

## "Fornella one Earth 2030"

A pilot project, applied to a "cluster" of 7 mobile homes, which aims to establish new standards of sustainable hospitality based on today's "best available practice" and included in a process of continuous improvement, in compliance with the criteria of the "Ecocamping" certification. The project wants to offer a new inclusive and sustainable open air holiday experience , which reflects the values of environmental responsibility, wellness and attention to the well-being of guests.



We have taken the following 9 steps with the aim of combining living comfort and "open air" experience in a framework of sustainable awareness and tourist satisfaction :

### 1- Design and research of high-performance architectural and construction solutions, durable and modifiable over time:



- The surface / volume ratio of the Mobile Homes has been carefully evaluated to ensure the best possible energy efficiency combined with high standards of comfort and livability. We opted for a surface of 34.5 square meters (860x400 cm) and a configuration for 4 people, who enjoy over 8 square meters per person to which 22 square meters of covered terrace add.
- This sizing allows both the positioning of an adequate surface of photovoltaic panels and the control of climatic comfort inside the unit, through a single Daikin heat pump system with a power of 12000 BTU; wall applied static control and set point blocking functionality.
- The design has clean and essential lines and differs from the standard manufacturer's models for the particular inclination of the roof, chosen according to the best performance of the photovoltaic panels in relation to the angle of solar incidence in the period of main use (May-October).
- The same principles have been adopted for the outdoor terrace.
- The mobile home is designed with particular attention to the possibility of "refurbishing" to improve efficiency over time following the evolution of new technologies and materials.

## 2- Insulation and sun radiation:

- The thermal insulation of the units has been increased and replaced with 8 cm of natural cork inside the ventilated wall, floor and ceiling package, to which 4 cm of natural cork are added as an external coating of vertical elements.
- Particular attention has been paid, through the correct sizing of the covered terrace, the inclination of its roof and the positioning towards the west of wooden sun shields, that also guarantee privacy, to avoid direct solar radiation on the glass surfaces.
- Photovoltaic panels, under which an "air corridor" has been created that allows the heat accumulated on the surface of the roof to be dissipated, also contribute to the mitigation of radiation.



### 3- Energetic independence and efficiency:

- Each unit is equipped with a photovoltaic system of the nominal power of 8.2 Kw, capable of producing, in the geographical context in which we operate, about 8600 Kw/h per year against an estimated consumption of the unit in 180 days of 1080 Kw / h, each unit therefore provides the resort with about 7500 Kw / h per year of electrical power for different uses.
- Individual systems are connected through a centralized inverter to the grid exchange point where a control panel diverts the excess energy primarily to the main sanitary blocks hot water storage systems.
- Each unit is equipped with an electricity meter connected to the PMS for real-time consumption reading and billing .
- The air conditioning system is connected to a selector activated by the key of the entrance door of the unit and to sensors on doors and windows that inhibit it's operation if doors or windows are open or if the main door is locked from the outside.
- The air conditioning system is limited to a cold set point of 22 ° C and a hot set point of 25 ° C that cannot be modified by the customer
- Dishwashers are switched off outside photovoltaic system production hours.
- All electric appliances in the units are class A

