PACCo

Promoting Adaptation to Changing Coasts

Promouvoir l'Adaptation aux Changements Côtiers

Interreg France (Channel Manche) England

European Regional Development Fund

WINTER 2022-23

PACCO NEWSLETTER

KOR Communications

Welcome...

...to the latest updates at Project PACCo

It's full steam ahead at project PACCo! After a busy year, this third issue shares the latest progress that has taken place at both of our sites - the Lower Otter Restoration Project in Devon and the Basse Saâne 2050 project in Normandy.

As we prepare the way for some milestone works next year, we catch up with the campsite and wastewater treatment plant in Quiberville, and the new cricket club, road bridge and creek network at the Lower Otter Valley.

Also in this issue: we take a look at what's to come; some special on-site visitors (including when our teams came across borders to meet face-to-face for the first time!), species and wildlife wonders; the fantastic community learning and involvement in the projects; take a trip back in time to learn the history of the sites, and provide a sneak peek at the incredible transformations underway!

Clinton Devon Estates


Conservatoire du littoral

Work at the Lower Otter leaps towards its final stages

Over at the Lower Otter Valley, works have made significant progress since our last update. The site is really taking shape as the South Farm Road bridge nears completion, the cricket club settles into its new home, and the newly created creek network flows towards the final goal of reconnecting the Otter estuary to its historic floodplain.

The removal of the large and unsightly concrete aqueduct, which cut Budleigh Brook off from the Otter and dramatically reduced its ecological value to fish and invertebrates represents a real win for wildlife. Allowing the landscape to return to a more natural state, the brook now flows back into the floodplain through new channels.

Other updates include the installation of information panels to help visitors find out more about the project and the history of the Otter Estuary and valley, the lowering of Big and Little Bank in the north, and the newly surfaced footpaths between East Budleigh and the River Otter over Little Bank and on the west of the valley between Big Bank and South Farm Road.

Little Bank will be closed for a short spell, however, to undertake additional works to improve resilience during flood events.

The road bridge is in its final stages of construction, with the supporting piers and abutments completed and the formwork removed. It is due to be opened to the public in February, marking another milestone for the project.

Following one of the wettest Novembers in the South West for many years, the road bridge has already demonstrated how it will provide safer, more accessible access to homes and businesses above the floodplain.

Seven new viewing platforms are also soon to be opened. These will be accessed from the main footpath network and will provide visitors and wildlife enthusiasts with greater reaching views across the floodplain, as well as of the wading birds that will be attracted to the new wetlands.

Jacobs
Culvert installed
Budleigh Brook

KOR Communications

Early evidence of environmental benefits have been recorded at the site both earlier in the year and more recently by the team of onsite ecologists and members of the local community.

This is fantastic news and suggests the developing wetland habitat is already helping to increase biodiversity, particularly among resident and migratory wading birds.

Between December 2021 and December 2022, 131 bird species were recorded on site including a recent spotting of over 100 black-tailed godwits, a new record for the area. There have also been a variety of lesser seen visitors.

During the breeding season, over 40 species successfully bred and fledged young including mistle thrushes and spotted flycatchers. Both have been absent in the area in recent years.

Little ringed plovers spent the summer in the Lower Otter. This Schedule 1 species is not known to have stayed for so long before but with the newly constructed bird islands around the site, which are being topped off with pebbles (ideal plover nesting habitat), these areas will be even more attractive for them in future years.

The construction team now turn their attention to progressing works at the southern end of the site. This will include raising the footpath in the west, and construction of a new 70-metre footbridge on the South West Coast Path in the location of the future breach. Also underway are ongoing tree and shrub planting and landfill ground works.

David R White
Black-tailed godwits

Progress powers ahead at the Saâne Valley

The Basse Saâne 2050 project is well underway, making great progress this year, and by 2025 will bring about profound changes to the landscape.

As part of the vast spatial recomposition initiative to improve the resilience of this coastal region of Seine-Maritime, the following works will be completed:

- Quiberville campsite will be relocated out of the floodable and submersible zone
- A wastewater treatment plant will replace failing treatment sites
- A concrete-framed bridge will replace the culvert pipe at the mouth of the Saâne (after the conclusion of PACCo)

Work on **the new tourism facility and campsite in Quiberville** began in early 2022 with earthworks, roads and various networks (access roads, water supply, electricity, and telecommunications) being the first steps.

The development is located on a hillside, which has a significant slope in certain areas.

The choice was made to work on integrating the facility into the landscape without significantly altering the slope to preserve its natural shape and conserve nature wherever possible. The buildings, currently under construction, came next.

Made entirely of wood for a more sustainable and seamless integration into their surroundings, the walls and roofs will be covered with cladding. Similarly, the individual units, intended for seasonal rental will also be made of wood with gabled roofs.

To limit the amount of earthworks and soil alteration, some of these buildings will not be built on concrete slabs, but on stilts providing stunning views across the valley.

