



School: Bath School of Art

Researcher: Keith Harrison

Project Title: Social Experiments: 1. Knowledge is Power: 6 Towns 2017 (KIP)
2. Material Environments: Bad Shit 2018.

UOA: 32

Research Timeline

Date	Rationale of research activities and decisions undertaken
March - April 2005 KIP	<i>Library</i> was the precursor for Knowledge is Power (KIP) , shown as part of the exhibition 'Platos Rotos' Posada del Potro, Cordoba, Spain and consisted of a clay replica of the full set of the Encyclopaedia Britannica. Embedded in each volume was a high temperature heating element specially made by Elmatic (Cardiff) Ltd which would be activated in sequence using a multi-switch timer developed in collaboration with the Electrical Engineering Department at Aston University.
January 2007 BAD SHIT	As part of <i>Glittering Ground</i> a series of live works curated by Ben Roberts with Roger Hiorns and Karen Russo in response to Victor Grippo's exhibition at Camden Arts Centre. <i>20 Whittington Street</i> was a living room carpet made of bread and spices that was fired <i>in situ</i> over the weekend. The use of bread, yeast and live production became the connecting material and process for Bad Shit when invited by Ben Roberts to take part in Material Environments at the Tetley in 2018.
September 2009 - July 2013 KIP	2 Early proposals which were precursors to KIP: 1. AHRC bid developed with the Electrical Engineering department at University of Bath and the V&A titled <i>Switchboard</i> proposing the firing of a clay replica set of the UK Telephone directories using clay sourced from each telephone area code. 2. Joint proposal to Contemporary Arts Society with National Museum Wales to manufacture and install 'Switchboard' at National Museum Wales, Cardiff as part of the Survey Exhibition <i>Fragile?</i> in 2015. Ultimately 'Mute' was produced for the exhibition
March 2016 KIP	<i>Switchboard</i> proposal sent to British Ceramics Biennial and Clayground Collective to gauge interest in making the work as part of BCB 2017.
24-26 May 2016 KIP	First meeting with Iain Cameron and Barney Hare-Duke, directors at BCB based at Staffordshire University. BCB proposed working in partnership with Stoke-on Trent Libraries to deliver the project.
13 July 2016 KIP	BCB meet with SOT Libraries and present the switchboard proposal. Libraries supportive of the project and agree to apply to ACE Arts

	Council/Libraries Funding Grant. Agreed meeting with all stakeholders to work out the project in more detail, including looking at the ways to work with library communities (existing and potential).
19 August 2016 KIP	<p>First stakeholder meeting at Stone-on-Trent Central library, Hanley including presentation of proposal and update in thinking. Summary of notes made in advance of meeting:</p> <p>“An option for people to activate the block through dialling a given area code or special project number. Make repeated versions of the local phone directory or with an adjustable mould the size and thickness could be varied. Use local companies who make ceramic heating elements, after firing each volume has the capacity to become a heating system that could be loaned out by the library using tickets and date stamped on the block. The main work will take place at the BCB main site at Spode with firings over the duration of the exhibition and added to over the months, some pieces multi-fired? Possibility of a mobile library to bring in the raw clay volumes from the libraries and then disperse from BCB after firing? Make an additional volume of all the makers/ loanees/callers to function as an index to the project?”</p>
23 August 2016 KIP	Submitted updated proposal at stakeholder meeting with project partners at Stoke-on-Trent Central library. This was adapted and finalised later.
9 September 2016 KIP	<p>Full list of the Six Towns Collection sent by SOT libraries including loan figures - many volumes have not been loaned for a number of years. Notes in response to the data:</p> <p>Discovered there are large numbers using the 6 Towns collection and includes an impressive range of local knowledge which will provide the subject matter for KIP. The loan data would be used as a way of indicating how many times a clay volume is to be heated if we are unable to do a live link up directly to the library loan system.</p>
27 September 2016 KIP	<p>Meeting to collaboratively explore and plan the approach to the proposed Switchboard project with Stoke on Trent Libraries, Wavemaker and BCB.</p> <ul style="list-style-type: none"> • Discuss and develop strategies for creating Clay volumes activated /differentiated through the library Dewey system using arduino technology. • Project Planning - design of project, technical components, tool kit • Workshop programme - Research and production of books • Outputs – installation, firing in China Hall & Installation/s in libraries
16-19 October 2016 KIP	<p>Updated Project Proposal submitted to BCB /SOT Libraries:</p> <p>KIP will consist of a replica set of 469 clay volumes that comprise the ‘6 towns collection’ distributed across the 6 public libraries that make up the provision for Stoke-on Trent.</p> <ul style="list-style-type: none"> • The 469 volumes which would require 6 shelving systems to be housed at the former Spode factory. Shelving system could be broken down to provide a bracketed single shelf for permanent installation at Central Library. • Clay volumes activated/differentiated through the use of the Dewey system. Each time a book is scanned at the library a clay volume will be heated using simple Arduino technology and also an option to activate the heating of books at Spode. The work could be a live record of activity at the library, the audience would be encouraged to activate the unfired volumes at Spode remotely by loaning books to complete the set? • Use clay bodies from Ceramics factories in Stoke to produce the

