

RST ECO LODGI IERTO PIRÁMIDES N PATAGONIA ARGEN

ENTINA. WWW.ECOHOSTERIA CHUBUT - PATAGONIA AR

PHOTOS: WWW.ALEAVA.NET

TECHNICAL REPORT OF THE PROJECT.





The origin of the demanding concept that we apply in Del Nomade Eco Lodge is generated simply by the power of observation.

Enveloped by a magnificent natural landscape, extreme weather, austere nature and scarce resources, we decided to build with creativity and projection, knowing that every item we add to the work should serve to maximize efficiency in the consumption of non-renewable resources. We also seek the flexibility to accept installation of innovative concepts to ensure continuous updating of technology, constantly keeping at the forefront of sustainability, with an investment of just 5% more of the total cost of the building site.

New renewable energy resources are appearing constantly and we want to be able to install, add value to the concept and minimize the footprint that our business inevitably generates. We educate and promote the use of these technologies, so that they can be applied to other ventures, private homes, or any building that requires them. A great achievement is that the Puerto Piramide's building code was modified based on sustainability parameters introduced by Del Nómade Eco Lodge. To achieve this goal, we first constructed a building of 400 m2, consisting of a ground floor, first floor and second floor with separate entrance for a private apartment.

The heat balance optimization was the first step to prevent heat loss, which is why we started by building solid walls and large windows all sealed with double glazed (DVH) to avoid unnecessary heat loss and allow the entry of solar energy as light and heat.

The main entrance has a small hall which is designed so that one door is opened first, then the second one, a layout that significantly reduces the entry of outside air into the building. We knew that to achieve a construction with thermal and luminous environments, we have to guarantee to maintain the internal temperature in the range of temperature between 20 and 24 degrees, without unnecessary losses.





To be sustainable we must try to get as many local products as possible, but being in a small isolated destination like Puerto Piramides this was impossible. We made most of the purchases in one place in the country and concentrate them into one shipment to save fuel and unnecessary expense.

An essential detail to the proper operation of the building is the rainwater collection, a basic element for filling the under floor circuits of the heating system and the solar collectors. In this way, we avoid the use of the desalinated water network offered by the town.

We strategically planted twenty climbing plants around the building, so they will grow up and cover the outer surface of the inn. We have trained them around supports, to ensure that there is a gap of an inch between them and the walls, to create an airspace.When fully grown,these climbing plants will provide more protection to the building. We estimate that in three or four years they will cover the total area of the lodge ,except windows, doors and solar collectors. They will thus decrease the effect of reflected radiation that the building generates, it being absorbed by plants for photosynthesis process which would also increase the thermal and acoustic isolation.

FURNITURE AND DECORATION.

For decoration we chose a studio in Buenos Aires, which met the requirements of our concept. The project required them to take a degree in Metropolitan Environmental Management, which took over two years, and they applied this approach to their building and design studio in Buenos Aires.

We decided to paint the inside of the Inn with a light sand colour, in order to promote overall brightness.

The furniture embraced a minimalist design; most of it was built in the mountainous region of Patagonia, by a local carpenter who worked with naturally fallen cypress wood. Even the outer decks were made of dry coihue wood. We ourselves take care of supplying all these woods to guarantee their source. In the rooms bathrooms, bathtubs are designed with a 45 degrees back that offers comfort and reduces the amount of required water for filling. We also promote the concept "short showers."

For the floor, in order to complement the concept and decor, we decided to use a colored coating, also warm sand.



We use 2.0 MM Linoleum, which is ideal for under floor heating, mainly because of its' antistatic and bactericidal characteristics and for its resistance to cigarette burns.

Because of the materials it is made from, this warm floor is considered to be a green floor. With a slightly marbled design, it consists of oxidized and polymerized linseed oil, wood flour, natural pigments and resins; this is bonded onto a jute base and finished with Topshield protective layer, with a reaction to fire Cfl/s1, according to EN 13501-1, average traffic U2s P2. "... they wanted to impart a strong ecological content, so we decided that in addition to the infrastructure, also the interior design and equipment would try to deepen the concept of sustainability. Until that time I've had not (by personal or customer proposal choice) the design and ecology challenge. I can confess that it has opened a new world, full of interesting proposals and the need for a new commitment to the ecosystem."

