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Events This Year

I had hoped to find quite a number of events to start the Waterways Events feature again this month. However I've only managed to find five and they might yet be postponed or cancelled if the Covid-19 regulations are not relaxed as expected. Still it is a start - of sorts.

Many of the trip boat organisations are starting public trips this month albeit with restrictions on the numbers of passengers they can accommodate under the pandemic rules. Details can be found on the Society's [website](#).

Peter Oates

In this issue

This month there are several articles that are not directly associated with waterways but which may be of local interest to our readers.

One of these involves the Ordnance Survey, a local employer, and the establishment of today's heighting information in this country.

The other is concerned with proposals by Southern Water to build a desalination plant (apparently at Fawley) to reduce abstraction of water from the chalk rivers in Hampshire.

Peter Oates

Chairman's Column

Dear Members,

Well, another month has passed with a couple milestones for us all.

I trust that you are now getting out a bit and enjoying the sunshine, although still a bit cool at times.

Angie and I had planned to go to the boats this month but events overtook us and it is unlikely that we will get up to Napton for at least 4 weeks. Basically, I have had a new left shoulder 12 days ago. All ok but just need to watch it.

Because we can't go boating, I thought that I would look locally. Somebody told me about the Calmore Canal near us. I thought great I could get a rubber canal boat and go for a couple week trip.

I decided to contact an expert on this sort of things (our very own Peter Oates). He explained that it was in fact a drainage canal built a couple centuries ago to drain the Cal Moor and Netley Marsh. And it is unfortunately not navigable but does still show itself around the Calmore area of Totton.

So no local boating! Disappointing.

I am hoping our editor might add a bit about it as well.

Look forward to meeting up again.

Alan Rose

Calmore - what does the name mean? Most old names are descriptive and Calmore is no exception. The name has been found to mean "Cabbages on the marsh" or in other words the marsh or moor where cabbages grow. These cabbage plants would've been Sea Kale, hence the name Kalmoor - Calmoor - Calmore. Its only in modern times that there has been any consistency in spellings.

The area of low land surrounding Tatchbury Mount was extremely boggy and only suitable for farming in the drier months of the year. In the Napoleonic era the Calmore Canal was dug to drain the Calmore and Netley Marsh areas. The land use changed, more farms and different crops; as the land became drier. One of the new crops was flowers and several nurseries were in the area. The next big change came 150 years later with the construction of the Calmore Estate.

The Calmore Canal is the drain running north east along the east side of the straight length of Calmore Drive. It carries water northwards discharging eventually into the River Test.

Peter Oates

Aylesbury murder inquiry

A canal worker who died after being attacked on a towpath has been identified as a former police officer.

Clive Porter, 63, had served for over 30 years with Hertfordshire Police and was working for the Canal and River Trust when he was assaulted.

Police said they found the man with serious injuries after being called to Bridge 14 on the Aylesbury Arm of the Grand Union Canal, near Broughton in Aylesbury, at 12:20 BST on Monday 26 April.

A man aged 34, of no fixed address, has been arrested on suspicion of murder. Thames Valley Police said he was "in the custody of officers while receiving hospital treatment", but did not release details about why he has been admitted to hospital.

Mr Porter had served as police officer for over 30 years before joining the Canal and River Trust, said his family in a statement, "Clive had a passion for working outdoors and meeting people. He believed in caring for people and the environment through the principle of policing by the people, for

the people."

A 41-year-old woman from Birmingham, arrested on suspicion of assisting an offender and perverting the course of justice, has been released on police bail.

Richard Parry, the trust's chief executive, said: "Sadly, one our colleagues, Clive Porter, a Licensing Ranger with the Trust, died on Monday 26 April on the Grand Union Canal towpath in Aylesbury, in an incident which is the subject of a police murder investigation.

"We are deeply distressed and are sharing the police's appeal urging anyone with information, no matter how insignificant, to come forward and assist the investigation.

"I am sure you will join me in offering our thoughts and sincerest condolences at this extremely distressing time for his family and our colleagues.

"Clive had worked on the waterways since 2010 when he joined us on his retirement from the police force after more than 30 years."