Another important aim of the development is to promote environmentally friendly transport and drastically reduce the need to travel by car. To reach the sites reserved for tents and seasonal dwellings, guests will need to leave their vehicles in the car park and use the carts provided. Work is also planned on the footpaths leading upstream from the seafront.

The construction of Soléa, the **new wastewater treatment plant in Longueil** started in October 2021. In 2023, the plant, managed by the Communauté de communes Terroir de Caux (inter-municipality community) will enable better quality water to be discharged into the Saâne (and thus into the Channel). When it is operational in the spring of 2023, this major milestone will enable the treatment of wastewater for a portion of the 4,300 population units' design capacity.


Thomas Drouet/Conservatoire du littoral

On completion, more than 28.5 kilometres of pipelines will be laid. More than 750 households, which are currently not connected to a common system will be connected to this new network, as well as the 750 existing homes connected to faulty treatment plants.

In addition to sanitation, the Soléa plant will also play an educational role in the valley. An observation platform will allow school trips to learn about the water cycle and all the small fauna that will be found at the site.

Finally, a third operation, carried out by the Syndicat Mixte des Bassins Versants Saâne Vienne Scie (joint association), will enable the Saâne Valley to regain a hydraulic functioning similar to that of an estuary. A rigid-framed bridge will reconnect the coastal river to the sea and replace the existing estuarine culvert pipe.

Thanks to marine influence, intertidal environments rich in biodiversity will develop in the lower valley, changing the landscape from freshwater to brackish wetlands. These sites will attract a diverse range of fauna and flora, including migratory birds for whom these rare environments are a real haven.


Thomas Drouet/Conservatoire du littoral

Environment Agency

Adaptation across borders: managing the uncertain

Engaging in an Interreg programme like the PACCo initiative represents a real challenge. It is a question of how to go about getting two very different yet similar countries, France and England, with a sometimes-difficult past, to work together effectively. The brief was as follows: 'two countries with one major thing in common - the Channel, and with one challenge – adaptation.'

Putting together the bid, setting up the working groups, and considering the issues that needed to be addressed on both sides of the Channel according to this formula was a complex task that needed to take into account varying cultural differences and approaches.

The bigger challenge at hand however - the increasing need to adapt coastlines to the effects of climate change - is the unifying element and constitutes a common threat for all coastal areas facing rising sea levels.

The PACCo project faced unique difficulties from the start given it was approved just three days before the UK's departure from the European Union, and the official Brexit date. Envisaging an Interreg project between two countries while one was in the process of leaving the EU was tricky.

This pressure weighed on its development, but was overcome.

From the outset, the schedule and deadlines of the project were strict with little room for manoeuvre. The main challenge we face as a team is to collectively manage the uncertainties. The project is a marathon that has occasionally turned into a sprint in order to enable us to meet our deadlines.

For example, the two approved projects both involve elements of construction that can be affected by the unpredictable nature of wildlife and the weather. These can quickly disrupt the phasing of a complex sequence of events which must happen in order, with the final delivery deadline unable to change. The supervision of the construction site, and the involvement of the design offices and companies in respecting these timelines are a collective challenge which is currently being met.

A few weeks after being selected, the PACCo project was forced to work in the context of the COVID-19 pandemic, which led to the closure of companies, public services, reduced staff and forced remote working.

Against the odds in these unprecedented conditions our lead partner, the Environment Agency, succeeded in mobilising all the project partners on both sides of the Channel. While we were all eager to meet, the restrictions in place as a result of the pandemic meant that the first in-person meetings and site visits didn't take place until June, July and September 2022.

Following COVID-related closures, economic recovery strategies led to shortages in the supply of raw materials. Inflation has led to postponements in the start of many projects (with unsuccessful tenders), which raised concerns about whether our deadlines could be met. Russia's war in Ukraine has also since heightened the cost of energy and certain materials in addition to the ongoing pressure in the timber sector.

The support of the Interreg programme monitoring committee was therefore much appreciated, particularly for the Quiberville campsite, where the budget was increased.

Despite these issues and the many obstacles in its way, PACCo continues to overcome and demonstrate how English and French societies can enact a common vision for the adaptation of their coastlines, and take on the challenges of climate change and rising sea levels together.

The shared challenges, features, passions, and learning allow the Lower Otter Restoration Project and Basse Saâne 2050 project to make up the unifying PACCo initiative, and set an example to inspire other international partnerships to adapt other estuarine locations in need. This is thanks to the commitment of the European Union and all of PACCo's partners, as well as the financial support of the European Regional Development Fund.

LORP, Saâne, sea, and site seeing

The PACCo partners meet face-to-face for the first time

The French partners describe their visit to the Lower Otter Restoration Project: July 2022

The French partners' visit to the Lower Otter Restoration Project site in Devon in July was an important event for PACCo.

We were given an extraordinarily warm welcome from our English partners, and it was a fantastic opportunity to be able to blend conviviality and efficiency for the benefit of our project.

