

PACCo



Promoting Adaptation
to Changing Coasts
Promouvoir l'Adaptation
aux Changements Côtiers

Interreg



France (Channel
Manche) England

European Regional Development Fund



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**PACCO
NEWSLETTER**

“ Welcome, to Spring in Project PACCo

In this issue we take a look at progress being made on both our PACCo sites. Work has begun on the campsite in Quiberville, Normandy, and the wastewater treatment plant is making fantastic progress. In the lower Otter valley, construction has started for the new road bridge and rare plants have been relocated.

We also take a first look at results for both our carbon capture research and socio-economic survey, as well as findings from ecology surveys in the Saône valley. Kate Ponting, Countryside Learning Officer for Clinton Devon Estates, interviews Jasper Westaway, Head of Youth Development for the Budleigh Salterton Cricket Club, and scattered throughout this issue are fabulous images from across both sites.

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Conservatoire du littoral

21st century campsite is making way for green holidays

In Quiberville, works for the new tourist facilities, which will take over La Plage campsite in 2023, have now started.

Work began last February and in March 2023 the new tourist facilities in Quiberville, which are due to replace the campsite located behind the sea wall, will open.

Infrastructure work will take place during the coming winter, then buildings will follow. They will all be made from wood for better integration within the landscape. The walls and roofs will be covered with cladding and straw is to be used for insulation, as it can be sourced locally and is bio-based.

Similarly, the individual dwellings, which are for rent

on a seasonal basis, will also be made of wood and will feature gable roofs and be of similar appearance to Alpine chalets.

To limit earthworks and use of concrete, these dwellings will be mounted on stilts. This will also allow them to be in line with the slope (on this hill, overlooking the left bank of the Saône, four of the six hectares are on an incline).

Some sites will benefit from a view of the sea, but more importantly, they will all offer an extraordinary view of the Saône Valley and the Cape of Ailly. But the most significant new feature of these facilities, which have been tailored for 21st century tourism, is the focus on modes of transport. Only 25% of the sites will be accessible to motor vehicles

(caravans and motor homes). To reach the sites reserved for tents and seasonal dwellings, visitors need to leave their vehicle in the car park and use the carts provided for guests.

Every effort will be made to encourage visitors to reach the nearby beach in Quiberville on foot. Bikes will be welcome as the new roads will be adapted for them and secure shelters will be provided. Some of the dwellings will feature special access for people with mobility difficulties.

Eric Germain's main commitment, as the landscape gardener for the project, is to conserve nature as it was before the works, wherever possible, though he accepts some hedges and trees will need to be removed. But the work will respect local species, gently manage storm water and maintain the vegetation cover. And when it comes to maintenance, "ultra-specialised technicians", ie sheep, will be used for eco-grazing.

Architect, Valérie Parrington, said: "We've designed these new and extremely comfortable facilities to accommodate tourists looking for holidays that are more in line with the aspirations of new generations and are more in connection with nature and the environment. We prioritise access for backpackers both on foot and bike, as we're located on discovery



trails and cycling routes. We've also paid special attention to environmental issues, such as landscape and biodiversity issues.

We didn't just pull these ideas out of a hat! They were adopted in consultation with the elected representatives. In addition, the choice has been made to respect the topography of the terrain and its plant life and woodland as much as possible, to not spoil the landscape with large road networks or large buildings that are poorly integrated into the territory, and to focus on working around what already exists, rather than starting on flat ground!"

- 4 stars: this is the rating for the new facilities
- 210m²: minimum area of each site
- 150 sites for tourists (between 300 and 500 guests)
- 6 hectares (total area of new facilities)
- 7 million EUR: total project cost
- 69%: share of the budget covered by the European Union (PACCo programme), 5.2%: share of the Normandy Region, 5.8%: share of the Seine-Maritime department, 20%: share of the municipality of Quiberville (project owner)





Work at the lower Otter site is marching ahead

In Budleigh Salterton, work is continuing apace on the Lower Otter Restoration Project as we head towards the final goal of reconnecting the estuary to its original floodplain.

