

ARCHAEOLOGICAL DESK-BASED  
ASSESSMENT OF LAND ADJACENT TO THE  
LEAS LIFT, WEST CLIFF, LOWER SANDGATE  
ROAD, FOLKESTONE, KENT



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Front cover: Leas Lift c.1970

## **1.0 INTRODUCTION**

1.1 In January 2023 Dr Paul Wilkinson MCIFA of SWAT Archaeology carried out an archaeological desk-based assessment of available data on land adjacent to Leas Lift, West Cliff, Folkestone in Kent. The site has development proposals that may impact on the archaeological resource and this DBA will inform interested parties on the archaeological potential of this site.

**1.2 Historic mapping, aerial photographs and the HER records were studied and no archaeological activity has been recorded within 400m of the proposed development site.**

1.3 The principal elements of the archaeological survey involved the creation of a record and description of any known archaeological and historical sites within the environs of the PDA (Proposed Development Area) together with an analysis and interpretation of the sites origins and historic development.

1.5 A review of Historic OS mapping has been made and the Pevsner Architectural Guide (*Kent, East and East Kent 2012*) was consulted as was the National Heritage Register.

1.6 This report consists of a descriptive report accompanied by historic aerial photographs and historic OS plans.

## **2.0 HISTORICAL/ARCHAEOLOGICAL BACKGROUND**

### **2.1 Location**

The Proposed Development Area (PDA) is located to the west of Folkestone Harbour and east of Leas Cliff Hall. The NGR to the centre of the PDA is NGR 622743 135671 (Figure 1).

### **2.5 Historic Background**

The PDA is in an area of extensive 19<sup>th</sup> and early 20<sup>th</sup> 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).

### **3.0 ARCHAEOLOGICAL SITES**

3.1 The HER records show very little archaeology in the immediate vicinity of the PDA and in fact most of which is itemised in the HER records can be found in greater detail on the Ordnance Survey Historic Mapping.

80m to the SSE of the PDA the Lifeboat House is identified (MWX 44005) and 100m to the south the site of Victoria Pier (MWX 44007). About 60m to the east a WWII fortified house is identified (TR 23 NW 501) and another to the west at about 200m (TR 23 NW 502) whilst just below the PDA are WWII anti-tank blocks (MWX 51465). About 400m to the west is Lea Cliffs Hall (TR 23 NW 288) and just above the site of the Cliff Railway built in 1885 with its unique Listed Buildings (Grade II\* 1061185) the Historic England listings is English Heritage, *List of Buildings of Special Architectural or Historic Interest* (Map). SKE16160.

#### *Summary of Building*

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*

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.

### *History*

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.

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 (below).



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.

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. 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 1890-1. 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.

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.

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. 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.

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 (above).

**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, 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 verandah 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.

