**Essays on Mount Crosby - Lake Manchester Bywash**

There is no doubt; John Peart wished he had built the dam wall at Lake Manchester taller, and it is also doubtless the wall could have been at least two metres taller to collect a lot more water without affecting much in the way of fertile land.

We can be certain of this, because once it was.

When the dam was first designed (c.1910-12), it was quite different to the dam we see now. For one thing, it was intended to have a concave wall with a radius of 450ft. However, due to depressed economic conditions preceding the First World War the design was altered to save concrete and labour, and the wall became straight like a weir with a bywash (spillway). The bywash was a worry to the builders of the dam, especially when the rock beneath it turned out softer than expected and prone to erosion. Peart summed it up in January of 1915, when he advised the Metropolitan Water Supply and Sewerage Board, *"… the materials in the cutting have turned out much softer than anticipated. The Superintending Officer is emphatic that the slopes be altered and flattened.*"

It wasn't the only problem with the dam. You might recall it took years to fill, and between its completion in 1915 and the rainy summer of 1931 it was only drawn upon a few times (because it seemed incapable of delivering anything like the expected 30 million gallons per day). By the mid-1920s, the Board, chiefly advised by Peart, embarked on a program of works to compensate for the dam's poor performance:

* 1925 - construction of a pipeline connecting Lake Manchester to the Brisbane River (to reduce losses caused by soakage into the creek bed);
* 1926 - construction of the weir bridge at Mount Crosby (really a dam on the Brisbane River) ;
* 1927 - construction of a marvellous electric pump station to pump water from the Brisbane River into Lake Manchester

As well as this, Peart sought to satisfy his old wish that the dam had been made taller. He did this in 1924 through raising the bywash by a little over five feet, which increased the storage capacity from 5700 million gallons to 7000 million gallons.

As if to make the point that sometimes your first design is your best design, Peart's modified bywash was found inadequate to cope with the flood rains of 1931. Incoming floodwaters over-topped the dam wall by 3 feet (1metre) and, through a scouring action below and at the ends of the dam, did serious damage to the works. The evidence remains of that spectacular day - at the end of the dam wall you can detect a little more showing than ought to be.

There was nothing for it except to restore the bywash to its original level, which was done (perhaps a little sheepishly) in 1937.

Col Hester