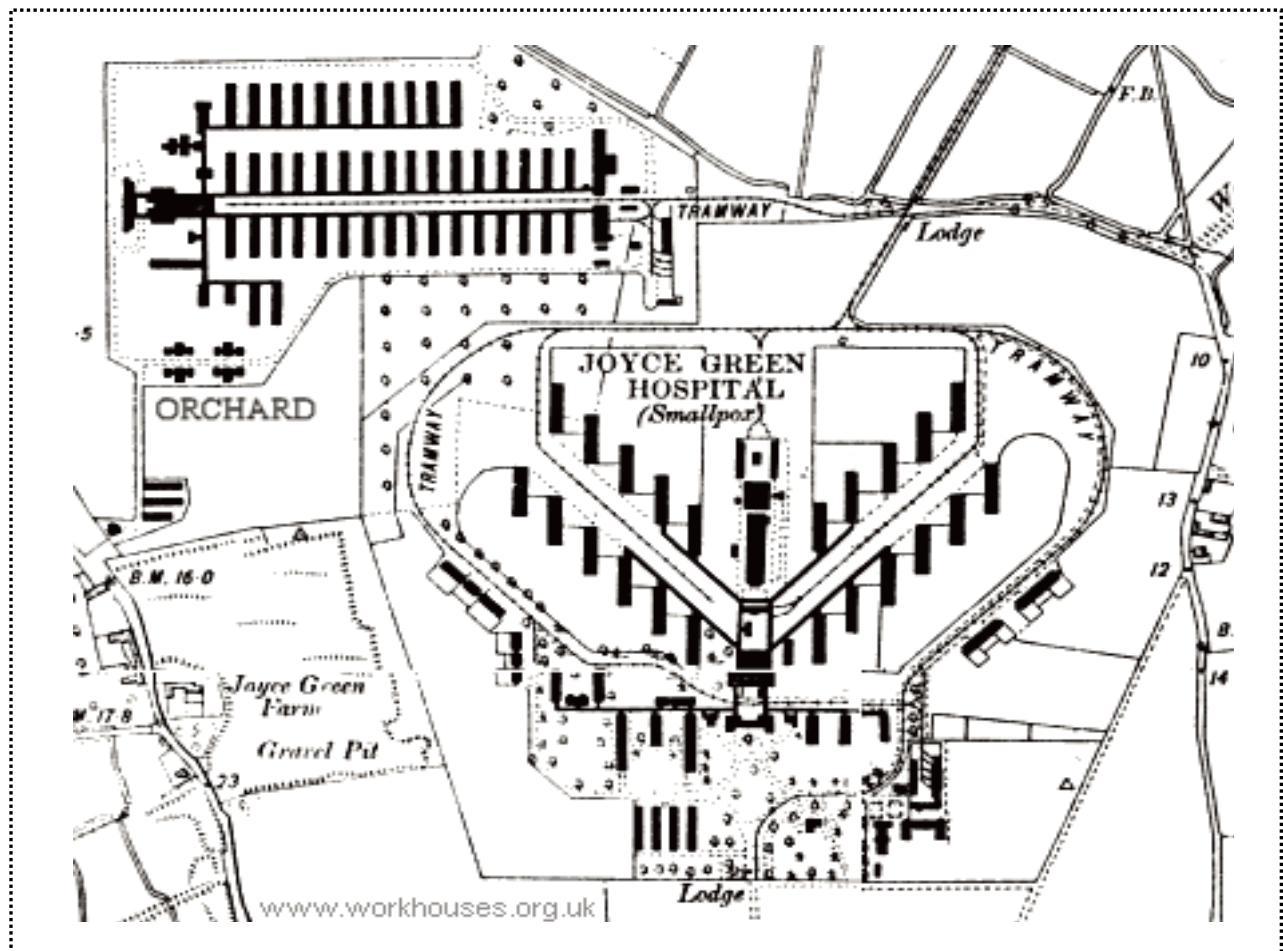


BACKGROUND HISTORY OF THE RIVER HOSPITALS JOYCE GREEN, LONG REACH AND ORCHARD HOSPITALS JOYCE GREEN'S CEMETERY AND GENERAL INFORMATION ON THE SMALLPOX VIRUS

