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Issue 65 Autumn / Winter 2026

newsletter of the Solway Firth Partnership



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Convenor's Column

Rupert Shaw MBE MA, SFP Convenor

Have you ever put off doing something, only to finally tackle it and think wow, fantastic, I wish I'd done it earlier?

Well, my brother and I completed the Hadrian's Wall Path in late April. The full 84 miles in 6 days as a holiday, rather than as a challenge, I strongly recommend it. It has made me want to reflect on that first section of the walk along the Solway (rather than why I had purchased the Ordnance Survey Hadrian's Wall route map in 1998 and not tackled it until 2026). That trip has inspired me in sum, to look more closely and think more deeply on what we have – lucky us – right here on our doorstep. So, I am going to reflect a lot in this Column on our fabulous Cumbrian Solway coast, and my constant desire to return.

I am no stranger to that stretch of coast: I have bought cattle in Burgh by Sands. When my boy was wee, I used his age as an excuse to visit the Toy Soldier museum in Silloth more than once! I was thrilled to explore the remains of Port Carlisle with Ann Lingard after her publication of *The Fresh and The Salt*. I am excited by what the excavations at Drumburgh reveal about the Romans and it was great to have the privilege of a tour of the Castle during a Trustees visit. I feel duty bound to point out that in my long tenure as a Trustee Director of the SFP we have diligently ensured at least half our board meetings are held in Cumbrian coastal locations. So possibly like you, I thought my brother and my walk from Bowness to Carlisle would reveal little of note to such a regular visitor. Wrong. Moving at walking pace, filling a day with the Solway's gentle but ever-changing vistas, seeing the detail of every sand bar, building, hedgerow, field and copse, everything you pass entering Carlisle on foot finishing at the Cathedral (itself a magnificent visit – see its vault treasures spanning a thousand years). It was the best of days.

Are you expecting me to conclude that I've done it – and so should you? Well, I'm not going to cajole. Instead let me share another experience from our warm dry summer of 2026. I had the privilege of being asked to help New York visitors look for a holiday home in the North Lakes in August. So, on the final night in Glasgow, at a thank-you meal for my diligent weeklong support and guiding before they flew out, they relayed that their highlight location was St Bees! They loved its Priory, its setting and a swim from its sandy beach (I know). The Solway seemed to feature heavily in their recollections; in fairness it may have started when we climbed Dodd Peak and I was able on such a clear day to point out the Solway on the horizon. I realise that the return journey right around the Solway to Glasgow via the Ruthwell Cross (to avoid the motorway) may have been a factor... I have learnt I am probably not the best North Lakes property hunter... but they are set to return this November to look again – just on the Solway plain!

Don't take my failure to highlight in this Column those wonderful 2026 summer events that you all worked hard to make a success of: your turning out at events running from Maryport's Festival of the Sea to the Oyster Festival, your important volunteering at beach cleans and sea grass seed collecting, as a sign that they aren't worthy of praise. They are.

There is a lot in the pages that follow to interest and encourage you further. As I mark a decade of involvement with the Partnership, I hope the following pages give you a sense of what still draws me in, why I want to be involved, what a privilege it continues to be. I hope to see many of you at our AGM on 13 November in Carlisle: maybe you can give me further pointers to some Cumbrian Solway Treasures I need to see.

Event: The Solway Firth Partnership Year in Review & AGM

Headline speaker: Nick Waterfield on the Hadrian's Wall dig at Drumburgh – new findings!

Fri 13th Nov 2026, 1:30-3:30pm

Cumbria's Museum of Military Life, The Castle, Carlisle











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Photo Credits: Front Cover: Nith bore, Mike Bolam

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Solway Coast National Landscape News

Coming soon - Have Your Say on the Future of the Solway Coast National Landscape

The Solway Coast National Landscape team and partnership have reviewed and updated their statutory Management Plan, setting out a shared vision and priorities for conserving and enhancing this nationally protected landscape.

The Solway Coast National Landscape Partnership are pleased to announce that the draft Solway Coast National Landscape Management Plan 2027-2032 is now available for review. The consultation itself will open over the autumn and remain open for input for eight weeks, and feedback is welcome from residents, businesses, land managers, community groups, visitors and anyone with an interest in the Solway Coast.

The Management Plan is the key strategic document for the National Landscape, guiding the work of the Solway Coast National Landscape Partnership, local authorities, statutory agencies, land managers, community organisations and other partners. It identifies the area's special qualities, the challenges it faces, and the actions needed to protect and enhance its natural beauty, wildlife, cultural heritage and sense of place over the next five years.



Copies of the draft Management Plan and the consultation survey to follow can be viewed and completed online via the Solway Coast National Landscape website and Cumberland Council's consultation platform:

https://consult.cumberland.gov.uk/
www.solwaycoast-nl.org.uk

Those who would prefer a paper copy of the draft Plan or consultation survey can contact info@solwaycoast-nl.org.uk with their name and postal address, and a copy will be provided.

Feedback received during the consultation will help shape the final Management Plan and ensure it reflects the views and aspirations of the people who live, work and enjoy the Solway Coast National Landscape. Everyone with an interest in the future of the area is encouraged to take part and have their say.

Solway Coast National Landscape Youth Panel

Are you aged 16 to 25 and passionate about the Solway Coast?

The Solway Coast National Landscape team are looking for enthusiastic young people to join a new Solway Coast National Landscape Youth Panel.

This exciting initiative aims to give young adults a stronger voice in the future of our nationally important landscape. The panel will bring together individuals who live, work, study, or have a connection to the area, providing opportunities to share ideas, influence projects, and help care for the landscape we are all proud of.

By joining the Youth Panel, you will have the chance to:

- Share your views on issues that matter to young people around nature, climate, landscape and history.
- Help develop and shape future projects.



- Learn more about the special qualities and hidden corners of the Solway Coast.
- Play an active role in protecting and promoting the landscape for future generations.
- Take part in exciting opportunities and exchanges.

To be part of the Youth Panel or find out more please send an email introducing yourself to info@solwaycoast-nl.org.uk



RSPB Campfield Marsh



Rockpools, Allonby Bay

Building Connections Beyond the Solway Coast

As part of their commitment to engaging and inspiring young people, the Solway Coast National Landscape team is taking part in the EUROPARC Atlantic Isles & Landscapes Northern Ireland Youth Exchange Programme. This year, the team were delighted to welcome a group of young people from Northern Ireland to the Solway Coast, giving them the opportunity to experience some of the area's most special places, landscapes and conservation projects. During their visit, they explored the rich cultural heritage of Holme Cultram Abbey, learned about the working farmed landscape at Blue Dial Farm, discovered nature restoration efforts at RSPB Campfield Marsh and Mawbray Banks, and enjoyed the diverse coastal habitats and fascinating rockpools of Allonby Bay. The exchange provided a valuable opportunity to share knowledge, build connections and inspire the next generation of champions for our protected landscapes.

Thanks to our partners Cumbria Wildlife Trust and the RSPB, and our communities and landowners from Abbeytown and Blue Dial for welcoming the group to the Solway Coast and sharing their time and expertise. An engaging report from the exchange visit written by the group is available through info@solwaycoast-nl.org.uk

The exchange programme will continue in October with a visit to Northern Ireland, where youth representatives from the Solway Coast National Landscape will continue to strengthen links through this Exchange Programme. The visit will include exploring the spectacular landscapes of the Causeway Coast and Glens, as well as attending the Landscapes Northern Ireland 2026 Conference in Ballycastle. This ongoing partnership helps foster collaboration, shared learning and lasting connections between protected landscapes across the Atlantic Isles.

Holme Cultram Abbey





Hedgerow cookery walk



John's display of historical cookery

A Taste of the Landscape

Food can be a powerful way of connecting people with the landscapes around them, and two recent events organised by the Solway Coast National Landscape did just that. Held at Blue Dial Farm, both the Hedgerow Cookery and Historical Cookery demonstrations were led by local chef John Crouch, offering participants a unique opportunity to explore the Solway Coast through its natural and cultural heritage.

During the Hedgerow Cookery demonstration, participants discovered how plants found within local hedgerows can be identified and used in cooking, helping people gain a greater appreciation for the wildlife and biodiversity that make the Solway Coast such a special place.

The Historical Cookery demonstration took visitors on a journey into the past, recreating dishes and cooking techniques that would have been familiar during the Roman period. The event also included a visit to nearby Milefortlet 21, helping participants connect the food, history and archaeology of the Solway landscape.

While the events focused on different themes, both encouraged people to engage with the National Landscape in new ways. Whether learning about edible wild plants or experiencing the tastes of the Roman frontier, attendees discovered how the Solway's natural beauty and rich history continue to shape the landscape we see today. These events demonstrate that connecting with nature and heritage does not always happen through a walk or a talk. Sometimes, experiencing a landscape can begin with a taste of it.

