

# Time and Tide Bell

## Proposals for installation of a Marcus Vergette sculpture on a Lincolnshire beach near North End, Mablethorpe.

*"This is an inspired project. The link between ourselves and the elements is in danger of being lost in our 21st century life. The importance of that link, given climate change, is more important than it ever has been and such a beautiful reminder of the importance of tides and sea levels is truly inspirational."* Baroness Miller of Chilthorne Domer, House of Lords.

This national project involves permanent installations of Time and Tide Bells near the high tide mark at a number of diverse sites around the country, from urban centres to open stretches of coastline. The rising water at high tide drives the clapper to strike the bell. Played by the movement of the waves, the bell creates a varying, gentle, musical pattern. As the level of the tide changes and as the bell becomes submerged in the rising water, so the periods of bell strikes and pitch of the notes will vary.

The first bell was installed in July 2009 at Appledore, Devon: the second on Bosta Beach, Gt. Bernera, Outer Hebrides in June 2010: the third at Trinity Buoy Wharf, London, in September 2010: the fourth installed in Aberdyfi, Wales, July 2011. The fifth was installed on Anglesey at Easter 2014 and our Lincolnshire coast could host the sixth. Proposals for the Berwickshire and Norfolk coasts are in preparation.

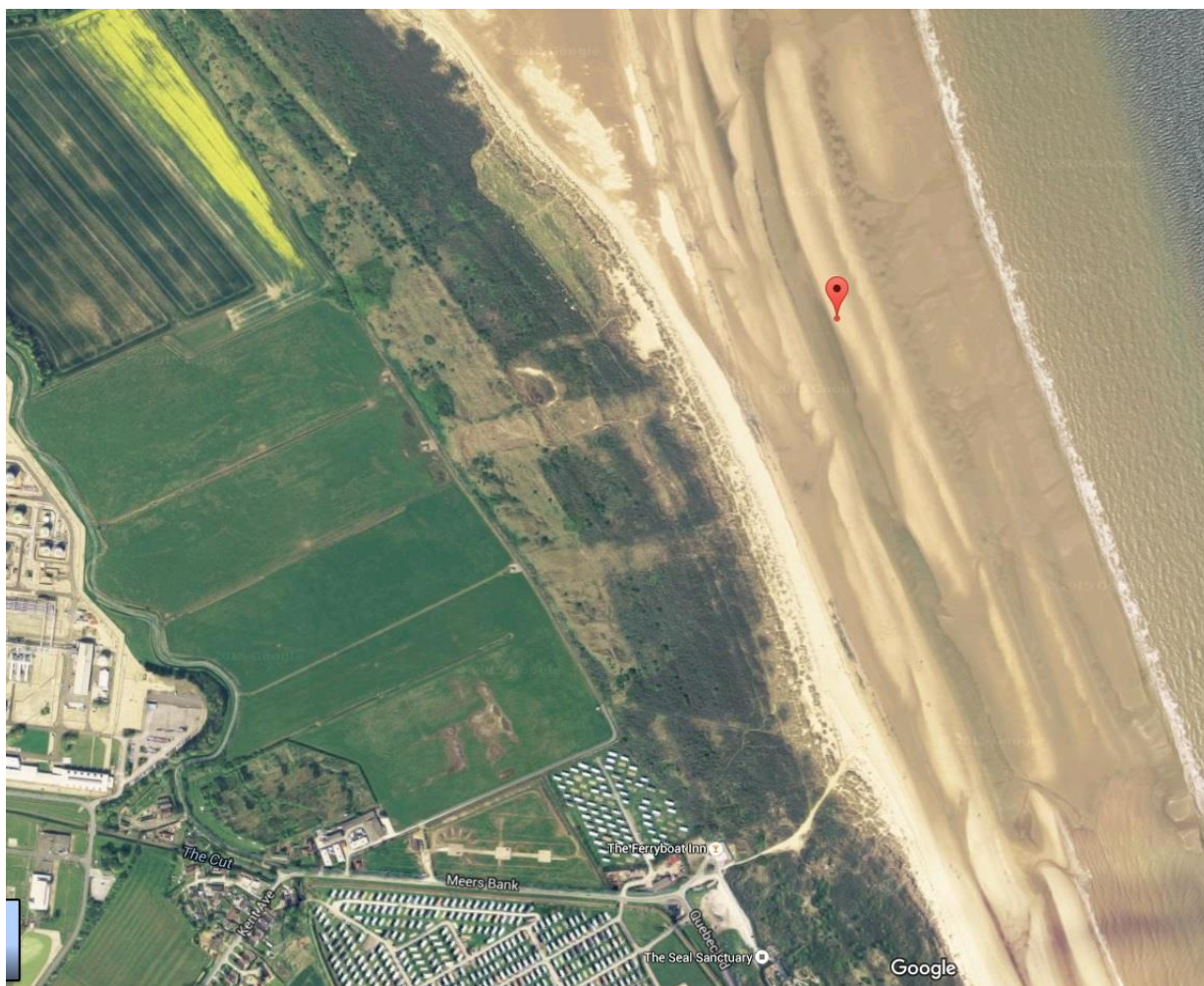
The integrity of the Time and Tide Bell project nationally is in the choice of the sites and how they connect. The Time and Tide Bell is to create, celebrate, and reinforce connections between different parts of the country, between the land and the sea, between ourselves, our history, and our environment. Each of the sites brings something particular and unique to the whole group.