The **Joyce Green Hospital** was erected by the Metropolitan Asylums Board (MAB) in 1901-3. It was located at Long Reach near Dartford, near to the MAB's hospital ships complex which it was intended to replace. The ships, the *Endymion* and *Castalia*, which had been refitted to accommodate 150 smallpox patients, were proving increasingly unsatisfactory: they had a high maintenance cost and were prone to fires, there were difficulties in preventing delirious smallpox patients throwing themselves overboard; hazards arose from bad weather and the possibility of collision with other ships; an increase in the number of smallpox beds was needed which was not possible on the existing ships. The hospital ships were closed in 1902 and sold for scrap in 1904.

By the beginning of the 20th century, the MAB decided to replace the hospital ships with the so called 'River Hospitals' – Joyce Green, Long Reach and The Orchard, which were all in close proximity.

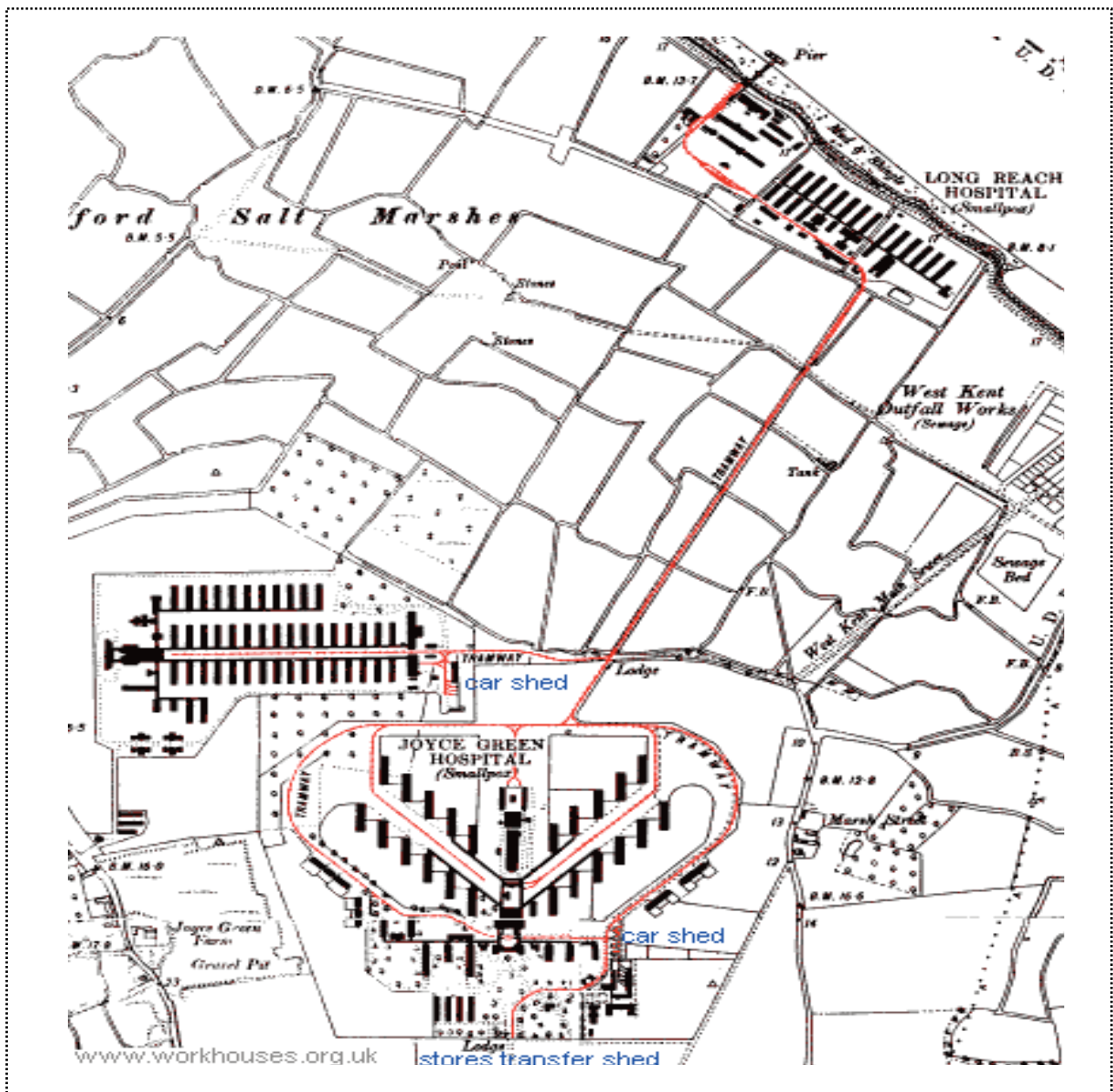
Together with the nearby Gore Farm Hospital, which had been used for recovering patients since 1890, the MAB now had nearly 4000 beds available for smallpox cases.