After two years of online meetings, and only seeing the Otter Valley through map projections and photos, the visit allowed us to meet face-to-face with our English partners and see the scenery, progress and challenges of the Lower Otter Valley site first-hand. It was also a chance to discuss and view the detailed on-site solutions that have been implemented by the Environment Agency and East Devon Pebblebed Heaths Conservation Trust.

With representatives of the Seine Normandy water agency present, which co-finances the improvement of sanitation and the environment in the Basse Saâne 2050 regional project, we were surprised by several elements.

Firstly, the size of the Otter Valley in contrast to the Saâne Valley, which while smaller still allows for many useful comparisons. There is also less need, and therefore not the same level of focus on wastewater treatment in the Lower Otter Valley project (in France the water agencies can provide an integrated vision of the entire water policy), as well as different cultures and administrative frameworks to consider.

However, despite some differences and variation in the hierarchy of issues and allocation of prioritised public funding on either side of the Channel, we are succeeding together in balancing risk management and the preservation of environmental systems.

There are also clear similarities between the sites and their methods including strategies based on shared aims - to provide resilience to communities and the environment against flooding, coastal squeeze, storms and heavy rainfall; relocation and spatial recomposition approaches (the municipal campsite in Quiberville, and cricket club in Devon), and wetland restoration through nature-based solutions.

As part of the project, we have implemented fauna, flora and habitat inventories in our two valleys, and hope that the contacts established through PACCo will enable us to extend our scientific exchanges beyond 2023. This will ensure we gain valuable research on adapting low-lying coastal valleys to the many challenges brought about by climate change and can monitor and compare the impacts of our projects for many years to come.

This visit, like that of our English counterparts to the Saâne in September, illustrates the importance of the dynamics of institutional cooperation and individuals in the success of complex projects through informal exchanges and shared experiences.

L'Agence Nature/Conservatoire du littoral

The Otter and Saâne Valley projects are setting an example that we hope will inspire other coastal areas in need to adapt to the challenges of the 21st century.

The English partners describe their visit to the Saâne Valley: September 2022

On reaching our destination at the foot of the Dieppe cliffs in early September, the still strange experience of receiving a passport stamp 'chez' our nearest European neighbour confirmed our arrival in Normandy.

This piece of coastline was unknown to several of the English partners prior to the trip and it was obvious just how close roads, houses and infrastructure are to the coast, and how the Basse Saâne project, like the Lower Otter Restoration Project, will transform the sea frontage and floodplain entirely.

The welcome from our Conservatoire du littoral hosts was warm and generous, and on day two we travelled to the Foyer des Jeunes in Quiberville where we received another warm welcome from Mayor Jean-François Bloc and his team.

For only the second time in over two years, all project partners were able to chat about our work streams, our progress, common challenges and hopes for the remaining nine months of PACCo in the same room.

Our three French partners - Conservatoire du littoral, Communauté des Communes de Terroir de Caux, and Quiberville Council provided an update on the most recent progress in the Saâne Valley and prepared us for our site tour the next day.

Our tour began by visiting the impressive and modern looking new wastewater treatment plant, where we found out more about the technology being employed in this part of the works.

Passing through Longueil and Sainte Marguerite, we were able to put all the pieces of the French territorial project together and visualise the future of the floodplain. Speakers including Samuel Comont from the Syndicat Mixte des Bassins Versants Saâne Vienne et Scie explained the links to the Basse Saâne 2050 project, while director Laurent Topin outlined historical flooding in Sainte-Marguerite using flood markers. This brought home the challenge the local community faces with climate change and sea level rise.

Reaching the seafront, we observed the defensive approach that has been implemented, with a high concrete wall protecting the low-lying road behind the beach. From this wall, looking at the current narrow Saâne outfall, we understood just how disconnected the river is from its historic floodplain. Here the 10-metre breach will change this relationship for the better.

In the Otter Valley, a 70m breach is planned, so we were keen to learn more about the size of the Saâne breach and discuss the rationale and technical design behind the two schemes, as well as how implementation will vary.

We then viewed the current campsite before visiting the new site on the west side of the valley. The site is a hive of activity, with earth moving, levelling, terracing, and initial buildings going up. The Mayor of Quiberville is passionate about this development and providing fantastic tourism infrastructure for years to come.

The final stages of the project will be very busy, with cross-border webinars and educational presentations, our final conference in February 2023, and preparation for the Otter Valley breach in the spring.

Taking our leave of our French partners, it was even clearer to us how PACCo will serve as an example of what can be achieved when international projects join forces to work with nature, towards shared goals.


Environment Agency


L'Agence Nature/Conservatoire du littoral

A history of human modification

Saâne Valley - making waves

The first traces of human activity in the Lower Saâne Valley date back to Roman times (between 58-50 BCE) when an important Gallo-Roman settlement overlooked the lower valley at Sainte-Marguerite-sur-Mer. It was uncovered during archaeological excavations that took place between 1820 and 1847.