**Location:** North of North End Mablethorpe OS Grid Ref. TF497877 or 549750 387750  
The preferred location is on the beach north of where the path from the Ferryboat Inn emerges on the beach, within the area of the SSSI and Saltfleetby-Theddlethorpe Dunes National Nature Reserve and outside the area upon which sand-yachting is allowed . The Bell is to be sited at the mean high water mark so will be on dry land for most of most days, only in water deep enough to ring the bell at high tide around the spring tides every fortnight. The top of bell will be submerged only in the extreme tidal surge conditions experienced in 1953 and December 2013. The Bell will not be visible nor audible from any dwellings or other buildings.

The location is significant within the context and concept of the overall Time and Tide Bells project. This part of the Lincolnshire coast is easily accessible yet conveys a feeling of remoteness. It has a rich past, geologically with the shifting coastline and socially as people

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interacted with the changing environment over the centuries. It will be the first Bell on the east coast but has connections with the Aberdyfi Bell in particular, on a similar latitude and in a similar context of sea level change, evidenced by submerged forests and dune development. Longitudinally Mablethorpe is almost due North of the Bell at Trinity Buoy Wharf but the London Docklands environment could hardly be more contrasting.



## Design

This new bell form was designed by sculptor Marcus Vergette in collaboration with Dr Neil McLachlan.

Marcus Vergette is a sculptor, film-maker, composer and musician. His main involvement at present is with his Time and Tide Bell project.

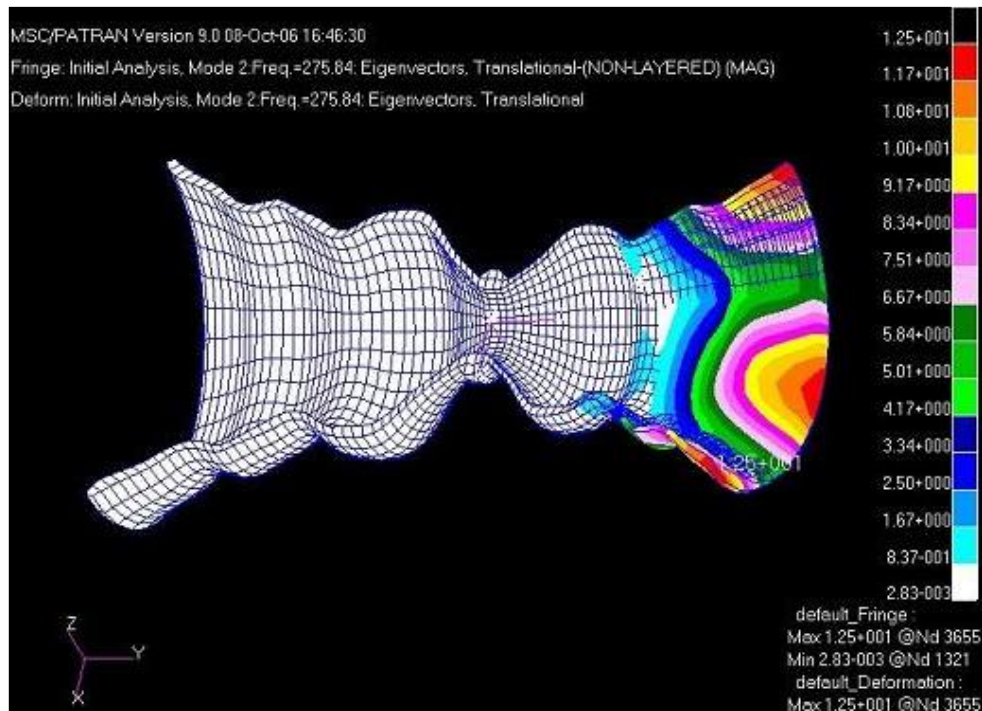
See <http://www.marcusvergette.co.uk/> and <http://rbs.org.uk/artists/marcus-vergette>

