

No 1304C. 29. 7. 83.

Dec 17. 83.

dy. 6. 7. 860 W. 9. 4. 83.

" " 15. 83 W. 8. 7. 83.

REVENUE DEPARTMENT.

1885.

Board of Revenue,

MADRAS.

No 2256 Wd. 28th Sept 1885

Communicated to the
Suplty Engineer II Circle
with reference to para
5 of his letter No. 665 Wd
of 19. 6. 85 recorded in
G.O. No. 1588 Wd 8/7/85.

Cu.
10. 9. 85

Cu.
15. 9. 85

W.
14. 9. 85

To B/P
28/9

The Suplty Engineer II Circle

" " Suplty Engineer I Circle
S. S. I Circle Berau

Aug. 6/9. 103/10 29/9

11. 9. 83 2. 16. 9. 85 5/10

Printed August 26th.

W 10/9/85.

Proceedings, 20th August 1885, No. 2398 Forest 449.

No 2256 Wd. 28th Sept 1885

Submitting to Government letter from the
Conservator of Forests, Northern Division,
pointing out the improbability of any teak of
good size being procurable from Government
forests in the Godavari District.

its, ta- nor the ed, and its. com ery rn- ear rs, are

31,

MEMORANDUM.

For C. No. 7933.

Communication to officers concerned.
Requested for reference the undermentioned papers:—

5 copies of Board's Order 20 Aug 1885 No 2398.
7 449

Forwards to the Under Secretary to-
Government- P.W.D with reference to his Memorandum
dated 23rd September 1885.

Revenue Board Office
24th September 1885

H.C.
25-9-85

To the Secretary to Government, Revenue Department.
Copy to the Conservator of Forests, in charge of Northern Division.
" " Examiner of Forest Accounts. " of Southern "

Order thereon, 3rd September 1885, No 4649

Communicated to the Public Works Department
with reference to para 4 of G.O. in that Department, No 1585W,
dated 8 July 1885.

(True Extract)

Exd. A. Raitt.

C. Brown. Major R.E.

For Ag. Secretary to Govt.

To The Public Works Department
" Board of Revenue.

No 1304C. 29. 4. 83.

25/7/85

187/9

For C. No. 7933.

MEMORANDUM.

Communication to officers concerned.
REQUESTED for reference the undermentioned papers:—

Revenue Dept. Proceedings No. 4679 d/ 3rd Sept 1885
on Board of Revenue Proceedings No. 2398 d/ 20 Augt 1885
Foot 449

Five spare copies.

GOVT. OFFICE, P. W. D.,
188

To

The

Am. Sen. and Captain R.R.
Under Secy to Govt. I. W. Dept.
Secretary to the Board of Revenue.

R.L.

Board of Revenue.

No 1304C. 29. 4. 83.

OK

18/9/85

Encls:

The Under Secretary
to Govt. P. W. D. is
informed that the
paper referred to was
not printed & that,
therefore, no copies are
available.

[Signature]

Acty Sub Secy

Revenue Board Office
21st Sept 1885.

Revenue Department.
Proceedings of the Madras Government.
Read the following:—

BOARD OF REVENUE, 20TH AUGUST 1885, No. ²³⁹⁸ FOREST 449.

PROCEEDINGS OF THE BOARD OF REVENUE.

READ—the following letter from J. S. GAMBLE, Esq., Conservator of Forests,
Northern Division, to the Secretary to the Board of Revenue, dated Oota-
camund, 9th August 1885, No. 917:—

In reply to Board's Resolution, No. ²²³⁵ Forest 422, of 31st July 1885, I have the honor
to say that there is no probability of any teak of good size being procurable from the
Government forests in the Godavari District during the next five years, and, indeed,
I may say, during the next fifty. With the exception of an isolated tree here and
there in an out-of-the-way part of the hills, there are no trees of large size in the forests.

