

- (1) பக்கங்களின் எண்ணிக்கை 6
(2) புதுக்கித் திருப்பிய நாள் 26-8-89
(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் [Signature]

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

P.W.D துறை

அரசாணை எண். மு. கோப்புத் தாள் எண்.	2001-W	அச்சகம் பலவகை
நாள் :	22-7-1890	198/

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

GOVERNMENT OF MADRAS.
REVENUE DEPARTMENT.

READ—the following letter from Major O. V. BODDY, R.E., Acting Deputy Chief Engineer, Public Works Department, to the Chief Engineer, Public Works Department, dated Ennore, 5th June 1890 :—

With reference to your telegram of the 31st ultimo, I have the honor to forward the report therein called for :—

ENCLOSURE.

REPORT.

The platforms inspected are eleven in number and are situated as follows :—

At Kattur factory	...	...	...	...	...	1
„ Vayalur „	...	...	...	...	...	2
„ Pulidiwakam factory	...	...	...	...	...	2
„ Attipat factory	...	...	...	...	...	3
„ Vallur „	...	...	...	...	...	3

2. The general principles on which they have been constructed are as follows :—

- To bring the top of the platforms to a height of 2' above M.F.L., at the same time allowing an extra raising of 2" per foot to compensate for shrinkage and consolidation.
- To make the side slopes of the embankment at 2 to 1, to turf them and plant them with prickly-pear.
- To facilitate surface drainage by sloping the surface at an angle of 1 to 50, draining to all four sides.
- To allow a berm of 15' from toe of embankment to edge of cutting.
- To place a small bank 9" high and 18" wide all round the edge of the surface of the platform, the drainage to be carried off by means of 1' diameter drain pipes sunk at intervals under the side slopes.

3. With regard to (a), I consider that, as salt is both a perishable and very valuable commodity, this height is not sufficient and that the top surface of the platforms should, after consolidation, have a minimum height of 3' above M.F.L.

With regard to (b), the arrangements are suitable generally, but at several platforms they have not been carried out, the side slopes at many places being only 1½ to 1; 2 to 1 should be the minimum slope.

With regard to (c), the arrangement is approved and has been endeavoured to be carried out.

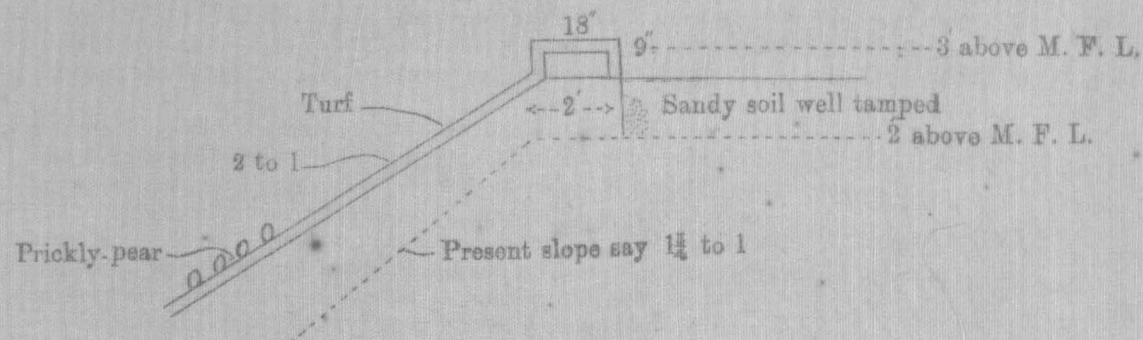
With regard to (d), this arrangement would have been satisfactory, but at several platforms at places this berm has been reduced to 4 or 5 feet. I consider it would have been better to have adhered to a 10' berm as a minimum.

With regard to (e), this method will do.

4. Before proceeding to report on each platform in detail, I would remark that the work to all of them was commenced about the 7th of last December, and the earthwork, with one exception, completed by the middle of April of this year. The earth was thrown up as it came from the cuttings. There was no attempt made at consolidation by tamping. The nature of the soil varies from clay to sand. There has been no rain since the earth was thrown up. When the rain does come, the soil will in the course of nature consolidate and sink and the variety of the soils will cause unequal sinkage. A further danger to which the platforms will be subjected will be the lap of flood water on the side slopes, and a great source of danger to the unconsolidated earth will be caused by the action of the rainfall on the surface of the platforms and from off the pent slopes of the salt heaps when draining off the surface. I am certainly of opinion that it would be a great benefit to the platforms if they were allowed to weather through one rainy season. Defects and unequal sinkages could then be made good, and they might safely be employed for the storage of salt. If they must be used this season for storage, I recommend that the following suggestions be carried out :—

- That the side slopes be made full 2 to 1 slopes. This will entail a little extra earthwork where the side slopes at present are under 2 to 1.