The main construction work currently underway revolves around a new bridge on South Farm Road. Piling, a type of foundation that will provide a strong base for the bridge, was completed in the spring. The building of supporting piers and abutments began in late April, as well as an embankment at each end of the bridge.

The bridge is expected to be completed in the autumn and was a key element of the project providing continued access to homes and businesses across the river.

With upwards of 250,000 visitors a year, there is always a lot of interest in impacts on public footpaths. One footpath (Ref) accessed from the entrance to the current Budleigh Salterton Cricket Club up to South Farm Road has been closed throughout the project work to keep the public safe during works. The project team is currently awaiting





the outcome of a planning amendment application in order to carry out improvement works that will reduce flood risk and increase accessibility along this path. It is hoped approval will be given in August, then work will begin straightaway.

Environmental works have been very evident with ecologists and volunteer groups carefully relocating rare plants. divided sedge and galingale were moved to new nearby homes in April, and planting completed to infill gaps in hedgerows. Careful monitoring of wildlife and habitat management to protect them continues.

New viewing platforms, accessed from the footpath network, are being built over the coming months and people enjoying the area also now have a new way of finding out more about the project, with Hello Lamp Post installations available at several points around the site. Using the QR code or text number on posters, anyone can have an interactive “chat” about the project.

Hi,
what brings you to
the Lower Otter today?

No show for water shrew



Between February 2021 and February 2022, everything that lives in the lower Saône Valley, including birds, algae, rodents and insects, was methodically identified by a (small) team of naturalists...

Are you familiar with the water shrew?

Even though it is the largest shrew in Europe, it is rather solitary and

discreet. It digs a burrow in the riverbank, then fills its nest with a ball of roots, moss and grass. This is where it tries to hide itself, particularly from its predators. Even the naturalist experts who carried out an inventory of the fauna and flora in the Saône Valley didn't come across a water shrew.

However, they have been helped by allies who are more talented than they are... the barn owls that shelter in the valley's spires. By analysing the pellets that these birds form,

that is, the indigestible parts of their prey that they regurgitate (e.g. hairs and small bones), experts can detect the presence of these stealthy animals, which the birds love to eat.

The verdict? No trace of any water shrews. A common vole at every meal, a harvest rat and some "crocidura shrews" (white-toothed shrews), but no sign of a water shrew at all. Yet they are known to be present in the region.

So, why not here? Experts have cautiously summarised that, "the lack of water shrew bone remains does not mean that they cannot be



found in the study area”.

But naturalists have spent the last year looking for proof they are present. Several techniques have been used for those living in the water, e.g. capture, using nets or pots, as well as environmental DNA.

Technicians have analysed samples of water collected from the Saône and have identified every trace of DNA discovered. For the birds all those that have been seen or heard have been identified.

So, why was this meticulous inventory work even carried out? There were three reasons for this.

Firstly, it is required by law. Before carrying out any work to alter the course of the Saône, environmental authorisation must be obtained, and to do so, it is necessary to demonstrate that the work will not destroy any of the protected species.

The second reason is to manage the work while respecting the species and habitats, especially the wetlands, as much as possible. But to protect them, we still have to identify them. This is one of the parts of the inventory.

Finally, the third objective is to establish a “situational analysis” of

existing nature before any work is carried out, so that the expected increase in biodiversity can be measured when the Saône is re-connected to the sea.

In a few years, experts will return to count the birds and track dragonflies and grasses. This will show whether, as expected, new species have been established in the valley.

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Syndicat des bassins versants Saône Vienne et Seie



Syndicat des bassins versants Saône Vienne et Seie

Study shows saltmarshes are helping with the battle against climate change

It's long been recognised that trees and peatland are good for the environment since they soak up carbon dioxide. But it is becoming increasingly clear that saltmarshes are also brilliant at the job too.