	<p>volumes from the library nearest to the factory.</p> <ul style="list-style-type: none"> Adjustable wooden moulds would allow actual size replicas of the book and moulds offer the possibility of numerous copies. Volunteers required utilising local schools? The people of Stoke-on-Trent should produce the works. Dewey number stamped on books to enable clay volume to be positioned on shelves. Additional set produced to be fired conventionally, which could be loaned out by libraries? Option for a complete set of the fired/unfired clay volumes to be sited on shelves around the walls of Central Library. The firing of the volumes is a reflection of usage. Result will be a full range of raw and cooked books. Does the set have to be complete before the firing begins or are there additions to the collection as the project progresses? An option to activate the work at Spode (or Wedgwood library)? How many volumes might be possible to fire at one time? Each element generally is about 1kw at 240v with 3kw load. Three phase 415 volts would enable more elements but would need to create a public barrier as some of the elements could become exposed during firing. RCD cut off required. <p>Use local technology, industrial ceramic processes and materials:</p> <ol style="list-style-type: none"> Midlands Electrical contacted to make bespoke heating elements Acme Batt Co contacted to provide refractory ceramics for the shelf system. Potclays contacted to provide clay bodies related to each town. Drayton Beaumont Services LTD - Kiln firing sequencer KMF engineering contacted to manufacture shelving systems Staffordshire University - arduino firing technology Wavemaker - arduino firing technology and schools workshops <ul style="list-style-type: none"> Index/directory/catalogue created of all the volumes including Dewey numbers and authors that are struck off as they are fired. Can numbers being fired be put up on electronic display? Option for a mobile library to transport work from where they are produced to the main site?
20 October 2016 KIP	<p>Switchboard Brief sent to Wavemaker: To create an electronic system that enables the remote electronic scanning of a library book from the 6 towns collection to trigger the heating of the corresponding clay replica volume installed in the Spode works.</p> <p>Also trying to find a rationale for a clay volume being triggered by a visitor at Spode; through activity in a 'reading room' with a selection of 6 town volumes situated in front of the KIP installation.</p>
6 January 2017 KIP	<p>Developing ACE Grants for the Arts/Libraries Application in consultation with BCB and SOT Libraries. Change of project name from Switchboard to working title: Knowledge is Power (cooking the books)</p>
3 April 2017 BAD SHIT	<p>First contact from Ben Roberts, director of Artists Research Centre (ARC) about commissioning a new work for The Tetley in an exhibition and an experiments academy over the summer. The focus of the show is process, transformation and research creating experimental environments; the ways in which the material itself can be altered but also used to alter our experience of a physical space.</p> <p>The structure is a group show in which a small number of artists are offered a studio and exhibition space within the gallery - both of these are public with the</p>