In the Middle Ages, signs suggest that there was some maritime activity and a small fishing port in Longueil as demonstrated by “la route de la pescherie” (literally, the road to the fishery). Some ancient texts mention a port at Longueil and a tithe of 3,300 fresh herrings owed by the fishermen of Longueil to the monks of the abbey of Longueville. At that time, the lower valley was an estuary, with the sea reaching Ouville-la-Rivière (5km upstream) at high tide. The Saâne flowed into a salt marsh, which was separated from the sea by a pebbled strip of beach. The mouth of the Saâne was 70m upstream from its current location.

During the 16th century the Saâne estuary underwent major changes. The mouth of the river, which used to move freely, was restricted by the construction of several military structures to prevent potential invasions from the other side of the Channel.

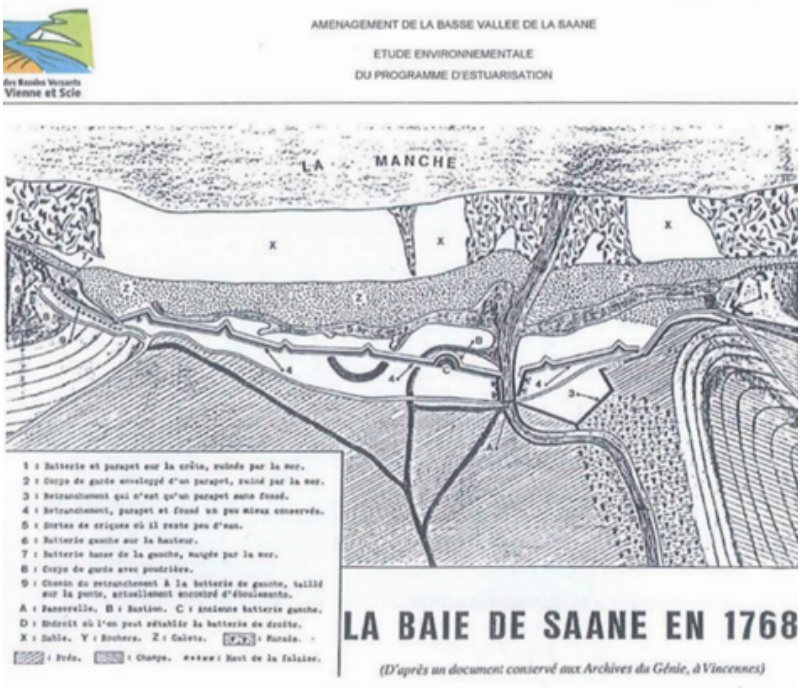
Two centuries later, in the 18th century, the estuary changed due to a greater focus on agriculture. The site was consequently made into a polder (low lying, naturally wet drained land) by a system of dykes to help drain the wetlands. Behind these dykes, marshes were replaced by pastures. In 1864, the first culvert pipe in the Saâne estuary was built from wood. This structure completed the partitioning of the agricultural land by facilitating the drainage of water and limiting the influence of the sea water on the land. After further drainage and sewage works between the 18th and 19th centuries, the Saâne Valley lost its estuarine character and came closer to the appearance we know today.

With the industrial revolution and the boom in popularity of sea bathing, Quiberville welcomed its first tourist bathers in 1856. This bathing trend was accompanied by the urbanisation of the seafront and the development of road infrastructure to transport bathers. A road was built connecting Quiberville and Sainte-Marguerite-sur-Mer. On the beach, initial developments involved the installation of rudimentary groynes. In 1914, the current stone facing was put in place and new groynes were also built. A total of 14 transverse groynes were built subsequently to reinforce the dyke.

During the Second World War, access to the seafront was forbidden and many bunkers were built, some of which are still visible today. During the Dieppe Raid of 19 August 1942, a British commando force landed on the beach at Sainte-Marguerite-sur-Mer before attacking a German defensive post on the high ground above the village. The Lower Saâne Valley underwent a transformation in the post-war years (1950-1960).

In 1955, the current groyne-culvert pipe was built in concrete after the previous one was partially destroyed in a storm in 1953. At a length of 52m, it discharges the river water onto the foreshore around 50m from the seawall.

Two years later, in 1957, the causeway was restored after the initial one was built in 1920, measuring 700 m in length. The Quiberville campsite was built between 1963 and 1973, just behind the causeway. It plays an essential role in the local economy by welcoming several thousand visitors per year.



