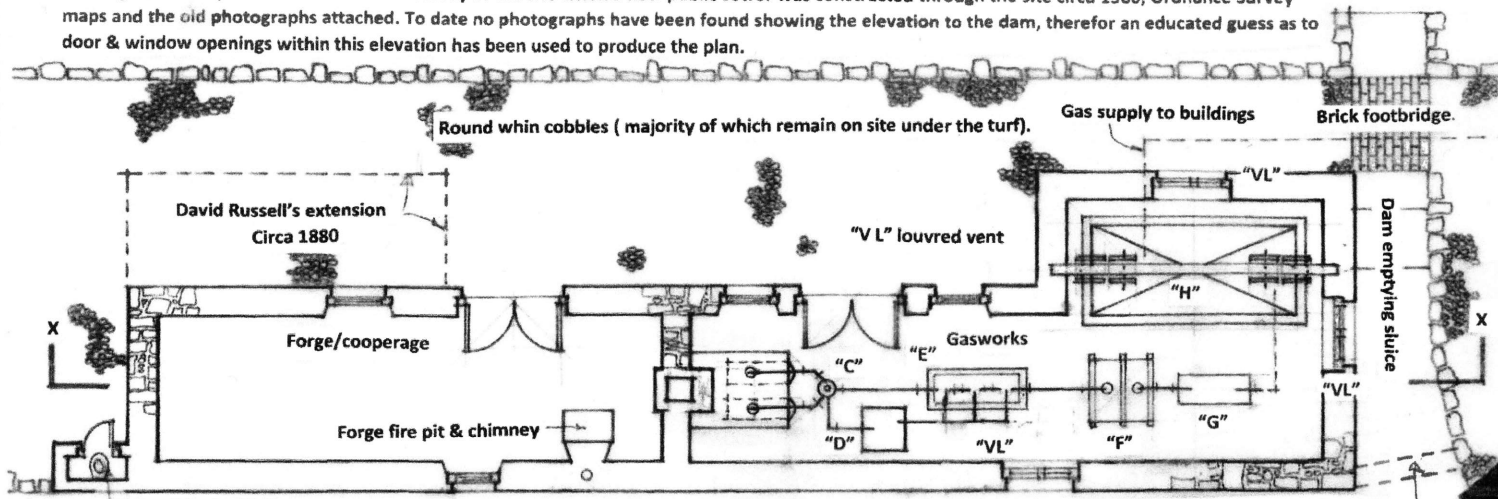


Largo Mill. Gasworks, Forge/Cooperage. Plan & Section circa 1860 (scale 1:100). Sept. 2018, John Band.

This drg. has been produced from a visual survey of the site when a new public sewer was constructed through the site circa 1980, Ordnance Survey maps and the old photographs attached. To date no photographs have been found showing the elevation to the dam, therefore an educated guess as to door & window openings within this elevation has been used to produce the plan.



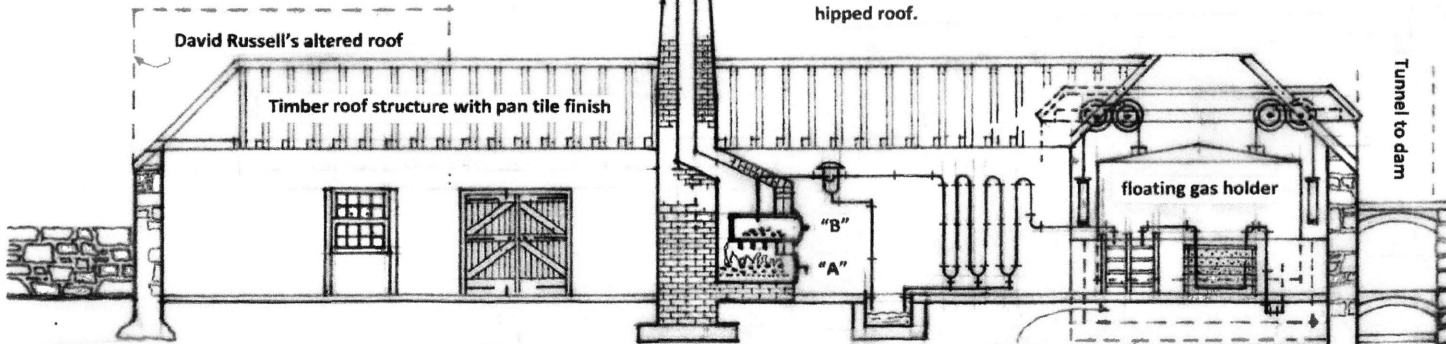
Plan Possible dry W.C.

This extension was of brick construction as the foundations were seen by myself and was possibly built to enlarge forge to accommodate the mills cooperage for the manufacture of wooden casks to hold the mills production of Linseed oil for use in the manufacture of linoleum, putty, paint & varnish etc. and Cottonseed oil for use in soap and cooking etc.