	idea of using the spaces together to experiment with ideas of exhibiting process. Alongside this exhibition there will be an experiments academy over an intensive period in the summer to develop a public programme of experiments, talks, performances around practice to take place either in the gallery or in the exterior spaces around the building.”
23 February 2017 KIP	ACE Grants for the Arts/Libraries Application submitted. The working title of the project is now Knowledge is Power; 6 Towns.
3 May 2017 KIP	KIP Awarded Arts Council Funding of £49,500
May - June 2017 KIP	Working with KMF to develop adapted library shelving units from sheet steel according to developmental drawings. Commissioning refractory shelving from Acme Batt Co to house the books, take the weight and refractory shock . Working with Staffordshire University to develop arduino technology for firing sequence - this was later incorporated into the ‘black box’ and switching system developed by Drayton Beaumont Services. Exploring options to also produce seating tables for the reading rooms - outsourced for the design of this to studio Alt Shift - Later worked with KMF directly from CAD drawings taken from my preliminary sketches Latest working drawings scanned and sent to BCB/KMF
5-6 June 2017 KIP	KIP Project Meetings over two days with all project partners at Hanley Library: Meeting with Potclays to discuss the range of clay bodies to be used. Colour coding on spines of books rather than coloured throughout the clay body. Meeting with Midland Elements to discuss specially made elements and test at the prototype. Very localised heat - steam produced and the smell of heating clay is palpable. Meeting with Staffordshire University to discuss arduino technology. Knowledge is Power - Design meeting update with BCB: <ul style="list-style-type: none"> • Update from the BCB (site details) - map of the space • BCB Reading Space dimensions and ideas of the structure the BCB will use for the festival. Discuss furniture, and concept of the space. • Library - What will be put in the library? • Safety Structure - update and ideas so far. Drawings or ideas about how to make the commission safe: Glass/perspex screen, fence, maybe distance? Logistical Updates: <ul style="list-style-type: none"> • Technology/Digital - the amount of heat we need or are aiming for, share this information with Chris Wayman of Staffs University and Ben McManus of Wavemaker • Book Producing - Resolve Mould design with Peter Jones and establish process of book production. Additional support needed? • Key Dates: Workshops and deadlines shared with project partners including KMF
20-25 June 2017 KIP	Developing clay firing tests with Peter Jones and prototype clay book using six different sized moulds based on brick making techniques.
27 June 2017 KIP	Number of books and clay body assigned to each of six towns libraries: Library & Number of books from 6 Towns Collection Type of clay & amount required (in bags of 25kg): <ol style="list-style-type: none"> 1. City Central (Hanley) Library 301 books: Grogged red clay x 34 bags 2. Longton Library 125 books: Grogged white clay x 14 bags 3. Tunstall Library 143 books: Crank clay x 16 bags 4. Bentilee Library 73 books: Y material clay x 8 bags