Audience at the historical cookery event



Tasting



Natterjack Toad Training Creates New Volunteer Surveyors



Natterjack toad

The Solway Coast National Landscape recently hosted a Natterjack Toad Training session delivered by Amphibian and Reptile Conservation (ARC), helping local volunteers develop the skills needed to support one of the area's rarest and most iconic species.

The training provided participants with an introduction to natterjack toad ecology, identification and survey techniques, alongside an understanding of the specialised dune and pond habitats the species depends upon. Successful attendees became accredited natterjack toad surveyors under ARC's licensing, enabling them to assist with future monitoring and conservation work.

By equipping local people with the knowledge and qualifications to monitor this endangered amphibian, the training not only supports vital conservation efforts but also helps participants build a stronger connection with the special landscapes and wildlife of the Solway Coast National Landscape.

Natterjack toad training





Glasson Moss boardwalk under construction

Improved Access at Glasson Moss

Visitors to Glasson Moss Nature Reserve will soon benefit from improved access thanks to a boardwalk replacement project funded by the Solway Coast National Landscape and Natural England.

The existing boardwalk plays an important role in allowing people to explore this nationally important wetland habitat while protecting sensitive areas of the reserve from trampling and erosion. Boardwalks help safeguard the fragile habitats that support a variety of wetland plants, insects and birdlife, enabling visitors to experience the reserve while minimising impacts on wildlife and the wider environment.

Over time, sections of the structure had deteriorated and required replacement to ensure safe and sustainable access for visitors. This partnership project has invested in high-quality access infrastructure, helping people continue to enjoy and connect with Glasson Moss for years to come, while supporting the long-term conservation of this valuable nature reserve.



Seed collecting

What's new with SCAMP Innovation in Restoration?

Seagrass: From surveying to seed collection

It has been a busy summer for the SCAMP Innovation in Restoration project. Our new Project Officer, Cordeil Sinclair, started in June, and since then much of our fieldwork focused on one of the Solway's most important coastal habitats: **seagrass**.

Over the past few months, we have been on the shore carrying out seagrass habitat condition assessments. These surveys are helping us build a clearer picture of the condition of the known existing meadows and how they may be changing over time.

Seagrass seeds



Getting volunteers involved

We're only a small team and with around 16 known intertidal seagrass beds along the Solway, a key part of our work has been developing opportunities for volunteers to take part in seagrass monitoring too. Earlier in the summer, we ran two volunteer training sessions covering the techniques needed to assess seagrass condition.

The response from the public has been fantastic, with over twenty volunteers getting trained up with us over the two days. These volunteers are vital and will be involved in the fieldwork; helping us collect valuable information about the Solway's seagrass habitats.

By building a network of trained volunteers, we hope to develop a longer-term picture of how these habitats are changing, while giving people the opportunity to play a hands-on role in marine restoration in their own local area.

Collecting seagrass seeds

In late August and throughout September, we have been out collecting **seagrass seeds**, again with the help of our excellent team of volunteers.

Collecting seeds from healthy existing meadows is an important first step in restoring seagrass beds across the Solway. In order to collect the seed, we first need to understand where to look for it. Seagrass seeds grow in 'spathes', which are small protective pouches that contain the flowers and developing seeds near the base of the blades. The ripe, seed laden-spathes are picked carefully ensuring the rest of the seagrass stays rooted. From there, the collected spathes are allowed to break down; this natural process allows the seeds to be separated from the rest of the seagrass blade material – to do this for restoration purposes is traditionally rather time and labour intensive.

A new approach to seed processing

We have recently taken delivery of two innovative seagrass seed processing units from **Seavive**.

The units provide a way of processing collected seagrass material by allowing the seed spathes and other plant material to break down, while the heavier seeds separate out. Once the processing is complete, the seeds can be collected and then stored in cold hyper saline water over winter, ready for use in future restoration work next year.

The two units are suspended in the water at Stranraer Marina; by using the natural seawater around them, we do not need to carry out regular water changes or continually aerate the water, making the process much simpler and more practical for our small team.

This is a new approach for us, and we are looking forward to seeing what we can learn from the first round of processing. This summer has therefore been an important opportunity to develop our experience of collecting and handling seagrass seeds, as well as learning more about the practical challenges involved.

Listening to local knowledge

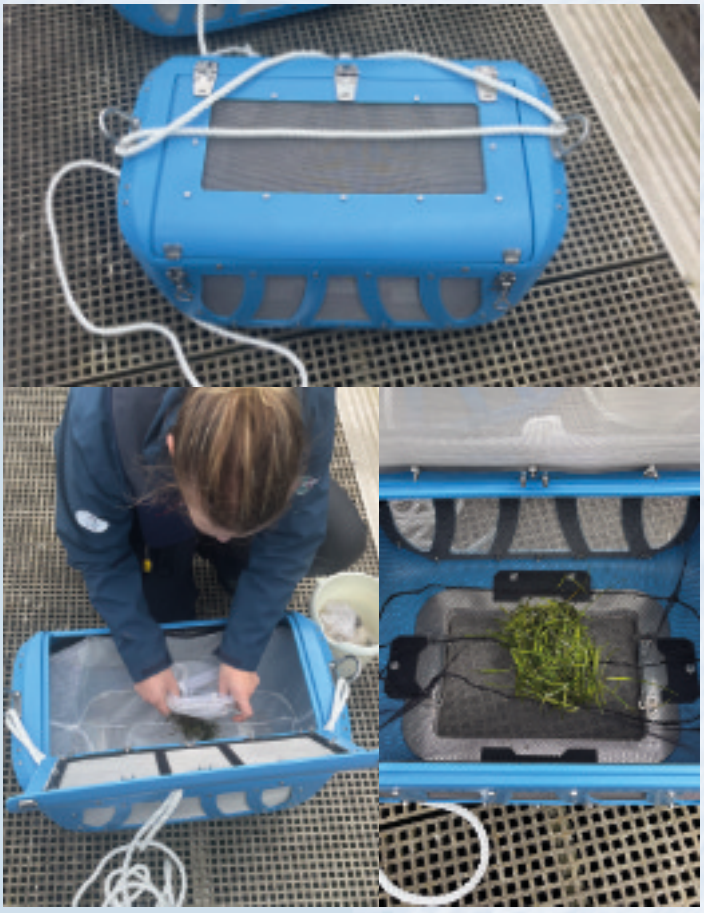
Our work this summer hasn't just been about fieldwork. We have also been keen to learn from the people who live, work and spend time around the Solway.

We held three events over the summer in conjunction with SAMS Enterprise (Scottish Association for Marine Science), St Abbs Marine Station and SensFish, where we asked members of the public to share their knowledge and experiences of seagrass and native oysters. The main focus of this was to find out where people had seen seagrass meadows or native oyster beds, both recently and historically.

Local knowledge can provide a valuable complement to our scientific surveys, helping us identify areas for further investigation of potential future restoration sites, whilst building a better understanding of how these habitats have changed over time.

Seed collecting





Seed processing unit in action

Highlighting seagrass at the Stranraer Oyster Festival

In September, we had a stall at the Stranraer Oyster Festival, which was a great opportunity to meet people who were already interested in the Solway's marine environment, as well as introducing SCAMP to people who hadn't come across the project before. We had lots of interesting conversations about seagrass, native oysters and the wider health of the Solway.

As the project develops, we will continue combining fieldwork and research with local knowledge and community involvement. There is still much to learn about the Solway's marine habitats, but the work carried out this summer is helping us build the evidence, skills and partnerships needed to explore future restoration opportunities.

SCAMP and the Solway Firth Partnership stall at the Stranraer Oyster Festival



Galloway Rivers Trust put the Spotlight on Coastal Invasives

Invasive non-native species (INNS) pose a significant threat to our native biodiversity. Introduced to the UK outside of their natural range, these species can spread rapidly and outcompete native plants and animals for access to essential resources such as space, light, water, and nutrients. The impacts can be wide-ranging, affecting entire ecosystems, reducing habitat quality for wildlife, and cause substantial economic costs through extensive management and restoration efforts. Once established, many invasive species have proved difficult and costly to control, making early detection and rapid response essential for protecting our natural environment.



Loch Ryan coastal knotweed



Himalayan balsam

As part of the Solway Coastal and Marine Project (SCAMP), Galloway Rivers Trust has been working to raise awareness of invasive non-native plant species along the coastline of Dumfries and Galloway. Dynamic coastal environments are particularly vulnerable to INNS due to the movement of water, strong winds, wildlife activity, and human transport, all contributing to their spread. Seeds and plant fragments can travel considerable distances, allowing invasive species to colonise new areas quickly and making containment challenging.

