

East pier audio guide /1

STOP ONE: WELCOME

AILEEN: Hello, and you're very welcome to the East Pier Audio Guide.

I'm Aileen O'Meara, a producer with Twintrack Media, a local resident and

a big fan of the East Pier....

MARY: .. and I'm Mary Mulvihill, from Ingenious Ireland ...I'm a science journalist, and I love engineering and technology and the stories behind that.....

AILEEN: . we're going to bring you on a heritage tour of the East Pier...

There are 14 stops on our route out and back, starting here at the East Pier upper level entrance.

If you have the map printed off, you can follow the stops along the route...

but don't worry if you don't have one.. we'll give you directions.... and there's a handy map of the pier by the entrance as well.

At the end of each track, you'll hear this sound

BEEP

that's the signal to pause your player, and walk to the next stop on the route, and then resume listening to us.

Pier/2

MARY: The East Pier is not just a pier... it's a rich tapestry of stories woven into the very stonework... And all very much part of the heart of Dun Laoghaire for nearly 200 years ...

Dun Laoghaire actually began 1500 years ago, when one of the High Kings of Tara, King Laoghaire, built a fort or Dun here in the 5th century.

People were living here for thousands of years before that, but Laoghaire's Fort is the official start.

The Fort is gone now - said to have been flattened to make way for a Martello tower during the Napoleonic wars.

And look at Dun laoghaire now!... it's gone from an insignificant fishing village to a major maritime centre in 200 years... and the harbour is one of the largest in the world.

There's over 100 hectares between the two arms of the East and West Piers.. and it's still developing and evolving.

So take our two-mile journey out and back to hear the East Pier's story - it includes tragedy, bravery, and wildlife and poetry, music and engineering....

Our next stop is the Cannon - just up where the Pier wall opens on the right hand side.

Pause your player now... and stop when you get to the Cannon.

BEEP

pier/3

STOP TWO CANNON

AILEEN:

We're now in the East Pier gardens, overlooking Scotman's Bay, and looking south we can see Joyce's Tower in Sandycove, and Killiney Hill in the distance.

If you look carefully, you can see the Dalkey Quarry - where the granite you are standing on came from.

MARY: The harbour, and everything else in Dun Laoghaire today, actually started because of an awful tragedy in 1807. Now, Dublin Bay is actually very treacherous, because there are an awful lot of shifting sandbanks. And there were lots of shipwrecks and drownings. So, before Dun Laoghaire harbour was built, ships would prefer to dock at Howth and Dalkey instead.

One of the worst tragedies was in November 1807, during a violent storm, when two British Army troop ships sank, and 400 people drowned. A campaign started to build what they called an "asylum harbour" in Dun Laoghaire, where ships could shelter during bad weather. It took 10 years to get permission to build the asylum, and work on the east pier began in 1817.

The new harbour was designed by a famous Scottish engineer John Rennie, and when it was finished it was the largest artificial harbour in the world. And it was a great feat of engineering. In 1821, even King George IV came to inspect the works, and Dun Laoghaire was renamed Kingstown in his honour, and that's marked by the obelisk near Carlisle pier.

Pier/4

AILEEN: Some of the stone for the piers came from just up the road, what's now the People's Park.

But much of the stone came from Dalkey quarry, up on Killiney Hill just above us. And the rock was transported down to Dun Laoghaire on a funicular railway.

There were six trucks on the railway, connected together by a continuous chain, and each truck could carry 25 tons of rock.

The railway was powered by gravity: trucks laden with stone would fall down from Dalkey, and the weight pulled the empty carts up.

The East Pier was finished in 1823, ... the West Pier four years later. They are both over a mile long.

MARY: The project to build the East Pier was huge at the time, and turned Dun Laoghaire from a fishing village into a boomtown.... at one time there were over a thousand labourers, and their families, working on the project... that's a small town!

By 1826 250 wagons of granite a day were being delivered from Dalkey to the harbour by railway carriages.. that's the equivalent of one every couple of minutes during the working day. What a noise that must have been!

AILEEN: And here right in front of us is the Cannon - which has an interesting history going back to the Crimean War.

The gun is Russian - it was one of about 3,000 such guns reported to have been captured during the Siege of Sebastopol,.. In the Treaty of Paris, it was agreed that each of the victors would receive some as trophies of victory...around 30 Irish and British towns asked for cannons to be put on display.

