

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

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Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
7th March 1865.*

Read the following :—

No. 77. MINUTE BY THE HONORABLE THE PRESIDENT.

1. I am very glad that I was able to arrange for my visit to the Northern Circars so as to be present at the Cattle Show at Addunky. In accordance with the arrangements made by the Collector, Mr. Dykes, I landed at Kottaputnum, and proceeded from thence via Ongole to Addunky, every preparation having been made for my transport and accommodation both on the road and at Addunky itself.
2. The cattle were pouring in fast when I arrived at Addunky, the show of stock was, I am told, much larger than usual, and the number exhibited taxed the energies of the persons employed to classify them, and to adjudicate upon their relative merits; but the work was well and satisfactorily performed; and great credit is due to Mr. Dykes for the methodical arrangements by which this result was obtained, and for the mode in which he has enlisted the active co-operation of the natives.
3. The increase in the number of stock was due, I believe, in great measure to the exhibition of a larger proportion than usual of young stock, so that in a few years, when the yearlings exhibited on the present occasion have arrived at their full growth, the competition for prizes among the full grown classes will become much more active.
4. I was very much struck with the appearance of the stock generally; the bulls were remarkably fine, there were some splendid specimens of working bullocks, and some nice looking cows and heifers; these latter, however, struck me as being small in proportion to the bulls, and were disposed to be rather leggy.
5. The working bullocks were tried with a weight of two tons in a cart weighing about half a ton, and this they moved up a steepish bit of ground with fair ease; they exhibited a frame upon which 1,500 lbs. of beef might have been laid, but I should be afraid that they would be found too heavy for ordinary descriptions of labor, and would, I should think, find their weight rather an incumbrance in deep ground.
6. The Photographs which Doctor Hunter has taken of much of the stock, will give a better idea of its character than any description.
7. For the sake of encouraging the exhibition, I gave to each of five men who had gained two prizes, a gold ring, and I think that the encouragement thus given will have a satisfactory return on future exhibitions.
8. I took with me from Madras some of the new tools and machinery sent from England, and though every arrangement had been made by Mr. Dykes for their exhibition in action, the results were not so satisfactory as I could have wished.
9. In the first place, as the tools were taken out of their packing cases, and put at once on board ship, our exhibitions were to a great extent tentative; we had to experiment with new implements in the face of upwards of a thousand people, all of whom were of course alive to any failure, and who were certain to contrast the performance of the new implements with the working of their own more simple tools.
10. In the second place, several of the tools were not in a state to be used. The scythes had not been ground, and no sharpening stones had been sent with them, so none of these could be exhibited in action.
11. The pumps too were not well fitted, and more attention was required to the details of their construction.
12. The Machine which did its work most satisfactorily was the winnowing machine, and one of the iron ploughs performed well considering the light sandy character of the soil.
13. There are two points, however, with reference to these tools and implements to which I wish to call the attention of the Government.

14. The first is the necessity of training up a certain number of natives to the use and working of these machines. The second is a matter of still more importance, namely, the necessity of simplifying the construction of these implements and machines; of bringing them within the means of the Ryots, and within the ability of the village mechanic to construct, or at all events to repair them.

15. If I recollect aright, in my Minute recommending the purchase of these machines, I laid great stress upon the propriety of introducing them as examples of the principle upon which the construction should be attempted; and from what I have seen at Oosoor and Addunk I feel compelled to reiterate this opinion. The very trifling irregularities which affect the working of a machine cannot be comprehended by a Ryot, and the result of placing such a machine in his hands would be to generate distrust in its efficiency instead of confidence.

16. I cannot but think, therefore, that it would be good policy on the part of the Government to provide the means of training a certain number of natives in the use and management of the better descriptions of agricultural implements, and, at the same time, to direct the attention of a competent Mechanical Engineer towards the application of the principles exhibited in the English machines, with a view to the invention of improvements in the native tools, and of simple processes, by which the labor of men and animals might be applied more economically than at present.

17. Take, for instance, the pumps which were exhibited at Addunk, these were modifications of the chain pump, one simple enough, but requiring more attention to its construction in matters of detail; the other complete enough, but made of iron; both of these pumps, however, require attention, in fixing; the barrel of the pump should be vertical and its axis should be in a line with the centre line of the chain and buckets, any deviation from this would cause great friction, the pump would wear rapidly, and would only do half its work. Can this amount of care be looked for in a Ryot? Is he in a position to comprehend the necessity of it? I am afraid this must be answered in the negative. It would be better, therefore, to supply him with a machine of a more simple construction, such as a chain of buckets or a belt pump; the former is the simpler of the two, and more likely to commend itself to the intellect of the Ryot. I have alluded to these pumps merely as an illustration, but the principle involved is one of general application.

18. The people of India have little or no mechanical knowledge, and in attempting to instruct them, we must take them as we find them, and adapt our training to the existing state of their knowledge; gradually we may hope to make their intellect act as an useful auxiliary in the work of mechanical training, but at present I am almost afraid that the desire to purchase implements which we have exhibited, is more likely to check than accelerate the introduction of mechanical improvement. We must begin with them as with children; and this leads me to enquire what has been the result of the reference made on this very subject to the Director of Public Instruction. He was, if I recollect aright, directed to provide in the Government schools for the exhibition of simple mechanical appliances. I should wish to know what steps have been taken by him to carry out the instructions of Government.

27th January 1865.

(Signed) W. T. DENISON.

No. 78. **MINUTE BY THE HONORABLE THE PRESIDENT.**

1. In my former Minute of January 27th, I gave an account of the Cattle Show at Addank, and made some suggestions as to the steps which it would be advisable to take, in order to facilitate and encourage the employment, by the Ryots, of better descriptions of Agricultural Implements. I did not allude in that Minute to the state of the roads, or to any of the wants of the District, as I thought that I should be better able to deal with these questions after I had made myself acquainted with the state of matters in the Northern Circars.

2. I left Addank on the afternoon of Friday, 27th January, and embarked at Coimbatore on the morning of the 28th. I had intended to have looked in at Masulipatam on my way to the

North, but I received such a report of the prevalence of Diarrhoea and Dysentery in the town and the vicinity, as decided me to postpone my visit, and I therefore steered direct for Vizagapatam, off which place I anchored on the evening of the 29th. I remained at that station two days, during which time I inspected all the public buildings and institutions, and took note of the various suggestions submitted by the Collector, or by the people themselves. On the 1st of February I went by land to Bimlipatam, a flourishing place of trade, about 19 miles to the north of Vizagapatam, and embarking there sailed to Ganjam, where I landed at the old town, which has been generally deserted by the European community, and went five miles to Chitterpore, the present residence of the Agent. The next day I drove 16 miles to the northward, crossing the Ganjam river, to Rumbah, on the shore of the Chilka lake, which is the landing place of most of the boats which bring down produce from the northern shores of the lake, a distance of nearly 61 miles. At Rumbah the cargoes of these boats are transferred to bandies, and taken by land to Ganjam or to Gopalpore, another port more frequented by European merchants, about 15 miles south of Ganjam.

3. At this time of the year the traffic is very heavy, boats are constantly coming down the lake laden with rice and paddy, and there would probably be a sufficient amount of trade to make the proposed canal from the lake to the mouth of the Ganjam river a profitable undertaking. It appeared, however, to me that the great amount of this traffic was dependent upon the fact that the paddy crop had been just reaped, and that a demand existed for both paddy and rice for shipment to Bombay and elsewhere. I should, therefore, be disposed to postpone the construction of the canal for the present, till the Government can be better satisfied as to the amount of the annual traffic, and of the probable cost of the work.

4. I looked into the plans of the line of canal, and as I heard that the Zemindar to whom the paddy flat belonged, through which the line was to pass, had made heavy claims for the land required for the canal itself, as well as heavy prospective claims for damage caused by the introduction of salt water, and by cutting off the supply of fresh water, I recommended Captain Ryves to alter the line, and to carry the cutting on the sea side of the paddy flat.

5. I do not think that the delay of another year will be in any way injurious to this undertaking. It may, it is true, bring a large amount of trade direct to Ganjam; but the actual saving to the public will be the difference of cost between the conveyance by water or by road of the trade of the lake for a distance of about 8 or 9 miles; having due regard to the fact that the road, a very fair one, is already made, and that the canal has yet to be constructed, the opinion of the Collector and of others seemed to be that if a given sum of money were to be expended upon roads or canals, it would be better to spend it upon the extension of the lines into the interior of the country, than upon the improvement of those running parallel to the coast; and in this opinion I concur.

6. From Rumbah I went about 30 miles across country to Aska, where Messrs. Binny & Co. have a large Sugar Refinery, under the management of Mr. Minchin. Here I witnessed the whole process of Sugar making, from the first crushing of the cane to the out-turn of the sugar.

7. The establishment appeared to me to be very well managed; a variety of appliances were shown to me by Mr. Minchin which, with certain modifications, seemed capable of being applied to various purposes useful to the Ryots, such as raising water, &c. I was glad to see that most, if not all, of the workmen connected with the Factory were natives, including among these the whole staff of Engineers in charge of the machinery.