Several priority invasive species have been identified across the region's coastal habitats, including Himalayan balsam *(Impatiens glandulifera)*, Japanese knotweed *(Fallopia japonica)*, American skunk cabbage *(Lysichiton americanus)*, Giant hogweed *(Heracleum mantegazzianum)*, and Gunnera species. These plants can form thick, dense patches that alter habitats and suppress native vegetation, ultimately reducing biodiversity. Some species, such as Giant hogweed, also pose significant risks to human health, as it produces a toxic sap that causes severe skin burns and blistering when exposed to sunlight, while Japanese knotweed is well known for its extensive rhizome system, which can damage infrastructure and is particularly difficult to eradicate because it can readily regenerate and spread from small rhizome fragments.

To help increase public awareness and encourage community involvement, informative flyers have been distributed throughout coastal towns and communities across Dumfries and Galloway. By helping local residents, visitors, and landowners to recognise priority invasive species and report sightings, we can build a clearer picture of their distribution along the coastline. Reports from the public are invaluable in helping us understand the scale of the problem, identify priority treatment areas, and support efforts to protect and restore our valuable coastal habitats.

Alongside community engagement, Galloway Rivers Trust has appointed environmental mapping specialists, Spectral Ecology, to explore the use of multi-spectral sensing technology to improve how invasive species are detected and monitored across large stretches of coastline. This includes a mixture of drone and satellite surveys, with the addition of machine learning for species identification. Traditional ground surveys are an important part of invasive species management but are time-consuming and may miss plants, particularly across remote or inaccessible coastal areas. Surveying extensive sections of remote shoreline on foot requires significant staff time and resources, limiting the frequency and scale of monitoring.

Drones offer a more efficient approach. Equipped with high-resolution sensors and cameras, they can rapidly collect detailed imagery over large areas in a relatively short period of time. This enables surveyors to assess habitats that may otherwise be difficult to

Himalayan balsam





Giant hogweed

access safely and allows for more regular monitoring of known invasive species sites. The imagery collected through drone surveys can then be analysed to identify and map priority INNS populations along the coastline. By creating detailed distribution maps, we can better understand where invasive species are becoming established and how they may be spreading through the landscape. This information is essential for planning effective treatment programmes and targeting resources where they will have the greatest impact.





American skunk cabbage

Remote sensing technology will definitely provide many advantages, but it is important to recognise its limitations too, as small emerging patches or individual strands of plants may not always be detectable through remote imagery alone. However, identifying larger infestations can provide valuable clues about where the source population may be located. Invasive plant species often spread outward from an already established population, meaning that locating larger infestations can help guide follow-up ground surveys and direct surveyors towards potential source areas. This targeted approach can significantly improve the efficiency of fieldwork and increase the likelihood of detecting smaller, previously unnoticed populations. Combining drone technology and ground surveys with community reporting creates a powerful tool for invasive species management. Public sightings are extremely valuable in identifying areas of concern, while drone surveys can provide a broader view of infestation patterns across inaccessible landscapes. Together, these approaches can improve our understanding of invasive species distribution and enable more effective management interventions.

If you spot any of the priority invasive non-native species along the Dumfries and Galloway coastline, please report your sighting through our recording app. Every report helps us build a more comprehensive picture of invasive species spread and supports efforts to safeguard the region's coastal habitats for future generations.

American skunk cabbage



Telling the Solway's Story, One Post at a Time

Prabhroop Kaur, Former Environmental Communications & Risk Intern @SFP

I joined the Solway Firth Partnership (SFP) this summer. I was a postgraduate student, fresh out of my Master's. This was my first working placement outside India.

I arrived with an assumption that felt almost too obvious to question: that reaching people online meant chasing a particular kind of audience. I thought a charity's digital presence should be built mainly with that audience in mind.

SFP's own data told a different story. It reshaped how I think about communicating environmental work altogether.

What the numbers actually showed

A few months ago, a short video about the River Nith tidal bore became SFP's best-performing Facebook post ever. It reached nearly 97,000 views. Over 49,000 people genuinely watched rather than scrolling past.

This was not quite the expected result for a small cross-border charity working hard to modernise its communications. It raised a genuinely useful question. Was reach ever really about who we assumed we were speaking to? Or was something else doing the work?

The video that broke through did not target anyone in particular. It was simply true to a place. A real tidal wave, moving up a river, filmed by people who know that stretch of water well. It worked because it was specific and honest, not because it was aimed at any one audience.

We reached younger followers too, in numbers that mattered to us, but the wider spread of who actually watched was the real surprise. For small charities without the budget to run targeted campaigns, that is a genuinely reassuring finding. Resonance travels further than any single audience you set out to chase.

Some formats we experimented with

Small charities are often told they need slick production values to compete online. SFP's own experience over the past few months suggests otherwise.

The Behind the Scenes series is one example. Short and unpolished videos of actual fieldwork going on in real time. One clip featured Jenny, SFP's Innovation in Restoration Project Manager, standing on the mudflats. She explained Mini Buoys, the survey equipment used to assess seagrass potential. People do not follow a small charity's page to watch a polished campaign. They follow to see what conservation genuinely looks like on an ordinary Tuesday morning.

Meet the Solway Species is the other example. A carousel format introducing the Firth's residents one at a time, starting with the shore crab. A rather bold post with a touch of humour. Facts were drawn directly from the team's own knowledge. Did you know male shore crabs latch onto females and carry them around? They wait patiently until she moults before they can mate. It is a small, low-cost format but leaves people wanting to know the next thing.

Tidal wave





Shore crabs mating

What this might mean for other small charities

None of this suggests charities should stop thinking about who they want to reach. It suggests something more useful: chasing resonance tends to travel further than chasing any single audience ever could. Build it around a genuinely local voice and let the people doing it carry the message. It costs less too, which matters enormously for organisations working with limited staff time and even more limited budgets.

I arrived at this placement expecting the task to be about widening who SFP's work could reach. I leave thinking the task was never really about who we were speaking to at all. It was about sounding genuinely true to a place. That is a lesson I expect to carry well beyond the Solway coast.

I want to thank Jenna, my supervisor, for trusting a student with SFP's public voice for three months. And the wider team, for constantly sharing the insight, the pictures and the patience that made any of this possible.



Southerness lighthouse

Heartstrings of the Firth:

Exploring Place Attachment and Shared Meaning Along the Solway Coast

Greyson Webb, University of Edinburgh

Why do certain places become meaningful for some while others leave no mark at all? It's a question that has been explored by researchers—from environmental psychologists to economists—for more than half a century. The positive bonds people form with places are commonly conceptualised under the term place attachment. In an era marked by rapid urbanisation, increased mobility, and global challenges such as climate change and displacement, understanding these bonds has become increasingly relevant as the ways we encounter and experience the places around us continue to change.

The Solway Firth offers a particularly rich setting in which to explore these human-place bonds. Stretching across the Scottish and English border, the estuary is a place of ecological, cultural and social significance, shaped by centuries of life around its shores. This summer, in partnership with the Solway Firth Partnership, I sat down with thirteen residents across the Scottish side of the Firth to explore what drives place attachment to this dynamic estuarine region as the focus of my MSc dissertation research.

To capture these connections, I used an interactive visual interview method known as STREAMLINE. Rather than relying solely on traditional surveys, this adapted interview approach engaged participants in open-ended conversations led by structured activities, such as marking their 'treasured places' on a map of the Solway. What emerged was a vibrant, multidimensional landscape. For some, attachment was built through daily routines like coastal rowing, walking, and birdwatching. For others, it was anchored in family roots, local heritage, and community life. Locations such as Kirkcudbright and Caerlaverock surfaced repeatedly as multi-valued hubs, cherished simultaneously for their history, scenic beauty, wildlife, and local livelihoods.

Yet across this variety of personal ties, one constant thread bound their accounts together: the Solway's distinct natural character. Participants readily acknowledged that while walking or hill climbing could be done elsewhere, nowhere else provided the same atmosphere. To many, this distinct atmosphere was defined by a rare combination of quietness, wildness, dark skies, and uncluttered views.

This shared connection became most vivid when participants imagined what they would be most upset to see the Solway Firth lose and their priorities for what should be protected in the area. Alongside mentions of region-specific traditions like haaf net fishing and concerns for sustainable local economies, residents consistently pointed to both the region's ecological integrity and its distinct landscape character. Their priorities ranged from safeguarding native species such as ospreys, salmon, and wild apple trees, to protecting the open, uncluttered coastlines, dark skies, and quiet solitude that separate the Solway from other areas.