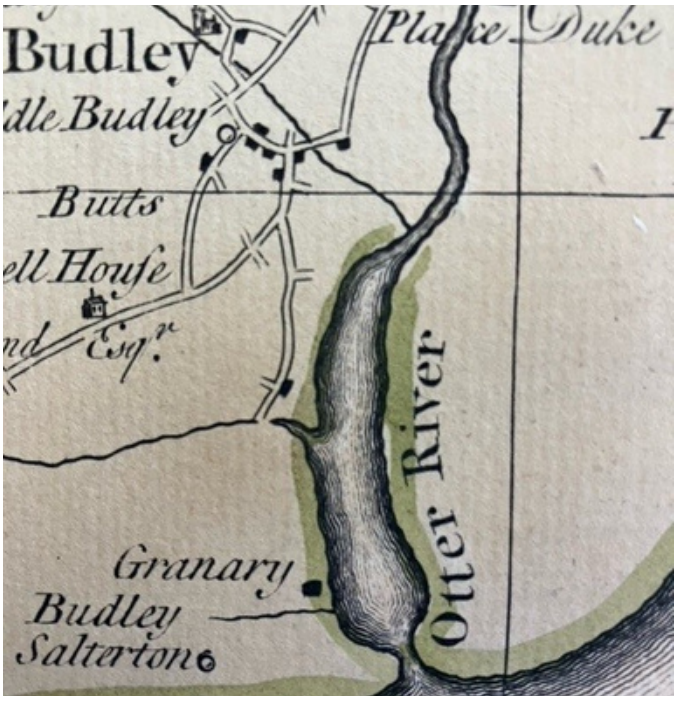
Syndicat Mixte des Bassins Versants Saâne Vienne Scie

Otter Valley - bridging the gap

As the Lower Otter Restoration Project moves towards completion, involving the opening of the new bridge on South Farm Road and the breach of embankments, it's interesting to consider how much of this work is a reversal of previous 'improvements' by generations determined to engineer the landscape for their advantage.

Clinton Devon Estates' historic maps archive, which chart the modifications of the last 250 years, were used extensively to inform LORP. Take the example of the bridges over the River Otter – the maps show the emergence of South Farm Road and the bridge that was variously known as Otter Bridge, South Bridge, and finally, White Bridge. Before the embankments led to drier conditions in the Runnie (the name of the marshland at the Otter Estuary), the first bridge crossing was at Otterton, two miles upriver.

Looking at the map from 1765, the river was simply too wide to span below this point.



Syndicat Mixte des Bassins Versants Saâne Vienne Scie

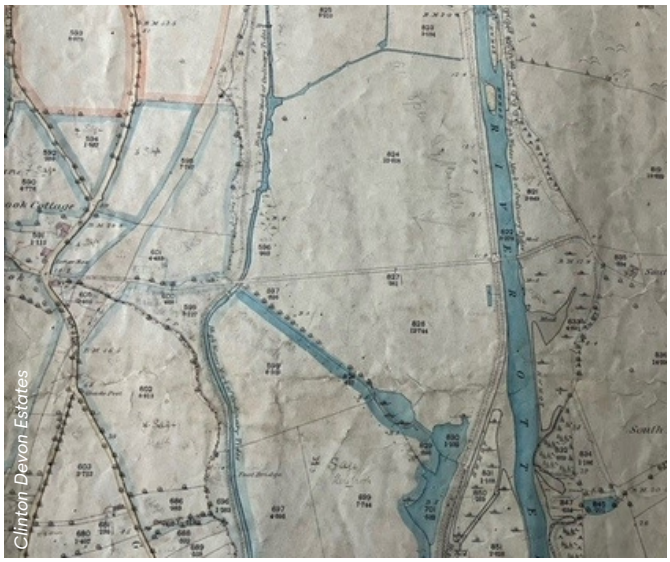
Even now it has been a major engineering project to raise the existing South Farm Road and build a new bridge at its western end to allow the re-instatement of the river's natural floodplain, while ensuring safe passage across the valley. This level of engineering wasn't possible in the early 19th century, and so the eastern side of the river had no settlements below Otterton. At the eastern end of the road is White Bridge, which has been in place in various forms for many years.

Big change came about as a result of the embankments in the early 1810s when they were suggested as an idea to Lord Rolle by James Green (the Rolle family later married into the Barons Clinton). He produced a plan of the river meandering across the marsh with the works needed to drain the Runnie for agricultural land, straightening parts of the river to form a canal, and enhancing the navigation of the river. This stood to boost the area economically as food prices at the time were rising and canals were all the rage as a new form of transport.