Nora Larosa - Decoration in charge.

ELECTRIC LIGHTING.

Electric lighting, is necessary only after dark. Large windows and skylights ensure us natural light to the end of the day, including cloudy days. We have installed LED lamps wherever possible. Because the technology is not yet developed for some applications, such central light rooms or restroom mirror lights, we use low consumption bulbs for those applications, but in the halls and common areas, bedside tables, outdoor and other sectors, we illuminate with LED technology. In this way we significantly reduce power consumption. Below is a graph comparing the consumption with the old tungsten lamps, low-power, and mix between LED lighting and low consumption.



LIGHTNING - CONSUMPTION



AIR QUALITY.

There are ozonators installed in common areas, a highly recommended element to disinfect and create a sense of freshness and remarkable relaxation. The text that aroused our interest in this new equipment is referred to here.

Its highly disinfectant property and ability to break down molecules with double bonds and aromatic rings, through a process called ozonolysis, makes ozone the ideal applications for this process.

To comment briefly some of the benefits: Ozone introduced into any environment, performs four basic actions:

A) Microbicide action.

The germs remain on all surfaces and fluids, floating in the air associated with dust specks, or in water droplets in suspension. Very often they are responsible for the transmission of many diseases, especially in enclosed spaces where air is not renewed efficiently.

Ozone is considered one of the faster and effective microbicide agents known. Its action has a broad spectrum that includes the elimination of bacteria, viruses, fungi and spores.

When coughing, speaking, and even breathing, the nasal cavity and mouth release all kinds of germs. Some, as mentioned above, are left in the air adhering to microscopic water droplets, and others are placed in the floor, furniture, shoes of people, etc. and therefore, transmission can occur by contact or by breathing.

B) Deodorant action

It is one of the best proven properties due to their usefulness in all kinds of public premises and in industrial odors treatment. Ozone has the property of destroying odors directly targeting the cause which create them, without adding any other odor. The cause of the odor is usually the organic matter in suspension or in gaseous form and action of microorganisms on it, as in the case of the typical human odours, sweat, food, etc.

Ozone attacks both causes: firstly, it removes the organic matter by oxidation and ozonolysis, and then removes microbes that feed on the organic matter.

C) Oxygenating action

In closed and poorly ventilated places (such as gyms), it is common to find "dead air".

Ozone, because of its greater oxygenating power, helps to improve the efficiency of the cells of higher organisms in terms of available oxygen utilization by stimulating several enzymes involved in these processes.

D) General decontaminant action

The accumulation of positive charges in indoor environments due to the operation of electrical appliances and plenty of synthetic materials, is a constant assault on people. Ozone's ability to counter such charges, is logical and intrinsic to the type of chemical reaction which destroys pollutants and microorganisms: ozonolysis and oxidation. These reactions consist essentially of the assignment by Ozone of its third oxygen atom to the positively charged particles, counteracting the static electricity.

This is another property of Ozone, which helps regenerate damaged environments that our body is forced to endure.

+ INFO

http://thenaturalhealthplace.com/ Articles/Oxygen.html

HEATING AND COOLING.

Rainwater collected from roofs fills the underfloor heating circuits and solar collectors.

This was not an arbitrary decision, on the contrary, to maintain the life of the metal components of these circuits, we must prevent the corrosion that desalinated water system would cause.

In order to reduce bottled gas consumption, in June we incorporate solar collectors occupying an area of $12m^2$ to maximize use during the season from September to April, which is the time when our lodge is open. For this we built a surface/roof at the back of the inn, north facing, with a 35 degrees slope, the optimum angle for use in the season.

To store the hot water, we installed a 1,000 liter thermal tank, which has an output below and an input at the top, where it is connected in series, with all inlet manifolds below, and exit ones at the top.