Pier/5

MARY: The carriage was made in London... and it was first put on display on the Queens Road up from here, before being moved to this spot in 1974.

if you look closely, you'll see the Romanov Family crest on it - there's a double eagle and crown.

(CHILDREN - DRAW THE CREST)

Our next stop is the Sun Shelter - and Bandstand - up ahead.... take a quick look at the geographical pointer on your right as you go... it'll give you the distances to all the landmarks around you..

BEEP

STOP THREE: BANDSTAND

AILEEN: What a lovely bandstand and sun shelter we have here on the pier - they're Victorian - and recently restored... and they complement each other beautifully.

These structures remind us that Dun laoghaire was once a very fashionable Victorian seaside resort....

The bandstand and the sea shelter are important examples of ornamental Victorian park and seaside structures ...

. these ones are noted for the high quality of the design of their wrought iron and cast iron structures ... (and don't forget that there are also good examples of Victorian public fountains in the People's Park just south of here)...

both the bandstand and the sun shelter were built in the 1890s , manufactured by the Glasgow firm of Walter McFarlane and Company..... at the time, they were key spaces for outdoor events, including regular band recitals in the evenings.

Pier/6

MARY: The salt water is very harsh on the ironwork, - and these are in a particularly exposed spot - the structures were severely rusted and corroded before the recent restoration... they had to be taken apart and transported to a specialist conservation expert in the UK.

Now that they've been beautifully renovated and conserved, they've been painted a lovely creamy colour. It's the kind of thing interior designers probably call "antique white". But it's a special shade of a white. It's called "turner white", after a famous Dublin iron founder called Richard Turner, who was famous for his glasshouses.

He was responsible for the stunning glasshouses in the botanic Gardens at Kew, Belfast and Dublin in the middle of the 19th century.

And when they restored the Dublin glasshouses in the 1990s, they discovered that the iron work had originally been painted this lovely creamy shade of white.

And so an Irish paint company, ColorTrend, in County Kildare, recreated Turner's white, and it was used on the glasshouses in the botanic Gardens, and it's the same shade of Turner White you can see here.

So stop for a minute and admire the roof cresting and the balustrades on the bandstand.... and imagine the Victorian ladies and gentlemen taking their evening walks along the East Pier.

Next stop - is at the bend ahead where we learn a little about the wildlife in the harbour area.

BEEP

pier/7

STOP FOUR - WILDLIFE

AILEEN: We're now at the first bend, or turn in the upper pier, and this is a good spot to talk about wildlife, and the natural environment around us.

Just listen for a few seconds... pause... and you'll hear the familiar sound of gulls - just one of the many species you will find in this area..

there are several species of seagulls, oystercatchers, plovers,.. and herons all around us here.. and many more seasonal visitors....

.. if you get a chance when you get back, have a look at the information and drawings of birds supplied by Birdwatch Ireland on the poster near the upper pier entrance.

.. these include some of our winter visitors , such as the redshank, the turnstone, the guillemot and razorbill, and of course the brent goose..

..... if you're taking this tour in the summer, watch out for the common tern, and the sandwich tern in particular.

Just take a minute to have a look to see what you can find.

SFX OF GULLS

(CHILDREN'S LEAFLET - DRAW A GULL).

But it's not just birds you'll see around you here. We'll tell you about where to look for the seals at stop seven -

and don't forget the fish in the water as well.....

Fishermen here and on the West Pier regularly catch species like mackerel and pollock, dab and conger, and plaice and codling... c

heck with the fishermen what they've caught today when you pass them.

As we stand on the upper pier, have a look south towards Killiney Hill.... here you get a view of the Obelisk on the summit - another lovely walk with great views over the bay -you'll again see the geology of the area.

Pier/8

MARY :

Killiney Hill behind us is one of the two headlands that form the entrance to Dublin Bay. The other one is Howth Hill, 10 km away from us across the water. And because they're both made of hard granite, these two headlands haven't been eroded. But between them you get much softer limestone and that has been slowly eroded over thousands and thousands of years, so if you look at a map, it's like a big bite taken out of the coastline.

MARY: The granite on Killiney Hill formed about 400 million years ago, and it's a really attractive rock. Just take a close look at the lovely crystal structure, even better if you have a magnifying glass.