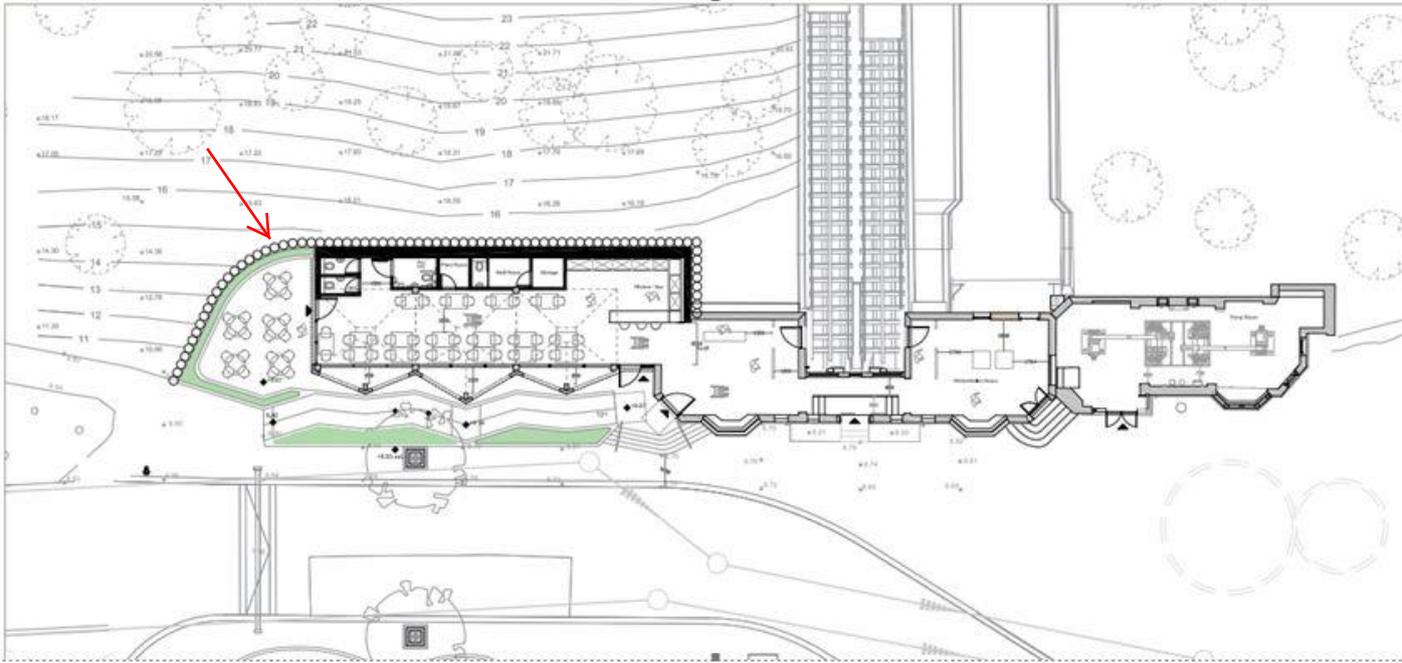
#### **4.0 DISCUSSION**

4.1 A review of the available data shows that very few archaeological sites are known within the 250m radius of the PDA and that no additional archaeological investigative work may be required on site.