The whole circuit is completely filled with rainwater and powered by solar radiation entering through the collectors surface, heating the water inside, based upon the physics principle, which states that hot water, being less dense, ascends, and the cold water descends. This condition moves the water without the need for a circulator; warmer water rises inside the manifolds and enters the thermal storage tank, displacing cooler water located at the bottom of this tank into the inlet manifolds, creating a continuous circulation of hotter water into the storage tank. One of the biggest challenges we must overcome to preserve intact the investment in solar collectors, is prevent the corrosion caused by using the desalinated water offered by the network of Puerto Piramides. For this, we installed two heat exchangers in series. The heat exchangers are metal devices for the dual circulation of water. They are small, the largest one measures 30 cm x 7 cm x 5 cm and are designed to transfer heat between fluids circulating within two circuits.

In this particular case, we move warm rain water, accumulated in the tank, to heat, on the other side, the water we need to warm. We have two choices depending on the time of year where we are. By opening only two valves and closing two other valves, we open a circuit and close the other one, deciding if we want to transmit the heat to heat water or to the boiler.

In winter.

All the warmth of the sun in the solar collectors system is passed through the heat exchanger to water which is circulated by the underfloor heating boiler.



Here is the technical description:

The feedback loop from the underfloor heating to the building boiler, as it is the coldest water around the circuit, enters the heat exchanger, being heated by the other circuit where hot rain water has accumulated in the thermal tank. Thanks to this we can raise the coldest temperature of the circuit to higher levels than it would normally be, therefore assisting with the thermostatic control of the boiler. That's why the boiler is turned on mainly after noon, when the sun warms the water a few degrees of its circuit.

Of course thanks to the optimum heat balance of the building and the effectiveness of the thermal inertia of the underfloor heating which keeps the soil warm for several hours, the boiler remains off at night and in the morning, returning to the circulatory motion next noon.

Concerning this closed heating circuit, we have no statistics yet as this is the first season that we have used the heat exchanger. But we do know that for the lodge, the coldest time starts as soon as we open, when the season starts. By late August the temperature of 1,000 liters of water on a normal day, which is usually sunny, exceeds 65 degrees Celsius, and the temperature inside the building between 20 and 24 degrees, we also know that the circuit of the floor heating has approximately 600 liters of water, so we estimate that we will reduce consumption significantly.

The boiler is used until mid-December and as the days pass, solar system efficiency increases.

This is the information that we used to assess the suitability of this floor heating system.

Floor Heating: The ideal heating.

Physiological studies show that when our feet are at a temperature slightly higher than our heads, we experience a unique sense of wellbeing. The underfloor heating is the only satisfactory and efficiently complying with this high comfort premise, providing 22/25 ° C at floor level and

19/21 ° C at head level.

Consistent heat.

A large emitting surface (the ground) at low temperature, heats evenly all environments, so that there are no cold zones or suffocating. A pleasant feeling of comfort dominates every room in the house.

Healthy heat.

The 6-7 ° C temperature difference between the floor surface and the atmosphere does not create drafts. Nor are objects that may cause injuries or burns, or modifies the relative humidity so do not dry the skin or mucous membranes. Therefore underfloor heating deserved the recommendation of the World Health Organization (WHO)

Temperate flats.

Floor heating not only provides a healthy and comfortable climate, also enables direct contact with the floor. Comfort is not the same in a room at 22 ° C ambient temperature with a floor at 15 ° C for one to 25/27 ° C. The even heat creates a pleasant feeling of comfort in every room of the house.

The premise is that a heating system should provide 22/25 ° C at the foot and 19/21 ° C at the head. Only underfloor heating satisfactorily and efficiently meets this high comfort set point. Floor heating avoids consuming energy heating unusable environment sectors, such as air mass existing above two meters. Convection heating from radiators and heaters can not do this and to provide equivalent comfort, consume at least 20% more energy. At higher ceiling height, the difference is magnified.

The total cost of a radiant floor is 35% lower than a radiator heating system.



The even heat creates a pleasant feeling of comfort in every room of the house.

35%	less investment cost
+	energy
20%	saving

With under floor heating system reduces investment by 35% and 20% of power consumption.

