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**►**AEE



## Presentation



The Spanish Wind Energy Association has made this initiative possible with the ambitious aim of shedding light on the realities of rural areas, their villages, and the people who live alongside wind farms. In Spain's picturesque landscapes, where history and innovation intertwine, modern wind turbines have arrived to write a new chapter in rural life. 'Wind Power Neighbours. An overview of 10 Spanish municipalities' is a journey through ten Spanish towns where wind farms are an essential part of both the environment and everyday life.

This publication, written and photographed by environmental journalists, offers an intimate portrait of how wind energy has transformed entire communities. Through these pages, we are introduced to the real protagonists: the people who live alongside wind turbines and have become an integral part of their lives.

From the coast of Cádiz to the mountains of the Cantabrian Range, each place has a unique story to tell. Beyond technical data and energy production figures, this journey invites us to discover everyday life in places where the wind drives progress and sustainability.

We share this journey – 'Wind Power Neighbours. An overview of 10 Spanish municipalities' – as we explore the magic of wind farms through the eyes and voices of those who consider them an indispensable part of their landscape and their future. Thank you to everyone who made this journey through rural and wind-powered Spain possible.





## Introduction

For an environmental journalist, the opportunity to travel across Spain's landscapes and villages, and to meet the women and men of rural areas, has been an enriching, rewarding, and at times even fun experience.

Carrying out this project has allowed me to have long and meaningful conversations with livestock farmers, agricultural workers, environmental experts, local council technicians, archaeologists, residents, young people, and children, and to see first-hand that the integration of wind energy into their lives and landscapes is a reality in our country.

Gaining access to wind farms has been an opportunity to discover everything from the ancient Galician route, the Camino de los Arrieros in Mañón, to the archaeological excavations of Carrecastro in Tordesillas; to enjoy a walk along the Canal de Castilla near Paredes de Nava; to see how the forest resources of the Jarafuel wind farm in Valencia benefit the local community; and to learn about horse-riding routes led by a young rider across the lands of Los Lances in Tarifa.

It has not only been a case of conducting numerous interviews and taking hundreds of photographs and videos with my colleague, the photographer Covadonga Gala, behind the camera. There has also been time for birdwatching and observing wildlife, for discovering bat habitats and vulture feeding sites in the protected areas of Plasencia, and for confirming that coexistence with wind turbines is indeed possible. Together, in harmony, they form a mosaic of biodiversity and cultural identity in many Spanish villages and landscapes.

I would like to express my gratitude to all those who have dedicated their time and patience to making this project a reality. Talking to wind power neighbours means getting to know rural Spain. You are, without a doubt, the true protagonists of this publication.







### **MARIBELA GUTIÉRREZ MONZONÍS**

An environmental communicator with a passion for nature and a deep curiosity about rural life – a fascination that began during long childhood summers spent in the Montaña Palentina.

Her versatile professional background spans both teaching and environmental communication, working with various conservation organisations. She has contributed as a writer specialising in rural development for magazines, blogs, social media, and reports for the Ministry of Agriculture. In addition, she has served as head of press offices in the performing arts sector, including the Autumn Festival of the Madrid Region, La Abadía Theatre, and several music and dance companies. Her career reflects a consistent commitment to raising awareness through education and promoting culture and the environment.



### **COVADONGA GALA MIRANDA**

A nature photographer with 22 years of experience. Graphic designer for Mi Jardín magazine, where her photographs are currently featured. She is a member of APIA (Association of Environmental Journalists) and AEFONA (Spanish Association of Nature Photographers). Among her numerous awards are the "Best of Houzz" accolades in 2016 and 2018, the prize for "Best Camellia Photo – Luarca-Valdés 2023", as well as the 2nd prize in the AEE Photography Competition, Premios Eolo 2024. She is widely known for her travels in search of gardens across Spain, with features published in various magazines and platforms, notably Houzz (Garden of the Week), El Jardín de Pepe Plana, and Diario 16. Her photographs of local flora and fauna are eagerly awaited each year in the annual Covadonga Calendar.

Mañón A CORUÑA

Illano ASTURIAS

SODO CANTABRIA

Borja zaragoza

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz



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## Common Land Forests

It is a mild autumn afternoon, and our meeting point is the old Union Mañonesa school, a beautiful early 20th-century building donated by emigrants from the Indiano community to their neighbours in the municipality of Mañón, in A Coruña. Here we meet José Picos, treasurer of the Mañón Community Forest Association, and Jorge Filgueiras, a forestry engineer from the company Foresga (1), who will show us the work being carried out in the Coriscada forests, where the Endesa (2) wind farm is located.



Union Mañonesa Schools | Mañón

Mañón A CORUÑA

ILLANO ASTURIAS

SODO CANTABRIA

Borja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa CÁDIZ



## A House with Smoke





José Picos | Treasurer of the Mañón Community Forest Association

Jorge Filgueiras | Forestry Engineer

https://youtu.be/lv9wETIEnK4

"

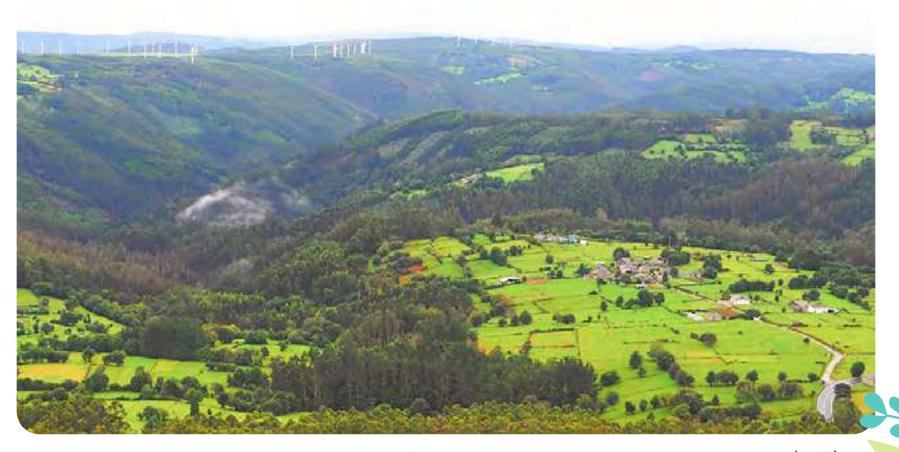
60% of the income generated by the forest is allocated to social purposes, while the remaining 40% is dedicated to forestry management activities

As we climb up into the Coriscada mountains, Jorge tells us that in Galicia there are nearly 3,000 common land forest communities — known as montes vecinales en man común — meaning that neighbours manage the land collectively, following Germanic law, which predates Roman law.

José adds that the only requirement for belonging to these communities and enjoying their benefits is to have "unha casa con fume" — "a house with smoke" — meaning simply that you must live in the village or parish, as they are called in Galicia.

A parish (or parroquia) is the traditional territorial division of municipalities (concellos) in Galicia. These parishes have their origins in ecclesiastical parishes but are now understood as collective population entities.

Anyone can become a comunero (a member of the community) by demonstrating that they have lived in the municipality of Mañón for at least a year. At present, there are comuneros not only from Galicia and the Basque Country, but also from other countries, including the United Kingdom.



Sierra de Coriscada | Mañón

Mañón a coruña

ILLANO ASTURIAS

SODO CANTABRIA

BOrja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

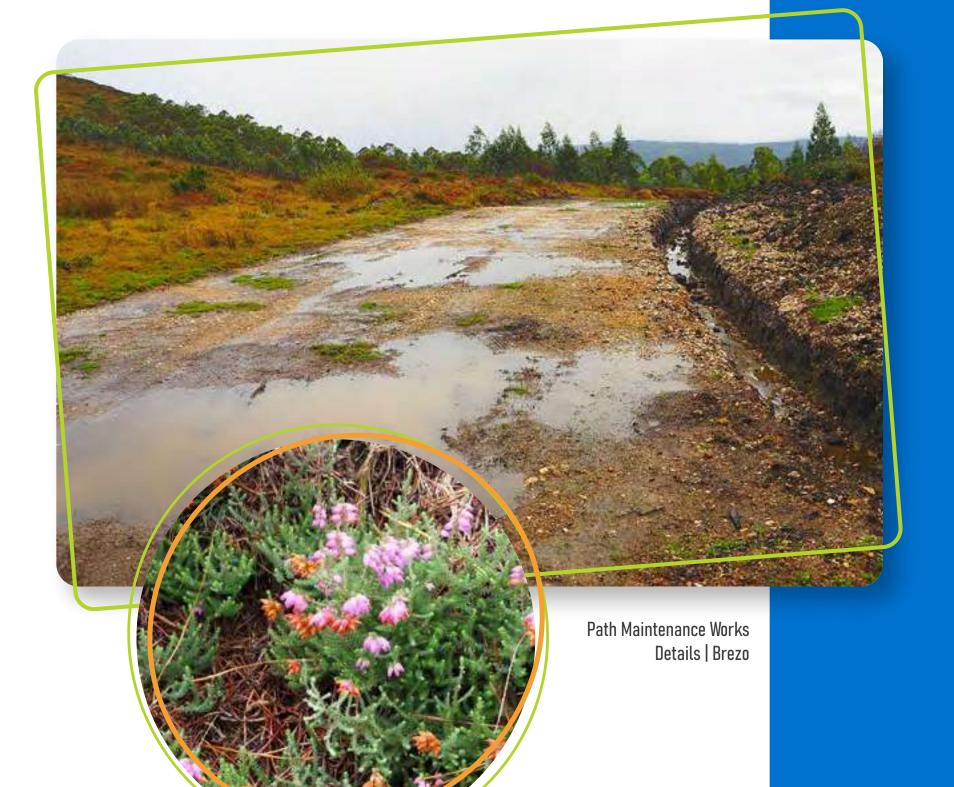
Jarafuel VALENCIA

Plasencia cáceres

Tarifa Cádiz







## The Benefits of the Forest

The Coriscada wind farm is located on land belonging to the municipalities of Ortigueira and Mañón, where pine forests predominate. It is established that 40% of the income generated by the forest—whether from the wind farm, timber sales, or permits for mushroom picking—must be reinvested in forestry management. Jorge tells us that "this work involves maintaining paths, clearing undergrowth, and replanting Pinus radiata, also known as Monterey pine, a fast-growing species."

The remaining 60% of the profits is allocated to social purposes. In addition, each community member is entitled to a yearly allocation of firewood, may place their beehives in the mountains for honey production, or make use of the natural meadows by releasing semi-wild herds of horses classified as **Cabalo de Pura Raza Galega** (3) (Galician Native Horse). These native horses, used for equestrian purposes and leisure, play an important environmental role by helping to improve grazing areas and reduce the risk of forest fires through the natural clearing they carry out while grazing.

### Mañón A CORUÑA

ILLONO ASTURIAS

SODOI CANTABRIA

BOrja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas

Jarafuel VALENCIA

Plasencia cáceres

Tarifa CÁDIZ



## Crossing Point of Seas and Migrating Birds

We climb with José and Jorge to the far end of the wind farm, sheltering at the foot of a turbine to avoid being blown away by the strong winds. From here, we enjoy sweeping views of the hills and valleys that descend towards the coast at Estaca de Bares, where the waters of the Atlantic Ocean merge with those of the Cantabrian Sea. This is a treasured spot for bird enthusiasts, particularly for observing seabirds on their migratory journeys.

Our attention is caught by the small mounds scattered across the fields. José explains that these are mámoas—ancient burial mounds found along the **Camiño dos Arrieiros** (The Muleteers' Path).





Coriscada with the Sea in the Background

Mañón A CORUÑA Illano **ASTURIAS** Soba Borja ZARAGOZA **VALENCIA** CÁCERES Tarifa CÁDIZ

**CANTABRIA** 

Paredes de Nava **PALENCIA** 

Tordesillas VALLADOLID

Jarafuel

Plasencia

Puebla de Guzmán HUELVA

**AEE** 

## Breakfast with O Padriño



We stop for breakfast in O Vicedo at the café bar run by O Padriño, as the locals call Álvaro Vale Trasancos. Alongside Teresa Pereira, he runs the San Esteban café-restaurant. Behind the counter, as he serves our coffees, Álvaro explains that "the older folk have retired, the younger ones have gone off to study and work elsewhere, but there are still many young people employed in the wind sector." He adds, "besides the jobs, the turbines produce much cleaner energy than the coal we used to rely on."



Álvaro Vale Trasancos | Bar San Esteban | O Vicedo https://youtu.be/6NcHtdtz8OM



We bid farewell to **O Padriño and Teresa**, a kind woman always ready to serve a plate even after the kitchen has closed.

We continue on foot along paths bordered by fresh ferns and gorse, the air scented with pine and eucalyptus. We make our way through woods and meadows where horses graze, and follow the track up to the wind farm substation, where **Ángel Cardamas**, the supervisor, is waiting for us.



ILLANO ASTURIAS

SODO CANTABRIA

BOrja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz



## Energy and Galician Frogs

We step into the office of Ángel, a patient and friendly 46-year-old who has been working at this wind farm since 2015. Ángel was born near the wind farm, in Valdoviño, and witnessed its construction as a teenager.

It is a windy and sunny day, so the technician suggests we climb to the viewpoint to take in the extent of the wind farm. "Coriscada has 40 turbines with a total capacity of 24 MW, enough to supply electricity to around 11,000 households a year. An environmental monitoring company is contracted to oversee the park – this is a fundamental requirement, as over 30 species of terrestrial and seabirds inhabit the area, including gulls, red-legged partridges, and goldcrests, among others. The latest studies, covering the period from August 2022 to July 2023, have, for instance, recorded large flocks of lesser black-backed gulls."



## Coriscada generates electricity for around 11,000 households a year



They have even found a frog in the wind farm that exists nowhere else but Galicia





Ángel Cardamas | Wind Farm Supervisor https://youtu.be/Hm9V0UpoCVY

These lands form an ecosystem that is home to the Galician frog, or Rana galaica (Rana temporaria parvipalmata), a species found only in Galicia. In addition, sightings of badgers, foxes, and wolves have been recorded, along with tracks and droppings from these species.



Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel **VALENCIA** 

Plasencia CÁCERES

Tarifa CÁDIZ

Guzmán



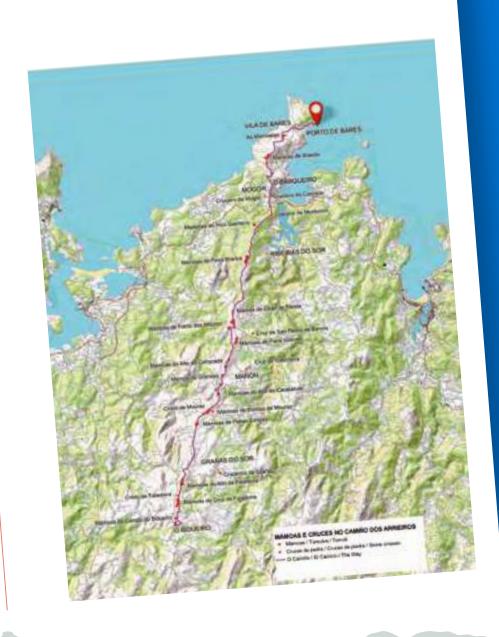
**ROUTE** 





CAMIÑO dos ARRIEIROS





## The waymarking of the path



Endesa has contributed to the waymarking of the Camino de los Arrieros

Ángel traces an imaginary line along the park's summits and points out, "We have also contributed to the waymarking of O Camiño dos Arrieiros, which here follows almost the same line as the wind turbines."

It is now a tourist route featuring 300 elements of archaeological, architectural and ethnographic heritage, such as stone crosses, churches, chapels, traditional houses, burial mounds, fountains and weighing scales.

Our curiosity about this path leads us to **Lois Gómez** Souto, an archaeologist expert on this ancestral route, whom we arrange to meet the following day to learn all about the muleteers and the mámoas.

we can follow the path by tracking the tumuli from As Pontes to the coast without getting lost

Mañón A CORUÑA

Illano **ASTURIAS** 

Soba **CANTABRIA** 

ZARAGOZA

Paredes de Nava

Tordesillas VALLADOLID

Jarafuel **VALENCIA** 

Plasencia CÁCERES

Tarifa

Puebla de Guzmán HUELVA



Borja PALENCIA

Path Panel of the Muleteers | Cultureume

## Una ruta entre mámoas





Lois G Souto | Cultureume Archaeologist https://youtu.be/XaI3Es3UjyE

**Federico Maciñeira Pardo de Lama** (1870-1943) was an archaeologist, historian, and politician, born in O Barqueiro (Mañón), and the first person to research this route and its mámoas.

We met up with Lois, an archaeologist from <u>Cultureume</u> (4), the company responsible for managing cultural heritage and the signage along this historic trail. Lois explains: "O Camiño dos Arrieiros is an ancient route connecting the towns of As Pontes and Bares. It runs along the high ground of the Serra da Coriscada, passing through prehistoric burial mounds, known as mámoas in Galician. These burial mounds were visible throughout the route, guiding travellers from As Pontes to the coast without losing their way."



### Lois: Who travelled along this route?

Based on the most common archaeological remains found along the path – the mámoas – we can say that between 5000 and 2000 BC, during the Neolithic and Chalcolithic periods, people were already moving along this route, although no evidence of their settlements has been found. However, there are traces from the Roman period at both ends of the route: in Bares, where the remains are linked to the fish salting industry, and in As Pontes de García Rodríguez, where it is thought to have been part of the Roman road network. In addition, in San Mamede (As Pontes), there is a Roman altar dedicated to the gods of the roads (the Lares Viales).

## What is the length of the route, and who took part in the signposting?

It is approximately 60 kilometres long, and we have signposted the 32 kilometres within the municipality of Mañón, where there are 69 mámoas.

The signposting of this route has been funded by the energy company. We also received great support from Hixinio Puentes, the official chronicler of Mañón, who provided us with valuable information and documentation. The Mañón Council and the Comunidades de Montes of Grañas do Sor and A Loiba also took part in this work.

### Mañón A CORUÑA

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Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz







## MÁMOAS

Mámoas are burial mounds in the form of dolmens, the deceased were placed. They were built in the mámoa dated in Galicia is that of A Chousa Nova, in Silleda, Pontevedra, which is 6,350 years old...





As part of the work of surveying, documenting and designing the information for the trail, Cultureume has produced a documentary that gathers the testimonies of older people about this ancient route. The documentary is titled O Camiño dos Arrieiros: un camino entre mámoas (5)





Information panels on the Arrieros Trail | Cultureume Mañón A CORUÑA

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Tordesillas VALLADOLID

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Tarifa CÁDIZ

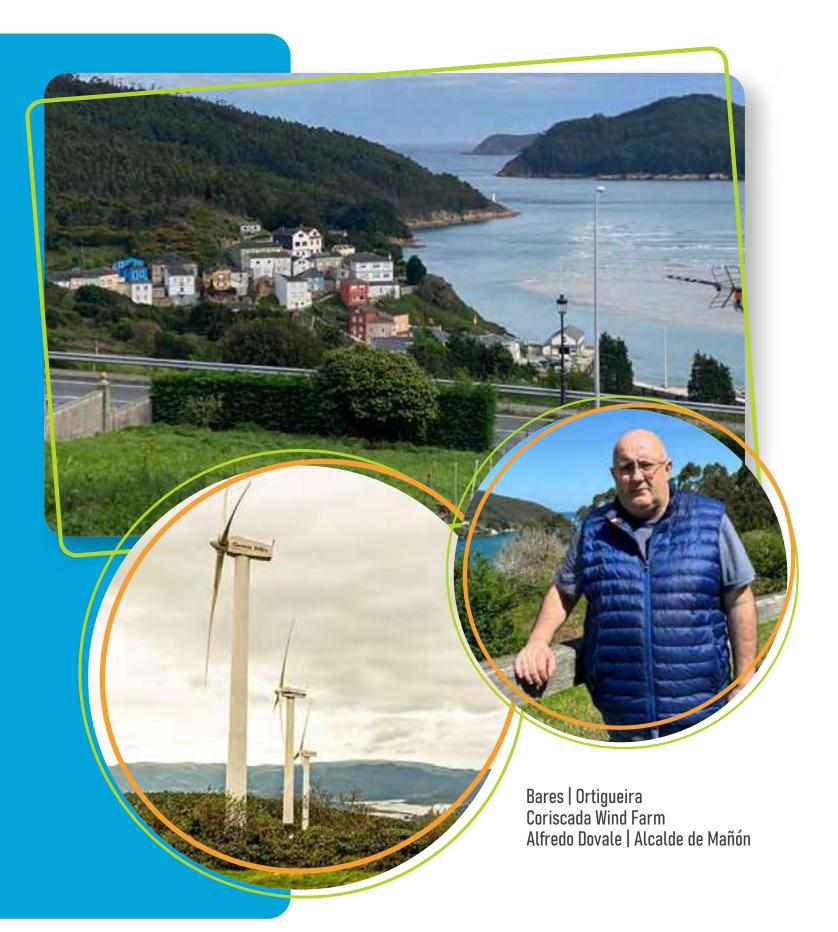


## The Crews

Alfredo Dovale the mayor of Mañón, tells us that the council signed the agreement with the energy company, but it is the Community of Common Land that manages the territory.

The municipality receives an economic benefit through the wind energy levy, and half of this sum is used to employ 12 people who make up the environmental crews. When spring arrives, and for four months, these crews focus on clearing paths and the banks of the Sor river, which, with heavy rainfall, carries away fallen trees and shrubs.

"Just imagine," says Alfredo, "after all the rain we've had recently, the river has swept along trees and branches that have piled up in the riverbed and on the banks. Once we have the crews in place, they'll sort it out."



