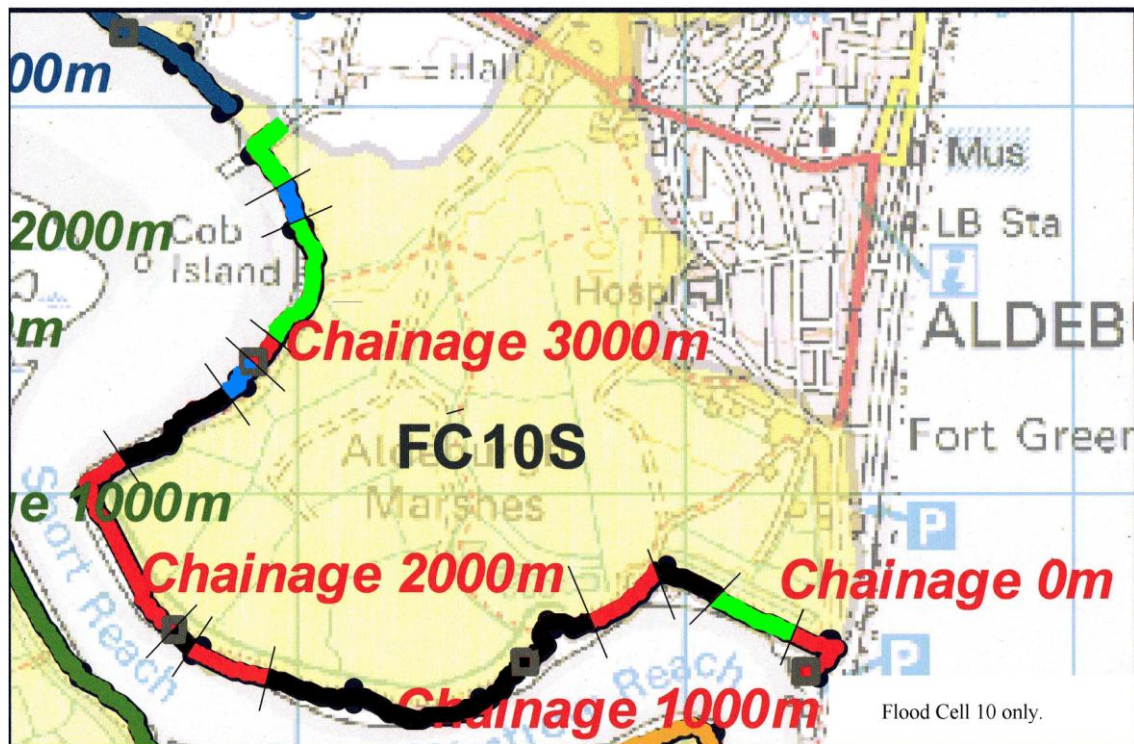


April 29, 2013

AOEP Flood Cell defence upgrade designs.

Flood Cell 10 S



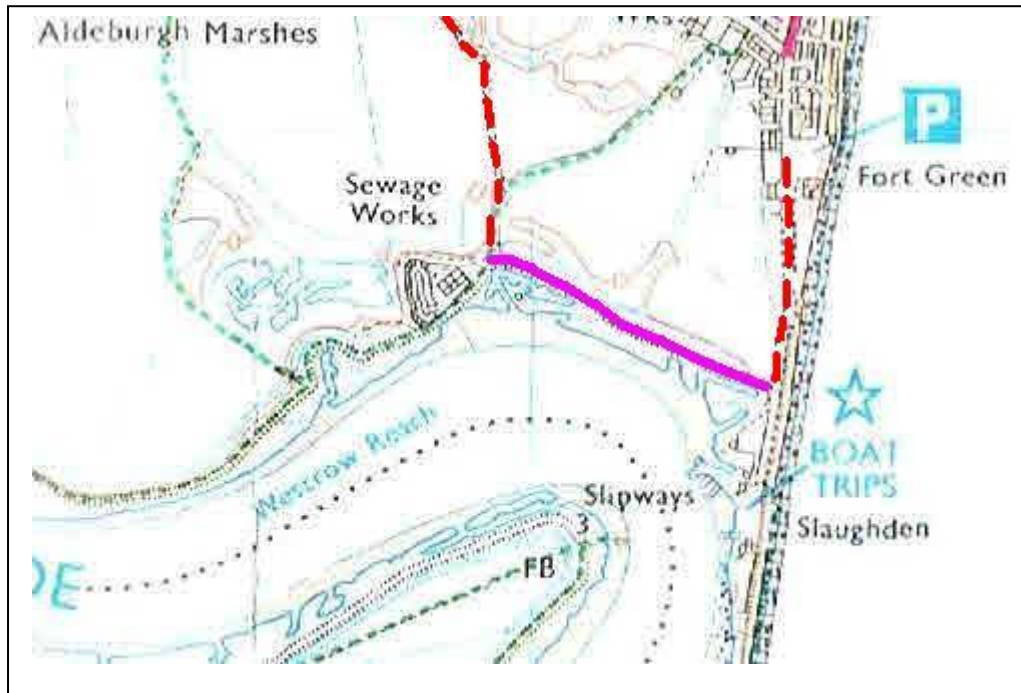
Introduction.