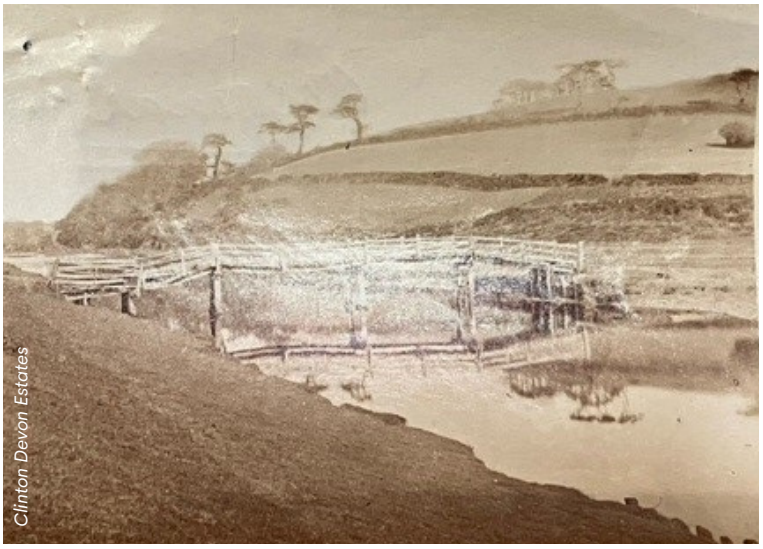
Successive maps show a bridge and pathway in place providing the communities of Kersbrook and Budleigh Salterton with a short route to the eastern side of the river. By the time the tithe map for the parish of Otterton was drawn, a bridge and a trackway leading to South Farm were in place, built in 1802. Previously, the land was farmed as part of Otterton Barton, with the farmhouse in Otterton itself.

The first edition 25” Ordnance Survey plan shows the straight road crossing the valley, over the bridge and curving round past South Farm Cottages to South Farm itself, just as it does today. This remains the only route for vehicles across the river without going north to Otterton.

OS 25”1888:



The bridge would have eased communication between the east and west banks, but these photographs of c.1880 show it was a modest and rickety affair. It was likely used by people on foot and packhorses only and was certainly under water when the river was in flood.



In September 1888 it was replaced by a more serviceable bridge with distinctive white wooden boards, hence its name change to White Bridge. It was swept away in the exceptional floods in February 1930 but was rebuilt in much the same style and replaced with a concrete bridge in the 1960s.

Today South Farm Road has been raised improved by LORP to be flood-free. The best of both worlds has been achieved – easy communication between the east and west banks, while the river flows again into its natural floodplain.

Saving the divided sedge, a tale of translocation

A transforming landscape will always have its winners and losers.

With the onset of tidal flooding up the Otter Valley from 2023, the environment will change, with saltmarsh and mudflat replacing the current pastoral landscape of fields. A change in habitat will result in a change in resident species with those favouring inter-tidal habitats including marine fish such as bass, and wading birds such as black-tailed godwit moving in or using the site seasonally.

Species that prefer a drier environment and that have called the site their own for two hundred years such as grass snake and harvest mice have moved to drier ground in preparation of the arrival of the sea, with the LORP scheme ecologists giving them a helping hand if required.

Ecologists on site are sometimes asked: 'What is the rarest species in the Lower Otter Valley?' They are sometimes worried what will happen to them.

Although they usually expect the reply to be dormice, beaver, or otter, in fact, the rarest species is an unassuming grass-like plant called the divided sedge (*Carex divisa*).

Small in stature and without showy flowers, this current resident of the Lower Otter Valley is easily overlooked. Unable to move by itself, this nationally scarce species is very rare in Devon; its only known location is currently the Lower Otter Valley. It is thus fitting that the LORP team try to find it a new home.

Clinton Devon Estates

As part of the scheme, and funded by the PACCo initiative, new sites have been identified outside of the Otter Valley where it is hoped this species can thrive far into the future. The process of moving a species from one place to another is called translocation.

Before undertaking the move, research is required to find a suitable habitat with the right kind of soils where this fairly picky species can flourish - somewhere wet, but not too wet; saline, but not too saline; grazed by animals, but not overgrazed.

The project team found three suitable sites, including one near an adjacent estuary where it was known to grow in the past (but last recorded in 1934).

During spring 2022 and with the help of diggers, tractor-drawn trailers and a party of volunteers, turfs of the divided sedge were moved to their new homes with similar ecological characteristics to its former residence.

Clinton Devon Estates

The five-month drought during summer 2022 wasn't ideal for its early establishment, and the populations moved earlier in the year will be further bolstered by additional turfs of this species. The project team are hoping for a moderately wet spring to enable transplants to root. We need it to be wet – but not too wet!

The success of these new populations will continue to be monitored over the coming years.


Clinton Devon Estates

Environment Agency

Species studying in the Saâne Valley

Over at the Saâne, the project has provided an opportunity to update and deepen our knowledge of the biodiversity of the area.

The Syndicat Mixte des Bassins Versants Saâne Vienne Scie (joint association) carried out a vast study of fauna, flora, habitats and wetlands in 2021, which covered 256 hectares of the lower valley, mainly on non-urbanised plots.

Several consultancies and nature associations worked together to carry out this comprehensive inventory on a wide range of species over the course of a year. The fact that this study was carried out over this time period made it possible to produce a detailed inventory of migratory species that are not present throughout the year, and to identify all of the plant species that may be less visible in certain seasons.

Entitled 'Vous qui passez sans me voir...' ('You who pass by without seeing me...'), an open-air exhibition took place all summer for the residents and visitors of the Lower Saâne Valley.