	<p>5. Stoke Library 142 books: Raku clay x 16 bags</p> <p>6. Meir Library 97 books: Grogged pink clay x 11 bags</p> <p>Total books in 6 Towns collection: approx 881 including duplicates</p> <p>Total clay required: 100 bags = 2.5 Tonnes</p>
3 - 17 July 2017 KIP	First phase of production of clay books with local schools 3rd-5th, 10th and 17th July.
5 July 2017 KIP	Additional book making dates added with general public on 1- 2 August
12 July 2017 BAD SHIT	First meeting with Bryony Bond, Director at The Tetley and curator Ben Roberts (ARC) in London. Presented documentation of current practice. Informed that the Material Environments Exhibition was subject to funding by ACE.
12 July 2017 KIP	Public call out for volunteers to make clay volumes on Tuesday August 1st, 5pm - 8:30pm and Wednesday August 2nd, 10am - 12:00, 13:00 - 16:00 at China Hall, former Spode Works site, Elenora Street, Stoke.
17 July 2017 KIP	Protective cage for KIP developed through consultation with KMF
17 July 2017 KIP	Consultation with Thersker UK to develop firing sequencer
20 July 2017 KIP	Development meeting with KMF - library furniture simplified/Prototype shelving produced?
24 July 2017 KIP	Library furniture for reading room adapted to enable laser cutting - speed up manufacture
1 August 2017 KIP	<p>Interview on BBC Radio Stoke to talk about the project and encourage the public to get involved in the clay book making at Spode.</p> <p>Test refractory shelf from Acme Batt Co fitted in prototype shelving with KMF</p>
4 August 2017 KIP	<p>ACE Interim Report: Principle findings:</p> <ul style="list-style-type: none"> • changes to the firing system and schedule based on costs and availability of a power source. The proposed daily connecting of the elements to unfired blocks will add to the ritual and drama of the work. • The making of the clay books has opened out to the wider community and changed the nature of the making, the books are now more individual. A further public call out needed to get the remaining books made as they take longer to make than anticipated. • Considering whether the making of the books continues during the BCB exhibition. • Difficult to ascertain the size of the collection with many books not on the official SOT library list. • In negotiation with KMF over the best way to translate the ideas for the seating in the reading room using the forming processes available at KMF.
8 August 2017 KIP	Invitation to speak about KIP as keynote speaker at Ceramic Values conference at the Potteries Museum, Stoke-on-Trent: Can Ceramics Make a Difference? (5-6 October 2017) is the culmination of Ceramics and its Dimensions, an initiative involving 19 European partners. The Congress, led by Ulster University, aims to add to the debate about the value and role of ceramics in society.
9 August 2017 KIP	Final drawings sent to KMF for production of Reading Room seating
24-28 August 2017 KIP	Install plan drawings sent to BCB regarding the positioning of the six shelving systems in the space at Spode works.
16 September 2017 KIP	Additional public Book Making day takes place at the former Spode factory

22 September 2017 KIP	Opening of BCB 2017 KIP switched on for the first time as part of the opening ceremony. SOT libraries use the Reading Room as a pop-up library during the festival.
11 October 2017 BAD SHIT	Material Environments Experiments Workshop project in Leeds, awarded Arts Council Funding. Confirmation that the exhibition <i>Material Environments</i> will be at the Tetley from 4 May - 8 July 2018. Connected to this will be the Experiments Workshop project, a week-long public experiment staged in the gallery as part of the exhibition to take place 15-20 May 2018.
26 October 2017 KIP	Discussion with Hanley library about post-BCB install of KIP Proposal for the 6 bookcases with fired ceramic books and chairs to be installed in Hanley Library as the final permanent installation of the project. To enable this the books will need to be higher fired (stabilised). The bookcases will need to be sprayed/lacquered and fitted to the floor. Chairs are ok as they are galvanised. Piece to be made 'Public Art work proof' discreetly adhering the ceramic books to the shelves.?
1 November 2017 KIP	KIP 6 Towns Celebration Event - Final public firing of KIP - signed Certificate of Participation given out to all school children taking part.
18 November 2017 BAD SHIT	Site visit to the Tetley - discussed options to site a work outside. A new work would be informed by the former brewery offices. Various room options are available but particularly drawn to the idea of adjoining rooms and the wood panelling in the former offices that denote status in the company. On the basis of this I chose to use the two adjoining rooms spaces G8 & G9 with a door opening between them.
1 December 2017 BAD SHIT	Early Development drawings and notebook sketches. Correspondence with curator Ben Roberts: Exploring use of a yeast (<i>Saccharomyces cerevisiae</i>) central to the process of brewing and bread making. The two adjoining rooms at the Tetley could reflect this split from the same organic starting point (derived from the natural yeasts in the air so we start from nothing). An aspect of the build up/live process is the growing of the organism in their respective mediums in different rooms: flour + water sugar + water. Interested in carbon dioxide gas produced by brewing and its uses in fire extinguishers and dry ice making. Possibly create one room full of expanding dough and another of dry ice - a laboratory diptych.
6 December 2017 KIP	Central Library informed that the planned Library renovation scheme through which KIP would be permanently sited will not now go ahead due to Government funding cutbacks. Alternative spaces at Central Library were explored to house KIP but none were suitable for the scale and weight of the final fired work. Plans were made to see if the entire installation could become a public realm art work as part of Stoke's Cultural Strategy.
15 February 2018 KIP	Further discussions with BCB and Stoke Libraries about final install of KIP at Central Library - work currently in store at BCB pending final decision by Stoke Libraries.
December 2017 - February 2018 BAD SHIT	A2 development drawings: Using The Tetley gallery plans barrels containing yeast, sugar and water in one room depicted piping gas into the adjoining room to inflate a giant multi-coloured/red inflatable balloon that would fill the former management office space. Calculations made by chemist Anthony Wynne to ascertain amounts of water, sugar and yeast needed to produce sufficient quantities of CO2 gas to fill the volume of the large inflatable.
23 February 2018	BAD SHIT - Material Environments Press Release
6 March 2018	BAD SHIT -Send fund application to BSU to support The Tetley Project

