

Essex River Board.

The weir is subject to a 12" lowering in summer, in accordance with the recommendations of the Ministry of Agriculture set up by the Local Authority of the River Stour, Great Cornard Weir, Sudbury. The dimensions of the weir together with the dimensions of the mill gates are shown on drawing No. 3/5000/6 and the position of the mill gates are shown on drawing No. 3/5000/6 Part 7.

Stour Division.

Serial No. 33.

The estimated cost of the work on the Engineer's Report, ~~£15,000~~ has been carried out by the Essex River Board and the cost of the scheme is estimated at £15,000.

Prior to the taking over of the River Stour by the Essex River Board the River Stour (Essex & Suffolk) Catchment Board had approved proposals for the replacement of the derelict lock at Great Cornard 1½ miles downstream of Sudbury town by a steel sheet piled weir.

The scheme had been approved in principle by the Ministry of Agriculture & Fisheries and the steel piles for the work are in stock. The weir is designed to form part of a scheme for the alleviation of flooding in Sudbury, and can be regarded as the first stage in the Sudbury Town Flood Relief Scheme. It will not be effective in lowering flood levels until the channel upstream around Sudbury town is improved, which is to follow in subsequent years combined with a possible flood sluice improvement at Cornard Mill. The design of the weir has been based on the following figures:

Approximate estimated flow in March 1947 1,121 cubic feet per second.

The maximum flow allowed for 1,682 cubic feet per second or 50% above 1947 flow.

The proposed weir crest level is 12" below the present retention level at the mill gates.

Average depth of water below new weir level after channel improvement is complete 4 feet.

Maximum flow to pass at a head of 2 feet without flooding of adjacent land when channel improvement is complete.

No disturbance to water levels will be necessary during construction apart from a 12" lowering in summer level.

The weir by itself can have no effect on conditions downstream. When the channel improvement portion of the scheme is designed consideration will have to be given to this point, but the present information indicates that the elimination of flooding in Sudbury by means of channel improvement will have little effect on levels downstream.

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The weir is designed to form a fish pass in accordance with the recommendations of the Committee on fish passes set up by the Institution of Civil Engineers in 1941 and in consultation with the Board's Pollution & Fisheries Inspector. Constructional details of the weir and the position of the fish pass are shown on Drawings Nos. 5a/3100/6 and 7.

The estimated cost of the weir is £13,500 on the assumption that it will be carried out by direct labour, and details of the estimate are enclosed herewith.

It is requested that early approval to this scheme be given in order that the work may be put in hand and completed this summer.

*E. Smelly*  
Engineer.

16th July, 1954.

D. Office

Re 54 / 3100 / 1,2,6,7

Essex River BoardRiver Stour, Great Cornard Weir, Sudbury.Brought forward

Soil and new selected grass seed.

Stour DivisionSerial No. ~~54/3100~~ S.C.W 33Provide and lay stone blocks  
according to Estimate  
value.

10/- 100 0 0

Provide labour and other in  
connection with the above work.

10/- 100 0 0

Item	Qty.	Unit.	Description.	Rate.	Amount.
1		Item	Allow for access to site, trans- port of plant, offices etc.	Sum.	500 0 0
2		Item	Allow for clearing site.	Sum.	250 0 0
3		Item	Allow for cofferdams.	Sum.	300 0 0
4	200	hrs.	Allow for pumping.	10/-	100 0 0
5	29.5	tons.	Provide Fordingham 1-A steel sheet piles.	£35.	1,032 10 0
6	29.5	tons.	Painting, handling, pitching and driving 1-A steel sheet piles.	£25.	737 10 0
7	30	No.	Provide, handle, pitch and drive 8" x 8" x 13' long oak piles.	£7.	210 0 0
8		Item	Remove and erect H.T. Power Line pole.	Sum.	100 0 0
9	14,500	cu.yd.	Dredge to correct levels, and dispose of surplus spoil.	5/-	3,625 0 0
10		Item	Remove, dismantle and dispose of old lock gates and existing dam.	Sum.	50 0 0
11	480	cu.yd.	Excavation to leap walls, fish pass, floor, apron and dispose of soil.	20/-	480 0 0
12	320	cu.yd.	Provide, mix and place 1:2:4 vibrated concrete to leap walls, weir floor and fish pass.	£6/10/-	2,080 0 0
13	650	sq.yd.	Provide and fix shuttering to leap walls, platform and fish pass.	25/-	812 10 0
14	136	cwt.	Provide and fix m.s. reinforcement.	55/-	374 0 0
15	250	sq.yd.	Provide and fix R.R.C. No.6 7.68 lb./sq.yd. to leap walls.	7/-	87 10 0
16	1750	sq.yd.	Strip turf at site of new embank- ment.	1/-	87 10 0

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No.	Qty.	Unit.	Description.	Rate.	Amount.
			Brought forward:	A. 11,451 3d.	S. 10 0
16	5720	sq.yd.	Rake and sow selected grass seed.	71	d. 0 0
19	120	sq.yd.	Provide and lay concrete block revetment on slopes downstream of weir.	30/-	180 0 0
20	30	cu.yd.	Provide, handle and place in position ragstone to form apron.	55/-	165 0 0
21	500	lin.yd.	Improve drainage ditch at back of new embankment.	2/-	100 0 0
22	25	lin.ft.	Excavate, provide and lay 24" dia. concrete pipes under existing crossing.	25/-	625 5 0
			10% on labour.		A£1,866 383 12,250 1,250 A£13,500
			Land acquisition and Contingencies.		15 0 0 0 0 0
			The maximum flow estimated for 1,000 cubic ft per sec. is 1,000 ft above 1000 ft.		
			The proposed new creek level is 10' below the present elevation level at the mill gates.		
			Average depth of water below new creek level after flood improvement will be approximately 4' feet.		
			Maximum flow to pass at a level of 4' feet without flooding of adjacent land when channel improvement is completed.		
			An inundation to water levels will be temporary during construction work from a 10' lowering in creek levels.		
			The water by itself can have no effect on adjacent foundations. Since the channel improvement portion of the scheme is designed to coincide with time to be given to this point, but the present information, including that the elimination of flooding in either by means of channel improvement or too little effect of levels foundations.		
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			These figures probably are not exact. They are based on the 1000 cu.m. per second estimate.		
			There is no guarantee that the scheme will be completed in time.		
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