8. From Aska I was driven along a good road to Berhampore, a distance of 25 miles, passing through a District which, though the season had been unfavourable owing to want of rain, shewed evidence both of the industry of the people, and of the quality of the soil, by the crops with which it was covered.

9. At Berhampore, as at Vizagapatam, I visited the public buildings, most of which are new; and having done so embarked at Gopalpore, a distance of about 8 miles from Berhampore.

pore, at noon on the 8th, and sailed for Madras, calling at Vizagapatam on my way for some of the details of the Battery of Artillery which were not in a fit state to march with the Battery to Madras.

10. Having thus given a sketch of my journey, I will now call the attention of Government to a variety of matters which pressed themselves on my notice, or were suggested to me by the local authorities with whom I was placed in communication.

11. I will first allude to the roads, or more generally to the means of communication; but in order to place my views clearly before the Government I must state a few facts, and enunciate a few principles, which will, I trust, commend themselves to the attention of the Government.

12. The East Coast of the Peninsula of India does not present a single port or harbour where any shelter can be given to shipping, neither indeed is there, as far as I know, a single point on the coast where cover could be made for the protection of shipping by breakwaters or any appliances of the kind. The shore is nearly everywhere low and shelving, and vessels of any draught of water are obliged to anchor at distances varying from 2 to 5 miles from the beach, the cargo being discharged into or taken from boats of a peculiar build, capable of passing through a heavy surf. From this description, which is generally applicable, it is evident that the attraction which draws a vessel to one part of the coast instead of to another, has nothing to do with the character of the harbour or the anchorage, but is solely determined by the amount of traffic which can, by means of roads, or other modes of communication with the interior, concentrate itself at any particular spot on the coast.

13. There are several points upon the East Coast of the Presidency at which the trade of the country has concentrated itself, and, generally speaking, it would seem that the causes which have led to this were purely fortuitous. Of course the outlets of great rivers like the Godavary and Kistna, &c., are to a certain extent, exceptions to this; not however because they offer greater advantages than any other part of the coast for loading or unloading vessels, but because the produce of the Deltas of these rivers which, being irrigated, are very productive, seeks naturally the nearest port of embarkation.

14. We have, therefore, the fact that certain points have been selected by merchants as centres of trade, from distance to distance, along the coast; and the purpose of Government, which I may state broadly, is the encouragement of trade, and the development of the resources of the country, will be best answered by facilitating the access to these centres of trade from the country in rear by constructing roads radiating from these centres, and pushing them as far as possible into the productive portions of the country.

15. The traffic of the Nellore District to the south of Nellore itself, will naturally flow to Madras by the way of Cochrane's Canal when this is extended to Kistnapatam, and it would be advisable to complete this as soon as possible.

16. The trunk or northern road beyond Nellore, crosses the general line of drainage of the country, and would therefore be costly to complete and maintain; sometime or other it must be put into order, properly bridged and drained; but the first step to be taken is to complete the roads leading from the small ports on the coast, such as Cotiapatam, &c., into the interior of the District. A very large saving in the cost of conveying produce to Madras will be the result of this.

17. It is unnecessary for me to say anything of the Deltas of the Kistna and Godavary. The canals provide ample means of conveyance for produce, a large proportion of which is brought down to Cocanada for shipment. I may, however, take this opportunity of expressing my conviction that all attempts to neutralize the evil arising out of the discharge of the enormous amount of silt brought down by the Godavary would be fruitless; and that the best mode of securing proper accommodation for the shipping which frequent the port, and for the larger amount which will come there when the navigation of the Upper Godavary is completed, will be by the construction of a Basin on the flat shore to the north of Cocanada, with a canal leading into it from a point near Samulcotta, and a channel from it leading into deep water, with a sea lock

at some distance down it; this, however, is a matter which need not be, and will not be, thought of till the amount of shipping visiting the port is largely increased.

18. The District of Vizagapatam is but badly provided with roads, and the remarks which I made with regard to the Nellore District, apply most forcibly to it.

19. The District is rich, a great deal of land is under cultivation, and were roads pushed into the interior from the different ports of shipment, not only would a great stimulus be given to production, but an outlet would be secured for the salt made on the coast for which a ready sale would be open in the hill tracts of Jeypore. The out-break of the Native Sowrahs, in the hill country at the back of the District, which was successfully put down by the Police will probably be followed by a change in their relations to us, similar to that which followed a similar out-break among the Khonds about eighteen months ago. I should, therefore, be disposed to spend such money as can be granted upon the roads leading from the coast to the interior, and to postpone any large outlay upon the northern line of road till these roads have been pushed well forward into the hills. A three-fold benefit will be derived from these roads; in the first place a ready access will be secured for the advance of Police or Troops into the country if necessary; in the second place, this advance will probably be rendered unnecessary, as the people will get gradually civilized, having fresh wants, and seeing a simple mode of supplying these by the exercise of a little steady industry; in the third place, the revenue will be largely increased.

20. Many of these roads will have to pass through Zemindary land, and the owners will of course benefit much by their construction. I should not, however, be disposed to *press* the Zemindars to give the land for the road gratuitously, though I should willingly accept it if offered; but my wish would be to throw all these roads open to the public at large, and by some system of local taxation to secure the means of maintaining them in good order. In such a case the Zemindar must of course be called upon to bear his share of the local taxation imposed for a purpose so useful to himself; and it would be desirable that the Government should proceed with as little delay as possible to consider how the funds for the maintenance of these purely local roads could best be levied.

21. A suggestion was made to me by Mr. Minchin, which may be worthy of consideration. With reference to the roads in Ganjam, he proposed to levy a duty upon all the grain brought down and shipped in coasting craft; the grain shipped to foreign countries already pays a duty, but the grain taken coastwise pays none; the cost of collection of this duty would be nothing; the duty could not be evaded; it would be far more remunerative than tolls, and open to fewer objections.

22. Whether, however, this mode be adopted or not, it is very certain that the maintenance of the local roads cannot be thrown upon the general revenue, but must be met by some special source of revenue in the District, and the sooner some mode of raising these funds can be devised, the better.

23. I am far, however, from thinking that it is in any way necessary, or even desirable that one system should be applied to the whole Presidency. A scheme such as that suggested by Mr. Minchin might answer well in Ganjam, and *perhaps* in Vizagapatam; but in other Districts a rate upon the land somewhat analogous to a highway rate might be levied, as is now being done in the revision of the land assessment, and in other cases it might be more convenient to levy tolls.

24. To the south of Ganjam the Estate of the Zemindar of Purla Kimeddy is administered by the Court of Wards, the owner being incapable of managing his own property; under this management roads have been constructed so as to provide fully for the wants of the people. Still, however, it will be necessary to insure by some process the maintenance of these roads, and of others similarly situated, as it is by no means impossible or improbable, that when the land reverts to its native owner, he will not be disposed to lay out a large sum annually for the maintenance of communications, the benefits arising out of which he will not, in all probability, be able to appreciate.

25. To the north of Ganjam roads have been pushed into the Khond country in two directions; these, however, require to be completed and carried towards the coast. Bridges too are wanted over several of the rivers. While I am upon the subject, I may observe that the cheapness and durable quality of the Sâl timber point it out as an admirable material for the construction of bridges. A wooden bridge will cost less than one-fourth of a brick or stone bridge; it will be less liable to injury from flood, as the piles on which it is supported offer less resistance to the water, and are less liable to cause a scour; any damage done to a wooden bridge is easily and rapidly repaired, while the interest of the money saved by the use of the cheaper material will more than cover the cost of re-building it, when the timber decays. When then timber is cheap and good it would, I think, be desirable to employ it; and I would not admit the mistaken plea that works made of wood are necessarily of such a temporary character that they should not be sanctioned by the Government.

26. I was very glad to hear from the Collector and others that the lesson given to the Khonds last year has been productive of the best effects. Formerly robberies of cattle were constant, and a general system of border spoliation prevailed; there has hardly been an instance of cattle lifting since the District was quieted, and the Khonds show now a desire to apply themselves to the cultivation of land. They have produced some very good samples of Cotton; are asking for more seed, and under a firm system of management will, in the course of a few years, become an orderly and settled race. They and the other hill tribes must be taught to know and to feel that the Government is their master; that it will not permit its orders to be disobeyed or disregarded. An apprenticeship of this kind for a few years will give them a knowledge of their relation to the Government and to each other, and prepare them to yield a ready submission to the law, and to seek redress for any real or imaginary injury by an appeal to the Courts, instead of, as heretofore, an appeal to the sword.

27. The only Public works of any importance which came under my notice were the Jails at Waltair and Berhampore, and the Court House at the latter place. The Jail at Waltair was not complete, and I could only judge of the building, from what I saw of the part finished, and from the plans of the whole structure which were shewn me by Captain Ryves, the Superintending Engineer.

28. From these data I arrived at a conclusion very unfavorable to the Officer who had submitted the plans and estimates.

29. It is true that the plan shewn to me was signed by the Inspector General of Jails, Mr. Rohde, who may therefore properly be held answerable for its deficiencies; but the Superintending Engineers must be informed that the Government cannot permit them to shuffle off upon others the responsibility which their situation entails upon themselves and upon themselves only.