In the autumn of 1901, after construction of the Joyce Green had begun, London suffered a severe outbreak of smallpox. Since the new hospital was nowhere near being able to take in patients, two temporary smallpox hospitals were erected in the vicinity. The Long Reach, which opened in February, 1902 with 300 beds, was located on land immediately to the east of the Long Reach Pier buildings. The Orchard, opened later in 1902 with 800 beds, was situated to the north-west of the Joyce Green site. At the south-east of the site were stables and a coach house.

Dartford itself saw an increase in the number of smallpox victims as workmen, lodging locally, who were building the hospitals were affected by the disease.

Joyce Green's unique ambulance-tramway, initially horse drawn, was used to carry both patients and also supplies delivered at the Long Reach Pier or at the hospital main gate and linked all the hospitals. The track, at its longest run extended 3.4 miles. Initially second-hand vehicles were used but in 1908 purpose-built ambulance-trams were introduced. The tramway continued in use until around 1936.



Transport to the River Hospitals

Horse drawn carriages were initially converted to covered wagons and the first ambulance was created.

The 18 mile journey from London took its toll on the patients. A river ambulance was set up to supply the River Hospitals with patients and goods. With the steady decline of smallpox, the service was reorganised in 1913. The North Wharf at Rotherhithe became the sole departure point for the smallpox ships, with the South Wharf at Blackwall accepting only general fever cases.

The MAB was abolished in 1930 and its functions passed to the London County Council. By this time, road ambulances were carrying most of the sick and visitors out to the hospitals, and the river service was rarely used.

Although the ships had been maintained in case of an epidemic, the service was closed in May 1930. By 1933, all the steamers had been sold. The pier was demolished in 1936.



The Decline of Smallpox and the Changing Role of Joyce Green Hospital

Although smallpox was in decline from the early 1900's the River Hospitals still saw 13,500 patients suffering from the disease.

After 1902, the Long Reach and Orchard hospitals were reserved for smallpox sufferers. The Joyce Green took other infectious cases, with diphtheria and scarlet fever patients being admitted from 1907, and later taking measles and whooping-cough patients.

In 1915 the Government took possession of the Orchard Hospital at Long Reach for the use of sick and wounded soldiers, but after only a few months it was occupied exclusively by Australians. Some thousands of Australians were treated at this hospital between 1915 and 1919 and local people did their best to make their stay as comfortable and enjoyable as possible.

Special entertainments were arranged at the hospital and the soldiers were welcomed into many local homes. Some Dartford girls married Australian soldiers.

In June 1918 about 1,140 refugees from Russia arrived in England. As they had been in contact with smallpox they were housed in isolation at the Joyce Green Hospital. All were vaccinated even though only two were found to be affected.