In capturing these perspectives, I hope this research can contribute positively to ongoing stewardship efforts in the region. Decades of environmental research have highlighted the importance of incorporating local voices into sustainable landscape management, but meaningful engagement requires understanding more than simply whether people care about a place. It requires understanding what their connection is built around, what they value, and what they feel is worth protecting. These insights offer a starting point for anticipating how the community might respond to future change on the estuary, without losing sight of what makes people care about this coastline in the first place.

Kirkcudbright





Traditional haaf net fishing

I am immensely grateful to the residents who generously shared their time, experiences and stories with me. Without their openness, this research would not have been possible. I am equally grateful to the Solway Firth Partnership for making the project possible, and particularly to Jenna Cains, who took the time to meet with me at the outset, understand my research interests, and explore how they could speak to the needs and priorities of the region. That initial conversation ultimately shaped the research that followed.

For readers interested in reading the complete MSc dissertation or learning more about the research findings, please contact the author or the Solway Firth Partnership.


BALLANTRAE
LOCH RYAN
CAIRNRYAN
STRANRAER
PORTPATRICK
GLENLUCE
LUCE BAY
DRUMMORE
MULL OF GALLOWAY
ST JOHN'S TOWN OF DALRY
NEWTON STEWART
WIGTOWN
GATEHOUSE OF FLEET
KIR
GARLIESTON
PORT WILLIAM
WHITHORN
WIGTOWN BAY
ISLE OF MAN


DUMFRIES
LOCKERBIE
CASTLE DOUGLAS
DALBEATTIE
ANNAN
GRETNA
KCUDBRIGHT
SILLOTH
CARLISLE
SOLWAY FIRTH
ALLONBY BAY
MARYPORT
WORKINGTON
WHITEHAVEN
ST BEES



Compass jellyfish, Annabel Pattison

Coastal Jellyfish in Our Changing Seas

Annabel Pattison, University of Manchester

Jellyfish are a familiar sight along our shores, drifting through the water in their translucent bells and occasionally gathering in vast blooms.

Jellyfish belong to the phylum Cnidaria, while their close relatives, the comb jellies, belong to the phylum Ctenophora. Both are ancient lineages, existing for over 500 million years. Today, species such as the moon, compass, lion's mane and barrel jellyfish can be found in UK waters, each with a distinctive form.

A life in two forms

Jellyfish have a remarkably complex life cycle. In the classic scyphozoan lifecycle, fertilised eggs develop into larvae, which settle onto solid surfaces and transform into a sessile polyp. These polyps reproduce asexually, releasing tiny ephyrae that mature into the familiar free-swimming medusae we recognise as jellyfish.

This is only the classic model. Different groups can have substantially different life cycles, and each stage is triggered by specific environmental conditions such as temperature and food availability, meaning species can respond to environmental change in very different ways.

Why do jellyfish numbers change?

One year, beaches can be covered with stranded jellyfish; the next, you might struggle to find one. Temperature, salinity, food availability, predators, local currents, and weather patterns can all influence jellyfish populations, with the right combinations forming jellyfish blooms which often exhibit high reproduction rates. In the Irish Sea, for example, a 16-year study found that jellyfish abundance had increased over that time, with sea-surface temperature and the overfishing of herring resulting in decreased predation among the possible contributors.

Jellyfish in a changing climate

Jellyfish are very tolerant animals. They can survive low-oxygen conditions, while some, such as the moon jellyfish, can shrink during periods of starvation, reducing their energy requirements.

Climate change could therefore alter jellyfish populations in several ways. Warmer water contains less dissolved oxygen and can affect fish and plankton communities, changing competition and food availability. Local jellyfish may benefit from these changes and produce sudden blooms, making them useful indicators for scientists to monitor.

Laboratory studies also show that warming can increase sexual and asexual reproduction in some temperate jellyfish. However, this does not mean that warming will benefit every species. Tropical jellyfish may be harmed by further warming and could migrate north to join our cooler waters.

More than meets the eye

Jellyfish are not simply floating predators. They are also prey for a wide range of animals. Leatherback turtles, crustaceans, fish and other marine animals consume them, while some jellyfish even prey upon other jellyfish. In the Irish Sea, jellyfish DNA has been detected in the stomachs of herring.

The Jelly Web

Jellyfish can both eat and be eaten by other gelatinous organisms, creating an independent network of interactions described as the "jelly web".

Their importance extends beyond ecosystems. Jellyfish have contributed to scientific discoveries, including the green fluorescent protein (GFP), an invaluable tool for studying cells and developmental processes. Some species are also studied for their regenerative abilities, while in parts of Asia, jellyfish are consumed as a delicacy.

What does the future hold?

Despite their abundance, we know little about long-term jellyfish population trends. Their numbers naturally fluctuate, making it difficult to distinguish a short-term bloom from a genuine long-term change.

Jellyfish may benefit from some aspects of environmental change, while other species may suffer. Rather than assuming that climate change will simply create "more jellyfish", understanding their life cycles, predators, food webs and population trends is essential in determining how they will respond to our rapidly changing oceans.

Personally, I believe that with ocean temperatures rising gradually and them being highly adaptable creatures, they will continue to survive and thrive.

Rubbish Science

Héloïse Gilbert, Scottish Association for Marine Science

I'm currently completing an MRes at the Scottish Association for Marine Science (SAMS) in Oban, where my research asks two connected questions: how old is the plastic washing up on Scottish shorelines, and where does it actually come from? And once it's here, how does our particular Scottish weather, the rain, the UV exposure, the tides, wear it down over time?

To answer the first question, I've been working at Ardwell Bay in Dumfries and Galloway, examining stranded bottles for clues to their age and origin. Expiry dates are one obvious marker, but I'm also tracking something less expected: the way brand packaging and logos have changed over the years. Lucozade bottles are a good example of why these matter because their expiry date is printed on the cap





rather than the bottle itself, and caps tend to degrade and go missing faster than the bottle body, so that date is often lost long before the rest of the bottle breaks up. In those cases, tracking how the Lucozade logo has changed over time gives me another way to date the bottle even once the expiry date is gone.

The second question has taken me to the beaches around Oban, where I've set up a six-month weathering experiment, exposing HDPE and PET plastics, the two most common polymer types found on our coastlines, to real, local conditions. I'm tracking how they break down using FTIR spectroscopy, which lets me measure oxidation at a chemical level, alongside visual inspection and biofouling assessment. Alongside the experiment itself, I'm pulling in environmental data on sunlight, temperature, rainfall and tidal patterns, to understand exactly what's driving the degradation I see.

My hope is that this research feeds into something practical: a clearer evidence base to support more effective beach cleanup policy around Scotland. Understanding how long plastic lasts, and where it's coming from, is a first step toward tackling it at the source.



Dark skies tourism

Coastal Adventures and Starry Skies:

Community Tourism Takes Off in the Biosphere

GALLOWAY AND SOUTHERN AYRSHIRE BIOSPHERE

unesco Biosphere Reserve

The Galloway & Southern Ayrshire Biosphere Partnership is hosting three projects within the Solway Coast & Marine Project (SCAMP Landscape Connections) with some exciting development work taking place over recent months. Alongside the Blue Biosphere initiative for marine education in schools, and the SolWays Youth entrepreneurship scheme, is a community-led tourism initiative which has seen local workshops take place in Whithorn and Annan, and a pilot Coastal Adventure Day at Kirkcolm in the Rhins of Galloway.

One of the driving concepts behind community-led tourism is that local residents and businesses are best placed to celebrate and share the history, nature, wildlife, and experiences on offer in their area. Another is that as many positive outcomes as possible should go directly to the local community: profits from visitor spending; education, training and jobs; and a wider public understanding of natural and cultural heritage. The workshop programme facilitated by the GSA Biosphere Partnership is called 'Growing Community Tourism' and invites anyone with an interest in the coastal visitor economy to get involved. Discussions cover what brings people to an area and what makes them stay longer or return again, and participants explore untapped potential in each locality. Events have also included the fascinating 'Spend Fifty Challenge' which demonstrates how difficult it can be for visitors to spend their holiday cash in small rural communities, even when those visitors are eagerly seeking excursions, food, drink, and souvenirs.

Kirkcolm's Coastal Adventure Day took discussions a step further with the GSAB Partnership's support. The village's Community Development Trust organised taster sessions for activities on the beach, including yoga, arts and crafts, and boat trips out to the amazing seagrass meadows of Loch Ryan. Some ideas may be seasonal or specialist, others may quite simply be better on paper than in practice, but the ultimate goal is to empower communities on the Solway coast to test potential, and ultimately to create sustainable initiatives that benefit locals and visitors alike.