Floor heating	Investmen
Hidroflex Pex Pipes	12%
Expanded polystyrene + polyethylene film	13%
Steel mesh	6%
Collectors and thermostat room	8%
H3 AI feed collectors pipes	15%
Boiler	18%
Workforce	28%
TOTAL	100%
Radiators	Investmen
Full radiators installation	135%

http://www.industriassaladillo.com.ar/esp/productos/hidroflex/index.html

In summer.

To take advance of the flowing water in the floors, chilled water from the slab is used, changing the under floor heating from winter to under floor coolant in summer.

With the boiler pilot turned off and heat exchanger flow closed, the same circuit diverts water through a water cooler 50 cm x 50 cm x 50 cm and we use the circulator pump boiler to circulate cold water inside the building. The consumption of cooling equipment is only 1.4 kW. The efficiency of the cooling system is awesome. The system must be used for seven or eight hours per day to cool the building. If the cooling time is increased, the temperature may drop excessively, for that we connect it to electricity through a timer that turns on at set times. This system is highly recommended for its efficiency; otherwise we would have to install ten air conditioning equipments, with a total consumption of 14 KW, which means ten more times.

Sanitary hot water.

In summer all the sun's heat accumulated by the solar collectors system is used by the heat exchanger for hot water heaters. The technique is as follows: We do a very interesting "castling". On one side, we close the heat exchanger stopcocks of the boiler and we open the valves that enable the circulation to the heat exchanger of the network water. This warmer water goes to the hot water heaters. It flows from another 250 lt tank, which temperature never exceeds 40°C by a thermostat that activates the circulation to the heat exchanger through a small washing machine pump. This hot water tank supplies by gravity the 3 heaters that remain in pilot practically all summer.



In this circuit we do have interesting facts. We know that we have plenty of heat in the 1000 lt thermal tank. To feed the demand of hot water in summer,

COOLING - CONSUMPTION



thanks to the knowledge gained, this year we installed the plumbing needed to supply domestic hot water indirectly heated by the sun, to the staff house. We also know that the water temperature of the solar collectors gets an average temperature of $80/90 \degree C$ (every day afternoon, from late December through February). Thus, from mid-December to late February we do not buy gas, which in this period is a resource only used in the kitchen.

With the use of the heat exchanger, we have ensured that the only element that can corrode is the unit itself, which functions as a fuse. Therefore it is the only element that need to be replaced in the whole solar system and underfloor heating system, because is the only metallic place where water flows.

Reuse water: Irrigation and toilets.

At the time of construction of the inn, we divided grey water drains (showers, sinks and washing machines) and black water (toilets).

Grey water passes first through a degreaser camera. From there, with a small bilge pump, we send it to a wetland of 10 meters, which consists of a 50 cm deep pond with average five cubic meter of pebbles inside, where we put ideal plants for filtering function such as papyrus and similar plants, which trap nutrients in their roots and use them for growth, purifying water.

This pond has a gentle slope that allows water to seep slowly between stones and plants nutrients free, after travelling ten meters, it flows through a pipe from the wetland into a 2,500-liter tank buried in the garden, where ozone is injected by an aerator for its highly disinfectant properties and for its ability to break aromatic rings, purifying gray water even more. The water treated and stored in this tank has two destinations. Through an automatic irrigation system, it is distributed by drip and sprinklers between plants and trees in the garden, lawn of the inn and the employees house. It is also, using a small climb booster water pump, passed through a chlorinator to a 1,000 liter tank which feeds the toilet tanks (we know that the consumption for this purpose ranges from 1,500 to 1,300 lt per day).

This system has a bypass with a backstop valve with water supply network, to ensure filling this water reserve anytime. Due to fortuitous circumstances, whether for breach of the booster pump or pond maintenance, it will automatically fill with network water by demand of a floating supply.



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WATER NETWORK.

We have 20,000 lt of water reserves distributed between tanks and cisterns.