Mañón A CORUÑA

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Tordesillas **VALLADOLID** 

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Plasencia CÁCERES

Tarifa CÁDIZ

**MAEE** 





### **CORISCADA WIND FARM**

**Commissioned**: 1997

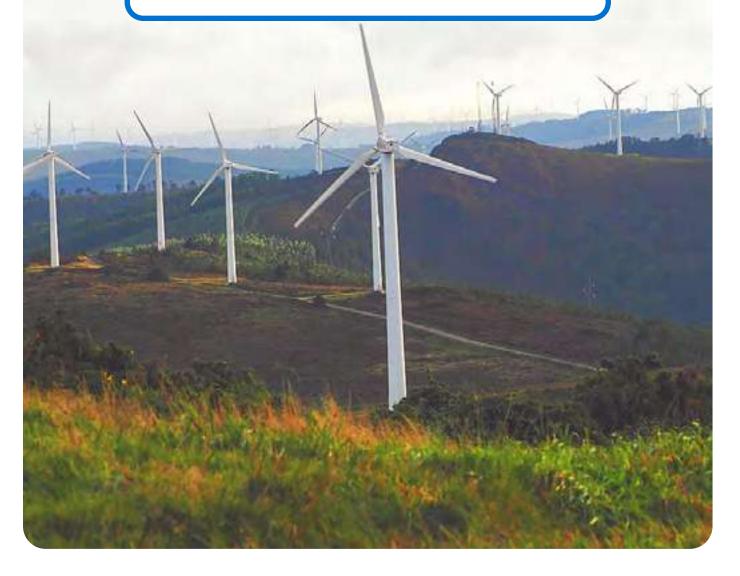
**Operator:** Endesa

Capacity: 24 MW

Number of turbines: 40

**Municipalities:** Mañón y Ortigueira,

A Coruña







(1) Foresga: www.foresga.es



(2) Endesa: All projects – Energy transition – Renewables <a href="https://www.endesa.com/es/proyectos/todos-los-proyectos/transicion-energetica/renovables">https://www.endesa.com/es/proyectos/todos-los-proyectos/transicion-energetica/renovables</a>



(3) Galician Native Horse (Cabalo de Pura Raza Galega) – Livestock

https://www.mapa.gob.es/es/ganaderia/temas/zootecnia/razas-ganaderas/razas/catalogo-razas/equino-caballar/caballo-pura-raza-gallega/default.aspx



(4) Cultureume:

Documentation project on O Camiño dos Arreiros

https://www.cultureume.com/proxecto-de-documentacionsobre-o-camino-dos-arrieiros-ao-seu-paso-polos-concellosde-ortigueira-manon-e-as-pontes-a-coruna/



(5) Documentary: O Camiño dos Arreiros. A Path Amongst Mámoas

https://youtu.be/0cYSvGdav9c?feature=shared

Mañón A CORUÑA

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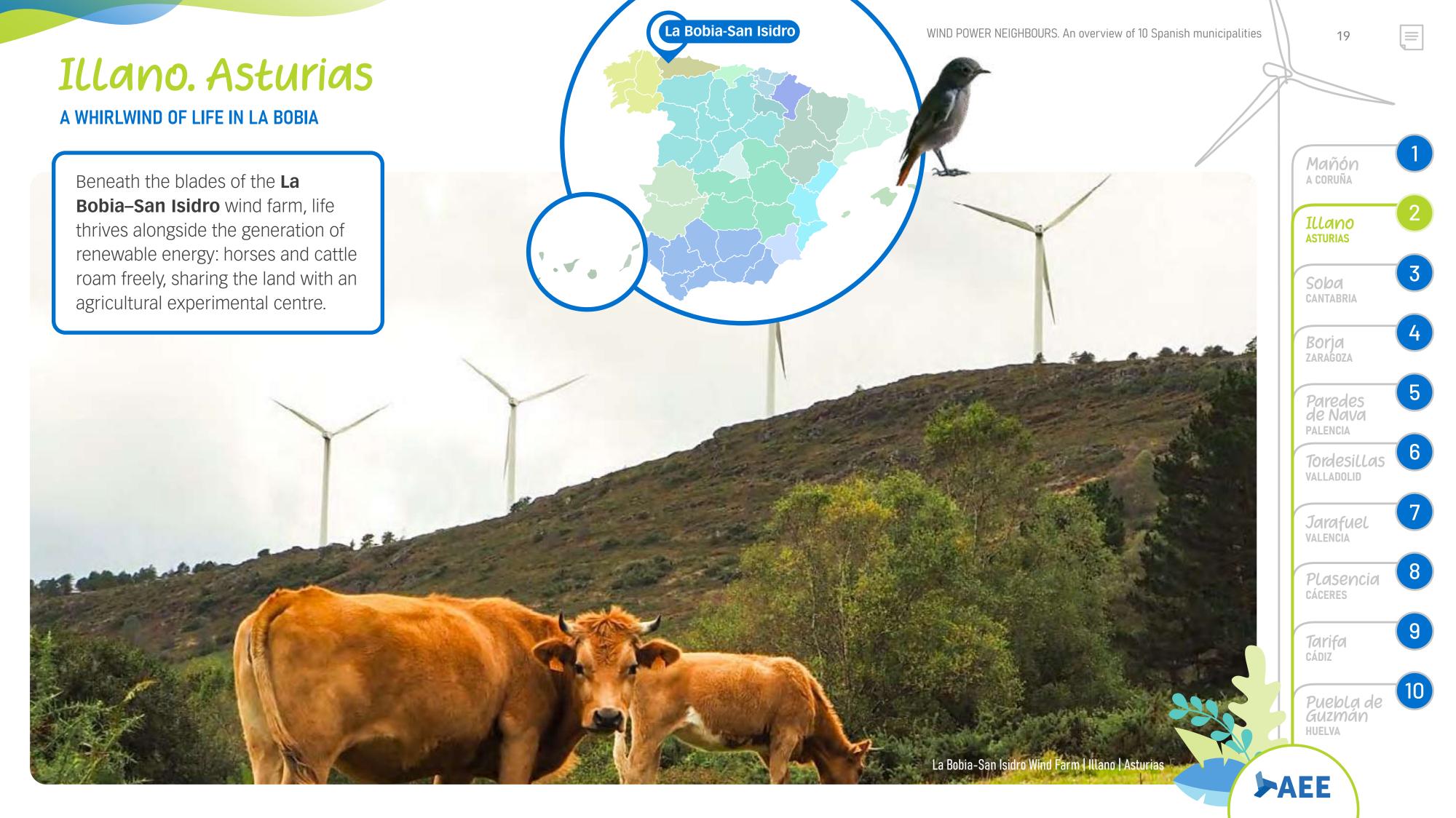
Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz







## On the Road to La Bobia



We are in the western part of Asturias, setting off from Vegadeo towards the La Bobia–San Isidro wind farm. The morning greets us with rain and strong winds as we follow the directions given by **Gil Fernández Rico**, the local manager of **Acciona Energía** (1) . He advises:

"You'll need to take the turn-off at the La Garganta mountain pass. You can't miss it – there's a dolmen at the roundabout. Then keep following the road carefully until you reach the substation. Take it slow, there's fog and strong winds ahead."



Gil Fernández | Wind Farm Manager https://youtu.be/reABZ6DrQJ4

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It was my sense of belonging that brought me back to work at this wind farm, and I have no regrets whatsoever.

On the way to Gil's office, the weather changes. The sun breaks through, the skies clear, and everything is bathed in bright, blue light. We make the most of this perfect light to film the hills and valleys. Cows with their calves and free-roaming horses greet us along the way. The landscape is breathtaking, a stunning display of green hues, nature, and wildlife.



Mañón a coruña

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Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa CÁDIZ



## An Office with a View

Gil's office is quite something: it has large windows overlooking the hills, and it's lovely and warm inside. The technician tells us he considers himself a lucky man because he's been able to return to his homeland—he was born in a small village in the municipality of Illano.

Gil recalls how his mother always encouraged her many children to study, telling them there was no future for them in the village. Taking her advice, Gil pursued technical studies. It's now been 21 years since he left a good job in Gijón to work in wind energy back home. "It was my strong sense of belonging to my roots that made me decide to come back and work at this wind farm. I have no regrets at all about returning—I'm happy. And I'm not alone; 15 of us work here full-time throughout the year," he points out.

The morning flies by as we explore the wind farm from end to end. Gil insists we go up to another hilltop with stunning views. On the way, we pass a flock of sheep in an enclosure with some buildings—it's the El Carbayal Experimental Station of the Regional Service for Agri-Food Research and Development **SERIDA** (2) of the Principality of Asturias.

But before we find out what they're working on there, we speak to the neighbour in the next plot. Her name is Marta.



El Carbayal Facilities



### THE LAND BANK

The Land Bank forms part of the property assets of the Principality of Asturias. It is made up of plots of agricultural interest, and its purpose is to promote the modernisation and agricultural and social development of the region, as well as the rational, direct, and personal cultivation of the land. The leasing of Land Bank plots is managed by the Regional Ministry of Rural Affairs and Territorial Cohesion.



Wind Turbines and Livestock | La Bobia

Mañón A CORUÑA

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Borja zaragoza

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz



## Marta, the Livestock Farmer

I have managed the generational handover all by myself, which isn't easy at all these days to be a farmer.

Marta Pérez Rico is a livestock farmer born in Entrerríos, a small village in the Illano council. She says she has known the trade since childhood: "There were always cows at home. Eight years ago, I took over my parents' farm, and now I run the business as the main farmer. I have managed the generational handover all by myself, which isn't easy at all these days to be a farmer."

> Every few years, I replace the bull so the family doesn't get too large on the father's side.



### Marta, how many cows do you have?

I currently have 30, they are of the Asturiana de los Valles breed (3), which I raise for meat production.

### Where are the cows?

Up there, on the same land my father requested from the Land Bank when he ran the farm. At first, the land was all scrubland; we had to clear it with machines, then plough, seed, and fertilise to create pasture. Between forest and meadow, I have about 22 to 25 hectares. The lease is for 30 years, and you have to commit to maintaining the land well, including fences and water channels—everything.

### How often do you go to the mountain?

Every day, because the cows are freerange all year round, and they have their calves there. I go up daily to check on them, to see if the calves are growing well, if they're healthy, or if I need to call the vet—sometimes mothers get mastitis or it's time for routine health checks. I have a breeding bull that's always with them, and every few years I replace him so the family doesn't get too large on the father's side.

## And do they always stay in the mountain, or do they ever come down?

The cows live up there freely and only leave the mountains when the trader comes up to buy them.

Mañón A CORUÑA Illano Soba Borja **PALENCIA** 

**ASTURIAS** 

**CANTABRIA** 

ZARAGOZA

Paredes de Nava

Tordesillas **VALLADOLID** 

Jarafuel **VALENCIA** 

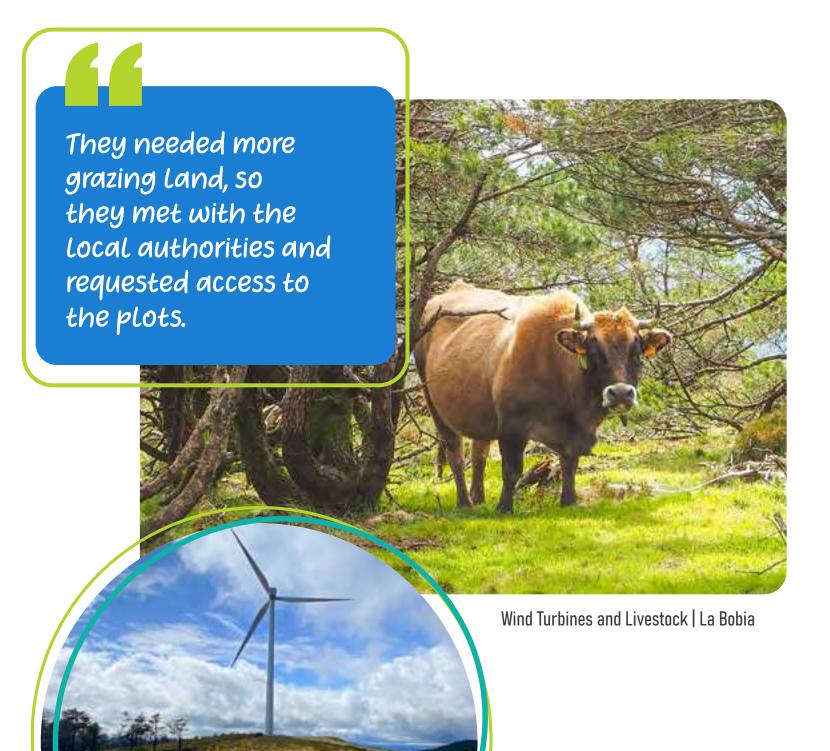
Plasencia CÁCERES

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# The History of the Land Bank



Marta explains that these lands originally belonged to the parish, but were later sold to Banco del Noroeste, which is based in Galicia. Eventually, the Government of the Principality of Asturias acquired them to establish the Land Bank. "Over time, local residents realised they needed more pasture for their livestock, so they met with the administration to request access to the land again."

Farmers now pay a rental fee to the Principality for the use of the land, and in return they commit to maintaining the meadows. They are also eligible to receive subsidies under the Common Agricultural Policy (CAP).

Marta's partner, Miguel Ángel, works in construction and helps out with the farming tasks when he returns home from his job. Marta explains that Miguel Ángel took advantage of the Covid-19 lockdown to complete a blended online and in-person course on "Installation and Maintenance of Wind Turbines and Wind Farms." He is now seeking placement with a company that will allow him to complete his required practical training and begin working in the wind energy sector.



ILLANO ASTURIAS

SODO CANTABRIA

Borja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifal CÁDIZ



## Folgueiróu Restaurant

Dining in this area is a real treat for any visitor. Gil takes us to visit Folgueiróu Restaurant.

Together we head down to Illano's recreational area — a space with meadows, a playground, a municipal swimming pool, and the Folgueiróu Restaurant. Although we arrive late, Manuel García welcomes us without hesitation and tells us what's available on the menu. The restaurant is a modern, minimalist, and spacious building, featuring a large picture window overlooking the Navia River valley.

Manuel and his partner, Marbely López Villegas, have been running the business for ten years, ever since the Illano local council awarded them the concession. "I used to work in construction. Neither of us had any experience in hospitality," Manuel explains, "but I wanted to come back to my homeland, because I'm from Lantero — just across *there,"* he says, pointing through the window to the opposite shore of the Doiras reservoir.





Manuel García | Owner of Folgueiróu Restaurant | Illano https://youtu.be/8xXSnmOcNVs



Thanks to the people who come by each day, we're able to keep going through the low season.

Mañón A CORUÑA Illano

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# Folgueiróu Recreational Area

In summer, Illano's recreational area is teeming with people, but during winter it would likely be deserted if it weren't for the wind farm workers and maintenance crews who enjoy Marbely's daily set menus. "Thanks to the people who come, we're able to make a living through the low season," says Manuel. "And, as you can imagine, I support the development of wind farms. It's a clean energy source that doesn't pollute, and it generates benefits for the council, the community — and for me. I had customers when the park was being built, and now we serve the maintenance staff who come every day. Plus, the wind farms keep the access roads clear year-round, which is great because those same tracks are used by livestock farmers and tourists. In winter, they're kept open because the snow is removed," he concludes.

# Chiastolite and the Demons

As we leave the dining area, we notice a glass display case at the bar filled with pendants, earrings, rings and keyrings — all made from a brown crystal stone marked with a beige cross in the centre. Manuel explains that these charms are crafted from chiastolite, also known locally as the stone of Saint Peter. According to an old document found in the Monastery of Santa María de Villanueva de Oscos, the construction of the Church of Saint Peter drove away the demons that used to rise along the Navia River. However, local legend tells a different story: it was the cross within the chiastolite crystals that banished the devils, protecting the villagers forevermore.





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## From the Himalayas to La Bobia

We leave behind the local legends and make our way to the experimental farm" El Carbayal" (4), where Urcesino García Prieto, one of the research technicians from SERIDA, tells us more. Urcesino is an agricultural technical engineer, passionate about his work, which aims to promote the value of disadvantaged mountain areas and study improvements to highland environments through livestock use. "The experimental farm lies at an altitude between 850 and 2,000 metres and covers 245 hectares. When the project first began, the whole area was heath and scrubland—typical brezal-tojado vegetation of this region. After clearing some of it, we've managed to create 90 hectares of pastureland."

This experimental site, where livestock and wind turbines coexist, is home to 40 cows of the Asturiana de los Montes (5) and Asturiana de los Valles breeds, 20 mixed-breed mares with no dominant lineage, 300 goats, and a flock of 400 sheep from various breeds including the Galician latxa. All of these animals are well adapted to mountainous terrain, and to withstand harsh weather conditions and rapid climate changes.

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## The Cashmere Goat

But when it comes to clearing the land and managing undergrowth at El Carbayal, the real stars of the show are the goats. The herd includes native **Bermeya** (6) goats as well as the more exotic Cashmere goats, originally from a region in northern India in the Himalayan mountain range. Accustomed to extreme temperatures and rugged vegetation, Cashmere goats grow a fine, warm, and valuable fibre to protect themselves from the cold. This fibre has long been used by civilisations to weave pashmina, a highly prized fabric used to make shawls, scarves, and dresses.



We prefer for the lambs to grow more slowly and adapt better to this kind of climate and vegetation.



Cashmere Goat I Fuente: SERIDA

## Biomass Eaters

At the centre, researchers focus on how livestock adapt to terrain and climate, monitoring the growth and weight of the offspring. Urcesino explains: "We're not interested in rapid growth, as they don't tolerate the cold and require far more feed. That's why we prefer the lambs to grow slowly and adapt better to this environment."

The research also includes analysis of how the goats clear the land, how the pastures evolve, and their role in wildfire prevention, by estimating the amount of biomass they consume. "Using mixed herds of livestock can encourage more sustainable grazing—both economically and environmentally," the technician notes. "We also fit some cows with GPS trackers to monitor their grazing routes. To assess the condition and development of the soil, we use drone imaging."



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### LA BOBIA-SAN ISIDRO WIND FARM

Commissioned: 2002

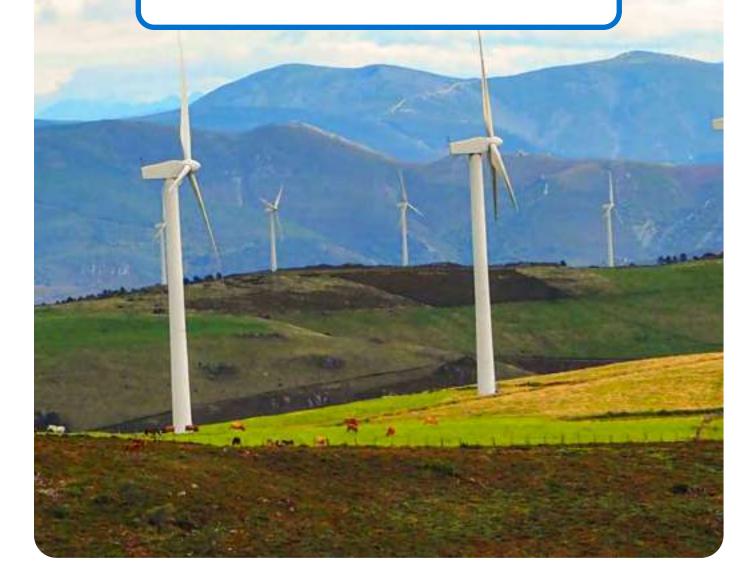
Company: Acciona Energía

Capacity: 49,3 MW

Number of turbines: 58

Municipalities: Illano and Villanueva

de Oscos, Principality of Asturias







(1) Acciona Energía:

https://www.acciona-energia.com/es/



(2) SERIDA: www.serida.org



(3) Asturiana de los Valles cattle breed:

https://www.mapa.gob.es/es/ganaderia/temas/ zootecnia/razas-ganaderas/razas/catalogo-razas/ bovino/asturiana-de-los-valles/default.aspx



(4) El Carbayal:

http://www.serida.org/vernoticia.php?id\_ noticia=755



(5) Asturiana de los Montes cattle breed:

https://www.mapa.gob.es/es/ganaderia/temas/ zootecnia/razas-ganaderas/razas/catalogo-razas/ bovino/asturiana-montana/default.aspx



(6) Bermeya goat breed:

https://www.mapa.gob.es/es/ganaderia/temas/ zootecnia/razas-ganaderas/razas/catalogo-razas/ caprino/bermeya/default.aspx

Mañón A CORUÑA

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Borja ZARAGOZA

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## A Tour Around the Valley

As we make our way through the **Soba Valley**, we stop to meet **Julián Fuentecilla García**, who has been mayor of Soba for the past quarter of a century. In addition to the town hall, small municipalities like this one also coordinate through their local council presidents—or alcaldes pedáneos—who are elected democratically.

The installation of the wind farm was agreed upon and voted on by the local councils.





The mayor recalls the proposal to build the Cañoneras Wind Farm back in 2000. "An agreement was reached with the local councils who owned the land. It was also put to a vote within each council to gauge the support of local residents, and there was virtually unanimous approval for its development. That decision gave the go-ahead for its installation."

Mañón a coruña

Illano asturias

SODO CANTABRIA

BOrjal ZARAGOZA

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# Julián, what has the wind farm meant for the Soba Valley?

It's been a major change,"
he says, "because thanks to
the financial resources we've
received, we've been able to
turn the valley around in terms
of infrastructure. At first, the
town council collected income
from the building permit, and
now it receives €60,000 every
year from the Property Tax
and the Business Activity Tax.
In addition, the local councils
(juntas vecinales) receive
around €140,000 annually from
the land use lease fees.

### What has this money been used for?

It's made it possible to carry out countless projects that have greatly benefited the municipality—for example, village restoration, major water supply and sanitation works, and the renovation of public buildings for use as community centers. In short, it's been used for a wide range of improvements, and we're also able to carry out regular public works throughout the year that help improve the lives of residents.

### How do the people in the valley feel about it?

From the beginning they supported the project, and today it's fully integrated into everyday life—there's no controversy. We've seen significant progress: for instance, improvements in livestock genetics, optimized infrastructure, and the paving of farm roads, which has hugely improved access to livestock holdings—vital for the development of local farming. All in all, it's been very positive.





Julián Fuentecilla | Mayor of Soba | Cantabria https://youtu.be/EA3JVaOryOw

Mañón a coruña

Illano asturias

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## Dreams Fulfilled

The track that leads up to the operations center of the Cañoneras Wind Farm, owned by <u>Iberdrola</u> (1), is lined with mountain pastures where herds of <u>Monchina</u> (2) mares and foals graze freely. Today, the sky is clear and you can just make out the sea off the coast of Laredo, though the fog can roll in at any moment.

At the entrance to the substation, we're greeted by Javier Martín Rasines, northern area supervisor, and Alfredo Gutiérrez Vivanco, technical assistant. Both share the satisfaction of being able to work in the land where they were born.

Javier has been a technician since 2007: "Before the wind farm, I worked in Bilbao for ten years, but the construction of Cañoneras gave me the chance to come back and settle here. Now I live in Medina de Pomar, in Burgos, with my wife and two children. I'm happy to have returned to the place where I grew up."

Alfredo made his dream of living close to home come true when he joined Javier's team in 2008: "I'm from Herada, a village in the unicipality of Soba. When I was younger, my goal was to work and live in this area and start a family. Years later, I've achieved that thanks to this job, which I enjoy and where I feel very comfortable."



Mañón A CORUÑA

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## Lucrecia Lives in Santander and Commutes Daily to the Soba Valley

A car pulls up and a woman steps out — it's Lucrecia Cárdaba Picado, who provides cleaning services at the offices of the substation.





Lucrecia Cárdaba | Cleaner | Santander https://youtu.be/w0Jh5vA2hYQ

> I really enjoy my work — I'm very much a country person, and this region is so beautiful.





### Lucrecia, can you tell us about your work?

I live in Santander and every morning I drive out to work at the offices of companies operating in the Soba Valley. Today, among other stops, I'm heading to the Cañoneras substation and the transformer center in Regules.

### Doesn't all that driving through mountain roads tire you out?

Not at all! I really enjoy my work — I'm very much a country person, and this region is so beautiful. It's a wonderful place for anyone who loves nature.

We leave Lucrecia, Javier, and Alfredo to their tasks high up in the mountains, and make our way to Fresnedo, where the dairy farm of María Luisa Ruiz Gutiérrez and Fernando Saiz-Aja Fernández is located.

Mañón A CORUÑA

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Borja ZARAGOZA

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**VALENCIA** 

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Tarifa



Jarafuel







María Luisa Ruiz & Fernando Saiz-Aja | Livestock Farmers | Fresnedo (Cantabria) https://youtu.be/EEHqiVm0kgE

## Marigold Milk Farm

The entrance is bursting with vibrant orange marigolds growing everywhere. Fernando and María Luisa have just finished milking the cows and are waiting for the arrival of the tanker truck.

María Luisa was born in Regules and has lived in **Fresnedo** since she married Fernando twenty-five years ago. It's where their two daughters were born and raised. The couple runs two cattle farms: one for beef and one for dairy. All of their animals are raised outdoors.

In the year 2000, Fernando was elected president of the Fresnedo village council. "Back then, three villages — Rehoyos, La Revilla, and Fresnedo — signed in favor of the wind farm. Later on, Santayana, Sangas, Pilas, and Villar joined in. We're really happy with the outcome because it improved access to many pastures where local residents graze their mountain livestock."

I just wish more young people would continue in Livestock farming.