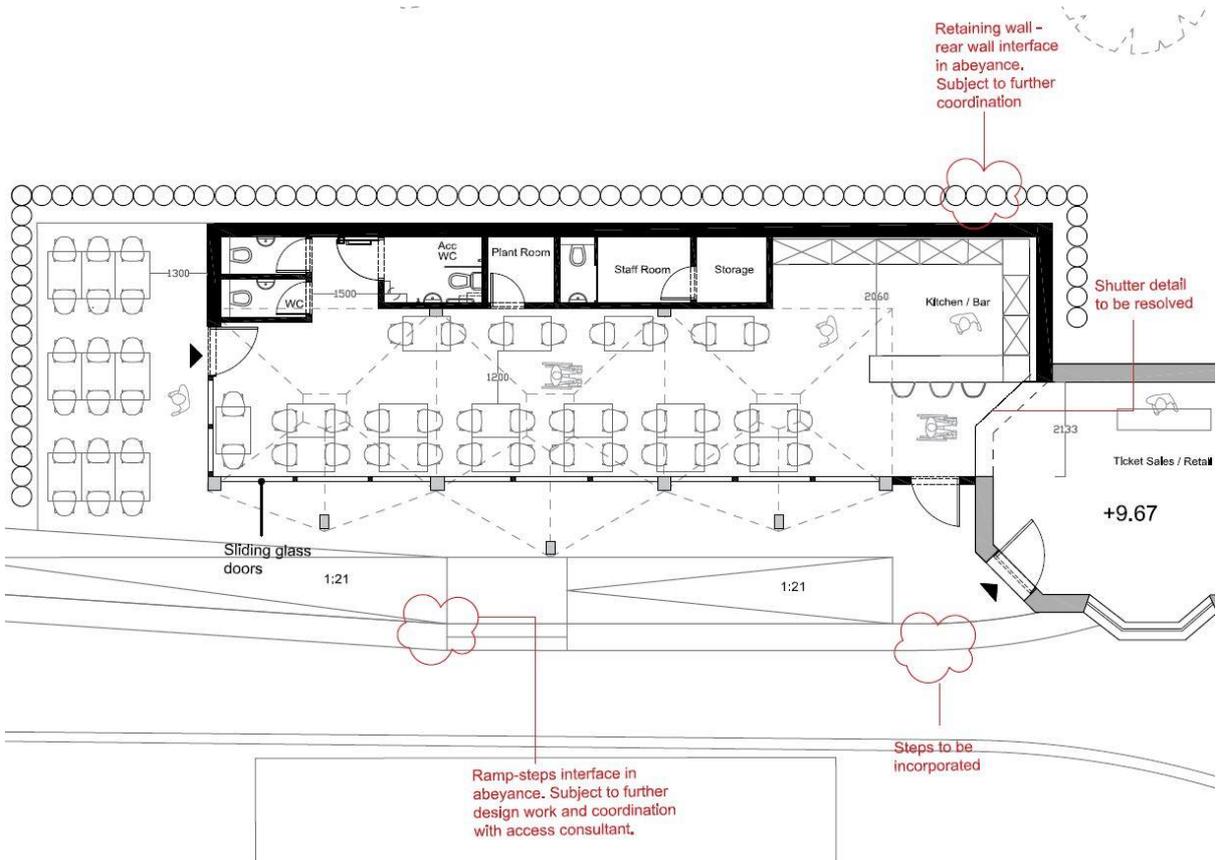
#### **5.0 PROPOSED DEVELOPMENT**

5.1 The proposed build will consist of:

- Refurbishment of existing buildings at the lower station and top stations (Figures 1, 2).
- Renewal of the lift to make operational again, this will consist of repairing/replacing where necessary the Victorian engineering and lift infrastructure.
- Extension of the lower lift, this will require excavating into the cliff with a new retaining wall shown at the back of the building of Figure 1.