2. The teakwood at present brought down the Godavari river all comes from
Bustar, Hyderabad or the Central Provinces, and is all of quite small size and very
crooked, probably either the result of thinnings of badly-shaped pieces in the Govern-
ment forests of the Central Provinces, or of cuttings of old, much-damaged trees near
villages. From the Government forests in Rekapalle, none has been cut for some years,
and none is likely to be, for, though the tree is very common, yet the individuals are
all small.

RESOLUTION—dated 20th August 1885, No. ²³⁹⁹ Forest 449.

Submitted to Government, with reference to G.O., dated 17th July 1885, No. 3631,
Revenue.

(A true Copy and Extract.)

(Signed) C. F. MacCARTIE,
Acting Sub-Secretary.

To the Secretary to Government, Revenue Department.

Copy to the Conservator of Forests, in charge of Northern Division.

" " Examiner of Forest Accounts. " of Southern "

Order thereon, 3rd September 1885, No. 4679

Communicated to the Public Works Department
with reference to para 4 of G.O. in that Department, No. 1585H,
dated 8 July 1885.

(True Extract)

Ed. A. Raiff.

[Signature] Major R.E.

To Secy. Secretary to Govt.

To the Public Works Department
Board of Revenue.

Q. 6. 7. 860 W. 9. 4. 85.
" 15. 85 W. 8. 7. 85.

(9) Recd 7933

REVENUE DEPARTMENT.

1885.

Board of Revenue,
MADRAS.

No 2256 Wd/ 28th Sept 1885
Communicated to the
Suply Engineer II Circle
with reference to para
5 of his letter No. 665 U.S.
of 19. 6. 85 recorded in
G.O. No. 1585 Wd/ 8/7/85.

Received - Request for
transmission of
18. 8. 85

Printed August 26th.

10/9/85

Proceedings, 20th August 1885, No. 2396 Forest 449.

No 2256 Wd/ 28th Sept 1885

Request for
transmission of
17/9/85

Submitting to Government letter from the
Conservator of Forests, Northern Division,
pointing out the improbability of any teak of
good size being procurable from Government
forests in the Godavari District.

Cu.
10. 9. 85
W.
14. 9. 85

To
The Suply Engineer II Circle
" " Suply Engineer I Circle
S. S. I Circle
28/9
29/9
105/10
11. 9. 85

GENERAL
ACCOUNT.

Govt. of (1885) Madras.

PUBLIC WORKS.

Dated July, 8th.

Recd.

Encl.

G.O., 8th July 1885, No. 1585 W.

JULY.

Timber

Orders on a reference from Superin-
tending Engineer, II Circle, on the subject
of supply of — from State forests to the
Public Works Department.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following letter from J. W. RUNDALL, Esq., Superintending Engineer, II Circle, to the Chief Engineer, Public Works Department, dated Bezvada, 19th June 1885, No. 665 K.S.:—

I have the honor, in acknowledging the receipt of G.O., No. 860 W., of the 9th April 1885, to request more specific instructions regarding paragraph 3. Executive Engineers are authorised to obtain from the Forest Department timber of suitable kinds to meet their probable requirements for five years.

2. In the case of the Kistna Eastern division, the average consumption of wood during the past five years has been 1,300 cubic feet of Pegu, and 16,000 cubic feet of country teak. It will probably be not less than the above in the next five years, and will, therefore, amount to not less than 90,000 cubic feet. It is clear from the Conservator's letter to the Board of Revenue, No. 1370, of the 3rd November 1884, that he cannot undertake to supply us with teak, which is required for the bulk of our work.

3. It seems to me therefore impossible that we should carry out the orders of Government and obtain five years' stock from the Forest Department.

4. There are other difficulties, viz., that we have not space at the Bezvada shops to stack more than the annual supplies which we purchase locally.

5. What we do want is to get regular supplies of teak in good logs, which will not cut to waste, from the Godavari forests. If the Forest Department could arrange for this, they would be doing us an immense service.

