

# HISTORIC BUILDING RECORDING OF THE LEAS LIFT, WEST CLIFF, LOWER SANDGATE ROAD, FOLKESTONE, KENT

Date of Report: 23.04.2024

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*Front cover: Postcard. The Lower Lift Station photographed in the 19<sup>th</sup> Century*

## 1.0 INTRODUCTION

1.1 In April 2024 Dr Paul Wilkinson of SWAT Archaeology carried out a historic building recording and photographic survey of the building known as Leas Lift, West Cliff, Folkestone in Kent (Figures 1, 2 & Plates (Views) 1-10). The building is presently occupied.

1.2 The building recording was carried out on the 15<sup>th</sup> April 2024 in accordance with a Level 3 survey as detailed in the Historic England publication 'Understanding Historic Buildings: A Guide to Good Recording Practice' (2016). And *The Chartered Institute of Field Archaeologists Standard and Guidance for the archaeological investigation and recording of standing buildings or structures* (2017) and the *KCC Historic Building Recording Requirements Part C*.

1.3 This is essentially a photographic record. Historic England specifications for a Level 3 report suggest that written information should be to identify the building's location, age, type, materials, use and when and whom compiled the report.

General photographs of the exterior as well as any specific architectural or historic features (both internal and external) should be taken.

The Historic England guidelines for a Level 3 are:

*Level 3 is an **analytical record**, and will comprise an introductory description followed by a systematic account of the building's origins, development and use. The record will include an account of the evidence on which the analysis has been based, allowing the validity of the record to be re-examined in detail. It will also include all drawn and photographic records that may be required to illustrate the building's appearance and structure and to support an historical analysis. A Level 3 record may also be appropriate when the fabric of a building is under threat,*

*but time or resources are insufficient to allow for detailed documentary research, or where the scope for such research is limited.*

**1.4 In summary the work consists of a descriptive report accompanied by digital photographs.**

1.5 The principal elements of the survey involved the creation of a record and description of the historic fabric of the front of the building together with an analysis and interpretation of the buildings origins and historic development.

1.6 A review of Historic OS mapping has been made (Maps 1-8) and the Pevsner Architectural Guide (*Kent, North & North East 2013*) was consulted as was the National Heritage Register for England.

1.7 This report consists of a descriptive report accompanied by digital photographs and annotated plans.

## **2.0 HISTORICAL/ARCHAEOLOGICAL BACKGROUND**

### **2.1 Location**

The proposed development site is located to the west of Folkestone Harbour and east of Leas Cliff Hall. The NGR (National Grid Reference) is 622743 135671. The PDA (Proposed Development Area) is in an area of extensive 19th and early 20th century seaside development and a map assessment of OS historic mapping shows that in 1872 (MAP 1) the PDA is not identified but by 1897 the Lift is shown with adjacent baths, Lifeboat House and a Switchback to the west, Marine Gardens to the east and Victoria Pier to the south (MAP 2). The OS map of 1906 shows little change (MAP 3) as does the OS map of 1931 (MAP 4).

2.2 Historic England Monument details for the site are as follows:

Heritage Category: Listed Building Grade II\*

List Entry Number: 1061185

Date first listed: 27-April-1989

Date of most recent amendment: 27-June-2016

List Entry Name:

*The Leas Lift, including waiting rooms, pump room, lower station tanks, track, cars, wheel houses, tank room, upper station tunnel and railings*

Statutory Address: The Leas Lift, The Leas, Folkestone

The building or site itself may lie within the boundary of more than one authority. County: Kent

District: Folkestone and Hythe (District Authority) Parish: Folkestone.

National Grid Reference: TR2274535668

Summary; A cliff lift comprising waiting rooms, pump room, track, cars, brake houses, boundary railings and lift machinery. The cliff lift was constructed in 1885 for the Folkestone Lift Company by Messrs Waygood and Co. The waiting rooms were designed in a Domestic Revival style by the architect Reginald Pope and the builder was John Newman. The pump room was added in 1890 in similar style, at the same time as a second lift, which was removed in

1985.Reasons for Designation

2.3 The Leas Lift, Folkestone, a cliff funicular railway built in 1885, operated by the water balance system, is listed at Grade II\* for the following principal reasons: \* Rarity: of only eight water balance cliff lifts built nationally, this was the third, but is one of only three which are still operating by the original

system; \* Engineering and structural interest: in its unique arrangement with two wheel houses with dual controls, with originally two separate lifts beside each other, with cars with side entrances; \* Rarity and degree of survival of the working machinery: being the only water balance lift with the original 1890 reciprocating pumps, with early cast steel herringbone gears in use, and its original balance wheel and brake assembly; it is the only funicular railway in the world with a working band brake and has a unique automatic, hydraulic, remote engine control system; \* Architectural interest: in the Vernacular Revival waiting rooms and pump house by Reginald Pope.



*Postcard 2. Lower Lift Station with Cliff Lifts (Looking NNW)*

## 2.4 History

2.4.1 The Leas funicular cliff railway was built to carry passengers between The Leas situated on the cliff top and the lower promenade and was opened to the public on the 21st September 1885 by the Folkestone Lift Company on land leased from Lord Radnor. The lift equipment was supplied by Waygood and Co of Southwark and the waiting rooms were designed by a Folkestone architect Reginald Pope, the builder John Newman.

2.4.2 Two carriages mounted on triangular-framed trucks ran on twin tracks, coupled together by steel wire rope passing around a large pulley wheel at the upper terminal. In order to operate the lift water is admitted to the ballast tanks of the upper carriage; this overcomes the weight of the lower one which is drawn up as the upper carriage descends. It was the third water-balance lift to be built in the country and it is now the second oldest still in service.

2.4.3 Originally the lift operated as follows: once the lower car was loaded the toll collector contacted the brakesman who also had the job of supervising the loading of the upper car. The weight of the loaded car approximated five tons and to set them in motion the brake was released and the cistern valves opened allowing whatever water was necessary into the tank of the upper car until its ballast outweighed that of the lower car and its passengers. On arrival at the bottom, the toll collector released the water into a drain running onto the beach.

