BRIDGE OVER THE HAWKESBURY RIVER AT WINDSOR
EFFECT OF "BREAKAWAY" ON
FLOODING AT BRIDGE SITE

At a level of about RL 9.8 AHD, the Hawkesbury River breaks its bank at Cordners Corner, between Freemans Reach and Argyle Reach, some three kilometres upstream from Windsor on the Freemans Reach Road. This results in "The Breakaway", a major flood flow, which rejoins the river downstream between Windsor and Wilberforce (see Figure 1). Approximately 80% of flood flow discharges across "The Breakaway" in a major flood, the effect of which is to reduce the flow volume downstream from "The Breakaway" at Windsor. This in turn reduces the quantity of flood debris flowing down the river between "The Breakaway" and Windsor. Therefore the flood flow forces on the existing bridge substructure and superstructure are not as great as would occur if the "Breakaway" did not happen.

For any new bridge constructed between "The Breakaway" and Windsor, while the flood level would not change, the possibility of damage from flow forces and debris is considerably reduced, particularly if the new bridge is located upstream of the Rickabys Creek junction.

The "Breakaway" is a well known to locals. It is featured on local tourist information.

It is referenced in the PWD Report 87067 ISBN734030131

"HAWKESBURY RIVER HYDRAULIC AND SEDIMENT TRANSPORT PROCESSES

REPORT NO. 10

CHANNEL GEOMETRY, MORPHOLOGICAL CHANGES AND BANK EROSION

December 1987"

http://nsw-coastal-explorer.domorewithmaps.com/documents/HAWKESBURY%20RIVER%20HYDRAULICS%20&%20SEDIMENT%20TRANSPORT%20PROCESSES%2010-CHANNEL%20GEOMETRY,MORPHOLOGICAL%20CHANGES%20&%20B.pdf

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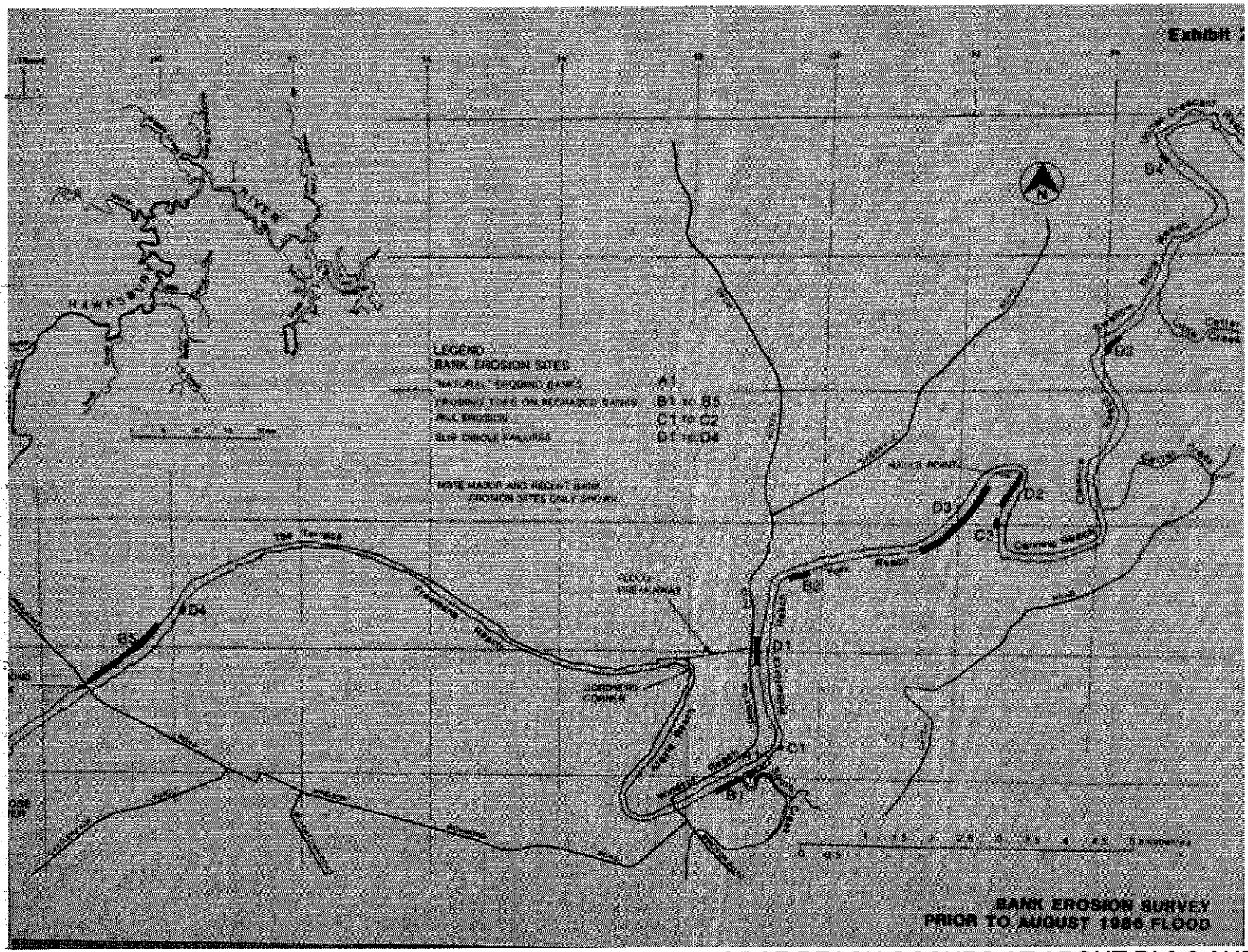

FIG 1. THE BREAKAWAY BETWEEN FREEMANS REACH AND WILBERFORCE REACH OCCURS AT ABOUT RL9.8 AHD AND RESULTS IN ABOUT 80% OF MAJOR FLOOD FLOW BYPASSING WINDSOR, THUS MINIMISING FLOOD FORCES ON THE BRIDGE