

# **PILING ROTTED IN THE BACK BAY**

## **Architect Found Tops in Bad Shape.**

### **Cause, He Says, Undoubtedly Due to Dryness.**

#### **Lowering of Ground Water Level an Explanation.**

Whether or not the construction of the new wall and the marginal conduit along the bank of the Charles river has reduced the level of the ground water, the fact appears to be that piling which supports the foundations of Back Bay buildings has in some instances rotted and has had to be reinforced.

Engineers have decided that cutting off the percolation from the river by the building of the new basin wall and the conduit has threatened the life of the Back Bay piles and they have reasoned that if the Riverbank subway were built it would be a barrier which would prevent the seepage of the water from the basin through the Back Bay land, which is so necessary to the preservation of the piling.

## Ascribes Rotting to Dryness.

The rotting was ascribed, to the lowering of the ground water level in the district. While many years ago the high tides from the Charles river supplied ample protection to the piling the evidence showed that in recent years no such rise could be depended upon and the piles had to be sawed off at a lower grade.

Mr King's house at 118 Beacon st was designed and built under the supervision of William L. Morrison, an architect associated with Little & Browne. Mr Morrison remembered distinctly the difficulty he had with the old piling.

"I found that when we excavated for the new foundations the old piling was defective," said Mr Morrison. "The tops of many of them were rotten. Those we sawed off, and as the building was very heavy, we drove many new ones and sawed them off at the lower grade than the old.

"The rotting of the piles was undoubtedly due to dryness, to the fact that the tops were above the water level. I do not know how long the old piles had been there, but a pile which is kept saturated ought to last indefinitely.

"I do not remember that any investigation was made at the time to ascertain why the old piles had rotted. I believe we accepted the condition and sawed them, as well as the new piles, off at a level that we were sure was low enough to insure a constant supply of water sufficient to preserve them.

"I have never studied the situation as a problem, but I should say that if a subway is built under the Charles river embankment the water supply to the Back Bay piling ought to be considered. It is essential that the ground water level be maintained at a height sufficient to reach the tops of all piling."

## Tops of the Piles Were Rotten.

Henry P. King's house was constructed by the Walter A. Wentworth company. A. Wentworth, president of the construction company, has conducted building operations in the Back Bay for 40 years. Mr Wentworth was asked for his recollection of the condition of the piling on which the foundations of the old house at 118 Beacon st rested when he prepared the base of Mr King's new home.

"There is no question as to the condition of the piling when we excavated for the new house," said Pres Wentworth. "The tops of the piles were very rotten. They were so bad that we had to saw them off and all the new piling was driven deeper.

"It should be said, however, that the old piles were much higher than they should be under the present building law. I think the old piles were as high as grade  $7\frac{1}{2}$ , while the present building law declares that piles must be sawed off at grade five. The old piles under the foundations of 118 Beacon st were therefore  $7\frac{1}{2}$  feet above the mean low water mark when the building law of today requires that the tops shall not be above 5 feet.

"We found the piles were sound enough, except at the top, and we sawed them off at grade five, in accordance with the building laws, and the new piles were also terminated at that height.

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## Water Necessary for the Piling.

"I do not believe there is any reason to be apprehensive at this time of the possible decay of the piling in the Back Bay. In my building experience I have found the water as high as grade six at points between Huntington av and the Providence division railroad track, and I believe that along Beacon st it would be safe to saw off the piles at grade seven even and be sure of plenty of water to preserve them.

"I am basing my opinion, of course, on the understanding that the water in the Charles river basin be maintained at grade eight. I understand that grade eight is the height of the water in the basin and I am assuming that the water is permitted to percolate through the earth from the river.

"If any construction should shut off the water from the basin and should drain the ground water in the Back Bay, why, of course, the lowering of the level would be fraught with serious consequences to the Back Bay piling.

"I have seen nothing yet that to me offers any occasion for alarm. The piling under Mr King's house was rotted, but it was very high, and as soon as the tops were sawed off I was satisfied that the grade was low enough to insure plenty of water. The earth on that location was a peat bog, and it had become very dry. The condition in that section is quite different from that in most sections of the Back Bay."