2.4.4 The lift proved so popular that a second lift was added alongside the original one in 1890, of slightly different design but operated in the same way, and at the same time an automated water pumping system was also brought in because the former method of discharging the water at the bottom after each journey was giving the water company concern.

2.4.5 The first year of operation of the water recycling system ran into problems when the pipes taking the water back up the cliffs froze during the harsh winter of 1890. As a result an additional wing was built on the pump room to enclose these pipes and provide a coke stove to keep them defrosted.

2.4.6 The lower station building was used as a Home Guard Post during the Second World War. The original gas engines were removed at this time to deny the enemy an operating lift up the cliffs. After the war new electric motors were given to drive the pump from the War Damage Reparation Fund.

2.4.7 The 1890 lift was taken out of service after a heavy landing in 1966 and completely removed in 1985. In that year £75,000 was spent on refurbishing.

2.4.8 The Leas Lift was statutorily listed in 1989. The 1885 lift was closed for a number of years in the late C20 but was restored in 2010, winning an Institute of Civil Engineers award in 2011. The tracks to the 1890 lift were removed in 2013.

3.00 Historic England's listing description is:

3.1 A cliff lift comprising waiting rooms, pump room, track, cars, brake houses, boundary railings and lift machinery. The cliff lift was constructed in 1885 for the Folkestone Lift Company by Messrs Waygood and Co. The waiting rooms were designed in a Domestic Revival style by the architect Reginald Pope and the builder was John Newman. The pump room was added in 1890 in similar style, at the same time as a second lift, which was removed in 1985.

MATERIALS: waiting rooms constructed of brick cavity walls with tiled roofs. Cast iron railings, tracks and machinery. Iron, wood and glazed cars. Concrete and glazed brake houses.

PLAN: two conjoined waiting rooms with a linking corridor at the lower level



with an attached pump house on the east side. On the north side the waiting rooms are linked to two steeply inclined iron tracks 164 feet in length, each with a car and a brake house at the top.

**WAITING ROOMS EXTERIOR:** the 1885 waiting rooms on Lower Sandgate Road are single-storey brick pavilions with concrete plinths, hipped tiled roofs to the centre and splayed bays to the ends surmounted by terra cotta ridge tiles and finials. They are linked by a lower single-storey central entrance block with a gabled veranda supported on six wooden piers. The arched entrance has two 3-panelled, rail mounted sliding doors and is flanked by two narrow casement windows. The waiting rooms each have a tall casement window adjoining the entrance and a tall canted bay under a projecting gable with wooden barge-boards. The side elevations each had a casement window. When the second lift was added in 1890 the main entrance was moved from the central lobby (which became the exit) to a new double door which replaced one of the windows in the eastern waiting room. A flight of steps was built up to this door and the turnstile access was removed at this time. The rear elevations of the waiting rooms project forward of the entrance block and access to the cars is on the inner side.

**INTERIOR:** the waiting rooms and corridor retain their original joinery including dado panelling with fielded panels, doors with moulded architraves and fielded panels and wooden railings to regulate access to the cars.

**PUMP ROOM EXTERIOR:** a single-storey brick pump room with a concrete plinth and tiled roof, hipped to the west and splayed to the east with terra cotta ridge tiles and finials. The principal front has a projecting gable to the west with a three tier six-light square bay, a blank circular window, a four-tier four-light splayed bay and a single-light window in the side bay window.

**INTERIOR:** includes the two pumps, the automatic belt control mechanism and

an unique cast steel herringbone gear wheel, vertical pump pistons and pipe work under the floor.

**THE LOWER STATION TANKS** The original tank was built under the Lower Sandgate Road and consisted of a brick-lined round reservoir. A second tank was built alongside in 1899.

**TRACK** Cast iron track, originally laid on sleepers that spanned wooden longitudinal beams running vertically up the length of the track bed which were coated in tar. However, as a result of the harsh coastal weather these were replaced by concrete within a couple of years. In the middle of the tracks are the emergency braking systems.

**CARS EXTERIOR:** 1885 cars built to a modified goods-wagon design, fitted above a purpose-built undercarriage containing the water tanks. These run on a standard Victorian design of wagon wheels of approximately 28" diameter consisting of wrought iron spokes and cast iron rims. The undersides have undercarriages with a water tank and draining spout and a cistern valve between the two tracks fills the cars with water. The passenger cars have segmental-headed roofs, four windows to the ends and five windows to the sides. The half-glazed doors are on the centre of the outer sides and the Leas Lift is the only one from this era to be built with side door access to the cars.