Vergette's most recent piece is at the Sainsbury Centre for Visual Arts, commissioned for the exhibition Monument: Aftermath of War and Conflict. It comprises a bell of similar design to the Time and Tide Bell, mounted on a gun carriage. See <http://bit.ly/MonumentBell>

Dr Neil McLachlan is an Associate Professor in Psychological Sciences at The University of Melbourne and has broad professional experience in music, acoustic design, engineering, and auditory neuroscience. In 2000 he designed the World's first harmonic bells, and more

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recently has designed a new harmonic percussion ensemble for use in educational and a range of community contexts. See <https://sites.google.com/site/mclachlansound/>  
A descriptive technical note, *Designing The Weatherbell: A Collaboration with Marcus Vergette* by Dr Neil McLachlan can be downloaded from:  
[http://www.timeandtidebell.co.uk/bell\\_design.pdf](http://www.timeandtidebell.co.uk/bell_design.pdf)



Uniquely, from one strike, the Bell sounds different notes one after another as a melody. This form has never existed before and has only been possible as a result of recent developments in computer modelling. It required the Bell's unconventional shape.

To hear the Bell, recordings are available at:

<http://audioboo.fm/boos/186220-time-and-tide-bell-trinity-buoy-wharf-sept-20-2010>

<http://audioboo.fm/search?q=bosta+bell>

<http://audioboo.fm/search?q=appledore+bell>

<http://www.marcusvergette.co.uk/bell.htm>

When the first Bell, at Appledore, Devon, was mooted, concerns were raised regarding potential noise nuisance. Consequently the initial planning consent was temporary. After commissioning the requests were received from local residents to adjust the Bell to make it louder. Local Authority granted permanent consent. The Lincolnshire Bell will not be audible from residential properties or other buildings.

## Award

The Time and Tide Bell Project was a finalist for the Climate Change Awards 2011, Best Artistic Response to Climate Change.

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*“Devon artist Marcus Vergette is ringing out a poignant warning on climate change with a permanent installation of 12 giant bells at high tide points around the UK. Rung by the waves, Vergette’s seven foot-high bronze bells will strike more often as climate change raises sea levels, and their pitch changes as they become submerged. The first was installed in Appledore, Devon in 2009 with others now in the Outer Hebrides and London. The project connects the traditional use of bells for celebration and loss with modern environmental concerns. It also links communities around the country, with each creating a poetic inscription of their bell’s significance.”* <http://www.climateweek.com/awards/climate-week-awards-2011/2011-winners/best-artistic-response/>

### **Construction**

The Bell is of cast marine bronze made at the John Taylor & Co Bell Foundry at Loughborough. <http://www.taylorbells.co.uk/web/> It will develop a greenish patina but will not degrade in seawater.



Fig1. One half of a Time and Tide Bell being broken out of the mold.



Fig. 2 The two halves of the Time and Tide Bell being worked on.

A frame, constructed from pieces of oak connected to stainless steel hexagonal rings by bronze castings, suspends the Bell at a height where the movement of water at high tide operates a paddle at the bottom connected to the clapper that rings the Bell. At the highest spring tides the Bell could become largely submerged. The frame is anchored to the ground by a ring of helical piles that are screwed into the beach sand. See <http://www.targetfixings.com/products/helipile/>

The modular construction enables community involvement. Fund-raising can be pursued through 'selling' of components, the quite cheap oak pieces and the more expensive bronze castings. On the day of frame construction much of the work, being of a human scale, can be done by the community with nothing more than a large spanner to tighten the bolts that fix the oak to their housings.

