



School: School of Art

Researcher: Keith Harrison

Project Title: Heavy Rock | Plymouth Sound

UOA: 32

Research Timeline

Date	Rationale of research activities and decisions undertaken
20 December 2013	Invitation to take part in New Expressions 3 (NE3) from Plymouth Museum and Art Gallery (PMAG). NE3 was a national approach to collaboration between contemporary artists and museums. This iteration proposed nine major artist-museum collaborations across the South West, the Midlands and the North of England.
17 January 2014	First meeting to scope out parameters for the NE3 project at PMAG.
29 January 2014	Invitation by NE3 and Visual Arts South West to talk about the current and previous Museum based commissions as part of the one day symposium; Intervention: Artists working in Museum & Heritage Settings, M-Shed, Bristol as part of official launch of NE3.
13 February 2014	First Research meeting with curators to view the Fine and Decorative Arts, Social History Collections and Archive Office at PMAG. Initial interest in Plymouth Porcelain invented by pharmacist William Cookworthy in 1768 and Toshiba/Bush radios manufactured in Plymouth suggesting ideas around a history of radio transmission in the city and possibilities for sound.
20 March 2014	Ideas developing from interest in concrete & city's post-war brutalist architecture. Drawings and photographs of Brutalist Charles Cross Car Park before imminent demolition. Developed 1st proposal combining car park ramps and launch event ramp on Plymouth Breakwater. Proposal rejected by PMAG as no direct connection to the collection.
30 May 2014	Further research led to the decision to focus on the painting, 'Laying of the Foundation Stone of Plymouth Breakwater' by George Barrett the Younger, 1815. Plan to use deconstructed elements of the painting as the project's key motifs; a public flotilla, a military band in a boat, a ceremonial foundation stone carried to sea. Developing Ideas around shipping ceramic materials to the Breakwater to recreate the chemical processes involved in the production of Plymouth Porcelain.
9 June 2014	NE3 meeting hosted by Bristol Museum and Art Gallery, to discuss commissioned projects. Delivered an outline of my proposal to all the national partners and fellow artists in NE3 indicating focus on the breakwater and painting but not the methodology or physical outcomes.

27 June 2014	Pivotal Meeting with Nigel Overton, Curator of City & Maritime Heritage, PMAG revealed the Breakwater is still being built with regular placements of protective 100 tonne concrete blocks onto the seaward side by Devonport Dockyard/Babcock International on behalf of the Royal Navy and controlled by Ministry of Defence (MOD). This changed the focus of research to the wavebreaker concrete blocks and their placement as the contemporary equivalent to the scene in Barrett's narrative painting. There was uncertainty about the possibility of collaborating with MOD. Curator and PMAG used existing contacts to arrange a site visit to the Breakwater with permission from HM Queen's Harbour Master (QHM).
28 June- 6 August 2014	<p>Developed first proposal for MOD and PMAG with the following key components:</p> <p>Intervention into 6 times a year placement on the Breakwater of a "Wavebreaker to make a hidden process public. Transform material, challenging negative perceptions of concrete as indestructible and brutalist to a material fragile and sacrificial.</p> <p>Exhibition of developmental A1 drawings based on dating of blocks, experimenting with semaphore messages and use of numbers and colour coding to represent the 1.2m predicted rising sea levels.</p> <p>Reflecting & reconnecting to the painting narrative; create a public event to celebrate the block casting process at Oreston Quay and witness the ceremonial placement off the Breakwater with live musical accompaniment from a military band.</p> <p>Inspired by the original Breakwater models in the PMAG collection, a commemorative edition scale version of the wavebreaker block produced to mark new collaborations.</p>
6 August 2014	First Heavy Rock Project proposal was sent to Queen's Harbour Master (QHM) and Babcock international. QHM arranges the first site visit to the Breakwater.
19 August 2014	First site-visit to Plymouth Breakwater and Lighthouse. Photographs taken of the Breakwater and the wave breakers at high tide.
28 August 2014	Second Research site-visit to Plymouth Breakwater to photograph Wavebreaker blocks at low water and blocks blown over the Breakwater in previous winter storms. Reinforced the sense of the shifting scale and fragility of the material and questions started to form around ways to make the change in relative size apparent.
12 September 2014	First meeting with Babcock Naval engineers at Devonport Dockyard to discuss intervening in the casting process of the Wavebreaker and to create a public event around the block drop. Accompanied by Jodie Bishop, Public Arts officer for PMAG & copy of Barrett's painting. The spirit of the meeting was supportive & responsive to the historical reference in the painting and the contemporary parallels in their process.
24 September 2014	Research trip on the 'Camel' barge with Babcock/Devonport Diving Team to drop a wave breaker off Plymouth Breakwater. The drop was recorded from Plymouth Breakwater & footage later used by Schiller and Knights in the final documentary.
25 September 2014	Further development of the project's sound element. The Naval band depicted in the Barrett painting informed thoughts around sound as a two fold exploration: a musical score to accompany the block drop event & installing sound equipment inside the wavebreaker to animate the concrete block. Exploring options for live-transmission from sea to shore to a mainland audience.

