

# Tamar Crossings Newsletter

No. 12 April 2024



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## Welcome to the 12th edition of Tamar Crossings



Welcome to this March 2024 edition of our newsletter. In it you will find news about a wide range of activities and projects. In this edition we introduce two new managers at the Crossings, but say goodbye to a couple who are two of our longest serving Ferry staff and are

retiring after over 42 years of service between them.

There is also some technical information about both crossings and news on the forthcoming refit of the Torpoint Ferry Tamar II.

I hope that you find it interesting!

### Beryl bikes come to Saltash

For more information visit [beryl.cc/scheme/cornwall](http://beryl.cc/scheme/cornwall)

**The popular Beryl e-bike scheme has been extended to Saltash.**

44 Beryl e-bikes are now available to use from 15 brand new Beryl bays across Saltash and Plymouth, helping to further reduce traffic congestion and carbon emissions while getting people more active and improving air quality.

To celebrate the extension of the scheme, Beryl is offering free unlocking and ten minutes off the total journey up to Friday 22 June 2024. The offer applies to journeys that start and end in any of the 15 new bays across Saltash.

Users can pay for their journeys in a variety of ways to suit individual needs and circumstances.

Pay As You Ride is best for single journeys or occasional rides and will cost users £1 unlocking fee and 15p per minute. Minute Bundles enable regular users to buy upfront and save money with no unlocking fees, starting at 100 minutes for £15

The Beryl app is available for free download on the App Store for iOS, and the Google Play Store for Android users.



### Spring is here at last!

Our Customer Service team have been busy spring cleaning TamarTag accounts and sending out replacement tags for non-working tags and will continue to carry out this process over the coming months.

We put a message on our various social media platforms asking any drivers whose tags are failing to scan properly when using the crossings to change their faulty tags for new ones by contacting us. It was great to have some positive feedback from customers thanking us for our proactive approach and friendly and professional service. One customer emailed us directly to thank Penny, one of our customer services staff, for being helpful, patient and knowledgeable and, in her words, 'not always something you get these days'.

Congratulations to finance team leader Kate and her husband Ross who welcomed baby Jasper to the world in February.

We are keen to hear what you would like to see in future editions so please let us know at [trisha.hewitt@tamarcrossings.org.uk](mailto:trisha.hewitt@tamarcrossings.org.uk)



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tamarcrossings



[www.tamarcrossings.org.uk](http://www.tamarcrossings.org.uk)

# Spotlight on new Bridge Manager Coral Jonas

Swapping a job looking after lions and tigers for one managing a suspension bridge used by up to 48,000 vehicles a day may seem an unlikely career move to some people but for Coral Jonas, the new Bridge Manager at Tamar Crossings, it is one of the best things she has ever done.



Coral, who is the first female Bridge Manager at Tamar Crossings, is definitely a 'local girl'. Born in Saltash, with degrees in science and conservation, she initially trained and worked as a teacher in London and the South West before moving to Devon with her husband, son and bouncy labrador.

After initially joining Dartmoor Zoo (home to the lions and tigers) as Head of Education and Research, four years ago she was appointed as the Zoo's

Chief Operating Officer leading on all aspects of the work of the charity.

Although she had loved working at the Zoo, Coral was looking for a new challenge when she saw the advert for a new Bridge Manager.

"I have never worked in the transport sector before, although I have driven and walked across the Tamar Bridge, many, many times, and saw this as a fantastic opportunity to advance my skills and learn a new industry" she said. "Having moved back to Saltash, the location of the bridge is an added bonus, with the extremely short journey to work giving me more time to spend with my family."

Coral joined Tamar Crossings at the beginning of January and, having spent a hectic couple of weeks meeting her new colleagues and learning about the bridge and the ferries, she is enjoying every second of her new role.

"The whole team have been great" she said. "Very friendly and welcoming and very patient as I get to grips with all the technology in the bridge control room – it is like the Star Ship Enterprise with all the screens!"