Across the two sites in the PACCo project, 100ha of wetland habitat, including saltmarshes, will be recreated and so they will capture CO₂, helping to reduce the impacts of climate change.



Following a review by the Environment Agency of evidence which suggested that saltmarshes can capture between two and eight tonnes of CO₂e CO₂ per hectare each year, a new study was launched building on evidence from Steart Marshes in Somerset, which suggested there may be even more gains to be had in the fight against global warming.

PACCO project manager, Dr Lydia Burgess-Gamble, was one of a team from the Environment Agency that worked with Manchester Metropolitan

University and consultancy Jacobs, in extensive research analysing soil samples from 21 EA managed realignment (the creation of intertidal zones between the sea and land) and regulated tidal exchange (an area behind a fixed sea defence) sites and adjacent natural saltmarshes.

Lydia said: "Knowing how much carbon our saltmarshes capture is important because understanding the benefits of this habitat can help us to protect and preserve existing intertidal habitats. This sort of evidence can also be used as an additional incentive to restore other sites, like we are doing on the Lower Otter."

Interim findings from this study (Mossman and others, in press) show that saltmarshes have a greater potential to capture carbon than previously expected. The sites included in the study were found to have captured between 7 and 71 tCO₂e/ha/year, much higher figures than previous research has found.



The findings are significant. This study considerably expanded the number of sites in the UK where the restoration or creation of new saltmarshes has been studied to understand their potential to capture carbon. It also showed that the saltmarshes studied have captured more carbon than seen in previous research. Plus, it highlights the importance of protecting, restoring, and expanding our network of existing natural saltmarshes. These sites are already helping to capture carbon while providing an invaluable habitat for coastal species.



On the Lower Otter, baseline carbon data was collected before construction work began. This will enable us to go back over time and understand how much carbon the site is capturing. In turn we will better understand the role of the Lower Otter in helping fight the impacts of climate change.



*Mossman, H. and others, In press. How much carbon can saltmarshes capture? Results from a study of managed realignment and regulated tidal exchange sites in England. Environment Agency, Horizon House, Bristol.





Aerial view of the new cricket grounds
KOR Communications

All out for cricket club as it moves to new site

With the cricket season underway at the Ottermouth ground, Jasper Westaway, Head of Youth Development, reflects on the challenges the club faces and how he feels blessed to have the opportunity for the club to move to its new home.

Rain stops play

As owners of the only building in the Lower Otter floodplain, Budleigh Salterton Cricket Club (BSCC) are no strangers to the challenges that water can bring. Climate change and failing infrastructure means that the sea is returning to the Otter valley whether society likes it or not and managing this process is preferable to waiting for it to happen. As a result, the club, which has enjoyed an enviable coastal position on drained flood marsh at the mouth of the river Otter since 1930, must move with

its current position making way for a new inlet allowing sea water to inundate the floodplain for the first time in over 200 years as the floodplain is restored and natural processes returned.

The majority of the flooding in the lower Otter valley occurs outside the playing season, but summer deluges are still possible. In September 2018 the earth embankment began to fail. Had the Environment Agency not made timely and costly



repairs to the embankment the club would have been lost as the floodplain would have been inundated with sea water twice a day. As part of the wider Lower Otter Restoration Project, which will see a managed breach of the embankment, a funded move of the cricket club onto higher ground is planned. More than £1.2 million will support the club's move from its flood prone site bringing a sustainable future.

“Crafting a culture of change will be more than providing a new space”

Jasper explains: “Flood water deposits a layer of silt destroying the playing surface. A cricket pitch doesn't merely provide the space to play, the outfield and most importantly the square (the central strip of the cricket field between the wickets) will change over the course of the game and conditions effect how the ball moves and favour certain types of play. It's vital for the pitch to be of the required standard. The most recent flooding was in October 2021 which washed away newly seeded grass around the wickets and by the time the pitch had dried out sufficiently it was too late to reseed.

