

# CAMERA OBSCURA

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PH0710 Positions and Practice

Illustrated Proposal

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# Introduction

## **I love a challenge.**

I consider myself a versatile and creative person, with a love for metal and woodwork developed during my school years, that's continued throughout my adult life.

Five years ago I embarked on my largest woodwork project, when a friend asked me to fell a diseased oak on his farm. Beams and planks were cut from it and used to make sympathetic repairs to his 18<sup>th</sup> century barn conversion. As a reward, I claimed one of the planks. It was seasoned for three years and then I was able to work with it to make a dining table for my home.

During the start of the pandemic in 2020, I was furloughed for several weeks by my employer. To keep busy and alleviate boredom, I chose to repair an antique clock that my wife and I had bought as a non-working ornament. The success with this project encouraged me to try something a little more complicated - an old film camera, whose mechanism had locked-up making it inoperable. Many hours later, and with extensive research, I had it working again. This project was so rewarding that it has led to the purchase of many more film cameras, mostly requiring repair, which now fill my shelves.

The only class of camera that I haven't had an opportunity to use are the pinhole camera and the camera obscura, and this has sparked my idea for this project - to build my own camera obscura.

# Objectives

## **Create a Portfolio**

Build a portable wooden pinhole camera and create images that explore the coastline around Folkestone and its relationship with the people who live and visit here. Exhibit portfolio locally and via social media platforms.

## **Engage & Excite**

Collaborate with the Creative Foundation in Folkestone to secure a location on Folkestone's Harbour Arm to site a walk-in camera obscura. With high footfall, it offers the best opportunity for public participation.

## **Encourage Participation**

Construct a large walk-in camera obscura in this public space, to educate locals and visitors, in the simplest of cameras offering the opportunity to take and develop their own 'selfies'. Assess the possibility of on-site processing.

## **Find Green Solutions**

Explore the use of alternative developers. Most off-the-shelf developers contain chemicals, which are harmful to people and the environment. I hope to find and use an eco-friendly alternative.

# Timescale

I envisage a timescale of three weeks to perfect and build a prototype cardboard camera.

I estimate at least two months, to design and construct the full-sized wooden version.

Following the submission of this Proposal, I plan to immediately contact the Creative Foundation and explore the possibilities of a publicly accessible, walk-in camera obscura to be constructed on their property. I'm currently unable to predict the timescale required to secure a meeting and gain the required permissions.

# Experimentation & Research

## The Project to Date

I wanted to explore the feasibility of temporarily converting a spare room into a camera obscura. I started by sourcing black plastic sheeting to cover the windows. I am fortunate to work within an industry that uses many different products for a large variety of purposes. The plastic was cut from a large sheet, surplus to requirements. This fitted my spare room window almost perfectly. A hole, 20mm in diameter, was cut in the centre and the resulting image photographed for reference. However, after more research, I feel that using sections of cardboard fixed with masking tape, would be much easier to manage and could be better for the environment.

Due to the height of my windows, and having just one pair of hands, the light-tightness could have been improved but the results validated my experiment.

Exposure times were five seconds in the darkened room.



Figure 1.



Figure 2.



Figure 3.



Figure 4.



Figure 5.

The next stage was to create a portable camera obscura and test a method of viewing the image on the inside of the box. Having a regular supply of cardboard boxes that package the alcohol-free beer which I drink is very handy. They're fully recyclable and I buy three each month, so regular experimentation is quite feasible.

In the first instance I created two holes in the side of a box (the front), one a five millimetre diameter round hole, the other a square, two centimetres wide. I placed a piece of white card on the inside of the rear of the box and used the square hole to photograph the image with the camera on my phone.

The resulting image, seen here, once reversed and flipped, is recognisable, but out of focus.



Figure 6.



Figure 7.

Amongst my box of spare camera parts I found a +2 diopter viewfinder adapter. Once I placed this over the aperture it dramatically improved the image produced as can be seen here.

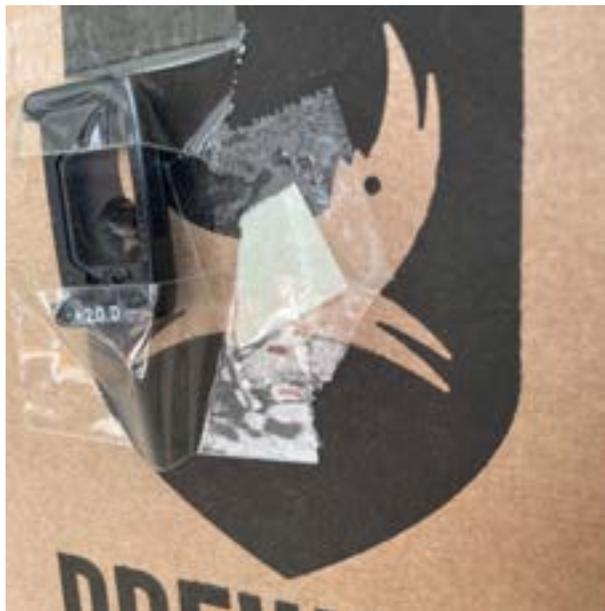


Figure 8.