8th October 2014	Site-visit to Oreston Quay to document the Wavebreaker block casting process which informed plans for intervention in the process. Introductions to Lee and Brian who oversee the block casting but have never witnessed a block being laid out on the Breakwater. Decision to highlight the workers overlooked role, leading to a series of A5 Plymouth Hoe postcards with wavebreaker blocks inserted carrying Lee and Brian's names.
15 -18 October 2014	A short promotional film published by PMAG about the casting process at Oreston Quay and my reflections on its location on the same site as the original limestone quarry used to construct the Breakwater.
27 November 2014	Meeting with Babcock and QHM at PMAG. Due to MOD restrictions on public access and the need to drop the block at high tide when the breakwater is partially submerged it would not be possible for the public to be present on the Breakwater at the live event. All attendees would need to attend on boat and stay aboard for the duration of the block drop event. This connected well with the Barrett painting.
4 December 2014	In a response to the meeting on 27 November a revised proposal and time schedule was produced involving three main elements: Intervention in the casting process working with Babcock/Devonport Dockyard teams to adapt the mould making processes to explore text on the block surface. This later focussed on adapting the date plate to include Brian and Lee's initials. A Public Event at Oreston Quay held at low tide, in which audiences will have the opportunity to view the block in situ before it is transported out to the breakwater alongside an exhibition of research and development drawings, Barrett's Painting and Babcock/MOD photos. This was later switched to the Museum and Art Gallery. A public viewing of the Block Drop in which Audiences will be transported on chartered boats to the breakwater following the trail of the wavebreaker block on the camel barge. A Military band and local sailing clubs will recreate a flotilla of vessels in a contemporary interpretation of the Barrett painting.
5 - 9 December 2014	Initial Meeting with Musician Will Greogory to commission a new score in 3 movements to accompany the block drop event ideally played by HM Royal Marine band. Discussed the possibility for recording the sound of the blocks through hydrophones that would then be transmitted back to land as a way to create a sense of the block out at sea.
9 January 2015	Preliminary discussions with NUB sound about the possibility of transmitting signals from the Breakwater back to Plymouth via radio signal.
5-10 February 2015	Initial contact made with HM Royal Marine Band based at HMS Raleigh, Plymouth to play Will Gregory's score as part of the block drop event. A1 drawings produced of hydrophones embedded in the Wavebreaker block at the casting stage.to enable underwater recording . DIY hydrophone prototype developed in the studio and later demonstrated to the Royal Navy at a meeting on 28 April.
11 -24 February 2015	Project temporarily halted by QHM due to the technical difficulties of Babcock accommodating the perceived changes in the block casting process and concerns about public access to Oreston Quay. Meetings were arranged with Plymouth City Council, PMAG, Queens Harbour Master, the Commodore of HM Royal Navy and Babcock International to resolve the technical issues and find an alternative to the launch event at Oreston Quay which was moved to PMAG. Project reinstated.
2-4 March 2015	Correspondence with Dr Jonathan Hare, Sussex University/Rough Science BBC about developing a sea battery to power a transmitter to send sound from the block back to Plymouth. Drawings made in response to these conversations led to the development of a prototype concrete sea battery. Sea battery prototype unsuccessfully tested and discussions with NUB sound resulted in developing a solar powered transmitter.