Growing Community Tourism Whithorn Workshop



Beach art with Elizabeth Tindal, Kirkcolm Coastal Adventure Day

In related news, the GSA Biosphere Partnership and the South of Scotland Destination Alliance coordinated the first South of Scotland Dark Sky Festival in October, launching the autumn/winter 'season of stars'. The Galloway Forest Dark Sky Park is part of the UNESCO Biosphere and these two internationally-recognised designations are a big draw for visitors in what is regarded as low season for many businesses in the tourism sector. The colder months offer longer nights and clearer air and are regarded as optimum for stargazing. There is also a significant wellbeing element to dark sky experiences – spending more time outdoors (even when it's chilly), connecting with nature in new ways, and immersing oneself in mindful tranquillity. Hosting and delivering dark sky experiences as part of a community tourism offer is an idea that comes up again and again in local workshops and conversations around sustainable, nature-friendly tourism development.

Rhins of Galloway coastal tourism



Galloway Forest became the UK and Europe's first Gold-Tier International Dark Sky Park in 2009, and the United Nations' Educational, Scientific & Cultural Organisation awarded UNESCO Biosphere status to Galloway and Southern Ayrshire in 2012; it might be said a South of Scotland Dark Sky Festival was long overdue. This first event inspired businesses, communities and attractions to create new and unique experiences ranging from starlit storytelling to wild swimming after dark. It is hoped that this will become an annual event that widens awareness of the beauty of true darkness, its cultural impact, its importance for nocturnal wildlife, and its benefits to mental and physical health. Anyone starting or running a business on the Solway coast within the Galloway & Southern Ayrshire UNESCO Biosphere who would like advice on incorporating dark sky information and/or activities into their offer, or who would like to find out more about doing this as part of SCAMP's community-led tourism development, is warmly invited to contact the GSA Biosphere Partnership team for guidance and advice.

The GSA Biosphere Partnership is a registered Scottish charity (SC044137) running a programme of collaborative projects in conservation, education, enterprise, and climate resilience. Free learning opportunities, marketing resources and accreditation schemes are available, plus support for green space management, regenerative farming, and nature restoration from local to landscape scale. Visit www.gsabiosphere.org.uk to find out more and to sign-up to the monthly e-newsletter, or follow #gsabiosphere on socials.

Wig Bay near Kirkcolm





Nith Bore

Wild Bores in the Solway!

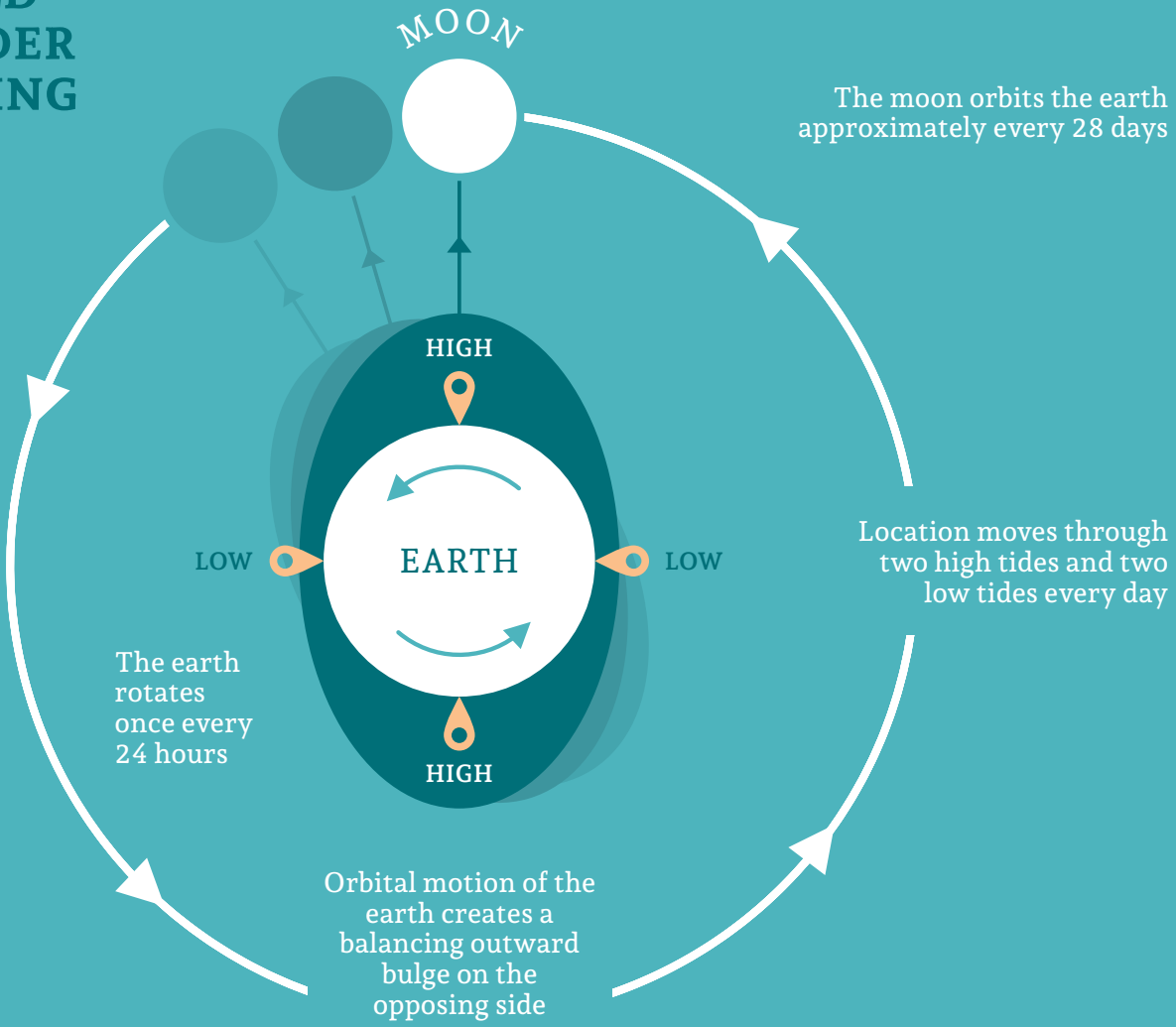
Scottish Government
Riaghaltas na h-Alba
gov.scot

The tides that move up the Solway estuary and into the rivers that feed it are dynamic, but at least they are predictable. The roar of the bore is a phenomenon that is much more unreliable but has inspired wonder in many who have experienced it. The Solway bore is a rare occurrence that is an expression of the wild forces of nature that occur when a unique combination of tides and geography interact.

The Solway bore is created by the action of large tidal ranges, where the rise and fall of the sea surface can be over 8 metres. There are many factors that influence these big Solway tides but the gravitational pull by both the moon and the sun control the two bulges in the sea that we experience as tides every day.

The monthly orbit of the moon around the earth has an impact on the size of those bulges because the sun

THE WORLD SPINS UNDER THE BULGING OCEAN



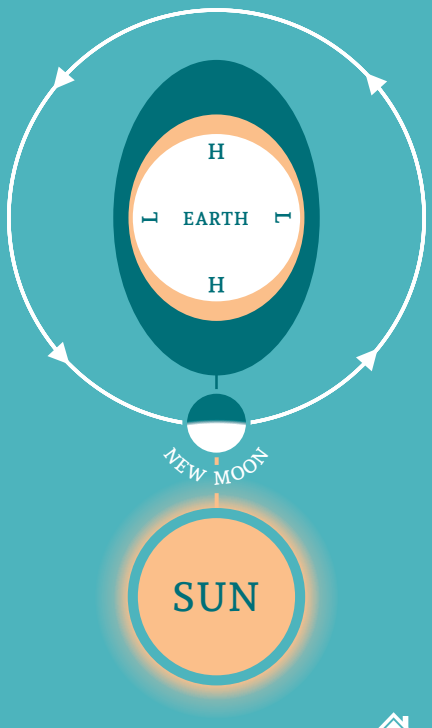
and moon go through different alignments. When the moon and sun align, around full moon and new moon, their gravitational forces combine to pull the ocean water into much larger bulges, creating higher high tides and lower low tides.