30. Of course if a Superintending Engineer is directed to prepare plans and estimates for a Jail to contain a given number of prisoners, he is bound to confer with the Inspector General of Jails, to ascertain from him all the rules as to the space required for each prisoner, the number to be placed in each ward, the size of the Jails, the appliances required for the comfort, the health, and the safe custody of the prisoners; but should the Inspector General, in reply to such reference, send to him a plan signed by himself, the Superintending Engineer is not to accept this plan, as a standard plan embracing every thing that can be required. He is bound, on the contrary, to exercise his own judgment as to details; to point out omissions and mistakes, and to make the plan, in every respect, perfect and complete according to the best of his judgment.

31. To apply what I have said to the case of the Jail at Waltair, I must observe that no provision was made in the plan or the estimate for a house for the Jailer, none for a supply of water, none for cook-houses or sheds; none for privies, and none for Hospital.

32. When I inspected the Jail at Berhampore, which was precisely upon the same plan, and completed, I found that although the house for the Jailer had been added to the buildings

shewn upon the plan, and a well sunk, none of the other deficiencies were remedied; and the mode in which the Jailer's house was constructed made the iron gate of the prison a mere farce, as there was direct access to the Jailer's house from the prison, and an easy exit from the same without troubling the main gate, while as there was but one well, all the prisoners from the different wards had to draw water from it which made the yard in a constant mess.

33. I went over the Berhampore Jail with the Judge and Local Officers, and Dr. Shaw, the Inspector General of Hospitals, and the following is but a sketch of the complaints made:—

First.—Want of means of classifying and separating the prisoners, all the wards being of the same size and constructed on the same pattern.

Second.—Want of Hospital accommodation.

Third.—The absence of means of adapting the wards to suit the changes of climate.

Fourth.—The absence of latrines.

Fifth.—The absence of cook-houses or sheds.

Sixth.—The facility afforded, by the construction of the Jail, for the escape of prisoners.

Seventh.—The check imposed upon ventilation by the proximity of the external walls to the wards.

34. I must say that these complaints appeared to me to be well founded.

35. There are many other defects which will be brought before the Government by the Judge and the Inspector General of Hospitals, and all these will be dealt with when brought forward in their regular form.

36. The Court House at Berhampore seemed to be a convenient building, but the space taken up by records seemed to me altogether out of proportion to the amount of business transacted, and I cannot but think that much must be retained which cannot possibly be of use, and which can only serve to impede instead of to facilitate reference; there seemed to me also to be a want of method in the arrangement of records, of this, however, I would only judge from appearances.

37. I saw at Aska a practical exemplification of the benefit to be derived from the employment of improved machinery, and of the willingness of the natives to avail themselves of such machinery. Mr. Minchin, the head of the large Sugar Refinery of Messrs. Binny & Co., was convinced that but a small proportion of the saccharine matter in the sugar cane was really made available. He thought that this was due, in the first place, to the inefficiency of the common crushing apparatus, which is, in fact, but a couple of hardwood vertical rollers worked by coarse screw on the head of each, and he accordingly employed a pair of cast iron rollers with a toothed wheel at the head of each, and a proper system of wedges to keep the rollers nearly in contact. The effects of this simple improvement has been to add about 30 per cent. to the quantity of syrup from a given quantity of cane, in fact to add about 35 Rupees per acre to the gross yield of the crop. Upwards of fifty of these improved crushing mills have been purchased by the Ryots in the vicinity of Aska. Mr. Minchin expressed his willingness to aid the Government in its endeavour to introduce improved implements, and I should be disposed to send a certain number of those which the Government may procure or make to him; it would be as well that a couple of his improved cane crushers should be purchased and tried in other Districts, while others may be easily made upon their pattern out of some of the old iron guns which could easily be turned down into cylinders, and properly fitted.

38. The general burthen of the complaint in every District which I visited was want of money for the completion of public works. Did I remark an unfinished bridge or culvert, I was told that the estimates for these had been sent in year by year, and struck out of the budget to make place for more pressing wants. Did I enquire why a road was made good for a few miles and then left as a track, the answer was certain to be "want of money."

39. It is perfectly evident that so long as the cost of all public works, whether directly remunerative, as irrigation works, or indirectly so, as roads, is chargeable to the balance available

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annually out of the general revenue this want of money must always be felt. Works of the most importance while they get the largest share of the available surplus, are checked and impeded by this want of money, while all the minor works suffer even more, and all must exhibit that patchy incomplete appearance which forces itself upon the notice of every traveller.

40. It is fair and reasonable that certain works such as roads, buildings for public purposes, &c., which make no direct returns to the revenue should be paid for out of the surplus of that revenue, but that works which are sure to repay a large interest upon the money expended upon them, should be allowed to linger on in a state of incompleteness for want of that money which could be procured at any instant for 4½ per cent., seems to me but very questionable economy. The money required for the completion of the Godavery, Kistna, Pennar, and other irrigation works should, in my opinion, be borrowed from time to time as required, and the works should be pushed on as speedily as the state of the Districts to be irrigated will permit. This would set free a large sum of money for which a profitable investment might be found in the construction of the works suggested by me in a former part of this Minute.

41. I should strongly recommend that this mode of procedure should be pressed upon the Government of India and upon the Secretary of State.

42. I do not wish to suggest any special mode of raising this money; but I may observe that the Government in England has been in the habit of advancing money to individuals for the improvement of their properties, under an engagement that the interest and portion of the principal of the debt should be paid off annually, so as to extinguish the debt in twenty years. A similar or analogous course might perhaps be adopted here.

11th February 1865.

(Signed) W. T. DENISON.

ADDRESS PRESENTED TO HIS EXCELLENCY SIR WILLIAM DENISON,
GOVERNOR OF FORT SAINT GEORGE, DATED 25th JANUARY 1865,
AT ADDUNKY.

1. We, the undersigned, respectfully beg permission to express the great joy we feel at the honor your Excellency has conferred this year on the Addunky Cattle Show by granting it with your presence.

2. We feel it a duty to express our gratitude that your Excellency should find time amidst the cares of state, to attend to such matters, and inspect the stock of this country; and we humbly believe that the encouragement thus given by those in your Excellency's position will be felt throughout the Presidency.

3. This spirit of competition, and the prizes liberally offered by Government, have hitherto stimulated us to bestow more than usual care in the breeding and selection of cattle, and on the report of Your Excellency's visit, we have taken additional pains to bring forward the best cattle in the humble hope that they may meet Your Excellency's approbation.

4. The general advantages of maintaining these newly introduced shows have already been felt. The gathering together of cattle from various parts of the country, affording as it does an innocent recreation to the people, has furnished all with an opportunity of comparing stock, and profiting by the experience thus gained. And we humbly hope that Your Excellency will continue to support these exhibitions with the same generous feelings that have hitherto marked your efforts to improve the material and moral condition of the people, who have the honor of being under Your Excellency's rule.

5. We beg further especially to express our deep gratitude to Your Excellency for bringing, as we hear for exhibition here, the improved implements of agriculture that are used by the farmers of England. We have gathered together from many distant villages to examine, with the care they deserve, these results of the mechanical skill of other countries; and the benefits we shall gain from the opportunities thus placed within our reach will, we hope, be the date by which our children shall remember the honor Your Excellency has done us.

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REPLY.

I am very glad that I have been able to pay a visit to this District upon the occasion of the annual Cattle Show, and from the cursory view I had this morning of the stock, I feel certain that the inhabitants have exerted themselves to improve the breed of cattle, and that success has attended their exertions. I trust that this effect will induce them to aid the Government in its attempt to introduce improved implements and machinery, as I can assure them, from the experience of a long life, that the profits resulting from the economy of labour, or from its improved application are even larger than those which are derived from improvement in the breed of stock. If by improved modes of applying power we can make one bullock do the work now done by two, we shall have saved to each Ryot the cost of one bullock, have put in his pocket the price of this animal, and have saved the cost of its keep; that such may be the result of improvements in the mode of applying the labor both of men and animals I do not hesitate to affirm, and I have no doubt that the Ryots of Nellore, who have shewn themselves active and enterprising, and have given the rest of the Presidency so good an example, will afford every assistance to the Government in working out improvements.

25th January 1865.

(Signed) W. T. DENISON.

ADDRESS OF THE MUNICIPAL ASSOCIATION OF VIZAGAPATAM.

MAY IT PLEASE YOUR EXCELLENCY,

1. We the undersigned members of the Municipal Association, representing the inhabitants of Vizagapatam, respectfully approach Your Excellency to express our exceeding joy and pleasure at Your Excellency's visit to our town. Our joy is unbounded, as the occasion is one which but seldom happens, and when it does, it is not without some special object of public good and advantage.

2. We need not observe that Vizagapatam is the head quarters of a District where there is a larger number of wealthy Native gentlemen than in any other District, and where, in consequence, the call of public charities and of public improvement is more readily and effectually responded to than in the case generally. To this cause chiefly our Municipality owes its origin, and the community has shewn that it appreciates the benefit it receives from its action. To give it, however, a better stability and greater efficiency, the Association has it in contemplation to apply for the extension of the Municipal Act, and it is believed that the community would only too gladly give their hearty concurrence to the proposal.