Burn

Probable flagstone floors to both the gasworks & forge to ease the shovelling of coal. No flooring material seen circa 1980. I suspect "robbed" during demolition in the late 1930's as flagstones are a valuable material. Photo. Circa 1901-07 indicating Alexander Philp's building above the cottage as part of his improvements to the Oil Mill. Also David Russell's alterations to the end of the forge shown with gable replacing the original hipped roof.

Wall built by Robert Band & John Philp



Section X-X

Manufacture of coal gas

The retorts "B" which are usually a D shaped sealed vessels (built into the furnace on their flat side) are brought to a bright red heat, and then charged (filled) with high bitumen content coal. The furnace fire "A" beneath is kept up, and the charge left to distil for 6-8 hours, at the end of which time the mouth of each retort is opened, and the residue, which consists of coke, taken out, watered and removed in iron wheelbarrows to the place where it is stored. The gas as it is formed (mainly Hydrogen & Carbon Monoxide) rises up the dip pipe and flows along the hydraulic main "C" (water trap) where it deposits the particles of tar & Ammoniacal liquor which fall in to the tar tank "D".

Coal gas was known as a fuel from as early as the 1600's. Scotsman William Murdoch improved the methods of purifying & storage and lit his house at Redruth, Cornwall with the product in 1792.

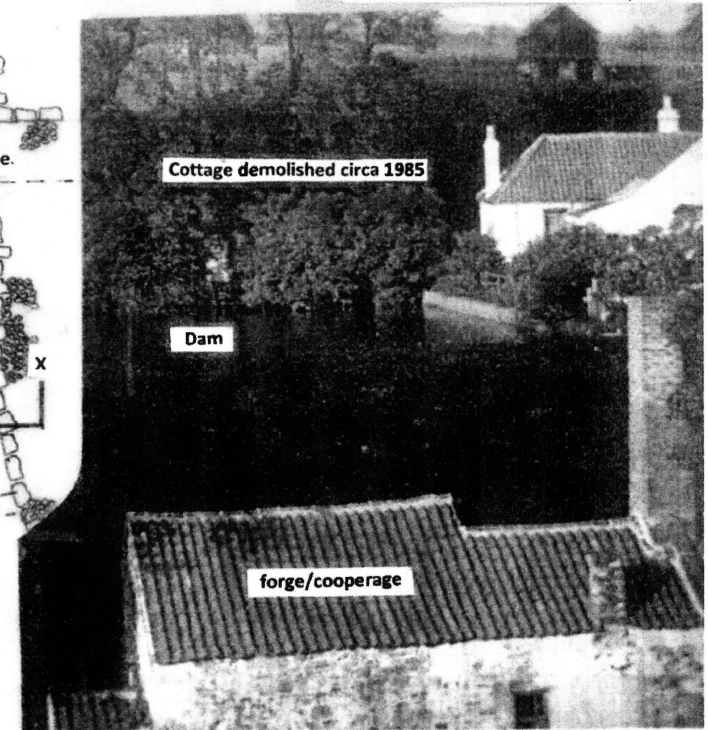
The process of coal or town gas production changed little up to the closure of the last plant in Britain in the early 1970's

The gas manufacturing plant may well have been manufactured & installed by Henry Balfour & Co., Leven who commenced business in 1810 and by 1852 were advertising their expertise in the construction & installation of gaswork equipment including distribution pipework.

Bitumen sealed masonry water tank on bedrock

(this tank was dug through on the route of the new public sewer circa 1980). It then passes up and down the pipework of the atmospheric condenser "E"; this part of the process is for the purpose of cooling it, as it usually enters the condenser at about 120 deg. and is made to leave it at 60 deg. This also causes more of the tar to be separated. (the resulting build up of tar can later be pumped in to barrels for use elsewhere). From the condenser it passes through the scrubber "F" consisting of several layers of coke, which are kept in a moist state by means of water continually trickling through them; this further cleaned the gas from Ammonia. The dry lime purifier "G" is the machine next

Photo. taken from Woodlands Rd. steps.



Cottage demolished circa 1985

Dam

forge/cooperage

in order, it consists of a series of wire gratings, covered with hydrate of lime. The gas passes through these, and parts with the Sulphuretted Hydrogen (rotten egg smell) & Carbonic Acid which render the gas impure & unwholesome for use. The gas is then fit for distribution and is conveyed to the gas holder "H". Early gas holders were of rectangular shape as shown and basically consisted of a floating sealed timber box, the gas entering from beneath through the water seal and stored in the void above. The floating structure was kept regulated by the side weights and pulley system. This maintained a constant pressure in the pipework to the lighting system within the mill. Later gas holders were circular in shape. The main reason for the drg. indicating the early form of rectangular gas holder is the small strange masonry structure on the gable of the gasworks with its hipped & tiled roof. This has been a mystery as to its use, ie if it was a redundant chimney, the simplest way to roof over would have been to remove it above wall head and tile over. The fact that such effort & expense has went into the small roof suggests it was to cover the support beam to the gas holder as shown and therefore I have indicated by the hidden detail dashes its partner opposite. If a cylindrical gas holder had been in place then a minimum of 4 supports ie 2 beams forming a cross on plan would have been required to stabilise the floating holder.



Gasworks gable

burn