The local granite was used to build a lot of the older buildings in town, as well as the harbour. And the quarry up on the hill is also an interesting place to visit, and it is very popular with rock climbers.

.... our next stop is the Boyd Memorial - just up ahead, where we are reminded of the dangers of the sea.

BEEP

pier/9

STOP FIVE BOYD

AILEEN: It was a maritime tragedy that led to the building of the harbour, but this memorial is a reminder of the bravery of men trying to rescue stricken ships offshore.

Captain James McNeil Boyd and about 100 of the crew of his ship, the HMS Ajax, were stationed in Dun Laoghaire in February 1861, when the Irish coast experienced one of its worst storms... winds exceeded 140km an hour....

23 ships were wrecked off Dun Laoghaire.

Two of them - the Neptune and the Industry - were being struck off rocks here at the back of the East Pier....

Captain Boyd and his men attempted to help rescue the sailors, trying to attach ropes to the stricken vessels.... but the sea was too powerful.

Reports from the time described how a huge sea struck the breakwater, and dashed Captain Boyd and his men against the rocks.

CHILDREN - WRITE DOWN THE YEAR OF THE BOYD TRAGEDY

MARY: Stop Six is also about the weather - a more modern story.... walk ahead to the small building, with the wind meter on top on the wall ahead... that's the anemometer.

BEEP

pier/10

STOP SIX

ANEMOMETER

MARY: Being able to forecast the weather is really important for so many things, but especially if you're going to go to sea. And if you're sailing, and depending on the wind, then being able to tell the wind speed is very important.

For centuries, people had looked for ways to forecast the weather, but it's only really since about the 1920s, that we've begun to understand the science, and to develop accurate forecasts.

Wind is one of the most important components in weather, because the wind is actually the atmosphere moving around. People had been trying for ages to find a way to measure wind speed. And it was an Irish scientist who finally came up with a successful invention in 1850. And you can see his invention on top of this lovely stone building.

AILEEN: He was the Rev Thomas Romney Robinson, and he was an astronomer at Armagh Observatory. And his instrument was called an anemometer, from the Greek word for wind.

It's essentially four cups that can spin freely in the wind around a central spindle. The faster the wind blows, the faster the cups spin.

Robinson's crucial invention was a way of counting the number of times the cups spin each minute, and from this he could calculate the wind speed.

He first began to use his instrument in 1852 at Armagh. And in the same year, one of his devices was installed on the East Pier.

AILEEN: As you can see, it is now hooked up to a lovely computerised weather station, where you can catch the weather data being collected. I wonder what the wind speed is now? And as we are here later, this lovely ingenious Irish instrument helped to inspire a local writer on to a Nobel prize.

We'll head now to the end of the pier, and sit down overlooking the bay.

PIER/11

CHILDREN: WRITE DOWN THE WIND SPEED

STOP SEVEN
SEALS

AILEEN: We're now at the half way point of our walk, and time for a little rest and a chance to look over Dublin Bay from a good vantage point.

Firstly, while you sit on your seat at the end of the East Pier, have a look for the seals that live in the sea around here, and who often surface in front of you.

MARY: You may catch a glimpse of what is likely to be the grey seal, as there is a population in Dublin Bay. They are very big animals, the adult males can be over 3 m long, and they have a large, dog-like snout.

You might also see a harbour porpoise if you're lucky - but they're very elusive at the best of times, usually all you see is a small thin ripple breaking the water very discreetly.

AILEEN: Then look across at the bay ... Dublin Bay is shaped like the letter C,...

.. a lovely way to see the bay properly is to take the DART along the coastline from Bray to Howth, taking in the scenic Killiney Bay...

pier/12

MARY: while we're talking about wild life, most people have heard of Dublin Bay prawns. But the funny thing is, the one place you don't find Dublin Bay prawns is... in Dublin Bay! That's because, these animals like to burrow into mud and clay, and you don't get the right kind of sediment in Dublin Bay. But you will find them further out to sea. The reason they got their name, or at least this is what one marine biologist told me: is because the custom was to let the fishermen eat the prawns once they got close to home and were inside the bay.

Actually, the Dublin Bay prawn is a double fraud, because it isn't a prawn either. It's really a small lobster. Prawns have soft transparent shells, and lobsters have a hard pink shell and claws. So we should probably call it the "east coast lobsterette" and not the "Dublin Bay prawn".