3. The operations of the Association at present extend to the cleansing of the town every day, to the construction of drains, and to the opening and improving of roads. These are so efficiently carried out, that sickness in the town has of late years greatly diminished, and its sanitary condition so immensely improved that the taxes levied are cheerfully borne by every household in the town.

The liberal support of Government by an annual grant of Rupees 10,000, also enables the Association to increase its usefulness and scatter its benefits to a greater extent than would otherwise be the case. The Association personally offers its thanks to His Excellency for this support, and earnestly hopes that it may always be continued.

4. Large as the finances of the Association appear to be, they are but sufficient for the ordinary improvement of the town. Works of public utility of any great magnitude, seem to be beyond the means at present of the Association. There is one such object which has engaged their attention for some time, but which has been found beyond the reach of their operations. At present the back-water to the south of the town, an estuary from the sea, is crossed by means of a large flat raft, and it is so largely used, that the assistance of small rafts is necessary, and sometimes danger is the result; only lately a month ago, one of these boats upset, and ten or twelve persons in it suddenly found a watery grave. A bridge has been roughly estimated to cost 80,000 Rupees, and the Association finds it impossible to undertake the work without a special assistance. In case the liberality of our Townsmen and rich Zamindars enable us to take up

this work, we solicit that Your Excellency will extend the liberal aid of the Government towards the furtherance of this great and important object. There is another work of similar importance though perhaps of less magnitude. The said back-water is used as a place of shelter for the native crafts, and not unfrequently dhonies are also built there, and towed into the sea during spring tides. During the late disastrous cyclone, a native vessel fortunately found its way into this bay, and was quite safe. These advantages might be extended to vessels of large tonnage, and the bay made into a large harbour, (the want of which is greatly felt in these ports), if the "bar," an inevitable obstacle at the month, be cleared. It seems that this subject was brought to the notice of Government once or twice, but it rested there. We earnestly solicit that Your Excellency would be graciously pleased to take it into early consideration, so as to remove the said barrier, and facilitate the increasing trade of this large Port.

5. Under the management of the Municipal Association is a Poor House, supported by a monthly contribution from the public. There are seventy-six unfortunate paupers who are lodged in a building erected for the purpose. Under the same roof as the Municipal is a Library and Reading-room, including the Educational Association founded by Sir Alexander Grant. A grant for this, was applied for, but was declined by the Director, that the Association was not largely availed of; but we beg to point out to Your Excellency, that in the present educational condition of the place, the progress of such institutions must be slow and gradual.

6. Connected with the Public Institutions of native charity in the place, is the Hindu Anglo Vernacular School, which Your Excellency honored with a visit yesterday. It is a grant-in-aid school under our own management, and the building was lately erected at a cost of seven thousand and odd Rupees. It is hoped that Government would reimburse half of this sum, as half of the estimate (Rupees 3,000) was originally promised. The want of a competent Head Master was also lately brought to the notice of Government, in view of a liberal monthly grant (150) being granted by them; and the new grant-in-aid rules appear to us to meet with the assistance solicited, viz., a grant equal to the sum contributed by us.

7. By the side of this object of native charity, is another institution solely supported by the munificent liberality of the Maha Raja of Vizianagaram, the chiefest and the most wealthy nobleman in the District. The other institutions in the place are chiefly maintained by Government, and are conducive to public good and benefit.

Your Excellency's administration has been characterized by the peace and prosperity of the country, and the passing of several new legislative enactments, the last of which, that appeared to affect the Zemindari interests, principally of this District, is the Rent Recovery bill. This however has, on the representations chiefly from this District, greatly been amended, and thus has been set at rest the alarm which the original draft excited.

8. These acts assure us, that the remainder of Your Excellency's administration will be characterized by similar results, and we remain with the earnest hope that Your Excellency may always enjoy perfect health and prosperity both in India and in England, when you re-visit your native land.

GENTLEMEN.

REPLY.

My visit to Vizagapatam has been productive of much satisfaction to myself, I have witnessed here, for the first time, the effective working of the Municipal system under your guidance, and I have no doubt that the extended powers sought for by you will be administered as efficiently and as carefully for the benefit of the community as those which have been voluntarily intrusted to you. Very great credit is due to those wealthy native gentlemen who have shewn so clear an appreciation of the benefits to be derived from Municipal action, and I have no doubt that you will both deserve and receive the continuance of that aid which has been so liberally granted hitherto, and that the introduction of a system of compulsory rating will not dry up the sources of private liberality.

2. With reference to the work specially alluded to by you, namely, the bridge over the back-water, and the clearing of the bar, I wish to say a few words, and to express a professional

opinion. As regards the bridge I would point out that the effect of it would be to impede the entrance into the back-water, that it would be costly to make and maintain, while an improvement in your present system of ferryage might be carried out by the Municipal body, and be productive of a revenue sufficient at all events to pay the interest of the outlay, and perhaps to add to the revenues of the town. In several of the ports in England a ferry worked on a chain plying at regular hours is found to afford ample means of meeting the demands of the traffic, and a well built boat worked by the power either of men or animals would cost but little. Power might be given to the Municipality to establish such a ferry and levy tolls thereupon.

3. With regard to the bar, I am afraid that as an Engineer I cannot hold out to you much prospect of improvement. These obstacles result from the operations of natural causes which are in permanent action, and although it is occasionally possible so to modify the action of these causes as to lessen, or remedy the bad effects produced, it is more often the case that the evil is enhanced by the efforts made to remedy it. I will, however, cause plans to be made, and information to be furnished to the Government, which will then be in a position to decide as to the benefit likely to result from any attempt to remove the bar.

4. I have visited several of the institutions alluded to in your address, and was glad to find them all so satisfactorily conducted. Nothing can be a better proof of the wholesome state of society than the good working of the educational and charitable establishments, and few things have given me more pleasure than to find all classes of people co-operating so harmoniously in the sustained management of these institutions.

I thank you most heartily for your kind wishes, and shall be always glad to hear of your welfare and prosperity.

31st January 1865.

(Signed) W. T. DENISON,

ADDRESS OF THE RESIDENTS OF BIMLIPATAM.

MAY IT PLEASE YOUR EXCELLENCY,

1. We the undersigned Residents of Bimlipatam take leave to express to your Excellency the high sense we entertain of the honor done to our town by this your Excellency's visit among us.

2. We would respectfully offer to your Excellency our hearty congratulations upon the peace, contentment, and prosperity which have marked the period of Your Excellency's rule over this Presidency, and more particularly upon the social and material progress made during that time by the towns of this, the Vizagapatam District, of which Bimlipatam is the commercial centre.

3. We embrace the opportunity to express an earnest hope that future years may witness a still greater extension of our commerce, and to the furtherance of this end we would primarily crave Your Excellency's attention to the urgent necessity which now exists for the opening out of roads into the surrounding Districts, for the transport of produce and encouragement of agriculture.

4. The trade of Bimlipatam represents an annual value in round numbers of from 45 to 50 Lakhs of Rupees; and were access to the interior facilitated, there is not a question but that these figures would be rapidly augmented, thereby increasing the Revenue, and adding to the prosperity of our town.

5. Another matter intimately connected with our trade to which we would beg Your Excellency's notice, is the want in our Port of a Light House, and of improved means of communication with the shipping. On the latter point, a plan was some time since conceived and drawn up by Major Stewart of the Royal Engineers, and was, we believe, submitted to Your Excellency's consideration and not approved; but we would still beg the favour of Your Excellency's directing the prosecution of further investigation as to whether a break-water or Pier or other scheme be not practicable.

6. The port and the shipping visiting it, are ready to contribute to all useful purposes; and when we mention that the shipping anchoring in the roads during the eight months from May

near measure, a memorandum

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7th March 1865.

to December last year, aggregated 44,500 registered tons, we feel a conviction that Your Excellency will deem it right that we should draw attention to wants thus felt both by the shipping and commercial interests.

7. And if the position of Bimlipatam justifies our making these representations, it warrants us in submitting to Your Excellency a striking disadvantage under which we labour, in the absence of any European Magistrate, save at a distance of twenty miles. We therefore urge yet one more appeal, an appeal shared in equally by all classes, that Your Excellency will be pleased to concede to our town a European Magistrate, that, by his residence on the spot, the more efficient and rapid administration among us of order and justice may be secured.

8. Commending this brief address to Your Excellency's gracious reception, and once more thanking Your Excellency for your presence here to day, we would again wish Your Excellency long continued prosperity in all things, and a happy and propitious return to the land of your birth when the term of Your Excellency's Government shall have expired.

GENTLEMEN,

REPLY.

1. I thank you for your kind wishes for my welfare.
2. I am very glad that I have been able to pay a visit to this flourishing part of the Presidency, and to witness the satisfactory working of principles which, indigenous to England, are now apparently taking root in India, and bringing forth their usual fruit of self dependence and united action.
3. The improvements which have taken place in the town of Bimlipatam show that it has been well selected as the site of a trading community, and as the success of the Merchant must depend on ready access to his place of business, the Government will do its best to open up the country by roads and to improve the harbour.
4. I must not, however, be understood to pledge myself to any scheme for the perfection of the latter object. My experience as an Engineer has proved to me the failure of most of the schemes so readily submitted for the improvement of harbours, and before the Government would be justified in expending large sums of money upon either breakwater or Pier, it would have to satisfy itself that the project was feasible and that the traffic was such as to justify the outlay. The first thing to be done is to make Bimlipatam a port of entry for the supply of a large tract of country, and that can be done only by making roads into the interior, and to this the attention of Government will be at once directed. With reference to the presence of an European Magistrate I would point out that some of the difficulties resulting from the absence of such an Officer have been remedied by the appointment of the Master Attendant to a seat on the bench, and, should further assistance be required, Government will be prepared to consider the best mode of meeting the difficulty; at present there would seem to be hardly sufficient employment for such an Officer. Wishing you every success and a large development of the trade of the town, I thank you again for your kind wishes on my behalf.