Figure 9.

I went on to research other ways of recording the image. I purchased a pack of Ilford photographic paper, developer (I already have fixer), three trays were donated and I purchased a rechargeable headtorch with red light capability<sup>1</sup>. Working in a darkroom with a headtorch makes the job of inserting and securing the paper inside the box, then securing the whole thing against light penetration, much easier and more efficient.

It was a shame that no one could see the huge smile on my face as this image, my first ever attempt with photographic paper, began to appear.

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1. BARRY, Brendan. 2020. Shed Camera. *Brendan Barry*. Available at: <https://brendanbarry.co.uk/videos> [Accessed 07-04-2022]



Figure 10.



Figure 11. Unknown maker. ca 1885-1910. No title. [Postcard]

My research has revealed that in the late 19<sup>th</sup> century, Folkestone had a Camera Obscura on the seafront. Two picture postcards from that era, show its size and position. Edward Langford Davies owned and ran the camera obscura in Folkestone until he died in 1892, aged just 44. He is buried in a local cemetery, alongside a previous owner of my own home, hence the historical interest.

The original location is no longer ideal due to construction work and reduced visitor numbers. I have identified a more suitable site just inside the entrance to the Folkestone Harbour Arm, and will aim to secure permission for construction there. It will be a octagonal wooden structure with steeped roof, and lens and mirror mechanism in the centre. Inside there will be a round 'tabletop' on an axle/pivot allowing it to be used horizontally or vertically. The vertical position could capture portraits of participants posing directly outside the structure, through a second lens in the side wall, projected onto photographic paper within or captured with a smart phone through a small aperture.

My intention is for the camera obscura to be elevated beyond the original Victorian sideshow. I hope to excite and educate, encourage public participation, promote and preserve Folkestone's heritage.



Figure 12. VALENTINE, Harben James. ca 1900-1910. Folkestone from the pier. [Postcard]

# The coming months

## **May - September 2022:**

I plan to visit the Camera Obscura in Llandudno. To minimise any extra travel, I will plan this journey to coincide with one of my twice yearly visits to my mother who lives nearby in Anglesey.

I will draw up construction plans and diagrams to visualise the final structure, revising estimates continuously as actual costs are realised. Dialogue with business owners will feature too, referencing funding in particular.

Experimentation with different photographic methods, mediums and lenses will be vital and feature strongly.

If permissions are gained and funds sourced, I will contact Folkestone College to propose a collaboration with the woodworking department students to help with the construction process.

Alongside this, I will be building a smaller, portable pinhole camera. More substantial than cardboard, this will be a wooden structure that I will use in various locations in and around Folkestone.

## **September - December 2022:**

Construction will commence of the walk-in camera obscura.

Social media campaign to begin, promoting and building local awareness and interest.

## **December - May 2023:**

I will be using a studio/photo laboratory local to me, discussing and analysing the development procedures of different photographic mediums.

I have identified an organisation that specialises in the design and construction of camera obscuras who also can supply the lenses, mirrors etc. with a view to collaborating with for consultancy.

## **February-May 2022: Informing Contexts**

I don't want this to be a sideshow, this project needs to be informative and interesting. Last year Brendan Barry created a temporary camera obscura in Folkestone. It only lasted one day as a teaching tool for a small number of disadvantaged children. My project will extend and develop on Barry's work allowing more people to learn about and enjoy this phenomenon.

I will incorporate a QR code in the project to link with a social media site i.e. Instagram, to generate another body of work created by the public.

## **Ongoing research strategies across the three modules**

- Visiting various camera obscuras to assess their roles in informing people new to photography
- Obtaining feedback from my peers, tutors, practitioners, viewers
- Connecting with audiences and practitioners using social media
- Mind maps
- Reflecting on my work and ideas via the CRJ
- Using the CRJ to evaluate my progress and realise where I might change direction should it be necessary

## List of Figures:

Figure 1: HICKS, Jeff. 2022. *The spare room*. Private Collection: Jeff Hicks

Figure 2: HICKS, Jeff. 2022. *The spare room set up*. Private Collection: Jeff Hicks

Figure 3: HICKS, Jeff. 2022. *The spare room before*. Private Collection: Jeff Hicks

Figure 4: HICKS, Jeff. 2022. *The spare room after*. Private Collection: Jeff Hicks