8 March 2018 BAD SHIT	Development drawings and notebook sketches sent to The Tetley for publicity.
23 March 2018 BAD SHIT	Enquiry to Tetley about use of a cube TV monitor to play the asteroids video piece in the brewing room gallery space to act as a visual guide to the brewing process happening in the opaque barrels and a metaphor for the administrators that formerly worked in the office.
4 April 2018 BAD SHIT	After calculating the materials required to produce enough CO2 it was estimated that the brewing element of the work will need to be housed in 12 x 210 litre 5kg containers that will each contain 200 litres of water + 25 kg sugar = 2400kg + 300kg + 60kg = Total combined weight of 2460kg /2.46 tonnes.
5 April 2018 BAD SHIT	Ideas developing for Material Weekender: Use carbon dioxide produced so far to create a chain reaction with the by-product of the original experiment to carbonate water, make dry ice, extinguish fires. Option to work outside with a direct/visual link to the inflatable upstairs with a possibility to bottle the gas/carbonated water as a give away/edition over the weekend.
10 April 2018	Title of Bad Shit decided - formerly <i>POP (Bad Shit)</i>
23 April 2018 BAD SHIT	Asteroids video piece completed with Carl Slater formatting the video for the cube monitor.
30 April 2018 BAD SHIT	Gallery and Exhibition Guide text established and confirmed with all artists
25 April - 29 April & 1-3 May 2018	Bad Shit install at The Tetley. 25-28 April - Setting up barrels & filling with water, setting up monitor, connecting piping, priming balloon to half inflation. 1-2 May : Mixed sugar & yeast with water to start the chemical reaction, set up DIY Health & Safety signage and hazard tape in gallery spaces.
3 May 2018	BAD SHIT - Material Environments show opens at The Tetley, Leeds
5 May 2018 BAD SHIT	Overactive brewing occurred in the work during the first weekend of the show. Some liquid went through the pipes toward the balloon and created puddles on the floor. Polythene was put down to stop liquid soaking through the floor. All changes were incorporated as part of the installation.
17-20 May 2018 BAD SHIT	Experiments Weekender at The Tetley. Live broadcast by <i>this is tomorrow</i> through its website platform. Bottled edition of bad shit produced over two days in front of the general public visiting the gallery space.
18 May 2018	Interview/podcast with Harry Meadley as part of the Experiments Weekender.
23 May 2018 BAD SHIT	Bottles remain in situ and rolls of tape are left on the barrels after the Weekender so the process is still evident and provides a sense of (arrested) work- in-progress.
6 June 2018 BAD SHIT	Summary of Feedback for Bad Shit ACE report: <ul style="list-style-type: none"> • The <i>Experiments Workshop</i> enabled the live production of an experimental art edition in The Tetley gallery over two days. • The work was a condensed version of the main work 'Bad Shit' produced for the <i>Material Environments</i> show and contained a material experiment in each 750ml glass bottle. • This process of production in the space led to an unexpected ongoing dialogue with a new audience about the work, its associations and its origins. • The audience were invited to take away the edition as a memento but politely declined.