Soba **CANTABRIA** 

Borja

Paredes de Nava PALENCIA

**VALLADOLID** 

Jarafuel **VALENCIA** 

Plasencia CÁCERES

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Fernando explains that the livestock move calmly through the wind farm, wandering beneath the turbines and sharing the mountain air with the blades. He and María Luisa are members of Cooperativa Valles Unidos del Asón (3), which collects their milk and also provides services like veterinary care, technical advice, and livestock feed production.

He laments the steady decline in population:
"The villages are getting emptier by the
day. Thank goodness the wind farm helps
improve the lives of those of us who are still
here. I just wish more young people were
willing to carry on with farming."

To that end, he encourages them to study at the **Granja Escuela de Heras** (4), a training centre where they can earn qualifications in Animal Farming and Veterinary Assistance.



Mañón A CORUÑA

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# Cristóbal's Milk Truck

Cristóbal collects milk from farms across the Soba Valley and the Merindades region of Burgos.

A milk tanker truck pulls into the farm. At the wheel is Cristóbal Gómez Canales, 37, the man in charge of collecting milk from the cooperative's member farms.





Cristóbal Gómez | Milk Tanker Driver | Valles Unidos del Asón Cooperative https://youtu.be/UF-IkDuie9A

### Cristóbal, tell us about your job.

I work for the Valles Unidos del Asón Cooperative, which collects around 25,000 liters of milk each day. I cover the Soba Valley and part of the Merindades area in Burgos, following different routes. I stop by each farm every two days.

### Where do you take the milk?

We deliver it wherever the dairy factory assigns us—sometimes to Asturias, sometimes to Burgos. The trips are usually no longer than two or three hours, so we can return and stick to our regular route the next day. If the dairy is further away, we unload the milk into a refrigerated trailer that handles long-distance transport.

## Do you enjoy living in your hometown?

Yes, I really do—this is where I grew up. But life in this region is getting very quiet... maybe too quiet for someone young.

### What's your opinion of the Cañoneras wind farm?

I think it's a good thing—it brings life to a village that doesn't have many other sources of income, and it helps fund the things we need. I'd take this over dirtier forms of energy any day. In fact, I like driving up to the wind farm now and then, just to take a walk around.

Mañón A CORUÑA

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Borja ZARAGOZA

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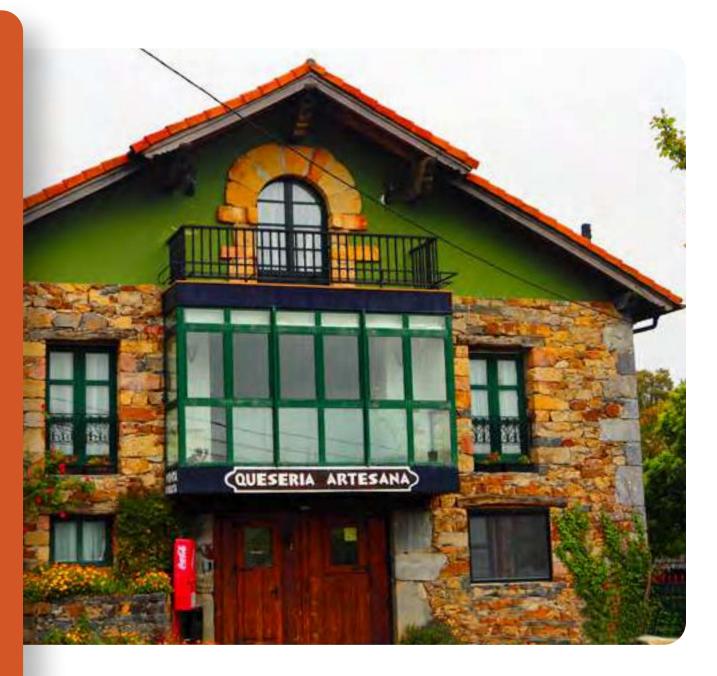
Illano **ASTURIAS** 

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# Local Cheese, Zero Kilometers

Some dairy products stay closer to home, transformed into local, artisanal cheeses. One example is **Quesoba** (5) Cheese Dairy, located in the village of Sangas, which uses milk from cows that graze freely in the lush meadows of the Alto Asón region. Another is the newer **Axia de Soba** (6) Cheese Dairy, based in the village of Aja, also known for crafting high-quality cheeses right in the heart of the valley.





Mañón A CORUÑA

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**CANTABRIA** 



# Paquito's Climb to Returtio

I was fourteen the first time I stayed up there alone overnight, watching over the herd.

Francisco Suárez Fuente, known to everyone as Paguito, is an extensive livestock farmer born and raised in the hamlet of **Pilas**. He tends to a herd of 160 mother cows of a mixed-breed type, meaning he's crossed native cattle with others raised for meat production.

Today, his cows are still grazing around the village, since the weather's mild and the grass is still good. But Paquito says that once temperatures rise, he'll move them up to the mountain pastures near the Los Tornos pass, to a place called Returtio. He knows that land like the back of his hand—and here's why.



### Paquito, what is Returtio?

It's a mountain grazing area where I used to go as a kid with my father and uncle, to bring the cows up for the summer. Back then, we had **Tudanca** (7) and Friesian cows. When the heat arrived in Pilas and grass was scarce, we'd drive them up to Returtio. We still do now—but with a lot more cows. We've got a small cabin there and cool, fresh pastures the cows graze on naturally.

## How long would you stay up there?

For as long as the heat lasted and cold hadn't yet returned. We'd usually go back down to Pilas once a week to bring up food—we cooked up there. Some women would come too, but it was mostly men.

# young?

All the neighbors who owned land up there. Sometimes there'd be six families at once, each with around twenty cows. It felt like a little mountain village. It took us two hours to climb up and another two to come down—either on horseback or by mule. I started staying up there alone at night to guard the herd when I was just fourteen.

## Were the cows always outdoors?

No, en el verano metíamos las vacas en la cabaña durante el día, y cuando empezaba a refrescar en el otoño se metían por la noche. Así hacían abono que luego utilizábamos en las fincas.

# Who else went up when you were







Paquito is the president of the village council of Pilas, and he also played a role in the installation of the wind farm. He explains that by the time it became operational, no one stayed overnight with the cattle anymore: "Thanks to the tracks and livestock handling facilities built along with the wind farm, I can check on the cows as often as needed. I go up with the car and trailer. Plus, it's helped improve the pasture quality in the area."

The wind farm has helped improve pasture conditions in the area.

# The "Mosqueadas" Cows

Paquito says that in local terms, cows are said to be "mosqueadas" when they need to cool down from the summer heat. That's when they seek out the breezes at the top of the mountain, 1,220 meters above sea level—a stretch of open grassland with no shade from trees or shrubs. "They still go up there to cool off," he says, "now sharing the space with the wind turbines."



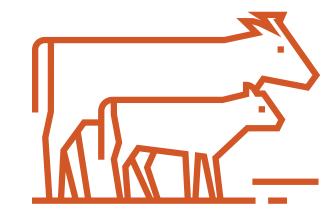


Francisco Suárez Fuente | Livestock Farmer from Pilas | Cantabria https://youtu.be/bzHOgbIMB44



## **TRASHUMANCE**

This traditional practice, known kilometers. Herds are moved



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# Ramón and His Noble Cows

Among the meadows of La Revilla walks Ramón Gómez Canales, president of the local village council and an extensive livestock farmer. Five years ago, he switched from dairy Friesians and other beef cattle to <a href="#">Angus</a> (8) cows..



# Ramón, why did you switch to the Angus breed?

Friesians were more problematic—they needed more feed from outside the valley.

Angus cows feed on local pastures, help keep the land clean, require less work, and have a very gentle nature. They're extremely hardy, their calving is easy—I've never had to call the vet for a single birth.

## What do they eat?

My cows always eat grass—either what they graze or what we preserve. If there's a very dry summer or a snowy winter, I feed them the grass we've harvested and stored in bales when the pastures are overgrown.

## What do they eat?

Around 140. Some are Friesian crosses, but most are now purebred Angus.
They usually roam freely through the fields of La Revilla, except when it's cold or rainy—then I bring them indoors.
Otherwise, they're always outside.
When the good weather starts, around May or June, I gradually move them up to the mountain pastures.

## And where do they spend the summer?

In the meadows next to the wind farm. Other neighbors also bring their herds up there after winning the village pastureland auctions.





Ramón Crespo | Livestock Farmer from La Revilla | Cantabria https://youtu.be/K1JmfZYT7pE



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"There used to be many mountain huts, but since people stopped using them, they began to collapse. When the wind turbines were installed, people started bringing their livestock back up, because now the access is great. We're really happy to have the wind farm."

Ramón explains that the annual income La Revilla receives from the wind farm is reinvested into improving the village's infrastructure—like restoring the old schoolhouse, the teacher's home, or the church fountain—so they can be rented out and generate additional revenue.



## THE SUCCESS OF THE ANGUS BREED

The breed's expansion is largely due to its high genetic variability, with multiple lines having been developed over generations and adapted to the specific needs of each farmer, climate conditions, and terrain, making excellent use of available forage

Thanks to their calm temperament, Angus cattle are easier to handle. The females reach sexual maturity early, are highly fertile, calve easily, and produce enough milk to feed their calves—traits that reduce labor and the need for veterinary assistance.



Mañón a coruña

Illano ASTURIAS

SODO CANTABRIA

Borja zaragoza

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

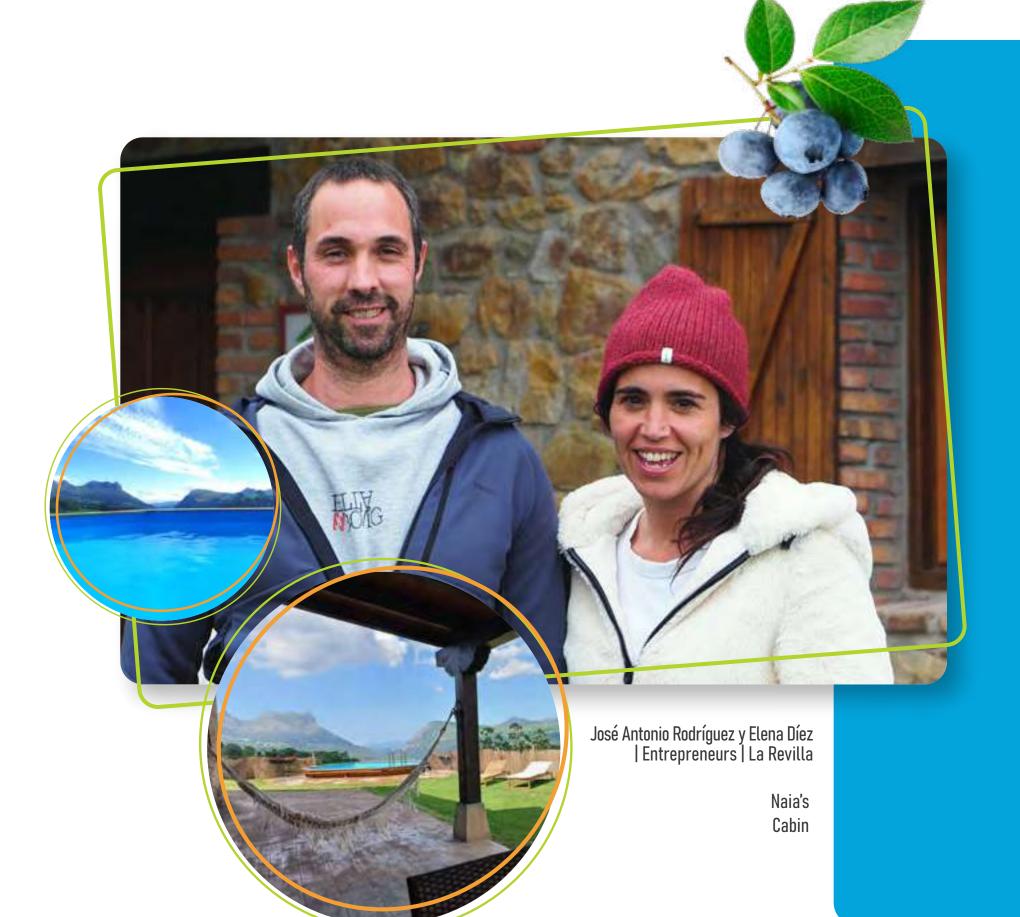
Jarafuel VALENCIA

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Tarifal CÁDIZ







# Naia's Cabin and the Blueberries

High in the mountains stands La Cabaña de Naia (9) (Naia's Cabin), the property of **Elena Díez López** and **José Antonio** Rodríguez Martín, a couple who left their jobs in Bilbao to settle in Ramales de la Victoria after their daughter Naia was born.

With great effort, they finished building their mountain house, which became a refuge during the Covid-19 pandemic.

Looking for a way to make the most of the land around them, they applied for a grant from the Government of Cantabria to grow blueberries. Their production has steadily increased—if all goes well, they expect to harvest 10,000 kilos this year.

They make a living from renting out La Cabaña de Naia and selling blueberries from the 4,000 plants they grow without any chemical treatments. It's a driven couple—right now they're restoring another cabin, which they plan to name El Paraíso de Aitana (Aitana's Paradise), after their second daughter.

Elena says with conviction: "It's easier and more fulfilling to raise our daughters in a rural environment. We bet on a change, and it's been wonderful."

Mañón A CORUÑA

Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava

Tordesillas VALLADOLID

Jarafuel **VALENCIA** 

Plasencia CÁCERES

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PALENCIA

## **CAÑONERAS WIND FARM**

**Commissioned:** 2007 and 2010

**Company:** Iberdrola Renovables

Capacity: 32,3 MW

Number of wind turbines: 38

Municipalities: Sangas, La Revilla, Villar, Santayana, Fresnedo, and Rehoyos (All within the municipality of Soba, Cantabria)







(1) Iberdrola Renovables – Onshore Wind

https://www.iberdrola.com/conocenos/ nuestra-actividad/energia-eolica-terrestre



(2) Monchina Cattle Breed (Raza Monchina): https://www.mapa.gob.es/es/ganaderia/ temas/zootecnia/razas-ganaderas/razas/ catalogo-razas/equino-caballar/monchina/ default.aspx



(3) Valles Unidos del Asón Cooperative: https://vallesunidos.com/



(4) Heras Agricultural School: https://cifplagranja.com/curso/tecnicosuperior-ganaderia-asistencia-sanidadanimal/



(5) Quesoba Cheesery: https://quesoba.com/



(6) Axia de Soba Cheesery: www.axiadesoba.com



(7) Tudanca Cattle Breed:

https://www.mapa.gob.es/es/ ganaderia/temas/zootecnia/razasganaderas/razas/catalogo-razas/ bovino/tudanca/default.aspx



(8) Angus Cattle Breed:

https://angusespana.es/razaaberdeen-angus/



(9) Naia's Cabin:

https://katestravelexperience.eu/ la-cabana-la-revilla-spain

Mañón A CORUÑA

Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas **VALLADOLID** 

Jarafuel **VALENCIA** 

Plasencia CÁCERES

Tarifa

**AEE** 

Guzmán HUELVA



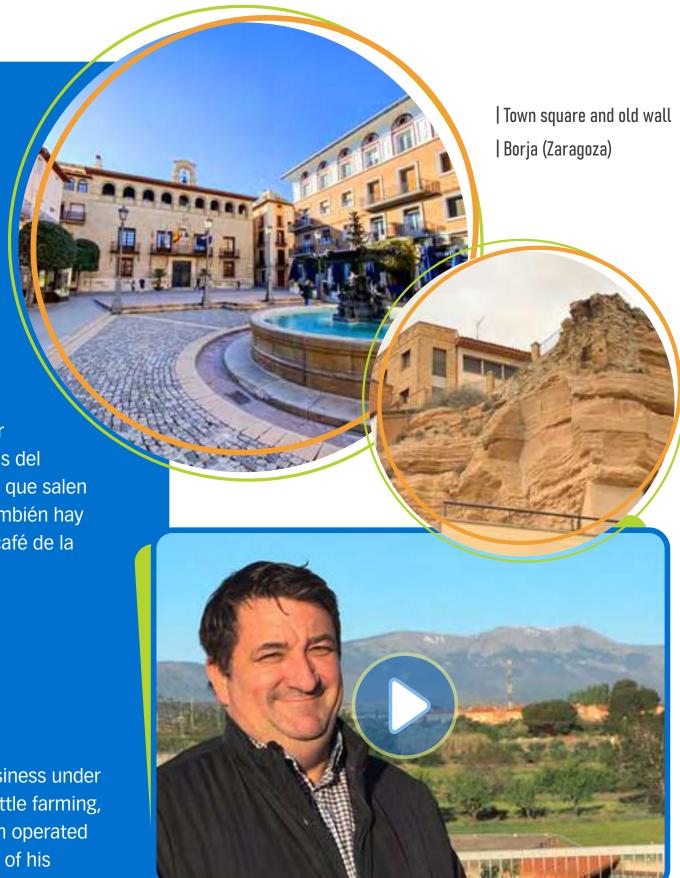
# Las Ruedas Tavern and the Angus Farm

The fresh breeze of the Moncayo shakes off the last traces of sleep. We're in for a day full of fascinating encounters that begins in the Barbalanca industrial estate. There we meet Luis de Pablo, owner of Mesón Las Ruedas.

Las mesas del interior y de la terraza se van ocupando por grupos de personas con uniformes de diferentes empresas del polígono. Luis explica que son trabajadores y trabajadoras que salen del turno de noche o que empiezan su jornada laboral. También hay agricultores y ganaderos que charlando toman el primer café de la mañana antes de ir a sus ocupaciones.

# Luis balances hospitality and ranching with his herd of Scottish Angus.

In addition to Mesón Las Ruedas, Luis owns a catering business under the same name. He combines his hospitality work with cattle farming, raising a herd of Angus cattle in the heart of the wind farm operated by **EDPR** (1). The beef produced on his farm supplies both of his establishments.





Luis de Pablo | Restaurateur and Rancher | Borja (Zaragoza)

https://youtu.be/6krBA76TjCk

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# The Angus Cows of the Wind Farm

The cows live within the wind farm
— both activities coexist in harmony.



Angus cattle farming



Luis, does the presence of wind turbines have any impact on your hospitality business?

Our restaurant benefits greatly from it. We serve many people every day — keep in mind that we're open 24 hours a day. Crews of workers, engineers, technicians, and maintenance staff from the wind farms come here regularly for breakfast, lunch, or dinner.

Your cattle farm is located within one of the town's wind farms. How do the two activities coexist?

Our farm is right in the middle of a wind farm in Borja, and our experience has been very positive — the two activities are perfectly compatible. We have an excellent relationship with the wind farm..

Luis recalls that in 2022, a wildfire severely impacted his livestock operation. To help with firefighting efforts, Luis and his catering team coordinated with the local council to provide essential support with water and meals for emergency personnel. "We served around 500 meals a day. That was our small contribution."

Luis circles back to the beginning of our conversation: "I fully support renewable energy. As an example, my restaurant is equipped with solar panels that make it fully energy self-sufficient."

We say goodbye to the cattle farmer and move on to meet our next story.

Mañón a coruña

ILLANO ASTURIAS

SODO CANTABRIA

Borja zaragoza

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

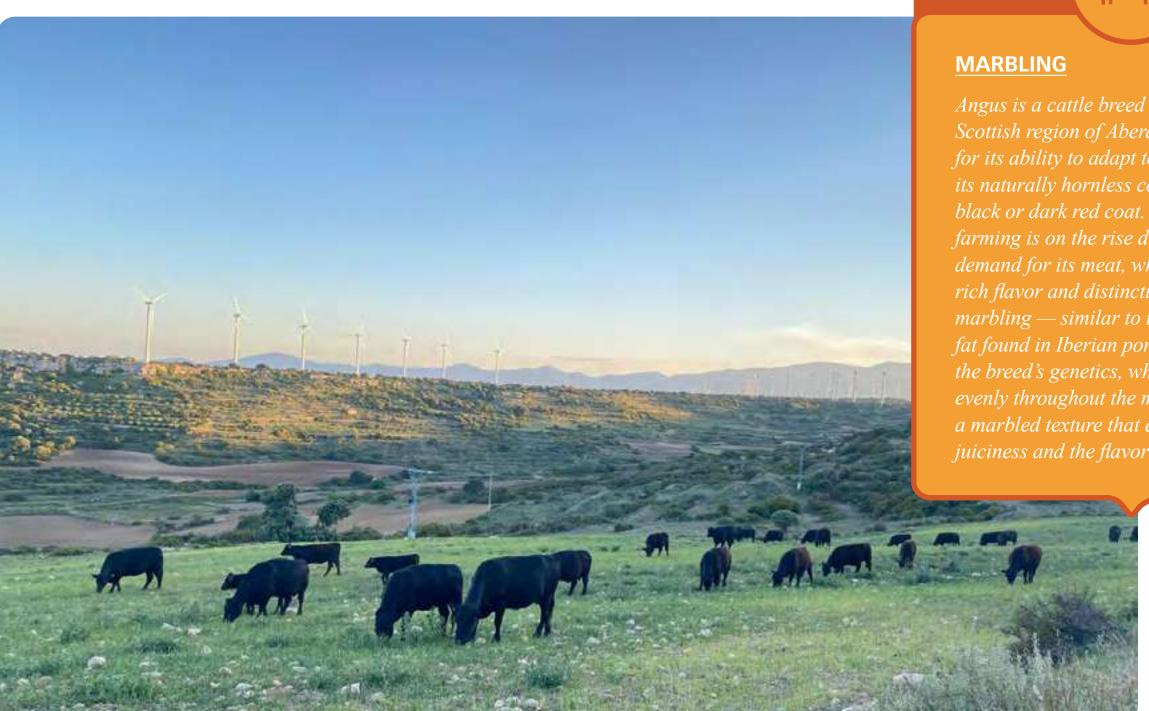
Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz







demand for its meat, which is prized for its rich flavor and distinctive marbling. This the breed's genetics, which distribute fat evenly throughout the muscle. The result is Mañón A CORUÑA

Illano **ASTURIAS** 

Soba CANTABRIA

BOrja ZARAGOZA

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Mañón



# Roads, Cranes, and Retaining Walls

Working at the wind farm provides an additional income — something essential in rural areas.

We find **Ángel Villalba** hard at work, operating a crane to move huge stones into place, building a retaining wall to stabilize a garden slope. He and his business partner founded Excavaciones Sanz y Villalba, a civil works company based in the nearby town of **El Buste**.

I would like to teach my trade to young people who could carry it on.





# Ángel, you're currently working here, but you also do jobs at the wind farm. Could you tell us more about that?

Years ago, we were involved in the construction of the wind farm, and now we handle the maintenance of the access roads. We fix cable line faults in trenches and make sure the roads are safe to travel year-round, whether it rains or snows. I remember in January 2021, during Storm Filomena, the snow completely blocked the access roads, and we had to go up with our machinery to clear the paths so the workers' vehicles could get through.

# Your company is based in El Buste, not far from here. What's the advantage of being so close to the park?

It means having steady work. If there's an emergency and they need us, we can be there right away. My partner and I are happy with this maintenance job because it brings in extra income at the end of the month — and that's something you definitely need in rural areas.

A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA** Borja ZARAGOZA Paredes de Nava **PALENCIA** Tordesillas **VALLADOLID** Jarafuel **VALENCIA** Plasencia CÁCERES Tarifa Puebla de Guzmán HUELVA

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Ángel Villalba | Civil Works Contractor | El Buste (Zaragoza)

# The Benefits of Stone Walls

The main work of Ángel's company is building retaining walls made of huge stones handled by crane. Their activity includes both civil engineering —such as road and breakwater construction, riverbank restoration, river dredging, and reforestation— as well as private projects. Many individuals choose to build or replace old concrete walls with new stone walls, which they find both more attractive and safer.