**INTERIOR:** slatted wooden benches.

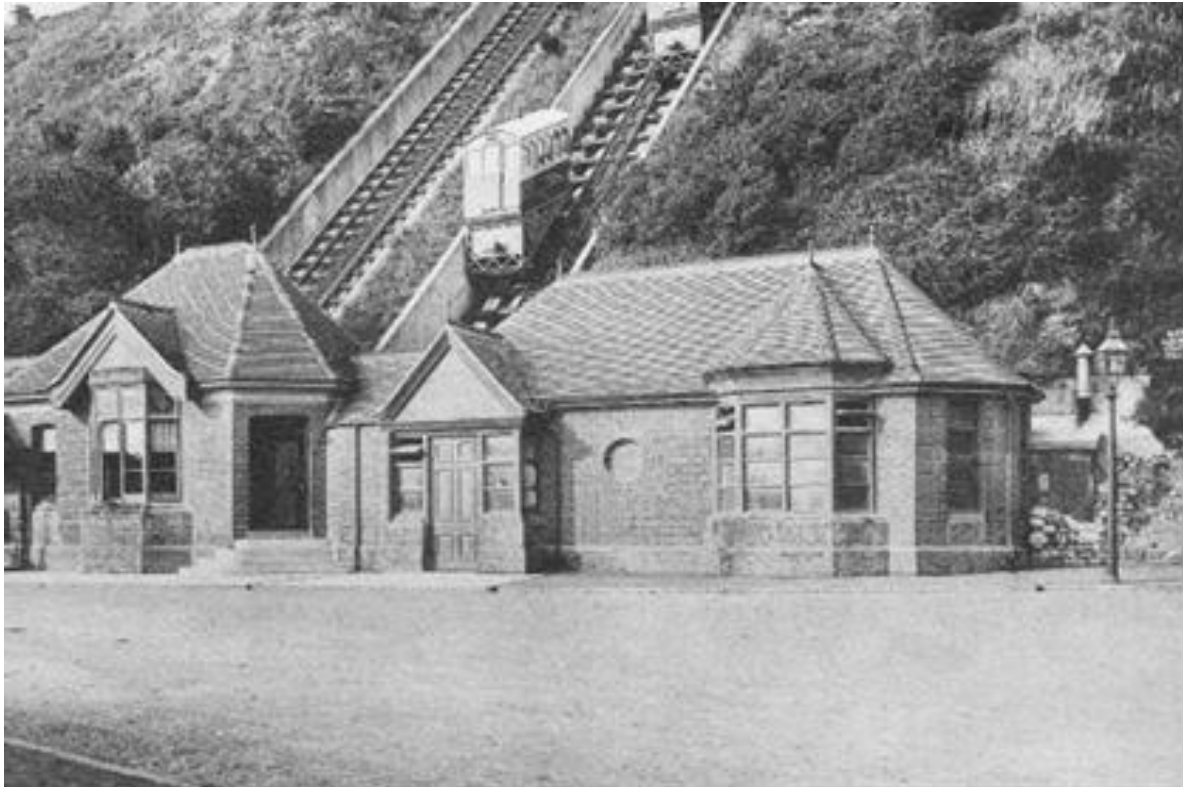
**WHEEL HOUSES EXTERIOR:** the upper station was originally provided with open air platforms and a driver station but the Board of Trade insisted that driver stations should be covered and two wheel houses were built, one for each platform. The wheelhouses are rectangular concrete buildings approached down flights of steps with continuous casement windows and hipped roofs. A third wheel house was built for the 1890 second lift.

INTERIOR: the wheelhouses retain the original driving controls. This was the only cliff lift ever built with dual controls. Although they were disconnected after a couple of years they are still in situ. The lift mechanism was originally provided with a separate brake wheel fitted lower down on the shaft of the balance wheel but this was replaced by a combined balance/brake wheel in 1887. Most of the controls were provided by standard railway components, for example the brake wheel was a level crossing gate wheel and the water lever was a signal box lever.

UPPER STATION TANK ROOM This was built under the Leas in 1890 and fitted with two cast iron tanks linked to form a single reservoir of the same design used on railway water towers. A second tank to a different design was built alongside in 1899.

UPPER STATION TUNNEL This is built under The Leas and extends the whole length of the upper station as defined by the cast iron railings (40ft). It is accessed down a flight of stairs down from the wheelhouse and gives access to the upper station tank room. It houses the brake wheel mechanism and control rods, the original dual controls and water pipes.

RAILINGS TO THE LEAS The 40ft frontage to The Leas has cast iron spear railings with dog rail and urn principals and a gas lamp standard.



A historic photo from c.1890 showing the original appearance of the pump room. This shows the bull's eye window was always a blind window, but that there was originally glazing in the two bays. This image shows how the eastern end of the pump room culminates in a canted east elevation with three planes, each with a window and a hipped roof above. Behind the third plane, a boiler room is just visible in this image, which was a later addition. Photo courtesy of Terry Begent.

Postcard 3

## 4.0 Setting

The site sits within a conservation area with a number of Listed Buildings in the vicinity of the site.

The Bedrock Geology is said to be by the British Geological Survey to be Folkestone Formation- Sandstone whilst the Lower Waiting Room area is bedrock geology of Sandgate Formation- Sandstone, Siltstone and Mudstone.

## 5.0 Planning history

A condition of archaeological works is attached to the Planning Consent Application Number: 23/0536/FH for:

*Restoration works to the Leas Lift (including lift cars and track), alterations to the upper and lower lift stations, the construction of an extension to the lower lift station to provide a café and associated landscaping and infrastructure works. Site Location: The Leas Lift, Lower Sandgate Road, Folkestone CT20 1PR*

Subject to the following conditions:

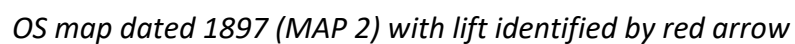
*9 No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of historic building recording (Historic England Level 3) in accordance with a written specification and timetable which has been submitted to and approved in writing by the Local Planning Authority.*

**Reason:** *To ensure that historic building features are properly examined and recorded.*

*10 No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of an archaeological watching brief to be undertaken by a suitably qualified archaeologist so that groundworks are observed, and items of interest and finds are recorded, reported on and the new information made publicly accessible. The watching brief shall be in accordance with a Written Scheme of Investigation, which has been submitted to and approved in writing by the Local Planning Authority.*

**Reason:** *To ensure that features of archaeological interest are properly examined and recorded.*

A rapid map assessment of historic mapping shows that in 1872 (MAP 1) the PDA is not identified but by 1897 the Lift is shown with adjacent baths, Lifeboat House and a Switchback to the west, Marine Gardens to the east and Victoria Pier to the south (MAP 2). The OS map of 1906 shows little change (MAP 3) as does the OS map of 1931 (MAP 4).



## **6.0 DISCUSSION**

6.1 A review of the proposed developments show the Grade II\* buildings will have new life breathed into them as the rarity of the eight water balance cliff lifts built nationally, this was the third, but is one of only three which are still operating by the original system. Engineering and structural interest: in its unique arrangement with two wheel houses with dual controls, with originally two separate lifts beside each other, with cars with side entrances.

6.2 Rarity and degree of survival of the working machinery: being the only water balance lift with the original 1890 reciprocating pumps, with early cast steel herringbone gears in use, and its original balance wheel and brake assembly; it is the only funicular railway in the world with a working band brake and has a unique automatic, hydraulic, remote engine control system. Engineering and structural interest: in its unique arrangement with two wheel houses with dual controls, with originally two separate lifts beside each other, with cars with side entrances;

6.3 Rarity and degree of survival of the working machinery: being the only water balance lift with the original 1890 reciprocating pumps, with early cast steel herringbone gears in use, and its original balance wheel and brake assembly; it is the only funicular railway in the world with a working band brake and has a unique automatic, hydraulic, remote engine control system. Architectural interest: in the Vernacular Revival waiting rooms and pump house by Reginald Pope.