1st February 1865.

No. 79.

Miscellaneous.

ORDER THEREON, 7th March 1865, No. 484.

Ordered that the foregoing papers be forwarded to the Home Government, and communicated to the Departments of the Secretariat for the issue of the necessary orders.

(True Extract.)

(Signed) J. D. SIM,

Secretary to Government.

To the Public, &c., Departments.
" the Public Works Department.
" the Military Department.

Ed. S. T. Augusta.

Minute

I am very glad that I was able to arrange for my visit to the Northern Circuit so as to be present at the Cattle Show at Addumby. In accordance with the arrangements made by the Collector, Mr. Dyer, I landed at Kothapattinam and proceeded from thence via Puduk to Addumby every preparation having been made for my transport and accommodation both on the road and at Addumby itself. — The cattle were passing in fact when I arrived at Addumby, the show of stock was, I am told, much larger than usual, and the number exhibited taxed the eyes of the persons employed to classify them, and to adjudicate upon their relative merits. But the work was well and satisfactorily performed, and great credit is due to Mr. Dyer for the methodical arrangements by which this result was obtained, and for the mode in which he has elicited the active cooperation of the natives. The increase in the number of stock was due I believe in great measure, to the exhibition.

is a large proportion than used
of young stock, so that in
a few years when the quantity
exhibited on the present
occasion have arrived at their
full growth, the competition
for prizes among the full
grown classes will become
much more active.

There was much stock
with the appearance of the
stock generally the Poles
were remarkably fine; there
were some splendid spe-
cimens of working Paullocks
and some nice looking cows
and heifers - the latter
however much more being
small in proportion to the
Poles, and were disposed
to be rather less.

The working Paullocks were
tried with a weight of two
tons in cart weighing about
12 cwt. and then they
were moved up a steep incline
up a stone path easily
they exhibited a frame
upon which 1500 lb of coal
might have been laid, but
I should be afraid that they
would be found too heavy
for ordinary descenders
Graham & would I should
think find their weight
rather an incumbrance in
descenders -

The Photographs which Mr
Hunter has taken of much of
the stock will give a better
idea of its character than any
description -
for the sake of encouraging the
exhibitors, I gave to each of
five men who had gained
two prizes, a Gold ring, and
I think that the encouragement
thus given will have a
satisfactory return, in fu-
-ture ~~the~~ exhibitions -

I took with me from Madras
some of the new tools &
machinery sent from
England, and though every
arrangement had been
made by Mr. Blyth for their
exhibition in action, the re-
-sults were not so satis-
-factory as I would have
wished -
In the first place, as the tools
were taken out of their packing
cases, and put at once on
board ship, the exhibitors
were to a great extent tutored
we had to experiment with
new implements in the
face of upwards of a thousand
people all of whom were
wondering at any failure
and who were certain to
contrast the performance
of the new implement with

the working of their own more
simple tools -
In the second place several
of the tools were not in a state
to be used - The scythes had
not been ground, and no
sharpening stones had been
sent with them, so none
there could be exhibited in
action -

The Pumps too were not well
felted, and more attention
was required to the details
of their construction -

The ~~scythes~~ machine which
did its work ^{most} satisfactorily
was the cornmowing machine
and one of the Iron Ploughs
performed well considering
the light sandy character
of the soil -

There are two points however
worth reference to these tools
and implements to which
I wish to call the attention
of the Govt -

The first is the necessity of
training up a certain num-
ber of natives to the use &
working of these machines.
The second is a matter of still
more importance, namely
the necessity of simplifying
the construction of these im-
plements & machines. &
bringing them within the
means of the Natives, and
within the ability of the
rugged mechanic to construct

the purchase of these machines, ^{in my opinion, requiring} ~~of~~ ^{recollection ought to be} laid plain
strip upon the propriety of
introducing them ~~as~~
as examples of the princi-
ples upon which the con-
struction should be attempted.
and from what I have seen
at Dohoon and Addumby I
feel compelled to reiterate this
opinion. The very trifling
irregularities which affect
the working of a machine
cannot be comprehended by
a Nylt, and the result of
placing such a machine in
his hands would be to pro-
-rate distrust in its efficiency
instead of confidence -
I cannot but think, therefore,
that it would be poor policy
on the part of the Govt to provide
the means of training a certain
number of natives in the
use & management of the
better descriptions of agricul-
-tural implements, and
at the same time to direct
the attention of a competent
mechanical Eng^r towards
the application of the prin-
-ciples exhibited in the
English machines with a
view to the invention of
improvements in the native
tools, and of simple pro-
-cesses, by which the labour
of men & animals might
be applied more economically

than at present.
Take for instance the Pump
which were exhibited at
Addis. There were mod.
specimens of the chain pump
one simple enough but ac-
quiring more attention to
its construction in making
a detail - the other complete
enough but making dim.
both of these pumps however
require attention in fixing
the barrel of the pump
it should be vertical and its
axis should be in a line
with the centre line of the
chain buckets. any de-
viation from this would
cause great friction, the
pump would wear rapidly
and would only do half its
work. - Can this amount
of force be looked for in a right
is he in a position to com-
prehend the necessity of it?
I am afraid this must be
answered in the negative -
It would be better therefore to
supply him with a machine
of a more simple construction
such as a chain of buckets
or a belt pump. The former
is the simpler of the two and
more likely to command
itself to the intellect of the N.Y.

I have alluded to these pumps
merely as an illustration, but
the principle involved is one
of general application -
the people of India have little
or no mechanical knowledge
and in attempting to understand
them, we must take them
as we find them, and adapt
our training to the existing
state of their knowledge -
gradually we may hope to
make them intelligent as to
an useful auxiliary in
the work of mechanical
training, but at present
I am almost afraid that
the desire to purchase im-
plements which we have
exhibited, is more likely to
check than accelerate the
introduction of mechani-
cal improvement -
we must begin with them
as with children - and
then lead me to enquire
what has been the result
of the reference made in
this very subject to the
Director of public instruction
however, if I recollect aright,
directed to provide in the
Govt schools for the exhibi-
tion of simple mechanical
appliances. I should wish
to know what steps have

been taken by him to
carry out the instructions
of Government
Waller

13"

I anchored on the evening

Report to Eng^d in Public
Dept^t of 8th March/65 M^y.

Revenue Secy. D. Pitt
Secy of Govt. for the March

No 747.

Minute by the Hon. the
President.
27th January/65.

With Encl^s.

Recording his
views with reference to
the Cattle Show held at
Addanky in Nellore Dist^t,
and suggesting that a cer-
tain number of natives
may be trained up to the
use and working of English
machinery.

or. 10482/65

1077

Minute

In my former minute of
Jan^y I gave an account
of the cattle show at Addanky
and made some suggestions
as to the steps which it would
be advisable to take in order
to facilitate & encourage the
employment by the Ryots
of better descriptions of
Agricultural implements.
I did not allude in that
minute to the state of the
roads or to any of the wants
of the District, as I thought
that I should be better able
to deal with these questions
after I had made myself
acquainted with the state
of matters in the Northern
Circar.

I left Addanky on the afternoon
of Friday 27 Jan^y, and
embarked at Cottapattam
on the morning of the 28th.
I had intended to have looked
in at Manipattam on
my way to the North, but I
received such a report of the
prevalence of dysentery &
diarrhoea in the Town &
the vicinity as decided me
to postpone my visit, and
I therefore steered direct for
Pozappattam of which place
I anchored on the evening

of the 29th - I remained at that station two days, during which time I inspected all the public buildings & institutions, and took note of the various suggestions submitted by the collector, or by the people themselves, on the ^{of the} ~~fact~~ ^{fact}. I went by land to Bimlipatam a flourishing place of trade about 19 miles to the north of Visakhapatnam, and embarking there sailed to Ganjam. where I landed at the old town, which has been generally deserted by the Europeans community, and went 5 miles to Chittipore the present residence of the Agent. The next day I drove 16 miles to the northward, crossing the Ganjam River, to Nimpah on the shore of the Chilka Lake, which is the landing place of most of the boats which bring down produce from the Northern Shore of the lake and ~~thereby~~ a distance of nearly 60 miles. at Nimpah the cargo of these boats are transferred to Baidies, and taken by land to Ganjam or to Chopal pore another port more frequented by European merchants about 15 miles South of Ganjam. - at this time of year the traffic is very heavy.

