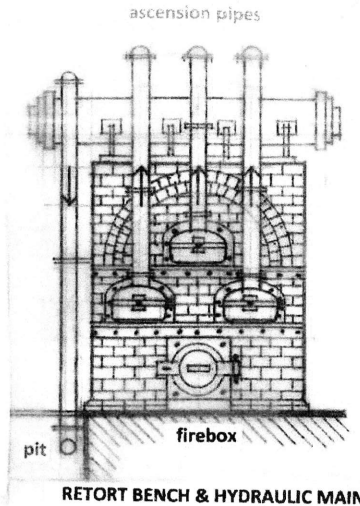
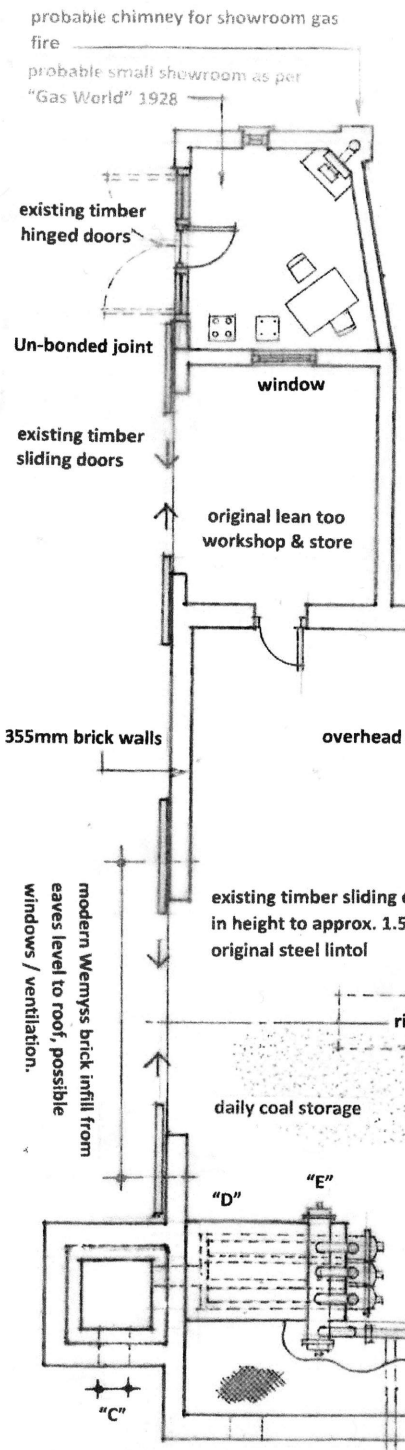


Largo Gasworks, drawing no. 3. November 2018, John Band.

This drg. has been produced using an advert in the Dundee Courier of 27th Jan. 1928 which gives details & dimensions of the works and a description of a gasworks almost identical in size to Largo in a book "The Construction & Management Of A Small Gasworks" by Norton H. Humphry, published 1911. Largo had 3 retorts "D" within the firebrick built "bench". Within these retorts the high oil content coal was heated in an oxygen free environment, the volatile gas was driven off, leaving the relatively pure coke. The coke was used to fuel the furnace or sold as smokeless fuel. The retorts were probably of the horizontal type 8-9 feet (2.4-2.7m) in length x 18 inches (0.45m) high in a "D" shape lined with Silica bricks as preferred for small works and manually charged. Other types were inclined or vertical. Originally the whole retort was of cast iron but these were prone to failure due to the fluctuation in temp. Only the mouthpiece and doors remained as iron in the days of Largo gasworks. A charge of coal remained in the retort between 8-12 hours. The gas passed up the ascension pipes into the hydraulic main "E" a sealed vessel containing a water trap, through which the gas bubbled and some of the tar & dust was removed, draining by gravity to the tar well. The tar was used in the manufacture of road tar, creosote etc. and the liquor was much in demand in the chemical industry. A gas engine powered exhauster "F" (referred to as the heart of the works) pulled the gas from the hydraulic main & kept the gas flowing through the process. The condenser "G" cooled the gas and further removed tar & Ammoniacal liquor. This relied on the temp. difference between the ambient air and the hot gas to cool the gas. Other types than shown were battery or annular condensers. Other impurities were removed in the tower scrubber "H". Scrubbing was carried out by exposing the gas to wetted surfaces, the tower being filled with coke, bricks, ceramics or wood. As the gas flowed up the tower it met with a fine spray of water passing down covering the filter medium and scrubbing or washing out the impurities Ammonia & Phenol down to the bottom where it drained to the tar & liquor well. Finally purifiers "I" removed the Hydrogen Sulphide & Hydrogen Cyanide (rotten egg smell). These consisted of iron tanks containing layers of Hydrate of Lime, later bog iron ore or a mixture of both was used. Finally the gas was metered before entering the gas holder to record the daily output and supply available.