Not content with just learning about the bridge from the ground, however, Coral bravely donned a safety harness and climbed to the top of one of the giant 76 metre towers via walking along the cables. "What an awesome experience" she laughed. "I am definitely glad I am good with heights!"

Part of Coral's role involves overseeing the operation of the Bridging the Tamar Visitor and Learning Centre. "Like many people who live locally I knew very little about the history of the bridge before I came to work at Tamar

Crossings" she said. "I also had never been inside the Learning Centre building and have been blown away by the incredible archive of more than 40,000 images, records, oral histories and objects."

"I am really looking forward to discovering more about the history of the bridge and engaging with members of the local community and the many visitors who come to the centre. One of the key aims of the centre is to inspire the next generation of engineers and bridge managers. The team work closely with local schools and I am definitely planning to take part in some of these sessions."

Coral has certainly joined Tamar Crossings at an interesting time. At the end of last year members of the Joint Committee backed plans to develop a new way forward for funding and operating the Tamar Bridge and Torpoint Ferry.

Coral has certainly joined Tamar Crossings at an interesting time. At the end of last year members of the Joint Committee endorsed plans for a programme of transformation and modernisation of the crossings – the Tamar 2050 programme.

"I am looking forward to working with colleagues, councillors, local stakeholders and partners over the coming months to develop and deliver the programme" she said.

As well as getting to grips with her new role, Coral enjoys music and martial arts and is the Vice Chair of Governors for a primary school in Saltash.

"The last two months have been surreal and gone by in a flash" she said. "It's so different from my last job but what a great change for the mind."

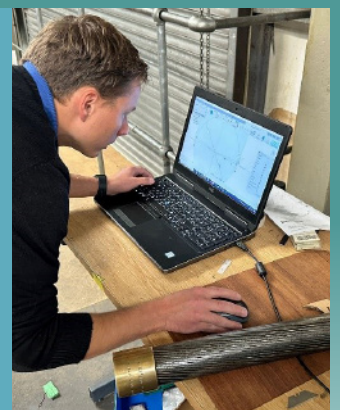


## Supporting our engineering team

**We provided one of the old cable samples from our archive to our engineering team and their colleagues at Hymec Aerospace UK Limited to test different sized gauges.**

The team are manufacturing aluminium gauges to measure the depth of corrosion on the main cable ropes within the side tower saddles areas of the Bridge. The cable sample was used as a template to test different size gauges cut from cardboard to ascertain which ones would fit best before going to manufacturing.

We are also looking forward to the launch of the Vis4Sea project next month which will provide data about water quality in the River Tamar. We are looking forward to working with the engineering team and Plymouth Marine Laboratory to develop ways of involving local schools in this exciting research project.



# Supporting Operation Foster

When news of the discovery of an unexploded WW2 bomb (UXB) in the garden of a Plymouth house first broke on the morning of Tuesday, 20 February, we did not expect to have any involvement in the incident.

As Tamar Crossings is responsible for managing two key transport links between Cornwall and Devon, our Health, Safety and Environmental Manager Davood Kalantar works closely with our emergency services partners and represents the organisation on the multi-agency Local Resilience Forum (LRF) which manages major incidents and emergency situations.

On this occasion, whilst Davood was monitoring the incident closely from the first reports of the discovery, we were not directly involved during the first two days which saw a cordon erected around the site and more than 1,000 people asked to leave their homes.

“At the beginning bomb disposal experts from the Army and the Navy were working with the police, Plymouth City Council and other partners on plans for dealing with the UXB and ensuring the safety of the people living around the site” said Davood.

“Once those living closest to the site had been evacuated, the focus moved to looking at potential options for dealing with the bomb. This initially included making it safe or detonating the device on site. When these options had been ruled out it was decided to look at transporting the bomb from the site and detonating it at sea. This is where we came in.”

We received a message early on the morning of Friday, 23 February outlining plans to remove the device from the garden and then transport it by lorry to the Devonport ferry slipway where it would be placed onto a boat to be taken out beyond the breakwater for detonation.