boats are constantly coming down the lake laden with rice & other goods, and there would probably be a sufficient amount of trade to make the proposed Canal from the lake to the mouth of the Ganjam river a profitable undertaking - It appeared however to me that the great amount of this traffic was dependent upon the fact that theaddy crop had been just reaped and that a demand existed for bothaddy & rice for shipment to Bombay & elsewhere. I should therefore be disposed to postpone the construction of the Canal for the present till the Gov^t can be better satisfied as to the amount of the annual traffic, and of the probable cost of the work. I looked into the plans of the line planned, and also heard that the Zemindar to whom theaddy flat belongs through which the line was to pass had made heavy claims for the land required for the canal itself as well as heavy compensation claims for damage caused by the introduction of salt water, and by cutting off the supply of fresh water. I recommended Capt. Roper to alter the line, and to carry

(The cutting on the sea side of
the Saddy flat -
I do not think that the delay
of another year will be in
any way injurious to the
undertaking, it may it is
true bring a larger amount
of trade direct to Languan
but the actual saving, to
the public will be the differ-
-ence of cost between the
conveyance by water or by
road of the trade of the
lake for a distance of
about 8 or 9 miles, having
due regard to the fact that
the road, as yet, one is
already made, and that the
canal has yet to be con-
-structed - the opinion
of the Collector and of others
seemed to be that if a given
sum of money were to be
expended upon road or
canal, it would be better
to ~~exp~~ spend it upon the
extension of the line into
the interior of the country
than upon the improve-
-ment of the river running
parallel to the coast - and
in this opinion I concur.
From Numbah I went
about 30 miles across
country to Acha where
Messrs. Burnetts have a
large sugar refinery
under the management

2 of Mr. Michin. - at 14
here I witnessed the whole
process of sugar making
from the first crushing of
the cane to the output of
the sugar -
The establishment appeared
to me to be very well managed.
a variety of appliances were
shown to me by Mr. Michin
which, with certain modifi-
-cations, seemed ~~adaptable~~
capable of being applied to
various purposes useful to
the West, such as raising
water &c -
I was glad to see that most
if not all of the workmen
connected with the factory
were natives, including
among them the whole staff
of superintendence in charge of the
machinery -
From Acha I was driven
along a good road to Per-
-shampai a distance of
20 miles, passing through
a district which though
the season had been unfa-
-vourable owing to want of
rain, showed evidence
both of the industry of the
people, and of the quality
of the soil, by the crops with
which it was covered.
At Perharipon or at Viga:
-apatawa I visited the
public buildings, most
of which are new, and
having done so embarked

at Chopalpore, a distance of
about 8 miles from Berhampore,
-pore, at Noon on the 8th and
sailed for Madras calling
at Nagapatnam on my way
for some of the details of
the Battery of Artillery which
were in a fit state to
march with the Battery to
Madras. —

Having then given a sketch
of my journey. I will now
call the attention of Gov^{ts}
to a variety of matters which
pressed themselves on my
notice, or were suggested to
me by the local authorities
with whom I was placed in
communication. —

I will first attend to the
Roads, or more generally
to the means of commu-
-nication. — but in order
to place my views clearly
before the Gov^{ts} I must
state a few facts, and
circumstances of some im-
-portance, which will I trust
convince themselves
of the attention of the Gov^{ts}.

The East coast of the Penin-
-sular of India does not
present a single Port or
Harbour where any shelter
can be given to shipping
neither indeed is there
as far as I know a single
Passage in the coast where
a vessel could be
made for the protection

of shipping by breakwaters
many appearances of the
kind. The shore is nearly
everywhere low and shelving
and vessels of any draught
of water are obliged to anchor
at distances varying from
two to five miles from the
Beach. The cargo being
discharged into or taken from
Boats of a peculiar build
capable of passing through
a heavy surf. — from
this description, which is
generally applicable, it
is evident that the attraction
which draws vessels from
one part of the coast to another
has nothing to do with the
character of the harbour or the
anchorage, but is solely de-
-termined by the amount
of traffic which can, by means
of junks, or other modes of
communication with the
interior, be concentrated at
any particular spot on
the coast. —

There are several points upon
the East coast of the Presi-
-dency at which the trade
of the country has concentra-
-ted itself, and, generally
speaking, it would seem
that the causes which have
led to this are purely for-
-tuitous. If we view the
outlets of great Rivers like
the Godavari and Krishna

and attainment, excepting
to this ~~case~~, not however,
because they offer greater
advantages than any other
part of the Coast for loading
or unloading vessels, but
because the produce of the
hills of this Province being
irrigated, are very productive
such naturally the nearest
port of embarkation -
we have therefore the fact
that certain points have
been selected by Merchants
as centers of trade from
distance to distance along
the Coast. That and the
policy of Gov^t which
manifests broadly in the
encouragement of trade, &
the development of the re-
sources of the country, will
be best most answered by
facilitating the access to
these centers of trade from
the country inland by
constructing roads radiating
from these centers, and
pushing them as far as
possible into the interior
portions of the country -
The traffic of the hills
direct to the Coast of Nelson
did not naturally flow
to Hudson by the way of
Cochranes Canal when this
is extended to Kistnapatan
and it would be advisable
to complete this as soon as
possible.

3 16
The River or Northern road
beyond Nelson, crosses the general
line of drainage of the country
and would therefore be
costly to complete and maintain
at some time or other it
must be put into order,
properly bridged and drained
but the first step to be taken
is to complete the roads leading
from the small interior
Coast such as Cotta-patan
into the interior of the district
as a very large saving in
the cost of conveying produce
will be the result of this -
It is unnecessary for me to
say anything of the Rellies of
the Kistna and Godavary. The
Canals provide ample means
of conveyance for produce
a large proportion of which is
brought down to Vancouver
for shipment. I may
however take this opportunity
of expressing my conviction
that all attempts to neutralize
the evil arising out of the
discharge of the enormous
amount of salt brought down
by the Godavary would be
fruitless. and that the
best mode of securing proper
accommodation for the
shipping, which frequent
the port, and for larger
amount which will
come there when the naviga-
tion of the Upper Godavary
is completed, will be by
the construction of a Basin
on the flat shore to the north
of Vancouver, with a canal

leading into it from a point
near Linnecotta and a
channel from it leading
into deep water with a
steep lock at some distance
down it. This however is
a matter which need not
be and will not be thought
of till the amount of shipping
is passing the bar is largely
increased -
The district of Pigeon Lake
is but badly provided with
roads, and the remarks
a while I made with regard
to the Indian district apply
the most forcibly to this.
The district is rich, a great deal
of land is under cultivation
and were roads pushed into
the interior from the delta
a great participation
be not only would a great deal
be made to produce
the lion, but an outlet would
be secured for the delta
on the coast for which a
ready sale would be open
in the Straits of Laysan.
The outbreak of the nation
at the back of the district
which was successfully
put down by the Police
will probably be followed
by a change in their relations
as is similar to that which
followed a similar outbreak
among the Khandi about
18 months ago. - I should
therefore be disposed to spend

such money as can be raised
upon the roads leading from
the coast to the interior, and
to postpone any large outlay
upon the main line of
road till these side roads
have been pushed well forward
into the hills. A threefold
benefit will be derived from
these roads - in the first place
a ready access will be secured
for the advance of Police or
troops into the country of
necessity. in the second
place the advance will
probably be rendered un-
necessary, as the people will
get gradually civilized
having fresh wants, & seeing
a simple mode of supply
- viz these by the exercise of
a little steady industry -
in the third place the re-
- newal will be largely in-
- creased -
Many of these roads will
have to pass through Linnec-
- dary land, and the owners
will of course benefit much
by their construction. I should
not however be disposed to
propose the Linnecdary to give
the land for the road gratis;
- though I should wel-
- come any offer of land;
but my wish would be to
throw all these roads open
to the public at large, and
by some system of local taxation
to secure the means of main-
- taining them in good order

In such a case the Demindar
must of course be called upon
to bear his share of the local
taxation imposed for a
purpose so useful to him-
self, and it would be
desirable that they
should proceed with as
little delay as possible to
consider how the funds
for the maintenance of
these purely local roads
could best be levied.

A suggestion was made to me
by Mr. Minchin which may
be worthy of consideration
with reference to the roads
in Ganyam he proposed to
lay a duty upon all the
grain brought down &
shipped in coasting craft.
The grain shipped for export
already pays a duty - but
the grain taken coastwise
pays none - the cost of
collection of this duty
would be nothing. The duty
could not be evaded. It
would be far more revenue-
productive than tolls, and open
to less objection.

Whether however this mode
be adopted or not, it is very
certain that the maintenance
of the local roads cannot be
thrown upon the general
Revenue, but must be
met by some special source
of Revenue local in the dis-
trict, and the sooner some
mode of raising these funds
can be devised the better.

x 4000000 ... in
the revenue of the district

4. I am far however from thinking
that it is in any way ne-
cessary or even desirable
that one system should be
applied to the whole District.
- say a scheme such as that
suggested by Mr. Minchin
might answer well in
Ganyam & perhaps in Tega-
patalam - but in other
districts a rate upon the
land somewhat similar
to a highway rate
might be levied - in
other cases it might be
more convenient to lay
tolls.