6. There is also one other point to which I beg to invite attention, viz., that in any transactions between the Public Works and Forest departments, it would be necessary that we should know beforehand the price which would be charged by the Forest Department for all wood delivered. Estimates are based on known local rates, and there is hardly likely to be mutual agreement unless the price was settled beforehand.

7. As regards sal-wood, the Conservator, writing under date the 26th May to the Executive Engineer, Kistna Eastern division, informs him that it is impossible to guarantee the regular delivery of this wood from Ganjam in consequence of the irregular way in which the British India Steam Navigation Company's vessels accept freight. He states, moreover, that the cost at Cocanada will be Rs. 1-8-0 per cubic foot. This would be equivalent to Rs. 1-10-0 at Bezvada. This year we have purchased Godavari teak at Rs. 1-2-0 per cubic foot at Bezvada. It would not, therefore, pay us to purchase sal at the price named, unless squared logs were supplied, on which the wastage would be small.

ORDER—dated 8th July 1885, No. 1585 W., Public Works.

The Superintending Engineer will be informed that it was not the intention of Government that the whole of the five years' supply of timber should be stored at one central depôt in the circle. In G.O., No. 860 W., dated 9th April 1885, *divisional* officers were authorised to obtain from the Forest Department timber of suitable kinds, sufficient to meet their probable requirements for five years. The Government are of

opinion that it will be more convenient if each divisional officer receive and store the supply for his own division only;—thus relieving the Bezvada workshops of the responsibility of the charge of so large an amount of timber.

2. If the storage space available at Bezvada be insufficient for the timber which must be stored near the Kistna works, early steps should be taken to acquire additional suitable ground. Should this be found impossible, and the full five years' supply cannot conveniently be distributed over the circle, the quantity of indigenous timber to be indented for must be reduced to the average requirements for two or three years only.

3. It is clear, however, that the demand upon the Forest Department must be regulated by the supply available; and divisional officers should therefore place themselves in communication with the Forest officers concerned in view to obtaining the necessary information before preparing their indents.

4. Subsequent indents on the Forest Department should be prepared with reference to the stock remaining on hand, the probable requirements for the year, and the amount of timber available.

5. It is the wish of Government that, so far as may be found practicable, the Forest Department shall be the source of supply to the Public Works Department of all timber of indigenous growth. There can be little doubt that, if the two departments work in harmony, the Forest Department will take steps for increasing its supply, which, in course of time, it is confidently hoped, will be able to meet the demands made on it by the Public Works Department.

6. With regard to the question of the price of the various descriptions of timber, there appears to the Government no difficulty in its being settled by mutual agreement between the officers concerned, after delivery at the divisional stack-yard.

7. These proceedings will be communicated to the Revenue Department with special reference to paragraph 5 of Superintending Engineer's letter above recorded, and to officers of the Public Works Department concerned for information and guidance, in continuation of G.O., No. 860 W., dated 9th April 1885.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Consulting Architect to Government.
" Superintendent, Madras Harbour Works.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. E. Fernandez.
Spare Copies

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper :—

G.O., dated 17th March 1885, No. 332, Revenue.

Read—the following Proceedings of the Board of Revenue, dated 25th November 1884,
No. ⁴⁰⁵³ Forest 415 :—

Read—the following letter from Major I. CAMPBELL WALKER, Conservator of Forests, Southern Circle, to the Secretary to the Board of Revenue, dated Madras, 9th August 1884, No. 1123 :—

Referring to G.O., No. 333, of 8th March last, communicated with Board's Proceedings, No. ¹⁰²⁵ Forest 38, of 21st idem, I have the honor to submit copy of my letter to the address of Superintending Engineers in my circle, the Government Architect, Superintendent of Works and Public Works Workshops, and a précis of their replies.

2. It will be observed that what the Public Works Department officers require is seasoned timber in suitable scantling delivered in Madras or other centres of demand, but they cannot gauge their requirements with sufficient accuracy to enable them to say that they will take a certain quantity annually if prepared and delivered according to specifications.

3. We have no means of saving up timber on any scale, and I admit that our methods of conversion and removal from the forest have hitherto been somewhat rude and wasteful.