The Time and Tide Bells are designed to be permanent, the materials lasting at least a great many decades, if not centuries. The timber components with a shorter lifespan can be removed and replaced one at a time in situ. The site at Mablethorpe is unlike the previously used sites in that there is no solid rock upon which to build. There is a realistic possibility of shifting sands that has to be included in design and planning and future policy on sea defence maintenance by the Environment Agency could change from the current beach nourishment regime. The modular design allows for the possibility that the Bell may need to be moved in some future time.



Frame construction: English Oak, Marine Bronze, Stainless Steel.



The Time and Tide Bell, Cemaes Bay, Anglesey.

In keeping with the tradition of inscribing words on bells, each Bell has its own inscription on the wave catcher, written by the community around the Bell. In this way the bell says what those who experience it regularly want it to say. Bells speak in celebration and in loss, they are a mouth piece for our culture.

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## London Inscription

*What is the song in the wave, if not that all living is meeting?  
Nothing given up, or held for good:  
bats in the lantern light,  
cormorants scouring the tide.*

## Aberdyfi Inscription

*Above the awesome tide I will rejoice.*

*Uwch llanw erch llawenhaf.*

## Benera Inscription

*Gun mhuthadh gun truas  
A' sluaisreadh gainneim h na tràgh'd  
An àtaireachd bhuan  
Cluinn fuaim na h-àtaireachd àrd.  
Mo leabaidh dean suas  
Ri fuaim na h-àtaireachd àrd.*

*Without change, without pity  
Breaking on the sand of the beach  
The ceaseless surge  
Listen to the high surge of the sea  
Make my resting place be  
By the sound of the surge of the sea.*

## Appledore Inscription

*In thrall to the moon  
Rocked by her ebb and flow  
I sing of swells beneath the stars  
black waves at the storms height  
new ships' rhythmic passage west  
seabirds in the dancing wake  
all who set sail in sorrow or joy  
and all who sleep below.*

We are seeking an inscription for our Bell, meaningful to the community and location.

## Ownership

The Bell itself comes as a gift from the artist, Marcus Vergette, who has private financial backers. The cost of manufacturing the Bell, by far the greater part of the overall project cost, is paid for but the cost of the frame and its construction and emplacement have to be met locally. The Bell will need to have a body to receive the gift and to take ownership of it in perpetuity. This could be done through the creation of a Trust or, as has happened with other Bells, or by the Local Authority accepting ownership. Natural England have expressed an interest and this may prove to be the most satisfactory arrangement.

Beyond legal ownership, an important part of the project is to develop and sustain a community of people, Friends of the Bell, who will engage with the project, promoting the associated activities and wider public participation.

The 'Friends' group was informally created in August 2013, when about 40 people met with Marcus Vergette for a beach party and much hand-bell ringing. By word of mouth, the group has now about doubled that number, with a small Steering Group formed to see the project to fruition.

### **A Ring of Bell**

The integrity of the Time and Tide Bell project nationally is in the choice of the sites and how they connect. The Bells have become a way for residents and visitors to connect with their own history and environment, as an instrument of measurement, as a musical instrument, as a sculpture, and a focus for music, events, and exchanges, both locally and between the different bell sites. Each site brings something particular and unique to the whole group; here expressed in their own words:

Appledore, Devon (installed May, 2009), in North Devon, on the Taw and Torridge estuary, an ancient shipbuilding town with connections east and west, through export of domestic ceramics to the West Indies as part of the slave trade, to ball clay still being shipped to Russia. Here are some of the highest tides in Europe, the base of the bell marks the moment the water is over the bar and ships may leave or enter the estuary.

Isle of Bernera, ( installed June 2010) on the northwest fringe Lewis, in the Outer Hebrides; is some of the oldest rock/land on earth, and has been resisting the ravages of sea for 3 - 400,000,000 years, from before the fossil record. This island has a complex history of courage, and independence in the face of resource depletion and oppression, with barely a tree now left on the island. Bosta beach has been the point of arrival and departure for many different groups and cultures from the Vikings to the clearances.

