HISTORY (by Simon Hodges)

Completed in 1865 and situated on the banks of the river Thames about 12 miles east of central London, Crossness Pumping station lies at the end of the Southern Intercepting Sewer. The pumping station itself originally consisted of the engine house, boiler house, fitting shop, valve house, chimney and covered reservoir. On top of the reservoir were sited 20 houses for the workers and one for the superintendent.

This sewer system along with a similar arrangement on the north side of the Thames, were the brainchild of Sir Joseph Bazalgette and came about as a direct result of the 'Great Stink' of 1858.

The system comprises of many pumping stations and over 80 miles of covered tunnels designed to intercept the smaller sewers before they reached the Thames and delivered their lethal cocktail of human, animal and industrial waste to an already chocking Metropolis. Bazalgette along with his team of Engineers from the Metropolitan Board of Works, oversaw the work and ensured that it was carried out to the up most standards, both above and below ground. It is testament to this that the intercepting sewers are still in use over 150 years later.

The pumping station at Crossness is sited at the southern outfall. The point on the tidal Thames where the sewage was released on the ebb tide, after being held in the covered reservoir, to be carried out to sea.

The process of pumping and releasing raw untreated sewage into the river continued into the 1880s when following the 'Princess Alice' disaster, releasing raw sewage into the river was stopped and a system of settlement and separation was utilised. For this purpose, the reservoir was extended to incorporate two settlement channels. This extension allowed for a further 10 workers houses to be built. A new engine and boiler house (referred to as the precipitation engine house or PEH) were built and a rudimentary treatment process was implemented. Although the liquid waste was still being discharged to the river, the solid waste was now taken in purpose built 'Sludge Boats' out to sea and dumped.

The four beam engines in the main engine house continued to pump using the low-pressure steam provided by the Cornish boilers, until around 1895 when it was considered necessary to carry out upgrades on both the engines and pumps to improve efficiency. To allow the pumping to continue, a new engine house was built on the front of the original building. This engine house housed two triple expansion engines which via reciprocating pumps took over from each beam engine as the work was carried out. Primarily the work was to remove the original cylinder and piston from each engine and replace with 3 new cylinders thus allowing maximum use of the stream. The engines valve gear was changed from simple slide valve to a modified Corliss mechanism which again helped to minimise steam usage, the original eight plunger pumps on each engine were replaced with two much larger items. Perhaps more importantly the low-pressure boilers were replaced with high pressure, conveyor fed, Lancashire boilers Work was finished in around 1901 and the engines in their new format continued pumping again.

All the time London was expanding, and so more pumping capacity was needed at Crossness. In 1916 the centrifugal engine house (CEH) opened between the original beam engine house and the PEH. The CEH housed modern vertical compound steam engines driving very efficient centrifugal pumps to provide steam to the CEH the main boiler house was extended to make room for 4 more 'superheated' boilers.

Gradually the beam engines were used less and less with the more modern engines on site doing the majority of the work.

In 1947 the triple expansion engines were removed and replaced with two Diesel engines attached to centrifugal pumps effectively superseding the beam engines for good.

By the mid 50's, the modern treatment works at Crossness was up and running and electric and diesel driven pumps were doing the work.

The last time one of the beam engines pumped was in 1952 to help deal with local floods.

After that the engine house was closed and left to decay, the boilers were removed and scrapped, and the chimney was demolished.

Although the CEH continued to be used albeit with Steam, then diesel and now electric power, the original 1865 buildings were no longer in use. Thames water began using the fitting shop as workshops, the valve house as a garage and the boiler house (with new concrete floor) as workshops, mess room and washing facilities. The Beam engine house was boarded up and apart from pigeons and vandals left empty to decay...

In the early 1980's Thames Water were looking to demolish the 1865 buildings, but thanks to the Greater London Industrial Archaeology Society (GLIAS) and the Trusts founder John Ridley, the engine house was accredited a Grade 1 listing and the two auxiliary buildings (fitting shop and valve house) were given Grade 2. Plans were then put in place to form a group to begin the heroic task of restoring the engine house. The rest, as they say, is history.....