But, granted that we improve in those respects, which we intend to do, what guarantee is there that the Public Works Department will require the timber or take it in preference to Maulmain teak and other descriptions obtainable from private merchants and contractors on the spot?

4. I have, for years, urged the advisability of the Public Works Department supplying itself more directly from the Government forests, but experience and mature consideration lead to the conclusion that this cannot be done by any number of rules or Government orders. We must improve our methods of conversion and transport and place our timber in dépôt within convenient reach of market centres, sending out from time to time notices and specifications, as recommended by the Executive Engineer, Presidency Division.

If our rates are moderate and the timber of good quality, we shall have no difficulty in disposing of it, and all that is necessary, in my opinion, is to reiterate the orders contained in paragraph 5 of G.O., No. 2734, Public Works Department, of 4th November 1881, and to instruct the heads of all Government departments that they are to purchase from the Forest Department direct, in preference to purchasing from private merchants, if suitable timber at reasonable prices is obtainable, not otherwise.

5. I deprecate our starting a dépôt in Madras, but am glad to see that by G.O., No. 721 W., Public Works Department, dated 15th March last (Board's Proceedings, No. ¹¹⁶⁶ Forest 57), the General Superintendent, Public Works Stores, has been authorized to lay in a stock of 200 tons, obtaining it from this department if available.

6. Our stocks are at present very low, and we are too busy with the selection and settlement of reserved forests to bestow the necessary attention to valuation surveys and preliminary working plans, without which felling operations on any scale should not be attempted.

As reserved forests are constituted, we shall at once proceed with valuation surveys and be prepared to place timber in the market departmentally.

As it is, I propose to fell 20,000 cubic feet of teak, vengai and kara mardu (*Terminalia tomentosa*) in the Anaimalai forests this year, and shall have due notice and specifications sent to the Public Works officers.

In the Wynaad and Palghat Division considerable quantities of teak, blackwood, kara mardu and irumbogam (*Hopea parviflora*), and in Tinnevely small scantlings of hopea, mesua and vengai will be available, but they are for the most part already disposed of to contractors who purchase in or on the outskirts of the forests.

7. I should state that, in accordance with the instructions conveyed in the last paragraph of G.O., No. 2734, Public Works Department, dated 4th November 1881, a preliminary list of timbers available in particular localities was sent to the Chief Engineer on the 8th August 1882, with the suggestion that they might be tried and results recorded and reported.

The proof of this list was only received back for correction last February, since which it is not known what has been done.

ENCLOSURES.

From Major I. CAMPBELL WALKER, Conservator of Forests, Southern Circle, to the Superintending Engineer, IV Circle, Coimbatore, (and others), * dated Ootacamund, 3rd April 1884, No. 35.

- * No. 36. The Superintending Engineer, V Circle, Madras.
- .. 37. The Superintending Engineer, VI Circle, Trichinopoly.
- .. 38. The General Superintendent, Public Works Workshops, Madras.
- .. 39. The Superintendent of Works, Presidency, Madras.
- .. 40. The Government Architect, Madras.

Referring to G.O., No. 333, Revenue Department, dated 8th ultimo, calling for further report, after consultation with Superintending Engineers, regarding the supply of timber from the State forests to the Public Works Department, I have the honor to request that you will favor me with an expression of

your views and requirements at an early date, in order to enable me to submit the report.

2. I am prepared to meet your wishes in every way possible, and, as we must recommence felling teak, rosewood and vengai in the Anaimalai forests this year, the opportunity is favorable for working up logs so as best to meet your requirements. This timber cannot, however, be ready for sale until 1885-86, and our present stocks are very low.

3. We cannot at present undertake to supply scantlings to order, as we have no means of conversion in or near any of our forests, but I am quite willing to advocate steps for the erection of suitable machinery where the supply and secured demand justify it, and believe we shall find no difficulty in agreeing as to rates if we approach the matter in a fair and liberal spirit.

