

Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.

Regd.

} 1912.

Enclosures

Spare copies

G.O. No. 613, 10th July 1912.

DESPATCH

Leather school.

Sanctioning the proposals submitted by the leather expert for the establishment of a —
in Madras.

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GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following paper :—

Letter—from the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., C.I.R., Director of Public Instruction, Madras.

To—the Secretary to Government, Educational Department.

Dated—the 22nd February 1912.

No.—Ref. on Cur. 1075/11.

With reference to G.O. No. 269, Educational, dated 8th May 1911, I have the honour to submit herewith Mr. Guthrie's note on the proposed Tanning School together with the letters from the Superintendent of Industrial Education, No. 196-I., dated 31st January 1912 and 10th February 1912, and to state that the proposals seem to have been well considered. Mr. Tressler seems to suggest that one-half of the estimated cost of the buildings and fittings, viz., Rs. 41,685 (Rs. 50,000 + Rs. 33,370) + Rs. 8,000 for land acquisition might be safely budgeted for. To this should be added the sum of Rs. 14,684 required during the first year for the salaries of the superintendent, sweeper and three watchmen and for wages and materials. Should Government approve, I request that the necessary provision may, if possible, be included in the budget estimates for 1912-13.

ENCLOSURES.

(1)

Letter—from K. T. B. TRESSLER, Esq., Acting Superintendent of Industrial Education, Madras.

To—the Director of Public Instruction, Madras.

Dated—the 31st January 1912.

No.—196-I.

In forwarding herewith Mr. Guthrie's note on the proposed leather trade school, I have the honour to submit also a plan of the proposed tannery together with a square feet estimate of cost. The cost of the building itself will come to about Rs. 50,000: that of machinery and fittings to Rs. 33,370, so that apart from land acquisition and quarters, etc., for staff, the total initial expenditure will amount to Rs. 83,370. An estimate of probable recurring expenditure is also submitted amounting to Rs. 19,304 annually.

2. To begin with, however, only the staff marked with an asterisk will be required and it is only for this staff that sanction at present is asked for. The initial recurring expenditure will therefore amount to Rs. 14,684.

3. With the general course of instruction outlined by Mr. Guthrie, I am incomplete agreement. It is one which such experience as I have of tanning instruction leads me to regard as specially suited to the demands of the trade. It will be observed that, although Mr. Guthrie proposes to devote himself mainly to the training of operatives—who are certainly the class of men that we ought primarily to cater for,—he also provides facilities for students of higher attainments and ambitions. How far these facilities will be made use of remains to be seen.

4. As regards raw material Mr. Guthrie proposes to accept any raw hides sent for treatment and to return them tanned without cost. Should the supply exceed requirements, he proposes to introduce a scale of charges and so re-establish the balance between supply and demand. It seems to me that in principle the proposal is a sound one, though I would point out that something of the kind was tried in my time with Messrs. Chambers & Co. and led to a considerable amount of unpleasantness. Unless suppliers enter into an agreement, having the force of law, that the hides they furnish are tanned solely at their own risk, I anticipate that the arrangement proposed is likely to prove a prolific source of contention; at the same time in view of the Secretary of State's Despatch, I do not see how any other method of obtaining a supply of raw material can be devised, except at a considerable cost and loss.

5. There is now a proposal under consideration for the establishment of a Technical school at Perambur and the establishment of such a school may materially affect the tannery question. I have therefore confined my estimate to the actual tannery buildings and equipment and will submit further proposals regarding site, superintendent's quarters and power when the question of the Technical School has been definitely settled.

ESTIMATE FORM—Abstract.

Quantity.	Description of work.	Rate.	Per.	Amount.	Total.
1	2	3	4	5	6
	<i>Proposed tannery.</i>	RS.		RS.	RS.
2,900 sq. ft.	Double storey terraced in front	4-12	Sq. ft.	13,775	..
9,100 "	Single storey corrugated roofing	3	"	27,300	..
4,100 "	Pavement for open area	15	100 "	615	..
	Lime pits some above ground, some below ground, also concrete foundations for machinery, etc.		L.S.	8,310	..
	Total ..			..	50,000

ESTIMATE FORM—Detail measurements.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
1	2	3	4	5	6	7
PROPOSED TANNERY.						
<i>Double storey terraced.</i>						
In front	1	123½	23	..	2,840	or say 2,900
Total double storey building in square feet ..	..	..	..	..	..	..
<i>Corrugated iron roofing whole area including open yards.</i>						
In sides and in rear	1	123½	106	..	13,091	..
<i>Deduct open yards—</i>						
In the centre of building	1	78	42½	..	3,315	..
In the verandah	1	27½	25	..	694	..
Total deductions in sq. ft. ..	..	..	..	..	4,009	..
Total corrugated roofing less deduction in sq. ft. ..	..	..	..	..	..	9,100
Pavement for open yards as per deductions above in square feet ..	..	..	..	..	4,009 or say	4,100

List of machinery, etc., with approximate cost.

	RS.
Drums—	
Soak drum .. 7' x 3' 6"	675
Bate drum lattice .. 5' x 4' 6"	550
Tanning drum .. 8' x 4'	720
" .. 6' x 3' 6"	640
Sumach .. 8' x 4'	720
Dyeing .. 6' x 3' 6"	720
Paddies—	
Bate paddle in pit 5' 6" x 2'	100
Tanning paddle .. 6' x 4'	600

List of machinery, etc., with approximate cost—cont.

	RS
Machines—	
Climax glazing and printing machine	830
Splitting machine	4,100
Staking „	950
Rolling „	840
Fluffing „	230
Shaving „	1,385
Chrome glazing	60
Bark mill	750
Stoning jack	500
Pump	400
Tanks—	
One wood, for hot water for dyeing	100
One wood lead lined for making chrome liquor	300
Motors—	
One 5 h.p. for tannery and lime-house	500
One 5 h.p. for wet currier's shop	500
One „ finishing shop	500
One 2 h.p. for pump	300
<i>Hand tools.</i>	
Soaks and limes—	
Grindstone	120
Stamping hammer and numbers	35
Unhairing knives	120
Fleshing „	
„ beams	
Spring balance	20
Miscellaneous	85
Bates—	
Scudding knives and stones	20
Miscellaneous	30
Tanning and leaches—	
Miscellaneous	100
Wet currier's shop—	
Slickers, etc.	15
Shaving knives and beams	45
Miscellaneous	60
Finishing shop—	
Slickers	50
Brushes	30
Arm boards	20
Knives etc.	30
Nailing out boards	50
Miscellaneous	30
Total, tools and plant	18,370

Materials.

Soaks, etc.—									
Soaking materials	..	..	..	..	..	..	..	300	
Lime and other depilantants	..	..	..	..	..	..	..	200	
Bating materials	..	..	..	..	..	..	..	350	
Tannery—									
Chrome and alum salts	..	..	..	..	..	..	..	1,700	
Other salts for chrome tanning	..	..	..	..	..	..	..	1,400	
Barks, extracts, myrobolans	..	..	..	..	..	..	..	3,500	
Currier's shop —									
Oils, soaps, etc.	..	..	..	..	..	..	..	750	
Greases	..	..	..	..	..	..	..	500	
Dyes	..	..	..	..	..	..	..	300	
Mordants, etc.	..	..	..	..	..	..	..	300	
Miscellaneous	..	..	..	..	..	..	..	600	
								Total	9,900

Miscellaneous.

Laboratory—								
Fittings and materials	..	..	..	..	..	..	..	4,000
Experimental room—								
Fittings and materials	..	..	..	..	..	..	..	750
Experimental dye house—								
Fittings and materials	..	..	..	..	..	..	..	350
Total ..								5,100

Abstract.

Tools and plant	18,370
Materials	9,900
Miscellaneous	5,100
Grand Total ..	<u>\$33,370</u>

Recurring expenditure.

Establishment—							
One superintendent on Rs. 750 *	..	..	..	..	..	9,000	
Two assistants { one on Rs. 100—5—150 }	{ one on Rs. 75—5—100 }	..	..	..	..	2,100	
One store-keeper on Rs. 35 *	..	..	..	..	..	420	
One tanning clerk on Rs. 25	..	..	..	..	..	300	
Two tanning foremen on Rs. 30 (60)	..	..	..	..	..	720	
Three watchmen { one on Rs. 8 }	{ two on Rs. 7 }	22 *	..	..	..	264	
Total ..						12,804	

Wages—

Lump provision ..								2,000
Materials— Lump provision ..								4,500
Total ..								19,800

Cost of staff (First year)—

One superintendent	9,000
One store-keeper	420
Three watchmen	264
Wages and materials	5,000
Total	14,684

(2)

Letter—from K. T. B. TRESSLER, Esq., Acting Superintendent of Industrial Education.

To—the Director of Public Instruction, Madras.

Dated—the 10th February 1912.

No.—196-I.

In reply to telephone message, dated the 7th instant, I have the honour to state that Mr. Guthrie has considered the question of hiring a tannery temporarily and of awarding scholarships to two deserving students; but, as he points out in his report, he has been unable to find any existing tannery to suit his purpose and for this reason did not consider that it was necessary to deal at length with the points raised in proceedings R.O.C. No. 1075, dated 18th May 1911.

2. A hired tannery would—as it stands—only be suitable for teaching native methods of tanning, and to convert it into anything else would involve large and unavoidable expenditure. The methods which would be possible to teach pupils in such a tannery could be much better learned by them in one of the existing tanneries than in a Government school. Mr. Guthrie further remarks—and in his views I concur entirely—that there is the greatest danger in starting any work of this kind without some definite assurance that proper facilities will be provided within a reasonable time. Such facilities as now exist may possibly be good enough

for a start, but it is not much use making a start and then finding oneself unable to proceed on account of lack of appliances and accommodation. Until the question of constructing a new tannery has been definitely settled, Mr. Guthrie does not think that any practical purpose would be served either by hiring a tannery—even were this possible—or else by awarding scholarships.