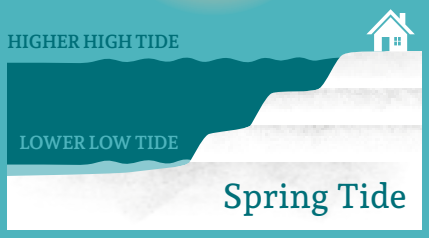
As earth completes its 24-hour rotation, each location passes beneath both bulges of high water, producing the familiar pattern of two high tides a day. When landmasses move through the bulges the shape of the geography of the coastline alters the way tides act. As water is forced into estuaries the friction caused by the funnel shape of the coast and shallow seabed

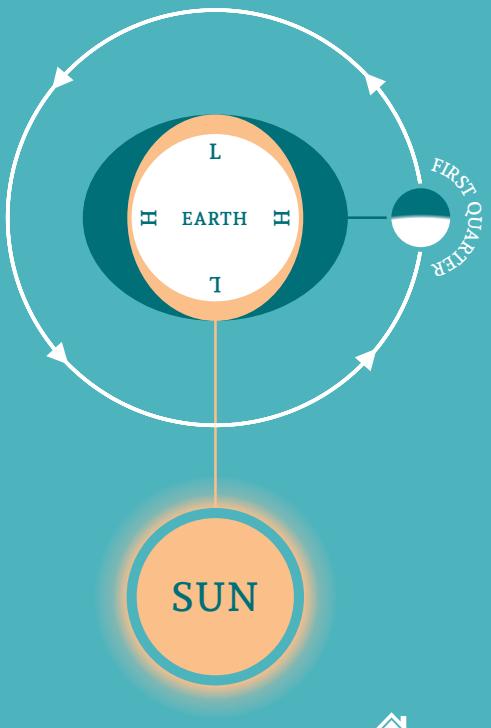
Spectators gather to view the Bore

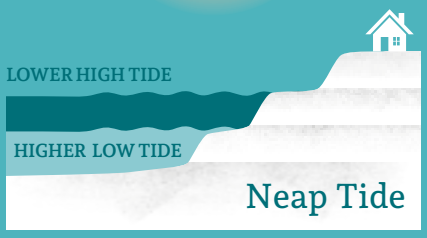


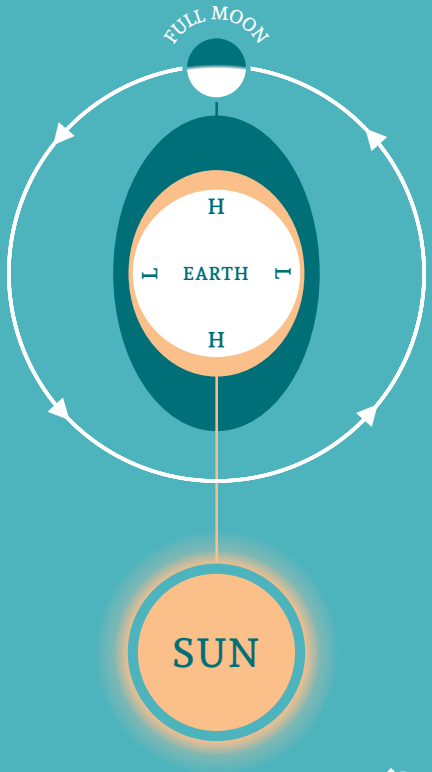
ALIGNING OR OPPOSING EFFECTS OF THE GRAVITATIONAL PULL OF THE SUN AND THE MOON

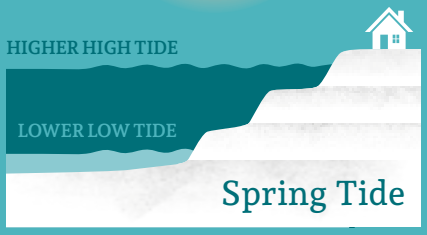


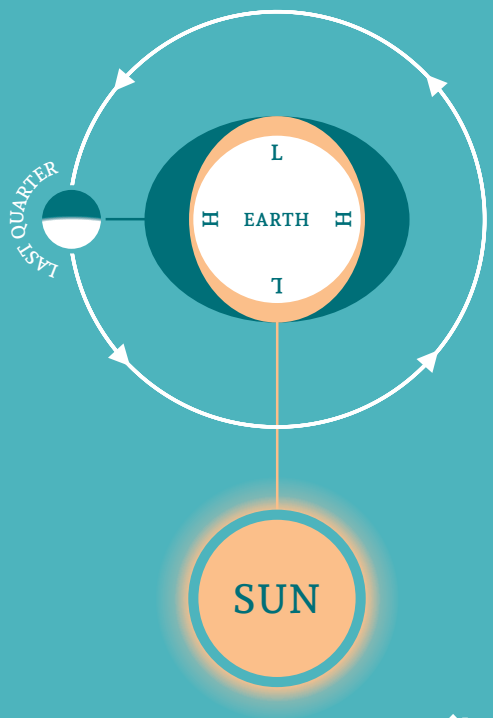


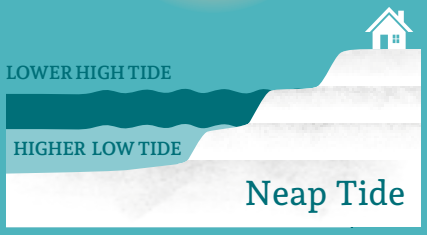


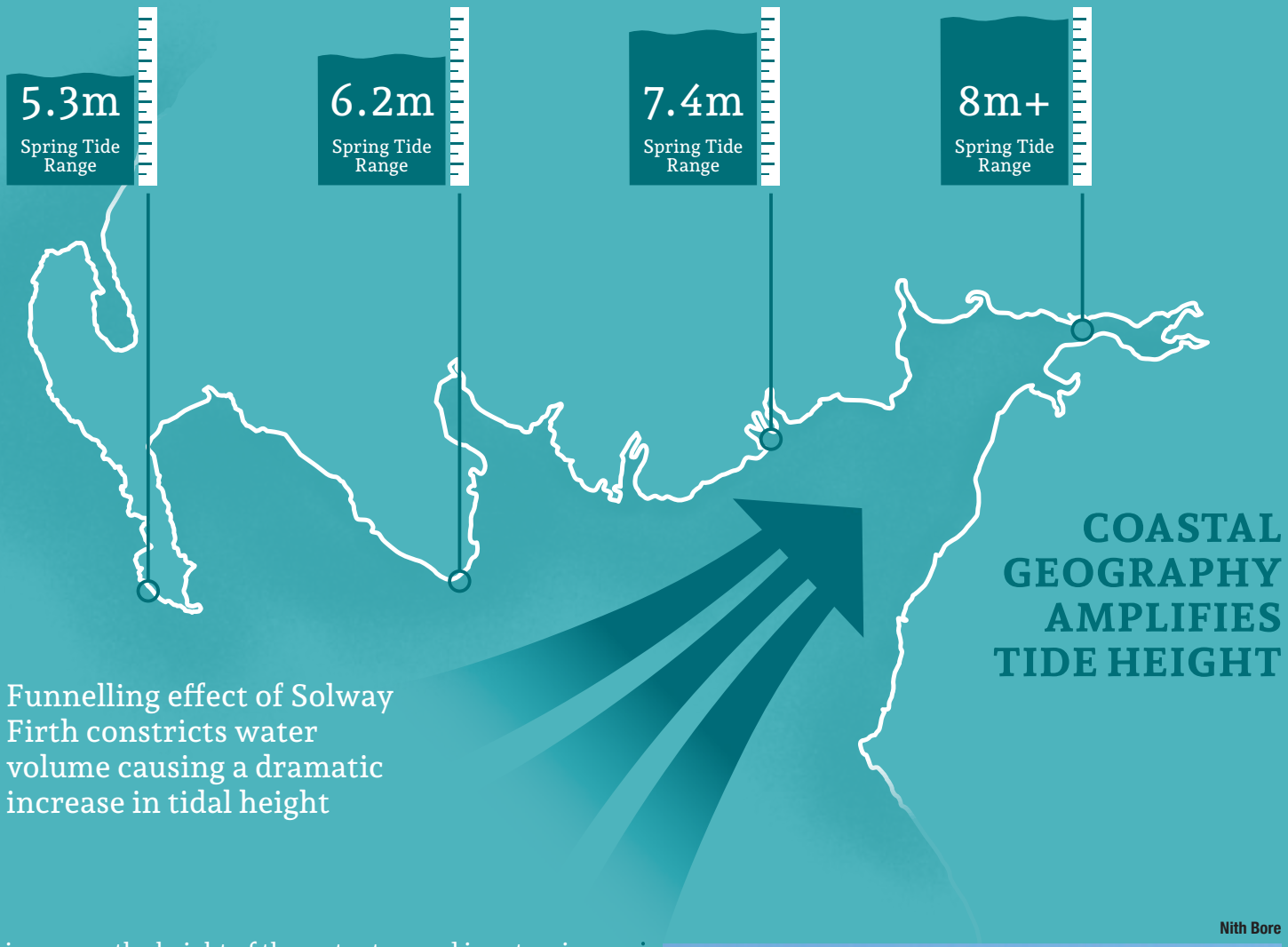












increases the height of the water trapped in estuaries and distorts the tidal pattern to produce tides that rise quickly and fall slowly. This funnelling effect is amplified by the resonance of the tides, also known as the soup bowl sloshing effect because the growing ripples that occur in a bowl of soup as it is carried to the table demonstrate the movement of water in the sea. A combination of these geographical effects create the extraordinary tidal ranges we experience in the upper reaches of the estuary. The rising waters of big tides are held back by friction until a point is reached when they rush in as a standing wave known as a bore.