“At the end of every season the club house must be stripped out and packed into the roof space over

winter and the process reversed before the season can start again. This is an exhausting undertaking and means the clubhouse can never be used during the winter months. It's hard to invest in clubhouse facilities to grow the club with the ever-present risk of flooding.”

Moves afoot bring wide-reaching benefits

Since 2008 the Club's committee has worked alongside their landowner and landlord, Clinton Devon Estates, who were seeking sustainable options for managing the valley. Climate change will affect coastal communities. As part of the Lower Otter Restoration Project the relocation of the town's cricket club to a flood-free site is one of the added benefits for people and the local community, providing an opportunity to this popular local club for investment and growth.

Jasper continues: “Crafting a culture of change will be more than providing a new space for teams of 11 men who might compete in the top leagues. BSCC has both a first and second XI plus a thriving junior section. On Friday evenings over 200 youngsters flock to training as their parents catch-up and catch the last of the sun. With a women's soft ball team and a community league with more than a dozen teams, BSCC are looking to grow the offer of cricket to a wider audience.



“Sport is evolving to encourage greater participation across the community. The current facility just isn’t good enough to meet those needs, so this opportunity is a double blessing, allowing us to move our current club to a new site and also enabling us to grow, at a time when cricket is looking to offer more for all members of the community, including youth, women and disability sport.

We’re also seeing the remarkable growth of female cricket. Played by more schools as the default summer sport, the women’s game is expanding but may take a decade to be felt by clubs and professional sport. hat else in Budleigh engages

several hundred people, across all age ranges on a weekly basis?” Our move at a time when there is an expansion of interest and female players means BSCC are in that position to be ready. We see this as a huge opportunity and five years down the line expect, when women’s cricket is more established, Budleigh will be the place to play it. The move is providing room to expand at the new site which boasts a full size and a smaller second pitch. Having appropriate facilities for youngsters, women and for disabled sport is vital.

What else in Budleigh engages several hundred people, across all age ranges on a weekly basis?”

“...this opportunity is a double blessing, allowing us to move our current club to a new site and also enabling us to grow...”



Visitor surveys give insight on social and economic benefits of lower Otter site



In July 2021, the lower Otter team from Clinton Devon Estates and ABPmer headed out onto the river estuary to carry out in-person visitor surveys to find out how people visit, value and use the estuary.

ABPmer is one of the contractors for the PACCo project and are helping us to understand the existing socio-economic value of the site.

This will act as a baseline from which to understand the long-term costs and benefits of delivering the Lower Otter Restoration Project. We set out with our clipboards, surveys and sun cream and gathered just

over 80 in-person surveys over the course of three weeks.

We stood at different points of the site at different times, on different days of the week and weekend to capture all visitors. We spoke to a range of walkers, dog walkers, runners, wildlife watchers, tourists and local residents.

To maximise the response rate, we circulated the surveys online via local social media groups. This enabled us to gather approximately 250 more surveys. We also provided hard copies of the surveys in local shops, cafes, the local tourist information centre and the local

library so those who wanted to could complete a hard copy version at their leisure.