## 7.0 PARAMETERS

7.1 The photographic survey was conducted using digital photography and as the exterior of the building was available drone coverage of the exterior of the building was undertaken. The use of drones for capturing important buildings is now an acknowledged part of historic building recording. For drone footage of other building and archaeological sites recorded by SWAT Archaeology access here: [www.swatarchaeology.co.uk](http://www.swatarchaeology.co.uk) and go to "Building Recording".

7.2 This work did not include any investigation of below ground archaeology. Such work is administered separately by SWAT Archaeology to a WSI prepared for the Local Planning Authority.

7.3 The site survey took place in October 2022 and photographs can be seen in the following Plates.

Report compiled by Dr Paul Wilkinson BA (Hons), MA., PhD., MCIfA., FRSA., IHBC and dated 23<sup>rd</sup> April 2024.





## 8. References

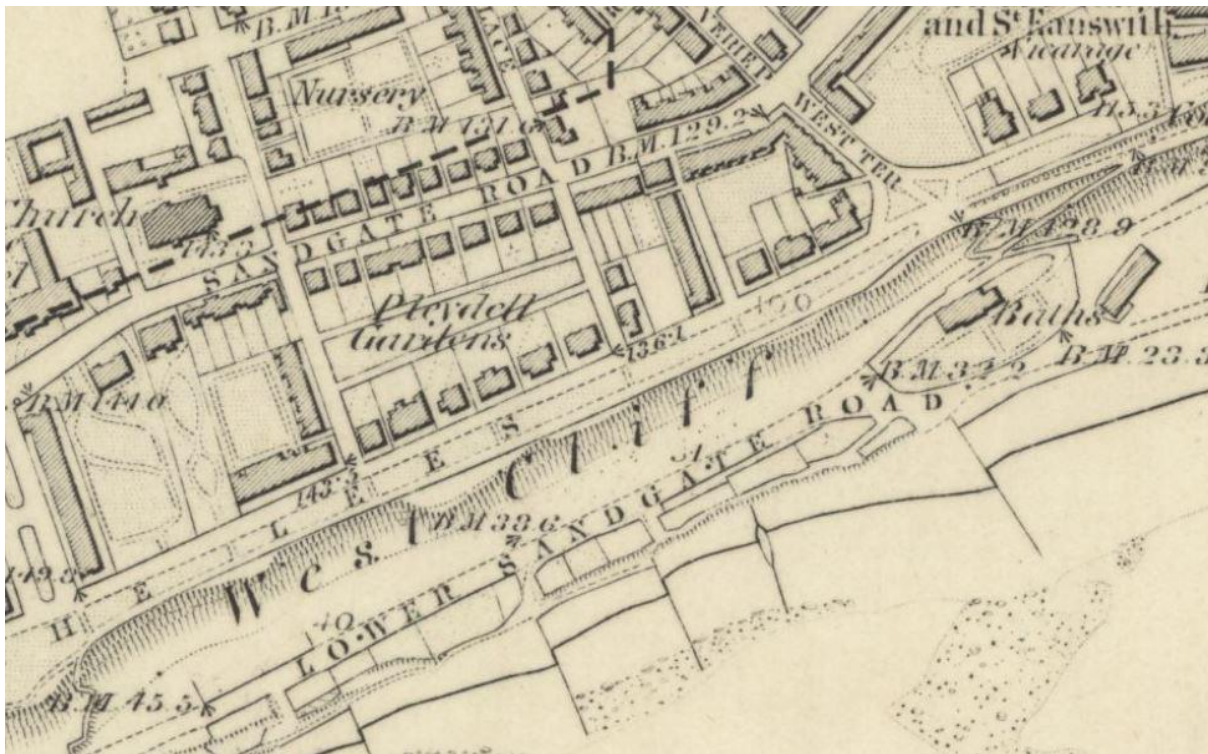
Historic England, 2019 *Understanding Historic Buildings: a guide to good recording practice*

The National Heritage List for England (accessed 12th March 2020)

Chartered Institute of Field Archaeologists, *Standard and Guidance for the archaeological investigation and recording of standing buildings or structures* (2017).