[BBC News](#) - 27 & 29 April 2021

The Cornish hut that gave rise to sea level benchmark

It's not much to look at - an anonymous red-and-white concrete hut that has that familiar battered seaside look. But the building, on the end of South Pier in Cornwall's Newlyn Harbour, is celebrating an important anniversary.

It was measurements made in the hut, and completed on 30 April 1921, that established mean sea level. And it's this surface, known as Ordnance Datum Newlyn (ODN), that became the reference against which all other elevations were compared.

Every hill, mountain and building in Britain could be described as being so many feet above the Cornish benchmark.

"Without that datum point, without that 'height zero' level that everyone agrees to use, nothing we do would fit," said Mark Greaves, from Ordnance Survey (OS), the UK's national mapping agency.

"Even with our modern technologies - you know, in some of our applications you can fly around Ben Nevis (the highest mountain in Britain), for example - none of that would be possible. It's a fundamental underpinning," he told BBC News.

New technology was facilitating the construction of larger and larger ships, with necessarily bigger draughts. This made tidal information essential knowledge for ships using ports and harbours. And at about the same time, the Ordnance Survey was considering problems with the heights of landscapes shown on their maps. The relative height of one hill compared to its neighbour was fairly simple to measure; what was needed was a base line from which all heights, all over the country, could be more precisely recorded.

The concept of 'sea level' seemed to provide the answer, and as one of the busiest ports in Britain, Liverpool was chosen as the place to establish Mean Sea Level - that is, the average taken from careful records of high and low tides. This worked well for about 80 years.

Meanwhile, however, other UK coastal towns had been taking measurements for their own purposes. It was gradually discovered that the records, when combined, showed the mean sea level was not the same everywhere - a concept difficult to grasp at first.

This revelation did not please the Ordnance Survey and in 1912 a re-survey of the country - called the Second Geodetic - was undertaken. As part of this enterprise, Newlyn and two other UK tidal observatories were fitted with automatic tidal recording machines. It was soon confirmed that each had a different MSL, and Newlyn was selected as the final location for the official measurement of the national mean sea level.

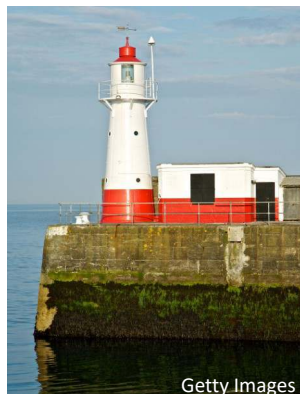


Ordnance Survey

OS maintained full-time observers at the Newlyn station until 1983

There were several reasons for this choice. Newlyn received the global tide coming in unimpeded, directly from the Atlantic. It was located in a stable area on granite, with only rare and minor earth tremors from a small, offshore fault. It is not near a major river estuary whose output could fluctuate (as compared with Liverpool, for example). Newlyn is also the closest to the continental shelf edge. All this ensured that the readings would not be affected by major external factors, and would most accurately monitor the global tide circling the planet.

Newlyn's efforts to begin measuring mean sea level during



Getty Images

The lighthouse and observatory at the end of South Pier, Newlyn Harbour

WWI were by no means the first attempt to track the highs and lows of tidal movements around the UK. But as scientists came to understand better the complexities of capturing and fixing a robust reference, the Cornish station took on primary importance.

OS ran a six-year study from the now-Grade-II-listed hut, starting on 1 May 1915.

Sea level was measured through a hole in the floor that led down into a chamber which was open to the harbour. A float connected to a chart-recording gauge monitored the ups and downs of Newlyn's tides.

The gauge was inspected twice daily to see that it was still working properly, and temperature, barometric pressure, and salinity measurements were also taken.

