

Erith Reach - Long Reach

Crown copyright
1985

ACKNOWLEDGEMENT

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ABSTRACT

This volume presents the results of an examination of bed levels undertaken as part of a study to determine the relative importance of factors influencing navigable depths in a single-channel estuary as represented by the Thames.

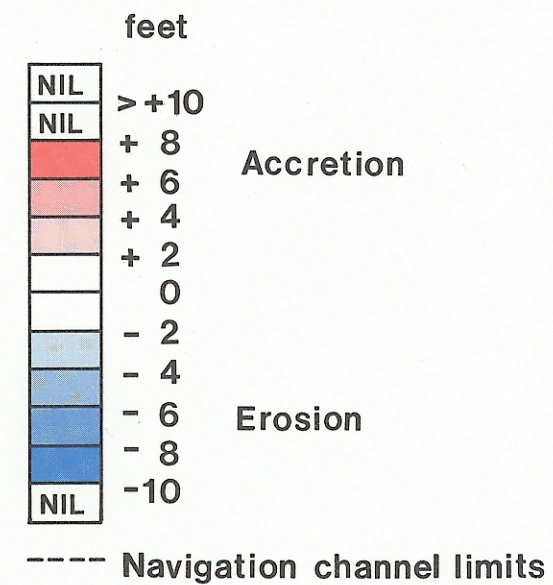
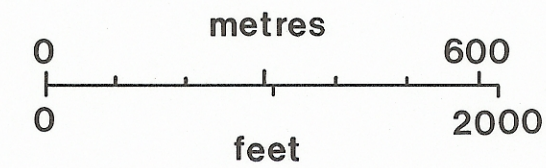
In March 1983, two reports were published to document the changes that have taken place from the early 1950's through to the late 1970's. The first report, IT 241, presented accretion/erosion charts of five sensitive reaches of the estuary - Bugsbys, Woolwich, Gallions, Barking and Halfway Reaches - which embrace the "Mud Reaches" where the bulk of the estuary maintenance dredging was carried out. The second report, IT 246, provided factual information for the same period on variations in tidal level, fresh water flow, water salinity, and capital and maintenance dredging.

Since 1983, work has been undertaken to extend the documentation of bed-level changes down-river to incorporate Erith Reach, Erith Rands and Long Reach and to make a more detailed examination of the changes that occurred in Woolwich Reach during Thames Barrier construction. The following eight accretion/erosion charts summarise the results.

The data collected during the 3-year study have been analysed in conjunction with records from four silt monitors which have been in continuous operation in the estuary since the early 1970's. The results of this analysis, reported in SR 42, demonstrate that it is possible to distinguish changes in bed level resulting from civil engineering activity such as jetty construction and reclamation, from those due to variations in natural factors.

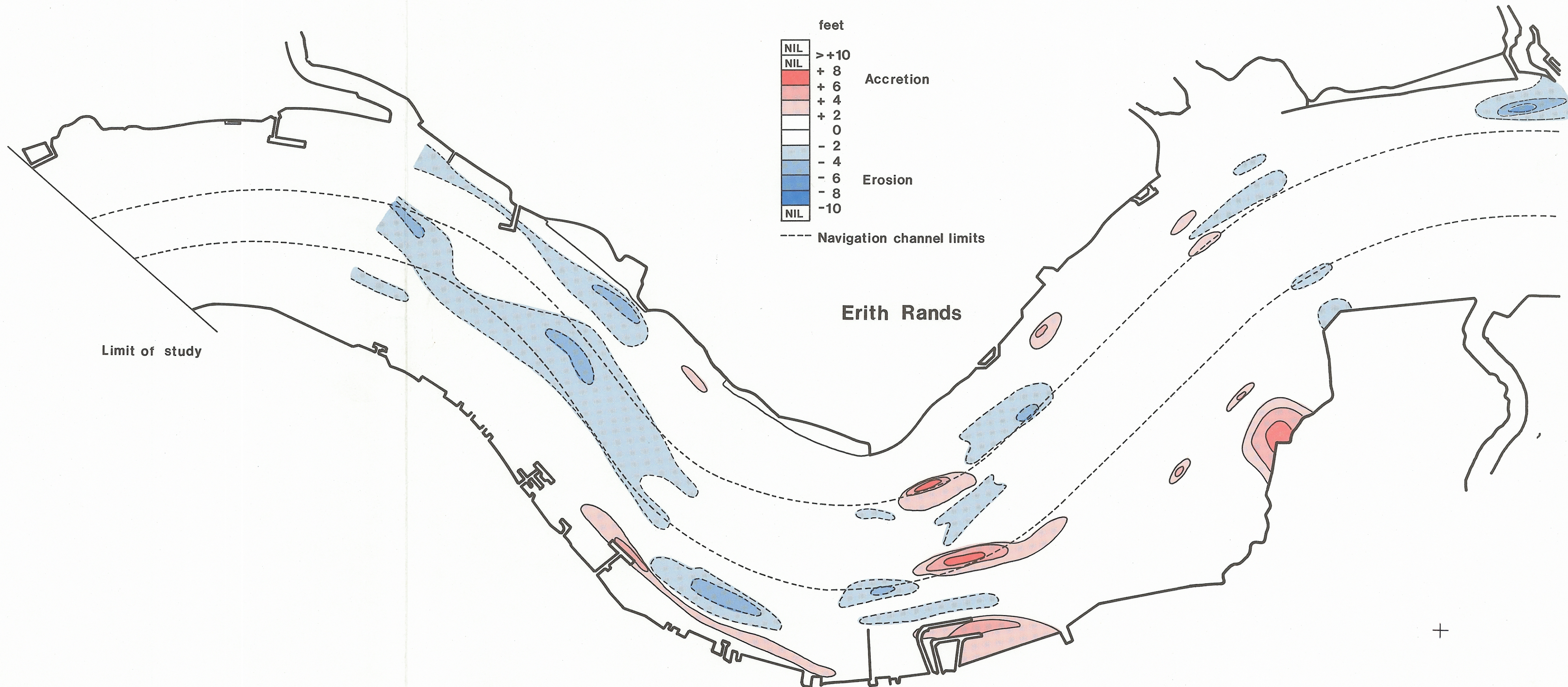
1. Accretion and Erosion 1952/53 - 1957/58