At first, because of lack of experience and unfortunate advice, we had two water pressurized pumps one for cold and one for hot water, but experience has shown us how much water consumption we could have avoided in that period. Last year, we put the tanks in higher and removed the pressurized pumps, reducing incredibly the consumption. We obtained the following data: consumption per minute with pressurized pumps, on the ground floor was 16 lt and in the top floor of 13 lt. Without pressurized pumps consumption was reduced to 11 and 7 liters, respectively.

Here we incorporate a chart with the numbers corresponding to the total water consumption in different historical stages and what we should consume without recycling:



WATER CONSUMPTION

CLEANING.

The cleaning of the entire inn and employees house is done with environment friendly products. Analyzing in detail the concept of hygiene, we spent time reading and studying it. In various websites and forums we've learned that "the most fragrant cleaners are the most toxic, as they have more chemical additives are concealed by floral aromas."

Reading paragraphs like this we felt compelled to research further, and searching in Argentina's market, we found Rolls Company (www.rolls.com.ar) located in Beccar, Buenos Aires province. They produce 400 environment friendly products for various industries, and since we opened they are our loyal suppliers. To avoid small purchases that involve many shipping and packaging production, with the consequent impact on transportation, we make an annual purchase of all products we need for the season.

Here is a description of the products we use:

L-30 detergent 30% of active matter approved for use at establishments enabled by SENASA.

High power detergent degreaser. Suitable for manual washing of utensils. Contains dermoprotector. Biodegradable. It is non-toxic and used as indicated does not represent any risk to health or environment.

DG-30 is a concentrated cleaner used to remove dirt, disinfect and deodorize in one operation, reducing costs and working time. Germicidal detergent specially developed for fast and efficient maintenance of large areas. Its components are completely harmless to the skin and all washable surfaces, does not require the use of gloves. Approved by the AN-MAT and suitable for use in food establishments -INAL.

DG-10 SPRAY deodorizes and kills germs immediately. The product does not cover odors, it eliminate them. Not flammable. Pleasant fragrances. Approved by the ANMAT.

A-70 L liquid soap for washing all kinds of garments. Formulated for high performance and quality washes. Available scented or unscented. Time: a single 20 min wash and one rinse. Quality: equal



wash, even in hard water and regardless of water temperature. Not requires the use of other products. It contains a wide germicidal power. Maintains machines and drains clean. Biodegradability 98%

L-10 Glass Cleaner Suitable for quick cleaning without rinsing. It significantly reduces the effort and time needed for such tasks. It acts as a disinfectant and insect repellent. Contains no ammonia. It is non-toxic and used following instructions does not represent any risk to health and the environment.

LV-40 Concentrated liquid dishwasher. Strong alkaline formula with sequestrant and softeners that allow effectively remove all kinds of organic and inorganic oiliness. It is non-toxic and used as indicated does not represent any risk to health and the environment.

LRI-100 Cleaner and effective natural insect repellent. Soluble. Based on Oil Pine and Citronella Java. Gets excellent repellency effects against insects and effective cleaning naturally without poisons or toxic. Biodegradable.

AMENITIES.

The soaps we offer in our guest rooms have been handcrafted by a regional family micro-business, with emphasis on the beneficial effect that each component has on the skin.

The raw materials are beeswax, honey, propolis, olive oil, coconut oil, almond oil, sesame oil, soybean oil, oats, natural essences, zone herbs. The result is a 100% natural soap with no preservatives or artificial fragrances.

These soaps help the skin's natural functions, in dry areas. It is especially recommended for babies and sensitive or allergic people.

In the shower there are dispensers with 2 in 1 shampoo sachets to prevent separate shampoo and cream rinses, which would run into thousands per season.





HUMAN RESOURCES.

The team that covers the different jobs of the lodge is led by two graduates in tourism, between whom, administration tasks and reserves are divided. Since the lodge opened its doors on December 4, 2008 they played a role in the reception function. As they gained a deeper understand of the ecological concepts, they learned to pass it to the cleaning staff, maintenance and everyday guests.

We are all aware of the small details needed to achieve a responsible work. During the last two years, to increase environmentally friendly actions, they decided to collect the two or three daily tetra packs used for juice and milk at breakfast and took them to the local gym, which is a very old wooden building, to thermally insulate the ceiling.