19 April 2015	2nd research trip on the Camel barge with Will Gregory. The Block drop was recorded off the Camel barge and later used in the documentary film.
20 April 2015	Correspondence with Babcock International about including hydrophone technology in the Wavebreaker during the casting process to record the sound of it's subsequent life out on the Breakwater. Meeting arranged with Babcock and the Royal Navy to demonstrate the prototype hydrophone and the vibro speaker. Process agreed. This agreement informed the decision to play out the recordings through an actual size wooden replica of the wavebreaker mould sited in Plymouth. Vibro speakers located in the same position as the hydrophones on the concrete block would turn the wooden mould into a speaker and create an immersive sound work in the negative space of the mould, recreating the block's physical mass through absence.
24 April 2015	Decision made by PMAG to hold the exhibition element of the project at KARST and build the wooden replica Wavebreaker mould in KARST gallery.
28 April 2015	Meeting with RN Commodore, Babcock International to discuss logistics of the project and confirm involvement of HM Royal Marine Band in the live event on the Breakwater and the opening of the exhibition at KARST. Royal Navy subsequently chartered a VIP boat for the event in addition to the public flotilla. It was requested that Lee and Brian should be on the VIP boat or on the camel barge to ceremonially release the block.
15 May-4 June 2015	Collaboration with Josh Small at NUB Sound and Thom Gordon, director of VP Marine, specialists in marine acoustic monitoring equipment, to produce the hydrophones to be cast into the Wavebreaker block and produce a transmitter to relay the sound back to the wooden replica mould at KARST.
22 May 2015	Meeting with the band leader of HM Royal Marine Band at HMS Drake. Confirmation of involvement and event date set for Saturday 18 July. 24 Piece band to premiere the specially commissioned score by Will Gregory.
23 May 2015	Updated proposal submitted to all project partners outlining the new schedule involving the RM band on the breakwater and KARST.
29 May 2015	Further meeting with Babcock International at Devonport Dockyard to run through the logistics of casting the hydrophones using rare earth magnets to hold the hydrophones in place and adapting the date stamp to incorporate B L - the initials of Brian and Lee.
15-17 June 2015	Hydrophones and adapted date plate are installed in the mould on the quayside 15 June prior to craning onto the sea bed ready for casting. Block casting takes place 16 June. The mould is craned off the block the following day. The process is documented and included in the Heavy Rock film by Schiller and Knights.
19 June 2015	Confirmation of 24 Piece Marching Band for event off Plymouth Breakwater on 18 July and RM Band ensemble Woodwind Quintet for KARST Gallery opening on 18 July. Orchestrated Band parts sent by Ian Gardiner to HM RM Band for rehearsal.
3-7 July 2015	Sound recordings taken from the hydrophones cast into the wavebreaker curing at high tide in Oreston Quay to test the equipment prior to the drop on the breakwater and create recordings that could be used at KARST prior to live transmission beginning from the Breakwater.
14 July 2015	Trip with Devonport Diving Team to choose the position of markers put in place on the Breakwater to indicate where the Wavebreaker is to be dropped on the night of the event. Transmitter equipment and cables were pre- installed on the breakwater by Nub Sound for connection to the block after the drop event.
16 July 2015	VIP Reception at Plymouth City Museum and Art Gallery 7pm to 8.30pm. Included speeches by Royal Navy, PMAG and NE3. Accompanied by exhibition of preliminary drawings, Barrett painting and MOD aerial photograph of Breakwater.