Erith Reach

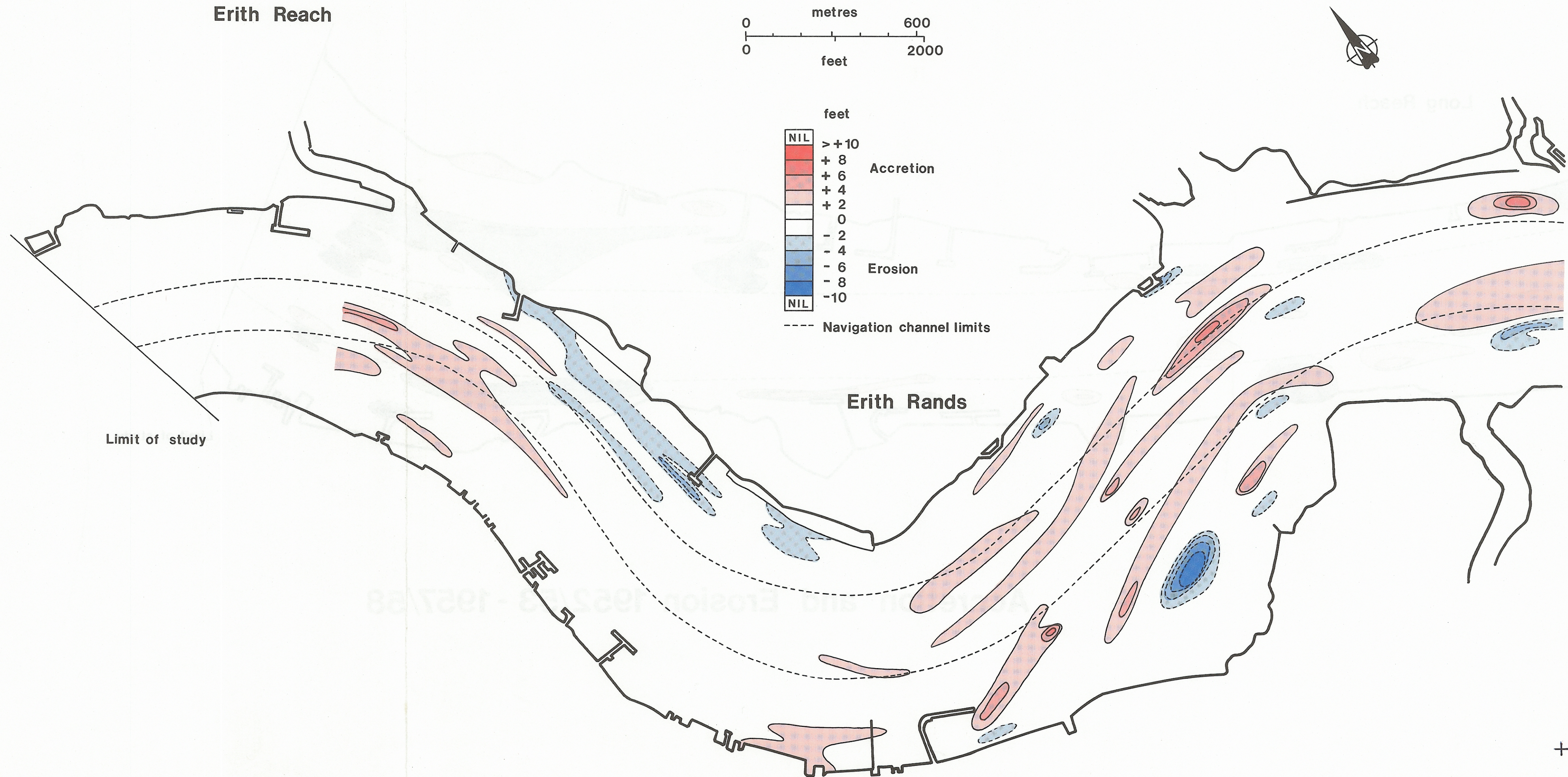


Limit of study

Erith Rands



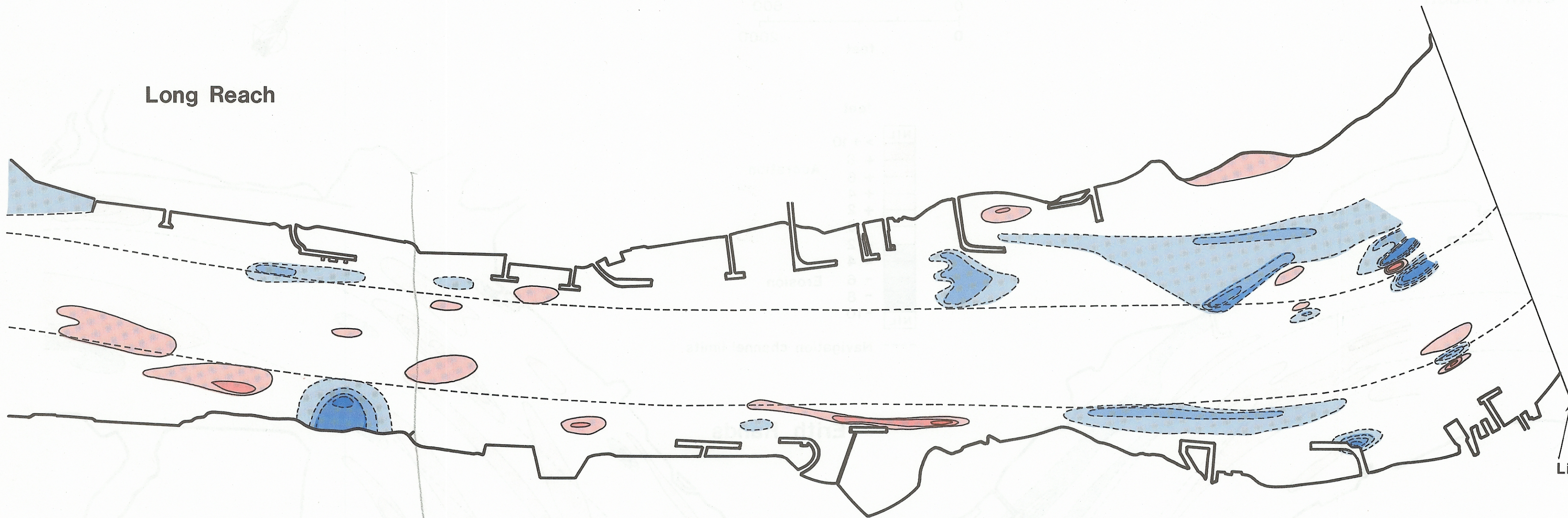
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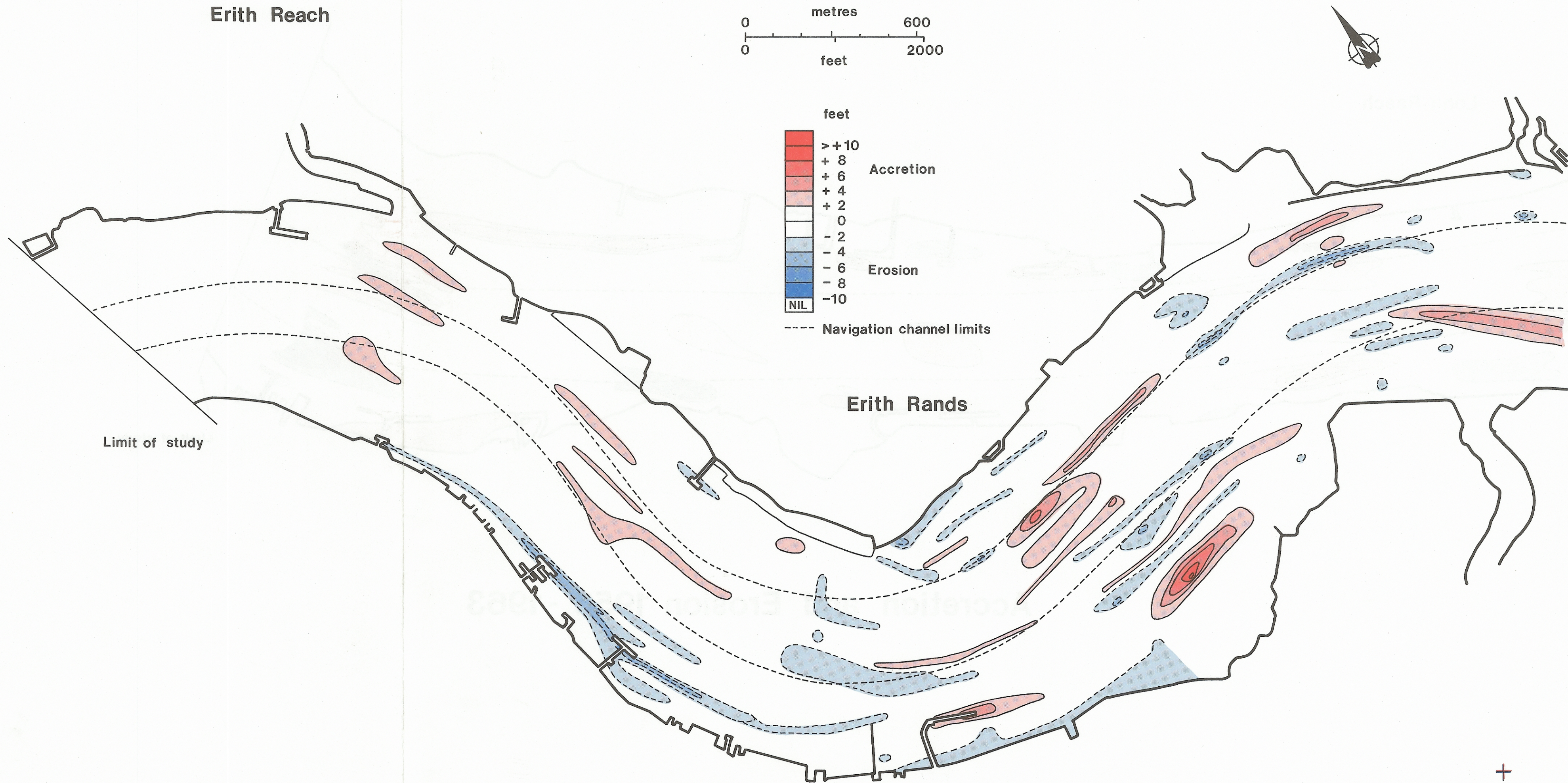
Long Reach