RETORT BENCH & HYDRAULIC MAIN
ELEVATION (1:50)



PLAN (1:100)

Original opening width (same height as windows) with sliding door gear on timber lintol

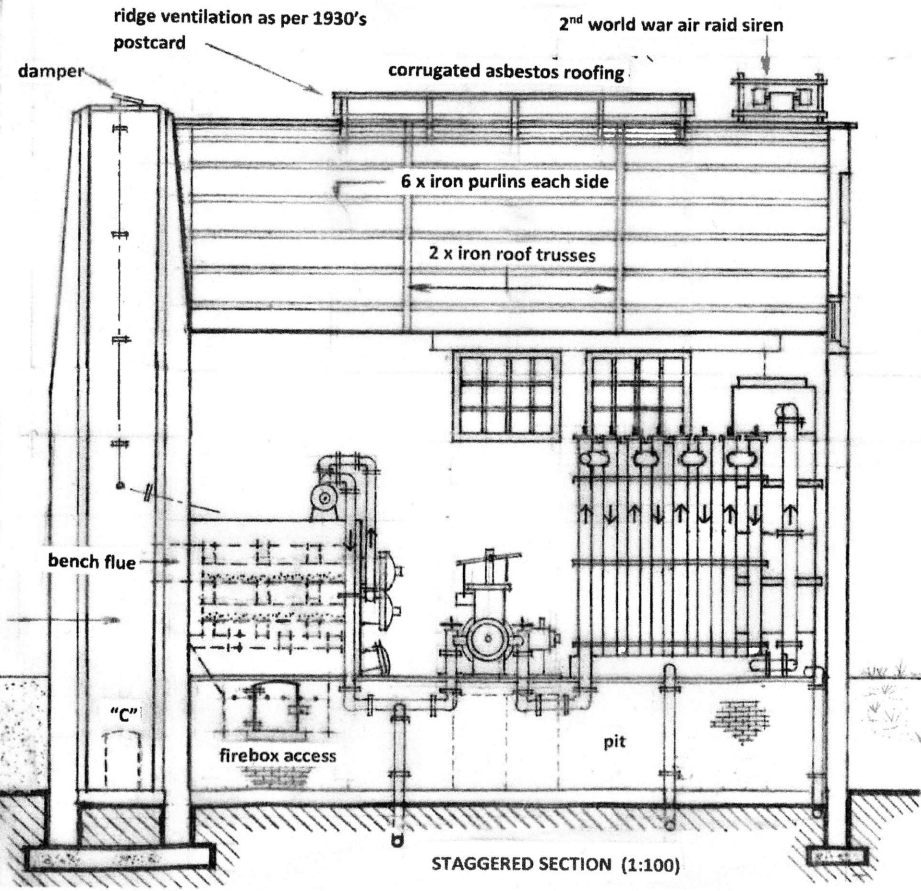
Note. 1. Showroom was possibly built skewed to avoid gas main from works to gas holder

Note. 2. Window in gable of workshop & store approx. 1.2m wide x 0.7m high with a flat arched top and rounded brick arrises as per gable panels facing Station Park

"A" built up doors to pit
"B" 0.6 x 0.2m vent to pit
"C" access to chimney built up vent approx. 2m high x 0.5m wide

fire brick lined chimney
high ground
lower ground

drainage pipework to tar & liquor well



STAGGERED SECTION (1:100)

2nd world war air raid siren