Tamar Bridge Manager Coral Jonas and Bridge Operations Manager joined an LRF Tactical Group to discuss how this could be safely achieved. After seeing the map of the proposed route and recognising the potential impact on the ferry service, they immediately contacted Ferry Manager Si Jones who would be responsible for managing the temporary suspension of crossings.

Following a series of multi-agency meetings held throughout the morning, it was decided that the ferry service needed to be suspended and all Tamar Crossings staff evacuated from the Devonport Control Tower from 1pm to enable the device to be transported to the slipway. Not only did this mean moving all three ferries over to the Torpoint side of the river, but staff also had to put messages on variable message signs, our website and social media channels warning service users about the suspension.

Once the device had been placed on the boat, Devon and Cornwall Police and Plymouth City Council declared an end to the major incident at 5.37pm and we were able to resume crossings.

We are very grateful to our service users for their patience while the crossings were suspended, and to our staff, both at the Ferry and at the Tamar Bridge who had to manage an increased volume of traffic throughout the afternoon.

We work very closely with all of our key partners on matters relating to the crossings and wider transport issues, and were surprised and delighted to receive a letter from the Chief Executive and Leader of Plymouth City Council thanking us for our response during the complex operation.



# Maintaining the Tamar Bridge

**Suspension bridges are complex structures, with many components, and require a very different management approach and a much higher level of inspection and maintenance than other, more simple designs.**

The Tamar Bridge was opened in 1961 and is currently approximately half way through its intended design life of 120 years. It now carries a much higher volume of traffic than it was originally expected to carry when it opened in 1961, and much heavier goods vehicles.

During the past 25 years over £66 million has been invested in major schemes to upgrade and maintain the Tamar Bridge to ensure that it continues to provide a safe and reliable crossing.

This has included major projects such as the innovative and award winning strengthening and widening project carried out between 1999 and 2001, which saw the original three lanes increased to five lanes by adding two cantilevers either side of the bridge deck; resurfacing all 5 lanes of the bridge, renewing the protective coatings, replacing 7,200 kerb units and deck waterproofing and suspension system remedial works.

This work is led by our engineering team Richard Cole, Steve Rimmer and Piotr Helm.

A range of other improvements have also been implemented around the structure. These have included improved security measures, new access arrangements throughout the bridge structure to improve safety and efficiency as well as other structural repairs to walkways and other areas of the bridge structure.

The bridge is subject to a rigorous inspection regime that complies with national standards and industry best practice. The engineering team carry out inspections throughout the year, implementing a 6 yearly rolling



inspection regime that ensures every element of the bridge structure is visually inspected within touching distance. These inspections identify defects or other issues that require further investigation or special inspections. For example, the bridge inspectors recently identified an area of potential concern within the bridge anchorages.

They are undertaking a special inspection using a non-destructive technique to inspect the main cable anchorage rods (the vital connections that anchor the main cables into the bridge anchorages buried below ground). Widely used in geotechnical and ground engineering for testing ground anchors and rock anchors, this is thought to be the first time the technique has been used to inspect bridge anchorage rods, which are generally much larger and longer than ground or rock anchors.

## Rockers project

**Suspension bridge structures are designed to move with traffic and environmental conditions.**

The Tamar Bridge has steel rocker bearings at the ends of the bridge decks which allow a range of movement as the bridge expands and contracts. The rockers, which act as additional 'hangers' next to the bridge towers, help support the structure of the bridge, control movements on the deck and protect the expansion joints in the carriageway.

Our engineering team monitors the condition of the rockers as part of the bridge's routine inspection programme.

Initial signs of wear on the rocker bearings were first identified in 2007 and since then the team has been carrying out targeted inspections to monitor the condition of the rockers. The wear in the rockers has been closely monitored since that time.

In 2016, when it became clear that the rockers would need to be replaced within the next few years, the team began work on developing options for the highly complex scheme.

