the work. In this sense, the contractor provides for the use of:
- Workers have company vehicle to move if necessary. It is not necessary to be the location of the work room within the village.

Area gatherings of materials:
Its good location specified in the implementation plan of the work and any time we do not interfere with traffic or production process of the work.
In the manipulation of materials collected by imbalance or vibration coming.
In the materials handling workers gathered using mandatory helmet, gloves and suitable footwear.

Temporary electrical installations:
The temporary electrical installation is located ad'interior find the work and work inside a cabinet door with metal and format required under the scheme.

Detection of hazards in the work.

Detection of fire hazards in the work:
Whenever you work in the presence of volatile flammable substances os'utilitzin flame shall be prohibited smoking and taking the jobs will be an appropriate fire extinguisher ready to use.
Detection of risks of hygiene of work:
If noise is derived from any of the jobs, often exceed 80 dB (A) or a continuous basis is 70 dB (A) used hearing protection. Works where dust occurs, the two systems accepted as additional preventive measure will be: water with water without making mud and / or draw with mechanical dust produced.

Collective protection
Tubular scaffolding:
Inevitably be placed railings from 2 m. height. Also be required to place the work on all platforms used in different height of the scaffolding. This will handrail 90 cm. high. Supports strong will and adequate resistance to compression in its lower base. When used in such a way that can be accessed from several points of the scaffold. Assembling and dismantling used safety belts. We placed nets and tarpaulins when there is risk of particle emission on personal or sidewalks. The platform will work minimum of 60 cm. wide slip.
The distance between the walls and the scaffolding will be more than 45 cm.

Ventilation and lighting:
The work surface a number of account openings abroad to ensure proper ventilation. Must be eliminated quickly with all deposit any debris that could cause risks for health workers to contamination of the air they breathe. In the workplace specific focus used phones, portable protective against shock.
Barran protection:
Be placed in perimeter wrought.
The minimum resistance will be 150 kg / ml, using rails of 90 cm. Railing buffer to 45 cm. Base and 14 cm. Do not use ropes or belts sticks. The railing will be stiff. In areas used for unloading materials systems that do not pose a risk of falling staff.

Roads and outputs:
The exterior doors are always clean out any obstacle in order to evacuate, people work quickly if necessary. The emergency doors open outwards and shall not be closed, and anyone who needs to use them in an emergency can easily open them.
Privacy horizontal holes:
Will Wood, network, mesh, etc ... and not allow the fall of persons and objects, this is solidly established.
The projected horizontal holes on forged to allow the passage of installation • Facilities, pitchforks ... will be protected so that there occurs a person's foot and does not pose obstacles to workers. Collection of debris: Should be watered before the rubble of their maintenance to prevent the formation of dust, but without causing dam.
Individual Protection

Protective equipment used in the work:

All protective equipment shall be properly certified according to CE Harmonised standards. The warehouse building will be a permanent reserve protective equipment, so they can guarantee supply to all staff without causing reasonably lack thereof. This provision should take into account the rotation of personnel, equipment life and expiration date among others.

Protection of head:
Safety helmet approved for everyone including visitors to the work involved. Hearing protectors for those jobs with higher noise levels of 80 dB (A). Goggles and crash pulse. Respiratory mask to filter dust thick self. Screen protections particles.

Body Protection:
Work clothes, according to convention, which in any case must be adjusted, long sleeves, long pants and light colored cotton.

Waterproof to work outside in adverse weather conditions. Seat belt height for work. Belt vibration machines for drivers. Protection of the upper extremities: Rubber gloves to work with cement or derivatives. Leather gloves to protect your hands during mechanical handling of materials are going to be needed. Protection of lower extremities: Safety boots with reinforced toe and staff for jobs of industry structure and palette. Bates up to work in rubber wet lands or where splashing water can receive and mortar.