3. Regarding site, the plot of land to be acquired in Perambur measures about 10 acres in extent and will cost about Rs. 10,000. There are 22 part owners. But as explained in my covering letter to Mr. Guthrie's note, I have left the question of site open pending the publication of the report of the Technical Education Committee now sitting, for it appears to me most desirable, if the proposals for the establishment of a technical school mature, to have the tannery and the technical school together if possible. So far as I can see, the committee are in favour of a site near Basin Bridge—possibly the Government Harness Factory—and before submitting definite proposals regarding site, I wish to ascertain whether it would be practicable to locate a tanning school in the same place.

4. Whether provision for expenditure on a tanning school should be made in the coming budget is a matter on which I am unable to pronounce an opinion. So far as I am concerned, it would be quite safe, provided the work can be started before June, to budget half the sum estimated *plus* Rs. 8,000, say, for land acquisition and Rs. 12,000 extra if it is considered desirable that superintendent's quarters should be built (though this is not a matter of urgency). I do not suppose the whole amount of the estimate would be spent in the current year as I anticipate delay in the delivery of the machinery.

Note on the proposed Tanning School by Mr. A. Guthrie.

The leather trade in India consists in —

(i) the tannage of hides and skins for export; and

(ii) the tannage and in a few cases the finishing of leather for Indian use,

and as the former is by far the most important portion of the trade, the importance of this class of tannage should be the first aim and object of a leather trade school. Unfortunately as is pointed out in the next few pages, there are great difficulties to contend with against the improvement of the leather export, whereas that used locally can be improved to a much greater extent, and I think that the aim of the school should be to first improve the classes of leather manufactured for local consumption and in doing this the faults made by the export tanners would be seen by the students and they could remedy them themselves if they ever came to have authority in any of the export tanneries.

2. Mr. A. Seymour-Jones, one of the best known of the sheep skin dressers in England in a "Memorandum regarding East Indian tanned goat and sheep skins especially from the Bombay and Madras Presidencies," points out in paragraph 13:—

"The causes which operate to create the wide differences in the values realized for East Indian tanned goat and sheep skins are various, but can be broadly divided into two sections:—

"A—Faults which are not within the leather manufacturers's control.

"B—Faults which are within the leather manufacturer's control.

"A—These faults are —

Tick marks.

Burrs and thorns.

Bad-flaying.

Disease.

Putrefaction prior to receipt at tannery.

"B—These faults are—

(1) Careless wet work operations.

(2) " tanning "

(3) Careless operations subsequent to tanning.

(4) Excessive loading with sesame oil.

"Loading of grain with some chalk like materials to cover defects produced in the tannery."

The causes of the faults mentioned under class A as being beyond the leather manufacturer's control would also be outside the scope of a leather trades school but those of class B would all have to be studied, and the best means of preventing them should be shown to the students. Mr. Seymour-Jones does not in any way object to the general methods used by the export tanners, but only to certain details of the work as carried out by the workmen.

3. *Methods of the export tanners.*—The methods employed by these export tanners when carried out under the best conditions as regards water, class of bark and myroboloms and careful supervision, turn out a class of leather that is of very high quality and very suitable for the European market, and although several tanners have at different times tried to modernize the processes used for these skins, they have always returned to the old native methods, having found that the only changes that could be profitably made are those of the type of tool used, the method of their use and more careful supervision. In Madras and some parts of the Presidency, the water is very unsuitable for tanning, and where this is the case, the students should be taught how to treat it so as to get the best results possible. Except in the type of tools used, how to use them and the treatment of the water, there is very little that can be taught to the export tanners whose business is a thoroughly organized one and for this reason it would be better to aim at the improvement of leather tanned and dressed for use in this country, in which there is a greater scope for improvement in both methods and details of work. In this manufacture it is just as necessary in order to get good results to carefully carry out the processes mentioned by Mr. Seymour-Jones as likely to damage the skins for export, and thus the study of these processes would be quite as useful to the export tanner as to those wishing to cater for the local trade.

4. *Leathers to be manufactured.*—The course for ordinary students should be such as to give him a fair working knowledge of as many classes of leather as possible, and especially those classes for which there is a demand, and in many cases an increasing demand in India. Amongst the chief classes of these are sole, harness, all classes of boot upper leathers from heavy russet to lightest glaze and red morocco, leather for drawing and carrying water, upholstery, bags and trunks, book-binding, etc. In some of these classes leather can be made in India of such a quality as to compete very well with those imported from other countries, and would be gladly accepted as a substitute for the higher priced imported article if a regular supply could be obtained. In parts of northern and western India many boots sold by the local Chumars as being of English leather are made of leather manufactured in Cawnpore or other places in India, and no complaints seem to be made by the people who buy them as the colour and wearing properties of these leathers are both good.

Many of the above-named classes of leather are tanned by ordinary bark tannage, but in other cases are chrome-tanned and in others by combinations of the two and so it would be necessary to teach not only bark tannages but also chrome and other mineral processes and the different combinations of these.

5. *Duration of course.*—It would be a mistake to try to give any really useful knowledge to the students in too short a time and the shortest time for any general course should be two years, but where students supplied their own material and wished to make certain definite experiments there should of course be no restriction as to time.

The two years' general course could be divided into two portions, each of which would require a year for its completion, the first year being devoted to tanning, the second to currying and dressing, that is during the first year the student should learn about the processes of soaking, liming, unhairing and fleshing, bating and tanning and the selection of raw material, treatment of bark and other tanning agents, whilst during the second year the finishing of the leather would occupy his attention.

It would be necessary to give lectures, and I think that two per week would be sufficient, whilst on two other days a tutorial class should be held where the students would be questioned and could ask questions on the lectures and on the work then being carried out in the school and the notes taken by them examined and criticised.

6. *Method of working the school.*—In order to give as practical a course as possible it would be necessary to work the school as a small tannery in which first one class of leather is manufactured and then another but sufficient of each would have to be made to show the system of working one pack after another without waste of material. To commence with, the classes of leather that take the longest time to tan should be worked. This would mean that sole leather would be the first the student would come in contact with and this would be followed by harness and belting. The first quarter of the year would be taken up with the wet work of these heavy leathers and the early parts of the tanning processes. During the second quarter the tanning of the above would be continued and the liming and tanning of lighter classes could be undertaken; whilst the third quarter would follow with the completion of the tannage of that from the first and second quarters, and new work in chrome leather could be carried out. The fourth quarter would then be free for the study of other mineral and mixed tannages such as Dongola and semi-chrome, besides the curing the skins with the hair on, and generally completing the course.

7. *Supply of material.*—As the school would not be allowed to make leather for sale, some arrangement would have to be made with different tanners to supply raw material, and to take back the finished article at first free of cost, but later, if it were found possible, at a charge that would cover cost of materials used, and if it were then found that too much raw material were forthcoming the price could be again raised. The class of material to be dealt with at

any particular time could not, however, be definitely fixed at first as the school would be more or less forced to take what raw material it could obtain and tan it in the way desired by the supplier.

For all experimental work students should supply their own material, except in cases where leather has to be cut up into pieces as in sample dyeing and shade matching in which case the school should supply it.

8. *Laboratory.*—Whilst the practical tanning is being carried out, it would be advisable to keep as strict a chemical check on this as possible and for this a laboratory would be essential in which students who had had a thorough chemical training could be taught the technical analysis and examination of the material used in the leather trade. In the laboratory, there should be accommodation for consultation work and also research work and it is quite possible that a considerable consulting practice might eventually be obtained. Whenever there was not sufficient consulting work on hand, research work might be undertaken as there is plenty of scope for this class of work in connection with leather trade of India. Amongst other things the value of different indigenous tanning materials for use in tanning and for extract manufacture might be investigated.

In the "Monograph on tanning and working in leather in the Madras Presidency, 1905," it is pointed out that there are several tanning materials that are grown in considerable quantities in the Madras Presidency, but of these only three or at most four are collected and used on any organized scale, the others being either not used at all or only by the local chucklers or by fishermen for their nets. The amount of tanning materials imported into and used in the United Kingdom during the last six years has averaged 140,000 tons per annum valued at £1,300,000 and of this practically only one-fifth in quantity and one-eighth in value is received from India, whilst Germany imports about 250,000 tons per annum, of which India's share is only about 10 per cent. of the total. From these two cases it can be seen that there is in Europe a great demand for tanning materials and especially is this so for tanning extracts which account for above half the total imports into the United Kingdom. Crudely made extracts are of little value compared to standardized ones, which are being used to a larger and larger extent as tanners find that they can not only keep a better check on costs, but also foretell with greater certainty what the final results will be than with crude extract or material. They are also able to keep their leather at one standard, whilst with crude extracts and materials peculiarities will always show in different packs. The manufacture of crude extracts is comparatively a simple matter, but when they have to be sold under guarantee as to strength and colour, which is now almost always required, it becomes quite a different matter and much careful investigation is necessary before any manufacture on a commercial scale could be undertaken.

Besides the tanning materials there are many other investigations that should be undertaken and would be of value to the leather trade in India. Almost all the investigations on soaking and other processes of the "wet work" have been carried out with water at a temperature of 10° to 20° C, or 50° to 70° F and as often the temperature of water in use in tanneries in India is about 30° to 86° F, this work is of little use and processes that may give very excellent results elsewhere may be of no use here. One of the chief causes of loss to the Indian tanner is due to the loss of weight due to the solvent action of the warm water used in the soaks, limes, etc., and research work to show how this can be remedied or lessened would be of very great value to both those tanners exporting leather and those manufacturing for home consumption.

9. *Class of students.*—The students admitted to the school should be limited to such a number as there is accommodation for, and sons of tanners and those with practical experience of the leather trade and who have a good general education should be given preference over all others. It is of very little use trying to train men, who have neither any previous experience of the leather trade nor have any position to look forward to after leaving the school, especially as almost all the Indian tanneries are on such a scale that the owner and his family are able to do all the overlooking, and hence require no other trained assistants.