With the investigation showing that a full replacement scheme could not only cost up to £10m, but would also present significant risks to the structure of the bridge and be very disruptive to bridge users because of the lane restrictions and bridge loading restrictions required to carry out the works, the engineering team began to investigate whether there were any viable alternative options.

In 2020 the team began working with engineering consultants to develop a localised repair scheme that would enable the original rocker arms to be retained, with just the worn rocker pins and bearing surfaces repaired or replaced using a technique known as line boring.

An initial trial of the line boring option was carried out in

2022. After some promising results, a full scale trial was carried out in 2023. This also proved successful.

After considering the results of the final trial, it has been agreed to go ahead with using this alternative method to repair the rockers rather than the significantly more expensive full rocker replacement option.

Not only will using this method save £9.5 million, it will also greatly reduce disruption for bridge users and potential risks to the structure of the bridge.

Our engineering team are currently working with partners on the final preparations for carrying out the groundbreaking project, with work expected to begin in April.



# New sensors on Tamar Bridge measuring water quality

We are delighted to be supporting an exciting new international research project monitoring water quality in the River Tamar and Plymouth Sound.

Periodic flooding as a result of heavy rainfall is becoming more and more frequent across the south-west of England as well as globally. This is because the heating of inland water and the sea is causing more evapotranspiration which results in high rainfall, which can result in episodic flooding events.

These flooding events can carry agricultural fertilisers, sewage effluent and, in some locations, heavy metals from the rivers to the coast. This can pose a significant health risk to humans and the environment through the deposition of high nutrients, suspended material, viruses and bacteria.

Earlier this year we were contacted by representatives of Vis4Sea\*, a new two year project which has been set up in collaboration with Plymouth Marine Laboratory and CSIRO, Australia's national science agency, to measure the impacts of flooding on water quality in Plymouth Sound. Funding for the project is being provided through the Government's UK Research and Innovation fund and CSIRO's AquaWatch Mission.

The project involves placing a small box containing three pairs of fibre optic sensors on the north side of the Tamar Bridge. Developed by CSIRO, these sensors, called HydraSpectra™, measure the reflected light spectra that occurs when there is a change in water colour associated with water quality. This means they can detect changes in water colour which is associated with changes in water quality during high loads of fertilisers, sewage effluent and heavy metals.

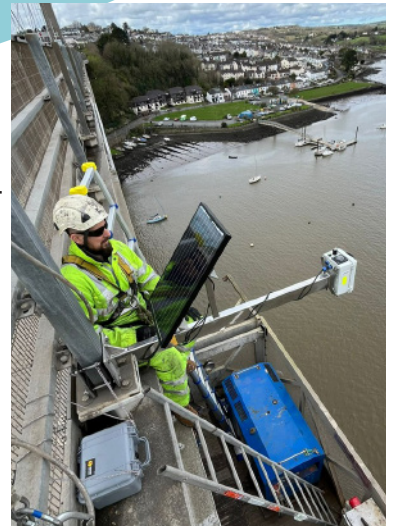
The sensors will be positioned so that one pair looks directly up to measure the incoming sunlight, one looks at the sky to

measure reflected sky light and the other looks down to the surface of the river. Powered through a small solar panel also fixed to the side of the bridge, this method provides a Carbon-Zero solution to measuring river water pollution.

Measurements from the sensors, supported by a programme of water sampling from PML's Research Vessels Quest and Explorer, are providing information on the concentration of nutrients, suspended material, viruses and bacteria in the water. These measurements are used in synergy with data from marine buoys situated along the coast and satellite images, to provide a synoptic picture of the water quality in the Tamar River and how it affects coastal waters in Plymouth Sound.

Fittings constructed by members of the Tamar Crossings engineering team have now been fixed to the side of the bridge enabling the sensors to be put in place so the project can officially begin its work.

\*"Vis4Sea" stands for "VISualisation and Assessment of water quality using and Open Data Cube FOR the weStern English channel". It is funded by the UK Research Institute under the EO4AgroClimate program.