This made it possible for visitors to find out about some of the lesser-known and rarer species of fauna and flora, which have been identified in the area thanks to the nature study. These include shrews, sea kale, natterjack toads, European eels, little ringed plovers, and many more!

The participants in the territorial project have chosen to highlight nine of these species, with only one of which, the little egret, being easily spotted in the valley. The others are rare, discreet, unknown, or simply nocturnal species: petit gravelo; bar commun; anguille d'Europe; chou marin; phoque gris; crapaud calamite; spergulaire maritime; campagnol amphibie, and on the "front page", l'aigrette garzette.

Conservatoire du littoral


New Space Architecture

Budleigh Salterton Cricket Club bowled over by new home

Following its relocation back in the autumn, we catch up with Budleigh Salterton Cricket Club team to get the latest news on the much-loved club as work begins on its clubhouse at its new scenic location away from the floodplain.

After completing its final season at the Ottermouth ground in September, Budleigh Salterton Cricket Club has been relocated to its new home.

Funding through the PACCo initiative and our Lower Otter Restoration Project has future proofed the club and given it the chance to end years of flooding misery by securing a new site on higher ground. The cricket club has chosen to build the new clubhouse themselves, with substantial funding from the Environment Agency.

Following extremely heavy rainfall recently, which is typical for the area at this time of year, the floodplain where the club was previously located was subjected to major flooding. The relocation of the club to its new home back in September means this is now a thing of the past.


Budleigh Salterton Cricket Club

Clinton Devon Estates


KOR Communications

There was overwhelming support and standing room only at a public meeting held by the club in November 2022 to update the community on its progress and publicly launch its fundraising drive. Much of the £1.4m required to provide the new grounds and buildings has come from public funding as part of the relocation package, but BSCC is working hard to raise the remaining £600k through their 'Buy a Brick' scheme: www.BSCCbuyabrick.co.uk

In partnership with landlords Clinton Devon Estates, the club seized the opportunity to move to a new site and gained planning permission for the pavilion and grounds – a dynamic, future proof home and an exciting community venue for the town. The Estate has provided a site for the Cricket Club at Ottermouth since the 1930s and understands the value it holds for the town. In 2009 the club was part of the initial working group that looked at the future of the Lower Otter Valley and its adaption to climate change.

BSCC Committee member Jasper Westaway said: "Very few clubs are provided with the opportunity that was offered to Budleigh. We have been very lucky. We opted to build a facility that will remain fit for purpose for generations to come. And one that we hope inspires people never involved in cricket to play or become part of the community."

Construction at the new ground is well underway, less than a mile upstream from its previous location. The steel framework is now in place, as is the internal staircase. The two pitches (one full size and one junior) are finished and preparing for a full season of cricket (with temporary bar and changing facilities) starting in April 2023.

As well as an upgrade from one to two pitches, the club's new ground will feature training facilities and a state-of-the-art clubhouse intended as a community venue. It is designed to host minor county cricket, league and youth cricket, women's cricket, and disability cricket. There will also be the introduction of a thirds team and its first girls' hardball team. The clubhouse is due to complete at the end of the 2023 season.

Cricketing hero Sir Alastair Cook CBE praised the club's proposals. In a video message to the club, he said: "The plans look absolutely fantastic. A new state of the art clubhouse will be a great facility for the community, and two new cricket pitches mean that four teams can play at once. I can't wait to see it!"

> ***"An opportunity to build a facility that will remain fit for purpose for generations."***


Budleigh Salterton Cricket Club

Developed in partnership with New Space Architecture and Clinton Devon Estates, the new pavilion will be built to the highest environmental standards to ensure it can be sustainably run and maintained. It will also be designed to sit sympathetically in its new picturesque location in the Otter Valley.

Clinton Devon Estates spokesperson Clare James said: "The site needed to provide space for senior and junior pitches and offer an opportunity to be used by the club and community all year round. The building needed to provide for all users, be a flexible space, facilitate the use of green energy, and be sustainable to run. Securing Interreg funding through the PACCo initiative has enabled the club to relocate and protect its future, as well as enabling the adaptation of the wider valley to climate change.

"It is encouraging to see the structure of the new club house starting to take shape, and excellent to see the progress made since the Environment Agency handed over the site. The committee are showing real vision and commitment to the project."


Budleigh Salterton Cricket Club

"The PACCo initiative has enabled the club to relocate and protect its future as well as enabling the adaptation of the wider valley to climate change."

Citizen science and education further environmental success

Citizen Science in the Otter Valley

IIn recent years there has been increasing recognition of the important role that community engagement and volunteers with time and expertise to offer can play in habitat and species monitoring.

Some organisations and research programmes are already supported by an army of volunteers, with those contributing sometimes referred to as 'citizen scientists.' Initiatives like these include the RSPB's annual Big Garden Birdwatch, Bumblebee Conservation's Bee Walk, and the angler's Riverfly Monitoring Programme.