Précis of Papers relating to the Supply of Timber from the State Forests to the Public Works Department.

On receipt of G.O., of the 8th March 1884, No. 333, (Board's Proceedings of the 21st March 1884, No. 1025 Forest 38), calling upon the Conservators of Forests to report fully on the question of the supply of timber from the State forests to the Public Works Department after communication or consultation with Superintending Engineers, the following officers were requested on the 3rd April to favor the Conservator with expressions of their views and requirements, at an early date, regarding the supply of timber from the State forests to the Public Works Department:—

- | | |
|--|----------------|
| (1) The Superintending Engineer, IV Circle, Coimbatore | Letter No. 36. |
| (2) The Superintending Engineer, VI Circle, Trichinopoly | " " 37. |
| (3) The General Superintendent, Public Works Workshops, Madras | " " 38. |
| (4) The Superintendent of Works, Presidency, Madras | " " 39. |
| (5) The Government Architect, Madras | " " 40. |
| (6) The Superintending Engineer, V Circle, Madras | |

In reply, the first of the above, the Superintending Engineer, IV Circle, informs * that he has called on the officers of his circle to let

* Letter of the 10th April, No. 103 M. Register No. 171, dated 17th April 1884.

him have lists of the buildings that were in progress in their divisions during the past official year, showing the description, quantity and cost of the timber paid for, which will be a

rough guide to the quantities, &c., the department in his circle could take, and that they require timber in scantling.

The Superintending Engineer, VI Circle, forwards a copy * of his letter to the Chief Engineer, Public Works Department, in which

* Endorsement No. 64 T. J., of the 10th April 1884. Register No. 199, dated 21st April 1884.

he says that they have hitherto been prevented from procuring timber from the Forest Department owing to the inferior quality of the wood supplied, high prices, and the forest depôts not being situated in trade centres, and the Forest Department are not in a position to supply what they require, viz., scantlings of seasoned wood, and states that he does not consider it advisable for the Public Works Department to take timber in log direct from the Forest Department, and, even if the Forest Department were able to supply scantlings, to order, of teak and vengai from the Anaimalai forests in 1885-86, he is not in a position to order any as he does not know what works will be in progress.

The General Superintendent, Public Works Workshops, in his letter † states that about 100 tons of Anaimalai teak will be required in 1885-86, and that if the timber is found satisfactory, both as regards quality and price

(delivered at the workshop), there appears no reason why the workshop should not make an annual indent for 100 tons or such larger quantity as may be required.

The Superintendent of Works, Presidency (the Executive Engineer, Presidency Division), forwards a copy of his letter to the Superintending Engineer, V Circle, in which he says that if the Forest Department would frequently circulate printed price lists of scantlings obtainable at the forest offices nearest to Madras, he has no doubt but that such wood would be very frequently used in the presidency division. He attaches a form for circular proposed and a table of useful sizes most required, which are

† Letter of the 30th May, No. 324. Register No. 764, dated 5th June 1884.

herewith submitted, and states ‡ that the Public Works Department at Madras would welcome the use of Government teak if delivered in such quantities and scantling as required and at rates less than that of Moulmein teak, for which he is now paying Rs. 4 per cubic foot wrought, framed and fired, or about Rs. 3-4-0 per cubic foot in scantlings sawn to the dimensions ordered, and that the existing rules of the department prevent him from buying logs, and offers certain suggestion in continuance of that regarding the state, &c., in which the wood should be delivered to the Public Works Department contained in the enclosure. He gives the quantity used at Madras by him last year at about 11,475 cubic feet.

The Consulting Architect to the Government of Madras states § that he is informed that the Government have authorized the Superintendent of the Public Works Workshops to lay in a large stock of teak and they are to be invited to apply to him for what they require; that, unless the Public Works Workshops can be utilized by the Forest Department as a sort of depôt for the timber from the State forests, he is strongly of opinion that the Conservator of Forests ought to arrange for delivering the timber at least at Madras, if not also at other large towns; that he is quite of opinion that it is desirable that the Public Works Department should obtain, if possible, all the timber it uses, from the Forest Department in preference to going elsewhere for it; and that he thinks that the Forest Department should make still greater efforts to offer them the timber under favorable conditions, leaving its price, which he considers a fair one, very much as it is.