Each team member is continually looking at ways to improve the environmental concepts. They publish green tips and ideas to recycle at home on Del Nomade Facebook account and all members of the eco lodge are ambassadors for its concepts, both inside and outside of Puerto Piramides.

SOLAR OVEN.

We have a solar oven used for cooking or boiling water, using the sun as an energy source. We use it for cooking puddings, cookies and assorted breads served at breakfast. It helps to reduce the consumption of gas and electricity in these activities: http:// en.wikipedia.org/wiki/Solar_cooker

BREAKFAST.

Breakfasts are served with homemade products made in the lodge, with raw materials from local

organic producers, who deliver direct to us on a regular basis.

We also buy from producers from within Argentina, who we know personally, for example, tea which is sent each season from Misiones province, with a variety of delicious blends; or walnuts, hazelnuts, almonds and marmalades, all of which come from the other side of the province. We consider this a good way to ensure that we know the quality and origin of products and also, because we want to work directly with small businesses and producers. In this way, guests will sample new flavors, recipes and knowledge about those products (such as grain products, organic seeds, homemade yogurt).

HOUSEHOLD GARBAGE MANAGEMENT.

We separate organic and inorganic wastes, at the lodge and staff house. The organics are processed naturally by composting with Californian worms, generating a compost used as fertilizer in the garden. On average we process between 1,500 and 2,000 kilos of organic waste, obtaining 300 kg of compost annually. This concept was introduced gradually to the residents of our town and has spread among our many friends in Puerto Madryn City, to whom we explained how to develop a compost. Many of them are now processing their own organic waste, using worms provided by us. These people in turn, spread awareness of the benefits of composting to others. We also publish a guide to composting on Facebook.

In Nature, everything is inter-linked and open dumps are an item of concern to us. All waste generated within Peninsula Valdes, is taken to a landfill site in Puerto Madryn and, as a result of this, we have seen disproportionate growth in the number of seagulls



because the inordinate amount of food that is thrown away, to end up in the landfill site, providing an easy food source for the gulls and increasing their rate of breeding. These opportunistic birds, in turn, learned to eat skin on the back of whales. This is a very serious problem, because it makes this huge marine mammals spend much of their day in constant movement, trying to dislodge the gulls, as a result of which, they expend more energy, with the consequence of consuming disproportionate food reserves. We have noticed that, last season, several whale calves died as a result of this waste. Already, as a result of the food source provided by the landfill site, we are seeing an alarming increase in the number of seagulls in the area. It is very important that organic waste is not included in the landfill site, which is another reason to educate our neighbours on the benefits of composting... having compost reduces transportation costs, pollution and waste become fertile land.

Production of inorganic waste we generate is minimal, by not offering lunch and dinner service. Garbage and packaging is very little, but all wrapping paper or cardboard is composted. We have reduced or eliminated disposable items for breakfasts by not using individual jams, butters or yoghurt packaging.

AWARENESS MESSAGES AND TIPS.

Every guest who enters our inn knows from the beginning that they are entering an eco lodge, a term that is included in the logo, which creates considerable interest among our guests as to why we have that categorization.

In the few seasons that the inn has been in existence, it has been able to create and fill a niche that did not exist, becoming an example for the entire region and adding service parameters in our small town and beyond. Upon entering, guests can see posters of the concepts we use to raise environmental awareness.

One of our major concerns is that guests who stay three or more nights be aware of the following important points : avoid washing linens daily, for them to spend their days exploring closely the nature that surrounds us and to consume on site. Living in such a small town, in such vastness the only activities that can be done are Nature-related or outdoor activities and those experiences are cumulative. Like everything in life, the more time a person spends in Nature and breathing fresh air more conscious about the care and respect for it he or she should have.

In the inside of the door of each room and the bathroom door, a poster advises how to behave as a ecological guest, promotes short showers, and ask



guests to alert the front desk if a loss of water is detected. We also have the following messages in Spanish and English.

"If you want to change your sheets today, put this poster on the pillow. Good use of the linens helps reduce the use of cleaning fluid."