Measures detailed below and on enclosed drawings are to provide a design upgrade in the form of 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 10 S extends from Ch 0 – Ch 3725.

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

Ch 60 – Ch 550 (Ref. Design sketch Ch 60 – Ch 550)



The purple line denotes the extent of the works. The dashed red line are the access routes.



View looking east from Ch 500.

Phase one.

Cut grass very short on landward bank and crest, collect all cuttings and pile adjacent to borrow dyke.

Phase two.

Strip turf from landward 1.0 metre width of crest, to create level platform.

Phase three.

Strip a 100m² strip of turf adjacent to borrow dyke to enable 50m³ of suitable clayey silt to be dug at depth no greater than 0.6m. Compact with sheep's foot roller into crest between Ch 418 and Ch 550 in sections which are below 3.12 m O.D. raise to 3.15m O.D.

Phase four.

Lay double twist galvanised UPVC coated mesh (see Specification) down from crest to landward toe of embankment. Join all edges with Spenax stainless steel rings at 200mm centres.

Phase five.

Install mechanical anchors (see Specification), two rows at 2m horizontal centres, as shown in design sketch.

Phase six.

Profile all meshed areas not in contact with ground, allow two U pins/m.

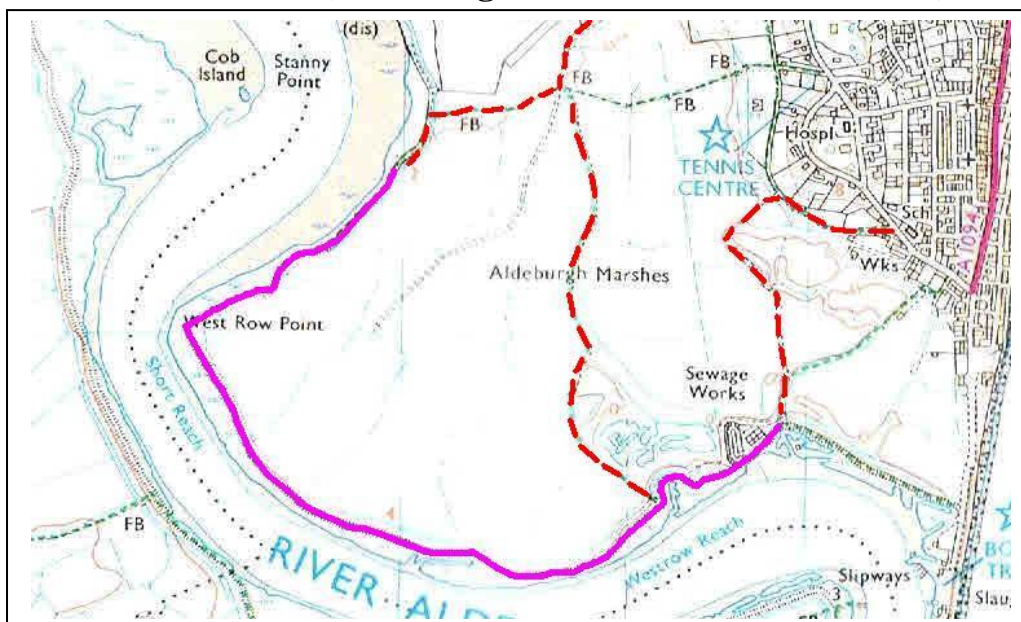
Phase seven.