Ángel lists several advantages of using the massive stones unearthed during large construction projects: "They are reused to build walls instead of being sent to landfills. Also, building with stone is faster than with concrete, and at the same time, it helps with rainwater drainage as it filters through the gaps between the interlocked rocks."

He says he would like to teach this trade to young people so they can carry it on, because even though a crane is involved, it is still a craft: "You have to know how to place the stones properly, because a stone wall resists horizontal forces through overturning stability, and vertical loads through mass."





Ángel Villalba | Civil Construction Builder | El Buste (Zaragoza)

<a href="https://youtu.be/\_2atDowKEtU">https://youtu.be/\_2atDowKEtU</a>

Stone walls serve as shelter for small animals and help reduce the use of concrete and cement. Mañón
A CORUÑA

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ASTURIAS

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CANTABRIA

BORJA
ZARAGOZA

PARENCIA

TORDESILLOS
VALLADOLID

Jarafuel VALENCIA

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Tarifal CÁDIZ







# **DRY STONE WALLS: INTANGIBLE**CULTURAL HERITAGE

In 2018, UNESCO declared the building of dry stone walls —constructed without mortar— an Intangible Cultural Heritage of Humanity (2) in Spain and seven other countries. These walls play a crucial role in preventing landslides, floods, and avalanches, and contribute to combating erosion and desertification. They also enhance biodiversity and create microclimatic conditions favorable for agriculture, while providing shelter for small animal species and reducing the need for concrete and cement.

## The Garnacha Wine Route

The fields flanking the road from the city of Borja to the wind farms are vineyards. This is one of the wine-producing regions with the <u>Campo de Borja</u> (3), Designation of Origin (DO), an area renowned for its wine tourism attraction: the <u>Garnacha Wine</u> <u>Route</u> (4), named after one of the region's most emblematic grape varieties.



Vineyard Landscape | Borja

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José Luis Gascón | Wind Farm Manager I | Borja (Zaragoza)
https://youtu.be/mOVOVQCsT20

The turbine line is intentionally broken to protect a golden eagle nesting site.

# A Haven for the Golden Eagle

The wind farms in Borja are named Boquerón, Borja I, and Borja II. They are located on municipal land designated as Public Utility Mountains (Montes de Utilidad Pública, MUP). José Luis Gascón, the manager of Borja I wind farm, tells us more. Although he was born in Zaragoza, love brought him to live in Borja, the hometown of his wife and daughter. He explains that 85% of the wind energy royalties go to the local council, while the remaining 15% is allocated to the MUP Improvement Fund, managed by the Government of Aragón.

José Luis takes us to the Boquerón I substation. From the top, you can see all three wind farms. On one side stands the majestic mountain that gives its name to the **Moncayo Natural Park** (5) and in the distance, the snow-covered Pyrenees outline the horizon.



"Do you see that break in the line of turbines at Boquerón I that separates 9 turbines from the other 18?" José
Luis asks. "That interruption was intentional—when the park was being built, a pair of golden eagles was found nesting in that area, so that section had to be preserved."

Although the day is chilly, it lacks the typical strong cierzo (north wind), so the turbines turn lazily. Usually, this powerful wind drives them more actively. In the surrounding plains, cereal fields stretch across the landscape, along with livestock farms like that of Luis de Pablo. There are also fallow fields and scrubland where sheep graze.

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## The Brothers' Ternasco Lamb

On our way back, we stop at a spot known as El Estrechuelo to talk with **Javier and Antonio Moros Jiménez**, two brothers who are both farmers and livestock breeders. They're joined by Asmin, the shepherd who tends their flock.



Moros Jiménez brothers an shepherd Asmin



The sheep graze freely among the wind turbines—they simply go their own way.



Javier is from Maleján, a village near Borja. He's married and has two daughters. He says that in addition to raising livestock, he also farms: "I grow cereals, vines, almonds—a bit of everything, because otherwise, it's impossible to make a living." He began working in the fields and with livestock at age 16, skills he learned from his father. However, he's doubtful that his daughters will follow in his footsteps.

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He owns a flock of 900 <u>Rasa Aragonesa</u> (6), which he raises for the production of the renowned <u>Ternasco de Aragón</u> (7), a type of lamb certified with a Protected Geographical Indication (PGI). The ewes are well adapted to traditional grazing methods in mountainous and arid areas of Aragón.

Javier organizes four lambing seasons each year, with around 200 lambs born each time, all destined for sale as ternasco.

The flock grazes on fallow fields very close to the wind farm. "As you can see, the sheep are right next to the turbines, which don't bother them at all—they just go about their business."







Javier Moros | Farmer and Livestock Breeder | Meleján (Zaragoza)

<a href="https://youtu.be/rU\_W8b6uvXY">https://youtu.be/rU\_W8b6uvXY</a>

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# Reforestation

Nearly two years have passed since the devastating wildfire. Close to the Balcón de El Buste viewpoint lies the substation of the Borja I wind farm, on land that was scorched by the flames.

The fire started in a village on the slopes of the Moncayo mountain on the afternoon of August 13, 2022, and within four hours, it had reached the wind farm. But thanks to the determination and efforts of the local community, it was successfully extinguished.

Stronger than the fire itself was the will to recover. In March 2024, groups of student volunteers from schools in Borja, coordinated with a reforestation company, planted 3,000 native species—holm oaks and Aleppo pines across the three affected hectares.

Today, young saplings are visibly growing, and some seeds have even sprouted on their own. Signs that this land will once again become a forest, restore lost biodiversity, help capture carbon, and contribute to mitigating climate change.





Reforestation at the wind farm Borja | Zaragoza

https://youtu.be/ k1cVYJGTP4s

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# BORJA I, BORJA II & BOQUERÓN

Commissioned: 1997 and 2004





(1) EDPR: https://www.edpr.com/en



(2) Intangible Cultural Heritage of Humanity (Spain): <a href="https://ich.unesco.org/es/RL/conocimientos-y-tecnicas-del-arte-de-construir-muros-en-piedra-seca-01393">https://ich.unesco.org/es/RL/conocimientos-y-tecnicas-del-arte-de-construir-muros-en-piedra-seca-01393</a>



(3) Campo de Borja Designation of Origin: <a href="https://docampodeborja.com/">https://docampodeborja.com/</a>



(4) Garnacha Wine Route:

https://www.larutadelagarnacha.es/



(5) Moncayo Natural Park:

https://www.rednaturaldearagon.com/parquenatural-del-moncayo/



(6) Rasa Aragonesa sheep breed: <a href="https://www.mapa.gob.es/es/ganaderia/temas/zootecnia/">https://www.mapa.gob.es/es/ganaderia/temas/zootecnia/</a>
<a href="mailto:razas-ganaderas/razas/catalogo-razas/ovino/rasa-aragonesa/default.aspx">https://www.mapa.gob.es/es/ganaderia/temas/zootecnia/</a>
<a href="mailto:razas-ganaderas/razas/catalogo-razas/ovino/rasa-aragonesa/default.aspx">https://www.aragonesa/default.aspx</a>



(7) Ternasco de Aragón:

https://www.ternascodearagon.es/ternasco-dearagon/que-es-el-ternasco-de-aragon/ Mañón A CORUÑA

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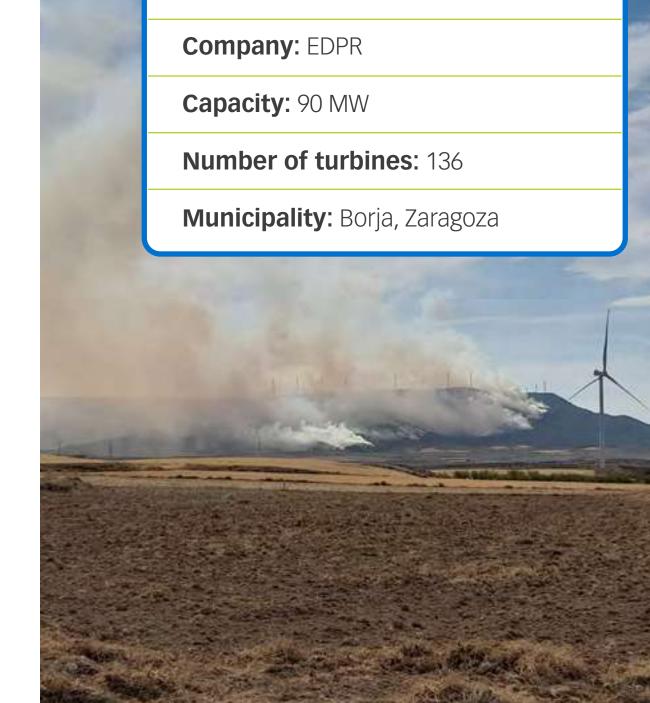
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de 10







## A Bustard Takes Flight Near Las Tadeas.







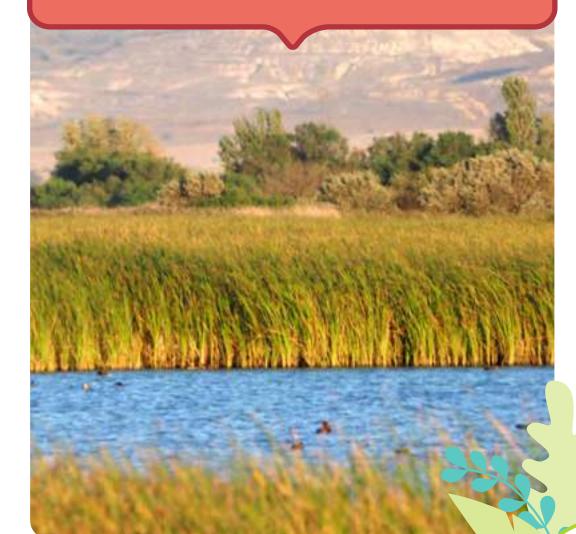
Sergio Villarán Viñé | Site Manager https://youtu.be/3JuSf5aB8hk

We meet with **Sergio Villarán**, the **Capital Energy** (2) technician responsible for the area, for an early morning visit to the Las Tadeas wind farm. Just as we turn onto the track leading to the site, a great bustard takes flight. Perhaps a good omen for the day ahead. We are surrounded by fields of alfalfa, wheat, barley, sainfoin, sunflower, and rapeseed. "It's a biodiverse area with plenty of food for birds," Sergio explains. "When tractors till the fields, you can often see them hunting insects, beetles, earthworms, or voles."



## **THE RAMSAR CONVENTION** (3)

The Ramsar Convention is an international treaty for the conservation of wetlands, especially those that serve as habitats for waterbirds. It was signed in the Iranian city of Ramsar in 1971. Today, 172 countries are signatories, protecting 2,493 wetlands covering more than 250 million hectares.



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Lagoon | Fuentes de Nava





Turbines | Las Tadeas Wind Farm



Lagoon, a wetland that has been restored to support biodiversity, fed by rainwater and by the <u>Canal de Castilla</u> (4). This site, designated a <u>Special Protection Area for Birds (SPA)</u> (5), ), is a vital habitat for both resident and migratory bird species. It forms part of the <u>Red Natura 2000</u> (6) Network and is included in the <u>RAMSAR Convention</u> (3) list of wetlands. These layers of protection highlight the region's rich wildlife and environmental value.

# Protecting Ecosystems and Birdlife through Environmental Measures.

To help preserve the birdlife and ecosystems surrounding the wind farm, a range of environmental compensation measures have been implemented. These include installing nest boxes for birds of prey—natural allies in controlling vole populations on farmland; revegetating degraded areas; setting up insect hotels to support species diversity and pollinators; and restoring 13 kilometers of historic footpaths and cycling routes, once deteriorated, now forming a scenic trail network.



As with all wind farms, bird protection is a top priority. "Bird collisions with turbines are a challenge we've practically overcome," explains Sergio. "We use a deterrent system that scares them off. Last year, we had zero collisions. Surveillance cameras with 360-degree coverage are installed on the towers. When they detect movement, they emit sounds to scare off birds. If the flight continues, the blades automatically stop. Birds have adapted to the wind farm—it's now part of their habitat. The first year saw some collisions, the second fewer, and now none."

Sergio adds that there have even been false alarms, like the time a fighter jet flew overhead and the system shut down the entire park.



Mañón
A CORUÑA

2
ILLANO
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4

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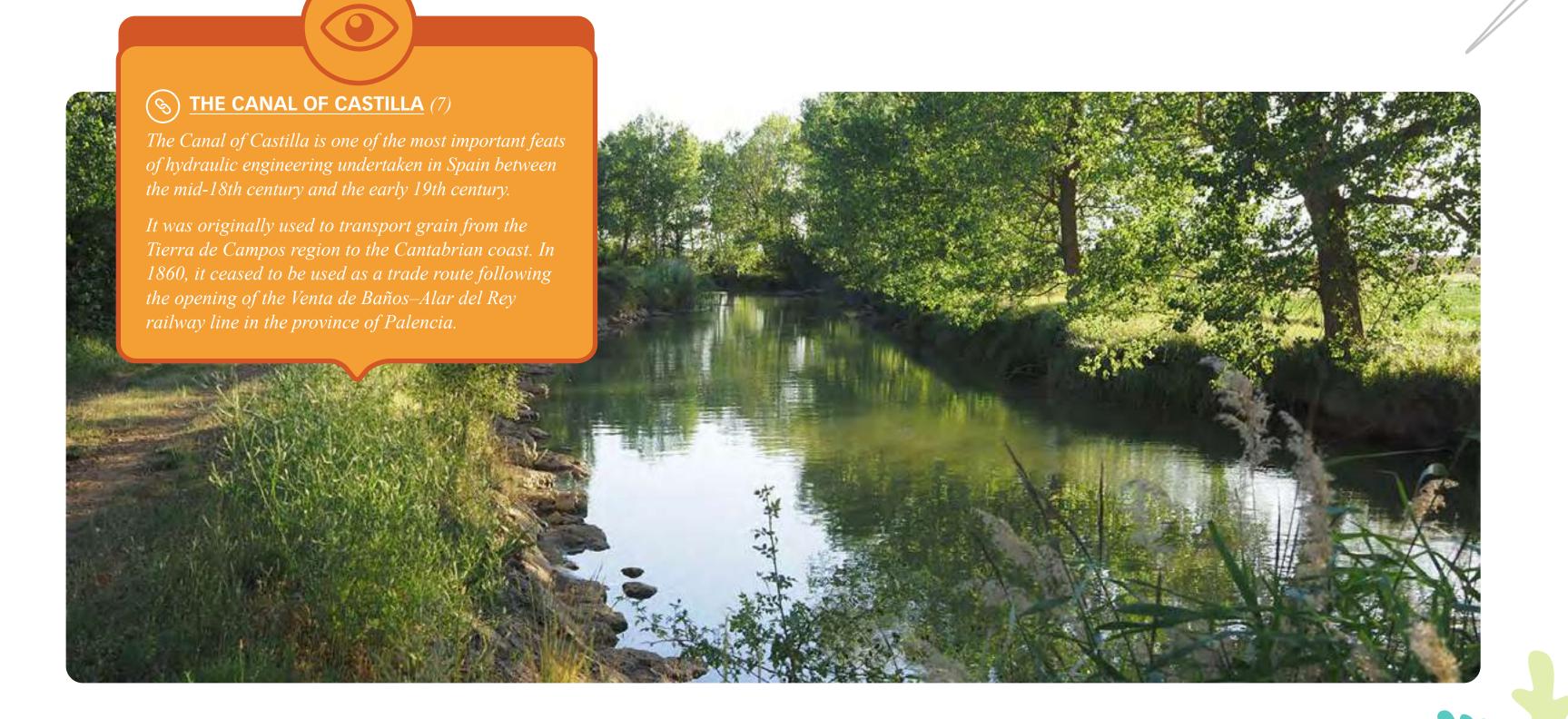
The data collected by the park's cameras through a dedicated app is used to analyze and identify the bird species living in the surrounding environment. This information is then shared with ornithology experts and with the Department of the Environment of the Junta of Castile and León.

Thanks to this system, many species have been spotted, including: the black kite, red kite, short-toed snake eagle, common swift, marsh harrier, rock dove, common kestrel, firecrest, spotted flycatcher, carrion crow, calandra lark, corn bunting, black redstart, hen harrier, common buzzard, skylark, and the white wagtail. All of them represent a rich sample of the biodiversity thriving in this part of the province of Palencia.

Our goal is to preserve these populations and help improve their quality of life.







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# Isabel and Marimar



Isabel Calvo and Marimar Sanz | Mother and daughter | Paredes de Nava https://youtu.be/RtCm20mwX2s

In the main square of Paredes de Nava, near the statue of the poet Jorge Manrique, (15) author of the famous poem Verses on the Death of His Father, we chat with **Isabel Calvo and Marimar Sanz**, mother and daughter.

These two women, Paredes residents by choice, enjoy the culture and art of their town and are happy to have Las Tadeas nearby. "I think the wind farm is wonderful, really good," says Isabel, "because we also get benefits that go back to the village — to support the museums, to fix the roads."

Her daughter Marimar adds: "Like the access road to the shrine of the Virgin of Carejas. Besides, the turbines are designed so that birds don't collide with them. If a bird comes near, sounds are emitted to scare them off. It's great that they're protected."



Both women are strong supporters of clean energy. Isabel emphasizes: "Yes, I like the wind farm because it's clean, renewable energy. And the Las Tadeas setting is simply divine. It's also very important for the people of Paredes and the nearby villages because it helps us preserve and care for the

surroundings of the shrine of the

Virgin of Carejas". (16)



Shrine of the Virgin of Carejas (above) Statue of Jorge Manrique (left)



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Landscape is divine



# Paredes de Nava, a Town of Art and Culture

After visiting Las Tadeas, we meet up with **Anastasio Nieto Bueno**, a retired resident of Paredes de Nava
who used to work at the Seda coffee factory in
Palencia.



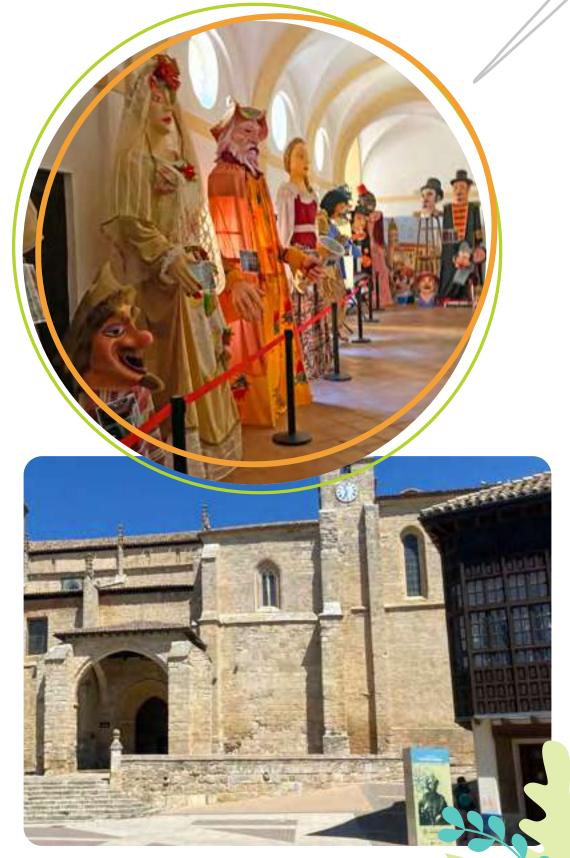
"Did you like it? I think the wind farm is a great economic help for the town. We're lucky that there's plenty of wind up there. Plus, the funding the municipality receives is really useful to cover the many services we have. It helps keep Paredes going—we try to preserve the population and ensure a good quality of life."

Church of Santa Eulalia

Like a local tour guide, Anastasio recommends the many must-see places in town: "Right here in the Church of Santa Eulalia you'll find the Parish Museum of Sacred Art (8), with works by Pedro Berruguete (9) and his son, the sculptor Alonso Berruguete (10). The church also houses a magnificent Baroque organ (11) built by Tadeo Ortega.

You can also visit the <u>House of Puppets</u> (12) and the charming <u>Museum of Stories and Science</u> (13), directed by the local artist Rosana Largo."

If you still have time, Anastasio recommends checking out the Interpretation Centre of Tierra de Campos (14).



Puppets (Town Hall) | Parish Museum of Sacred Art

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# The Center for Performing Arts

Las Tadeas has brought benefits to its neighbors from the very start of construction up to its current operation.

In the afternoon, in the courtyard of what was once a 15th-century Franciscan convent and now serves as the town hall, we spoke with **Luis** Calderón Nágera, the mayor, and **Antonio Gero**, the Councilor for Culture and Sports.



Luis Calderón Nágera | Mayor of Paredes de Nava https://youtu.be/wzNDbetI8GQ

For Mayor Luis Calderón, the arrival of the Las Tadeas park has been beneficial through every phase:

"It generated wealth during the construction phase, with a ripple effect on some local businesses, and continues to do so during its operation. Owners of farms and communal lands within the park receive rents. Additionally, there's a fiscal benefit for the municipality through taxes. For example, with the park's construction permit, we're developing the Performing Arts Center project, funded with 2.5 million euros—half financed by the Ministry through their 1.5% cultural program, and the other half by the regional government, the Palencia provincial council, and this town hall.

Antonio Gero, Councilor for Culture and Sports, an athlete closely linked to education and also the principal of the local school, explains that some healthy and traditional routes in the area have been improved:

"The most important is the one starting from the Hermitage of Señora de Carejas heading to the Hermitage of Becerril de Campos. Legend says a mother walked this path daily from Becerril to Paredes to ask the Virgin for the release of her captive son. Once freed, the young man's shackles were taken to the Paredes hermitage in gratitude."





Antonio Gero | Councilor for Culture and Sports, Paredes de Nava https://youtu.be/RJoUtEZ6p3c



Illano

**CANTABRIA** 

ZARAGOZA

Paredes de Nava **PALENCIA** 

Tordesillas **VALLADOLID** 

Jarafuel **VALENCIA** 

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## SCHOOLS FOR SUSTAINABILITY (17)

This project involves 13 primary and secondary schools across the province of Palencia. It encourages active participation of students in researching, understanding, and solving socioenvironmental issues in their immediate surroundings through a program called the school eco-audit. The goal is to educate the school community in environmental values by engaging students and their ideas and commitments, aiming to create more livable and sustainable schools.



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**MAEE** 



at that summer hour when the Castilian sun fades and

a gentle breeze rises. Chatting and stopping along the

"I love going up to the windmills. Yesterday, my son-

in-law went to the Canal de Castilla to photograph

daughter we should climb up to Las Tadeas instead.

Up there, with the breeze and the soft hum of the

blades, it feels like you're by the sea."

the moon's reflection on the water, but I told my

street, one of them says:

Pedaling with Renewed Energy

Cycling, running, and hiking enthusiasts will find Paredes de Nava the perfect starting point to discover a paradise of trails. These routes wind through paths, secondary roads, and tracks that invite adventure. Some cross the hills of the Las Tadeas wind farm; others connect nearby and distant villages, adapting to whatever effort and difficulty level each athlete desires. The terrain offers a variety of ascents and descents, with slopes ranging from 80 to 400 meters of elevation gain. Along the way, you can discover historic aqueducts, fountains, castles, churches, and hermitages. Every trail is an opportunity to explore and marvel at the cultural and natural heritage of the region!