A technically trained man with no works experience is always looked upon with suspicion by the owners and managers of factories as there is always a feeling that he will try to find out as much as possible of the methods in use, in order to sell them at some future date to the highest bidder and because of his technical training he is able to note little details that the ordinary man would miss. In Europe many men with very good technical training are either unable to obtain employment or have to be content with very subordinate positions with small salaries and in some cases have to pay a premium before being allowed to work in any factory. On account of this it would be a mistake to train numbers of men who would afterwards be unable to obtain employments in the trade, but it would be better to confine the training to the sons of those who are already connected with it, and so enable them to understand the methods they use, and to improve or modify them as required. If men are trained and are then unable to find employment, they naturally become dissatisfied, and throw the blame on their training rather than on lack of demand for trained men.

If students could be persuaded to take a short course of general science before attending the leather school, it would be of great benefit to them, as there are many methods in which a knowledge of elementary science is of great use, as with such a knowledge they would be better able to understand the reasons for various processes and in many cases would be able to check and regulate them by simple chemical tests.

10. *Fees.*—For ordinary students the fees should be at first of such an amount as to keep away all those who like to dabble in different trades, without any intention of seriously taking them up. Special work should be charged in such a way as to cover the expenses incurred for power, labour and materials used.

11. *Labour.*—As much as possible of the work should be done by the students, but it would be impossible to teach the use of all tools in the time taken for any ordinary course and if this were attempted great damage would be done to the material in work as several of the processes require great skill and long practice. At the same time any student should be allowed to carry out any processes himself if he provided the material to work on.

12. *Use of machinery by tanners.*—In case any tanners wished to improve or alter their manufacture in any way, they might wish that certain of their workmen or maistries be taught the use of certain tools or machines, and in this case it would be advisable to make no charge for tuition, but materials would have to be provided by the tanner. If machinery were being employed a nominal charge for its use should be made, but as this would give the ordinary students a chance of seeing larger quantities being worked, it would be better to encourage the sending of material to be treated. If at any time it was found that the amount of "outside" work was so great as to cause delay in the ordinary manufacture, the price charged for that certain process might be increased so that a balance might be found where supply was equal to the demand.

Any student who at the completion of the course wished to specialize in any branch should be allowed to continue his work on supplying the necessary materials as long as he did not interfere with the work of the other students.

13. *Experts.*—The classes mentioned above are those I consider should be specially arranged for and I do not think it advisable to at present attempt to train men as "experts" as there are in India some men who have studied in the best leather trades schools in England and are unable to obtain suitable employment here, and there are still quite a number studying in England. A course of leather trades chemistry for graduates might however be arranged and the number at first limited to two. If at any time either of these men received an appointment another graduate could be trained in the same way, but until those first trained received appointments, it would be unwise to train more. These could under the guidance of the superintendent do the necessary chemical testing in connection with the processes being carried out by the students taking the ordinary course, and would thus get a thorough grasp of the class of work that any works chemist in a tannery would be called upon to perform and at the same time it would be a check on the work being carried out in the tannery or dressing shop at that time.

14. *Graduates in laboratory.*—It seems quite likely that there would be difficulty to obtaining graduates willing to pay for further instruction and it would most likely be found that no fees could be levied here but that the value of the work done by these students would compensate for the time taken in their instruction. The course for these chemists would consist in the examination and analysis of water, lime and other depilants, bating and tanning materials and liquors, chromium and alum salts, oils and fats, effluents and bye-products and generally all materials used in the manufacture of leather. Besides this the course would show how to check processes so as to reduce wastage and loss to the minimum possible. When these men were trained it might be found convenient to keep them to do any consultation work that might be obtained as is mentioned in the paragraph dealing with the laboratory.

The laboratory would also be available in the same way as the other part of the school for experimental purposes so that if any one with sufficient chemical training wished to undertake any special investigation, he should be given every possible help as long as he did not interfere with the other work being carried out.

15. *Site.*—The chief points to take into consideration in selecting a site for a school for teaching tanning and leather dressing are:—

- (i) The districts from which most students are likely to be drawn.
- (ii) the accommodation available for students not living in the vicinity of the school,
- (iii) means of communication,
- (iv) water and
- (v) drainage.

From various enquiries made it seems likely that the greater number of students likely to attend such a school would be from Madras City or neighbourhood, and on this account any school formed should be if possible in Madras or within easy distance of it. Students from other parts of the country would in this case have little difficulty in obtaining suitable accommodation for themselves. As Madras is spread over a very large area it would be advisable to have such a school centrally situated, but as tanning is to a certain extent an offensive trade, this is impossible and so the next best possible alternative must be adopted, which consists in selecting

a position easy of access: that is near a railway station or tram line and on a metalled road. None of the tramways extend far enough from the city to be of use so that there is only the railway and the roads to fall back upon. There are three lines of rail leaving the Madras and Southern Mahratta North East Line, the Madras and Southern Mahratta North West Line and the South Indian narrow gauge main line.

On the north-east line the train service is very bad so that site on this line would not be suitable. We may therefore confine our attention to the other two lines and as the service is about equally good on either, any place near one of the stations on these two lines would be satisfactory.

16. *Water*.—The question of water-supply is one of the greatest importance in choosing the site for a tannery, as both a sufficient quantity and good quality are necessary. Temporary hardness not only destroys a large amount of tanning but is also apt to "fix" some of the lime in the hide or skin and this causes roughness and dullness of the colour, whilst both temporary and permanent hardness cause the water to be unsuitable for fat-liquoring and some other processes. Beside this, salt is a most dangerous impurity as it tends to reduce the plumpness of the skins or hides and to yield a thin leather. Very minute traces of iron will cause dullness in the colour of leather and for this reason water with any iron salts present is most unsuitable. Organic impurities are not as a rule of very great consequence except when they occur in excessive quantity when they would be apt to accelerate putrefaction and to cause loss of hide substance.

On account of these reasons it is necessary to have a supply of good water, and one that is not likely to be contaminated (see note on Sembium tannery), from the effluent of the tannery or other sources. For certain processes the quality of the water is not of such importance, as for others, and it would be quite possible to use two different waters in a tannery if only a small quantity of good water were available or if the good water were expensive. In this case, the inferior water could be used for soaking, washing, liming and in some cases tanning, whilst the good water could be used for dyeing, fat-liquoring, etc.

17. *Drainage*.—The drainage of a tannery is of great importance, as the effluents may become very objectionable if not treated in some way. The chief effluents of the tannery are:—

- (i) Soak liquor.
- (ii) Lime "
- (iii) Old bate liquor.
- (iv) " tanning liquor.
- (v) " chrome and other mineral tanning liquors.
- (vi) " dye and fat-liquor.

If each of these was run out separately, numbers (i) (iii) and (iv) would become very objectionable, but luckily as they are always mixed with No. (ii), the lime in which acts as a precipitant, they become less objectionable. In most cases in India, the effluent is run on to land and allowed to soak in, and where the land is of a sandy nature, little harm is done although all wells in the strata absorbing the water will become more or less polluted. Where the effluent is run on to clay and left to disappear by evaporation, the wells in the neighbourhood may escape pollution, but the amount of land necessary in this case is much greater than with an absorbent soil. Where chrome leather is being tanned the effluent is of a different nature from that of an ordinary tannery and more serious results may result from running this effluent into absorbent land (see note on sembium tannery).

In any case before running the effluent of a tannery on to land, it would be advisable to let it stand in a tank for some considerable time and thus allow as many of the impurities as possible to be precipitated. The sludge could occasionally be removed. This sludge has a distinct manurial value on certain classes of land as it contains not only lime salts, but also a considerable amount of organic nitrogen. For purposes of this treatment of the sewage all that is necessary is a tank large enough to hold a day's drainage and into this all the waste waters are run during the day, and thoroughly mixed by plunging in the evening and are left to settle during the night. By plunging up the old sludge a quicker and more thorough settling is effected as the fine particles of the new precipitate affix themselves to the coarser old and thus the whole settles quicker. In the morning the supernatant liquor is run off and the tank is then ready for further use. By this simple treatment a distinctly less objectionable effluent will be run on to the land and thus the neighbourhood of the tannery will be less objectionable.

18. *Sembium Tannery*.—The Sembium tannery, which was bought by the Government for a chrome tannery, had originally a water-supply of good quality, but after some time the character of the water changed and it became unsuitable for certain purposes. This change in the character of the water and the causes of it should be understood before any site is chosen for a tannery school as otherwise the same thing may take place again and thus cause great trouble and loss. The water used at Sembium was drawn from a comparatively shallow well to the west of the tannery and it seems quite possible that the change in the quality was caused by the percolation of water from the drainage of the tannery, which ran to the east, into the water-bearing strata feeding the well. It might be thought that this would have happened before, as

this site had been used as an ordinary tannery, but as the quantities and qualities of the effluent of an ordinary tannery and a chrome tannery differ very greatly, the effect on the soil on to which this runs must be different also. In the case of a bark tannery the lime liquor and partially spent tanning liquors are run out together and react with one another forming salts of lime which, on oxidation become practically insoluble, whereas with chrome liquors and lime, one of the chief salts formed is calcium sulphate which, though only slightly soluble, is one of the causes of hardness in water and the chief cause of scale in boilers. Calcium sulphate is a difficult salt to remove from water, and makes it very unsuitable for boiler feeding or processes where soap is being used, and as soap fat-liquors are largely used in leather dressing, it is one of the worst impurities that can be met with in water for tannery purposes. If some supplementary supply of water that would not be liable to change could be obtained at Sembium, this would be as suitable as any other site for a school. As Sembium is beyond municipal limits the supply of Red Hills water is impossible, so that the only other chance is finding a different water-bearing strata at a lower level, and as a boring was unsuccessfully tried, it seems that some other site must be taken.

It seems likely that other sites in the same neighbourhood would be similar to the Sembium site and as there are no metalled roads near Villivakkam and further down this line it seems that other directions would be more suitable. On the South Indian Railway, the first station outside municipal limits is Kodambankam, near which there are many tanneries and amongst them, several of the most important in the Madras neighbourhood. This should point to the water-supply being of a suitable nature for tanning purposes and for this reason two samples of water were taken from the tanks which supply the largest tannery in this neighbourhood and were sent to the Chemical Examiner to Government for analysis who reported on them as below:—

Water	No. 1	No. 2
Total hardness	190°0	165°0
Permanent hardness	140°0	155°0
Chlorine as Na Cl.	527.175	521.817.