AILEEN: and when you've had that little break, join us now as we go down the steps to the lower level of the East Pier to take our return journey, ... we're now half way ... and head over to the Lighthouse and the Battery building... if you're taking this tour between June and September, you'll be able to go inside the Battery and have a look around this rather special place.

Pier/12

STOP EIGHT LIGHTHOUSE

AILEEN: When the East Pier first took shape in the 1820s, the builders placed a wooden beacon at the end, to warn shipping but by 1845, a whole new lighthouse was almost completed.

George Halpin was the chief engineer... it was built of granite, and have a guess at how much it cost - 937 pounds in the 1840s!

The first light on this lighthouse - in 1847 - was 12,000 candle power....which sounds like a lot! . It was 41 feet above high water..... but while that might have been strong for its time... by the end of the century in 1892, the city of dublin steampacket company - which had a monopoly on the holyhead kingstown mail route... was complaining about the poor quality of the harbour lightng.

(we'll be talking more about mail routes when we come to the Carlisle pier at stop 10).

So the Commissioners for Irish Lights responded by raising the tower on the lighthouse by 12 feet - which resulted in the light's beam being cast on the Mugglin rocks off Dalkey for the first time.

There were further improvements - the so called "dioptric" lighting system was installed.... this involved the refraction of light rays from an oil wick lamp - using glass prisms - so that they were parallelised and aimed at the horizon.

It wasn't until July 1968 that the East Pier lighthouse station switched from vapourised paraffin to electricity - and it became unmanned. The strength of the new candlepower? 226,000 candles.

Pier/13

MARY: the 1840s, when this lighthouse was built, was the golden age of lighthouse building and engineering. There were beacons and fires burning around the Irish coast for centuries, but in the 1800s there was more and more traffic along the coast, not to mention people who would deliberately lure unsuspecting boats on to rocks in order to wreck them. And of course, there was little in the way of a lifeboat service at the time. So, a major programme began to build lighthouses at strategic points around the coast and on some of the islands, to try and improve safety at sea.

Lighthouses call for a special design and engineering if they are to be effective. They have to be visible at a distance, and able to withstand the elements, so most of them were built with thick stone walls. And the work tended to attract some of the great engineers of the day, including the father and son team, both called George Halpin.

The other challenge is the light. The earliest lights would have been called fires in the candles, but these would burn fast amounts of fuel, and they could be put out by a strong wind rain... ironically, when they were most needed. In the 19th century, when this lighthouse was built, people were experimenting with new fuels, like gas lights.

Today, all the Irish lighthouses are automated, and many of them use renewable energy sources like wind power and solar power. The lighthouses are run by the Commissioners of Irish Lights, and there are headquarters nearby, just past the West Pier, in a lovely landmark building that is reminiscent of a lighthouse.

CHILDREN: draw the lighthouse.

pier/14

AILEEN: But remember lighthouses are not just about lights - there are sounds as well... of the fog horn.

In 1852 the fog bell was replaced by a tall wooden belfry with a new bell....

this was manually operated..... then it was succeeded by a reed horn...

then by the firing of a gun....and in 1907 - a mechanised bell was used.

Then in 1944, they installed a diaphone fog signal - that's a piston driven by compressed air.

THE BATTERY

AILEEN: While we're still at this stop, a little about the Battery.

Defences were a big issue in the history of this coastline, and back in the Napoleonic era, Martello Towers were built all along the coastline here - including two in Dun laoghaire which are now long gone.... you'll have noticed the one remaining over at Sandycove which now houses the James Joyce museum.

The Battery here was for holding artillery and ammunition, with a gun platform on the upper levels....up until 1860 it was fully manned.

Now it's mainly used for gun salutes - it is only one of two in the state that can be used for such a purpose.

This battery never saw enemy action...the highlight of its career, so to speak, so far, was when it was decorated in fairy lights to welcome Edward VII and Queen Alexandra on their royal visit to Ireland... then the royal salute was fired.

And now, a different subject altogether - literature, and our great writers... we'll head back along the lower level and have a look at the Beckett Plaque, just below the Anemometer.

pier/15

STOP NINE
BECKETT

AILEEN: The Beckett Plaque commemorates the memory of a great Irish writer, Samuel Beckett, who hailed from Foxrock, in South Dublin... as you'll see, he was awarded the Nobel Prize for Literature in 1969.