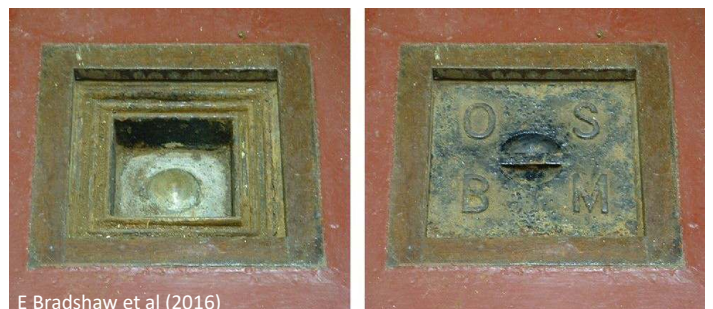
There's a brass bolt in the floor of the hut. ODN, at the end of the six-year investigation, was determined to be

15.588ft (4.751m) below this mark.

It was then possible, using the standard levelling techniques at the time, to go out and describe elevations anywhere in the country, using Newlyn as the common comparator.

Measuring heights today has been transformed by satellites.

GPS receivers measure height above a mathematical surface known as the ellipsoid but the data from gravity sensors in orbit has been used to construct surface models (a geoid) against which GPS heights can be converted to give you an elevation above mean sea-level to a few millimetres.



E Bradshaw et al (2016)

Ordnance Datum Newlyn: The brass bolt marker (L) sits under a cover (R)

"We now use satellites to measure height relative to the ellipsoid, but ellipsoidal heights are not what you might call 'natural'," said Mark Greaves.

"It still seems natural to have a height that's somehow relative to the sea. We're land-based creatures after all. And if you're stood on a beach, it just feels right that height-zero should be somewhere around where you get your feet wet."

However heights are measured, it's a critical endeavour. So many fields are utterly dependent on accurate mapping with precise elevation data.

The Ordnance Survey gave up responsibility for the tidal observatory in 1983, but it continues to be used for scientific tidal measurements, particularly for guiding climate change and coastal management studies. It has passed through several changes of responsibility but is now under the control of the Environment Agency.

Modelling areas most likely to flood; understanding how air pollution will move around tall structures in a city; knowing where to site solar panels or cell towers so they're not shadowed; planning the routes of new rail and road infrastructure; even plotting the flight paths of the drones that will one day deliver our online purchases.

All of these applications have a link to the legacy founded in that hut on Newlyn's South Pier on 30 April 1921.

Waterways Events

The following is a list of waterway events due to take place within approximately 50 miles of Southampton. Whilst every effort is made to ensure the correctness of this information, please check with the listed contact who will be glad to confirm and supply further details. Some or all of these events may be cancelled if Covid-19 regulations forbid them.

OS grid references and/or postcodes are shown (where known but not guaranteed) to aid location of the event.

If YOU know of an event taking place that should be in this list then please contact the editor.

Date/Time	Organiser	Details	Venue	Contact
Sat 22 May 2021 10.30am - 3.30pm	Kennet & Avon CT (Crofton Br)	Crofton Beam Engines - Non-Steam Days. Admission: Adult (18+): £4.50, Concession (60+ & Students): £4.00, Child (under 16) & K&A Trust members: Free. See website for further details.	Crofton Beam Engines, Crofton, Marlborough, Wiltshire, SN8 3DW (SU261623).	Tel: 01672 870300 Email: crofton@katrust.org.uk Web: www.croftonbeamengines.org
Sat-Sun 30-31 May 2021 10.30am - 3.30pm	Kennet & Avon CT (Crofton Br)	Crofton Beam Engines - Steaming Days. Admission: Cost not currently available. See website for further details.	Crofton Beam Engines, Crofton, Marlborough, Wiltshire, SN8 3DW (SU261623).	Tel: 01672 870300 Email: crofton@katrust.org.uk Web: www.croftonbeamengines.org
Sun 6 Jun 2021	Wey & Arun CT	"The Poddle" - WACT's annual sponsored walk and major fundraiser. Circular walk to include part of the canal. Start between 9am - 10.30am from Loxwood North Hall. Lunch will be provided then back to the start at approx 3.00pm. Possible to do morning or afternoon only. Further details and registration on website.	Loxwood North Hall, Guildford Road, Loxwood, West Sussex, RH14 0SF (TQ039321).	Trust Office: 01483 505566 Email: events@weyandarun.co.uk Web: weyarun.org.uk/events65
Sun 27 June 2021 2.30pm - 8.00pm?	Wey & Arun CT	Pulborough to Pallingham Boat Rally. Now full, we regret that we cannot accept any more bookings. Please email support@weyandarun.co.uk for advice on alternative launch times or locations. This event aims to confirm the right of navigation on the River Arun above Pulborough, reaching the site of the junction with the Wey and Arun then on to the navigable limit at Pallingham Quay. No entry fee, but donations towards costs welcome. Launching and other info on website.	Launching from Pulborough slipway. Adj to The Corn Store, London Road, Pulborough, RH20 2BJ (TQ045184). Map here . Canoes can launch at Stopham Bridge, RH20 1DS (TQ030183). Map here .	Please register for event on website. Further information, please email. Trust Office: 01483 505566 Email: events@weyandarun.co.uk Web: www.weyarun.org.uk
Sat-Mon 28-30 Aug 2021 10.00am - 6.00pm (Mon 5.00pm)	Inland Waterways Association	IWA Festival of Water 2021 - postponed from last year, a bank holiday weekend of fun for all who love spending time by the water. Entry to the festival and car parking is free.	Perdiswell Park, Droitwich Road, Worcester, WR3 7SN (SO855572).	IWA Office: 01635 414567 Email: event.enquiries@waterways.org.uk Web: www.waterways.org.uk/support/ways-to-get-involved/events/