19. *Unsuitability of water*.—These waters are both very bad for tanning and useless for leather dressing. Certain classes of hides and skins are tanned in this water, but certain other classes could not be made except of a very inferior quality. The permanent hardness is of little consequence during the tanning, but in certain of the finishing processes, it is very objectionable. If leather has to be fat-liquored one of the most usual constituents of the fat-liquor is soap and this is destroyed and rendered useless by hardness. One part of hardness destroys twelve parts of soap, so that each 100 gallons of No. 1 water would destroy about 23 lb. of soap and 100 gallons of No. 2 about 20 lb. soap.

An ordinary fat-liquor consists of an emulsion of oil in a soap solution so that when such a mixture is added to a water like the above, the soap will be immediately precipitated with the result that the oil will separate causing the fat-liquor to become useless. If soap were added to the fat-liquor in excess to correspond with the amount destroyed by the hardness, the sticky lime soaps produced would adhere to the surface of the leather and cause trouble in glazing and other processes. In No. 1 water, there is also 50° of temporary hardness so that if used for dyeing with basic colours, a very large amount of dye-stuff would be precipitated and not only wasted but would most likely damage the leather causing it to become steady and uneven in colour. The large amount of salt in the water would make it impossible to make anything but a thin flat leather, and thus no good sole leather could be made with it.

The water from a well, which was not in regular use, in the same neighbourhood and only a few hundred yards away from the above tanks was much better, its analysis showing—

Parts per 100,000—		
Total hardness		12.0
Permanent hardness		4.5
Salt		18.744

This is comparatively a good class of water, but as it was taken immediately after heavy rain, there seemed a doubt as to whether it was well water or surface water that had run in and another well near at hand was also examined and showed—

Parts per 100,000—		
Total hardness		72.5
Permanent hardness		50.0
Chlorine		69.225

or calculating the chlorine as salt 101.313

In this case the well water is distinctly better than from the tank, but it is still far too bad for profitable using for tanning and dressing leather. That well water is usually more pure than tank water in the same neighbourhood is also shown, in other cases where tanks and wells near together have been tested, but in many cases, the well water becomes distinctly worse after a large quantity of water has been withdrawn and very often the quantity of water available from a well is very small so that it is necessary to fall back on tanks.

20. *Purification of water.*—The above waters could not be purified for use in an advantageous manner; if the hardness were due to temporary hardness, this could be easily removed, but to get rid of this quantity of permanent hardness an equivalent quantity of sodium salts would be left in the water and these with the amount of salt already there would still leave the water most unsuitable for certain processes, although much improved for others.

Near other stations near Madras, the water seems to be of a similar nature so that it seems essential, that if the school be erected near Madras, a supply of municipal water should be available and as this is only supplied within municipal limits, it will be necessary to find some site within the boundaries of Madras City. The two districts in the city where objectionable trades are allowed are the north and the north-west so that the choice of a site is very much limited and Perambur with its good train service seems the most suitable place.

21. *Proposed site.*—In this neighbourhood there are several sites that would be quite suitable for a leather school and amongst them I should consider the plot of land (about 220 yards × 170 yards) situated to the south of the road leading from the north-west corner of the Carnatic Mill to the back of Perambur station and about 150 yards east of the plague camp to be the most suitable. This ground is well above the water level during the rains and would be easy to drain.

Summary.

22. The first aim of a leather trades school in India should be the improvement of the manufacture of leather for Indian use, and to do this the school should be worked as a small tannery manufacturing all the principal classes of leather used in India.

The course for ordinary students should be a two years' one.

A laboratory for the control of the practical work in the school, and also for consultation and research work should be built in connection with the school and in this one or two chemical graduates could be trained as leather trades chemists.

As far as possible only the sons of tanners, and others having some knowledge of the leather trade should be accepted as students.

Fees should be charged so as to keep away men who have no serious idea of continuing in the leather trade.

The school and the machinery in it should be available to tanners for experimental purposes.

The best position for the school would be near Perambur or Kodambankam station, but as the water from wells and tanks in both these neighbourhoods is very bad, it would be necessary to have a supplementary supply of Red Hills water and hence the school would have to be within municipal limits.

The most suitable site seems to be a plot of land (about 220 yards × 170 yards) situated to the south of the road leading from the north-west corner of the Carnatic Mills to the back of Perambur station and about 150 yards to the east of the old plague camp.

Order—No. 613, Educational, dated 10th July 1912.

The papers read above relate to the scheme for the establishment of a leather school in Madras submitted by Mr. Guthrie, the leather expert. The Government have carefully considered the proposals and accord their general approval to them. The main feature of the scheme consists in opening a tannery where theoretical and practical instruction in tanning will be given to students and a laboratory attached to it for consultation and research work and for controlling the practical work in the school.

2. The work of the school should, as proposed, be confined for the present to the training of "operatives" and no attempt should be made to train "experts" in view of the few openings that exist for such men. The Government approve the method and period of instruction proposed for operatives. They agree that admission to the course should be restricted to sons of tanners and others with a practical experience of the leather trade, who have a good general education. No educational test will be prescribed for admission and the selection of students will be left to the discretion of the superintendent of the school.

3. As stated in G. O. No. 269, Educational, dated 8th May 1911, fees should be levied from the students; and the Superintendent of Industrial Education will be requested to propose a suitable scale of fees. The Government agree with Mr. Guthrie that the question of awarding scholarships may be held in abeyance for the present. As

regards materials for tanning, the Government have no objection to the Superintendent's arranging with private traders for their supply as indicated in paragraph 7 of Mr. Guthrie's note; but when this is not possible or it is necessary to supplement the supply, the Government will permit the purchase of the materials required.

4. The following proposals are also approved:—

(i) To give instruction free of charge to workmen or maistries of private tanneries in the use of tools or machines;

(ii) to allow students who have completed their course in the school to specialize in any branch, provided the materials necessary for practice in each case are supplied by the workmen or students concerned; and

(iii) to provide free of charge a course of training in leather trade chemistry for two graduates.

5. No suitable tannery being available the Government approve the construction of a model tannery equipped with the necessary machinery. The Government harness factory suggested as a possible site in Mr. Tressler's letter, dated 10th February 1912, is not now available; it will therefore probably be advisable to locate the tannery in the alternative site in Perambur referred to in the same letter. Before sanctioning its acquisition, however, the Government desire to have a report as to whether it is large enough to accommodate the proposed technical school also or whether suitable land adjoining it can be acquired for that purpose. The Government desire that the school should be opened at as early a date as possible and the construction of the necessary buildings should be taken in hand without delay. Their construction will be entrusted to the Superintendent of Industrial Education who will be treated for the purpose as a Public Works disbursing officer. Detailed plans and estimates for the buildings and an indent for the machinery required should be submitted at an early date.

6. The following establishment proposed for the school is sanctioned and the sanction will be registered as No. 108 of 1912-13:—

	RS.
One assistant on	100—5—150
One second assistant on	75—5—100
One storekeeper on	35
One clerk on	25
Two tanning foremen on	30 each
One watchman on	8
Two watchmen on	7 each.

The staff should be employed as required.

7. The cost of the establishment will be met from the lump provision made for the purpose in the current year's budget.

(True Extract.)

L. DAVIDSON,
Ag. Secretary to Government.

To the Director of Public Instruction with plan.
 „ Accountant-General.
 „ Revenue Department.
 „ Financial Department.
 „ Public Works Department.

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O. No. 613, EDUCATIONAL, DATED
10TH JULY 1912.

[SUBJECT.—*Establishment of a tanning school.*]

Previous papers :

G.O. No.	504, Educational, dated	8th July	1908.
" "	3446, Revenue	" 27th October	1910.
" "	3597	" 14th November	"
" "	269, Educational	" 8th May	1911.
" "	652	" 15th September	"
" "	28	" 16th January	1912.
" "	467, Revenue	" 19th February	"

From the Director of Public Instruction, No. 1075/11, dated 22nd February 1912.

With his letter No. 1075/11, dated 22nd February 1912, the Director of Public Instruction submits proposals for the establishment of a tanning school in Madras and suggests that a provision of Rs. 49,685 being part cost of the building, including site and fittings, for a tannery may be made in the budget for 1912-13, in addition to the sum of Rs. 14,684 required for the salaries of the Superintendent, storekeeper and three watchmen and for wages and materials. A provision of Rs. 15,600 has already been made in the budget for 1912-13 for the salaries of the Superintendent and his establishment and funds should be provided only for the construction of a tannery. Submitted that the Financial Department may be informed that, if the Government approve the proposal to construct a tannery, an allotment of about Rs. 50,000 may be required during 1912-13.

T.K.—16-3-12.

R. SUNDARAM AIYAR—16-3-12.

A warning of a *possible* demand. The case has not yet been scrutinized.

L. DAVIDSON—16-3-12.

To the Financial Department.

FINANCIAL DEPARTMENT.

The demand (Rs. 50,000 being the probable amount required in 1912-13 for the building of a tannery school in Madras) may, it is submitted, be noted in the "Claims Register."

Yes.

C. REILLY—20-3-12.

The file may be returned to Educational after perusal.

T.A.S.—18-3-12.

V.G.K.—20-3-12.

C. REILLY—20-3-12.

H. A. STUART—21-3-12.

To the Educational Department.

EDUCATIONAL DEPARTMENT.

Please see G.O. No. 269, Educational, dated 8th May 1911, and the notes therewith. In that order the Government generally approved of the establishment of a leather school to be a place of instruction pure and simple and indicated their intentions in the matter of purchase of machinery, sale of articles, supply of skins for tanning, levy of fees and grant of scholarships. They also approved the appointment of Mr. Guthrie as leather expert for a term of three years, and directed the Superintendent of Industrial Education to work out, in consultation with Mr. Guthrie, when the latter joined his appointment, a scheme for the establishment of the leather school, specific information being called for in respect of the terms on which students should be admitted, the hire of a suitable tannery for use as a leather school and the estimated cost of the scheme.

