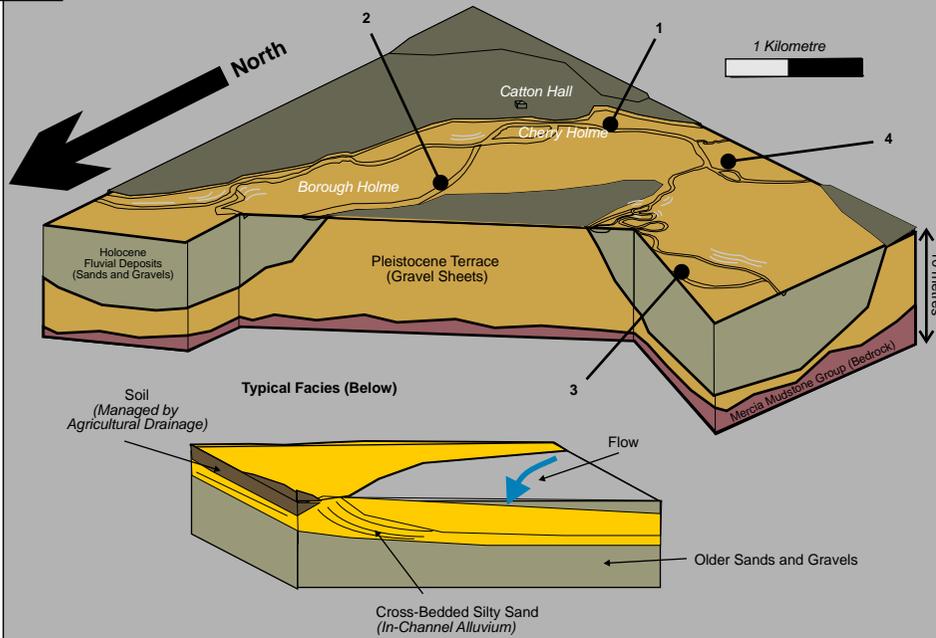


5

Land Drainage and River Management - 400 years B.P. - Now

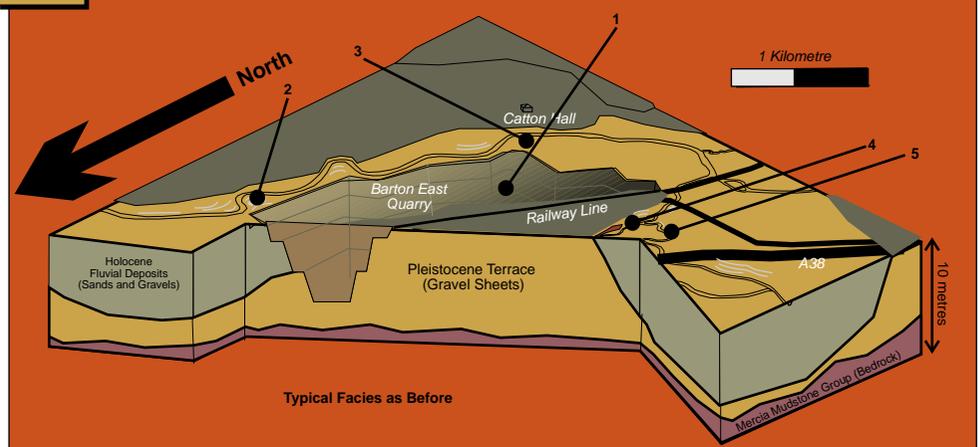


- 1 - Landscape surrounding the fluvial system becomes increasingly managed, with vegetation clearance and land drainage, resulting in the fluvial system abandoning additional channels and approaching a single-channel meandering planform.
- 2 - Former main course of the river, to the west of Borough Holme, shortens, eventually becoming abandoned and leaving the eastern subsidiary channel as the main course.
- 3 - Construction of canals near Alrewas requires the western part of the river to be lined with building materials, halting migration
- 4 - A major flood in 1795 causes the River Mease to switch its course from its original confluence with the Tame to its current confluence with the Trent.

Figure 15 - Reconstruction of the fluvial systems of the study area during seven stages of development, from the ice age to the present day. The diagrams show how the fluvial systems developed from a braided planform to an anastomosing planform to the modern single channel planform, and highlight the typical sedimentary facies that were deposited at each stage. Details of these stages are discussed further in Chapter 4 of the report.

6

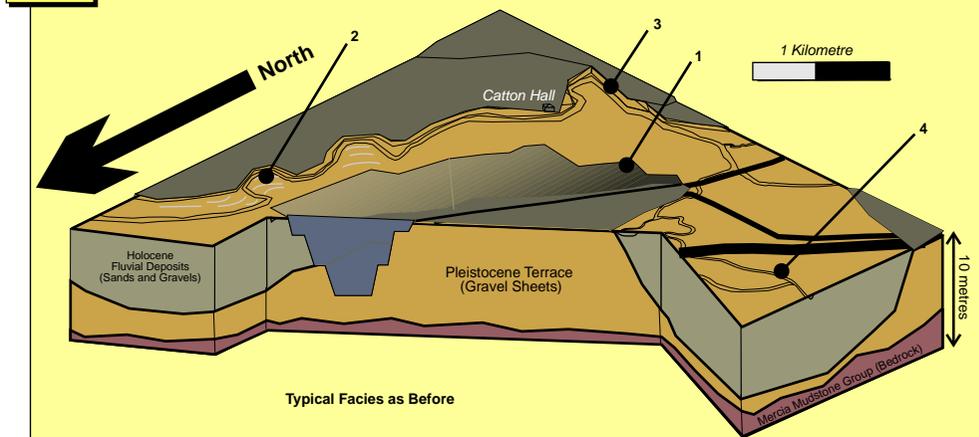
The Study Area Today



- 1 - Aggregate Extraction at Barton East Quarry. Preparations for quarry development required fully dredging and excavating the former main course of the River Trent to the west of Borough Holme.
- 2 - Extensive scroll bar development over the last hundred years as the downstream reach of the Trent in the study area has become more sinuous and incised into the Pleistocene terrace.
- 3 - Increasingly single-channel planform; second channel at Cherry Holme abandoned, leaving just two islands in the study area.
- 4 - Initial stages of channel abandonment; former subsidiary channels begin to silt up.
- 5 - Upstream part of River Trent in the study area is becoming more straight, with meander cut-off in unmanaged reaches of the river.

7

Probable Future Changes to the River Trent



- 1 - Barton East Quarry to be abandoned and filled with water by 2030.
- 2 - Northern stretch of River Trent will continue to erode eastwards, becoming more sinuous as it incises into the terrace.
- 3 - Extreme incision in some reaches of the Trent are likely to result in eastwards migration until the fluvial system reaches bedrock.
- 4 - Further abandonment of subsidiary channels where there is no human intervention.