- (b) That the best clay soil near each platform be selected for this earth, that it be well wetted and tamped, and brought up to 3' above M.W.L. and carried into the platforms for a length of 2'. On this return, the varapu to be raised 9" high and 18" wide. The side slope and varapu all over to be turfed and the side slope planted with prickly-pear, thus:



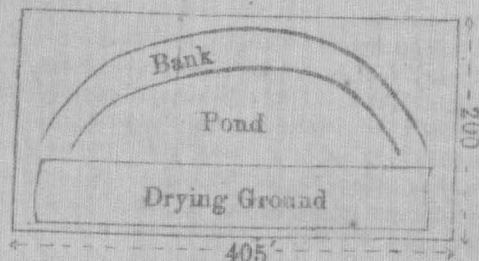
Where the side slopes are already 2 to 1, continue them up to 3' above M.F.L. as above.

- (c) Between these raised portions of the side slopes fill in with the best sandy soil available, to be well-watered and tamped. A suitable description of soil can be found near most of the platforms. Pure sand would have been recommended had not the distance from which it would have to be brought been so great. If it can be obtained it should be used. There are some high banks of sand along the Buckingham canal near the 17th mile which might be cut down for this purpose. Their removal to a certain extent would not jeopardise the safety of the canal.
- (d) The salt heaps are arranged with a clear space between heaps of 6', along which the drainage runs. These spaces should be well-turfed, and so should all the remainder of the platforms not occupied by salt heaps.
- (e) The toe of any salt heap should not be allowed to approach nearer the varapu than 15'. This generally is the method I would recommend to be carried out for the safety of the salt if stored this season.

5. Of course, after heavy rain, natural subsidence of the present unconsolidated earth will ensue, but if attention be given to the surface drainage by stopping any guttering with sods, sand bags, &c., the platforms may be used. Defects must be made good next season.

6. The following is a description of each platform:—

- (a) KATTUR FACTORY.—Platform A.—The soil has a considerable proportion of clay in parts where it has cracked. The slopes are 2 to 1 and are turfed and planted with prickly-pear. There is a good berm from 12' to 20' wide. The surface has been brought up so that, after consolidation, it shall be 2 1/2' above M.F.L. It is recommended to treat it as above described, allowance being made that this platform has only to be raised 6". If emergently required, the present surface may be watered and tamped and used without further raising; but the unoccupied portion of surface must be turfed. This platform measures 875' x 180' and is intended for the storage of 3,01,200 maunds.
- (b) VAYALUR FACTORY.—Platform A.—This platform measures 405' x 200' and is intended for the storage of 2,00,000 maunds. Side slopes 2 to 1, turfed and planted; soil, a sandy clay. One-third of the width for the entire length was previously occupied by a drying ground and is, therefore, firm soil. There was a pond by the side of the drying ground which has been filled in, and a small bank beyond the pond, thus:



The top level of the platform has been brought up to 3' above M.F.L. The soil is a sandy clay. The surface should be watered and tamped and turf applied as recommended. It can then be used, the proviso as to the 15' space to be allowed not being forgotten. This proviso applies to all the platforms.

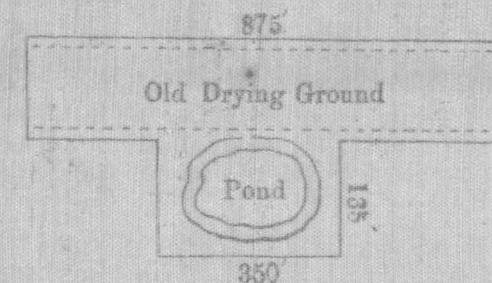
Platform B measures 578' x 180' and is intended for the storage of 1,50,000 maunds. The original ground level is similar to that of platform A, viz., drying ground, pond and bank. It has been raised in a similar manner and may be used for storage after treating in the manner indicated for platform A.