2. With his letter read above, the Director of Public Instruction submits the proposals framed by Mr. Guthrie for the opening of a tanning or leather trade school in Madras and considers them to have been well considered. Mr. Guthrie observes that the leather trade in India consists in—

- (1) the tanning of hides and skins for export; and
- (2) the tanning and in a few cases the finishing of leather for Indian use.

As regards (1) Mr. Guthrie states that the business of the export tanners is a thoroughly organized one and that, except in the type of tools used, the methods of using them and the treatment of water, there is very little that can be taught to them. On the contrary there is, in his opinion, a greater scope for improvement both in methods and details of work in the case of leather tanned and dressed for use in this country. Mr. Guthrie, therefore, considers that the aim of Government should be the improvement of this portion of the leather trade. The scheme, as now proposed, is shortly as follows.

3. *The scheme in general.*—The school will consist of—

- (i) a tannery where theoretical and practical instruction in tanning will be given to students, and
- (ii) a laboratory attached to it for consultation and research work and for controlling the practical work in the school.

4. *Course of instruction and duration.*—In the tannery Mr. Guthrie would arrange for a course of instruction to students which would give them a fair working knowledge of as many classes of leather as possible for which there is an increasing demand in India. There will be in the school only one regular class for “operatives”.^{*} For these a two years' course is proposed as originally suggested by Mr. Chatterton.[†] The first year of the

^{*} Paragraph 3 of Mr. Tressler's letter.

[†] Paragraph 2 of his letter on page 7 of G.O. No. 269, Educational, dated 8th May 1911.

course will be devoted to tanning and the second to currying and dressing. Mr. Guthrie proposes to give lectures on two days in the week and would have tutorial classes on two other days. The rest of the time would apparently be given to practical work in the tannery.

There being no likelihood of suitable employment being found for leather experts in India Mr. Guthrie does not think it advisable at present to train men as “experts.”

T. E. MOIR—26-4-12.

These proposals may, it is submitted, be accepted.

5. *Class and number of students.*—Mr. Guthrie would ordinarily admit into the class for “operatives” only sons of tanners and others with a practical experience of the leather trade, who have a good general education. He considers it useless to train men who have no position to look forward to after leaving the school. Mr. Chatterton had also the same idea; and the Government may agree. No standard for the general educational qualifications of students is proposed. Mr. Guthrie would prefer students who have taken a short course of general science. It may be left to the discretion of the officer in charge to demand any qualification he likes, as in the case of the School of Arts.

T. E. MOIR—26-4-12.

Paragraph 3 of G.O. No. 504, Educational, dated 8th July 1908.

Mr. Guthrie would limit admission to such number as there is accommodation for, but what the number that can be accommodated in the proposed buildings is not stated.

Paragraph 2, page 7 of G.O. No. 269, Educational, dated 8th May 1911.

Mr. Chatterton proposed to limit the number to 30. Perhaps it is not necessary to place any limit on the number for the present.

6. *Fees.*—Just as Mr. Chatterton,^{*} Mr. Guthrie also would charge fees from the students so as to keep away those who are not likely to take up the trade seriously; but no idea is given as to what the amount of fees is to be. Mr. Chatterton reported that at the Sembium tannery a fee of Rs. 5 a month was charged. Presumably the fees to be charged in the proposed school will not exceed this sum. As regards the question of granting scholarships referred to in paragraph 3 of G.O. No. 269, Educational, dated 8th May 1911, Mr. Guthrie does not think that the matter need be considered until the construction of a new tannery has been settled.

^{*} Paragraph 2, page 7 of G.O. No. 269, Educational, dated 8th May 1911.

7. *Materials for tanning.*—Following Mr. Chatterton, Mr. Guthrie states that some arrangements will have to be made with local tanners to supply raw materials (hides and skins) to the school to be tanned for demonstration purposes, and to take back the finished leather at first free of cost but later, if it were found possible, at a charge that would cover cost of materials used. This arrangement was approved in paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911. Mr. Tressler, however, points out that some such arrangement as this was tried in his time with Messrs. Chambers & Co. and led to a considerable amount of unpleasantness. He therefore suggests that an agreement legally enforceable should be entered into with the tanners that the hides they furnish are tanned solely at their own risk. Though such an agreement appears to be desirable, it seems unlikely that private tanners will be willing to enter into any such undertaking. To provide for such contingencies the school should, it is submitted, be permitted to purchase a sufficient number of hides and skins for its work. Moreover, the requirements of the tanners may not always agree with the needs of the school; and if the latter were to depend entirely on the tanners for materials, it may not be able to carry out its plan of work successfully. The purchase of necessary hides and skins for demonstration purposes in a leather school is not prohibited by the Secretary of State; and their sale when tanned will not convert the school into a “factory” manufacturing and selling articles for profit, within the meaning of the Secretary of State's despatch, dated 29th July 1910, referred to by Mr. Tressler in paragraph 4 of his letter, dated 31st January 1912. It is therefore submitted that, while the school should endeavour to obtain materials from private tanners wherever possible, it should be empowered to supplement its requirements by purchase when necessary.

Paragraph 7 of the despatch on page 18 of G.O. No. 3446, Revenue, dated 27th October 1910.

T. E. MOIR—26-4-12.

8. In addition to the regular class for “operatives” referred to above, Mr. Guthrie proposes to arrange—

- (i) to give instruction free of charge to workmen or maistries of private tanneries in the use of tools or machines, provided they supply the materials necessary; and
- (ii) to allow students who have completed their course in the school to specialize in any branch on the same conditions as above.

T. E. MOIR—26-4-12.

There seems to be no objection to this.

9. *Laboratory.*—In the laboratory Mr. Guthrie will arrange to provide a course in leather trade chemistry for two graduates without fees. If fees were charged, graduates would not, Mr. Guthrie apprehends, be forthcoming, and he considers that the value of the work done by the graduates would compensate for the time taken in their instruction. Mr. Guthrie's proposals in these cases may, it is submitted, be accepted.

T. E. MOIR—26-4-12.

10. *Tannery for the school.*—Mr. Guthrie has been unable to find any existing tannery suitable for the school which could be hired, as originally contemplated by Government. He therefore considers that a new tannery should be constructed. Mr. Tressler concurs in this view and submits a plan of the proposed tannery together with a square feet estimate of cost. The cost of the building excluding site is estimated at Rs. 50,000 and that of machinery, fittings and materials at Rs. 33,370—total initial cost Rs. 83,370, excluding the cost of the site. This estimate does not provide for quarters for the Superintendent which may subsequently come up for consideration.

The cost of the fittings and materials required for the laboratory alone are estimated at Rs. 5,100, and this amount is included in the sum of Rs. 33,370 given as cost of fittings above.

11. *Site.*—If the Government accept the view that none of the existing tannery would suit the proposed tanning school, the construction of a new tannery becomes a necessity and the question will have to be considered where to locate it. As most of the students of the tanning school will be drawn from Madras, Mr. Guthrie states that the school should be located in or near Madras and proposes the plot of land to the back of Perambur railway station. Mr. Tressler, however, considers it desirable that the school should be close to the contemplated technical school. The proposal to establish a technical school has recently been under the consideration of a committee appointed in G.O. No. 28, Educational, dated 16th January 1912. The committee's report has since been received; and Mr. Chatterton in submitting the report suggests that the Government harness factory at Perambur would be a convenient site for both the tanning school and the technical classes and proposes that it should be acquired. Even should the proposal to open a technical school fall through, the tanning school may be located on this site and the Revenue Department may be asked to take steps for its transfer.

12. *Staff and establishment.*—For the school Mr. Guthrie requires the following staff and establishment:—

	Average cost.
	RS.
One assistant on Rs. 100—5—150	133½
One assistant on Rs. 75—5—100	91¾
One storekeeper on Rs. 35	35
One clerk on Rs. 25	25
Two tanning foremen on Rs. 30 each	60
One watchman on Rs. 8	8
Two watchmen on Rs. 7 each	14
	—
	367
	—

Including the pay of Mr. Guthrie (Rs. 750), the average cost on account of the staff of the school will be Rs. 1,117 *per mensem* or Rs. 13,404 *per annum*. Adding the cost of materials (Rs. 4,500) and wages (Rs. 2,000) the total cost of maintaining the school will be Rs. 19,904 or Rs. 20,000 in round numbers. During the first year Mr. Guthrie requires only the storekeeper and the three watchmen; the cost will

T. E. MOIR—26-4-12.

therefore be Rs. 14,684 or Rs. 15,000. The staff proposed for the school appears to be moderate and may be sanctioned.

C. RAMANUJACHARI—19-4-12.

Before further action is taken on this we must know whether the Government harness factory at Perambur can be made available. Will Revenue please advise?

T. E. MOIR—26-4-12.

To the Revenue Department.

REVENUE DEPARTMENT.

The Commanding Royal Engineer, 9th (Secunderabad) Division, recently stated that proposals were under consideration for utilizing the harness and saddle factory at Madras for the accommodation of some of the divisions of Madras Arsenal and that consequently there was no intention of surrendering the land to the Local Government—*vide* his letter No. 190, dated 20th January 1912, at page 5 of G.O. Mis. No. 467, Revenue, dated 19th February 1912. The factory referred to in the Educational note above is evidently the same as that mentioned in the Commanding Royal Engineer's letter, dated 20th January 1912. Educational may perhaps be advised to select some other site for the location of the school and tannery.

K.R.N.—1-5-12.

S. H. SLATER—4-5-12.

To the Educational Department.

EDUCATIONAL DEPARTMENT.

It is for consideration whether in the circumstances the question of the suitability of the site proposed by Mr. Guthrie in paragraph 21 of his report should be further examined. This site is situated at the back of the Perambur railway station near the plague camp. It is private land measuring 10 acres and its valuation is estimated at Rs. 10,000. The Government harness factory site was preferred in view of the fact that it was selected as the site of the North Madras Industrial School. It has now to be ascertained whether the Perambur site is suitable for the proposed tanning school and will be similarly so for the proposed industrial school also, as it is contemplated to locate both the institutions on the same site.