In the case of Ganyam the
land of the Demindar &
Kumbh is administered
and by the co-owners, the
owner being incapable of
managing his own property.
Under this management
roads have been constructed
so as to provide fully for the
wants of the people - still
however it will be necessary
to secure by some process
the maintenance of these
roads and of other similar
works situated; as it is by
no means impossible
unprobable, that when the
land reverts to its native
owner he will not be dis-
posed to lay out a large
sum annually for the

maintenance of commu-
-nications. The benefits
arising out of which he would
not in all probability be
able to appreciate.

Is the risk of Sanyam road
have been pushed into the
Khond country in two
directions. There however
require to be completed &
carried towards the coast.
Bridges too are wanted over
several of the Rivers. While
I am upon the subject I may
observe that the cheapness
and durable quality of the
Lal Timber point it out
as an admirable material
for the construction of
Bridges - a wooden bridge
will cost less than one of
brick or stone. And
it will be less liable to in-
jury from flood as the
piles on which it is supported
are less liable to decay than
the water & are less liable to
cause a scour - any damage
done to a wooden bridge is
easily & rapidly repaired.
While the interest of the money
saved by the use of the cheaper
material will more than
cover the cost of rebuilding
it when the timber decays.
Where then timber is cheap
and good it would therefore
be desirable to employ it.

and should not admit the
mistaken plea that works
made of wood are necessarily
of such a temporary cha-
-racter that they should
not be sanctioned by
the Gov^t.

I was very glad to hear from
the collector and others that
the Lepers from the Khond
last year has been pro-
-ductive of the best effects -
formerly robbing cattle
were constant, and a few
-ral system of border pro-
-tection prevailed. There
has hardly been an instance
of cattle lifting since the
district was quieted, and
the Khonds now now a
desire to apply their skills
to the cultivation of land.
They have produced some
very good samples of cotton
and are asking for more seed,
and under a firm system
of management will, in
the course of a few years become
an orderly & settled race.
They are the other hill tribes
must be taught to know
and to feel that the Gov^t
is their master, that it
will not permit its
orders to be disobeyed or dis-
-regarded - an apprenticeship
-ship of their kind for a few
years will give them a

knowledge of their relation
to the Govt & to each other,
and prepare them to yield
ready submission to the
law, and to seek redress
for any real or imagi-
nary injury by an
appeal to the courts
instead of as heretofore
an appeal to the sword.
Public works.

The only works of any im-
portance which came un-
der my notice were the
Gaol at Mallow and the
Gaol at Drogheda, and the work
done at the latter place.
The Gaol at Mallow was not
complete, and I could only
judge of the building, from
what I saw of the part fin-
ished, and from the plans
of the whole structure which
were shown me by Capt.
Nesbit, the Superintending
Eng. From these data I arrived
at a conclusion very un-
favourable to the office
who had submitted the
Plans & Estimates.
It is true that the Plans
shown to me were signed
by the Inspector Genl of
Gaols, Sir Robert who may
therefore properly be held
accountable for its deficiencies.

But the Superintending
Engineer must be dis-
satisfied that the Govt. cannot
permit them to shuffle off
upon others, the responsibility
which their situation
entails upon them, and
upon themselves only.
If I am a Sup. Eng. I
desire to prepare Plans &
Estimates for a Gaol, and
I am a given number of
Prisoners, he is bound to
comply with the Inspector
Genl of Gaols, & ascertain from
him all the rules as to the
space required for each
Prisoner, the number to be
placed in each ward - the
size of the Gaol. The appli-
cations required for the com-
fort, the health, and the
safe custody of the Prisoners.
But should the Inspector Genl
in reply to such references send
to him a Plan signed by
himself, the Sup. Eng. is
not to accept the Plan, as
a standard Plan, or as
any other that can
be required. - It is bound
on the contrary, to exercise
his own judgment as to
details, to point out
omissions and mistakes,
and to make the Plan in
every respect perfect &
completely according to the
best of his judgment.

To apply what I have said to
the case of the East of Waller
I must observe that no
provision was made in the
plan or the estimate for a
hall for the Gaol - none
for a supply of water - none
for cook houses or sheds,
none for Prisoners, none for
Hospital -
When I inspected the Gaol
at Bechampan which was
precisely upon the same
plan and completed. I
found that although the
house for the Gaol had been
added to the building
shown upon the plan &
a well sunk - none of the
other deficiencies were re-
medied - and the mode
in which the Gaol house
was constructed made
the inmates a mere place
in there was direct access to
the Gaol house from the
Prison, and an easy exit
from the same without
troubling the inmates -
While as there was but one
well, all the Prisoners from
the different wards had
to draw water from it
which made the yard in
constant mess -
I went over the Bechampan
Gaol with the Judge and
local officers, and to show

the Inspector Genl of Hospitals
and the following is a list
of the complaints
made -
1st want of means of separating
& separating the Prisoners -
all the wards being of the same
size and constructed on the
same pattern.
2. Want of Hospital accom-
modation.
3. The absence of means of
adapting the wards to suit
the change of climate.
4. The absence of drainage.
5. The want of Cook Houses & sheds
6. The facility afforded by the
construction of the Gaol for
the escape of Prisoners.
7. The check imposed upon
ventilation by the proximity
of the external walls
to the wards.
I must say that these com-
plaints appeared to me
to be well founded.
There are many other defects
which will be brought before
the Govt by the Judge and
the Inspector Genl of Hospi-
tals, and these will be dealt
with when brought forward
in their regular form but
what I want to press now
upon the Govt is the conduct
of the Inspector Genl of Gaols
in allowing such buildings
to be constructed. - I have
blamed and do blame
the Superintendent of

for allowing such a slave
to be adopted - but I
hold Mr. Nohde to be far
more blameable for
allowing a slave to be
circulated with his name
upon it - ~~but which~~
as a sort of standard slave
but which does not proper
any of the requirements
of a good - This int-seeing
that int-healthy, and
provision is made for
the separation of proper
disciplining the pris-
-ners - In my opinion
that in my opinion
the Inspector Genl of fresh
has neglected his duty in
reference to these goods
the slaves have not been
properly considered
either in respect to the
general arrangements
involving the minor details
of execution - the due
relation of which to each
other and to the
prisoners in the god are
essential to the mainte-
-nance of proper discipline
- place -
This is not the first time
that I have had to find
fault with Mr. Nohde - but
I am willing to believe that
his duty would be better

performed were he more
immediately under the
eye of the Gov^t at Madras.
Mr. Nohde was allowed to
reside at Potacumund
for the purpose of super-
-intending the construc-
-tion of the European
Goal - This having been
completed there is no
reason why he should
remain any longer at
Potacumund and
propose therefore that he
should be directed to
establish his office at
~~Potacumund~~ Madras
with as little delay as
possible - When the
reports as to the state of
the Goal at Peshawar
and Malabar come
before the Gov^t Mr. N
will be called upon to
explain the course which
he has pursued with
respect to them -
I should wish also to ex-
-amine the plans of the
large central Goal now
in course of execution - it
may be that equal
anomalies will be
found to exist in this

It would be as well that
the authorities should be taken
to this opportunity to
define more closely the
duties of the Inspector-General
at Gado - apparently
de Noth's ~~marsh~~
up with the internal
arrangement of the factory
and discipline of the Prison
but is allowed to interfere
with the details of the Slaves
and Estimates - for these
alter the officers of the
S.W. Department should
be more fully responsible -
the result of the present
system of divided res-
ponsibility is shown in
the Gado to which there
is alluded above -
It seems that de Noth
was allowed to interfere
in these details on account
of his supposed skill as
a builder - but though
it may be as well that
the Govt should avail
itself of the particular
qualifications of its servants
this should be done with
due reference to the res-
ponsibilities of other
Departments - the
result of the course adopted
will refer to de Noth

has been to deprive the Govt
of the power of seeing the res-
ponsibility of the factory
arrangements of the Gado
upon any one. |
The Court House at Ber-
mudport seemed to be
a convenient building
but the space taken up
by records seemed to me
altogether out of proportion
to the amount of business
transacted, and I cannot
but think that much might
be retained which cannot
possibly be used, and
which can only serve to im-
pede instead of facilitat-
reference - there seemed to
me also to be a want of
method in the arrangement
of records of the houses
I could only judge from
appearance -

I saw at Ashe a practical
exemplification of the
benefit to be derived from
the employment of impro-
ved machinery, and of
the willingness of the natives
to avail themselves of such
machinery. - At Murrish
the head of the large sugar
refinery of Messrs Burrell &
Co was convinced that
but a small proportion
of the succharine matter in

The sugar cone was really
made available - he
thought that this was due
in the first place to the
inefficiency of the common
crushing apparatus which
is in fact but a couple of
hardwood vertical rollers
worked by coarse screws
on the head of each, and
he accordingly employed
a pair of cast iron rollers
with a toothed wheel at
the head of each, and a
proper system of weights
to keep the rollers nearly
in contact. The effects
of this simple improve-
ment have been to add
about 30 per cent to the
quantity of sugar from
a given quantity of cane
in fact to add about 30
Rupia per acre to the
gross yield of the crop.
The same improvement of
the crushing mills have
been purchased by the
Rajah in the vicinity
of Oake. - Mr. Birch
expressed his willingness
to aid the Govt in its
endeavour to intro-
duce improved methods
- mills and should be
disposed to send a certain
number of them which