## Spotlight on new Ferry Technical Manager Ralphie Ragogue

12 months ago, Ralphie Ragogue was responsible for maintaining the fleet of boats used by the Saint Vincent and the Grenadines Coast Guard Service operating in the Eastern Caribbean. Today he is the Ferry Technical Manager for Tamar Crossings based in Torpoint – and says he has never been happier.

The son of a fisherman, Ralphie was brought up on the island of Bequia, part of Saint Vincent and the Grenadines. Surrounded by the sea and boats during his early life, it is little surprise that he chose a career with the Coast Guard service.

As well as leading the team of engineers responsible for keeping the fleet of Coast Guard boats in working order, Ralphie also worked as the point of contact with the US Southern Command, Technical Assistance Field Team (TAFT). He was also part of the Coast Guard operation teams which provided support for counter-narcotics operations in the Caribbean and visited ports within St Vincent and the Grenadines to evaluate their security arrangements under the International Ship and Port Facility Code.

So why did Ralphie decide to leave the Caribbean and join Tamar Crossings?

The answer lies in a real-life love story!

Ralphie met his wife Onika, who is also from Saint Vincent and the Grenadines, in 2012. She later migrated to the UK in 2014 to join the Royal Navy. The couple got married in 2016. Then followed a long-distance relationship with lots of travel between the UK and the Caribbean as they tried to reconcile their careers. In 2023 Ralphie decided to take a risk and gave up his job to join Onika in the UK.

After submitting a number of unsuccessful applications and beginning to question if he had done the right thing, Ralphie saw the advert for the Ferry Technical Manager role.

"I knew I had to get this job" he said. "It involved leading a team of engineers and working on boats - it ticked all my boxes."

While he had not worked on chain ferries before, Ralphie has not let that faze him. "The ferries are certainly very different to the boats I previously worked on but a maritime platform is still a maritime platform. Whilst I am still learning, I am getting to grips with the systems and looking at ways I can improve them."

And what about his life with Onika?

"It was definitely the right decision to follow my wife and I would do so again if necessary" he said. "We are very happy – we are both doing jobs we love and living in a beautiful part of the country."



# Tamar II refit

This month will see TAMAR II being towed to Falmouth for its planned refit.



TAMAR II is one of the three chain ferries operated by Tamar Crossings which provide a vital 24-hour ferry service in all weathers for up to 8,000 vehicles and around 1,500 pedestrians each day, 365 days a year.

Achieving this requires a significant planned maintenance programme. While the majority of maintenance is carried out while the vessels are afloat some maintenance and component replacement activities have to be carried out during refits and in dry dock conditions.

Each of our three ferries undergoes a full refit every five years. The refits are essential to maximise the life of the ferries and ensure that we continue to provide a safe and reliable service. The refit of PLYM II took place in 2023, with currently LYNHER II due to be refitted in 2025.

TAMAR's refit will include:

- a mandatory dry docking to allow a survey of the underwater hull to ensure the material state is sufficient to safely last a further five years - this is a statutory requirement and satisfactory completion is required to allow the issue of a Chain Ferry Certificate by the regulatory authority.
- replacing systems and equipment that are becoming obsolete or have reached end of life, including chainwheel drive couplings and bearings together with propulsion motor electronic drive components.
- repainting the vessel both above and below the waterline.

The refits also give Lloyds Register and the Maritime and Coastguard Agency (MCA) the opportunity to carry out their five-yearly dry-docked inspections which are aimed at ensuring that the ferries are in a good material condition, and that they are safe to operate.

Managing these refits takes a huge amount of planning to ensure the work is completed in the right order and at the right time so that the ferry returns to service on schedule.

Preparations for TAMAR II's refit are well underway, with the ferry currently due to be taken out of service on Monday, 22 April in preparation for its tow to Falmouth. This preparatory work includes removal of unnecessary ships stores, passenger safety equipment and then adding the towing gear and detaching the ferry from its chains.