C. RAMANUJACHARI—8-5-12.

The file may now go to Financial for consideration. Mr. Guthrie's proposals seem sound and he has carefully distinguished what is good in Indian practice from what gives scope for instruction and improvement. The question of site need not delay consideration of these proposals. We know now that the harness factory is not available, and therefore a model tannery will be necessary; it seems useless to expect Mr. Guthrie to demonstrate up-to-date methods in a tannery built on the wrong lines. The file as to the technical school is linked. In all probability the Superintendent of Industrial Education will be called on to formulate a definite scheme on the committee's recommendations. It is proposed that the general supervision of the technical school should be entrusted to the Superintendent of the leather school. This will necessitate a joint site, and the Superintendent of Industrial Education may be called on to report if the site proposed by Mr. Guthrie will serve for both institutions.

T. E. MOIR—13-5-12.

FINANCIAL DEPARTMENT.

For the circumstances relating to the appointment of a leather expert, please see Official Memorandum No. 157-2, Educational, dated 15th February 1911, on pages 4-5 of G.O. No. 269, Educational, dated 8th May 1911.

* Sanctioned for three years in the first instance, pay Rs. 750 *per mensem*. Mr. Guthrie joined duty on 1st September 1911.

Paragraph 10 of despatch on page 18 of G.O. No. 3446, Revenue, dated 27th October 1910, and G.O. No. 652, Educational, dated 15th September 1911.

The proposals relate to the opening and working of a leather trade school in the Madras City. The scheme has been prepared by the Acting Superintendent of Industrial Education (Mr. Tressler) in consultation with the Leather Expert* (Mr. Guthrie).

2. The estimated cost of the proposals is shown below:—

(A) Initial expenditure—

	RS.
(a) Tannery (construction of a new building)	50,000
Cost of site for the building	10,000
(b) Machinery	18,370
(c) Materials (chemicals, etc.)	9,900
(d) Fittings and materials for laboratory, experimental room and dye-house	5,100
Total	93,370

[Exclusive of quarters for the Superintendent, cost of power, etc.]

(B) Recurring expenditure—

(i) Establishment—

	Cost per mensem.	Cost per annum.
One Superintendent (750)	750	
One Assistant (100—5—150)	130 $\frac{5}{8}$	
One Assistant (75—5—100)	91 $\frac{3}{8}$	
One storekeeper (35)	35	
One tanning clerk (25)	25	
Two tanning foremen (30)	60	
Three watchmen 1 (8), 2 (7)	22	
Total	1,114 $\frac{3}{8}$	13,370 $\frac{3}{8}$

$$[1,114\frac{3}{8} \times 12 = 13,370\frac{3}{8}]$$

(ii) Wages	2,000
(iii) Materials	4,500

Total ... 19,870 $\frac{3}{8}$ per annum.

* Assuming that there will eventually be sixty students in the two classes together, and a fee of Rs. 5 per mensem is charged.
60 x 5 x 12 = 3,600.

Paragraphs 5 and 6 on pages 2 and 3 ante.

3. Item (A) Initial expenditure.—When Government invited proposals in May 1911 for the opening of a leather trade school, there was no idea that such a large expenditure as that now proposed should be incurred. Attention is solicited to—

(i) Mr. Chatterton's letters No. 196-I., dated 24th February 1911 (paragraph 3) and No. 196-I., dated 1st March 1911 (paragraph 2), in which he has remarked that during the period of three years of Mr. Guthrie's engagement, the school will be somewhat of an experiment and that till its success is assured it will be unwise to spend money on permanent buildings, a suitable tannery in which to carry on the school being selected;

(ii) His Excellency the Governor's note (written as Honourable Member), dated 21st January 1911, in which it has been pointed out that the ignorance and inability of the greater number of workers to take in profitably any instruction make it unadvisable that a very costly experiment in this direction should be indulged in by Government; and

(iii) Paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911, where the Superintendent of Industrial Education was requested to enquire whether a suitable tannery could be hired to be used as a leather school.

Against the above expenditure there will be some receipts mainly from school fees, which will be about Rs. 3,600* per annum.

4. The Superintendent of Industrial Education and the leather expert now state

* For the reasons please see paragraphs 1 and 2 of Mr. Tressler's letter, dated 10th February 1912.

Cf. paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911.

Notes on page 4 ante.

Item (A) on page 6 ante.

that a *hired* tannery will *not* suit the purpose and that a new * one should be built. They do not at the same time appear to have actually made enquiries as to hiring a tannery. The Educational Department are, however, inclined to sanction the proposals now made for constructing a new tannery and equipping it with new materials, the total estimated cost being Rs. 93,370.

5. It is for consideration whether the incurring of this large initial expenditure may be accepted in this department in view of the following circumstances:—

Paragraph 2 of note, dated 6th January 1911, on page 3 of Notes to G.O. No. 269, Educational, dated 8th May 1911.

(The conditions of Madras are similar to those of Bombay although the export trade is larger in the case of Madras—paragraph 3 of Official Memorandum No. 157-2, Educational, dated 15th February 1911, on pages 4 and 5 of G.O. No. 269, Educational, dated 8th May 1911.)

Paragraph 5 of letter No. 3942-A/08-2, dated 3rd March 1909, on page 12 of G.O. No. 3446, Revenue, dated 27th October 1910.

Note, dated 21st January 1911, on page 9 of Notes to G.O. No. 269, Educational, dated 8th May 1911.

Pages 17 and 18 of G.O. No. 3446, Revenue, dated 27th October 1910.

(a) On a report submitted by Mr. Guthrie on the leather industries of the Bombay Presidency the Bombay Government decided that there was *not* much scope for an institution there; and

(b) Since the application was made to the Government of India in 1909 for the appointment of a leather expert, there has been a material alteration in the conditions, in that the original scheme of combining a leather school with the *profitable* sale of the products thereof has to be dropped under the orders of the Secretary of State in despatch No. 50, Revenue, dated 29th July 1910.

It is, therefore, respectfully submitted for orders whether the Superintendent of Industrial Education may be requested to adopt a more modest scheme in which a *hired* tannery will be used instead of a *newly constructed* one, as suggested by Mr. Chatterton.

But see what Mr. Guthrie says—paragraphs 19—21. We may accept the new construction. C. REILLY—30-5-12.

Paragraph 2, page 7 of G.O. No. 269, Educational, dated 8th May 1911.

6. Item (B) Recurring expenditure.—The appointment of leather expert will continue till the 31st August 1914 under the *existing*† sanction. If the appointment is to be made *permanent*, the sanction of the Secretary of State is required.

† Paragraph 10 of despatch on page 18 of G.O. No. 3446, Revenue, dated 27th October 1910.

As regards the subordinate establishment, the present proposals are only provisional, and a case will have to be made out with reference to actual requirements for the appointment of (a) two assistants, one on Rs. 100—5—150 ‡ and the other on Rs. 75—5—100, § and (b) one storekeeper on Rs. 35 and a separate tanning clerk on Rs. 25.

Item (B), page 6 ante.

‡ Rs. 130 $\frac{5}{8}$ } average.
§ Rs. 91 $\frac{3}{8}$ }

When the question of the tannery is settled, the Superintendent of Industrial Education may be asked to furnish detailed explanations in regard to the establishment required.

2. The estimated cost of the proposals is shown below:—

(A) Initial expenditure—

	RS.
(a) Tannery (construction of a new building)	50,000
Cost of site for the building	10,000
(b) Machinery	18,370
(c) Materials (chemicals, etc.)	9,900
(d) Fittings and materials for laboratory, experimental room and dye-house	5,100
Total	93,370

[Exclusive of quarters for the Superintendent, cost of power, etc.]

(B) Recurring expenditure—

(i) Establishment—

	Cost per mensem.	Cost per annum.
One Superintendent (750)	750	
One Assistant (100—5—150)	130 $\frac{5}{8}$	
One Assistant (75—5—100)	91 $\frac{5}{8}$	
One storekeeper (35)	35	
One tanning clerk (25)	25	
Two tanning foremen (30)	60	
Three watchmen 1 (8), 2 (7)	22	
Total	1,114 $\frac{2}{3}$	13,370 $\frac{2}{3}$

$$[1,114\frac{2}{3} \times 12 = 13,370\frac{2}{3}]$$

(ii) Wages	2,000
(iii) Materials	4,500

Total ... 19,870 $\frac{2}{3}$ per annum.

* Assuming that there will eventually be sixty students in the two classes together, and a fee of Rs. 5 per mensem is charged.
60 × 5 × 12 = 3,600.

Paragraphs 5 and 6 on pages 2 and 3 ante.

3. Item (A) Initial expenditure.—When Government invited proposals in May

Paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911.

(i) Mr. Chatterton's letters No. 196-I., dated 24th February 1911 (paragraph 3) and No. 196-I., dated 1st March 1911 (paragraph 2), in which he has remarked that during the period of three years of Mr.

Guthrie's engagement, the school will be somewhat of an experiment and that till its success is assured it will be unwise to spend money on permanent buildings, a suitable tannery in which to carry on the school being selected;

(ii) His Excellency the Governor's note (written as Honourable Member), dated 21st January 1911, in which it has been pointed out that the ignorance and inability of the greater number of workers

to take in profitably any instruction make it unadvisable that a very costly experiment in this direction should be indulged in by Government; and

(iii) Paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911, where the Superintendent of Industrial Education was requested to enquire whether a suitable tannery could be hired to be used as a leather school.

Against the above expenditure there will be some receipts mainly from school fees, which will be about Rs. 3,600 * per annum.

4. The Superintendent of Industrial Education and the leather expert now state

* For the reasons please see paragraphs 1 and 2 of Mr. Tressler's letter, dated 10th February 1912.

Cf. paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911.

Notes on page 4 ante.

Item (A) on page 6 ante.