Drink seawater to save chalk streams

More than half a million people will drink treated seawater under plans to build a giant desalination plant to help to protect prized chalk streams where the sport of fly-fishing was invented.

Chalk streams have been compared to rainforests because there are only about 200 globally and 85 per cent are found in England. The Test and the Itchen in Hampshire are two of the finest and anglers from around the world pay up to £350 a day to fish for trout, salmon and grayling in their normally gin-clear waters.

The rivers are threatened by excessive abstraction for drinking water, especially during droughts, which are predicted to become more frequent because of climate change.

Abstraction can rob the rivers of the strong flow needed for salmon and trout to migrate upriver to spawn. It also reduces weeds, which keep the rivers healthy, and means fertiliser and other chemicals that leak into the water from farms are less diluted and therefore more harmful.

The Environment Agency ordered Southern Water to reduce how much water it takes from the rivers. The company has responded with plans to build a £600 million desalination plant by 2027 that would take seawater from the Solent to produce up to 75 million litres of drinking water a day.

Desalination plants are increasingly common in countries at risk of water shortages, including Australia, Israel and Saudi Arabia, but the UK has only one at present, in Beckton, east London. It is used only occasionally, as a back-up, unlike Southern Water's plant which would operate all year round, normally producing about 15 million litres a day but increasing output in a drought.

The plans were welcomed by the Test & Itchen Association, which represents landowners with fishing rights on the rivers, but were

strongly opposed by the Hampshire & Isle of Wight Wildlife Trust because of the threat to marine wildlife from the concentrated brine that would be discharged back into the Solent. The trust said the increased salinity could cause algal blooms and other effects that would threaten the recovery of native oysters and damage seagrass, which stores carbon and is a breeding ground for sea bass, cuttlefish and spider crab.

In letter to Southern Water seen by *The Times*, the trust said: "We feel strongly that there are significant risks to protected habitats and species ... The Solent is already stressed and the unfavourable condition of its protected habitats such as seagrass has been attributed, in great part, to the impacts of poor water quality." It urged the company to do more to fix leaks and to invest in water treatment plants that allow wastewater to be turned into drinking water.

Julian Lewis, the local Conservative MP, also opposes the plant, saying that a planned reservoir at Havant Thicket near Portsmouth could meet the shortfall in water at a fraction of the cost and without the environmental impact.

Dr Mike Keil, of the Consumer Council for Water, said: "The enormous pressure on water resources in the south and east of England demands urgent attention but a desalination plant carries with it substantial costs both for customers and the environment. The company has a good record on reducing leakage and personal consumption of water but it still needs to make clear to customers why this is the right solution and will provide value for money."

Southern Water said it planned to halve leakage by 2050 "but large solutions are also needed to make up the shortfall" and the desalination plant was its "preferred solution".