Limit of study

Accretion and Erosion 1952/53 - 1957/58



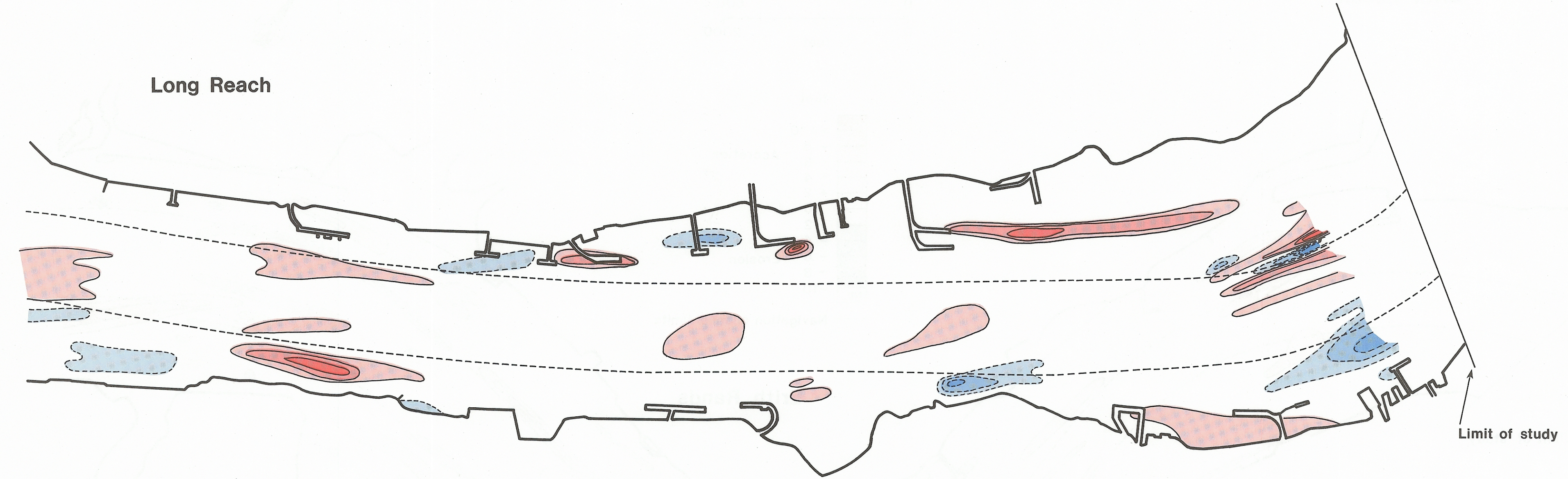
3. Accretion and Erosion 1963 -1968



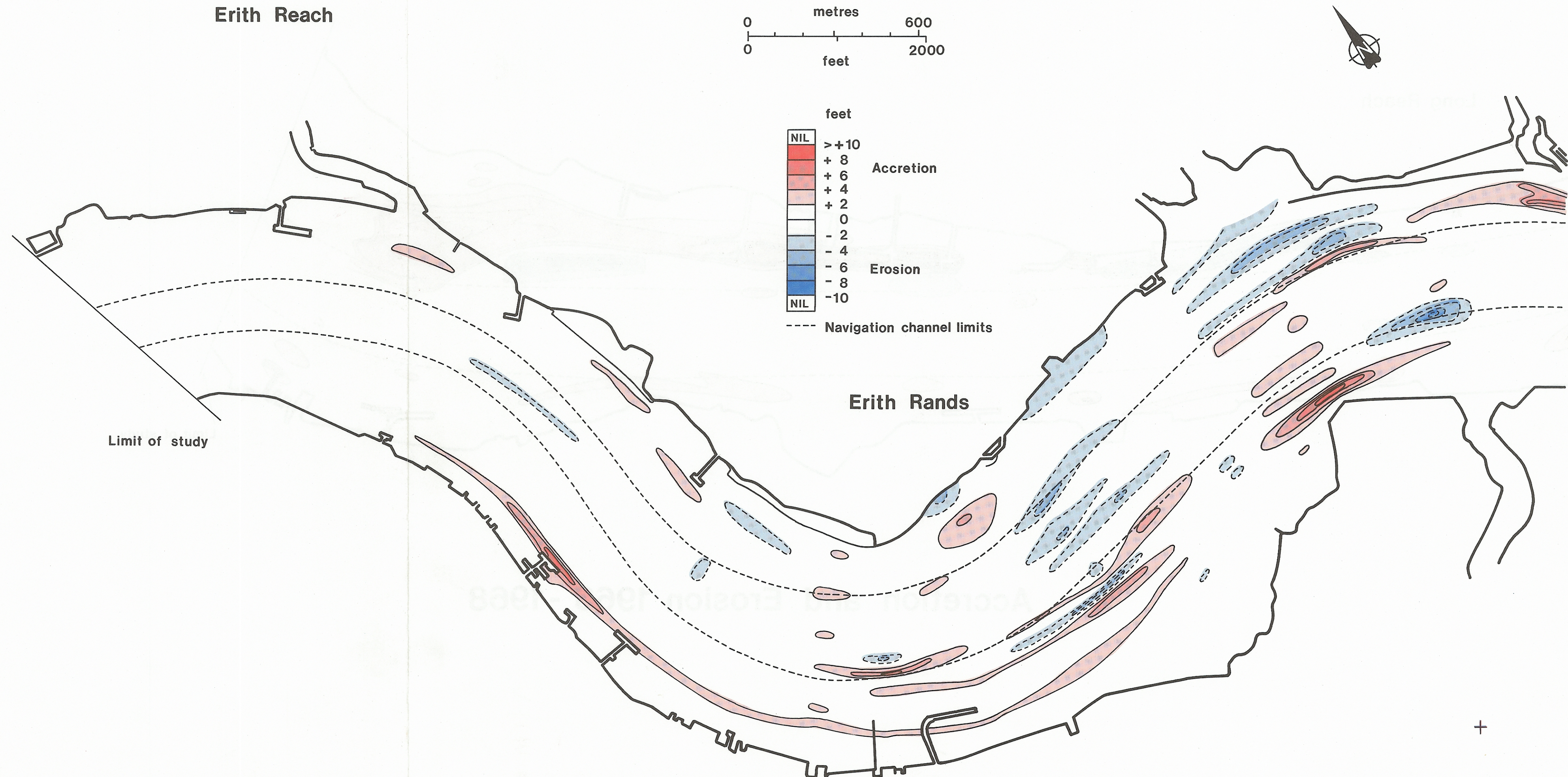
Long Reach

Limit of study

Accretion and Erosion 1958 - 1963



4. Accretion and Erosion 1968 - 1973