Mañón A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA** Borja ZARAGOZA Paredes de Nava **PALENCIA** Tordesillas VALLADOLID Jarafuel **VALENCIA** Plasencia CÁCERES Tarifa CÁDIZ Puebla de Guzmán HUELVA

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## LAS TADEAS WIND FARM

**Commissioned** 2020

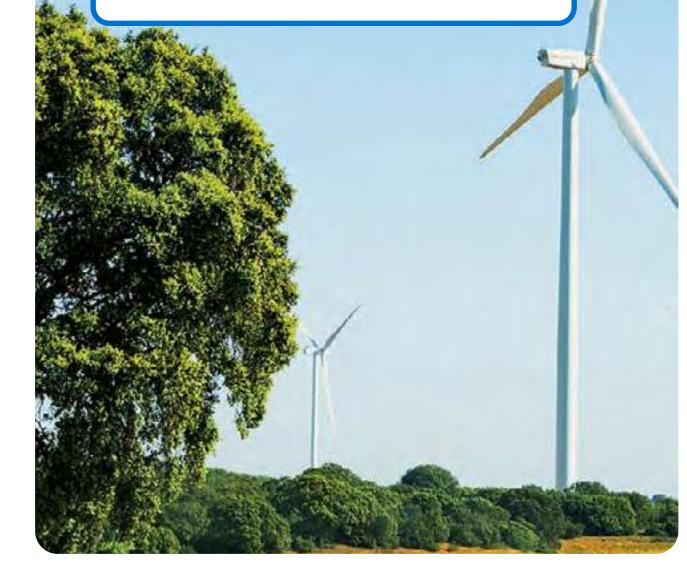
**Company:** Capital Energy

Capacity: 39 MW

Number of turbines: 11

Municipalities: Cardeñosa de Volpejera

and Paredes de Nava, Palencia







(1) Las Tadeas presentation: https://www.youtube.com/ watch?v=I5V7vDrzpdw&t=8s



(2) Capital Energy: https://capitalenergy.com/



(3) RAMSAR convention: https://www.ramsar.org/es



(4) Canal of Castilla (1): http://www.canaldecastilla.org/



(5) Zona ZEPA:

https://www.miteco.gob.es/es/ biodiversidad/temas/espacios-protegidos/ red-natura-2000/zepa.html



(6) Red Natura 2000:

https://www.miteco.gob.es/es/ biodiversidad/temas/espacios-protegidos/ red-natura-2000/rn\_espana.html



(7) Canal of Castilla (2): https://es.wikipedia.org/wiki/Canal\_de\_



(8) National Museum of Sacred Art: https://paredesdenava.org/lugar-de-interes/ iglesia-museo-santa-eulalia/?\_gl=1\*2gibxt\*\_ ga\*MTg2NDk1NzkyMy4xNjkxNTA1Mzcw\*\_ up\*MQ..\*\_ga\_



(9) Pedro Berruguete: https://www.museodelprado.es/

aprende/enciclopedia/voz/berruguete-pedro/5b7ce92c-4d34-450b-b564-f7dbf4ea05cc%20



(10) Alonso Berruguete:

https://www.museodelprado.es/coleccion/ artista/berruguete-alonso/77bd7393-c68f-4f31-9c11-1940513fc01a



(11) Baroque organ built by Tadeo Ortega. https://www.youtube.com/ watch?v=d4K5MHuAe5g



(12) The Puppet House:

https://paredesdenava.org/lugar-de-interes/ la-casa-de-los-titeres/



(13) Museum of Tales and Science

https://museodeloscuentosylaciencia.com/



(14) Centro de Interpretación de Tierra de Campos:

https://paredesdenava.org/lugar-de-interes/ iglesia-de-san-martin/



(15) Jorge Manrique: <a href="https://datos.bne.es/persona/XX1021804">https://datos.bne.es/persona/XX1021804</a>. html#:~:text=%E2%80%8B%20Es%20 autor%20de%20las,importantes%20 dentro%20del%20Cancionero%20general



(16) Hermitage of Our Lady of Carejas: <a href="https://paredesdenava.org/lugar-de-interes/">https://paredesdenava.org/lugar-de-interes/</a> ermita-de-nuestra-senora-de-carejas/



(17) Schools for Sustainability: <a href="https://www.diputaciondepalencia.es/sitio/">https://www.diputaciondepalencia.es/sitio/</a> medio-ambiente/escuela-sostenibilidad



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Borja ZARAGOZA

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When a valuable discovery is made by chance, we call it serendipity. Something of the sort—called Carrecastro—occurred when the company Nadara (1) planned to build a wind farm on a hilltop in the province of Valladolid. The presence of Bronze Age archaeological remains was already known, so the town council and the company agreed to excavate the site before installing the wind turbines. Today, the significant archaeological site coexists with a wind farm, cultivated fields, and is visited by cyclists, walkers and local residents.

The site revealed human and animal burials, pottery, metal artefacts and grain mills.



# A witness hill to history

The wind farm was built atop a páramo testigo, or witness hill, known as Carrecastro—meaning 'hillfort path'. Over millions of years, this hill became isolated from the Montes Torozos, allowing the Duero River to carve through the valley and the Cañada Real Leonesa Occidental to run along the eastern side of the hilltop—a natural route and ancient livestock trail dating back to prehistoric times.









The work began with close coordination between two teams of archaeological experts—one from the University of Valladolid, led by Professor of Prehistory **Germán Delibes** (2), and the other from the company Patrimonio Global (3), coordinated by **Ángel Palomino Lázaro**. Combining their expertise, and pickaxes in hand, they set out to uncover more about one of the most emblematic sites of the Cogotas I culture.

During the excavation, they unearthed human and domestic animal burials, ceramic vessels, ingots and metal artefacts, as well as curious stone mills used for grinding grain.





Carrecastro's Bronze Age archaeological site (4) https://www.youtube.com/watch?v=ShpJzDy1I3Y



## WHO WERE THE **COGOTAS PEOPLE?**

The Cogotas culture takes its name from carried out by Juan Cabré in 1920. Today, thanks to the research at Carrecastro, there is according to Germán Delibes de Castro, the

The Cogotas people systematically and ritually a new settlement. They had no cemeteries in the modern sense—human remains have been found in pits, suggesting this was part of their farewell rites.

They cultivated wheat and barley, raised livestock, and practised metallurgy using copper and tin alloys, typical of the Late Bronze Age. They transported raw materials, metals, granite millstones and pottery from areas more than 100 kilometres away from Carrecastro.

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Among the ceramics uncovered were some decorated with the so-called **Boquique motif** (5), featuring a sequence of dots and dashes filled with white paste—a distinctive design seen on vessels from the Boquique cave in Plasencia (Cáceres).

The archaeological richness of the Carrecastro site led to a revision of the wind farm's layout, reducing the number of turbines from 8 to 4 in order to uphold the agreed commitment to protecting the site.

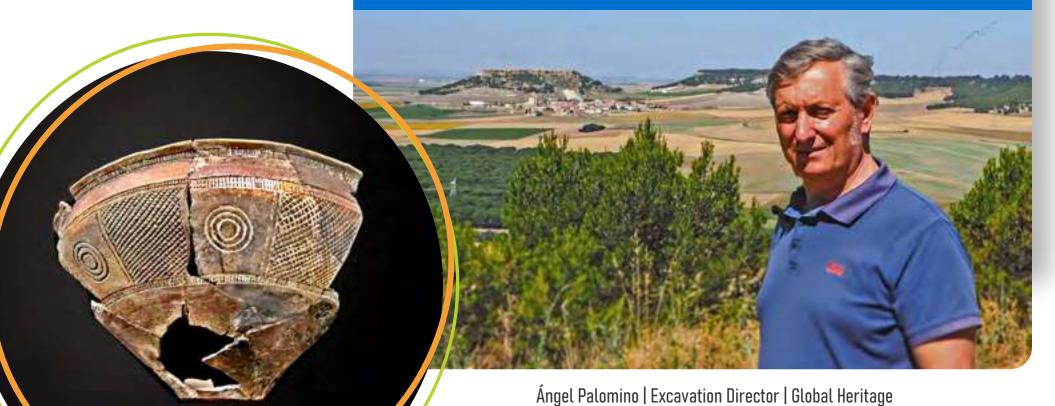
Carrecastro was a place of gathering and exchange between nearby groups.

Boquique-style pottery José Manuel Benito Álvarez, CC BY-SA 2.5 | Via Wikimedia

# What was Carrecastro?

As **Ángel Palomino**, Director of Archaeology and Projects at Patrimonio Global, explains:

"Based on the excavation work, we believe Carrecastro served as a gathering place where groups from the surrounding area came together to formalise agreements, reinforce social ties and celebrate commemorations and festivals. It was also a centre of trade and redistribution of goods from other regions—copper has been found from the Milagro mine in Asturias, granite millstones from the Zamora-Salamanca border, and ceramics from western Zamora."



Mañón A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA PALENCIA** CÁCERES Tarifa

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Jarafuel **VALENCIA** 

Plasencia





# Working in my hometown



Elena Molina and Ángel Palomino, archaeologists at Patrimonio Global https://youtu.be/4kFt7qfJ-QQ



I saw an opportunity for the site that couldn't be missed.

Elena Molina is an archaeologist at Patrimonio Global, born in Tordesillas. She recalls being fortunate to work on the excavation: "I took part in some informative talks back in 2017 when the wind farm was planned. At that time, people were against it, worried

about the destruction of the archaeological site, but we explained everything would be done with the utmost care. As an archaeologist, I saw an opportunity for the site that couldn't be missed."



Elena Molina | Archaeologist from Tordesillas | Patrimonio Global

About 20 local people were hired for the archaeological work, staying for the four months the campaign lasted. Elena remembers how the workers' direct contact with the site strengthened their bond with the castro: "Among those who worked there, many were genuinely interested; after the information sessions, acceptance grew among the community. Now the locals have made the wind turbines their own and get concerned if they see one has stopped."



Mañón A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA** Borja ZARAGOZA Paredes de Nava **PALENCIA** Tordesillas **VALLADOLID** Jarafuel **VALENCIA** Plasencia CÁCERES

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Mañón a coruña

ILLONO ASTURIAS

SODO CANTABRIA

BOTJOI ZARAGOZA

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Plasencia cáceres

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# From the Mayor's Office



There was a commitment to respect the site and publicise the findings — and that has been honoured.

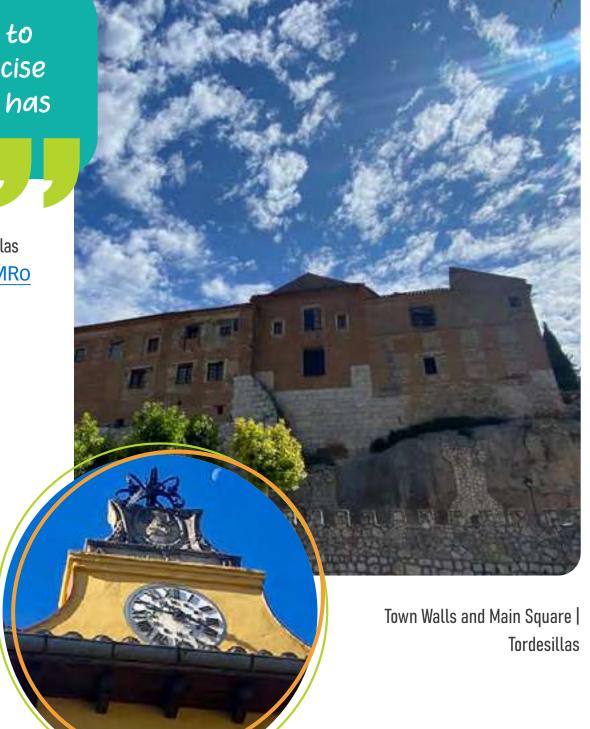


Miguel Ángel Oliveira | Mayor of Tordesillas https://youtu.be/-TqZCq6vMRo

Miguel Ángel took over responsibility for the wind farm from the previous municipal government and explains that "in Tordesillas, the community has accepted the wind farm and is pleased. We have seen that, besides uncovering a Bronze Age castro, we are also producing renewable energy."

The mayor is a strong advocate for energy generated from nature's inexhaustible resources. "Always in an orderly and well-structured way, we are obliged to work with renewable energies and provide a sustainable solution for future energy needs and the preservation of our environment," he explains.

Miguel Ángel is very satisfied with the collaboration between the teams working on the wind farm. "Everything has been very straightforward, with excellent communication. We committed to respecting the archaeological site and sharing the discoveries, and that has been upheld; both the energy company and Patrimonio Global have ensured the municipality understands the significance of Carrecastro. It is no longer just a local tourist resource but one of national and international importance," he concludes.



Mañón A CORUÑA

> ILLONO ASTURIAS

SOLO CANTABRIA

Borja ZARAGOZA

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# Ana and the Medieval Palenque

The coexistence of clean energy production and the excavation of the Carrecastro site has been a boon for the area.

Tordesillas receives financial compensation from the energy company, a portion of which is allocated to the Asociación El Palengue Medieval, an organisation dedicated to promoting the heritage of the town and its comarca. **Ana Serrador** is the president and balances her official work in the mornings with afternoons devoted to the association.





Ana Serrador | Pta. Asociación El Palenque Medieval de Tordesillas https://youtu.be/eZlqyscalaY



#### Ana, could you tell us how you distribute the funding you receive?

El Palengue Medieval acts as the channel for the contributions, enabling us to carry out numerous cultural activities (7). The funding is distributed across the entire community, reaching all ages and sectors, and we collaborate with other associations in the comarca.

#### Besides associations, are there other beneficiaries?

Yes, we work with the University of Valladolid through the Tordesillas Centre for Relations with Ibero-America, based in the Casa del Tratado. We have also organised lecture series, a nanotechnology conference, and another for mathematicians from Brazil, Portugal and Spain, among other events..

#### You also work to revive traditions that are lost or fading.

Yes, we are currently working with Brussels to preserve medieval lace-making.

#### You've brought back almost lost traditions in Tordesillas, such as the oblada. Could you tell us what that involves?

The oblada is a festival for children celebrated on All Souls' Day. We bake an oil bread filled with sausages or watermelon jam, which the children eat at the cemetery gates while waiting for the adults to return.

#### What other activities do you carry out?

This year we collaborated with the parents' association of the local school to create a radio programme about the environment, which came second in a national competition. We also support the Pandora Theatre group, lantern contests, photography competitions, and promote young local athletes.

The community knows that the funds Tordesillas and its comarca receive come from the wind farm. Participation has no restrictions except for three topics that are off limits: religion, politics, and bullfighting.

#### What's your opinion on wind energy?

allowed the excavation of Carrecastro, it's proven to be a perfect combination. Moreover, it benefits the population through funding. I'm delighted that Renantis continues to trust El Palengue Medieval here in Tordesillas.

Mañón A CORUÑA

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### At the Pool

The early July heat in Tordesillas draws us to the pool, where we meet our next protagonists, including Mateo Rodríguez, who works at the entrance control. He tells us about the park: "Yes, of course I know it, I've ridden my bike and walked up there many times with my friends. The wind farm is very well located; from the top you can see everything. Also, at school we've had talks about what they've found on the hill and that the pieces are being studied in Valladolid. I believe they're planning to make a virtual museum in the future with everything they've discovered."

On the grass, three teenagers — Elia, Elena, and Daniela — are playing cards and laughing nonstop. One of them says, "I liked Carrecastro when I visited the park with my family; it seemed like the air up there was cleaner." Another adds, "And it's the energy from the air that moves the turbine, right? So it's clean energy, it's lucky they put it here."



Mañón a coruña

ILLONO ASTURIAS

SODO CANTABRIA

Borja ZARAGOZA

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Soba **CANTABRIA** 

Borja ZARAGOZA

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Tordesillas

**VALLADOLID** 

Jarafuel

Plasencia

Puebla de

Guzmán HUELVA

**VALENCIA** 

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# The Little Archaeologists





Pablo Frías and Víctor Reguera | Tordesillas https://youtu.be/TanajB6lJ1E

Pablo Frías and Víctor Reguera pause their water games to tell us what they know about Carrecastro. These two friends from Tordesillas talk about what they learned in a school talk about the excavations. They know that people once lived there who performed rituals with animals, as bones have been found in the pits dug into the rock. They also know these people traded their products through bartering and had pottery and spearheads which they melted right there.



#### **CARRECASTRO WIND FARM**

Commissioned: 2020

Company: Nadara

Capacity: 10 MW

Number of turbines: 4

Municipalities: Tordesillas and Velilla,

Valladolid







(1) Nadara:

https://nadara.com/



(2) Germán Delibes Chair of Prehistory: https://historiasimancas.uva.es/ rushmore\_teams/german-delibes-de-



(3) Patrimonio Global:

https://www.patrimonioglobal.es/ proyecto\_carrecastro/



(4) Video: "The Bronze Age Site of Carrecastro":

https://www.youtube.com/ watch?v=ShpJzDy1I3Y



(5) Link: Boquique Pottery: https://es.wikipedia.org/wiki/ Cer%C3%A1mica\_de\_Boquique



(6) Excavation at the Carrecastro Site (Tordesillas y Velilla):

https://dialnet.unirioja.es/servlet/ articulo?codigo=8196769



(7) Activities at Medieval Palenque: https://community.falckrenewables. eu/2023/02/06/2022-lo-masdestacado-de-nuestras-actividadescomunitarias-en-espana-enimagenes/

A CORUÑA Illano **ASTURIAS** 

Soba **CANTABRIA** 

Mañón

Borja ZARAGOZA

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### The School Garden

It's February, and the sun warms the palm-lined park next to the school in Jarafuel. The school day is over, and the cheerful voices of children and parents fill the playground with life. The little ones dart about between the swings, making the most of the sunny afternoon.

We approach the lively group and are greeted with a broad smile by **Lorena Villanueva**, a cheerful woman who is clearly happy to live in this village. She explains that she works at the local care home and day centre, where meals are also prepared for older residents who prefer to have their food delivered, as cooking has become a challenge.

Chatting about this and that, she says she supports wind farms: "because they're one of the cleanest sources of energy I know, and I wish there were more of them all across Spain," she says with conviction.





Lorena Villanueva | Resident of Jarafuel | Valencia https://youtu.be/C1bup-kbYyk

The care home also serves as a day centre and provides homedelivered meals.

Mañón A CORUÑA Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

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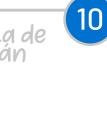
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Teresa Gómez | Resident of Jarafuel | Valencia https://youtu.be/P-sDJDLypIk

Wind farms are a clean source of energy, and I wish there were more all across Spain. While Lorena is sharing her thoughts on wind power, **Teresa Gómez** arrives to pick up her grandson. She nods in agreement and joins the conversation:

"Wind farms are a fantastic source of energy, and the turbines blend in well with the landscape. I'm not much of a country person myself, but I love walking up to Boira when friends come to visit. We take them up to the wind farm – it was a novelty at first, but now it's just part of the scenery." Teresa works at the Cofrentes spa, but she says she's chosen to live in Jarafuel because it's where she feels most at home.

A moment later, Espe, another mum at the playground, suggests we visit her husband's workshop. His name is José **Antonio Costa**, and he's a metal craftsman.



Bird on the School Wall (Eurasian Jay) copy <@\_dhos\_>



Puebla de Guzmán

HUELVA

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# Blacksmithing as Art



José Antonio Costa | Artisan | Jarafuel | Valencia

José Antonio, the artisan, expresses himself through metal. His workshop is home to hundreds of roses, cobras and dragons.

Following Espe's directions, we arrive at José Antonio's workshop. It's a spacious unit packed with metal materials: anvils, blowtorches, sheets, wire and hammers. There we find this skilled blacksmith, deeply immersed in the task of decorating a hundred roses he's preparing for the upcoming craft fair. From inside the workshop, one can make out the picturesque silhouette of the wind turbines outlined by the setting sun.

Night falls as José Antonio tends to his metallic garden. Beyond him, sculptures of flying dragons and a group of python-like snakes made from ribbed steel bars lie on the ground—so lifelike it's unsettling to walk among them.



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# Antonio, the Shepherd in Love

Just a few steps from the artisan's workshop stands the pen where Antonio Gandía keeps his sheep and goats. As the gate creaks open, an older man of medium height appears, moving gently among the bleating animals. His affection for them keeps him active and content.

Antonio was born in Almansa and was already out in the hills with the flock by the age of six. He never had the chance to attend school. When he was eleven, his family moved to Jarafuel, and he has lived here ever since. Now retired, Antonio remains a happy man with his small herd. "Taking the animals out each day is more than a routine; it's the passion that keeps me going. When my knee gives me trouble, I herd them with the motorbike. I can't imagine life without my sheep. They were once my *livelihood—now, they're my hobby,"* he says with a smile



The sheep are a luxury now after a lifetime living off them, they've become my hobby.

Antonio Gandía | Shepherd from Jarafuel | Valencia

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The Sheep Were Never Afraid of the Turbines — They Roamed Freely Among Them, Never Noticing a Thing.





Antonio Gandía | Shepherd from Jarafuel | Valencia https://youtu.be/30vbFF9MwhU

One October day, when Antonio was 23, he led his flock down to drink from the La Bella spring. There, by chance, he met Ofelia—his future wife—who happened to be there with a group of friends. Fate had arranged another encounter that would mark the beginning of their love story. Antonio decided that for New Year's Eve, he would join some friends in Teresa, a village near Jarafuel where Ofelia lived.

At the New Year's Eve dance, Antonio met Ofelia again. He asked her to dance, and from that moment on, their lives became intertwined. "That dance bound us forever we've never been apart since," he recalls fondly. This year, they celebrate 51 years of marriage and the family they've built together: four daughters, one son, and six grandchildren.

Years ago, Antonio would wander the region with his flock, across riverbanks and hills in search of pasture. And even when the wind turbines arrived, he would still lead the animals up into the mountains. "The sheep were never afraid of the turbines—they roamed freely among them, never noticing a thing."



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# Social Wellbeing



Fernando García has been the mayor of Jarafuel since 1999, and he takes great pride in serving its nearly 800 residents. The town council manages a residential home for the elderly, a day care centre, and also provides a meals-on-wheels service for older people. There is a centre for retirees, another for rehabilitation, a team of six social workers, and a transport service that takes patients to medical appointments outside the village.

The local council is now considering the creation of an energy community through the installation of solar panels on the roofs of municipal buildings.



Fernando García | Mayor of Jarafuel | Valencia https://youtu.be/ay78m8wie1o

Fernando is always coming up with ideas to improve life for the people of Jarafuel.



we could have built a sports centre like in other towns, but we chose instead to prioritise the more basic and pressing needs of our community.



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### Territorial Alliances

The Boira wind farm spans land belonging to both the municipality of Jarafuel and the regional government of the Generalitat Valenciana. Thanks to the efforts of forestry engineer Javier Hermoso de Mena from the Department of Environment, Water, Infrastructure and Territory, an agreement was reached to ensure that the wind energy levy owed to the Generalitat would instead be directed straight to the Jarafuel council. This funding enables the creation of mountain maintenance brigades. **ACCIONA Energía** (1) makes the payment to the Generalitat once the forest brigade work has been certified.

Fernando explains how some of the wind farm's benefits have been channelled:

"With the money from the agreement between the wind energy company, the Generalitat Valenciana and the town council, we've formed teams that clear the hills and prune the woodland. The workers carry out forestry work, clean ravines, clear paths, and create firebreaks. The goal is to create jobs, as this region is at risk of depopulation."

Locals hired by the Jarafuel council also process the biomass and distribute it to residents.



We've used the wind levy to create jobs focused on forest maintenance.





Javier Hermoso de Mena | Forestry Engineer
Pedro Pérez | Environmental Officer | Generalitat
Valenciana Department of Environment
https://youtu.be/6g0sG4o12f4

Mañón A CORUÑA

Illano

Soba

**CANTABRIA** 

**ASTURIAS** 

Boria

ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifal CÁDIZ







#### THE HACKBERRY TREE

The Ayora Valley is renowned for its use of the hackberry tree, a species traditionally employed to craft agricultural tools such as pitchforks and hoes. These trees also serve as natural supports for terraced fields. While artisan shops have become scarce in Jarafuel, one of the few that still offers handmade products is the company Bastones y Artesanía (2).