Leas Cliff Folkestone Gazetteer- Heritage Architecture Ltd

## MAPS AND PLATES

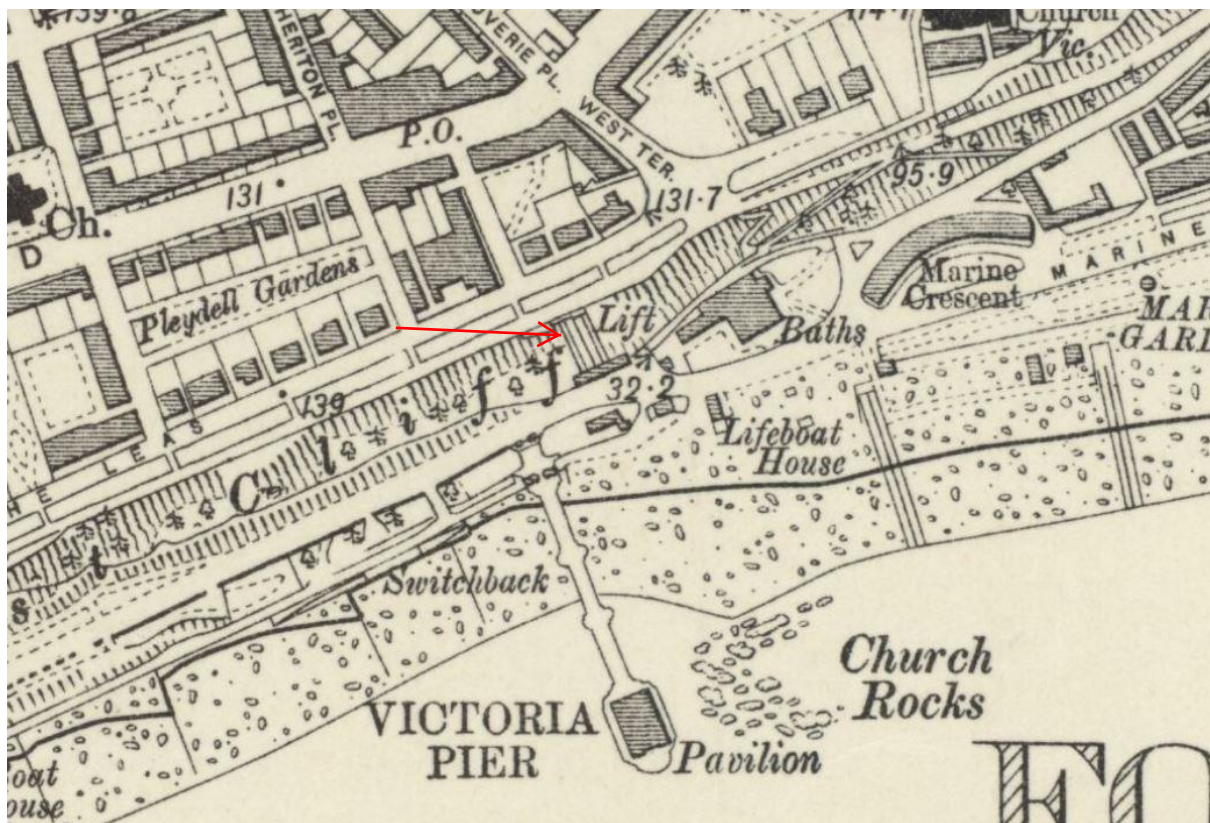


MAP 1. OS 1872 (no lift)

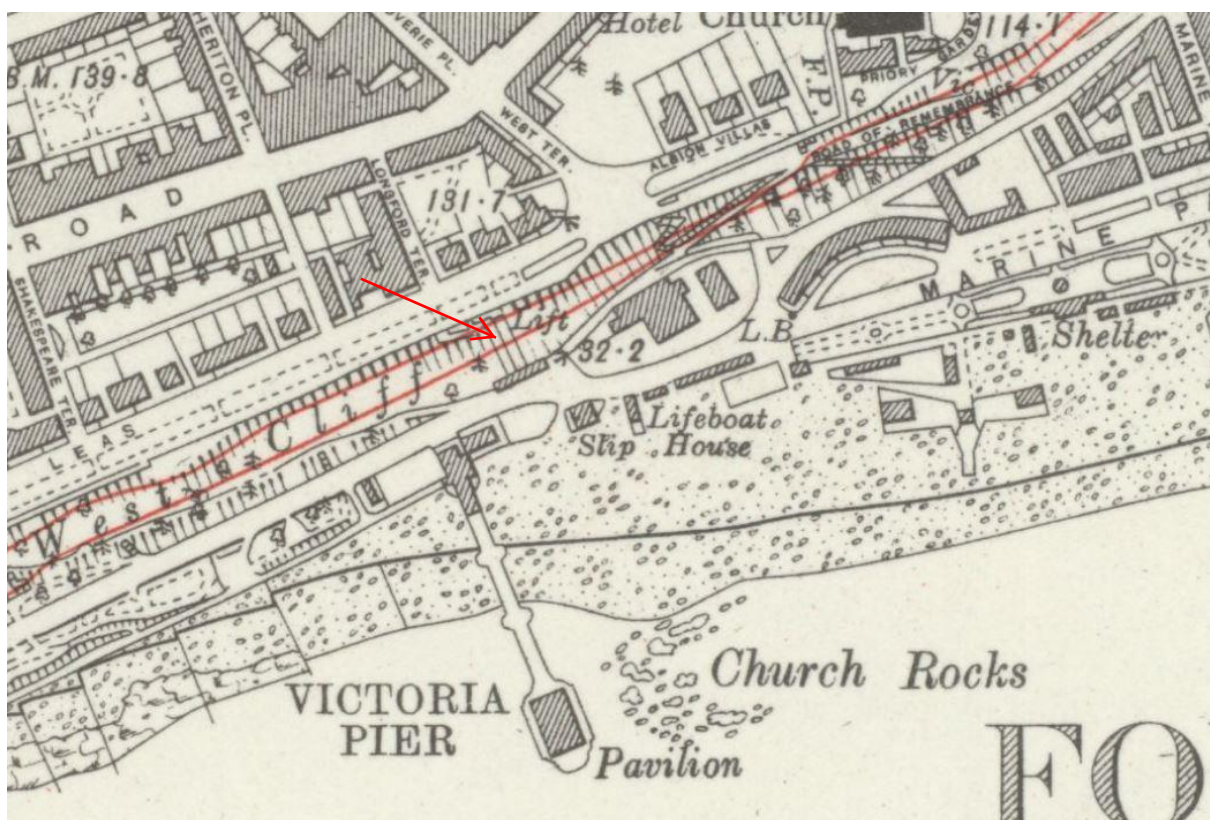


MAP 2. OS 1897 (red arrow for lift)





MAP 3. OS 1906 (red arrow for lift)



MAP 4. OS 1931 (red arrow for lift)