From 1919 to 1935 an intensive programme of shrub and tree planting took place around the hospital. Its extensive grounds leading down to the Thames were carefully laid out by the landscape firm Messrs H E Milner and embellished with a wide range of plants by its Kew trained head gardener. Joyce Green became the centre of plant propagation for other Metropolitan Asylums Board institutions. Many trees were lost in the hurricane of 1987 and of those that survived some, if not all, are currently being protected whilst the building of the new The Bridge site accommodates the Thames Gateway spread of 1,500 new homes.

In 1922 another smallpox epidemic, recorded as minor, took the lives of 107 Joyce Green patients.

Electric lighting arrived in 1926.

Only the Long Reach Hospital regularly looked after the declining numbers of smallpox patients. However, Joyce Green also came back into service during London's final smallpox epidemic. This was an outbreak of the far milder Variola minor virus between 1928 -1934. The majority of sufferers were unvaccinated children.

After 1930 control of the hospital passed to the London County Council. At the start of World War II it became a general hospital as part of the Emergency Medical Scheme and saw an increase in beds from 986 to over 1500. Specialist units were built including three x-ray units. With the cessation of war bed numbers had fallen back to 428 by 1945.

From 1944 to 1946 part of the site was used as a Dutch military hospital.

In 1948 Joyce Green joined the newly inaugurated National Health Service, run by the South East Metropolitan Regional Hospital Board and Dartford Hospital Management Committee. From 1974 it was run by the South East Thames Regional Health Authority and the Dartford and Gravesham District Health Authority. Joyce Green covered accident and emergency, general surgery, orthopaedics, paediatrics, haematology, general medicine, care of the elderly and postgraduate medical training. In September 2000 the new Darent Valley Hospital opened and replaced Joyce Green, West Hill and Gravesend maternity services.

Since Closure

Demolition of the redundant hospital buildings, covering 260 acres, was carried out in 2001 by Econ Construction Ltd., on behalf of their client, Carillion Special Projects. McAlpine Plc, who were tasked to level the site and lay services ready for the new build of 1500 new homes and services have fenced off specialist trees and shrubs in an effort to preserve Joyce Green's environmental heritage. Remnants of the cobbled still remain to be seen as Phase 1 of the building programme comes to an end and the first 120 families move into the new The Bridge community.

Joyce Green Cemetery

A cobbled pathway ran from Joyce Green Hospital to the cemetery forming part of Marsh Street on the Northern side. The path was used to transport the dead for burial at the Cemetery. Very little of the cobbled path remains today but a small part can be seen at Cornwall Road, which will, hopefully, come under the ownership of the Temple Hill Community Development Trust. Some parts of the pathway have been preserved on the northern side of Bob Dunn Way between the new Bridge Community and the River.

1970 saw concern from local residents over catching smallpox from the footpath as it is close to the houses in Cornwall Road.

1039 bodies are buried at Joyce Green Cemetery in 292 graves, some with up to 14 bodies to a grave. Approximately half the burials are children up to the age of 14. Between 14th February 1902 and 31st December 1902 there were 802 recorded burials, for which 20 grave diggers were employed. The bodies were buried in a sack, stuffed with straw and charcoal in order to absorb the bodily fluids. It is thought that the wooden coffins were re-used.

There are 36 graves marked with a headstone, 2 with kerbstones and 9 with simple crosses. By 2001 the only gravestone left to be seen was that of Ethel Clara Chapman, a nurse of the Poplar Institute (a workhouse) who had contracted the disease and died on 11th November, 1922, aged 24. Miss Chapman had, surprisingly, not been vaccinated against smallpox.

A plan of the graves and the cemetery register are held at the London Metropolitan Archives in Northampton Row, reference H48/B.08?001 (1902 – 1962). Records show that there was one burial in 1936 and then the last five in 1951.

The cemetery is consecrated land the records for which are held at the Rochester Diocesan Office.

In 1977 the Department of Health offered to sell the Cemetery to Dartford Borough Council for use as a cemetery still. The Council did not take up the offer.

By 2005 the Cemetery, now wild and totally overgrown with extensive fly tipping, was offered to the Community of Temple Hill, for a nominal fee.