The chances of a Solway bore occurring are best during big spring tides at full and new moons. However, many other factors contribute to its size and appearance. The weather can have a profound effect with strong south-westerly winds, low pressure and low water levels in rivers increasing the likelihood and size of the bore while easterly winds, high pressure and high river levels reduce its size to the point it disappears.

The size of the Solway bore is best appreciated from the English coast where higher ground provides a vantage point across the estuary, but locally the bore is easiest to see on the Nith at Glencaple Quay where it arrives approximately two hours before high tide in the right conditions. Some other rivers feeding the Solway also have a bore including the River Eden and Wampool.

Nith Bore





Buzzing Coastal Communities

Buzzing Coastal Communities is Solway Firth Partnership's new project exploring the creation of nature corridors to reverse the reduction of flower-rich habitats and associated decline in the number of pollinators in Dumfries and Galloway. For this project we are excited to have teamed up with local pollinator action group Bee Positive DG8. The project will feature development of wildflower meadows, training on hedge laying and commissioning a study to map habitat networks and identify opportunities to protect and enhance current pollinator habitats.

Insect pollinators of all kinds of plants often go unnoticed but are essential for a healthy environment and our everyday lives. They are particularly important for pollinating crops and fruits that we rely upon for nutrition as well as wildflowers that are vital for ecosystems and biodiversity.

While some insects can travel great distances in search of suitable feeding and breeding sites, others need nature corridors linking flower-rich habitats to survive. Nature corridors include hedgerows, verges or coastal strips where wild flowers are allowed to bloom to support pollinators and other wildlife.

Solway Firth Partnership

Dumfries and Galloway Council

POSTCODE LOTTERY POSTCODE GREEN TRUST







1

The metallic green forester moth is a day-flying species that is found on coastal grassland on the Solway shore. The larvae feed on the leaves of common sorrel and overwinter low down within the grass sward, building a cocoon in the spring and emerging as a brightly coloured moth the following summer.

2

The rose chafer beetle is a large, broad beetle that is more common in the south of England but has made its home in grassland in the southern part of the Rhins of Galloway. It can often be seen feeding on flowers in warm, sunny weather on the Mull of Galloway. The larvae feed on decaying leaves, plants and roots, living in the soil for several years as they develop. When they pupate, they hibernate in the soil or in rotting wood over winter, ready to emerge as adults the following spring.

3

The broad centurion is also known as the green soldier fly after the smart, bright colours they display, giving the appearance of uniforms. It breeds in damp, rotting vegetation, including compost heaps, and adults visit flowers such as hogweed to feed on nectar. They are commonly found sunbathing on garden or hedgerow leaves in the summer.

4

The tiny ruby tailed wasp is one of many species of solitary wasp that do not collect pollen to feed their young. Instead, they lay their eggs in the nests of other solitary bees and wasps. When the eggs hatch, they eat the larvae of the host. The adults feed on nectar from a wide variety of flowers, but not being very hairy, their role in aiding pollination is probably limited.





Getting to know – Cordeil Sinclair SCAMP Innovation in Restoration Project Officer

Q. How long have you been in post now, and how is it going?
I have been in post for almost three months now, and it has been a great experience so far. There is plenty to learn and lots of exciting things to get stuck into, so I'm really enjoying settling into the role.

Q. What have been the biggest challenges and highlights of the job so far?
The biggest challenge so far has probably been remembering all of the partners' names within SCAMP, along with all the new faces that come with them!

The biggest highlight would definitely be getting out onto the seashore to survey our intertidal seagrass beds and collect seagrass seeds. Even when it's raining, being able to work on the beach is a real privilege, and I've thoroughly enjoyed it so far.

Q. Where were you working before joining SFP?
I was working in Jersey, in the Channel Islands, where I worked with both Blue Marine Foundation and the National Trust for Jersey. This gave me the opportunity to gain experience across both marine and terrestrial conservation.

Q. What are you looking forward to in 2027?
I'm really looking forward to contributing positively to the coastline I was brought up along, working with the local community to help restore our vital marine habitats. I'm also excited to see work begin on the construction of the Marine Research Centre in Stranraer!

Scotland's Marine Protected Areas Consultation – Have your say

Scottish Government is consulting on proposed fisheries management measures for more than 160 inshore Marine Protected Areas and locations containing vulnerable Priority Marine Features. The aim is to protect important habitats and species while supporting sustainable fishing and the coastal communities that depend on healthy seas.

Habitats such as maerl beds, seagrass meadows and horse mussel beds provide vital feeding, breeding and nursery grounds for marine life, and this consultation explores the most sustainable ways fishing can be managed across such vulnerable habitats.

The consultation remains open online until 18 January 2027 with a number of drop-in sessions and online events scheduled over that time. Fishers, residents, community groups and environmental organisations can respond. The feedback will help shape how Scotland balances marine conservation with the long-term use of its seas. More information and event dates can be found on the gov.scot website.

CHILDREN'S ACTIVITY PAGE

WORD SEARCH

Find these words about the Solway Firth!

SHARK
BASKING
TOPE
SPURDOG
DOGFISH
FIN
GILLS
TEETH
TAIL
SNOUT

P	S	H	G	G	Y	B	X	Z	W	W	M	N	T	M	C	L	L
Y	S	J	O	Q	K	Q	F	Z	P	V	C	F	K	G	Z	F	W
R	R	D	D	G	N	I	K	S	A	B	F	K	B	K	T	Y	X
N	C	J	R	W	R	V	H	M	J	T	X	S	H	A	R	K	Q
Q	I	O	U	L	G	D	H	S	W	Y	L	T	Q	S	Q	D	G
Y	L	F	P	X	C	T	O	X	N	T	Q	C	R	M	B	I	L
Z	N	L	S	X	E	Z	V	G	B	O	K	J	L	X	L	H	C
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V	V	G	T	L	G	J	L	C	T	I	K	T	S	S	G	X	O
J	P	J	F	N	V	X	G	T	G	Z	S	H	N	M	K	W	P
W	W	R	C	X	F	Y	Z	T	K	Z	V	H	Y	A	T	H	E
M	D	K	K	L	I	A	T	P	Z	L	P	J	J	N	J	K	M

Words may be hidden forwards, backwards, up, down, or diagonally.