5. It is for consideration whether the incurring of this large initial expenditure may be accepted in this department in view of the following circumstances:—

Paragraph 2 of note, dated 6th January 1911, on page 3 of Notes to G.O. No. 269, Educational, dated 8th May 1911.

(The conditions of Madras are similar to those of Bombay although the export trade is larger in the case of Madras—paragraph 3 of Official Memorandum No. 157-2, Educational, dated 15th February 1911, on pages 4 and 5 of G.O. No. 269, Educational, dated 8th May 1911.)

Paragraph 5 of letter No. 3942-A/08-2, dated 3rd March 1909, on page 12 of G.O. No. 3446, Revenue, dated 27th October 1910.

Note, dated 21st January 1911, on page 9 of Notes to G.O. No. 269, Educational, dated 8th May 1911.

Pages 17 and 18 of G.O. No. 3446, Revenue, dated 27th October 1910.

It is, therefore, respectfully submitted for orders whether the Superintendent of

But see what Mr. Guthrie says—paragraphs 19—21. We may accept the new construction.

C. REILLY—30-5-12.

Paragraph 2, page 7 of G.O. No. 269, Educational, dated 8th May 1911.

6. Item (B) Recurring expenditure.—The appointment of leather expert will

The appointment has been sanctioned for three years and Mr. Guthrie joined duty on 1st September 1911 (G.O. No. 652, Educational, dated 15th September 1911).

† Paragraph 10 of despatch on page 18 of G.O. No. 3446, Revenue, dated 27th October 1910.

As regards the subordinate establishment, the present proposals are only provisional, and a case will have to be made out with reference to actual requirements for

Item (B), page 6 ante.

‡ Rs. 130 $\frac{5}{8}$ } average.
§ Rs. 91 $\frac{5}{8}$ }

Rs. 25. When the question of the tannery is settled, the Superintendent of Industrial Education may be asked to furnish detailed explanations in regard to the establishment required.

that a hired tannery will not suit the purpose and that a new * one should be built. They do not at the same time appear to have actually made enquiries as to hiring a tannery. The Educational Department are, however, inclined to sanction the proposals now made for constructing a new tannery and equipping it with new materials, the total estimated cost being Rs. 93,370.

(a) On a report submitted by Mr. Guthrie on the leather industries of the Bombay Presidency the Bombay Government decided that there was not much scope for an institution there; and

(b) Since the application was made to the Government of India in 1909 for the appointment of a leather expert, there has been a material alteration in the conditions, in that the original scheme of combining a leather school with the profitable sale of the products thereof has to be dropped under the orders of the Secretary of State in despatch No. 50, Revenue, dated 29th July 1910.

Industrial Education may be requested to adopt a more modest scheme in which a hired tannery will be used instead of a newly constructed one, as suggested by Mr. Chatterton.

continue till the 31st August 1914 under the existing† sanction. If the appointment is to be made permanent, the sanction of the Secretary of State is required.

7. *Materials for tanning, etc.*—The estimates provide for a recurring expenditure of Rs. 2,000 *per annum* on account of wages and Rs. 4,500 *per annum* on account of materials. It is submitted that these amounts seem to be large when it is considered that the school is to serve *instructional* purposes only. These amounts may perhaps be reduced to Rs. 500 and Rs. 1,500 respectively.

Item (B), page 6 *ante*.

No, not at all if you know anything about the subject.

A. G. CARDEW—3-6-12.

Cf. paragraph 2 of G.O. No. 269, Educational, dated 8th May 1911.

8. In the Budget Estimate for 1912-13, a lump provision of Rs. 15,600 * only has been made on account of the leather expert and his establishments. Additional allotments will have to be sanctioned for expenditure not covered by this provision.

Page 147 of Budget Estimate, 1912-13 (second edition—revised).

Paragraph 2 (5) on pages 337-338 and paragraph 7 (g) on pages 344-345 of Budget Notes, 1912-13.

* Rupees 6,000 of which is for the opening of a leather trade school.

C.P.K.—27-5-12.

V.G.K.—29-5-12.

Submitted to the Chief Secretary. Please see the Notes to G.O. No. 269, Educational, dated 8th May 1911, and His Excellency's note (as Honourable Member) on page 14. The whole thing seems to be an experiment. It may lead to the building up of a trade in dressed and finished leather in this Presidency for use in India. What the demand for this class of goods in India is at present, and how far it is at present met in the country, is not apparent from the papers in the file. Doubtless there is a considerable demand which is not fully met by manufacturers in this country and the expenditure proposed on the experiment may perhaps be considered worth while.

We may, however, ask that at the start the staff of the school should be entertained on a temporary basis—say, for three years—and that after two years a report should be submitted to Government showing what measure of success the experiment has achieved and the desirability or otherwise of continuing it.

This method has a bad effect, because it makes every one feel uncertain whether the Government in a fit of parsimony won't shut down the work. No results can be expected after two years.

A. G. CARDEW—3-6-12.

C. REILLY—30-5-12.

The papers do not seem very complete. No copy of the Proceedings of the Ootacamund Industrial Conference of 1908 is in the file, and I cannot find a valuable paper on the leather trade of India which was received probably in Revenue Department and from Bombay, I think, a year or two ago, nor is Mr. Chatterton's monograph on the tanning trade in the file. However, there can be no doubt of the immense importance of the leather trade in Madras. Our exports of raw skins (mostly goats) are valued at nearly a crore of rupees a year, while those of tanned skins are valued at nearly 2 crores. These so-called tanned skins are, I believe, very imperfectly tanned and would be worth much more if they were properly tanned. The export of tanned hides, also very imperfectly tanned, also runs into big figures, which reached $1\frac{1}{2}$ crores in 1906-1907, so that the total value of our leather exports in that year was over $4\frac{1}{2}$ crores, the average value of the skins being only Rs. 1-11-2 per lb. and of the hides As. 11.

Report on Leather Industries in Bombay Presidency in G.O. Nos. 3597-98, Revenue, dated 14th November 1910.

1906-1907—93 lakhs.

(Paragraph 4 on page 37 of Ootacamund Industrial Conference papers.)

1906-1907—208 lakhs.

(Paragraph 5 on page 37 of Ootacamund Industrial Conference papers.)

Statement in paragraph 5 on page 37 of Ootacamund Industrial Conference papers.

If these rates could be raised by 50 *per cent.* in consequence of improved methods of tanning, the gain to the country would be very great; and as the demand for leather is extending and India supplies a great part of the world's supply of leather and also possesses great supplies of cheap tanning materials, it is worth while, I think, to spend a small sum as here proposed (£6,000 initial expenses and £1,000 a year recurring charges) on a leather trade school which will diffuse a knowledge of improved tanning method.

2. I would therefore accept the general outline of the leather expert's scheme. It is true that his engagement is at present only for three years; but if he is to produce any useful result he must necessarily be retained for at least a dozen years, and he should be given permanent buildings and proper apparatus, or it is not worth while to spend any money at all. The diffusion of education is slow work and we can't expect immediate results, but it is to be hoped that in the end the expenditure will be justified.

A. G. CARDEW—3-6-12.

I have some misgiving about the wisdom of embarking on this large outlay before we know whether the school will be a success, but after reading the papers I have come to the conclusion that the prospects of success are fairly good, while they will certainly be increased if the school is well-found from the beginning. Of the importance of developing the tanning industry there can be no doubt, and I therefore agree to the proposed expenditure. It is desirable that the building of the school should be pushed on as rapidly as possible, and probably the best plan will be to entrust the work to Mr. Tressler, treating him as a Public Works disbursing officer.

H. A. S[UART]—6-6-12.

To the Educational Department.

A. G. CARDEW—7-6-12.

EDUCATIONAL DEPARTMENT.

Better print emergently before circulation to His Excellency and keep a spare copy of the proof. Add papers mentioned by the Chief Secretary to the file.

L. DAVIDSON—10-6-12.

Office—

Attend to at once please.

T. E. MOIR—10-6-12.

The notes have been printed and are submitted with the papers mentioned by the Chief Secretary.

T.K.—25-6-12.

C. RAMANUJACHARI—25-6-12.

His Excellency the Governor—

L. DAVIDSON—26-6-12.

I agree with Sir Harold Stuart. The experiment is worth trying, and the sooner we get to work the better.

We shall have eventually to extend Mr. Guthrie's engagement, but probably there will be no difficulty in doing this.

Please get the order out as soon as possible and see that steps are taken as soon as possible to get the project started.

M. H[AMMICK]—28-6-12.

A draft is submitted for approval. If approved, it may be sent to the Financial and Public Works Departments for acceptance.

T.K.—2-7-12.

C. RAMANUJACHARI—3-7-12.

Will Deputy Secretary kindly take on this draft as he dealt with the case in the noting stage.

L. DAVIDSON—3-7-12.

T. E. MOIR—4-7-12.

To the Financial }
" Public Works } Departments.

FINANCIAL DEPARTMENT.

Please see notes on pages 8-9 *ante*. The draft order may, it is submitted, be accepted, the sanction being registered as No. 108 of 1912-13.

C.P.K.—6-7-12.

V.G.K.—6-7-12.

C. REILLY—6-7-12.

A. G. CARDEW—6-7-12.

PUBLIC WORKS DEPARTMENT.

The draft order has been sent to this department for acceptance, obviously with reference to the orders in paragraph 5 thereof, wherein the proposal to provide buildings for the model tannery school has been approved and it is proposed to entrust the work to the Superintendent of Industrial Education as a Public Works disbursing officer. There seems no objection to the draft order being accepted in this department. The detailed plans and estimates for the work will no doubt be scrutinised in this department before sanction.

M.K.T.—8-7-12.

Submitted the draft order may be accepted in Public Works Department.

W. G. MOLESWORTH—8-7-12.

Accepted.

S. D. PEARS—9-7-12.

To the Educational Department.

EDUCATIONAL DEPARTMENT.

Issue.

T. E. MOIR—10-7-12.

[G.O. No. 613, Educational, dated 10th July 1912.]

G.O.No.269, Edl., dated 8--5-1911.

C.No.602, from the D.P.I., No.1075/11, d/22-2-1912.