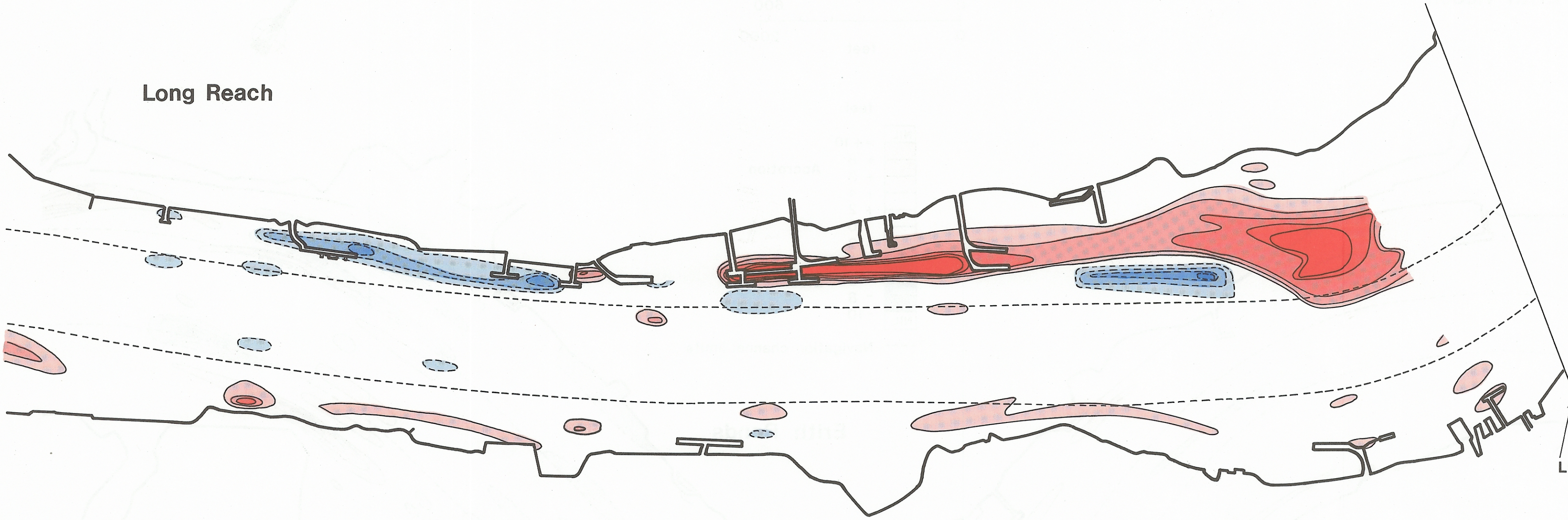
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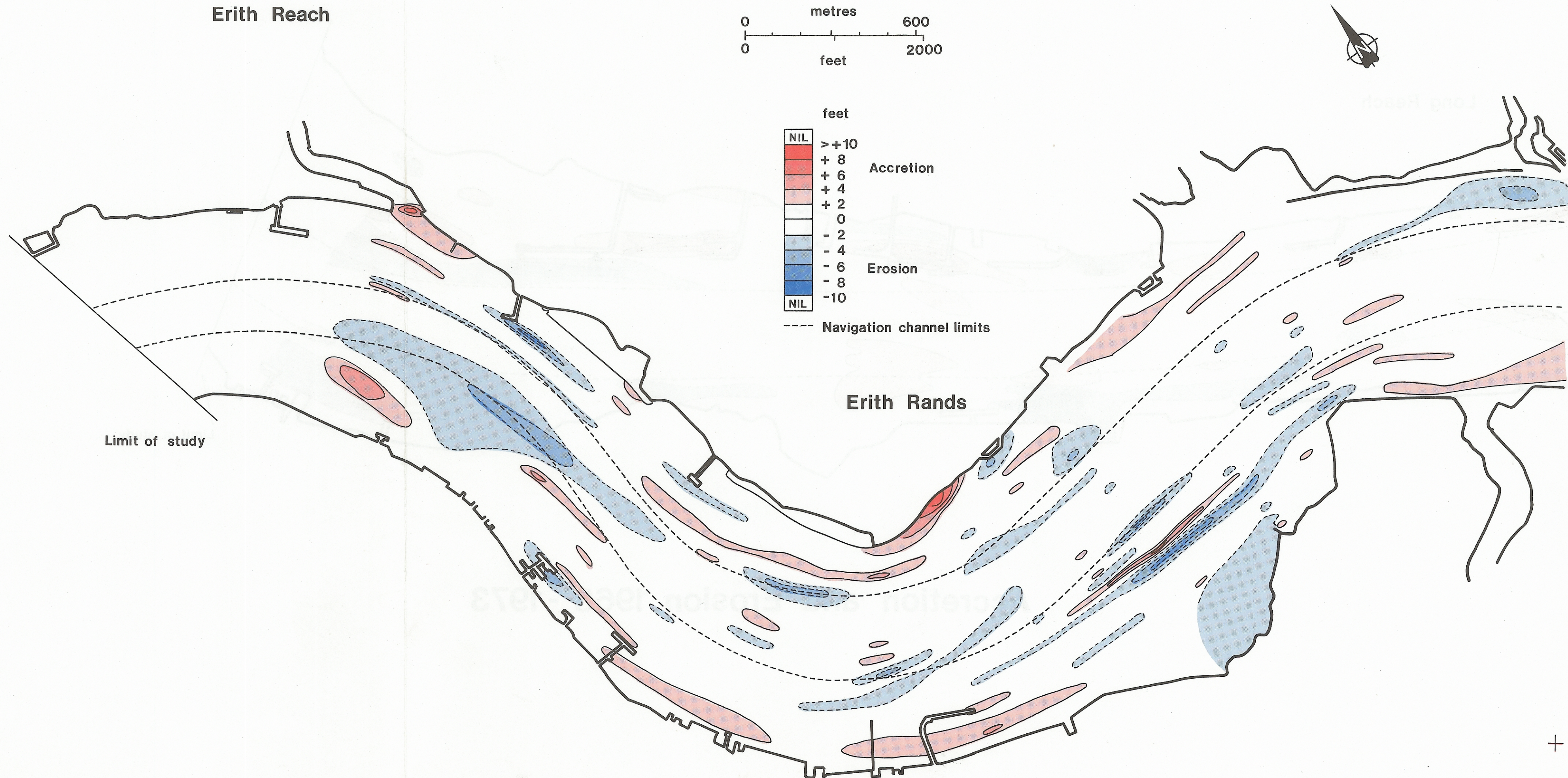
Limit of study

Accretion and Erosion 1963 - 1968

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5. Accretion and Erosion 1973 -1978