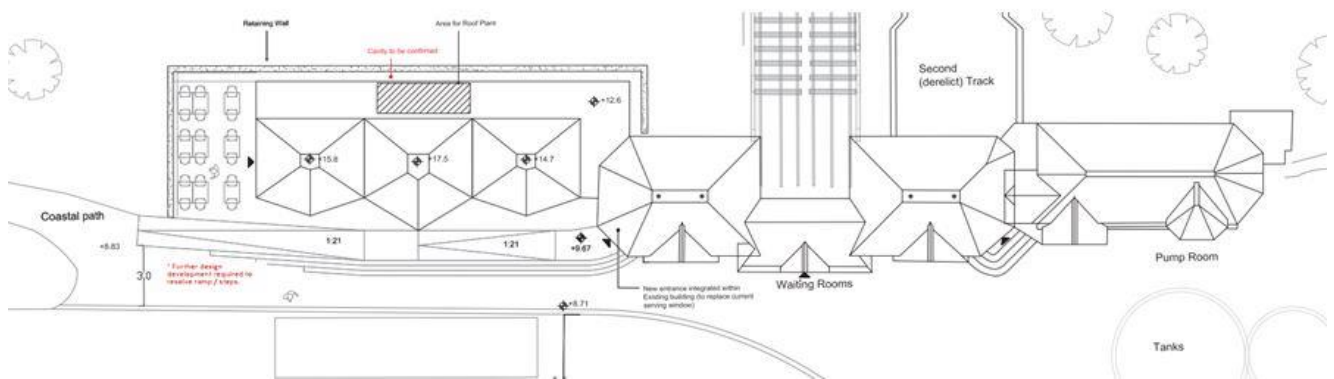




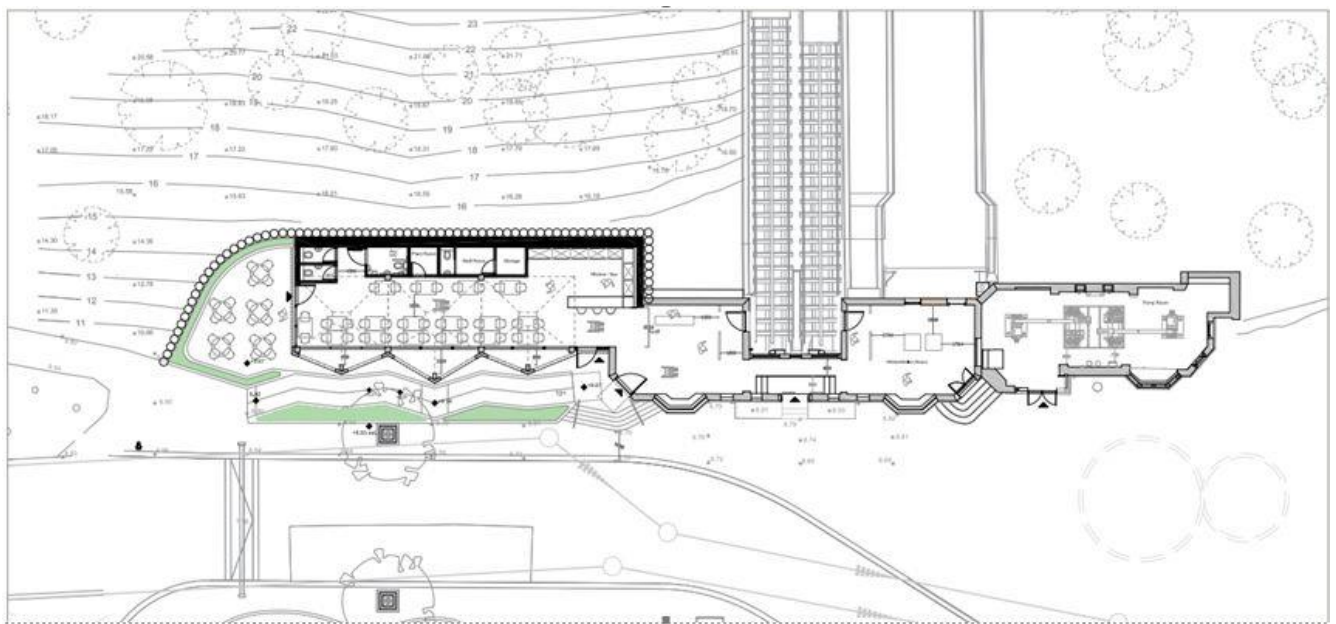
MAP 5. KCCHER map



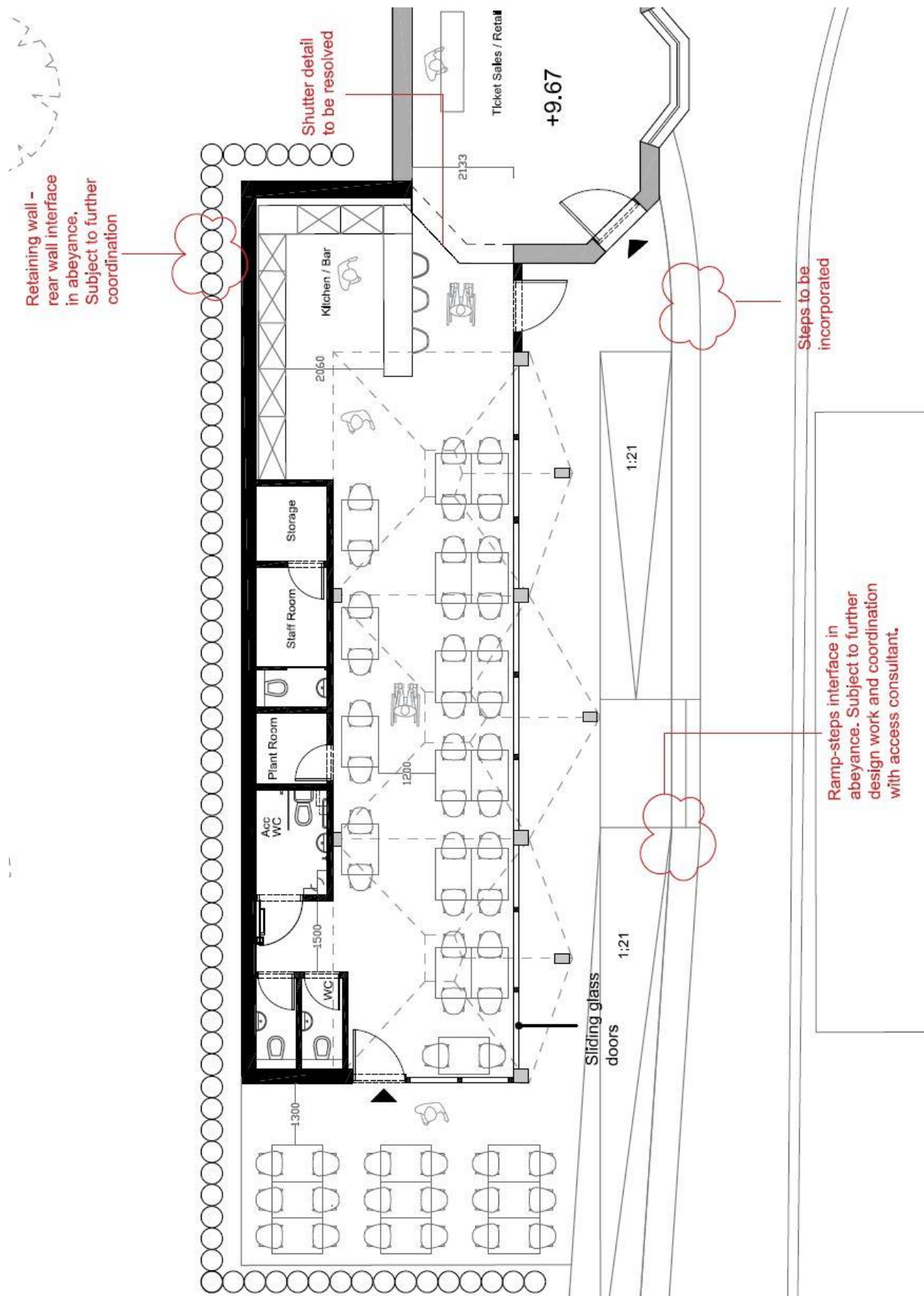
MAP 6. Historic England map



MAP 7. Proposed works- exterior



MAP 8. Proposed works- interior



MAP 9. Proposed works



## PLATES



Plate 1. The two lifts (Looking NNW)