ORDER:
P.S.

The papers read above relate to the scheme for the establishment of a leather school in Madras submitted by Mr. Guthrie, the leather expert. The Government have carefully considered the proposals and accord their general approval to them. The main feature of the scheme consists in opening a tannery where theoretical and practical instruction in tanning will be given to students and a laboratory attached to it for consultation and research work, and for controlling the practical work in the school.

2. The work of the school should as proposed be confined ^{for the present} to the training of "operatives" and no attempts should be made to train ~~men as~~ "experts" ~~in leather manufacture~~ in view of the ^{few openings} ~~little demand~~ that exists for such men. The Government approve the method and period of instruction proposed for operatives. They agree that admission to ^{the course} ~~this class~~ should be ~~xxx~~ restricted

H.M.'s & H.E.'s note
pages 8-9 & notes.

Para: 3 pages
of notes.

Para: 4 pages
1-2 of notes.

Para: 4+5
pages 1-2 of notes.

restricted to ~~only~~ sons of tanners and others with a practical experience of the leather trade, ~~who have a good general education~~ ^{who have a good} ~~general education~~. No ~~general~~ education ~~test~~ will be prescribed for admission and the selection of students will be left to the discretion of the Superintendent of the school.

3. As stated in G.O.No.269, Edl., dated 8th May 1911, fees should be levied from the students; and the Superintendent of Industrial Education will be requested to ~~report that will~~ ^{propose} ~~be a suitable scale of fees to charge~~. The Government agree with Mr. Guthrie that the question of awarding scholarships may be held in abeyance for the present. As regards materials for tanning, the Government have no objection to the Superintendent's arranging with private traders for their supply as indicated in para.7 of Mr. Guthrie's note, but ~~wherever~~ ^{when} this is not possible or it is necessary to supplement the supply, the Government will permit the purchase of the materials required.

^{following}
4. The proposals in the following ~~are~~ ^{are} ~~approved~~ ^{approved} ~~in~~ ⁱⁿ ~~respects~~ also commend themselves to Government:-

(i) To give instruction free of charge to workmen or maistries of private tanneries in the use of tools or machines; and

(ii)

Para: 5
Page 2 of notes.

Para: 6 on
Page 2 of notes.

Para: 6
Page 2 of notes.

Page 6 CF

Para: 7 Page 2 of notes.

Para: 8 Page 3
of notes.

(ii) to allow students who have completed their course in the school to specialize in any branch, provided the materials necessary for practice in each case are supplied by the workmen or students concerned; ~~and~~

(iii) to provide free of charge a course of training in leather trade chemistry for two graduates.

5. In view of the report that none of the existing tanneries will suit ~~the purposes of the proposed school,~~ *No suitable tannery being available* the Government approve the construction of a ~~new~~ ^{model} tannery equipped with the necessary machinery. As regards ~~the site for the tannery,~~ *as suitable site* the Government harness factory suggested in Mr. Tressler's letter dated 10th February 1912 is not now available; *it will* ~~the tannery should therefore be~~ *probably* ~~located in the alternative plot of~~ *land* ~~land in Perambur referred to in the~~ same letter. Before sanctioning its acquisition, the Government however desire to have a report as to whether it is large enough to accommodate the proposed technical school also or whether ~~there are lands adjoining it~~ ^{*suitable*} ~~can be required for the purpose~~ ^{*can be required for the purpose*} ~~suitable for the technical school.~~

It is desirable that measures should be adopted to start the school without further delay and that the buildings required for the purpose should be

pushed α

Para: 8 (ii) page 3
of notes.

Para: 9 page 3
of notes.

Para: 10 page 3
of notes.

Rev. Dept. note
page 4 of notes.

Page 4-5 C.F.

(H.M. & H.E.'s
note page
8-9 of notes)

The Govt desire that the school should be opened up as early as date as possible & the construction of the necessary buildings should be taken in hand without delay.

last sentence of
H. M.'s note page 8 quote.

Para: 12 page 3
quote.
+ H. M.'s + H. E.'s note
page 8-9 quote.

* Rs 15,600 - page 147 of
B.P. 1912-13.

Cost/line	No
130	5
91	2
35	
25	
60	
8	
14	
369	2

pushed on as rapidly as possible.

With this object, their construction will be entrusted to the Superintendent of Industrial Education who will be treated for the purpose as a Public Works disburser. Detailed plans and estimates for the buildings and an indent for the machinery required should be submitted at an early date.

6. The following establishment proposed for the school is sanctioned and the sanction will be registered as No. **108** of 1912-13:--

One assistant on Rs 100-5-150

An 2nd - do. - on Rs 75-5-100

One storekeeper on Rs 35

One clerk on Rs 25

Two tanning foremen on Rs 30 each

One watchman on Rs 8 and

Two watchmen on Rs 7 each.

The staff should be employed as required, necessity therefor arises.

7. The cost of the establishment will be met from the lump provision made for the purpose in the current year's budget.

8. The D.P.I. will be requested to see that steps are taken as soon as possible to get the project started.

T.K.
2-7-12.

CA
3-7-12

4/7/12

To the D.P.I. with plan
" Finl. Dept.
" P.W.D.
" Ag.
" Rev.

out with plan
3/8/12

ORDINARY.

PREFERENCE.

Very URGENT (a).

Educational
LOCAL AND MUNICIPAL DEPARTMENT.

Current No., dated 191

G.O., No. 613, dated 10 7 191 2

INSTRUCTIONS FOR THE
SECRETARIAT.Number of MS. pages sent { Correspondence including order or orders
(b)
Notes.Cocket. *Leather school*
Appraising Sanctioning
the proposals submitted
by the Leather Export for the
establishment of a
in Madras(c) Number of copies required when struck off (not including
copies for volumes and editors' table which are retained
in the Press).Complete
correspondence
and orders.

Notes.

FOR RECORD.*

Madras Records ...
Ooty Records ...
For filing with original ...

Total ...

FOR ISSUE.†

Signature copies.

India Office.....
Govt. of India.....Dept.
Revenue Department.....
Public Works Department.....
Educational Department.....
.....Dept.
.....Dept.
.....Dept.
.....Dept.

Spare copies.

The C.M.C.....
The Collector of.....
The P.D.B.....
The Accountant-General.....
The Director of Public Instruction.....
The Surgeon-General.....
The Sanitary Commissioner.....
Do. Engineer.....
Do. Board.....
The President, Corporation of Madras
The.....
The.....
The.....
The.....
The.....

Total ...

* Copies distributed on.....†(Press Clerk.)

† Copies distributed on.....‡(Despatcher.)

‡ To be initialled and dated.

(a) If a paper is marked to be printed
urgently, the Superintendent of the section
concerned should sign the Press slip. The
Superintendent should exercise a careful discre-
tion in the matter.(b) Each letter, memorandum, or order, or set
of orders, in the file of correspondence should be
headed in succession with the Roman numeral I,
II, III, etc., the number being written in red ink
or blue chalk above the item. The particular
papers to be printed in the special issue-copies
should be indicated by the Roman numeral (I,
II, etc.) by which that item has been headed in
the correspondence file. All matter, including
marginal remarks or references, to be printed
should be written in ink and matter which should
not be printed should be encircled. Initials and
signatures that are not quite legible should be
re-written distinctly.(b¹) For rules regarding printing of notes,
see the rules in G.O., No. 1220, Public, dated
30th November 1900.(c) The number of copies and the details of
distribution should be filled in by the Superin-
tendent or Referencer concerned.(d) In the absence of special instructions to
the Press to keep matter standing for a specified
period, ordinary papers of 8 pages and under
will be kept standing for one week, and larger
papers for two weeks only. The type of notes
and of all confidential papers is distributed
immediately after striking.(e) This slip, properly and completely
filled in, should accompany every paper sent to
Press; it will be returned by the Press when
proofs are furnished; it should be sent to the
Press when a call is made for revised proofs or
when a corrected proof is sent for striking.
When finally returned by Press it should
be filed with the original order or letter.

INSTRUCTIONS FOR THE PRESS.

(a) If, in the opinion of the Superintendent of
the Press, a paper has been marked urgent
unnecessarily, he should send the Press slip to
the Registrar with a remark to that effect.(b) Unless a note to the contrary is made
against the matter, pencil entries should not
be printed. The Superintendent of the Press
may bring to the notice of the Registrar
any instance of incomplete or careless editing.(c) Signature copies of letters to the
Secretary of State or to the Government of
India should be printed on hand-made paper.(d) This slip should be returned by the Press
to the Secretariat when proofs are furnished; it
will be sent back to the Press when proofs
are returned corrected and should be finally
returned to the Secretariat when struck-off
copies are supplied.(e) The names of the Secretary and Member^s
should be printed in full when they occur on
the right hand side, but only the first time when
they appear on the left side, the initials alone
being printed later.

A	B	C
Please send proof in triplicate. The papers have been carefully edited.	Proof returned corrected. Please strike off and send number of copies as indicated.	As the matter is clear manuscript and has been carefully edited, (b) proof need not be sent. Please print and supply number of copies as indicated.
	Type may be released ^{after usual interval.} at once.	Type may be released after usual interval.
.....Clerk.	Clerk.	Clerk.
.....Dy. Supdt.	Dy. Supdt.	 ⁷³ Dy. Supdt.

(b) Three copies of proof of all notes should be sent for approval, except when instructions are given to the contrary.

SPECIAL INSTRUCTIONS.

TO BE FILLED IN BY THE PRESS.

Diary.	Initials of Press official.
Received in Press on.....	12.7.12 <i>LB</i>
First proof furnished on.....	16.7.12 <i>LB</i>
Call for revised proof received on.....	
Revised proof furnished on.....	
Corrected proof received for striking on.....	29.7.12 <i>LB</i>
Final copies supplied on.....	1.8.12 <i>LB</i>

Account of copies.	Complete copies.	Notes.	Issue copies.
Supplied to Secretariat for Record.....	44		
Issue.....	29		
For Volumes.....	16		
For E.T.....			
Total ...	89		