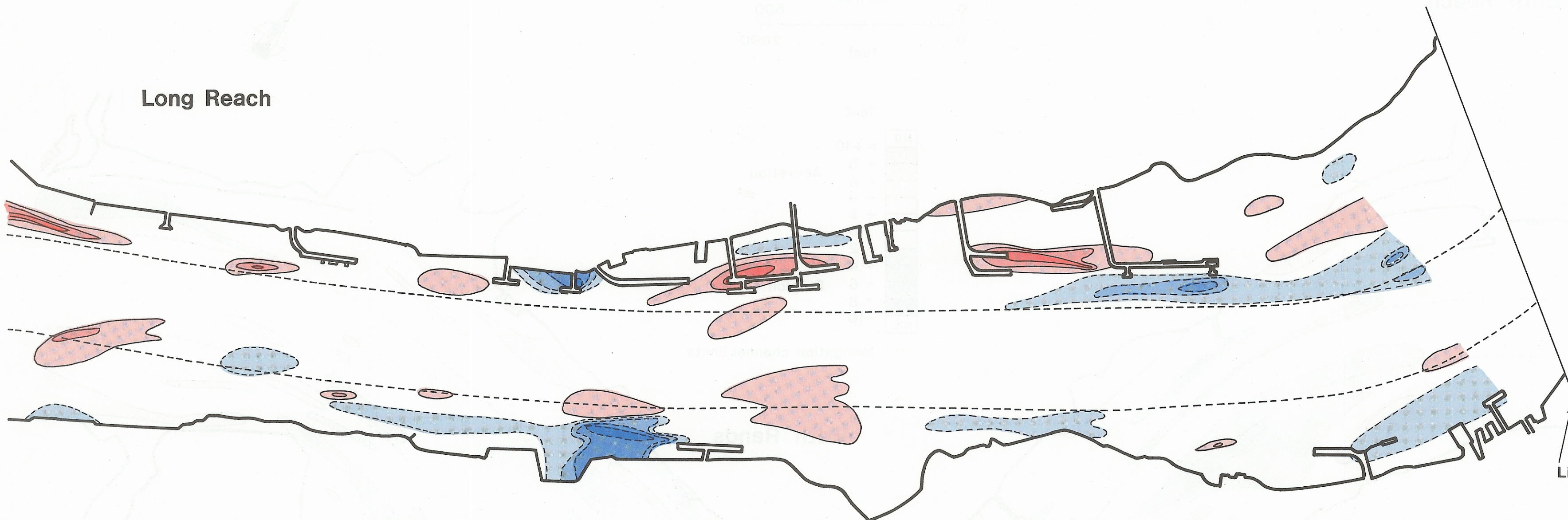
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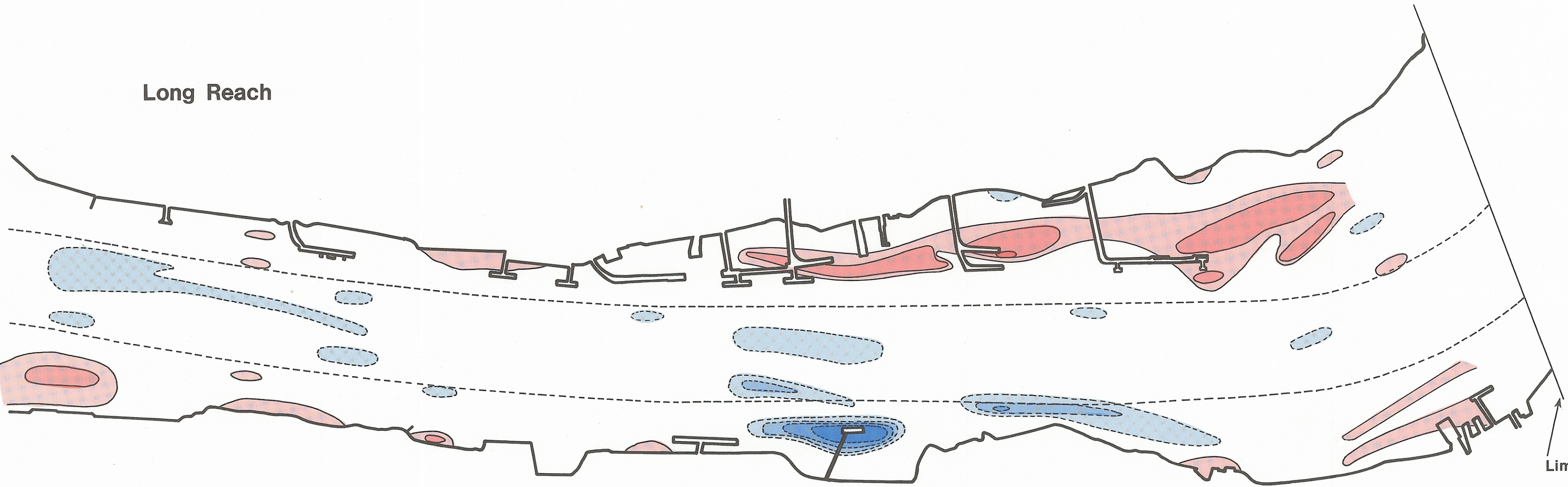
Accretion and Erosion 1968 - 1973