Beckett is said to have experienced an artistic epiphany while sitting at the end of the east pier..... hence the plaque. He was inspired by among other things, the lighthouse and the wind gauge spinning like a propeller .. to turn around and concentrate on becoming a writer.

He refers to this epiphany in his play *Krapp's Last Tape*.... take your time to read the quotation on the plaque.

And I suppose it is fitting that we are also close to the works of another great Irish writer - James Joyce. The museum of his life is close by in the Martello Tower, close to the village of Sandycove - immortalised in the opening chapter of his famous novel *Ulysses*.

Of course there are lots of other well known writers associated with Dun Laoghaire - not least novelist Joseph O'Connor, who grew up in the area and writes regularly about it... and Hugo Hamilton, who has written extensively about growing up in the Dun Laoghaire area... Maeve Binchy lives down the road in Dalkey.... and that's just a few.... there are plenty of cultural events in the area, and we've included some links to them on our website.

We'll move on now to the telescopes up ahead, which give us a good view of the Carlisle Pier here in the harbour.

Pier/16

STOP TEN CARLISLE

AILEEN: There's not much left now, but the Carlisle Pier is synonymous with memories of Irish emigration in the 40s and 50s.. on the so called mailboat.

These days, the pier is mainly unused, and there are ongoing debates about its future.

The pier was begun in 1853, three years after the Dublin steam packet company started passenger services from Dun Laoghaire (then kingstown) to Holyhead in Wales. It was completed two years later.

The steam packet ships and the railway made Dun Laoghaire a central point for a relatively comfortable and quick travel between Ireland and Britain ... Once the harbour was built, Dun laoghaire became the new mail terminus for Ireland.

Before that, the mailboat used to dock at Howth for centuries.

And to show you the rapid improvement in travelling between the two islands - in 1860 the average crossing time from holyhead to dublin on the steam packet co ships was 5 hours and 40 minutes... that was reduced by 3 hours and 37 mins in 1896.. now it's 90 minutes!!!
on the modern technological wonder, the HSS..

pier/17

MARY: Yes, the HSS and the other high-speed ferries are amazing pieces of engineering, and really lovely to watch. The HSS is a high-speed catamaran, with two hulls, and that helps them to cut through the water very fast. And it is powered by two gas turbines, of the same kind that are used in fighter aircraft, so no surprise that they can get up to 40 km..

And instead of using conventional propellers to drive the ship forward, HSS is pushed by four very powerful jets of water, two on each side. That also makes it very easy to steer. And of course there's all kinds of other high-tech sophisticated electronics, like GPS navigation and raider, and even nightvision binoculars. And if you happen to be here when the HSS is arriving, it's fascinating to watch this enormous ship docking so precisely and gently, a real piece of precision engineering.

Next stop...walk a little further back along the pier to hear about the first ever sports radio transmission.

(CHILDREN - WRITE DOWN THREE SOUNDS YOU HAVE HEARD SO FAR ON YOUR WALK OF THE PIER)

BEEP

pier/18

STOP ELEVEN MARCONI

MARY: Mention Marconi and most people think of the radio, what you might not realise is that Marconi was here in Dun Laoghaire in 1898 for the annual regatta, when he made the first ever sports radio transmission, in fact, the very first piece of radio reporting. We can't really call it a broadcast, because only one person was listening.

This is the story: it was July 1898, and the Regatta was taking place in the Bay. Marconi was in Ireland at the time - remember, his mother was Irish - to try and interest people in his new radio technology. And one of the marketing promotional ideas he came up with, was to broadcast the results of the regatta from the bay, to shore, so that the results could be published in the Dublin Daily Express before anyone else had them.

Marconi was in a tugboat out in the bay, making a note of the boats in the race as they passed, and sending the results by Morse code, using his wireless technology, to a receiver that was manned by one of his assistants, in the Harbor House, near here, now called Moran Park House. And the results were passed from the Dublin Daily Express, which was able to publish the results, and boast that they had taken part in the first-ever sports radio experiment. And you can see some of the equipment at Marconi used for the experiment in the science Museum at St Patrick's College in Maynooth.