7 The Govt may procure
mills should be sent to him
while it would be as well
that a couple of his im-
proved cane crushers
should be purchased
and tried in other districts
while other may be
easily made upon the
pattern out of some of
the old iron guns which
could easily be turned down
into crushers, and properly
fitted -
The principal blemish of the
complaint in every dis-
trict which I visited was
want of money for the com-
pletion of public works.
But I remark on one
- wished to build a culvert.
I was told that the Engineer
had been sent in
year by year, and struck
out of the budget to make
plans for more pressing
works - did I see him
why a road was made
good for a few miles &
then left as a track, the
answer was certainly
be want of money -
It is perfectly evident that
as long as the cost of all
public works, whether

directly remunerative as
irrigation works, or under-
= recting sea roads, is
chargeable to the balance
available annually out
of the General Revenue, but
this want of money
must always be felt.
Works of this most im-
= portant while they
get the largest share of the
available surplus, are
checked & impeded by
the want of money,
while all the minor
works suffer even more
and all must exhibit
that patchy & incomplete
appearance which
presents itself upon the notice
of every traveller -
It is fair and reasonable
that certain works such
as roads, buildings for
public purposes &c
which make no direct
return to the Revenue
should be paid for out
of the surplus of that
Revenue, but that
works which are sure
to repay a large interest
upon the money expen-
= ded upon them, should
be allowed to pay on

in a state of incipient distress
for want of that money which
could be procured at any
instant for a few cent-
= sime to me but very
questionable economy.
The money required for
the completion of the
Godavery. Krishna Damam
& other irrigation works
should in my opinion
be borrowed from time
to time as required, &
the works should be pushed
on as speedily as the state
of the districts to be irrigated
will permit - This would
set free a large sum of
money for which a prope-
= riate investment might
be found in the constri-
ction of the works suggested
by me in a former part
of this minute -
I should strongly recom-
= mend that the mode
of proceeding should be
prepared upon the Gov^t
of India as upon the
Gov^t of Madras -
I do not wish to suggest
any special mode of
raising this money
but may observe that
the Gov^t in England
has been in the habit

advancing money to
individuals for the
improvement of their
properties, under an
engagement that the
interest and a portion
of the principal of the
debt should be paid
off annually, was
to extinguish the debt
in 20 years - a similar
or analogous course
might perhaps be adopted
- but here -

William

Jersey

11/2/65

Report to Comr Public Dept
of 8th March 1865 No 9.

Revenue 1865 Dept.
Pro. of Govt for allahs

No 748.

Minute by the Honble
President.

Dy 1st February/65.

Recording his
views with reference
to the present state
of roads and other
wants in the Northern
Circar and Nellore Dis-
tricts.

or - 10/2/65

1278-

I am very glad that I have
been able to pay a visit to the
district upon the occasion of the
annual cattle show, and from
the views I had this mor-
=ning of the stock I feel certain
that the inhabitants have
erected themselves to improve
the breeding cattle and that success
has attended these sections
I trust that this effort will
induce them to aid the Govt
in its attempts to introduce
improved breeds.

105
D. O. Dept. Secy to Govt
for P. & S.
Sept 5.

and machinery, as I can
show them from the experience
of my life that the proper
resulting from the ~~improvement~~
economy of labour or from the
improved application are
even larger than those which
are derived from improvement
in the breed of stock - why
improved mode of applying
power we can make one Pullach
do the work ~~of two~~ now done
by two we shall have saved
to each half the cost of one
Pullach have put in his
pocket the price of the animal

and ~~the~~ have saved the cost of his
keep - that will maybe the re-
sult of ~~attention~~ improvement
in the mode of applying labour
~~to~~ both of men & animals
I don't hesitate to affirm and
I have no doubt that the Psych
Phillips who have shown
themselves active & enterprising
as well as having ~~shown~~ the
rest of the Presidency is good
an example will ~~follow~~
give every assistance to the
Govt in working out important
matters -

Do. Dept. Sec. & Gen. Sec.
For Recd. & J. S.
Sept. 5.

June 27/65

25 Jan 65

Adm. Secy
Baptist Chh.

Gentlemen

My visit to Kigali has been pro-
-duction of much satisfaction to myself.
I have been paid here for the last time
the ~~respective~~ ^{effective} working of the Municipal
system under your guidance and
have no doubt that the extended power
ought to be by you will be administered
as efficiently and as carefully for the
benefit of the community as those which
have been voluntarily intrusted to you.
Very great credit is due to those wealthy
native Gentlemen who have shown so
clear an appreciation of the benefit to be
derived from municipal action, and
I have no doubt that you will both ^{deduct} ~~deduct~~ ^{time}
and receive ~~that~~ ^{the continuance of} ~~that~~ ^{that aid} which has been so liberally
granted; ^{that} ~~that~~ ^{that the introduction} ~~that~~ ^{the}
facilitation of compulsory rating will not ^{the}
short dry up the source of private ^{of}
liberality -

Yrs, 03

Secy. Depts. Soc. & Moral
For Recd. 1/11/65
Sept. 8.

with reference to the works especially alluded
to by you namely the Bridge over the
backwater, and the clearing of the Pool
I wish to say a few words and to express a
professional opinion - as regards the Bridge
I would point out that the effect of it
would be to impede the entrance into the
back water that it would be costly to
make & maintain while an improvement
in your present system of Ferryage would
be carried out by the Municipal body, or
be production of a Revenue sufficient
at all events to pay the interest of the
outlay & perhaps to add to the Revenue
of the Town - In several of the parts in England
a Ferry worked on a chain plying at
regular hours is found to afford ample
means of meeting the demands for traffic
and a well built boat worked by either
the power of men or animals would
cost but little - power might be given
to the Municipality to establish such a

Ferry & levy tolls thereupon -
with regard to the Pool I am afraid that as
an Engineer I cannot hold out to you ³⁰
much prospect of improvement - these
obstacles result from the operation of
natural causes which are in permanent
action, and although it is occasionally
possible to modify the action of these
causes as to lessen or remedy the bad
effects produced, this more often the
case that the evil is enhanced by the
efforts made to remedy it - I will however
cause plans to be made, and in fer-
mation to be furnished to the Govt which
will then be in a position to decide as
to the benefit likely to result from
any attempt to remove the Pool -
I have visited several of the Institutions
alluded to in your address and was
glad to find them all so satisfactorily
conducted - nothing can be a better
proof

Ch/03
To the Depts of the Govt
For Receipt
Sept. 5th

31 Jan 7 65

Repl. to a Miss from Vézay;

200747/65

Gentlemen
I thank you for your kind wishes
Yours truly
Wm. L. Bay

for my welfare -
I am very glad that I have been able to pay
a visit to this flourishing part of the Pres-
=dency, and to witness ~~with me~~ the satis-
=factory working of principles which under-
=ferous to England are now apparently
taking root in India and bringing forth
their usual fruit of self-dependence, and
vigorous action -
Movements which have taken place
in Patna show that it is trading

taking
 their usual part of
 visited action -
 The improvements which have taken place
 in the Town of Manipatnam show that it
 has been well selected as the site of a trading
 community & as the success of the Merchant
 must depend on the ready access afforded to
 his place of business. The Govt will do its
 best to open up the Country by roads &
 to improve the Harbour -

en, 03

Dep't. Des. & An. n. l.
 For Dep't. N.
 Dep't. S.

I must not however be understood to
pledge myself to any scheme for the
improvement of the latter street - My Expe-
rience as an Eng^r has proved to me the
fallacy of most of the schemes so readily
submitted for the improvement of
harbours - and before the Gov^t would
be justified in expending large sums
money upon either breakwater or Pier
I would have to satisfy myself that the
project was feasible & that traffic was
such as to justify the outlay. The first
thing to be done is to make Benicupalam
a port of entry for the supply of all sorts of
provisions & that can be done only by
making roads into the interior & it is
the attention of Gov^t will be at once directed.
~~And some experiments to be made~~
with reference to the presence of an European
Magistrate I would point out that some
of the difficulties resulting from the absence
of such an officer have been remedied by the

appointment of the Marine Attendant to
act as a Magistrate - and should
further assistance be required Gov^t will
be prepared to consider the best mode
of meeting the difficulty: at present the
would seem to be hardly sufficient employ-
ment for such an officer -
wishing you every success & a large
development of the trade of the Town.
I thank you again for your kind wishes
Yours faithfully

W

Ch/05

Recd. Depts. Secy & Marine
For Recd. 11/11/05
Sept. 5th

Ordered that
the foregoing paper
be forwarded
to the House of
and connected
to the de-
partments of
the Secretariate
for the issue of
the necessary order

L. D.

W.D.

Fort St. George
4th March, 05

- 12 To the Public Secy, Dept. of Marine
- 21 To the Public Secy, Dept. of Marine
- 7 To the Secretary, Dept. of Marine

10/10/65

$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$

Reported to England
in Public Department
of 8th March/65 No. 9.

Revenue 1865 Sept.
Pro. of Govt. for March
N. 484.

Pro. of the Madras Govt.
Dy. March/65

Pro. B. of Rev. 2/11 April 65
N. 1073.

Forwarding to the
Home Government and Deptt.
concerned the alliments of the
Governor on his visit to the
Northern Circars.

N. 77079.