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Long Reach

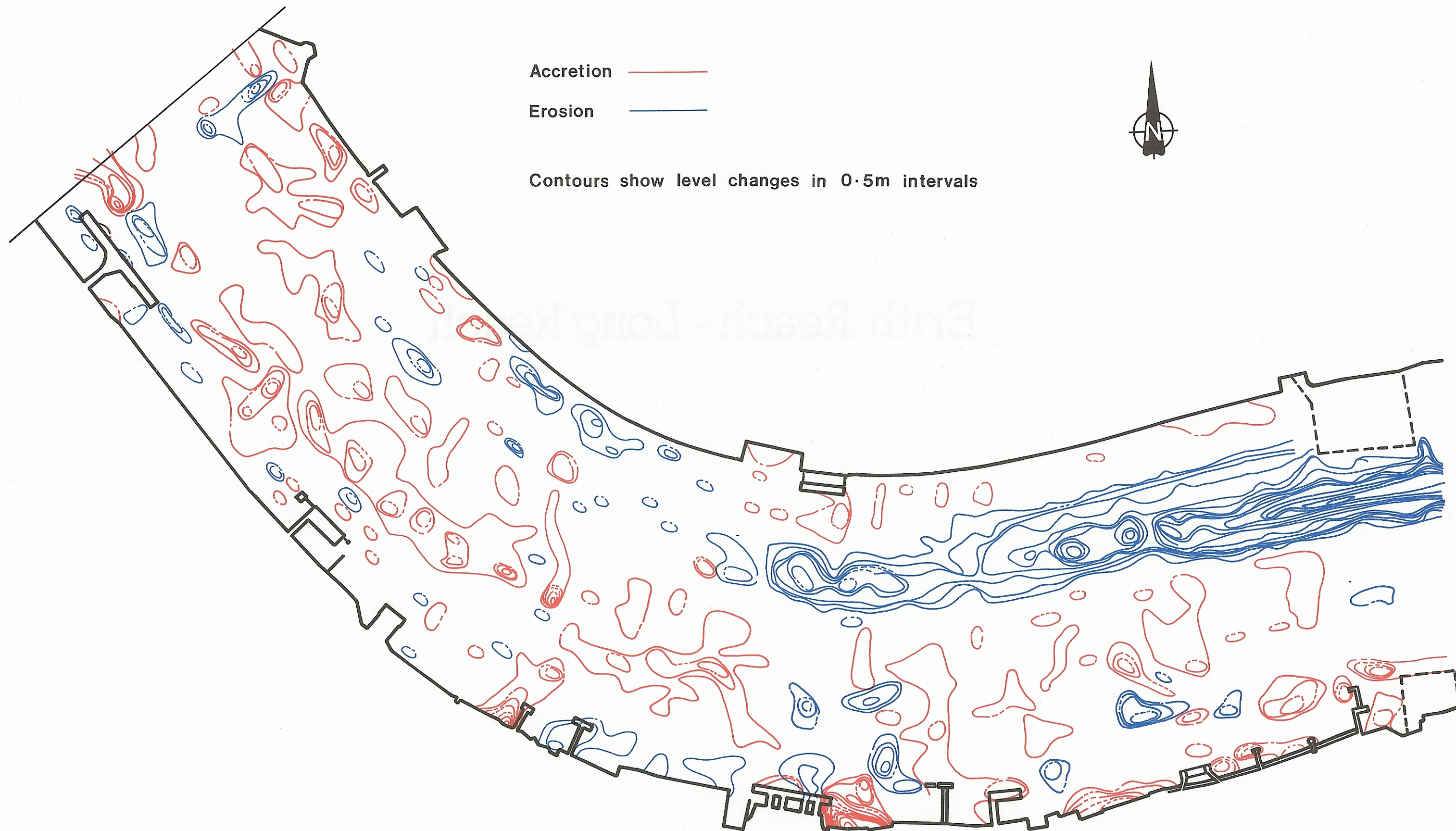


Limit of study

Accretion and Erosion 1973 - 1978

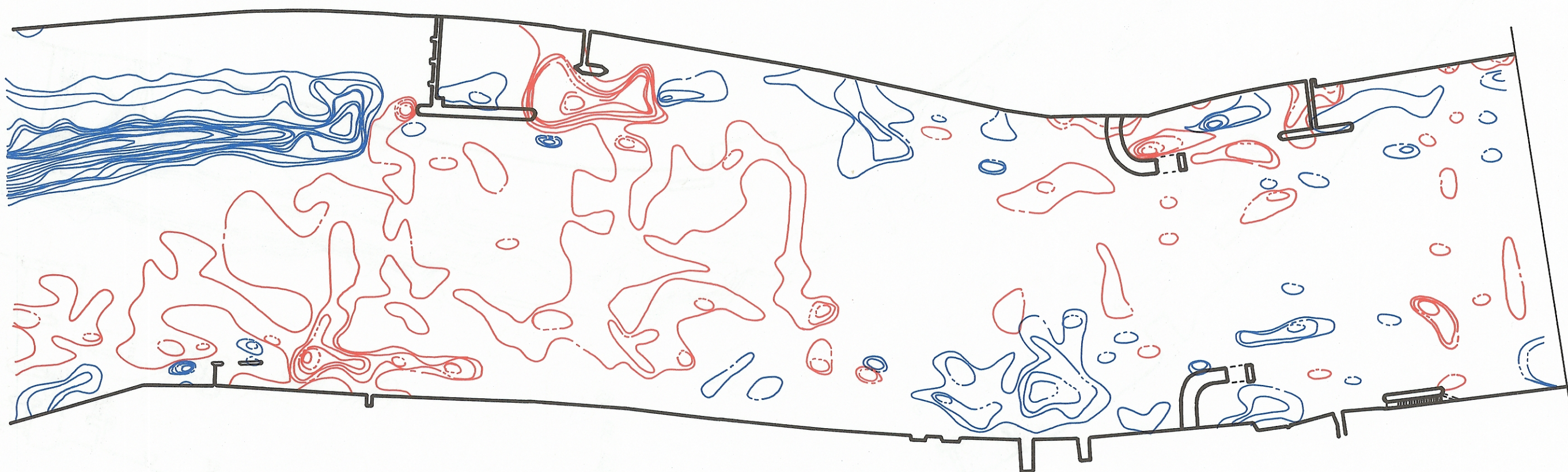
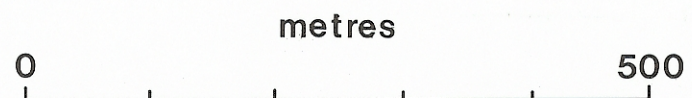
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Woolwich Reach



6. Accretion and erosion in Woolwich Reach

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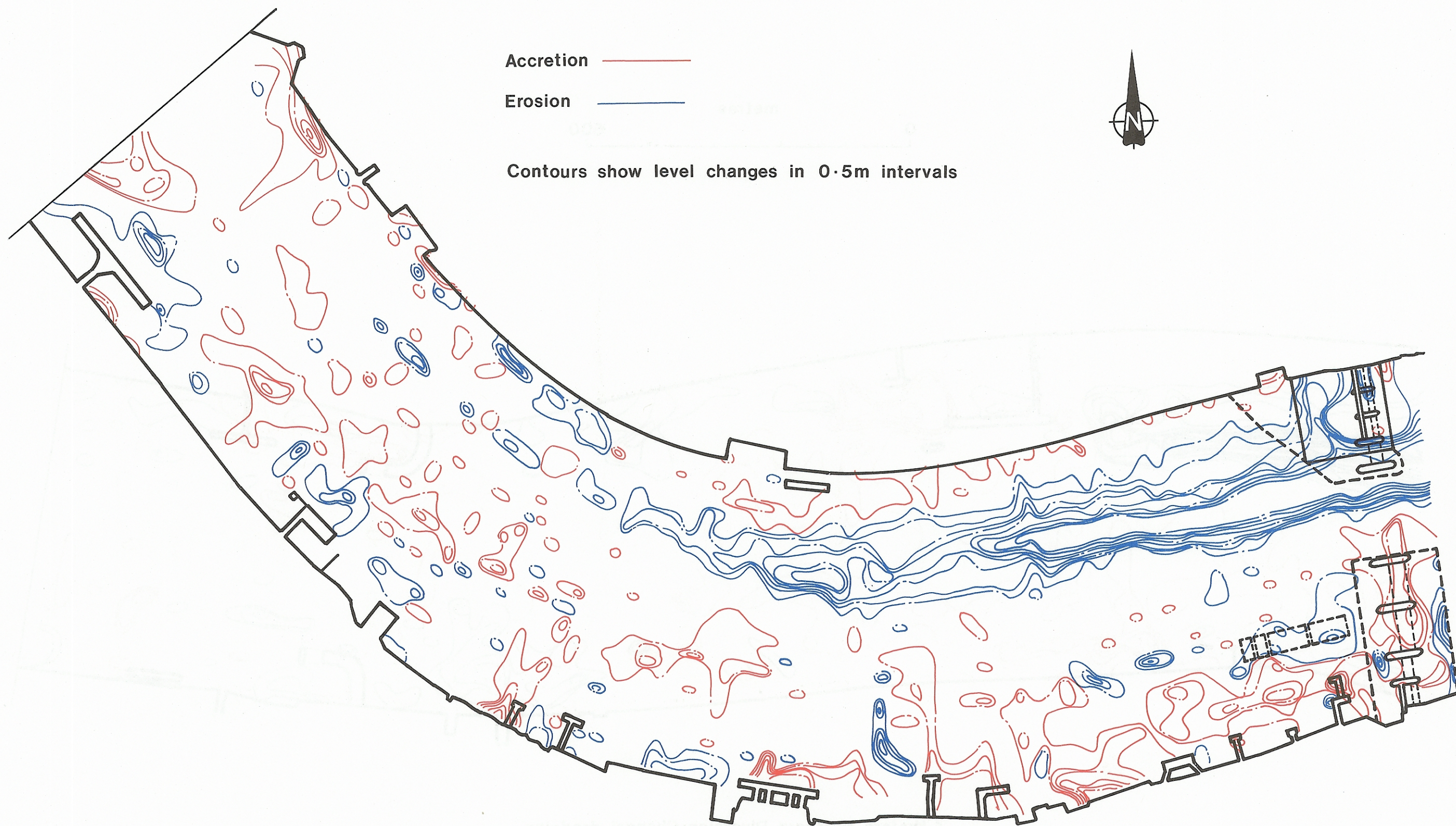


1 [before Northern Diversion Channel dredging
- 1974]

Surveys compared

2 [after Northern Diversion Channel dredging
- 1975]