17 July 2015	The block drop event at the Breakwater was postponed by Babcock International citing the forecast for high sea levels out in Plymouth Sound. The public were informed via a press release from PMAG and a new date proposed for the block drop event on 3 August.
18 July 2015	Opening of Heavy Rock exhibition at KARST. Hydrophone recordings taken off the block at Oreston Quay were used instead of live recordings from the block on the Breakwater and played through the wooden mould between performances by HM Royal Marine quintet inside the wooden mould.
20-21 July 2015	Heavy Rock was the focus project for the NEW EXPRESSIONS FIELD VISIT 2, 'Creative risk-taking: commissioning one-off outdoor public events' hosted by PMAG. Delivered an illustrated artist talk on the embracing of risk; in terms of weather and material experimentation but also in maintaining relationships with a large scale military organisation. PMAG provided a perspective on the project and included a studio/exhibition visit at KARST.
31 July 2015	Press release from PMAG announcing the cancellation of 3 August rearranged block drop event in response to Babcock again forecasting bad weather and anticipated swell conditions.
17-30 August 2015	<p>Informed that due to contractual obligations the adapted wavebreaker block was laid without public ceremony on the Breakwater on 14 August. Another adapted block would not be possible in the timescale before the block laying season ended in September. In discussion with PMAG it was agreed to charter boats out for the public to see the block in position on the Breakwater and to host the first performance of Will Gregory's score by the HM Royal Marine band at KARST alongside live transmission of sound from the block.</p> <p>Plans to connect the transmitter to the adapted block out on the Breakwater to transmit sound back to the gallery at KARST was postponed due to bad weather. The premiere of the commissioned score by HM Royal Marine Band was proposed for 18 September to close the exhibition at KARST. The KARST exhibition was extended to accommodate this option.</p>
18 September 2015	Closing event at KARST takes place with the public premiere of Will Gregory's score played by HM Royal Marine Band. The performance was recorded by Jared Schiller/Tim Knights and Axis Web.
5 October 2015	Invitation from Alun Graves, V&A to include elements of Heavy Rock as part of the ceramics group show 'Material Language' at New Art Centre, Roche Court, Salisbury.
7 October 2015	Site Visit to Roche Court Including presentation to curators and New Arts Centre staff. Outlined connections to ceramics casting process in the use of the mould and the scaled wavebreaker blocks.
10 October 2015	Public event organised by PMAG to see the block in position on the Breakwater and hear recordings of Will Gregory's score played en route on the chartered boat. Maritime curator Nigel Overton provided a historical overview of the Breakwater and Plymouth Sound.
1 March - 1 April 2016	Discussions with New Arts Centre about modifications needed to make the wooden mould suitable for outside installation and for new recordings to be taken off the block situated on the Breakwater. Selection of A1 drawings and concrete models made for the exhibition at Roche Court. Site-visit to Roche Court
4-6 May 2016	New sound recordings taken from the block on the Breakwater by Thom Gordon. Nub Sound reformat the footage for subsequent wireless transmission to the wooden mould sited in the grounds at New Arts Centre.

14 May-24 July 2016	Material Language: New Work in Clay' exhibition at New Arts Centre, Salisbury. The show included a marine ply version of the wooden replica mould installed in the grounds of the New Arts Centre playing sound recordings taken off the Wavebreaker in position on the Breakwater, 6 x 1;20 edition concrete models of the Wavebreaker and 5 x A1 developmental drawings.
11 October 2015	'MUSEUMS, ARTISTS, AUDIENCES', hosted by The Horniman Museum. An invitation to deliver a 'Provocation' as part of the programme of events on the day as part of shared insights into the challenges and benefits of different models of collaborative working. The talk outlined the benefits of the socially fluid status of an artist and the opportunity it affords to invert social hierarchies and open up debates around making and authorship.
July 2017	8 x A1 preparatory drawings, 2 x A5 adapted postcards and 2 x 1;20 scale editioned concrete Wavebreaker blocks were purchased by PMAG supported by V&A purchase fund.
12 September 2020	1 x 1:20 scale editioned concrete Wavebreaker block and two adapted A6 postcards an edited version of Jared Schiller and Tim Knight's documentary film of 'Heavy Rock' are to be included alongside the original Barrett painting in the permanent display 'Port & Place' at The Box, Plymouth.