Ownership and maintenance of the land will be taken on by the Temple Hill Community Development Trust and run by the community on a voluntary basis. The Trust wish to leave the land as a woodland, preserving and enhancing the ecology and wildlife, clear away the accumulated rubbish, create paths for walking and areas for sitting for all the community to use and to respect the graves in situ.

Smallpox – The Disease

Smallpox is a highly contagious disease (it can be transmitted from one person to another) caused by the Variola virus. It can be transmitted through respiratory droplets, aerosols and contact with clothing or bedding. Cases are most infectious during the first week of illness, but the period of infectiousness extends from the development of fever, when the first lesions appear, until all the skin lesions have scabbed over.

There are two main forms of smallpox: variola minor and variola major. Variola minor cases experience less severe symptoms and have a case fatality rate of 1%. Variola major has a case fatality rate of 30%.

Until the disease was eradicated, each case infected approximately five other people. Smallpox killed around 15 to 50% of those who caught the disease and left many of the survivors blinded or scarred.

In most western countries, smallpox was endemic – it was around all the time and did not need to be introduced from outside. At regular intervals serious epidemics, major outbreaks affecting large numbers of people, would erupt.

A smallpox attack gave the victim lifelong immunity – a person who survived the disease could not catch it a second time. So, at any time, there were always plenty of immune people around.

Epidemics did not occur until there were enough susceptible people, those who could still fall ill. These would mostly be very young children, who always suffered most during epidemics.

The Symptoms

The incubation period of smallpox, the time between infection and the appearance of symptoms, is between seven and 17 days. The first symptoms include a high temperature, headaches and tiredness.

Evolution of lesions is 8 days from pinprick spot to a crust, scabs start to fall off 14 days later. The first eruption is usually on the face or wrist (an exposed area) then the rash usually works downward with the legs being last. Death is usually between the 11th and 15th day caused by septic absorption, bronchial pneumonia or oedema of the lungs amongst others.

Smallpox can be transmitted by direct physical contact. A person with smallpox is most contagious after the rash appears and remains contagious until the last scabs dry up.

By this stage, patients are generally too ill to move around, so they are most dangerous to those in their home or hospital ward.

Other diseases which have been mistaken for smallpox are syphilis, pustule dermatitis, severe acne and chicken pox. In fact Dr Ricketts, a Joyce Green doctor, stated that two out of three cases brought to the North and South wharves were actually of chicken pox.

After Death

Public Health (Control of Disease) Act 1984, controls the movement of bodies on their 'pathway' to burial.

Bodies are still contagious after death and cremation is recommended. Bodies should be put in a plastic body bag and buried quickly. There will be no viewing, embalming or hygienic preparation. It is known that the virus can survive up to a week outside the body, so contact with contaminated clothing or bed linen can also spread the disease. A 1995 Communicable Disease Report states that the likelihood of smallpox re-emerging if the remains of a victim are disturbed appears remote.

Dr. Rachel Heathcock, a consultant in communicable disease control for the South East London Health Protection Unit said "It is not entirely clear whether there is a risk, but if there is, it is very low. It would depend on the age of the burial site and the condition of the coffins".

Consultant Virologists, Doctors Brown, Morgan and Mortimer, at the Health Protection Agency, confirmed in 2005 that "there is no known evidence of smallpox risk from old burial sites".

Eradication

There is no cure for smallpox, but the most important breakthrough in fighting the disease was the development of vaccination. This involved giving a patient a weakened version of cowpox, a disease related to smallpox which created a temporary immunity to smallpox, and saved the lives of millions of people worldwide.

**The last known natural case of smallpox was in Somalia in 1977.
Smallpox was officially declared eradicated Worldwide in 1979.**

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Various internet sources including these links:-

[The Joyce Green Hospital, Dartford](#)

[The MAB Hospital Ships, Long Reach, Dartford](#)

[Containing smallpox in Victorian London](#)

Temple Hill Trust

www.templehilltrust.org.uk

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