### 4- Water saving:

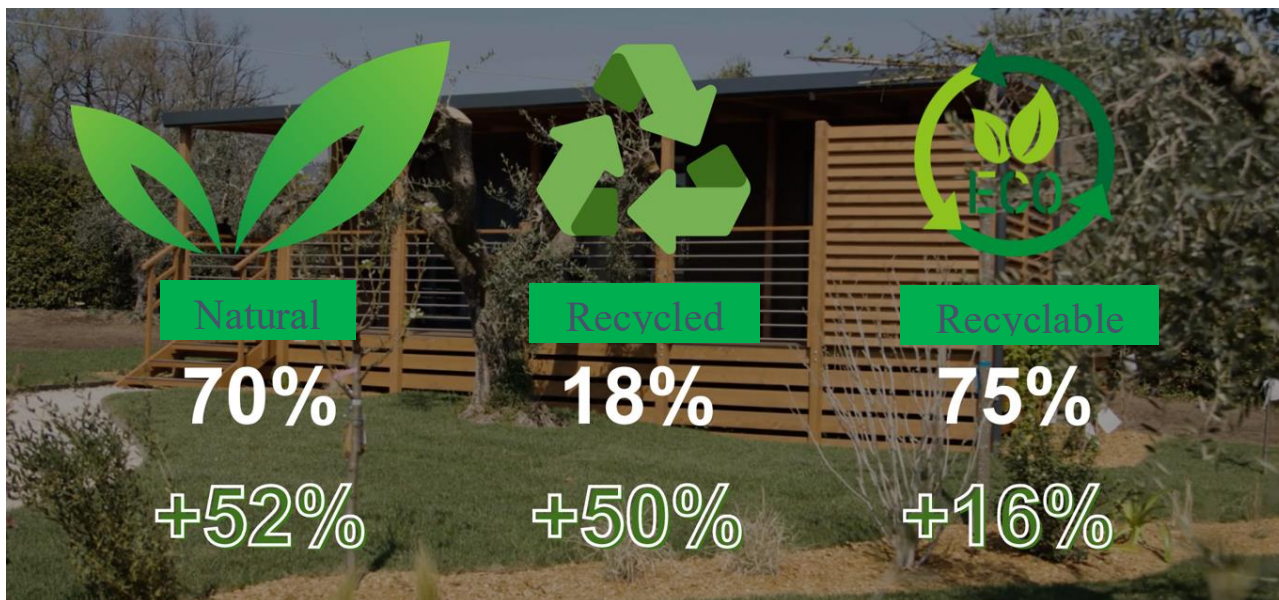
- The shower flow is limited to 9 liters / min, that of the taps to 4 liters / min and toilet output to maximum 6 liters per flush.
- Irrigation of the "cluster" gardens is carried out through a sub-irrigation system that minimizes evaporation losses and is fed through the reuse of backwash water from the filters of the main pool; rain sensors guarantee the shutdown of the system in case of wet weather conditions.



- Water consumption of the cluster is monitored in real time through "Smartvatten" optical readers capable of transmitting data via 5G network.

## 5- Circular economy and waste management:

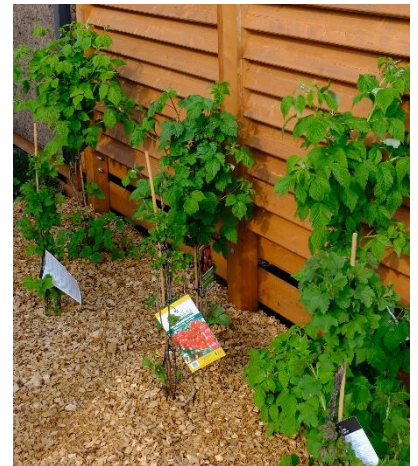
- The installed units can, at the end of their life, if properly treated, guarantee a good contribution rate to circular economy, as indicated in the table below, where the new homes are compared with those previously present in the same location.



- All material used for mulching the garden areas comes from the residues, properly chipped, of vegetation maintenance within the premises of the Resort.
- Waste cycle is managed through the separate collection of Plastic, Paper, Glass, Metal, Organic and general fractions .
- "Door to door" collection is carried out by staff.
- Water for irrigation is derived from the backwash of pool filters.



**6- Choice and design of the botanical and natural context is inspired by the principles of carbonfootprint reduction, resilience and adaptability to climate change. The "food forest" concept and insect well-being are also taken in account through the creation of a balanced micro-ecosystem:**



- The entire surface of the project area is permeable to water and made of natural materials, the "gravelfix" containment system of the access paths is made of 100% recycled plastic.
- Lawn mowing areas are limited to minimize the impact and emissions of maintenance processes, however performed with electrical machinery.
- The Cluster is surrounded by a wild flower meadow to ensure the well-being of pollinating insects; 150 m away, on the neighboring organic farm, 4 beehives have been positioned.
- All the decorative vegetation has been carefully chosen on the basis of water consumption and resilience to climate change, preferring native essences or those typical of Mediterranean environments; The existing olive trees have been preserved.



- Pest and harmful microorganisms control is carried out through organic and natural methods, pesticides and synthetic herbicides are not used throughout the resort.



## 7- Staff Training and Information:

- Staff of the Booking, Reception, Maintenance and Cleaning departments receives specific training on the project and is periodically updated on the data collected and involved in the continuous improvement plan.

## 8- Customer information and awareness:

- Customers are informed, also through brochures, of possible actions to make their holiday more sustainable and of the features of the “Ecolodge” Mobile Homes.
- Customers are involved in achieving sustainable objectives also through rewards related to energy saving.
- A guided welcome is dedicated to Ecolodge Customers, that are accompanied to the unit by a hostess who illustrates all the sustainability features of the structure.



## 9- Data collection and analysis:

- All measurable data useful for calculating the "carbon footprint" are collected and analyzed to look for new possibilities for improvement and implementation of the project.