Aberdyfi, Wales (installed August 2011) clinging to the rocky edge of Snowdonia, on the estuary of the historic river Dovey, flowing down the mountain Arran Mawddy to Cardigan Bay, the dividing line between north and south Wales. Aberdyfi is referred to in ancient Gaelic legend and song as the former kingdom of Cantre'r Gwaelod now submerged beneath Cardigan Bay, and its bells which, it is said, can be heard ringing beneath the water. Here the tree stumps from the ice age forests are revealed at low tide, the ancient Gaelic legend perhaps referring to ice melt at the end of the last ice age and the formation of the bay.

Cemaes, Anglesey (installed Spring 2014) Cemaes Bay is on the north coast of Anglesey, in an area of outstanding natural beauty, with a unique history and some of the most geologically important shoreline in Britain, whose significance has been recognized internationally. Local legend insists that St Patrick was shipwrecked on Ynys Badrig, where he founded a church in 440 AD. However this project is not only to connect with the past but also to engage with the



present and future. Around Cemaes there is a long history of varied land use, with farming, industry, and mining, and more recently wind farms, and a nuclear power station.

The Lincolnshire Bell will be the sixth and plans for Berwickshire and Norfolk are progressing. A significant part of the project is for the local communities at each Bell site to link up together; a sort of 'multiple twinning' is envisaged. There have already been exchange trips between the Trinity Buoy Wharf and Great Bernera communities.

## **Engagement**

The Time and Tide Bell is much more than a public sculpture to be looked at passively. It is set to be the catalyst for conversation, engagement, and support for multiple projects connected with our history, our future, and particularly, with our relationship with the sea. The principle funders will be supporting a part-time administrator, based at the National Maritime Museum at Greenwich, for a period of ten years. This will allow activities at each of the Bells to be given nation-wide promotion.

Awareness of the Lincolnshire coast's changing character through history will be promoted, engaging with local history societies and community groups. Information will be presented concerning the local geology and biology through the Pleistocene and Holocene, considering post-Glacial sea level changes and climate. Archaeology and recent history brings human involvement in the area into consideration. Consideration of the future, including the management of coastal defences and flood risk, in an environment where global warming is set to increase sea level, is a significant part of the Time and Tide Bell conceptual basis. The Bell will mark the approximate change from an accretionary beach environment to the north to an erosional environment to the south.

A large proportion of Lincolnshire's wildlife lives off-shore, unseen and largely unknown, beneath the waves. We are working with the Lincolnshire Wildlife Trust to promote the Living Seas <http://www.wildlifetrusts.org/living-seas> using the Bell as a vehicle for raising awareness of the rich biodiversity of the off-shore environment, and it's protection from the multiple threats of over-exploitation and climate change.

Information will be communicated through a variety of means. A book is under preparation, describing the Lincolnshire Time and Tide Bell and its historical, contemporary and future environmental and social context. The treatment is thorough and academic, ranging widely over the relevant sciences and arts. It will be available, free of charge, online and, subject to funding and commercial considerations, for sale as a print edition.

From this, other material will be derived; pamphlets, leaflets, posters, interpretive displays, etc., for a more general audience. We have a website <http://bit.ly/TimeandTideBell> and presence in the online social media which will be expanded once the Bell becomes a reality on site. A Geocache <https://www.geocaching.com/> will be incorporated within the structure, enhancing visitor appeal.

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The Bell is intended to enhance the tourism offer in the area, complementing the other attractions in and around the area, complementing the other 'Structures on the Edge' to the south. The Ferryboat Inn, Seal Sanctuary and other commercial facilities around Mablethorpe stand to benefit from increased visitor numbers. The Bell will attract visitors to the National Nature Reserve but do so in a way that is sensitive to the needs of the wildlife; the Bell will be well away from the area frequented by ground-nesting birds and other wildlife that might be disturbed by increased visitor numbers.

At all stages efforts will be made to engage with as wide a public as possible, exploring and creating a conversation about the issues that the Bell's conceptual basis raises. From its inception, this is a community-led art project with real social significance.