The ferries can only be towed in relatively calm sea states and wind conditions. Adverse weather can, and has in the past, significantly impacted on the actual dates of the towing operations in both directions.

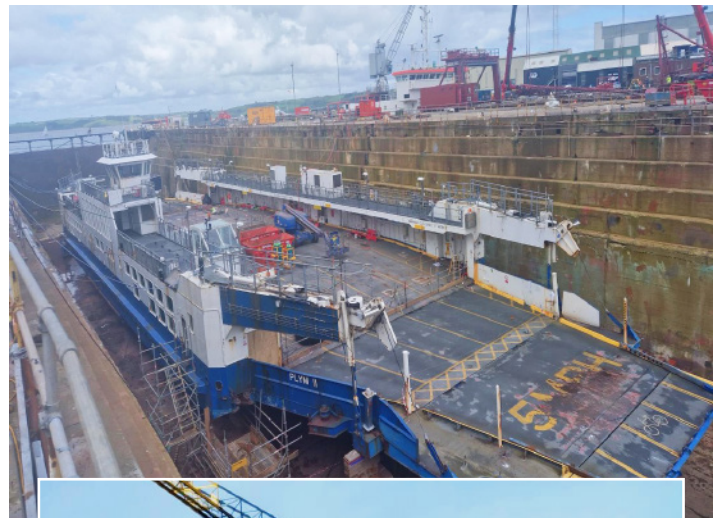
Weather permitting the ferry will be towed the 44 nautical miles from Torpoint to A&P Falmouth's dry dock facilities on Friday, 26 April. This journey usually takes around six hours to complete.

The refit duration is approximately 6 weeks and this means that the ferry should be back in service towards the end of June.

We are obviously hopeful that the tow will be able to go ahead on schedule on 26 April. If, however, the date has to be changed at short notice we will provide information through our website, social media and other means. We will also be publishing regular updates on the progress of the refit on our website.

There will only be two ferries operating during the refit and we request that our customers plan journeys accordingly. Regular updates will be provided during the works.

Below are some pictures from PLYM's refit last year.



# Ted and Tina retire after more than 40 years at the Torpoint Ferry

At the end of March we said goodbye to Ted and Tina Ayers, two of our longest serving members of staff who, between them, have spent 42 ½ years working at the Torpoint Ferry.

The couple, who met while working at the Ferry, say they will miss working with their colleagues and the public, but are looking forward to carrying out their long awaited plan to drive across Europe in a motorhome.

Tina joined the Ferry in 2001, initially working as a Ferry Cleaner / Relief. All relief staff receive training in other crew roles so they can cover for colleagues in case of sickness and holidays. This includes collecting tolls and being able to act up as a controller if needed.

Two years later Tina successfully applied for a full-time job as a Ferry Collector – a role she loves and has continued to do for the past 21 and a half years.

Collectors collect the tolls on the deck of the ferry, walking between the rows of vehicles and using handheld scanners to read the Tags and taking payments by hand. In the past this meant collecting cash payments but last year a contactless payment system was introduced at the Ferry which, Tina says, has made life easier for the collectors as well as the public.

As well as collecting tolls, collectors are also responsible for loading and unloading vehicles, and for the safe embarkation and disembarkation of all foot passengers. A ferry will travel to Devonport and back again up to 16 times during an eight-hour shift, with the two collectors taking it in turns to either collect the tolls or to unload and unload the ferry.

The ferries operate 24 hours a day, 7 days a week, with crews working shifts on a nine week rota. This means that everyone has to do their share of early morning and night working. "Working nights was actually one of my favourite shifts" said Tina "But I certainly won't miss getting up at 4.30 am for the early morning shift."

Tina has seen a lot of changes in her 23 ½ years working on the ferries. When she first arrived, she worked on the previous generation of diesel-hydraulic ferries. In 1986 these had been sent away to be lengthened "They added a section in the middle so they could transport more vehicles across the river before being replaced by the current generation of vessels in 2004/5."