**Figure 1. Retaining wall (red arrow)**

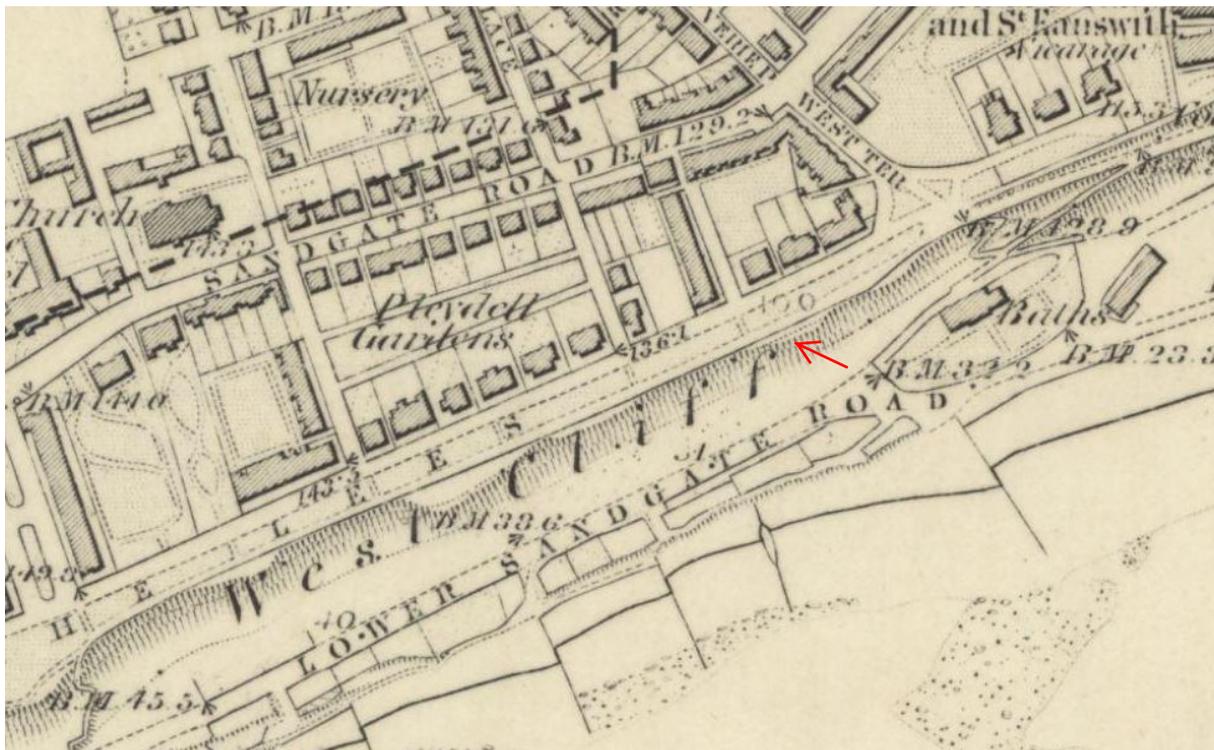


**Figure 2. Proposed development**

## 6.0 PARAMETERS

5.1 The archaeological desk-based assessment was conducted using on-line data from Historic England and other agencies (KCC HER) to identify the archaeological resource.

*Dr Paul Wilkinson PhD., MCIfA., FRSA. Dated 30<sup>th</sup> January 2023*



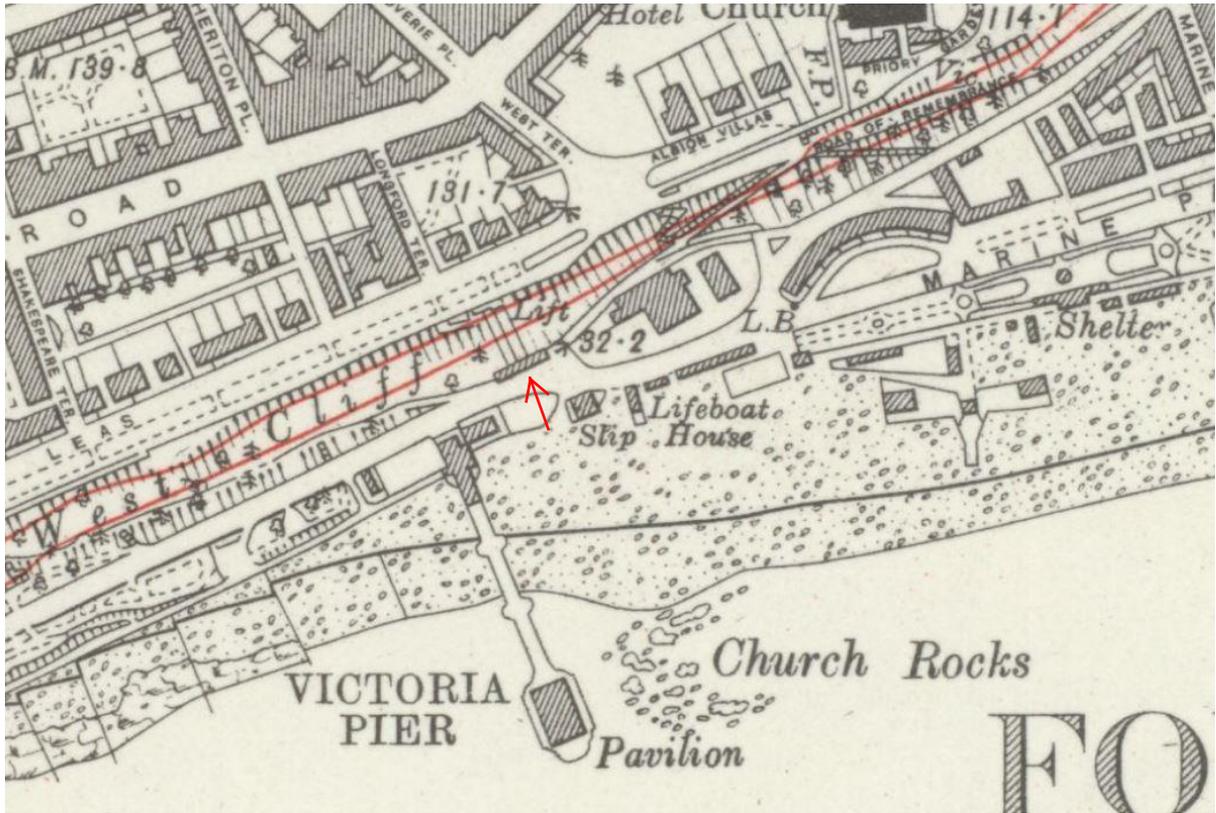
MAP 1. 1872 OS mapping (no lift)