Hackberry Tree | Jarafuel | Valencia



Pitchfork Making | Source: Jarafuel Town Council | Valencia



**Vídeo: Manufacturing of Elm Forks** (3)



Vídeo: Pruning Elm Trees to Make a Fork (4)

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# The Forest Brigades

The mayor invited us to join them up on the mountain where they were clearing brush.

In these parts, alongside bats, one can spot common kestrels, short-toed and golden eagles, wood pigeons, griffon vultures, and common buzzards soaring overhead.

Reaching the mountain summit, the landscape is varied: pine trees dominate, alongside holm oaks, kermes oaks, junipers, savin junipers, rockroses, and rosemary bushes. The vegetation is dense, and the buzz of brushcutters fills the air.

On the summit trail we met Manuel Máñez, the leader of the municipal brigade, who explained their work: "We clean the forest, prune the trees, remove excess scrub, and clear the paths to prevent wildfires. Our brigade consists of seven people; we start work at eight in the morning until two, with a break for lunch. Then we resume from three until half past five."

Each brigade usually consists of eight local people hired by the town council. Annually, they manage an area of about 10 hectares.



Forest cleaning brigade of Jarafuel | Valencia Manuel Máñez | Head of the Forest Brigade of Jarafuel | Valencia https://youtu.be/SAsk6zesysI

Mañón A CORUÑA Illano **ASTURIAS** Soba

Borja

**CANTABRIA** 

ZARAGOZA

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Guzmán HUELVA



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To meet the other brigade members working nearby,
Manuel warns us to approach carefully so they can see
us: "I'll call them from a distance; I can't get too
close because with all the noise they won't hear
me, and there could be an accident."

When the noise dies down, the team gathers at the edge of the pine forest, equipped with safety boots, protective goggles, coveralls, helmets, and face shields. Although it's February, the weather is quite warm, and they refresh themselves with water.





Forest cleaning brigade of Jarafuel | Valencia https://youtu.be/g\_w4bj3QBPI





Forest cleaning brigade of Jarafuel in action <a href="https://youtu.be/WfLbyi5vR68">https://youtu.be/WfLbyi5vR68</a>

We belong to the Jarafuel municipal forest brigade; we're all returning workers because we've been with the brigade for several years. Our activity usually runs from December until May or June, depending on the needs. We're happy to have this job and hope the funding and subsidies continue so we can keep working.



Mañón A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA** Borja ZARAGOZA Paredes de Nava **PALENCIA** Tordesillas **VALLADOLID** Jarafuel **VALENCIA** Plasencia CÁCERES Tarifa Puebla de Guzmán HUELVA

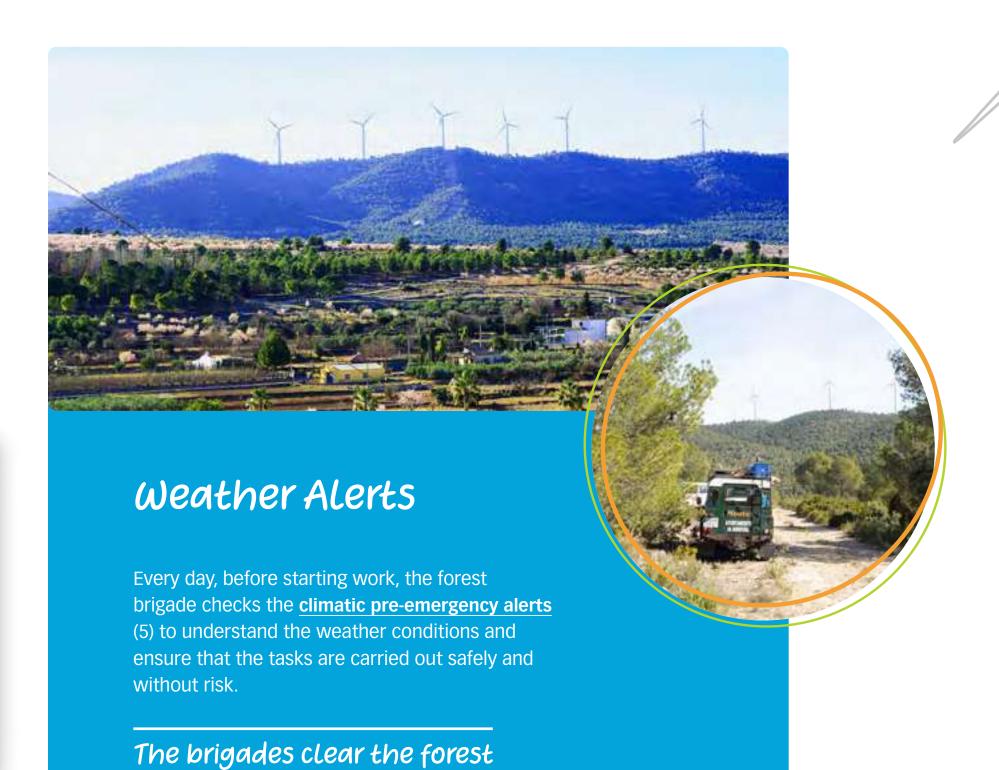
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### Safety Measures

Along the forest track, water backpacks and fire extinguishers are strategically placed; these serve as emergency equipment to quickly extinguish any spark or flare-up, especially during refuelling of the machinery.



Forest track | Jarafuel | Valencia



and paths to reduce the risk of

wildfires.

Illano **ASTURIAS** Soba

CANTABRIA

Mañón A CORUÑA

BOrjal ZARAGOZA

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### Biomass as a Resource





Juan Carlos, José Vicente and Francisco delivering firewood to Amalia and Juan <a href="https://youtu.be/pRM17mDA48g">https://youtu.be/pRM17mDA48g</a>

The municipality makes use of the biomass extracted from clearing the forest. After visiting the brigade, we pause at the woodpile, where the council workers chop the firewood, sort it, and load it for distribution to the homes of retired residents in Jarafuel. The little orange truck stops at the house of Amalia and Juan, where Juan Carlos, José Vicente, and Francisco unload the wood and stack it in the woodshed.



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ILLONO ASTURIAS

SODO CANTABRIA

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Plasencia cáceres

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# Yelyzaveta in Las Vegas

After an intense morning in the countryside, we enter Las Vegas, one of the local restaurants. Inside is its owner, Yelyzaveta Deshko, a woman with contagious energy. She serves tables and clears dishes but finds a moment between desserts and coffees to tell us that she has been a Jarafuel resident for 15 years and has been running Las Vegas restaurant with her partner for the past three.

When I ask her opinion about the Boira wind farm, she replies with determination: "I think it's an excellent initiative for three reasons. Firstly, because it is a measure in favour of the environment; we should by now be accustomed to more sustainable and ecofriendly energies. Secondly, because it generates employment in the village and contributes to the community's prosperity; and thirdly, of course, because it benefits me directly, as workers from the wind farm often come here to eat. You're all invited whenever you like," she concludes firmly.



We should by now be accustomed to cleaner, more sustainable energy.

Yelyzaveta Deshko and Juan J. Poquet, Owners Las Vegas Restaurant | Jarafuel | Valencia





Yelyzaveta Deshko | Las Vegas Restaurant | Jarafuel | Valencia https://youtu.be/ute6C9XzASO



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### **BOIRA**

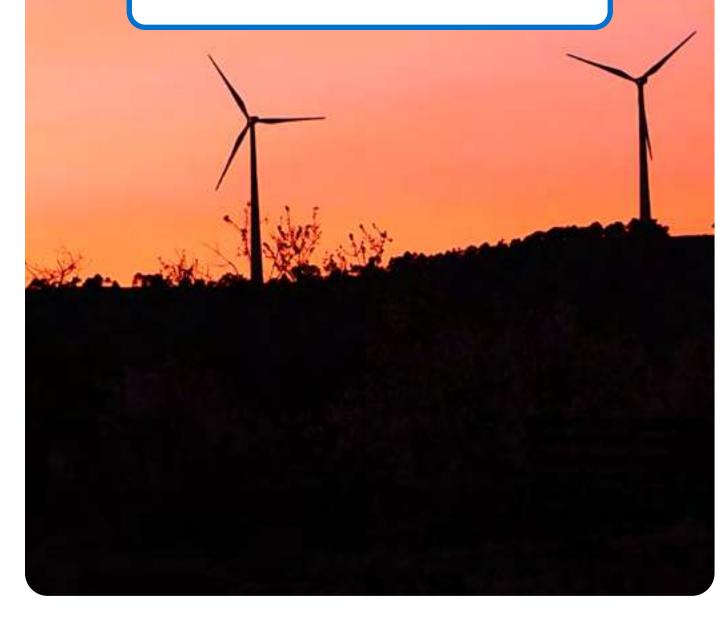
Commissioned: 2009

**Company:** ACCIONA Energía

Capacity: 34,5 MW

**Number of turbines**: 23

**Municipalities:** Jarafuel, Valencia







(1) ACCIONA Energía:

www.acciona-energia.com/es/



(2) Bastones y Artesanía de Almez Company: <a href="https://bastonesyartesania.com/es/6-horcas-de-madera#">https://bastonesyartesania.com/es/6-horcas-de-madera#</a>



(3) Video: Manufacturing of Elm Forks <a href="https://youtu.be/XbMoH-SbRnY?si=aCDXT5tHgRo3RciE">https://youtu.be/XbMoH-SbRnY?si=aCDXT5tHgRo3RciE</a>



(4) Video: Pruning Elm Trees to Make a Fork: <a href="https://youtu.be/oERIBNBXQ2Q?si=-">https://youtu.be/oERIBNBXQ2Q?si=-</a>
Ysf0Sf7ZlS9qepB



(5) 112CVA AlertsA: https://www.112cv.gva.es/es/ preemergencias-meteorologicas Mañón a coruña

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### The Early Start

The award-winning children and the mayor prepare for the big day.

Every year, the Spanish Wind Energy Association holds the Eolo Eolo Award for Rural Integration of Wind Energy (1). In 2023, the honour went to Plasencia for its harmonious coexistence with the Merengue wind farm, Extremadura's first, operated by Naturgy (2).

At one home, Andrea wakes her son, Alejandro
Monforte Rina, for school; he is excited because today is a special day. In another house, Sandra prepares breakfast for her twins,
Sofía and José Armando
Castillo Inchausti. After school, they will attend the ceremony at the Las Claras Cultural Centre. Sofía is happy that her brother will accompany her at the event.



The mayor of Plasencia, Fernando Pizarro, is also ready for the day. He will collect the **2023 Eolo Award for Rural Integration of Wind Energy**. Alejandro will be recognised for his essay on renewable energies, and little Sofía for her drawing of the Merengue wind farm.

We visited the Merengue wind farm, where Jorge Alonso, the site technician, met us at the base of the access road. He explained technical details at the wind farm's substation. Later, the awards ceremony took place in the city.

Group of Eolo 2023 awardees Eolo 2023 Awards Ceremony

Visit to the Merengue wind farm | Plasencia Mañón A CORUÑA

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Tarifal CADIZ





# Sofía Makes a Grand Entrance





Sofía Castillo, winner of the drawing competition, with her brother Armando | Plasencia https://youtu.be/Y0fcmyAcr\_o

Sofía's family had recently moved from León to Plasencia. The teachers at Las Josefinas school encouraged the pupils to take part in a competition about the Merengue wind farm. This little girl from León, just eight years old, entered the painting contest and earned her first regional success with the Prize for Second Best Drawing in Fourth Grade. Her parents were a little worried about how the twins would settle in with the change of house, school and friends. "But everything went really well — her classmates told her, 'Come on, Sofía, you've only just arrived and you've already won a prize; you've made a grand entrance," her mother recalls with a smile.



Sofía, you're holding a tiny wind turbine — tell us why you were given the prize.

I got this prize because I painted it with my heart. It's a drawing about wind energy — you can see mountains with wind turbines and, in the background, Plasencia and the cathedral."

The siblings speak together: "Wind energy provides electricity to homes, it comes from the wind and helps us live because it gives us energy without pollution.



Prize-winning drawing by Sofía Castillo

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Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava PALENCIA

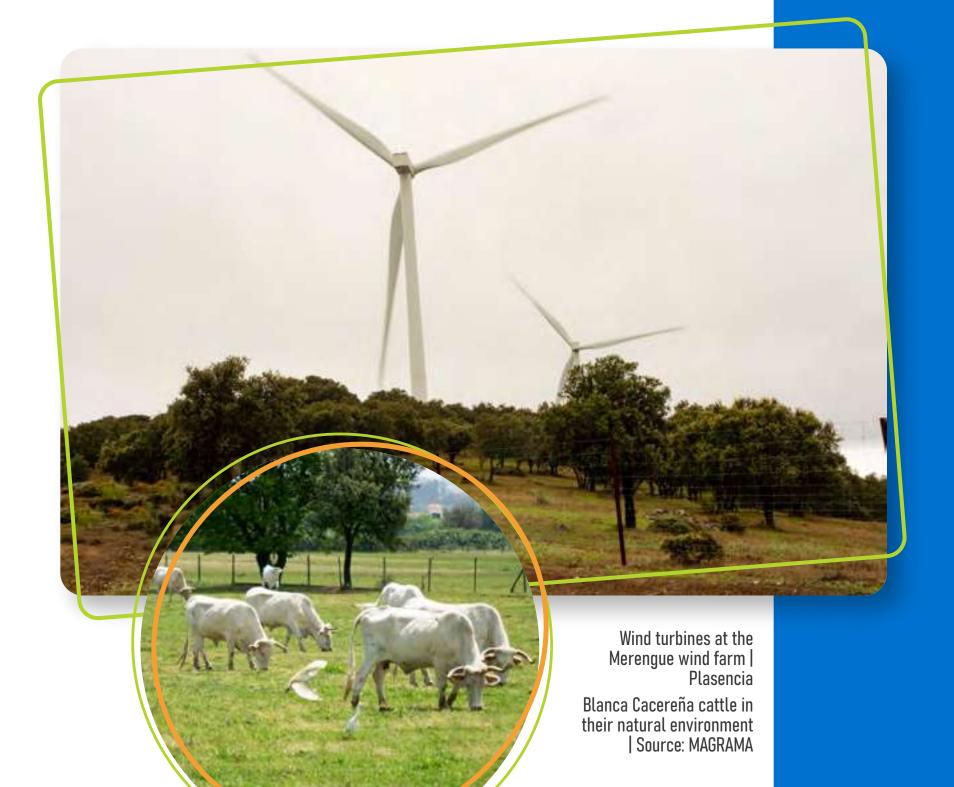
Tordesillas **VALLADOLID** 

Jarafuel **VALENCIA** 

Plasencia CÁCERES

Tarifa CÁDIZ





# Merengue, the Pioneer

Merengue is the first wind farm built in Extremadura, followed by Merengue II, which has greater energy output and fewer turbines. Both are owned by Naturgy and are located about 16 kilometres from Monfragüe National Park (3), a renowned spot for birdwatching and a resting place on migratory routes.

When the Merengue project was planned, environmental impact studies were conducted beforehand to ensure the conservation of wildlife. Efforts were made to achieve wide consensus, taking into account the needs of all people involved in the territory. The results speak for themselves: the turbines coexist harmoniously with local wildlife as well as extensive livestock farming, including the native breeds of **Blanca** Cacereña cattle (4) and Verata goats (5), both of which were once at risk of extinction.

Mañón A CORUÑA

Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava

Tordesillas

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> Puebla de Guzmán HUELVA



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**VALLADOLID** 



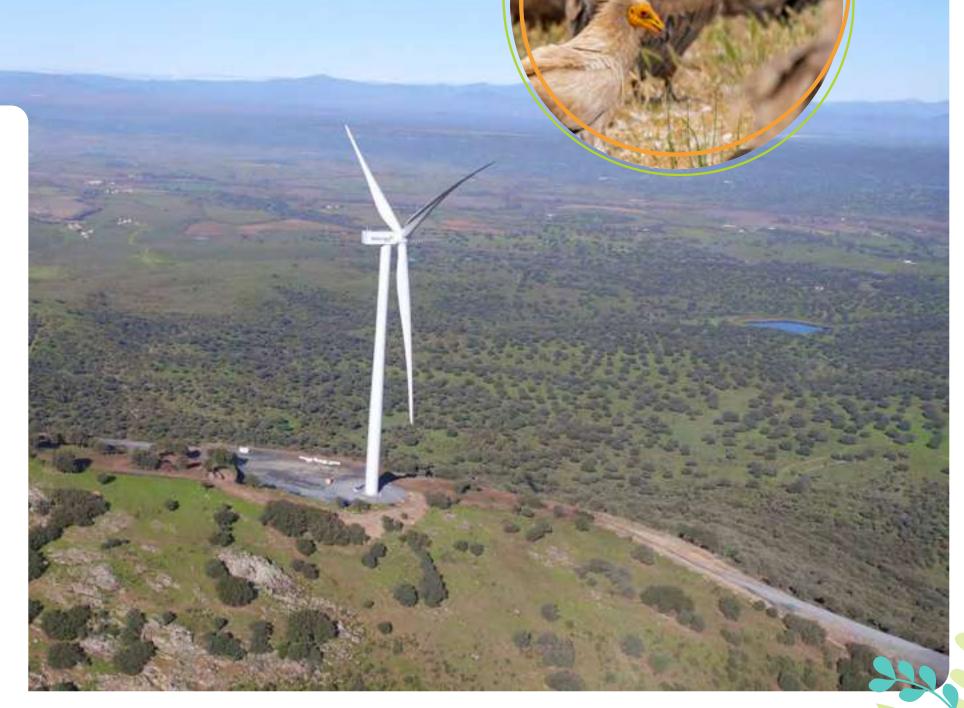
# Wild Biodiversity

A pair of Egyptian vultures have raised a chick; they are no longer here as they have migrated to Africa.

**Antonio Avilés Benítez** is the lead scientist at SOCEAMB, the company responsible for environmental monitoring of the wind farm.

"Although the wildlife of Monfragüe does not extend as far as Merengue," explains Antonio, "the wind farm is rich in soaring birds of prey such as the griffon vulture, whose population has increased considerably since the 1970s thanks to poison control measures. Two critically endangered species also live here: the Egyptian vulture, which nests in the quarry about three kilometres from the wind farm and successfully raised a chick this year, though they have now migrated to Africa; and the Spanish imperial eagle, which prefers to nest near Plasencia and has several roosting sites close to the wind farm, indicating that wind energy activities are compatible with their presence."

This Mediterranean woodland, with holm oaks, cork oaks and broom shrubs, is also home to populations of black kite, black vulture, griffon vulture and common kestrel.



Egyptian vulture | Freepik

Merengue wind farm | Plasencia | Cáceres | © Naturgy

Mañón a coruña

ILLANO ASTURIAS

SODO CANTABRIA

Borja zaragoza

> Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifal CÁDIZ

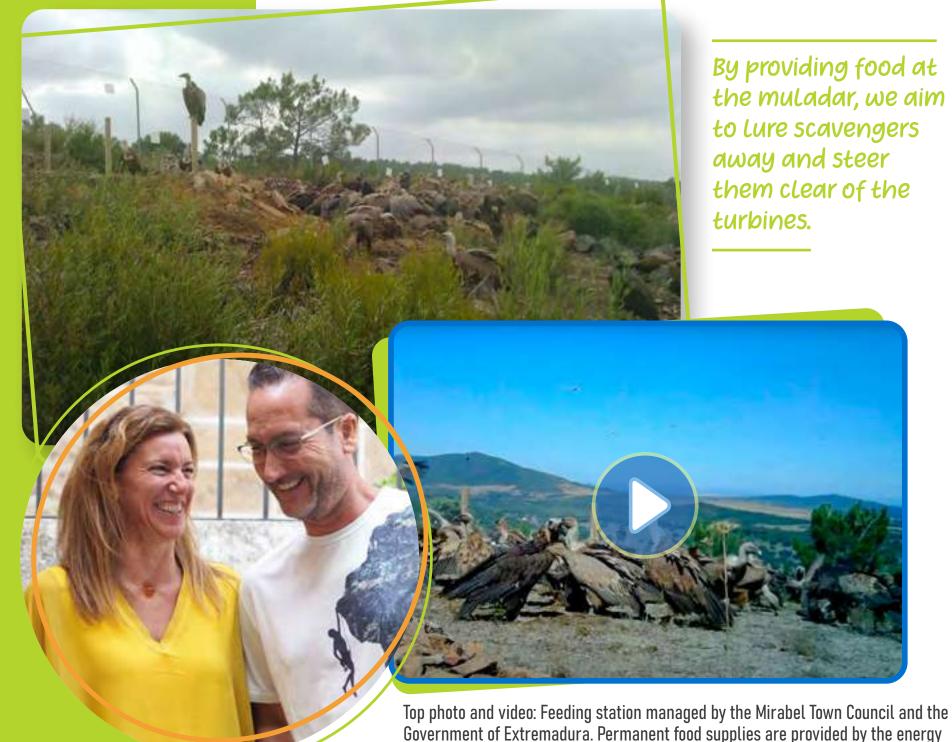


### Protective Monitoring

At the request of the Directorate-General for Sustainability of the Regional Government of Extremadura, several species are being monitored to record biodiversity and ensure that the presence of the wind farm is not causing any significant impact.

Lourdes Gómez de la Vega, who works in the renewables division of the company's Environmental Department, explains: "The turbines are under continuous surveillance, and if the watchperson detects a potential collision risk, they can shut down the turbine. To protect scavenger birds, we've installed a radar system near the wind farm to divert their flight path towards a feeding station, or muladar, where we leave food for them. Also, when our monitors come across the carcass of a cow, sheep or goat, they notify the farmers so they can cover or remove it. This helps prevent scavengers from flying near the turbines. In order to record any collision-related deaths, we also have trained dogs who assist in locating any fallen animals."

In addition to this, there are ongoing surveys of reptiles, amphibians and small birds, to assess any changes in species richness or diversity. Fortunately, the results have been positive, showing that the biodiversity surrounding the wind farm remains high and has not declined following the project's implementation.



Lourdes G. de la Vega (Naturgy)

and Antonio Avilés (Soceamb)

company and the Ecoánime Foundation, which also produced the footage.

https://www.youtube.com/watch?v=55iq3wtfKkl

the muladar, we aim

Illano **ASTURIAS** 

Soba **CANTABRIA** 

Mañón

A CORUÑA

Boria ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas **VALLADOLID** 

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#### **TRAVELLING BATS**

There are over 1,000 species of bats in the world. They are migratory animals and depend on cooperation within their colonies to survive. *In a single night, they may travel dozens or even* hundreds of kilometres in search of food, only to return to their colony afterwards. Since they do not recognise borders, there are both EU-wide and international agreements in place to protect them and allow us to benefit from the valuable ecosystem services they provide. Several bat species in Spain are classed as vulnerable, and one is considered endangered.



Murciélago montañero | J.M. Pérez de Ayala | Fototeca CENEAM

# The Extremaduran Batman

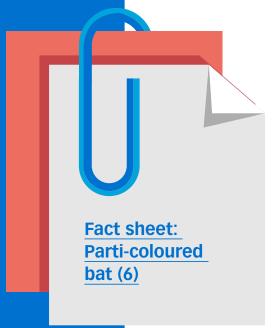
Bats (chiropterans), known for their voracious appetite for mosquitoes, can also be found at Merengue. We know this because special sound detectors have been installed at different heights on the turbines to capture the calls emitted by these flying mammals during flight and while hunting at night. The recordings are later analysed to identify the variety of bat species present, and surveys are also carried out in the surrounding area in search of nearby colonies.