SOUTHAMPTON CANAL SOCIETY

Established 1967

The objectives of the Society are to foster interest in canals and inland waterways, to assist in their preservation, restoration and development, and to give practical help on waterway projects.

Meetings are normally held on the first Thursday of each month at 7.45pm (see Waterways Events in this issue) at Chilworth Village Hall, Chilworth, Southampton, SO16 7JZ. OS Grid Ref: SU410184. Contact the Secretary for further information.

This Newsletter is normally published during the first week of each month in time for the Society's meeting.

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Cotswold Canals Trust Charity Book and Music Shop reopens in new premises

The much-loved Cotswold Canals Trust Charity Book and Music Shop reopened on Saturday 1 May 2021. The new premises in Brimscombe has been skillfully renovated by CCT Volunteers for the past few months.

Mo Francis, Volunteer Manager said earlier: "We cannot wait to reopen the Cotswold Canal Trust Charity Bookshop at its new home, a lot of hard work by many, many volunteers has taken place over the last year. Covid did not make it easy, but we have achieved our goal. We now have a magnificent resource for the community that will raise money for the restoration of the Cotswold Canals"

The relocation and refurbishment was generously supported by many volunteers and local businesses including Chalford Building Supplies Ltd and Mathew Creed; MB Frames PVCu Ltd and Andy Burns; Marlings Ltd and Mark Maynard; Francis Jones; Rexel Ltd and Chris Antone; Clearwater Properties Ltd and Alvin Lindley; Stroud Office Interiors Ltd

and Nick Martin and Linda Jones; SG Bailey (Paints) Ltd and Richard Townsend.

Specialising in second-hand books, jigsaws, records and CDs, and framed pictures the Bookshop is a major source of fundraising helping canal restoration. With massive stock of hardback and paperback books, it is probably the largest source of books outside the County Library network.

Visitors are made welcome with complimentary hot drinks; in addition, soft drinks and ice creams are available for sale. The bookshop incorporates a Visitor Centre providing information on the Cotswold Canals and ongoing restoration work.

Situated at Brimscombe Corner close by the Ship Inn, the bookshop is only a few miles from the centre of Stroud and on several bus routes.

[Towpath Talk](#) - 29 April 2021

First look at HS2's Oxford Canal Viaduct

HS2 Ltd today revealed the first images of its planned Oxford Canal Viaduct and is seeking views from the local community about the design of the viaduct between Banbury and Daventry.

Set low in the landscape, three prestressed concrete spans will take Britain's new low carbon, high-speed railway 62.5 metres across the canal, towpath and a country lane near the village of Wormleighton.

The viaduct has been designed to be as open as possible to improve the environment for boaters and walkers, allowing views across the landscape and the horizon. The design combines a simple overall form with a special focus on materials for the parts of the structure that are close to the canal and its visitors.

Rough-cut masonry features in the design where it faces onto the canal and towpath. This is to give a sense of design continuity and as a nod to the architectural heritage of the canal.

HS2 Ltd today launched an online design engagement event to gather feedback from the community. One of the key questions is whether the masonry finish used on the wall in front of the abutment should also be extended to the two sets of piers that support the structure.

HS2 Project Client Director, Ambrose McGuire said: "The Oxford Canal Viaduct is one of eight key design elements on the central section of



the HS2 route and I'm pleased to see the amount of thought that's been put into the design.

"We're keen to hear what the community has to say and I would encourage anyone with an interest in the bridge to have a look at the designs and let us know their views."

EKFB Technical Director, Janice McKenna said: "We were given the challenge of designing a structure that would sit as lightly as possible above the canal, while being low enough to

protect views across the countryside.

"That's why we came up with the idea of lengthening the span over the canal to bring in light, while keeping the continuity of the towpath and using the same kind of rough-cut masonry that is such a feature of the existing canal bridges. I hope the community like the designs and look forward to hearing their views."

The full design engagement can be found [here](#), with the local community also invited to sign up to a series of webinars to hear more about the thinking behind the design from the engineers and architects involved.

[Towpath Talk](#) - 6 April 2021

Editor's comment: It looks like they're widening the canal as well? It wasn't as wide as this last year.