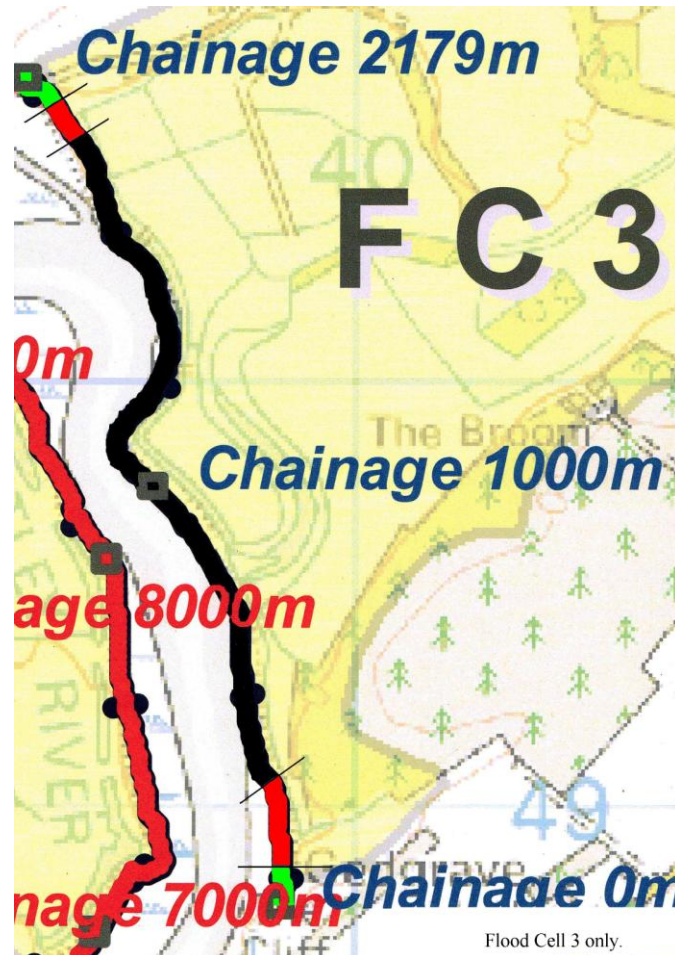


May 5, 2014

AOEP Flood Cell defence upgrade designs.

Flood Cell 03, Chillesford, Butley Creek.



Introduction.

Measures detailed below and on enclosed drawings are to provide a design upgrade to allow the defence to survive, intact, a 1 : 200 surge event in the year 2050, as defined by the Environment Agency surge modelling. Where the defence already meets or exceeds this criteria no detail is provided.

With reference to the Environment Agency Flood Cell level and chainage data FC 03 extends from Ch 0 – Ch 2179.

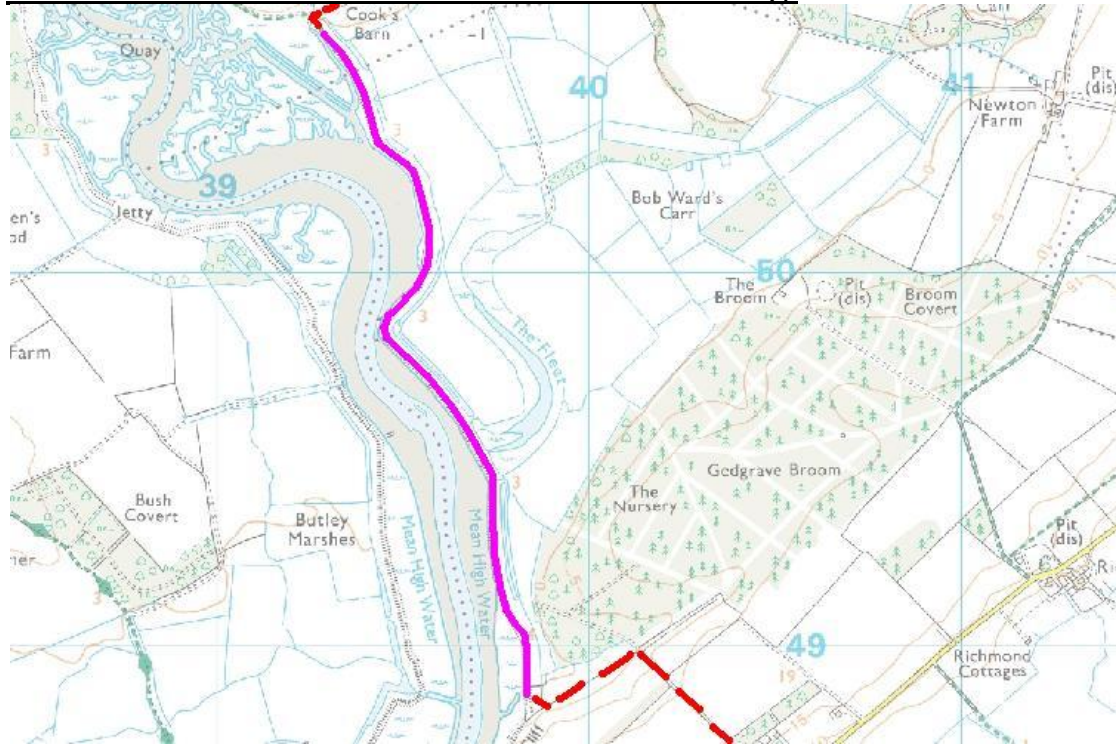
This design report details improvement work required along the flood cell levee. The detail enclosed will allow a specialist Contractor to price the work.

Andrew Hawes

BSc Hons Eng Geology & Geotechnics

FGS CEng MICE Supervising Panel 1975 Reservoirs Act

Ch 65m – Ch 2063m Conventional crest raising.



Purple line = extent of the works. Dashed red lines = access routes.

Method:

A4 design sections enclosed detailing examples of defence upgrade:

Ch. 205m & Ch. 750m 5 / 5 / 2014

Ch. 1020m & Ch. 2055m 5 / 5 / 2014

Phase 1.

Scrape 100mm topsoil from footprint of proposed clay fill and clay borrow. Stockpile adjacent to works.

Phase 2.

Dig shallow clay (this is the driest) and compact into landward toe of new earthworks, deep clay may need to be stockpiled to dry. All fill to be placed by excavator and compacted with sheep's foot. If compaction is not possible then work should cease until material from borrow ditch reaches a suitable moisture content in stock pile. A self propelled sheep's foot roller can be used, or a 360^o machine mounted sheep's foot attachment. For safety reasons a remote control sheep foot roller may be required on the 1.5m wide crest.

Phase 3.

Complete filling to required crest level and final shaping.

Phase 4.

Place topsoil to depth of 100mm, hydro seed crest and landward slope.



Looking south from Ch. 200m showing levee merging into higher ground. Note quality of grass, this is sheep grazed.



View looking north from Ch 750m, steep angle of landward wall to be reduced. Landowner is drying fill for this purpose.



View south east from Ch 750m. Head wall of old sluice will restrict access during earthworks.



View from Ch 1020m looking north, note drying borrow material and space to borrow ditch.

Andrew Hawes