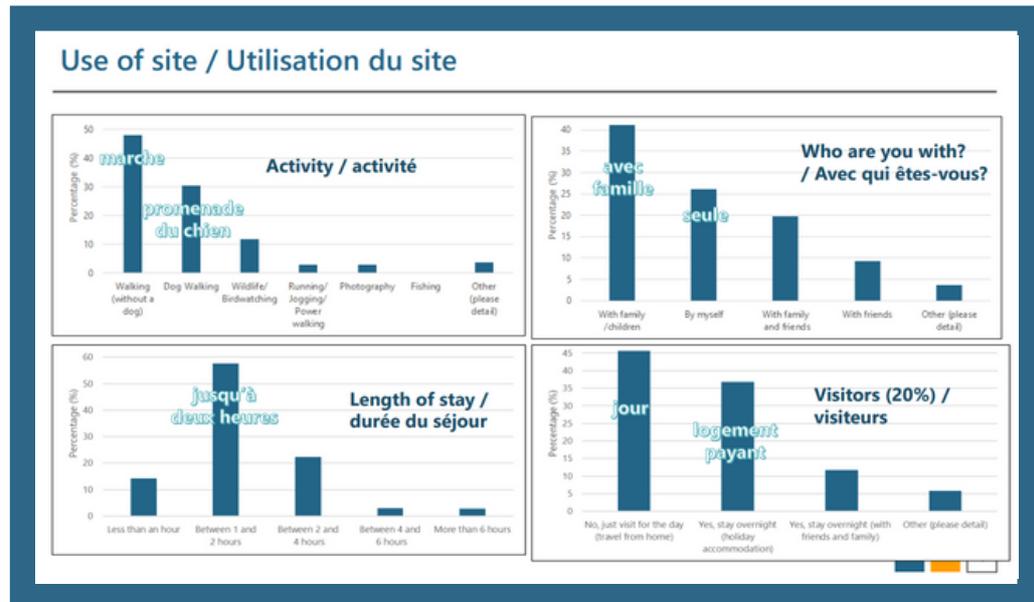
PACCo project partners on both sides of the channel co-created these surveys to make sure that they would be applicable at both PACCo project sites – the lower Otter in Devon, UK and the Saône Valley in Normandy, France.

The surveys form part of the PACCo socioeconomic work package and were designed to help us understand attitudes to the projects at each site, as well as visitors' relationships with the sites before, during and after project development and delivery.

The challenge for the team was ensuring the core of the surveys remain the same and retain scientific integrity, whilst also allowing the surveys to be tailored and relevant to each site. Surveys on the lower Otter took place in summer 2021 and will first be repeated in summer 2022. Surveys in the Saône valley will take place in spring 2022 and summer 2022. A few interesting preliminary findings emerged from the first round of surveys on the lower Otter.

Due to the demographic of local visitors, the majority of those surveyed were retired and / or over 65. The most popular use of the estuary was for walking, followed by dog walking. Most people we surveyed were just day visitors to the site, and wildlife was the most popular reason for visiting.

Most visitors agreed that the valley was natural in its present state and had not been heavily modified by humans. This was interesting as we know for both estuaries that this is not the case. Finally, with regards to the project, 80% of respondents had heard about it, over 50% stated that they knew what was happening but only 40% were happy that it is happening.



ABP Mer and Clinton Devon Estates

We also tried to ascertain the amount spent by visitors to the site, but results here were hard to quantify; car parking was the main charge but people would mostly suggest their spend on coffee and ice cream on the beach at Budleigh Salterton which is a separate site.

Next up, it will be interesting to compare these attitudes to see if they have changed at all now that the project has progressed another year on on the lower Otter. For the Saône Valley, once we have their results, it will be interesting to see how attitudes compare from site to site and how these findings could be used in future climate change adaptation projects.

“ **Most visitors agreed that the valley was natural in its present state and had not been heavily modified by humans. This was interesting as we know for both estuaries that this is not the case.** ”



Widgeons
David R. White

Keep up to date with the Promoting Adaptation to Changing Coasts project

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There's more about the Lower Otter Restoration Project at:

www.lowerotterrestorationproject.co.uk

There's more about the Saône territorial project at:

www.baase-saane-2050.com

To register for regular project updates, please email

karen.baxter@environment-agency.gov.uk



The PACCo project partners

The Promoting Adaptation to Changing Coasts project is managed by experts from across the project partner organisations.



The Environment Agency,
Lead Partner for PACCo



Conservatoire du Littoral
The French agency which protects
the country's coasts and lakes



Department
for Environment
Food & Rural Affairs

DEFRA

Department for the Environment,
Farming and Rural Affairs



PEBBLEBED HEATHS
CONSERVATION TRUST

**The East Devon Pebblebed Heaths Conservation
Trust**

A charity formed by the landowners to protect the
Pebblebed Heaths and the lower Otter valley



Terroir de Caux

Local authority in the Normandy region



Commune de Quiberville

Local authority in which
the project is happening