Pier/ 19

AILEEN: Next - the human sundial, Time and the world's first suburban railway.

STOP 12
SUNDIAL

AILEEN: From radio transmissions to telling the time - and this human sundial is not alone a wonderful way to learn about what time is, and also a fine design by local graphic artist Brian O'Connor (he designed our tour leaflets by the way!).

Follow the instructions on the plaques and use your own shadow to read the time...

CHILDREN: WHAT TIME IS IT? USING YOUR OWN SHADOW.

MARY - there is a surprising link between time and the railway in Dun Laoghaire.

Because this railway was the first railway in Ireland, and it was the railways had introduced a common time across the country. Before the 1840s, every place in Ireland kept local time, according to their latitude. So the time in Cork was 11 minutes behind Dublin for instance. But all that changed with the coming of the railways, because the railways operated to Dublin time, which was set by Dunsink Observatory. So for a while, you would have two clocks and railway stations: one would tell the local time, and one would tell Dublin or railway time. And the railway time was very precise, because it was carried by the telegraph wires along the railway lines. Until eventually, in the 1840s, for simplicity everyone switched to Dublin time or Dunsink time. Which was still not Greenwich time - Dublin time was 25 minutes behind Greenwich. And we didn't switch to Greenwich time until during the First World War, as a wartime measure.

pier/20

The railway here in Dun Laoghaire was the first railway in Ireland, the third railway ever built, and the world's first suburban commuter railway. The previous two railways were in England, and the first one was for a coal mine, and the second one was an InterCity line. But the Dublin-Kingston railway, which ran from Westland Row to Kingsdown as it was then called, was the first suburban line. It opened in 1834, and you can see how successful the route was, because it's still running today. The original terminal railway station is now a restaurant.

AILEEN: It helped to expand Dun Laoghaire, which was becoming a very popular Victorian seaside resort. And the population of Dun Laoghaire doubled from about 6000 people and the railway opened, to nearly 12,000 people in 1861.

The railways changed the face of Ireland.

People could now travel faster and further than ever before....for instance you could travel from Dublin to Cork in six hours, a journey that before that would have taken days.

The railways also brought mass transport, especially with the sale of cheaper class tickets. And this helped to increase emigration, and also the growth of cities, as well as seaside resorts like Dun Laoghaire.

We'll move on now towards the end of our tour... to that big blue buoy up ahead.

BEEP

PIER/21

STOP 13
LIFEBOATS

We've heard about a number of maritime tragedies on our tour of the East Pier, so it's fitting that we should acknowledge the work of the volunteers who man the lifeboats that rescue so many sailors every year here in the Dun laoghaire area.

We're standing beside the RNLI lifeboat station in Dun laoghaire, against the backdrop of its yacht clubs, ... the first lifeboat was placed in Sandycove just south of here back in 1803... and the RNLI took over the lifeboat service in 1861... by then it had moved to Dun leary.

There were many rescues in that time..... one particular tragedy is remembered in a plaque close to the lifeboat moorings... on Christmas Eve 1895, 15 lifeboat crew were drowned when their lifeboat capsized while coming to the aid of the steamship *Palme*.....

so it's suitable that we remember - in this busy harbour - that the lifeboats that save so many lives are crewed by volunteers, reliant on our support to do their work.

CHILDREN - DRAW THE BUOY

BEEP

pier/22

STOP 14.
DUNLEARY

AILEEN:

and we're back where we started - at the entrance to the East Pier.

We hope you've enjoyed this tour with us, and if it's whetted your appetite for more about Dun Laoghaire's great heritage... take a look at our website for links to more information about the heritage of the area...

we're at www.twintrackmedia.ie - forward slash East Pier.

MARY: and for more on Ireland's ingenious heritage, visit Mary's website - ingeniousireland.ie

AILEEN: We'd like to thank the Heritage Council of Ireland for its generous backing for the making of this guide under the 2010 Heritage Education, Communications and Outreach Grants scheme.... we also received the support of the Dun Laoghaire Harbour Board..and the Dun Laoghaire Rathdown Heritage Office.

The full script of this guide is available on our website - and we have a Facebook page if you'd like to share your experience with us.

Mary Mulvihill and Aileen O' Meara own the copyright. Sound production was by Twintrack Media.

Ends.