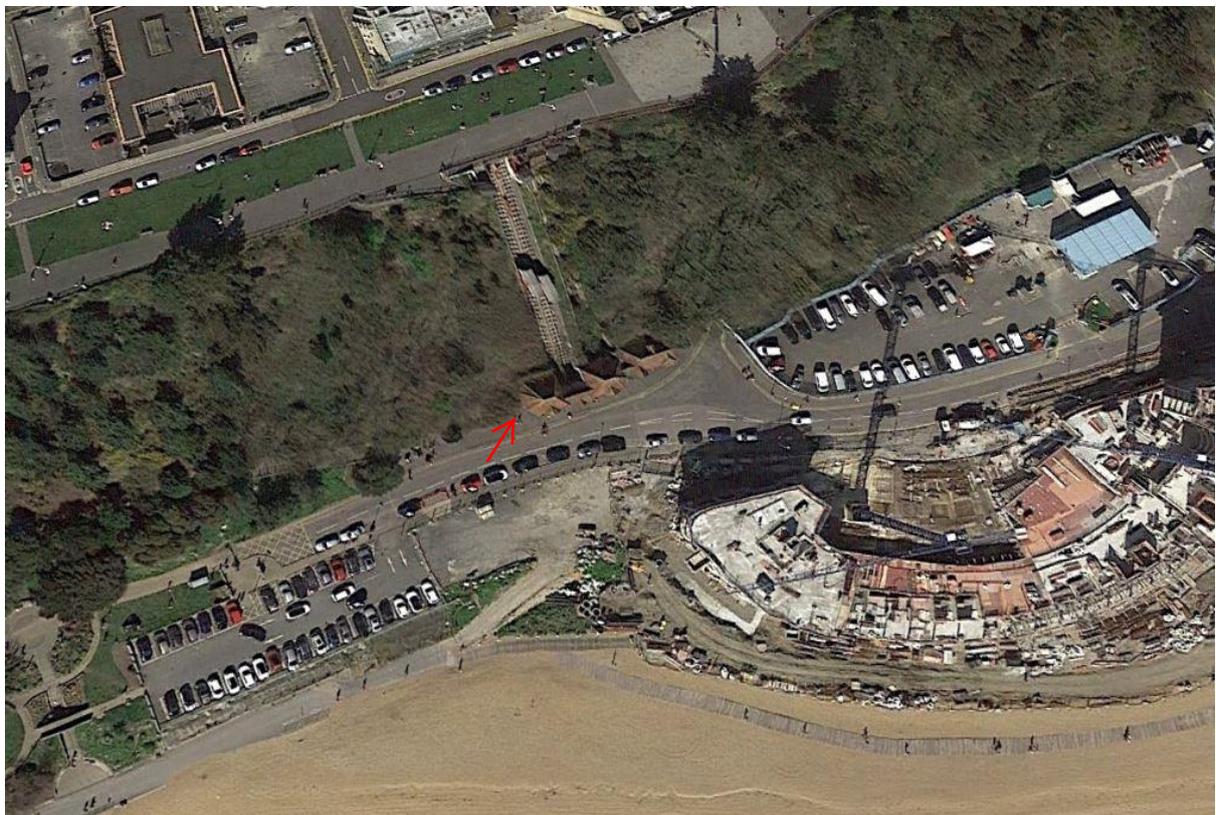
MAP 2. 1897 OS mapping



MAP 3. 1906 OS mapping



MAP 4. 1937 OS mapping



AP1. Google Earth 2021



Figure 1. KCCHER site plan