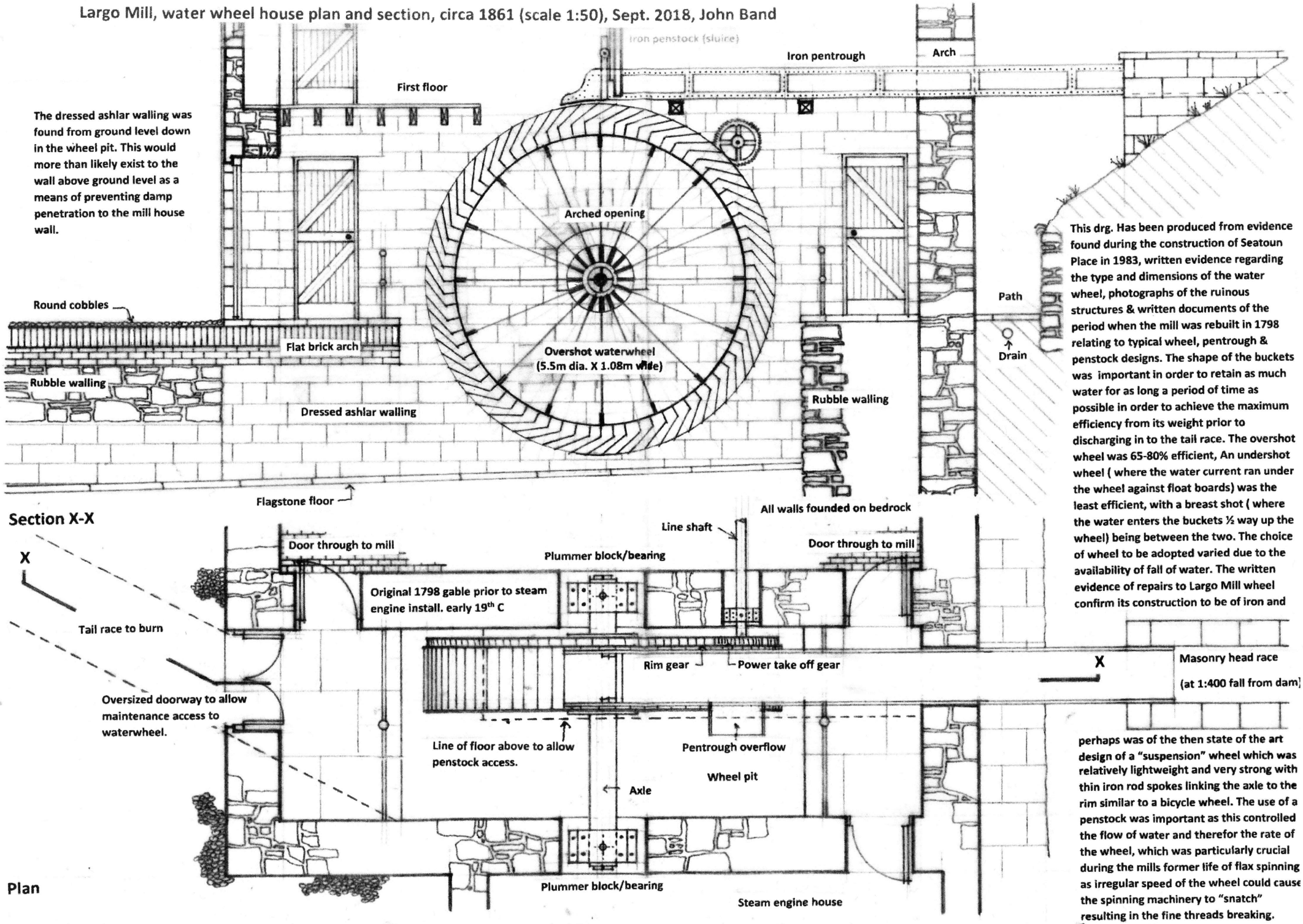
Largo Mill, water wheel house plan and section, circa 1861 (scale 1:50), Sept. 2018, John Band



This drg. Has been produced from evidence found during the construction of Seatoun Place in 1983, written evidence regarding the type and dimensions of the water wheel, photographs of the ruinous structures & written documents of the period when the mill was rebuilt in 1798 relating to typical wheel, pentrough & penstock designs. The shape of the buckets was important in order to retain as much water for as long a period of time as possible in order to achieve the maximum efficiency from its weight prior to discharging in to the tail race. The overshot wheel was 65-80% efficient, An undershot wheel (where the water current ran under the wheel against float boards) was the least efficient, with a breast shot (where the water enters the buckets ½ way up the wheel) being between the two. The choice of wheel to be adopted varied due to the availability of fall of water. The written evidence of repairs to Largo Mill wheel confirm its construction to be of iron and perhaps was of the then state of the art design of a "suspension" wheel which was relatively lightweight and very strong with thin iron rod spokes linking the axle to the rim similar to a bicycle wheel. The use of a penstock was important as this controlled the flow of water and therefor the rate of the wheel, which was particularly crucial during the mills former life of flax spinning as irregular speed of the wheel could cause the spinning machinery to "snatch" resulting in the fine threads breaking.