Despite having to cope with equipment which occasionally does not work quite as expected, and challenging behaviour from some members of the public, Tina does not regret a single minute of her time working on the ferries.

"I know I will miss my colleagues and interacting with the public, but I am really looking forward to hanging up my uniform and travelling around Europe with Ted" she said.

Ted joined the ferries in November 2005 after a career as a submariner in the Royal Navy. Originally based in Portsmouth, he came to Devonport in 1985 when his diesel submarine came to the port for a refit. Following the refit he returned to Portsmouth until he left the Navy when he returned to Plymouth to live.

Originally appointed as a Ferry Cleaner / Relief, Ted also received training in other crew roles before becoming a Ferry Collector. After remaining in that role for 8 years, he finally had the chance to use his engineering skills and experience when he secured a Mechanical Assistant role which saw him leaving the ferry deck for the engine room.



Three years ago he was appointed as a Mechanical Assistant trainer – a job he has really enjoyed.

"My journey from cleaner / relief to the training job I always wanted took 17 years which was definitely quite a bit longer than I expected" said Ted, who jokingly describes himself as "Officially the worst employee in the organisation. The reality was that I was really bad in interviews but I got there in the end."

Although both Ted and Tina work on the ferries, they are on different crews and have different shift patterns which means they very rarely work together on the same ferry at the same time when covering other staff. They do, however, usually manage to have one day a week off at the same time!

Like Tina, Ted says he will miss his colleagues when he retires at the end of the month. He has thoroughly enjoyed the opportunity to pass on his skills and experience to the next generation, training nine colleagues during the past three years, but is now ready to move on.

"I have been lucky enough to do a lot of travelling and I want to be able to show some of the places I have visited to Tina" he said.

Their first trip after buying their new motorhome will be France. "Tina says she does not like France but it is one of my favourite countries" said Ted. "In fact she has only been to Paris and I will enjoy taking her on a tour of other areas of the country."

"We have both been very lucky working in a job we love in a place we love" they said. "The Torpoint Ferry brought us together 19 years ago and we will miss it but are looking forward to the next chapter in our lives."

Good luck Ted and Tina – we will miss you.

# Bridging the Tamar update

Staff and volunteers at our Visitor and Learning Centre have been very busy, with a number of special events and activities taking place, as well as the usual programme of talks and anchorage tours.

## School visits

We are always delighted to welcome young people to the Centre to learn about the wonderful engineering and problem solving skills of Isambard Kingdom Brunel, and discover the different types of bridges engineers have designed over time.

As well as learning about the structure of both the Tamar Bridge and the Royal Albert Bridge, the youngsters also enjoy the opportunity to design and construct their own bridges.

One of those visiting the Centre recently was 11-year-old Rafa from Widey Court School whose construction was chosen as the winner of the bridge building competition by all three judges – much to his delight.

“From Mark’s visit, I learnt that if you have an arch in the middle of a support frame, it is called a key stone. I also learnt that there are four different bridge types! I used all of this information to build a triangular bridge built on strong triangular supports” he said.

Abigail from Widey Court school also thoroughly enjoyed her visit to the Centre, “The visitor helped me learn different types of bridges. I now know that triangles make a bridge stronger. We used triangles for our final design and helped make our bridge stronger. We also doubled up the thickness on our columns to make the overall support stronger as well.”



## Holiday activities for local families

Our programme of activities for half terms and school holidays is always popular with families. These include a range of different activities and workshops.

The most recent February half-term was one of our busiest yet, with Mossy Pom Pom activities from Art and Energy, who explained how important the mosses around the Tamar Valley are. We also hosted our sold out Lego workshops.



## Easter activities

And finally our Easter programme included a mixture of drop-in and paid for activities, including Bubble Bike Boogie, Make and Take craft sessions, and sessions with BRIC (Building Resilience in Communities).

There were also special bridge tours for the public. You can find out more about these and all our other activities on our website: <https://www.bridgingthetamar.org.uk/>