- (c) PULIDIWAKAM FACTORY.—Platform A measures 315' x 100' and is intended for the storage of 50,400 maunds. The side slopes are about 1 1/2 to 1. The berm is narrow, being as little as 3' in some places; soil, clay and sand; top surface 2' above M.F.L. It should be treated as recommended before being used for storage.

Platform B measures 720' x 175' and to store 2,49,600 maunds. The side slopes are under 2 to 1 (12 1/2 to 7 and 11 to 7); soil, clay and sand; berms are narrow and in south-east corner, platform is liable to fall in. The natural soil has been cut down 14' deep in continuation of side slopes, which is a cause of weakness. Top level made to 2' above M.F.L. To be treated as recommended and the western portion of the platform only used for storage this year.

- (d) ATTIPUT FACTORY.—Platform A measures 850' x 90' and to store 1,51,200 maunds. This was an old drying ground occupying half the site and a boat channel alongside. The drying ground has been cut down and channel filled in, in some places 14' deep. In south-east corner over the old channel the new earth constantly sinks. The side slopes are turfed and planted. It is recommended that only that portion over the old drying ground be used for storage this year. The top level of the platform has been brought to 3 1/2' above M.F.L., so that all that it requires is time to consolidate.

Platform B is T-shaped. The head 875' x 45' is formed from an old drying ground; the tail 350' x 135' is formed over a pond with a bank round it, thus:



It is designed to store 1,42,800 maunds. Side slopes are turfed and planted; turf inferior. They are under 2 to 1; soil, light and friable. If treated as recommended, may be used for storage.

Platform C measures 585' x 175' and to store 2,01,600 maunds. About half of this platform consists of an old well-consolidated drying ground, the other half was a channel now filled up, and which ran alongside the drying ground.

The side slopes are turfed and planted, but in places the slope is not nearly 2 to 1. The soil is bad, light and friable that will slush with water. The top level has been made up to 2' above M.F.L. It should be treated as recommended, but only the sound drying ground half used for storage this year.

- (e) VALLUR FACTORY.—Platform A measures 450' x 125' and to store 1,00,800 maunds; soil, a sandy clay; height 2' above M.F.L. To be treated as recommended.

Platform B measures 675' x 225' and to store 3,16,800 maunds. This platform is not nearly finished. It is being brought up to 2' above M.F.L. It cannot be used this year. To be treated as recommended with the exception that, as the Kortalayár flood flow affects this platform, the side slopes should be made at 3 to 1 instead of 2 to 1.

Platform C measures 315' x 125' and to store 68,400 maunds. The soil for half the width is clay with a slight admixture of sand, for the other half a light, sandy, friable soil. The soil is in lumps, not at all consolidated. The slopes are not turfed or planted. The platform is in a very exposed situation between two branches of the Kortalayár.

It cannot be used for storage this year. When making up this platform it is recommended that the top level be made 4' above M.F.L. and that the side slopes be made at 3 to 1.

No. 249-D. 8/7 June 1890.

MEMORANDUM.

Transferred to the Revenue Department with the remark that Major Boddy appears to have gone thoroughly into details, and that all the suggestions made by

him for putting the platforms in an at once utilisable condition and to guard against damage to the stored salt, commend themselves to the undersigned as the most judicious and feasible that can be adopted under the circumstances.

(Signed) R. R. E. DRAKE-BROCKMAN, Lieut.-Col., R.E.,
Ag. Joint Secy. to Govt., P.W.D.

ORDER—dated 13th June 1890, No. 435, Revenue.

Separate Revenue, No. 79.

Salt.

Communicated to the Commissioner of Salt, Abkari and Separate Revenue, who is requested to give immediate orders for carrying out the suggestions made by Major Boddy, so far as is practicable.

(True Extract.)

W. C. D.
Secretary to Government

To the Commissioner of Salt, Abkari and Separate Revenue.
Copy to the Public Works Department.

Exd. A. D. Xavier.

50 Copies.

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T. W. f. no 67.76

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Memo no 247 2 d/7.6.90
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G.O., 13th June 1890, No. 435.



Ennore salt platforms.

Endorsement of the Public Works Department transferring, with remarks, Major Boddy's report on —, communicated to the Commissioner of Salt, Abkari and Separate Revenue, with the request that he will give immediate orders for carrying out the suggestions made by Major Boddy so far as is practicable.

Ch. S. for [unclear]

for information

22/7

29/7

18/7

21.7.90

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*Ch. S. 13 VII
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