In addition, a system has been implemented to ensure the turbines do not operate under low wind conditions at dusk, as this is when bats are most active.





Audio of bats inside a cave Audio of bats inside a cave
<a href="https://www.youtube.co">https://www.youtube.co</a>
<a href="https://www.youtube.co">watch?v=m3RaPnr1eMI</a> https://www.youtube.com/



Mañón A CORUÑA Illano **ASTURIAS** Soba CANTABRIA Borja ZARAGOZA Paredes de Nava PALENCIA Tordesillas VALLADOLID Jarafuel **VALENCIA** Plasencia CÁCERES Tarifa Puebla de Guzmán





# Generating Energy with Pieces of Metal

In the Hebraic Hall of the Las Claras Cultural Centre, we meet Alejandro Monforte Rina, the young boy who has just received the First Prize for Best Short Story.



# Alejandro, how did it feel to receive this award?

This award means a lot to me because I never imagined it would happen. It's the first time I've taken part in a city-wide competition, so I'm very excited.

In your story, you say you asked your father so many questions about alternative energy sources that you both got in the car to visit the wind farm, and that afterwards you wrote about your impressions. What struck you the most?

Everything amazed me – the fact that we can transform the wind into energy, and that this energy is much better and cleaner than oil.

# What would you say to other boys and girls who don't know anything about wind energy?

I'd explain how important it is. I'd tell them that in the past it didn't exist, and that we only had very polluting sources of energy like petrol, coal, and oil. With those, we're polluting the planet. But now we can use better energy – alternatives that are much cleaner.





Alejandro Monforte Rina | Plasencia https://youtu.be/JbYZcn2Xpok

I'm really excited because it's the first time I've entered a city competition.



Puebla de

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# The Mayor of Plasencia, Fernando Pizarro, collects the Eolo Award 2023





Fernando Pizarro | Mayor of Plasencia https://youtu.be/qubyyTMbUsc



Residents need to be properly informed — there has to be an educational process about the project, and it should be them who come to see the wind farm as just another part of local life.

For Mayor Fernando Pizarro, receiving the award "has allowed us to truly appreciate all the work we've done together. There's been a great deal of effort and time behind it — the administrative processes, the construction — and now the wind turbines are here and fully integrated. Until today, we hadn't realised the full significance of it all. This award aligns us with what we've actually accomplished over the past decade to achieve this — a tool that undoubtedly helps make the world a better place."



#### What would you say to other local councils who may still be hesitant about wind energy?

We've all gone through that initial phase of reflection, wanting to understand what kind of impact it will have, what our citizens will think. That's why the most important thing is to make every effort to bring all these elements together — and to ensure that local residents see the project as their own. That can be achieved through plenty of education; everything must be clearly explained. And above all, there are already many examples — Plasencia among them. Like other towns, we're happy to share our experience with anyone interested in learning more about the benefits and the long road to establishing a wind farm. I would encourage them without hesitation, understanding that while the initial reflection isn't easy, in the end there are many benefits — for the world, and very specifically for the municipality, both economically and in many other ways.



Puebla de

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The wind farm also brings cultural benefits to the city, such as sponsoring the Plasencia Abierta Festival and supporting the vocational training programme for employability, from which over 3,100 students in Extremadura benefited in 2022. In terms of environmental improvements, 20 hectares of cork oak forest in the Protected Landscape of Monte Valcorchero have been restored; paths have been upgraded; and fire prevention measures have been implemented through close cooperation between local livestock farmers and park personnel.



Merengue Wind Farm | Plasencia | © Naturgy



#### BOQUIQUE POTTERY AND WIND FARMS

wind farm revealed the presence of Spanish Civil War trenches, as well as the rich archaeological heritage of the surrounding area, including the Bronze Age sites of La Solana and the Cistas necropolis; the Roman villa at Caserío de La Solana; and the medieval site at Arroyo de la Pardalilla. Worth highlighting — due to its proximity — is the Cueva de Boquique in Monte Valcorchero, an archaeological site where the first fragments of pottery decorated with a dotted-and-lined pattern were discovered. This pottery, typical of the Cogotas I culture, is known as Boquique pottery (7). Fragments of this same style of pottery were also found during the excavations at the Carrecastro wind farm in Tordesillas, Valladolid.



Boquique pottery
José Manuel Benito
Álvarez, CC BY-SA 2.5
Via Wikimedia
Commons







#### **MERENGUE WIND FARM**

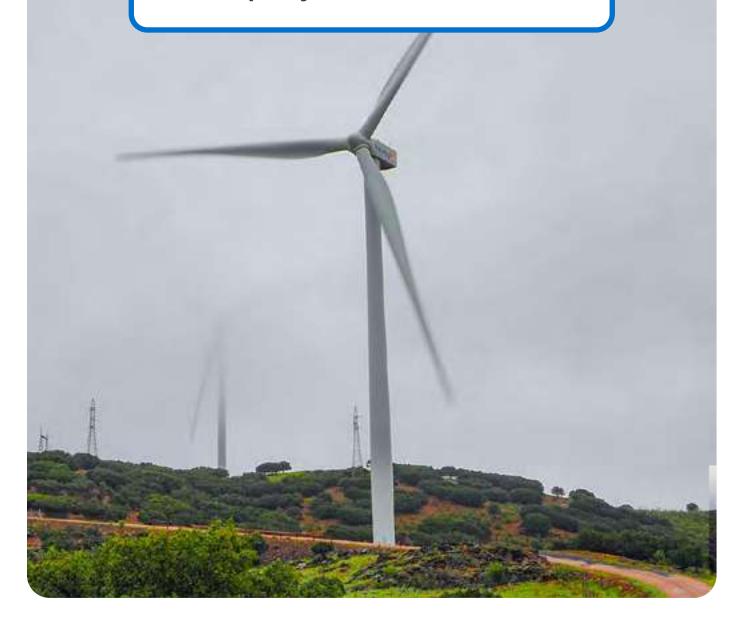
**Commissioned**: 2019

**Company:** Naturgy

Capacity: 39,38 MW

**Number of wind turbines**: 15

**Municipality:** Plasencia, Cáceres







(1) Premios Eolo 2023: https://aeeolica.org/eventos/premioseolo/



(2) Naturgy: https://www.naturgy.com/ conocenos-naturgy/la-energia/ renovables/eolica/



(3) Parque Nacional de Monfragüe: https://www.miteco.gob.es/es/ parques-nacionales-oapn/redparques-nacionales/parquesnacionales/monfrague.html



(4) Information on the Blanca Cacereña

https://www.mapa.gob.es/es/ ganaderia/temas/zootecnia/razasganaderas/razas/catalogo-razas/ bovino/blanca-cacerena/default.aspx



(5) Information on the Verata goat breed: https://www.mapa.gob.es/es/ ganaderia/temas/zootecnia/razasganaderas/razas/catalogo-razas/ caprino/verata/default.aspx



(6) Link to the fact sheet on the lesser noctule bat: https://www.miteco.gob. es/content/dam/miteco/ es/biodiversidad/temas/ inventarios-nacionales/ ieet\_mami\_pipistrellus\_kuhlii\_ tcm30-99860.pdf



(7) Boquique pottery: https://es.wikipedia.org/wiki/ Cer%C3%A1mica\_de\_Boquique Mañón A CORUÑA

Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

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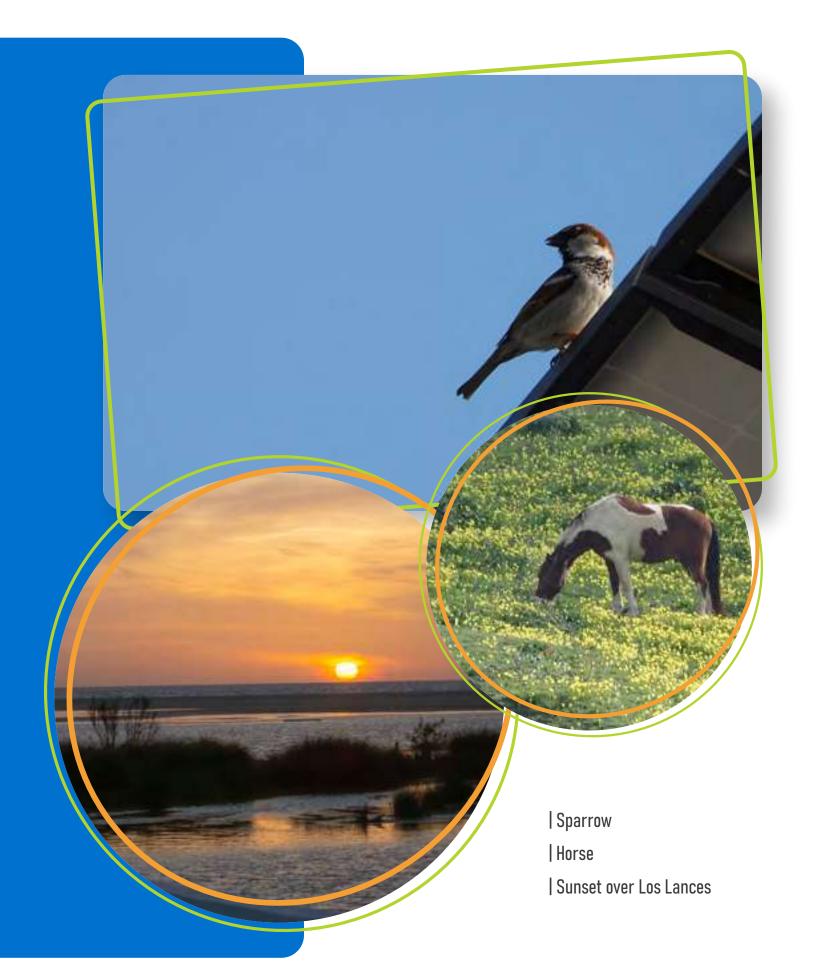


# From sunrise to sunset

We are in the Sierra de Enmedio with Vanessa Reina Santos, one of the spotters from the company **Testa** (1) contracted by **Endesa** (2). Her job is to monitor the park's wildlife, and she has the good fortune of working with a spectacular view over the beaches of Valdevaqueros and Los Lances, the Strait of Gibraltar and the African coastline.

"The day begins with sunrise and ends with sunset — we're here from dawn to dusk observing birds and wildlife. We work every day of the year, as the birds don't take breaks... though thankfully, we do."

Although born in Cádiz, Vanessa lives in Facinas, a nearby village. "The opportunity came up to work in such a breathtaking natural environment, and I absolutely love it. This is truly the place where I feel most at home in my work."



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Tarifa

Puebla de







We work in harmony to ensure clean, sustainable energy while protecting the natural environment.



Vanessa Reina Santos | Environmental Monitor | Tarifa https://youtu.be/7aYktHffnxc

Vanessa's team is made up of three people who work year-round, with an additional person joining during the bird migration season. She explains, "Thanks to constant monitoring and observation of the surroundings, we now have a better understanding of bird populations and local wildlife, which helps improve conservation efforts overall."

This area is a vital stopover point for migratory birds travelling from European countries. They arrive here to rest, feed and prepare for their long flight across the sea. The birds gather and wait for the right weather conditions before soaring across the Strait of Gibraltar towards Africa. "This year," says Vanessa, "we've observed changes in bird behaviour and also in the local vegetation, likely due to climate shifts such as less rainfall and rising temperatures."

work in close coordination with the wind power company to produce clean, sustainable energy while ensuring the surrounding nature is respected. If needed, we alert them so they can stop or slow the turbines, allowing birds to pass safely," concludes Vanessa.



"In the environmental monitoring team, we

# Feathered biodiversity

It is a privilege to witness the passage of so many birds of prey, such as the black kite, the red kite, the Egyptian vulture, the booted eagle and the short-toed snake eagle; seabirds like the northern gannet, the European shag, the Cory's shearwater and Audouin's gull. One can also see white storks, griffon vultures and Bonelli's eagles soaring together in groups, taking advantage of thermal currents to travel and glide gracefully; or terrestrial species such as the black stork, the European bee-eater, the crag martin and various species of warblers and buntings.



Click to follow the **journey ofmigratory birds** (3)



# Eyes on the land

Keeping a watchful eye over the area with binoculars all day has its benefits for farmers and herders too: "We're a bit like shepherds, a bit like goatherds and cowhands — if we see a sheep that's strayed or a cow looking unwell, we inform the owner. They also benefit from the work we do," adds Vanessa.



Cattle | Los Lances

Mañón A CORUÑA

2

ILLANO ASTURIAS

Soba

3

CANTABRIA

BOrja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz



## The Acebuchal of the Blackbirds

Alfonso Alba is a 78-year-old livestock farmer who gets around by car to manage his herd across the Dehesa de los Zorrillos, just below the wind turbines – land owned by the Tarifa Town Council where extensive cattle grazing coexists with the Los Lances wind farm.





My job is mainly to move the cattle, check on them, fit ear tags, update their livestock records — all those simple things that help clear your mind a bit and keep you active.

Alfonso Alba | Livestock Farmer | Tarifa



### The Palurda Cow

Antonio's children have not followed in his footsteps. He keeps sheep and seventy cows of various breeds: retinta, crosses with charolesa, and also <u>palurda</u> <u>or marismeña</u> (4), a breed typical of the marshes in the Doñana National Park.

Antonio raises these cows for their high-quality meat. They roam freely, feeding on pasture and forage among scrubland and Mediterranean undergrowth.



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## Seed-Sowing Birds

Reflecting on how the landscape has changed, Alfonso observes: "The fields are clearing up, and lots of wild olive trees are growing thanks to the blackbirds. They eat the wild olives (acebuchinas), and after digesting them, they expel the seeds, and trees sprout — a whole grove of wild olives is taking shape."

He recalls that the installation of the wind turbines brought a significant change with the construction of access tracks: "Back then we had more privacy because we were more isolated. But these access roads have been really beneficial for us. They help us get around the countryside. Nowadays, most of us live in the village and use them every day. I live in Tarifa now, but I was raised in the fields."

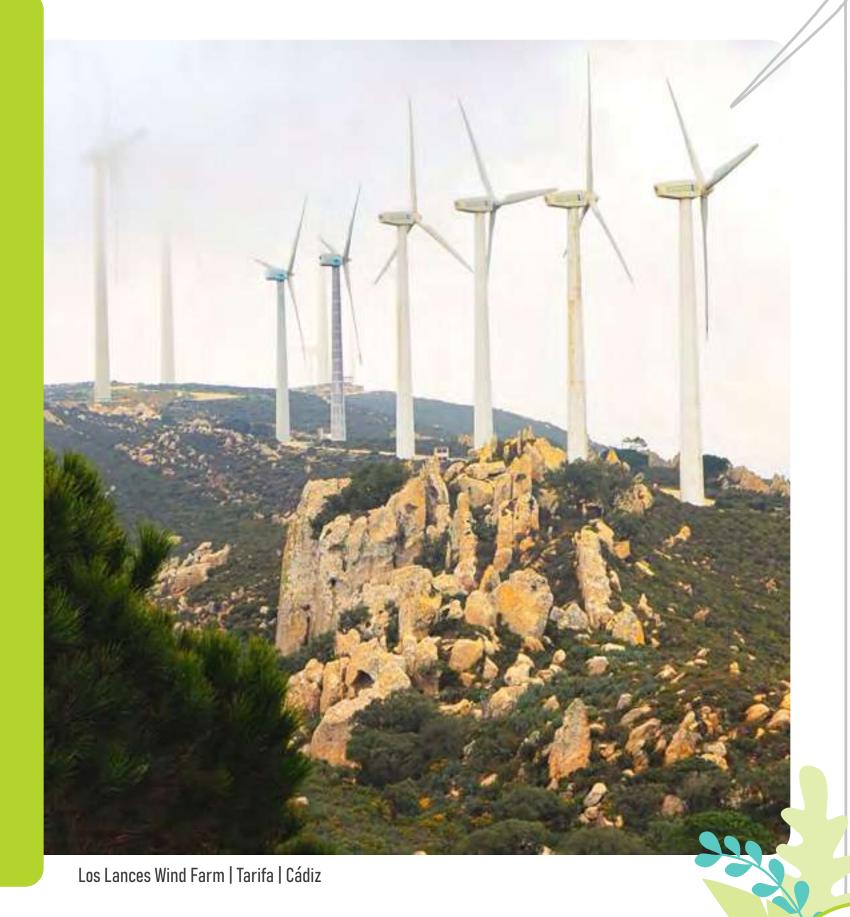
The access roads to the wind farm make life easier for farmers and livestock breeders working the land.

Alfonso reminisces about his youth: "Back then, in our homes, we had very poor lighting — we could barely see — but even the elderly women still managed to sew by that dim light."

He also recalls the intimacy that came with being isolated in the countryside — bathing nude before it became fashionable:

"In summer we worked in strong sun and heat, and at the end of the day we'd go down to the sea for a swim. It was a different time."

Alfonso acknowledges the benefit of the park's roads but wishes they could be improved: "They're made from a very fine gravel that blows away with the wind — which is strong in Tarifa — and ends up on the grass where the animals graze."



Mañón A CORUÑA

ILLONO ASTURIAS

SODO CANTABRIA

BOrja ZARAGOZA

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### A Tribute to José Ramón García "Moncho"

Beneath the substation offices lies the visitor reception centre — a room for up to twenty people, where technicians deliver training and talks about the operation of the wind turbines. The centre is named "Moncho" in honour of José Ramón García, a generous and committed worker who, during the Covid-19 pandemic, stepped in to cover for colleagues — some of whom were new parents. Moncho sadly passed away due to the illness, as technician **Antonio Úbeda**, the plant supervisor, recalls with sadness.



In memoriam plaque "Moncho"





Ricardo Valero | Regional Delegate Antonio Úbeda | Plant Supervisor https://youtu.be/xHbZukstQf0

Next to the visitor centre stands a sea-viewpoint, where an information panel outlines the most important bird species that cross the Strait of Gibraltar. An illustrated diagram shows how these birds take advantage of ascending air currents — allowing them, as if climbing an invisible spiral staircase, to reach the height needed to soar across the 14 kilometres separating the two continents.

Mañón A CORUÑA Illano

**ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

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Joining us are **Ricardo Valero**, Green Power's regional delegate, and **Emilio Guijarro**, head of operations and maintenance for the southern region, which covers Andalucía and Cuenca.

Emilio explains that Los Lances is one of Spain's oldest wind farms. Its turbines have suffered wear and tear from use, the passage of time, and the dampness of the fog. However, the company now intends to renew the turbines, replacing the current ones with more modern and efficient models. This upgrade is expected to have a notably positive environmental impact, as fewer turbines (just three instead of the current seventeen) would generate much more energy and extend the wind farm's operational life by at least another twenty years.

Ricardo adds that the current production from the seventeen turbines supplies electricity for around 5,000 households.

Mañón A CORUÑA

ILLANO ASTURIAS

SODO CANTABRIA

BOrja ZARAGOZA

Paredes de Nava PALENCIA

Tordesillas VALLADOLID

Jarafuel VALENCIA

Plasencia cáceres

Tarifa cádiz



### 3

## Miguel, the young rider

Tarifa has it all," says Miguel Campos Reina, a 16-year-old studying Year 10 at IES Almadraba de Tarifa.

I like surfing, but I prefer horse riding.



@Miguel Campos | Student from Facinas | Cádiz



### Miguel, what do you think of your homeland?

I love Tarifa — the town, the countryside, the beaches. I've always been close to the sea. I really like Facinas, which is my village. I grew up there, and my lifelong friends are there too — the ones I go horse riding with.

#### What would you like to do in the future?

I really like the countryside, so I think I'll work in something related to nature conservation.

Perhaps my interest in nature comes from combining my father's love of horses and my mother's work — Vanessa Reina, one of the park's environmental wardens.

#### What sports do you do?

I enjoy football and horse riding, but I don't practice any other sports. Once, a foreign friend invited me to try windsurfing, and in return, I invited her for a horseback ride. I liked surfing, but what I really love is riding horses — I've been doing it since I was a kid. When I was little, I took part in the El Rocío pilgrimage on horseback and passed through the marshes of Doñana.

Now, when my group of friends go out for the day with the horses, we bring a donkey with the provisions. We like to take it easy, go for a slow ride, relax and enjoy a peaceful

#### Do you also ride alone?

walk.

Yes, when I go out alone I spend two or three hours riding. I like to see the livestock, deer, roe deer, and sometimes a wild boar crossing the path. I also watch birds with my binoculars.



Guzmán

HUELVA

AEE



### All-terrain Horses

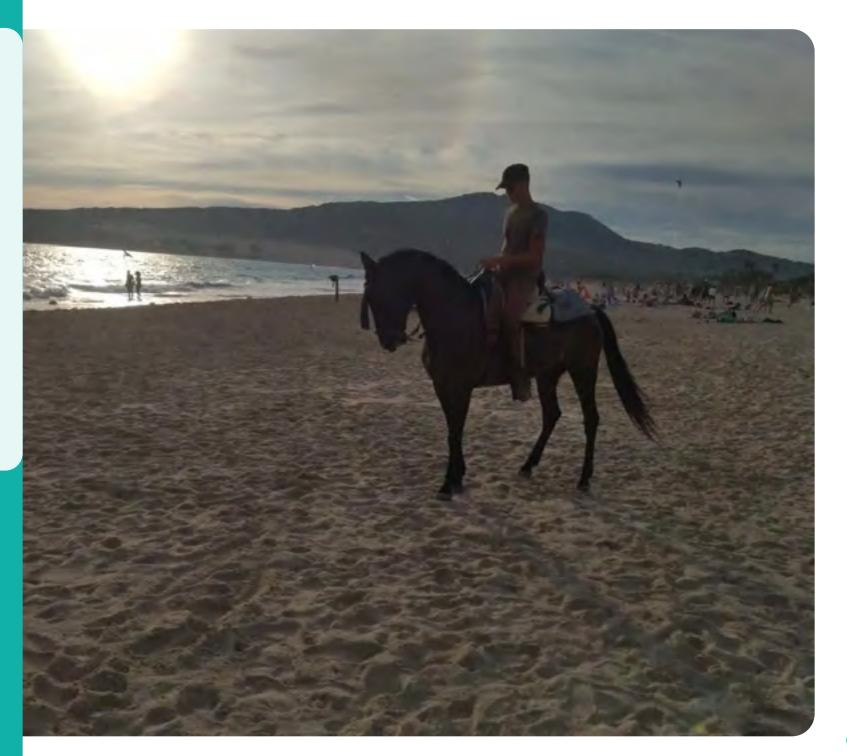


#### Where do you usually ride?

If it's during the week, we go for shorter rides. There are many places to explore: sometimes we walk along the beach, other times we cross natural areas, wind farms, and farms with livestock. The horses are used to all sorts of terrain. If we have more time, we go to the Parque Alcornocales Natural Park (5), or the Los Tornos recreational area. Sometimes we enter the Estrecho Natural Park, (6) aunque también nos gusta mucho la playa y solemos ir a Bolonia o a la de Valdevagueros.

Miguel used to ride Triki-Trake until a year ago when India arrived — a five-year-old chestnut mare still in training.

"My relative Javier and I are training India. Javier knows a lot about dressage and although I already ride her, it takes time until she is fully trained."



@Miguel Campos Reina | Tarifa Beach

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### Beatriz's Chill Out

In the afternoon, we headed to the **Beach Hotel Dos Mares** (7), by the sea in Tarifa, to chat with Beatriz Novella, a Madrilenian who swapped the city for this idyllic spot several decades ago.

Beatriz manages both hotels, including the **Chill Out Hotel Tres Mares** (8) — the name says it all — a more secluded space further from the sea, set on land shared with the wind farm, whose owners lease it to the company.