"To help the environment, we promote low impact practices. The lights are low consumption, and LED but if you leave the room please turn them off."

We have also established quiet periods. Noise pollution is a variable that we want to avoid and for that reason, in our inn, we ask that guests observe silence from 23:00 to 08:00 hs.

Here are some extracts from TripAdvisor comments about our ecological and environmental concepts:

"I went crazy with the ecological concept and the warm service, the suggestions were spot on and whales are the best."

Stayed July 2009, traveled in couple.

"The place is very nice. The beds are comfortable and spacious, the decor is very warm, everything is new and clean. My room on the ground floor had a very nice deck. This proposal protects the environment, something not yet very common in Argentina and therefore very valuable."

Stayed January 2011, traveled in couple.





BIENVENIDO! / WELCOME! /i Fi





We work to educate with all those interested in finding out about our concepts: school visits, NGOs, individuals who want to apply sustainable technologies in their homes, university students theses, magazines, radio programs, television programs. High school visits us to find out about our ecological operation.

We are promoters of healthy activities in addition to improving our quality of life, and reducing our carbon footprint. We spread this concept from the activities we offer in our establishment, and through our website, blog and social networks.

We offer Complementary Health Therapies, which consist of stretching session, breathing and meditation or shiatsu and reiki session for those interested.

SPREADING THE WORD.

The ecological profile of the lodge, also called the attention of the press willing to spread this new concept in service. From the beginning, we receive personally or by mail to various media interested in making an article of the ecological functions of the "I went crazy with the ecological concept and the warm service, the suggestions were spot on and whales are the best."- 2009 TripAdvisor critic.

establishment. We've appeared in broadcast media such as La Nación (national newspaper), Los Andes, Tiempo de Aventura Magazine and other national and international media.

GRAPHICS

We have a policy of not printing graphic material, but to resolve the information needs of our guests, we use different resources and internet websites to promote and raise awareness of the destination and the concept.

From the beginning we did a blog in Spanish, English and Portuguese articles about the area.

These blogs, as of today has over 900 published. The statistics indicate that already, 300,000 articles,



in the 3 languages have been read in those 4 years. The articles are also automatically distributed once posted in our blog through different social networks like Facebook, Twitter, Hyves and Myspace. On this page we display the graph of statistics in Spanish, with a total of 227,798 visits to the April 25, 2013.

We also have a space with images of wildlife and landscapes on Flickr, on Panoramio and Google Earth, and a presentation at TripWow.

Last year, we designed information brochures and small virtual books (full e-books) with information about:

1) Maps with routes to various natural atractions.

2) Birds

3) Marine wildlife

4) Earth wildlife

5) Ecological Concept Brief

6) The Lodge. Currently, this is the only one translated into English; the rest are in Spanish only but we propose to translate them in English before the end of this season.



DEL NÓMADE - MA... Descubra todos los rincones de Península... By ecolodgepenínsulaval... ***** Views. 7578



Las actividades que pueden realizarse en... By <u>ecolodgepeninsulaval</u>

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DEL NÓMADE - AV... Conozca algunas de las especies de aves ... By ecolodoppeninsulaval... ***** Views: 2105



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Avistaje de Ballenas Península Valdés P... · Estadísticas › Visión general



Páginas vistas hoy	19
Páginas vistas ayer	240
Páginas vistas en el último mes	13.925
Páginas vistas (historial completo)	227.798
No contar tus propias visitas	

Statistics - General vision.

Visits today 19 / Yesterday visits 240 / Visits in the last month 13.925 / Visits (full history) 227.798

OWN DEVELOPMENT OF EDUCATIO-NAL PURPOSES AND PROMOTION MATERIAL

The production of images or videos of Peninsula Valdes wildlife requires a thorough dedication. To access these wildlife sanctuaries, the elephant seals, penguins, sea lions, or orcas areas, most of the time written permission from the Management of Protected Areas is required, a fee is payable and a guide or ranger is required to accompany to oversee the work of documentary in order to avoid unneccesary disturbance of thee wildlife.