Plate 2. Lower Lift Station (Looking NNW)





Plate 3. Lower Lift Station (Looking NW)



Plate 4. Lower Lift Station (Looking NW)





Plate 5. Pump Room (Looking NNW)

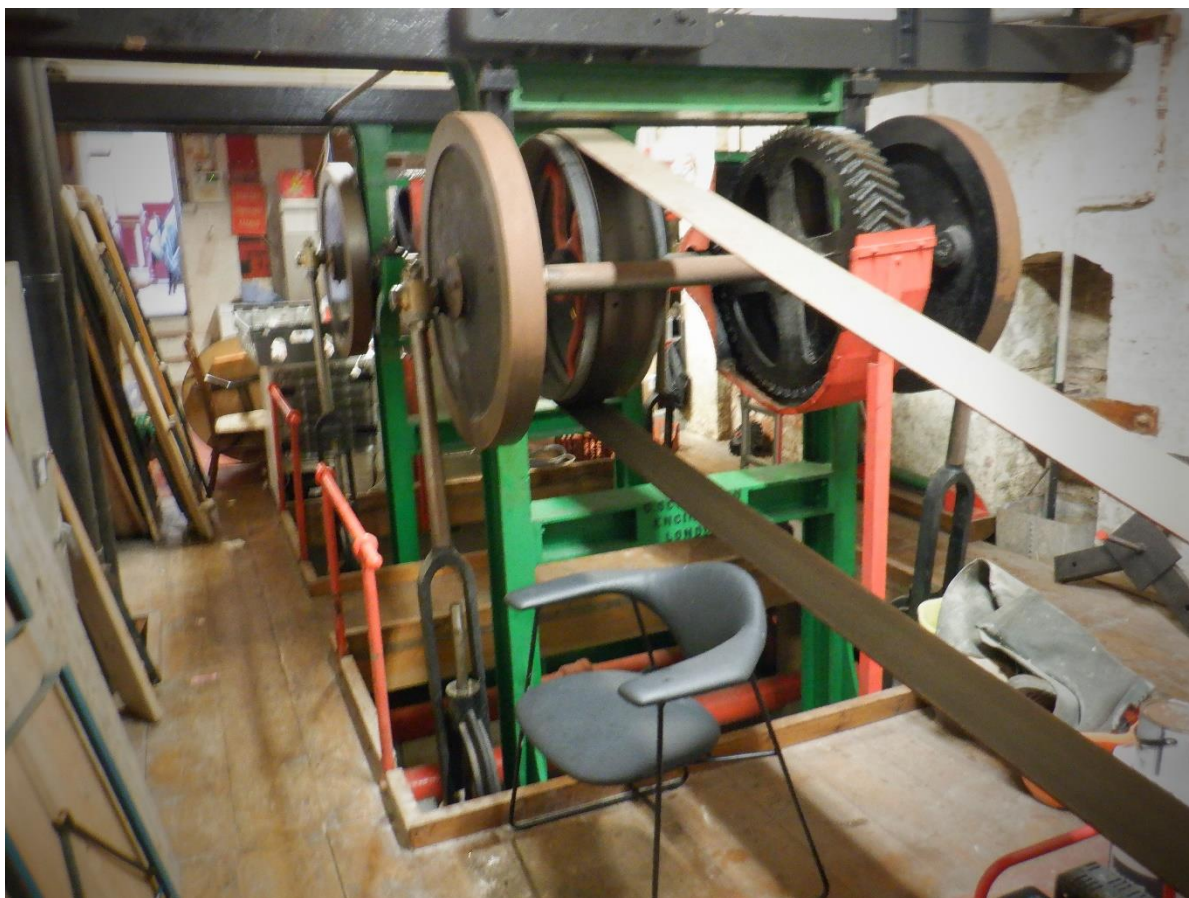


Plate 6. Pump Room: interior





Plate 7. Lower Station Waiting Room



Plate 8. Lower Station Waiting Room (now a café)