Place Amorflex 140 in two rows, pinning each landward block with rebar pin 500mm long, terminate 20mm below block surface.

Phase eight.

Work turf/topsoil mix, removed in phase two, into blocks and surround.

Ch 550 – Ch 3084 (Ref. Design sketch Ch 550 – Ch 3084)



The purple line denotes the extent of the works. The dashed red line are the access routes.



View looking south west from Ch 650. Slacket landward slope requiring only two anchor rows.



View looking west from Ch 1500. High and steep landward slope requiring three anchor rows.



View looking south west from Ch 2900.

Phase one.

Cut grass very short on landward bank and crest, collect all cuttings and pile adjacent to borrow dyke.

Phase two.

Re profile landward embankment crest to remove over steepened crest.

Phase three.

Construct 300mm deep anchor trench of mesh along top edge of re profiled landward crest.

Phase four.

Lay double twist galvanised UPVC coated mesh (see Specification) into anchor trench and down from crest to landward toe of embankment. Join all edges with Spenax stainless steel rings at 200mm centres. Compact trench arisings into trench to secure mesh.

Phase five.

Install mechanical anchors (see Specification), Ch 550 – Ch 790 two rows at 2m horizontal centres, as shown in design sketch, Ch 790 – Ch 3084 three rows at 2m horizontal centres, as shown in design sketch.

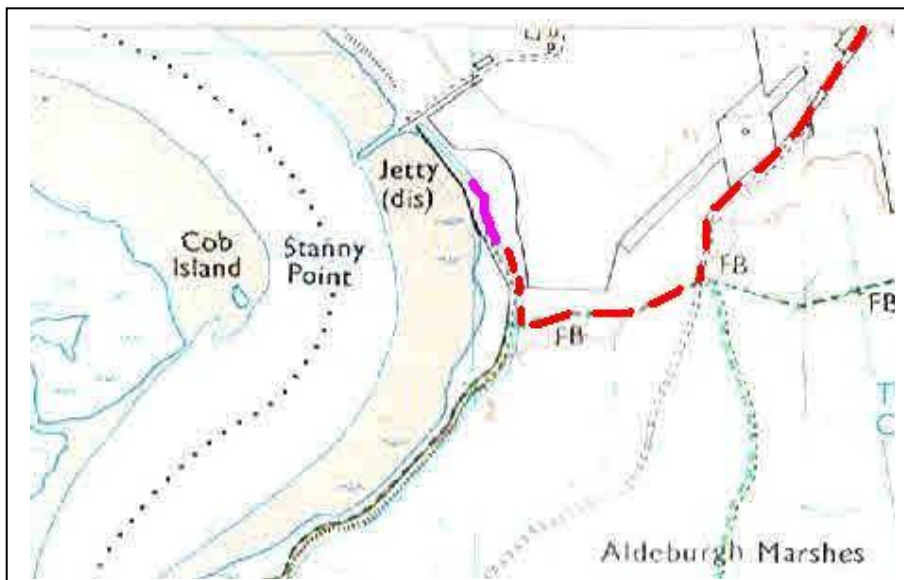
Phase six.

Profile all meshed areas not in contact with ground, allow two U pins/m.

Phase seven.

Hydro seed crest and landward levee bank.

Ch 3360 – Ch 3480



The purple line denotes the extent of the works. The dashed red line are the access routes.



View looking north north west from Ch 3200.

Phase one.

Cut grass very short on landward bank and crest, collect all cuttings and pile adjacent to borrow dyke.

Phase two.

Construct 300mm deep anchor trench of mesh along top edge of re profiled landward crest. Note crest only 1m wide here.

Phase three.

Lay double twist galvanised UPVC coated mesh (see Specification) into anchor trench and down from crest to landward toe of embankment. Join all edges with Spenax stainless steel rings at 200mm centres. Compact trench arisings into trench to secure mesh.

Phase five.

Install mechanical anchors (see Specification), two rows at 2m horizontal centres, as shown in design sketch.

Phase six.

Profile all meshed areas not in contact with ground, allow two U pins/m.

Andrew Hawes