SHARKS OF THE SOLWAY FIRTH

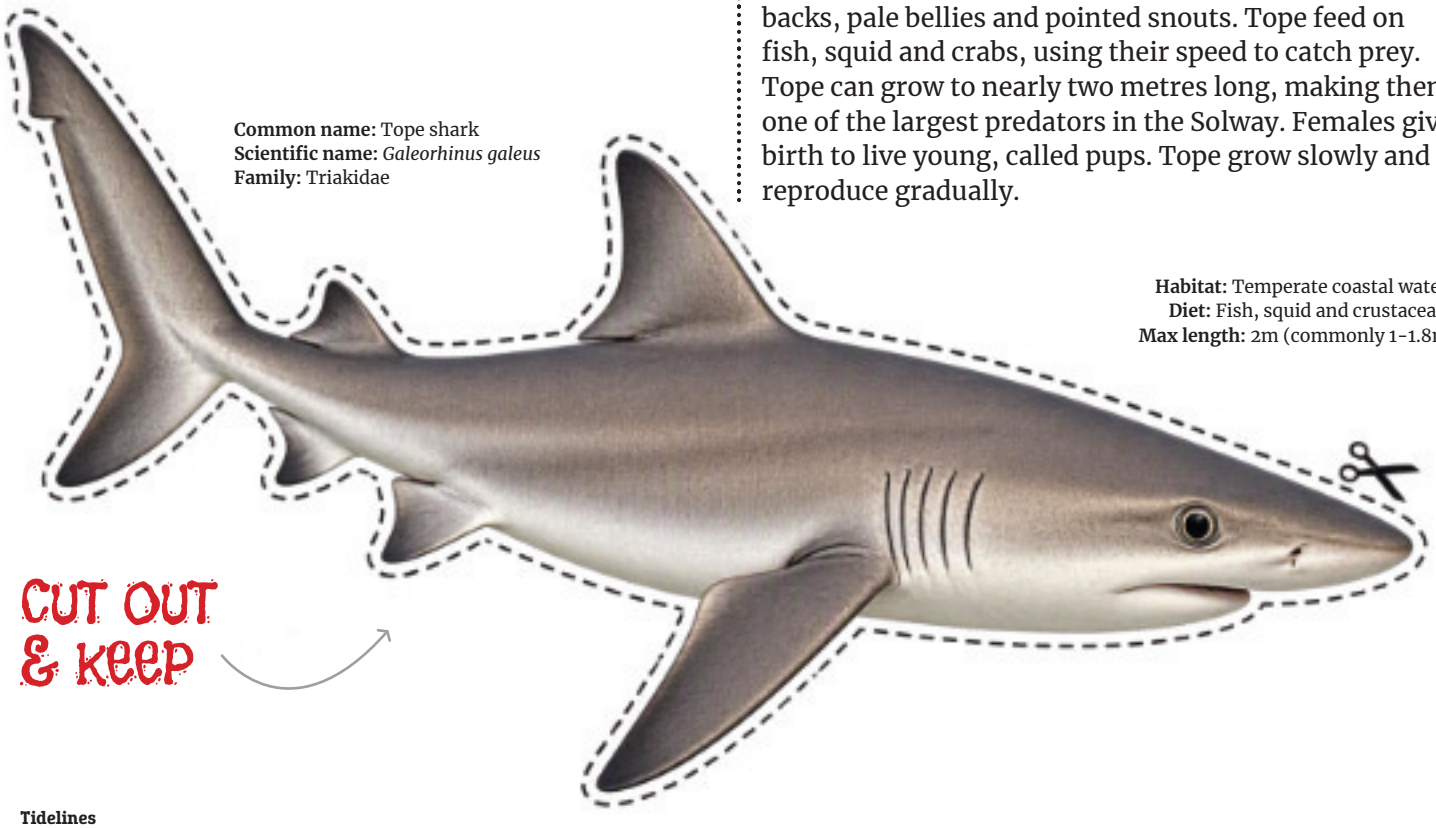
You might be surprised to learn that sharks live in the Solway Firth. Small-spotted catsharks and tope swim in its waters, while huge basking sharks sometimes visit to eat tiny plankton. The Solway is also home to many species of ray and skate. The egg-cases of many of these species are commonly found on the Solway's beaches, often nicknamed 'Mermaid's purses'.

TOPE SHARK (GALEORHINUS GALEUS)

Tope sharks are sleek, fast swimmers found around Britain, including the Solway Firth. They have grey backs, pale bellies and pointed snouts. Tope feed on fish, squid and crabs, using their speed to catch prey. Tope can grow to nearly two metres long, making them one of the largest predators in the Solway. Females give birth to live young, called pups. Tope grow slowly and reproduce gradually.

Common name: Tope shark
Scientific name: *Galeorhinus galeus*
Family: Triakidae

Habitat: Temperate coastal waters
Diet: Fish, squid and crustaceans
Max length: 2m (commonly 1-1.8m)



CUT OUT & KEEP

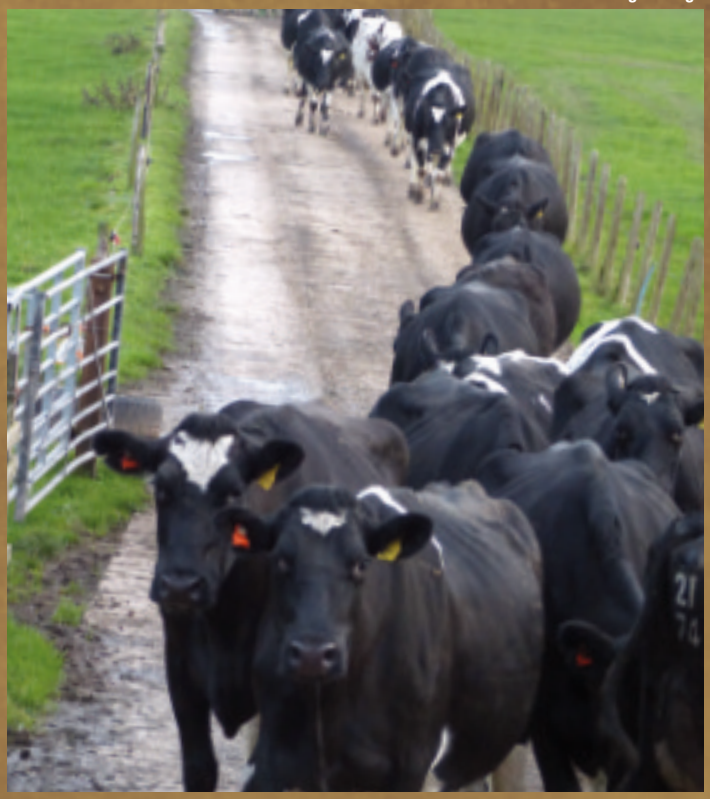


Hadrian's Wall archaeology

Drumburgh Castle Farm – A Rich and Layered Solway History

Fiona Stoddart

Farming heritage



'It's a palimpsest – a sort of historic palimpsest,' he said. I was trying out a new Secret Solway tour that I was developing for the travel trade on an academic colleague when he said this. Subsequently I've also heard others use these terms in relation to the Solway landscape. Of most note was probably Torri Herridge in her excellent keynote presentation at the 2022 Solway Firth Partnership conference.

A quick Google search puts a palimpsest as something that has 'a new layer, aspect, or appearance that builds on its past and allows us to see or perceive parts of this past'. These ideas certainly work for the way I see and experience the Solway. The layers of history and the connections between the Inner Solway communities, the landscape and the local heritage tell a unique story and make for an interesting visit to the area.

I guide visitors on heritage tours of the Solway coastal plains. In Cumbria that's from Maryport to Carlisle in north-west England. In the main, this is a coastal landscape that through interpretation of different heritage sites reveals layers and layers of history. There is evidence of Pre-historic, Roman,



Drumburgh Castle

Viking, Medieval, Colonial, Maritime, Industrial, World War history and lots more. For quite some time this rich and layered heritage has been a well-kept secret. Over the past ten years or so interest has however gradually increased.

A Spring 2026 Tidelines magazine article highlighted the exciting recent Hadrian's Wall archaeology found at Drumburgh Castle Farm. This is also a site on the Cumbrian Solway coast where many layers of history are to be found. The actual building called 'Drumburgh Castle', as it is known locally, is a medieval structure that stands next to the road passing through the centre of the village of Drumburgh. Built on the dry land of an ancient glacial drumlin left after the ice receded in the last ice age, Drumburgh village overlooks one of the historic low tide paths that crossed the Solway estuary.

The 'castle' is a building which has long been known as historically important. Thought to have been rebuilt

Drumburgh Castle





Solway View

in 1518 by Thomas Dacre the Warden of the southwest March, on the site of an earlier building, it was constructed for protection against enemy armies and bands of raiding reivers. Archaeologists think that re-worked stone from the Roman fort on the same site was used to build Drumburgh Castle, which today is a rare and beautiful example of a medieval fortified farmhouse or bastle.

These days the farmhouse is a private residence which sits in the centre of a working farm that also has a rich history. Early records indicate Anglo-Norman ownership of the land around the farm. After the Dacre family lost their ownership of the site the farm passed through the hands of a succession of powerful families ending up, following several centuries, as part of the Lowther Estate. The current owners then bought the farm in the 1930s. Since that time the farm has seen many changes - from horses and many people working the land to mechanised equipment and just a few people. From milking cows by hand to a new fully automated state-of-the-art milking parlour. The current new ways of farming build on the work and lives of the previous generations.

The recent archaeological investigations at the farm led by Grampus Heritage in 2025 and also this year in 2026 have unearthed a beautiful section of Hadrian's Wall, along with other structures that have been dated from 154 BC though to 1170 AD. Findings from this date range clearly indicate the site was used well before the Romans arrived. The 12th century findings are also interesting as little is known about activity at the farm during the late 12th and early 13th centuries, which was a war-torn era in this part of the British Isles. All of this points towards the layers of history hidden away in the Solway coastal landscape – a palimpsest of local heritage!

Further archaeological investigations at Drumburgh Castle Farm are planned, and in recognition of the rich and important heritage of Drumburgh Castle Farm the Drumburgh Heritage Group has recently formed. If you are interested in joining the group or in finding out more about developments at the farm and any events that are taking place you can visit their website at https://drumburghheritage.org.uk/

Solway Firth Partnership

For further information, to submit an article or to join the SFP mailing list please contact:
Solway Firth Partnership, Campbell House, The Crichton, Bankend Road, Dumfries, DG1 4UQ
t: 07462 664384 e: info@solwayfirthpartnership.co.uk www.solwayfirthpartnership.co.uk
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