"There's very good harmony with the wind farm staff,"
Beatriz explains, "which makes resolving any issues that
might arise much easier. We have a harmonious relationship
between the local community and the wind farm, which
even helps with the monitoring and protection of the area.
This is especially important for preventing forest fires, a
crucial concern in a region so prone to such disasters."

Beatriz highlights the environmental value of renewable energy and the respect for nature, emphasising the importance of striking a balance between economic development and environmental preservation, as well as maintaining an open, constructive dialogue among all parties involved.





Beatriz Novella | Hotel Manager | Tarifa https://youtu.be/OLBVmqg4kI0



Good relations with the wind farm staff make resolving problems that may arise much easier.

Mañón a coruña

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## The Animal Sanctuary

On the estate where Beatriz lives, there has always been a passion for animals. Among the residents of the farm are white and black Merino sheep, goats, geese, and three elderly horses. Over time, a donkey joined them, followed by another whose owner lost the plot where the donkey had lived. Additionally, Blanquita the cow was taken in after her owner passed away, and a fawn lost in the forest found a new home within this big family.

Mañón A CORUÑA

**ASTURIAS** 

CANTABRIA

Illano

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Mañón

### **LOS LANCES WIND FARM**

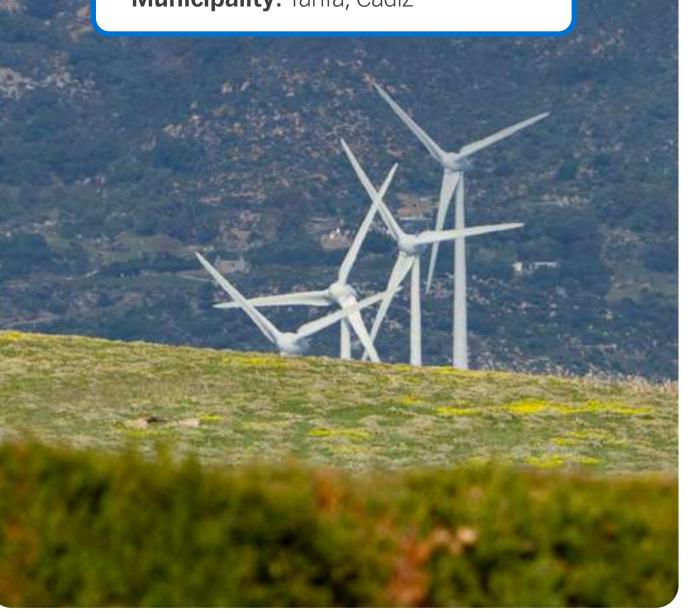
Commissioned: 1999

Company: Endesa

Capacity: 10,68 MW

Number of turbines: 17

Municipality: Tarifa, Cádiz







(1) Testa: https://testa.tv/



(2) Endesa: https://www.endesa.com/es/ proyectos/todos-los-proyectos/transicionenergetica/renovables



(3) Click here to watch videos of the Marismeña birds https://migraciondeaves.org/



(4) Vaca palurda o marismeña https://www.mapa.gob.es/es/ganaderia/ temas/zootecnia/razas-ganaderas/razas/ catalogo-razas/bovino/marismena/default.



(5) Los Alcornocales Natural Park: https://www.juntadeandalucia. es/medioambiente/portal/web/ ventanadelvisitante/detalle-buscadormapa/-/asset\_publisher/Jlbxh2qB3NwR/ content/los-alcornocales/255035



(6) Strait Natural Park https://www.juntadeandalucia. es/medioambiente/portal/web/ ventanadelvisitante/detallebuscador-mapa/-/asset\_publisher/ Jlbxh2qB3NwR/content/delestrecho/255035



(7) Beach Hotel Dos Mares: https://www.dosmareshotel.com/



(8) Chill Out Tres Mares: https://www.tresmareshotel.com/

A CORUÑA Illano **ASTURIAS** 

Soba **CANTABRIA** 

Borja ZARAGOZA

Paredes de Nava PALENCIA

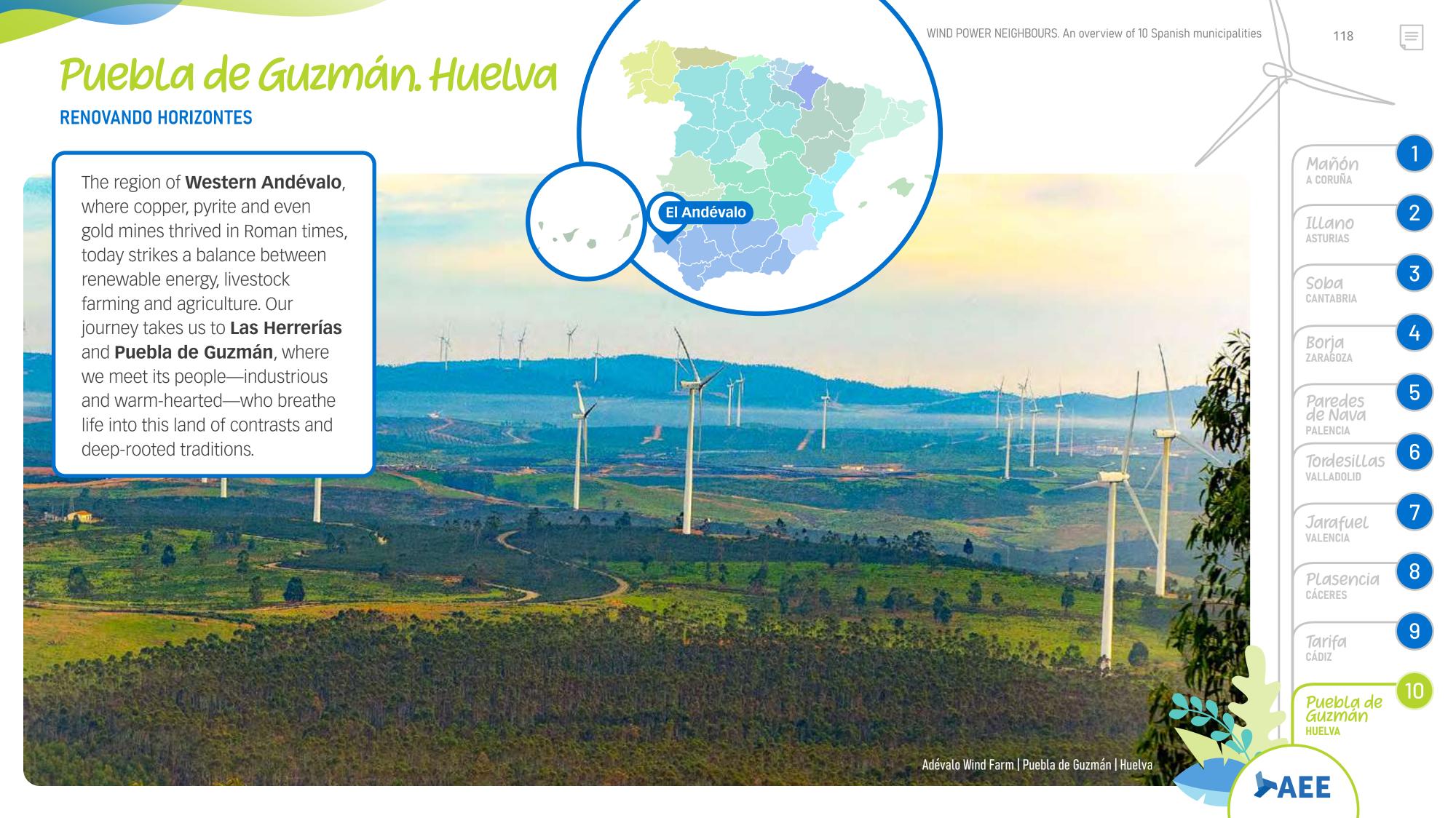
Tordesillas **VALLADOLID** 

Jarafuel **VALENCIA** 

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Tarifa CÁDIZ

Guzmán HUELVA **AEE** 



### A Vast Wind Farm

The streets of El Almendro brighten with the rising sun. The February sky is a brilliant blue and the air is crisp. Schoolchildren walk along with their rucksacks, while women and men go about their daily routines. Today's destination is the El **Andévalo** wind complex, near Puebla de Guzmán in Huelva—one of the largest onshore wind farms in Europe.

Turning off the road, we are greeted by Emilio Gámez, Head of O&M at Iberdrola Renovables in Huelva, who opens the gate as we follow the track towards the office. Here, his team monitors the performance of the eight <a href="Iberdrola Renovables">Iberdrola Renovables</a> (1) wind farms. The attentive staff pause to explain the unique aspects of the parks—their capacities, safety protocols, and daily operations at the site.



Team from El Andévalo Complex: Benito Carrasco, Juan F. Alcaide, Emilio Gámez, Marcos Bellerín and Domingo J. Márquez

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### A Bird's-Eye View



Eight wind farms | Voice of Emilio Gámez | El Andévalo (Huelva) https://youtu.be/VI466Gvr2-4

The size of the wind farms is so vast that **Emilio Gámez** and his colleague **Benito Carrasco** suggest we head to a viewpoint for a better sense of scale. From atop a huge rocky outcrop, where the Sanctuary of the Virgen de la Peña is perched, we see rows of turbines stretching across plains, pastureland and rolling hills, veiled in a delicate morning mist.

"These wind farms you see around us," Emilio explains, "supply electricity to 140,000 households each year and help protect the environment by preventing the emission of half a million tonnes of CO2 annually."

His colleague Benito smiles and shares how pleased he is with his profession: "Working at this substation allowed me to return to my birthplace, Puebla de Guzmán. I've now started a family here and enjoy being close to my community. Not anymore, but when I was younger, I used to take part in the Sword Dance during the pilgrimage of the Virgen de la **Peña, which we celebrate every year,"** he recalls fondly.

> Sanctuary of the Virgen de la Peña



Benito Carrasco and Emilio Gámez | Wind farm technicians | Puebla de Guzmán (Huelva) | https://www.voutube.com/watch?v=3142Gzf4

https://www.youtube.com/watch?v=3142Gzf48fU&t=12s

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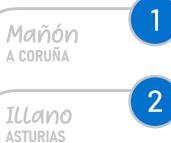
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### Tir - tir - tirrr

Before heading back to the substation, Emilio and Benito take us to the farm of Cristina Eduardo and José Antonio Gonzálvez, a couple living in Puebla de Guzmán who happily spend their days among bleating sheep, goats, and little kids. They say they've always worked in extensive livestock farming, with 400 Merino sheep (2) and 800 Negra Serrana goats (3) crossed with the Florida breed (4).

The hillside is dotted with colourful boxes where the goats live with their newborn kids. "The little ones take shelter inside the boxes and come out when they're hungry. They're dual-purpose animals, raised for both milk and meat," explains Cristina, just out of the milking parlour.



Soba

Borja ZARAGOZA

CANTABRIA

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Tarifa CÁDIZ

Puebla de Guzmán **HUELVA** 

**MAEE** 

José Antonio Gonzálvez calling the sheep | Puebla de Guzmán | Huelva

https://www.youtube.com/ watch?v=xFGYa1iL0LQ

2

José Antonio wraps his arm around Cristina's shoulder as he speaks of their children: "We've got two boys and a girl who worked with us until a couple of years ago. Now they've moved on, looking for a different kind of life. The truth is, this work is beautiful but very demanding—no holidays, no days off, no rest of any kind. They wanted something else and decided to follow a different path. So here we are, the two of us, still going strong."

We ask to see the flock grazing beneath the wind turbines in the El Centenar estate. José Antonio calls out to them, "tirrr-tirrr", and they come running for the feed he scatters as he walks. In the back of the car, two dogs nap peacefully, unbothered.









José Antonio and Cristina | Puebla de Guzmán | Huelva https://www.youtube.com/watch?v=7ulf1\_7l3D4

Mañón A CORUÑA Illano **ASTURIAS** Soba **CANTABRIA** Borja ZARAGOZA Paredes de Nava **PALENCIA** Tordesillas **VALLADOLID** Jarafuel **VALENCIA** 

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#### José Antonio, what's your work like?

We're hanging in there — it's a tough job. It's what I've done all my life. It's my work, and also my hobby, but I couldn't keep it up without Cristina. Working in something you love is a real privilege.

#### And how does your livestock get on with the wind turbines?

Just look at them — they don't even notice. They go about their day, they're used to it. And I think anything that makes good use of natural resources, that helps the environment and biodiversity, and can go hand-in-hand with farming, is absolutely worth supporting.



I believe in using whatever's natural, beneficial for the environment and biodiversity, and compatible with farming and agriculture.

Mañón A CORUÑA

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#### SILVOPASTORAL LIVESTOCK FARMING

Silvopastoral livestock farming refers to extensive grazing systems that make efficient use of the land's resources—water, pasture, trees, and scrubland—balancing production with sustainability, while generating both environmental and social benefits.

These farms, often raising native breeds adapted to their surroundings, help preserve and maintain natural landscapes, regulate the water cycle, conserve soil and biodiversity, produce high-quality goods, and contribute to the preservation of cultural heritage and regional identity.







Mañón A CORUÑA

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Mañón

A CORUÑA



### The Miners of Today

We head to the village of Las Herrerías to meet **Antonia Ojeda**, better known as Tona. She's an energetic, cheerful and resourceful woman who wastes no time rallying a dozen people to share their stories with us.

The group includes members of the Women's Associations of Las Herrerías and Puebla de Guzmán, as well as representatives from Cáritas and the cultural association El Foco. Together, they work tirelessly to keep the memory and cultural life of these villages alive, organising a variety of activities for all ages, both residents and summer visitors, always in close collaboration with the Puebla de Guzmán town council.

As the sun is still warm and the plaza is bathed in golden light, we take chairs from the community centre and settle in to hear moving testimonies of lives shaped by the nearby mine.

They share heartfelt stories of solidarity from the mining era, when the <u>San Carlos Pit</u> (5) was still active. They recall how people supported each other through hard times, the shortages they endured during childhood, and the way wisdom was passed down from their elders from a very young age.



They talk about the influx of people from neighbouring towns who came to work in Las Herrerías — some on donkeys, others by bicycle — and how in 1950 Puebla de Guzmán had 6,500 residents. But that number dwindled once the mining activity ceased.

They're united in saying that the strength and solidarity they carry within come from the pride inherited from their mining ancestors. It's what fuels their drive to improve their towns and organise festive events for everyone. "Perhaps we're like this because we love connecting with people, cooperating, and being wherever we're needed. And also because, as Tere says, we're miners — it's in our blood," says one of the women.

Trinidad, Juana, Peña, Esteban, Manoli, Coronada, Ester, Tona, Manuel, Luisa, Manuel and Rosa | Residents of Las Herrerías and Puebla de Guzmán | Huelva



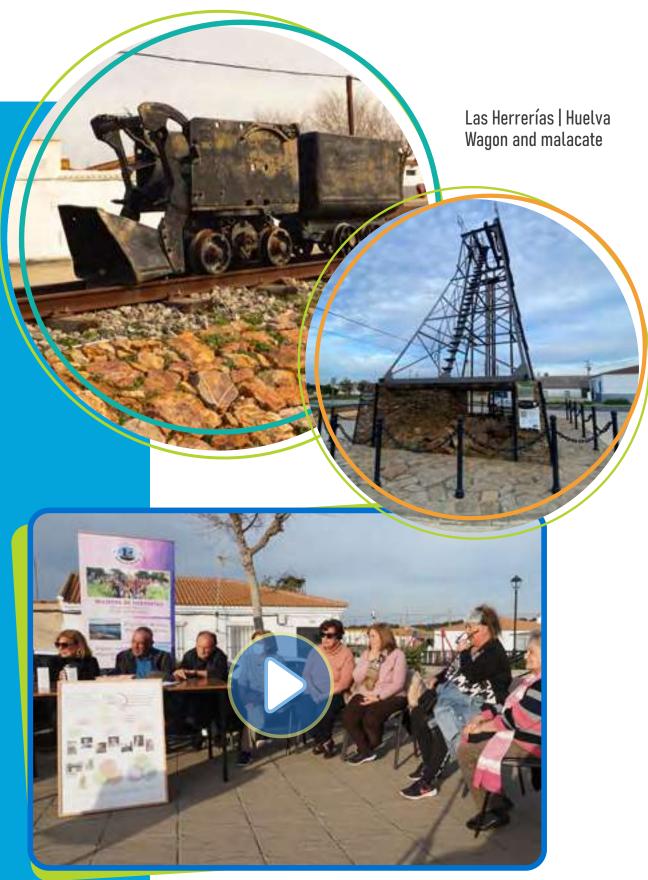
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The associations are gradually achieving their goals — restoring old buildings and refurbishing spaces, actively seeking support wherever they can. They also share how they make use of the honey donated by the energy company, either distributing it to families or turning it into traditional sweets to give away at the Christmas market.

With fondness, they remember the <u>Guadiana railway</u> (6), a 31-kilometre route that once ran from Las Herrerías to the Puerto de la Laja, where the ore was loaded onto ships on the Guadalquivir River and transported to other destinations. Today, part of that route has been transformed into a leisure trail called the Camino Natural de la Mina de Las Herrerías al <u>Puerto de La Laja</u> (7).

Tras la interesante conversación con el grupo, nos despedimos dando un paseo por las antiguas instalaciones mineras, visitamos el campo de fútbol construido por los propios mineros. Nos acercamos a los edificios deteriorados por el paso del tiempo como el antiguo economato, las escuelas y el malacate recuperado de la mina Cabeza de Pasto, que consiste en una torre de hierro que daba acceso a la bocamina por donde subían y bajaban los mineros y sacaban el mineral y el agua.





Meeting of the associations of Las Herrerías and Puebla de Guzmán <a href="https://youtu.be/tlLoYAyUFIU">https://youtu.be/tlLoYAyUFIU</a>

Mañón a coruña

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Puebla de Guzmán HUELVA

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### A way Out of the Crisis

Antonio Beltrán | Mayor of Puebla de Guzmán | Huelva

https://youtu.be/MZ34WwC59Vs

The wind farm showcases our municipality's commitment to renewable energy.

The mayor of Puebla de Guzmán, Antonio Beltrán, also recalls those mid-20th century years when mining began to decline in the region, resulting in job losses and migration to the cities. He reflects on the years leading up to the mine's closure, when silvopastoral livestock practices were also abandoned — two developments that plunged the area into a severe economic and social crisis. From a peak population of 9,000, only 3,000 residents remained.

"Fortunately," Antonio continues, "in the early 2000s, plans were made to build a large wind farm in the area, which gave our municipality the opportunity to show its commitment to renewable energy and all the associated benefits, such as CO capture and climate change mitigation. It also helped revive the industrial sector, creating jobs and opportunities for the community. For example, this year the wind energy company is supporting the Livestock Fair of Puebla de Guzmán and has also offered occasional sponsorship to local football teams."

In the mayor's opinion, the arrival of renewable energy projects has helped restore a sense of self-worth among residents. He is confident that one project will lead to another, bringing more economic activity and renewed hope for the town's future.

Mañón A CORUÑA

ILLano ASTURIAS

SODO CANTABRIA

Borja ZARAGOZA

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Wind energy is compatible with the region's traditional uses and the Natura 2000 Network.





Juan Gorostidi | Forest Engineer at Agroforestal Acebo | Huelva

https://youtu.be/M4R8j32cAJw

### Environmental Monitoring

We speak to Juan Gorostidi through the fog that sweeps across the dehesa. He is a Forest Engineer with Agroforestal Acebo (8), an environmental and forestry engineering consultancy that has worked with the energy company in Andalusia for many years.

Juan explains that his team has carried out environmental impact assessments, landscape restoration projects and synergy studies. They've also been involved in monitoring both the construction and operational phases of the wind farms: "These are external environmental verification and oversight tasks to ensure compliance with legal and environmental regulations."

"The El Andévalo complex is both vast and diverse, a space where traditional agricultural, forestry and hunting uses coexist with newer practices like irrigated crops and extensive livestock farming," he adds.

He notes that wind energy projects are fully compatible with traditional local activities and with the conservation goals of the Natura 2000 Network. "We're in an area with rich fauna, home to many species of birds, mammals, reptiles and amphibians. The actual impact on birdlife has turned out to be lower than expected." Red Natura 2000 (9)



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### **EL ANDÉVALO WIND COMPLEX**

**Start of operations: 2010** 

**Company:** Iberdrola Renovables

**Total capacity: 292 MW** 

Municipalities: Puebla de Guzmán,







(1) Iberdrola Renovables: https://www. iberdrola.com/conocenos/nuestraactividad/energia-eolica-terrestre



(2) Merino Sheep Breed: https://www.mapa. gob.es/es/ganaderia/temas/zootecnia/ razas-ganaderas/razas/catalogo-razas/ ovino/merina/default.aspx



(3) Serrana Negra Goat Breed:

https://www.mapa.gob.es/es/ganaderia/ temas/zootecnia/razas-ganaderas/razas/ catalogo-razas/caprino/negra-serrana/usos\_ sistema.aspx



(4) Florida Goat Breed: https://www.mapa. gob.es/es/ganaderia/temas/zootecnia/ razas-ganaderas/razas/catalogo-razas/ caprino/florida/default.aspx



(5) San Carlos Shaft:

https://www.mtiblog.com/2017/12/minasde-herrerias-pozo-san-carlos-las.html



(6) Guadiana Railway:

https://www.asociacionherrerias.com/ es/50-aniversario/historia-el-ferrocarril-delguadiana.html



(7) Las Herrerías Mine to Puerto de la Laja Nature Trail:

https://www.mapa.gob.es/es/ desarrollo-rural/temas/caminosnaturales/caminos-naturales/ sector-sur/guadiana/default.aspx



(8) Agroforestal Acebo Company: https://www.agroforestalacebo. com/servicios/forestal/



(9) Red Natura 2000: https://www. miteco.gob.es/es/biodiversidad/ temas/espacios-protegidos/rednatura-2000/rn\_espana.html

Mañón A CORUÑA

Illano **ASTURIAS** 

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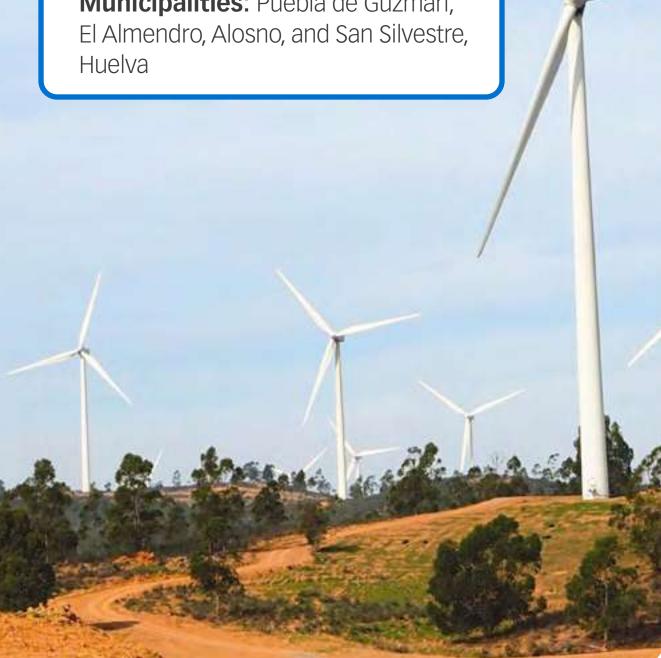
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# WIND POWER NEIGHBOURS

An overview of 10 Spanish municipalities

**BEST PRACTICES FOR WIND ENERGY COEXISTENCE IN LOCAL COMMUNITIES** 