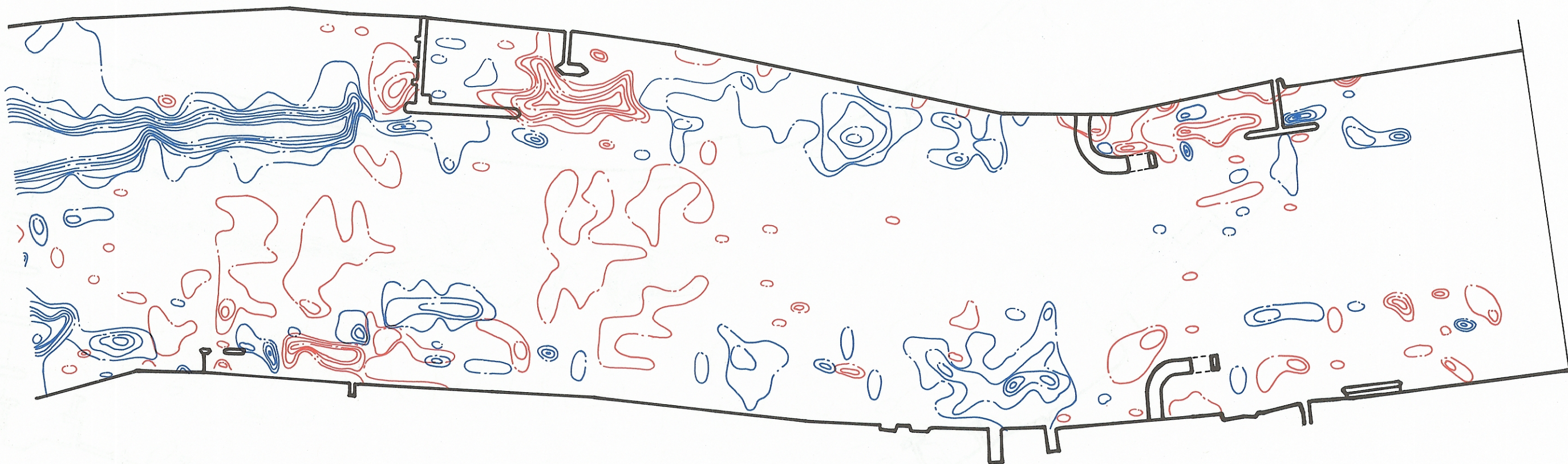
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7. Accretion and erosion in Woolwich Reach

metres

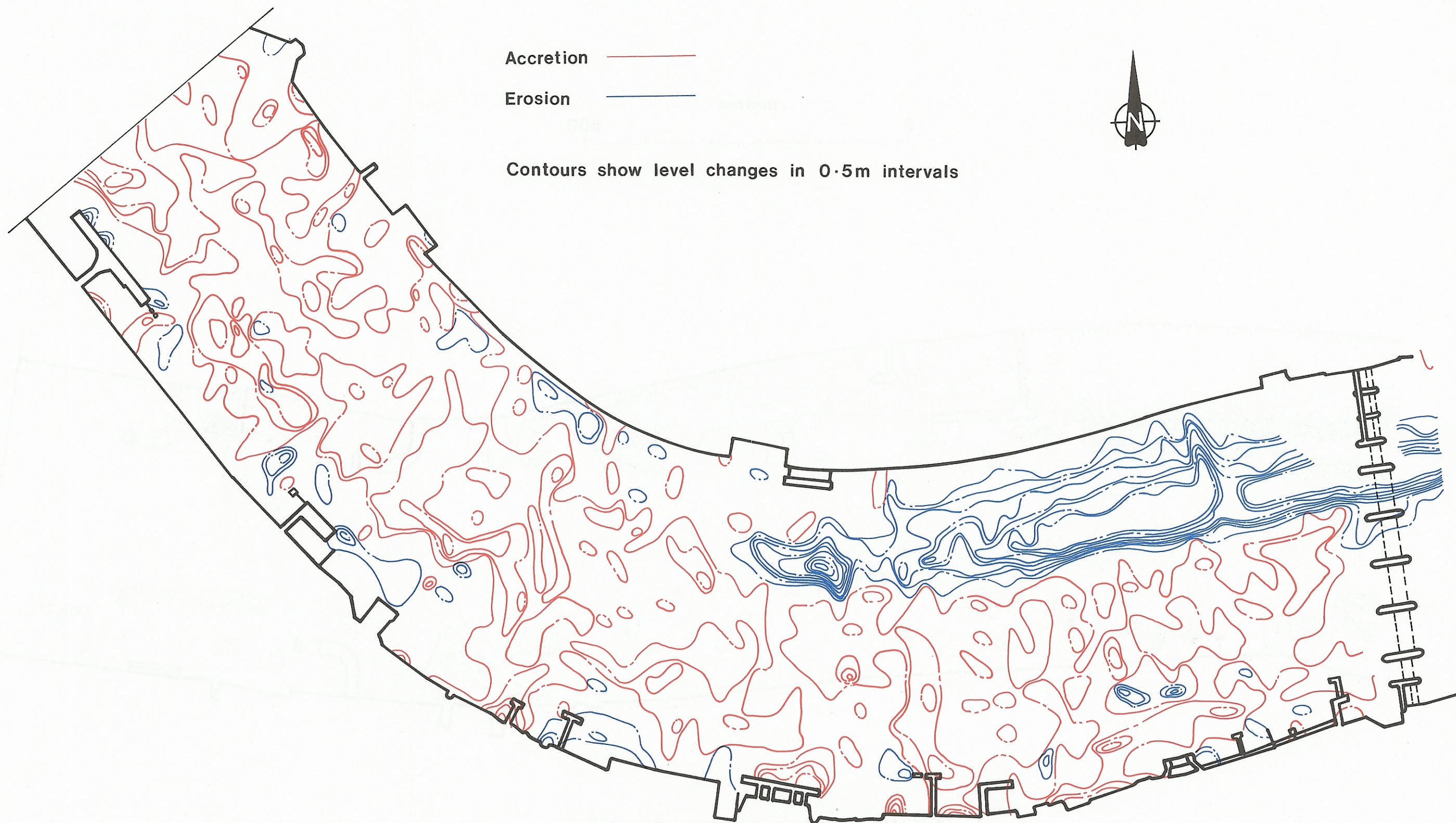
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Surveys compared

1 [before Northern Diversion Channel
dredging - 1974]

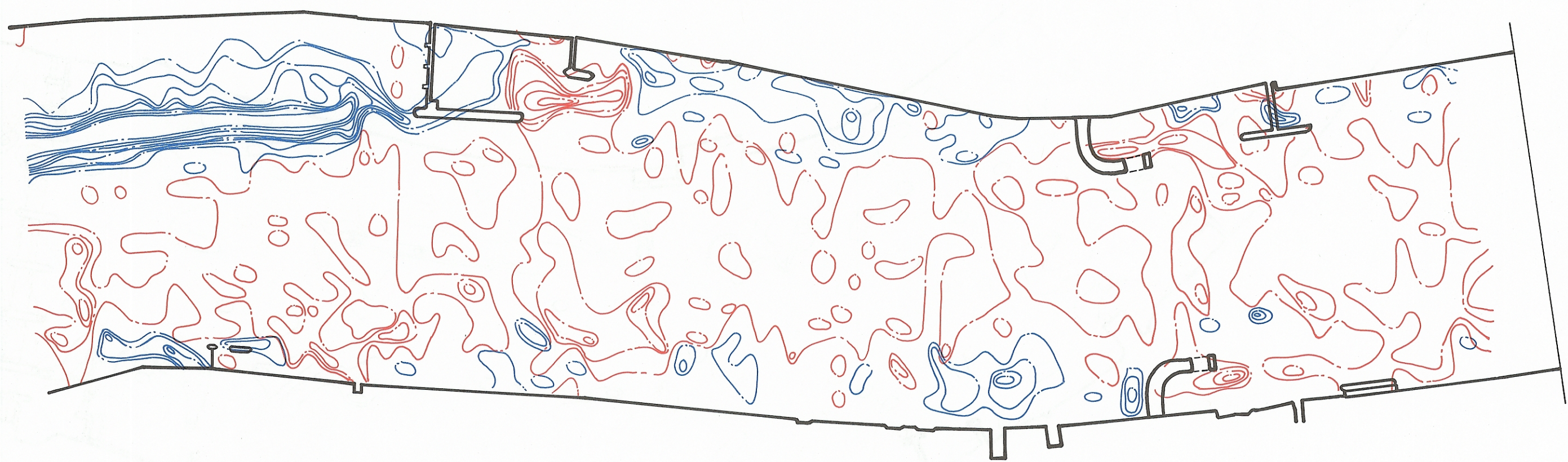
6 [during period of maximum obstruction
by temporary works - 1978]