Environmental monitoring is a vital part of any climate adaptation scheme, and the Lower Otter Restoration Project is no exception. The primary reason is to ensure that the desired outcomes of the project are achieved (for example, inter-tidal habitats support a fantastic and wide array of fish and wading birds!).

Every large-scale coastal adaptation scheme will be different, but they all tend to share similar monitoring phases. At their onset there is the collation of environmental information to identify any constraints to project delivery and to inform project design.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This might include survey work to understand the presence of protected species onsite and how they might be impacted if the scheme is progressed, or studies to understand the level of pollution risk posed by an old tip site (in the case of LORP).

During the project's construction and delivery phase, monitoring of the environment is required to ensure that the project is legally compliant with environmental legislation and any specified planning conditions, and that works follow best environmental practice. This phase might include the surveying of breeding birds to avoid disruption during works, or the day-to-day services of an Ecological Clerk of Works ensuring there are no oil spills from machinery.

The final phase relates to the project legacy, which is the monitoring of success of the environmental change desired. It is a common fault of many projects to under-resource monitoring and evaluation. A consequence of this is that clarity is never gained on whether the project has achieved its objectives or not. It is this legacy monitoring that lends itself best to citizen science.

There are many reasons for volunteers wishing to be involved in environmental monitoring. A survey conducted by Clinton Devon Estates in 2021 highlighted that ‘maximising wildlife potential’ and ’seeing an increase in biodiversity’ were important. The educational and social aspect is also hugely important with many citing an interest in training and the learning of new skills, and ‘coming together with other volunteers and professionals’ to do so. In return for their support, volunteers want to feel valued and receive the outputs from their work, so they feel reassured knowing that what they are doing is making a positive contribution to the world.

However, citizen science programmes come with their own worries and require careful coordination. For example, concerns related to time availability, long-term commitments, data quality control, knowledge of species and identification skills, funding, and ensuring continued levels of participation and motivation.

This is why our citizen scientists are being funded and trained under the PACCo initiative through workshops on a number of environmental areas.

During 2022 three fish monitoring and three wading bird identification courses have been held, designed to be fun, informative, and social activities. Through this work we aim to empower a local community of wildlife enthusiasts that feel connected to the Lower Otter Valley with a passion for looking after its wildlife, and who can help us monitor the success of the scheme for many years to come.

Education in the Saâne Valley

Climate change, biodiversity and nature are also increasingly hot topics of interest to children, and the PACCo project has been providing the opportunity to introduce them to climate change adaptation approaches focused on coastline and intertidal areas.

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Conservatoire du littoral

Célia Lefevre


Conservatoire du littoral

As the future users and caretakers of these areas undergoing ecological restoration, it is essential we make them aware of the changing landscape.

Whether in France or in England, by video conference, in the classroom or onsite, the objectives of the PACCo project and the initiatives in the Otter and Saâne valleys are being presented to different school audiences by various project partners.

On the French side, last June, the Terroir de Caux inter-municipality community organised a forum on sustainable development for 360 pupils. Here they learnt about the sanitation work being carried out in the Lower Saâne Valley to improve the quality of the environment and the river and bathing waters.

The same week, Kate Ponting from Clinton Devon Estates visited the school of Sainte Marguerite-sur-Mer and explained the activities being carried out over in the Otter Valley to the pupils of CM2 (final year of primary school).

Last September and October, the Syndicat Mixte des Bassins Versants Saâne Vienne Scie (joint association) also contributed to raising awareness among schools. First year pupils from the Luneray Middle School were able to learn about the Saâne Valley project and visit the site.

Similarly, Master's students from the AgroParisTech University came to meet various stakeholders in the region to learn more about the Basse Saâne 2050 project.

A vegetation planting scheme was organised at the end of November by the municipality of Quiberville with all school pupils (112 children) from the three municipalities in the lower valley (Quiberville-sur-Mer, Sainte Marguerite-sur-Mer and Longueil). The aim of this event was to highlight the relocation of the campsite, as well as the importance of maintaining hedges and reforestation for landscaping, wildlife habitat, and to reduce the risk of run-off during major rainfalls. This is all the more important as the tourism facility is located on a hillside.

The Conservatoire du littoral has also given presentations to primary and secondary school pupils whose schools are located near the Otter Valley. The pupils had the opportunity to learn about the PACCo project and to see the progress of the works in France.


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

Lower Otter Restoration Project **www.lowerotterrestorationproject.co.uk**

There's more about the Saâne territorial project at:

https://basse-saane-2050.com

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Interreg France (Channel Manche) England

European Regional Development Fund

The PACCo project partners

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

The Environment Agency,
Lead Partner for PACCo

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

DEFRA
Department for the Environment,
Farming and Rural Affairs

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
Inter-municipality authority
in the Normandy region

Commune de Quiberville
Local authority in which
the project is happening