Figure 5: HICKS, Jeff. 2022. *The spare room inverted*. Private Collection: Jeff Hicks

Figure 6: HICKS, Jeff. 2022. *Cardboard box camera obscura*. Private Collection: Jeff Hicks

Figure 7: HICKS, Jeff. 2022. *Camera obscura image*. Private Collection: Jeff Hicks

Figure 8: HICKS, Jeff. 2022. *Camera obscura lens*. Private Collection: Jeff Hicks

Figure 9: HICKS, Jeff. 2022. *Camera obscura image with lens*. Private Collection: Jeff Hicks

Figure 10: HICKS, Jeff. 2022. *Self portrait camera obscura*. Private Collection: Jeff Hicks

Figure 11: Unknown maker. ca 1885-1910. *No title*. [Postcard].

Available at: <http://www.warrenpress.net/FolkestoneThenNow/FolkestoneWestBeaches.html>. [Accessed 09-04-2020]

Figure 12: VALENTINE, Harben James. ca 1900-1910. *Folkestone from the pier*. [postcard].

Available at: <http://www.warrenpress.net/FolkestoneThenNow/FolkestoneWestBeaches.html>. [Accessed 09-04-2020]

# List of Appendices

**Appendix 1: Bibliography**

**Appendix 2: Webography**

**Appendix 3: Limitations, Risks and Threats to the Project**

**Appendix 4: Impact Assessment Plan**

**Appendix 5: Indicative Budget**

**Appendix 6: Risk Assessment Form**

## **Appendix 1: Bibliography**

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### **Appendix 3: Limitations, Risks and Threats to the Project**

Location. I may not get the permissions necessary to allow the ideal placement.

Building the structure will be challenging. I plan to approach the local academy to see if their woodwork students will collaborate with the construction.

Weather and salt water. These will be detrimental to the structure.

Locked access. The site could be locked over winter and periods of bad weather.

Cost. The funds may not be available, if expenses increase with the complexity of the project.

### **Appendix 4: Impact Assessment Plan**

#### **1. Project Narrative and Values**

The wooden construction materials will be from a FSC certified supplier. At the project's end of life, these materials will be recycled or repurposed.

I intend on researching whether I can use sea water, instead of tap water, to rinse the photographic papers I will be using. Disposal of the contaminated water will also be evaluated before I commence with this part of the project.

## **2. Resources, Materials and Suppliers**

### PHOTOGRAPHIC EQUIPMENT

I'm purchasing no extra film at the moment, I have quite a large stock. If I were to purchase more film I'd source expired/out of date film.

I will use local retailers to purchase photographic paper from.

Ilford photographic paper is recyclable according to the packaging. I'm currently waiting for their response as to their own carbon footprint and responsible sourcing.

### **3. Transport**

I will be walking to and from the camera obscura site itself.

The routes to the planned sites of the portable camera obscura, are walkable and much more interesting.

### **4. Power**

In my own personal life I am conscious of my own carbon footprint, this diligence will be mirrored in the project.

Once the camera obscura is built, the minimal lighting inside will be solar powered or rechargeable, both red and white lights.

The camera obscura itself will use no power to function.

## **Appendix 5: Indicative Budget**

Plywood, wood, screws - £1000.

Optical elements - between £1000-£6000 dependant on diameter of the lens and focal length required.

Photographic paper and chemicals - £100+ This will vary according to the number of people who wish to have their photograph taken.

I propose the site will be free from rental costs as it will be classed as an attraction/art piece for the Harbour Arm Company's benefit.

## Appendix 6: Risk Assessment

Risk Assessment				
<b>Student</b>	Jeff Hicks			
<b>Programme</b>				
<b>Activity/Equipment</b>	Construction and use of a walk-in Camera Obscura			
<b>Location</b>	Folkestone Harbour Arm, Folkestone, Kent.			
<b>Hazard</b>	<b>Who is at risk?</b>	<b>Inherent risk score</b>	<b>Controls</b>	<b>Risk score with controls</b>
Construction injury	Builders	12	PUWER	4
Drowning	Everyone	10	Two metre safety distance from the sea	1
Fire	Persons inside wooden structure.	6	Fire extinguisher in place	1
Slips, trips and falls. Dark interior	Everyone entering	9	Construct entry ramp	4
Electrocution	Persons inside structure.	9	Lights out of reach. Low voltage.	2
Cliff edge	Myself	12	Stay on foot paths/appropriate footwear and clothing	3

### Risk Matrix

Likelihood	Consequence				
	Very minor injury	Minor injury	Major injury	Severe injury - RIDDOR	Death
Highly unlikely	1	2	3	4	5
Unlikely	2	4	6	8	10
Possible	3	6	9	12	15
Likely	4	8	12	16	20
Very likely	5	10	15	20	25