8. Accretion and erosion in Woolwich Reach

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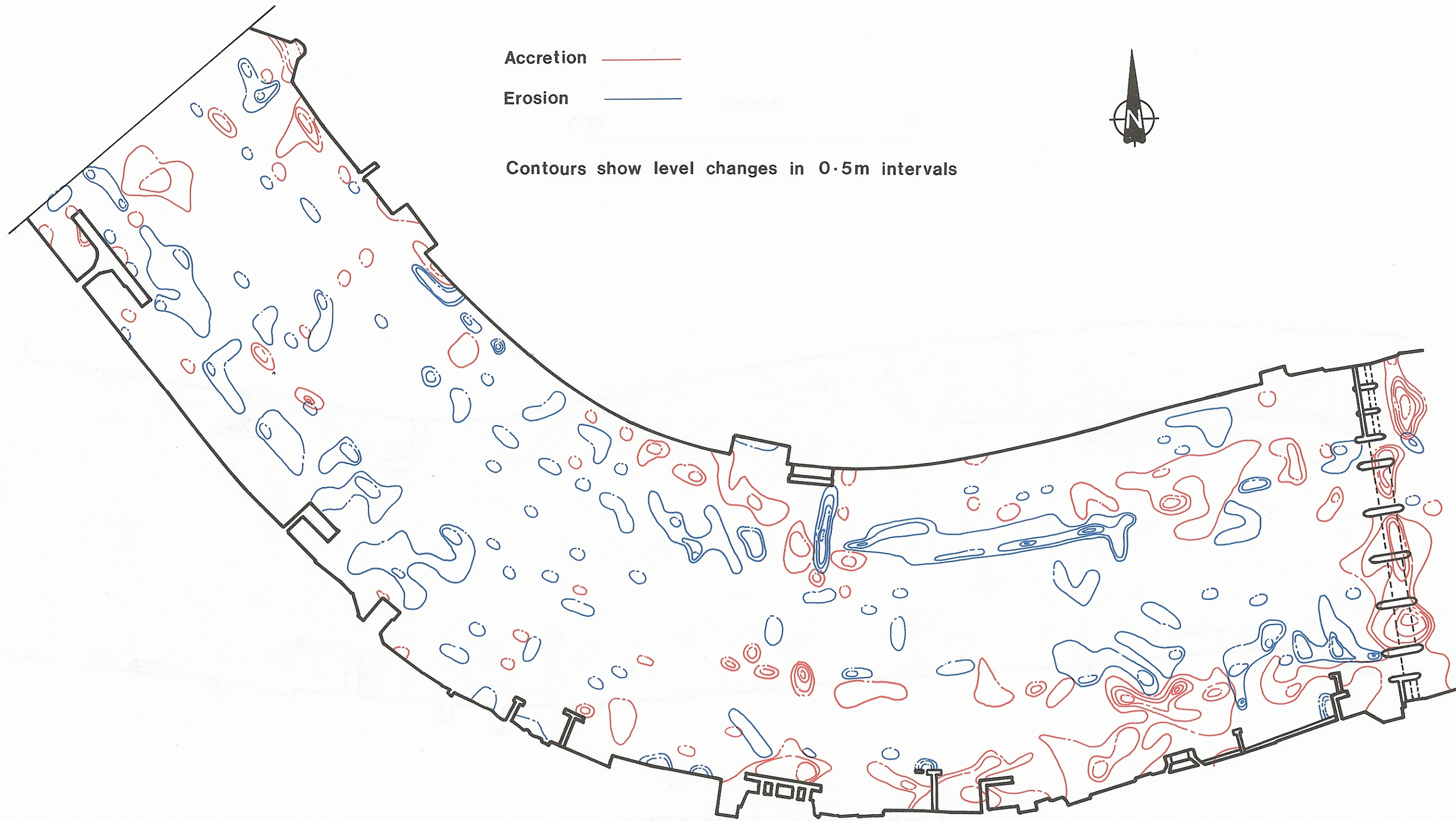


1 [before Northern Diversion Channel
dredging - 1974]

Surveys compared

10 [following completion of barrier structure
- 1982]

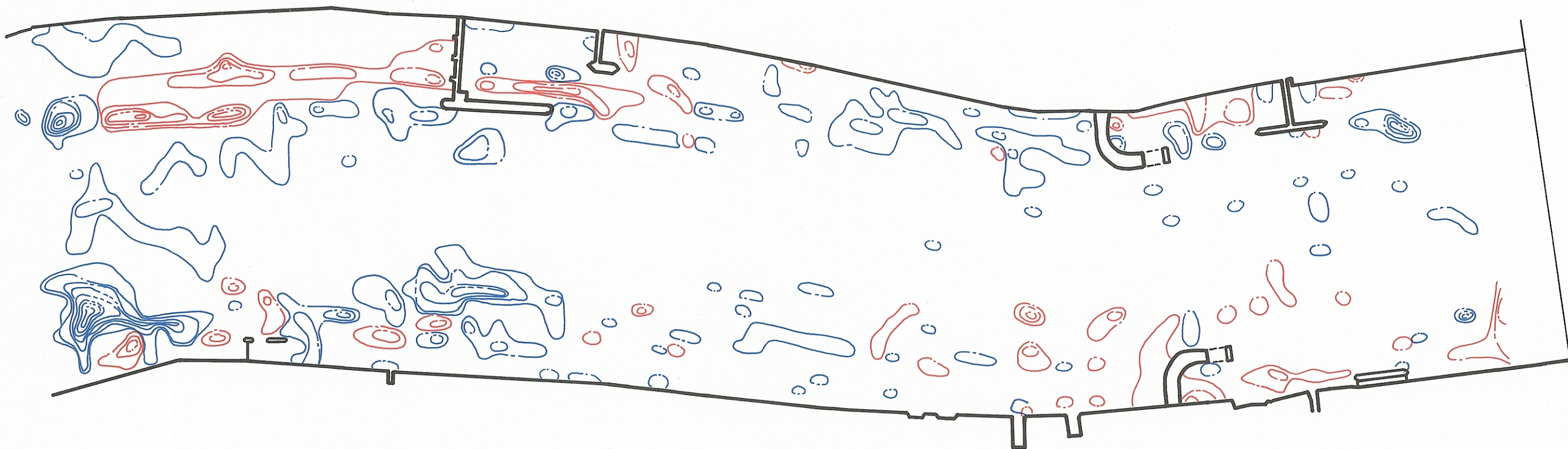
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9. Accretion and erosion in Woolwich Reach

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2 [after Northern Diversion dredging
- 1975]

Surveys compared

10 [following completion of barrier structure
- 1982]

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