Plate 9. Historic signage in Lower Station Waiting Room west corridor



Plate 10. West corridor Lower Station



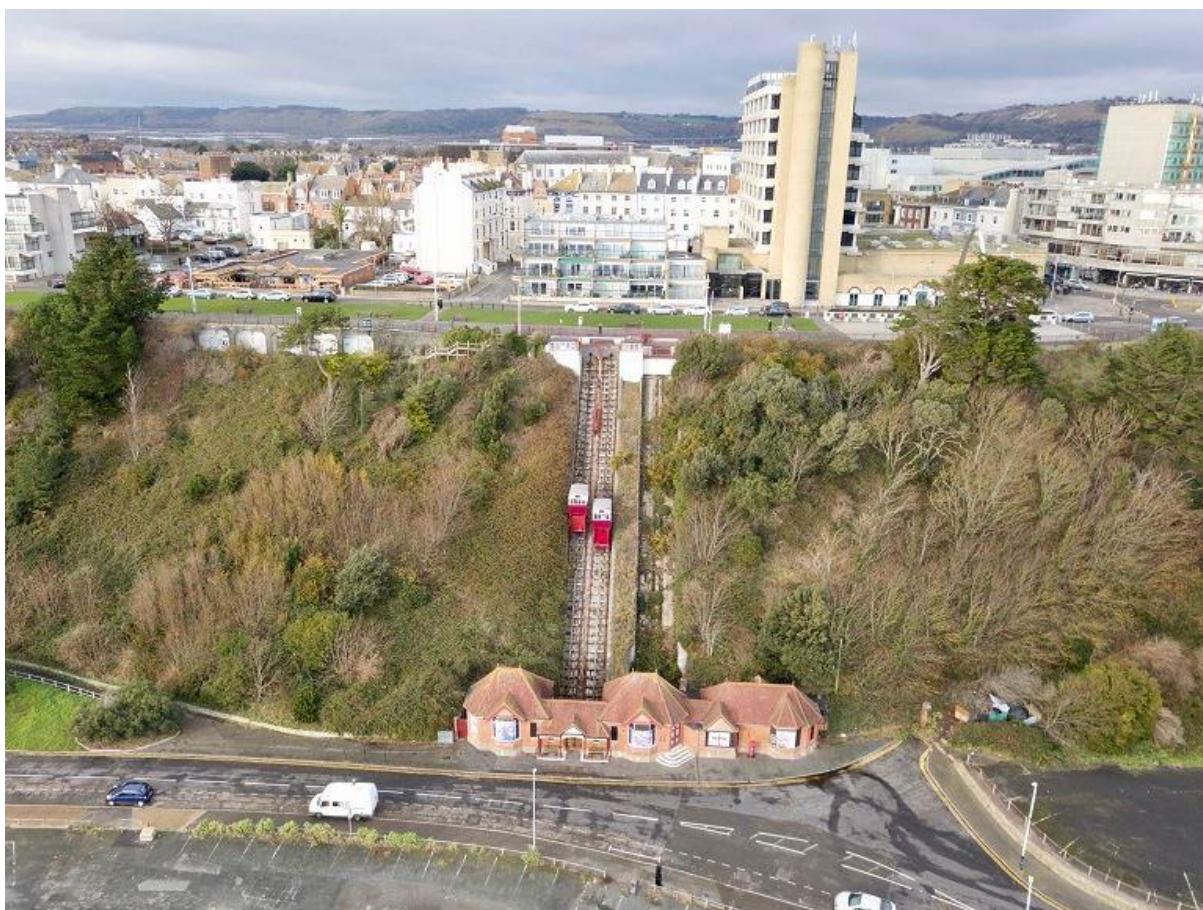


Plate 11. Drone aerial Photograph of Lower Station and Lifts (Looking NNW)



Plate 12. Lifts (Looking NNW)





Plate 13. Lifts (looking South)

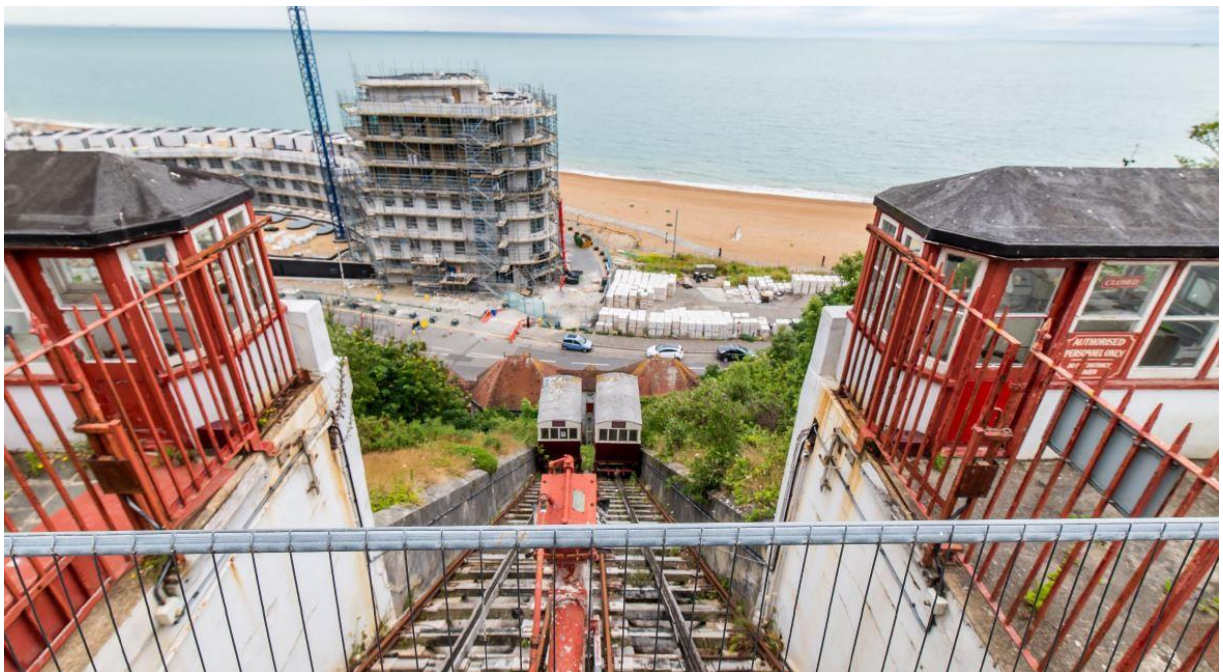


Plate 14. Lifts and Tracks (Looking SSE)





Plate 15. Brake Room (Looking SE)



Plate 15. Wheel House exterior (Looking SW)



Plate 16, Wheelhouse interior



Plate 17. Wheelhouse exterior