The development of the material that the eco lodge made with educational purposes required for each animal species, specifies logistics and management. As example we'll briefly mention, without going into details, the penguins season, which involved going to some of the penguins colonies once a week from September to April, in chronological order to register the progress of the various stages of the season: arrival from the sea of male penguins, preparing the nest, arrival of the females, courtship, mating, egg incubation, break the shell, first days of life, feeding the young, in their different stages of growth, arrival of sea of juveniles who come to change pens, etc..

The original idea was to develop a small blog and archive material, used by the author who works as a freelance with different graphics and online publications, but thanks to the incorporation of technology, we can make films on each field trip, adding HD video capture for the production of documentaries themselves with Alejandro Avampini's (Del Nomade's owner) point of view and his professional quality. He also worked for 20 days in the last orcas documentary filmed by National Geographic Society at our destination.

There are still some things we want to do and are projects that we'll carry out in the coming seasons. We help to improve efficiency and strengthen the concept of sustainability.

DEL NOMADE ONLINE

Spanish blog: <u>http://eco-lodg</u>e.blogspot.com

English blog: http://eco-lodge-en.blogspot.com

Portuguese blog: http://eco-pousada.blogspot.com

Informative issues: http://issuu.com/ecolodgepeninsulavaldes

Difussion articles: http://eco-lodge.blogspot.com.ar/search/ label/del%20Nomade%20Difusi%C3%B3n

Flikr image gallery: http://www.flickr.com/photos/delnomade/

Panoramio & Google maps: http://www.panoramio.com/user/6356517

TripWow presentation: http://tripwow.tripadvisor.com/tripwow/ta-009a-eac2-2f9d?lb



PROJECTS.

There are still things we want to do and projects that we'll carry out in the coming seasons. We hope to improve efficiency and strengthen the concept of sustainability. We are happy to share our ideas for new options to further improve functional aspects, but construction jobs are tasks to do outside the tourist season, while the inn is closed. Here the details:

1) Install a ceramic hot water storage tank. We know that with desalinated water, actual water heaters are going to corrode in a few years. Despite changing the anode rod every four months, to prevent corrosion, the heaters are functionally impaired. When we are able to replace them, we will install a water heater for hard water, and we'll evaluate what's the best option to achieve this benefit.

2) Installation of a biodigestor:

This item is to treat all wastewater (grey and black). We only want to install it to treat sewage, in this way we would have more water available. The destination of this treated water will be garden irrigation by drip. Greywater, which we treat today, is used in toilet cisterns and we recycle it three times. We would use 100% of the incoming water, without liquid waste. Is a challenge uppermost in our minds and is only a matter of waiting for the right time to carry it out.

3) Install a wind generator axial

This project is under evaluation. We will not install it until we are convinced that it will be effective, which is why we continue to analyze its viability. The basic principle is that the generator rotates by wind generating energy, active gears and batteries normally accumulate it. That's not the end we are seeking, but uses the same principle. We believe that if the village has power lines, using batteries is nonsense. The great challenge of the inventors is to more efficient batteries. Our goal is oriented to install an axial wind generator that has the same principle as the better known blades or propellers, but has a vertical design and what we know so far, has a quieter operation. With this tool we want to produce energy to heat through resistance the accumulate water in the 1000 liter thermal tank of the solar collector system, which at higher wind speeds greater heat generation.

The wind is a constant in Puerto Piramides and to use that renewable energy source to transmit immediately heat to the building through the heat exchanger would be incredibly useful.

The relationship is directly proportional: the greater the wind strength, the greater the energy efficiency. This system would help reduce gas consumption when we need more, especially in the time of year when we closed the lodge but with the house running. In winter and until the first half of August, the sun is so low that the solar system is virtually inoperative and at times of inclement weather, heating is very important. At a time of lower temperatures and higher wind intensity, it would be very helpful to be able to complete this challenge.

We are pleased to be able to share our ideas and concepts through this text, to encourages the spread of greener hotels.

We expect projects to multiply with this guidance and our experience is at the disposal of all those who are attracted towards sustainability.



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PUERTO PIRAMIDES - PENINSULA VALDES CHUBUT - PATAGONIA ARGENTINA