The Superintending Engineer, V Circle, forwards || a copy of his report to the Chief Engineer, Public Works Department, containing the views of certain officers (Colonel Burton, Lieutenant-Colonel Smalley and Major

|| Letter of the 9th June, No. 931. Register No. 804, dated 10th June 1884.

Drake-Brockman) regarding the obstacles to the use of Government timber on public works. What Colonel Burton states is "that, as the Forest Department does not supply wood in scantling at Madras, he prefers buying the wood he requires from the local dealers, who do so."

Lieutenant-Colonel Smalley states that 33' or large beams are not obtainable from the Forest Department, that Government timber cannot be relied upon as free from flaws when cut up, and that scantlings to order cannot be obtained, and that, as local markets do not present him with such difficulties, he prefers the local market."

Major Drake-Brockman states "the Forest Department have made no arrangement for sawing up timber; they supply at Rs. 2-8-0 per cubic foot in log delivered at Madras, i.e., about same price as sound Burma teak in log, and that Burma teak is better seasoned; he recommends logs being cut up into scantlings required at some central depôt at Madras near the railway station."

Form of Circular.

On the requisition of the Executive Engineer, by the Forest Department to the Public Works Department, at the following prices and in the following scantlings. The wood will be delivered at the station on the

, teak will be supplied

railways within one month of date of Executive Engineer's requisition; it will be thoroughly seasoned, free from large or loose knots, shakes, waves or other defects; will be entirely free from sap, and will have all sides sawn die square or with sharp angles.

	under 52 inches in section	per cubic foot.	Price.
10 to 18 feet long.	" 82 "	" "	" "
	" 112 "	" "	" "
	" 144 "	" "	" "
Rafters 12 to 16 feet long	" 30 "	" "	" "
	" 52 "	" "	" "
	" 82 "	" "	" "
	" 112 "	" "	" "
Tie-beams 18 to 24 feet long	" 30 "	" "	" "
	" 52 "	" "	" "
Joists 10 to 16 feet long	" 20 "	" "	" "
	" 30 "	" "	" "
	" 40 "	" "	" "
Also reapers 2½" x ¾" in bundles of 10' length and 500 cubic feet in each bundle.	Also ¾" and 1" planks 7' wide and 9' length.	" 9' and 9' "	" "

MADRAS,
th August 1884.

(Signed) I. CAMPBELL WALKER, Major,
Conservator of Forests, Southern Circle.

Read—the following letter from J. S. GAMBLE, Esq., Conservator of Forests, Northern Circle, to the Secretary to the Board of Revenue, dated Ootacamund, 3rd November 1884, No. 1370:—

In reply to the orders conveyed in Board's Proceedings, No. ¹⁰²⁵ Forest 38, of 21st March 1884, I have the honor to submit copy of a letter, No. 116-118, of 20th April 1884, addressed to the Superintending Engineers of Nos. I, II and III Circles (Enclosure A).

2. The Superintending Engineer, I Circle, replied as follows in his No. 278 G.C., dated 25th October 1884.

"I have ordered the Executive Engineers in this circle to make known to you direct their requirements in timber, and shall feel much obliged if you will communicate direct with them on the subject. According to the Public Works Code, the Superintending Engineers are precluded from the execution of work and the purchase of material, and it will greatly facilitate the object which, I presume, you have in view, viz., the sale of your timber, if you would communicate direct with Executive Engineers, who make all their own purchases and not through this office, which must considerably delay your communications."

I have pointed out to the Superintending Engineer that it seemed to me that he had somewhat misunderstood the object of my addressing him, which was to obtain information and proposals which would enable me to submit my report to the Board and Government. Should further communication from him be received, it will be reported on later.

3. The reply of the Superintending Engineer, II Circle, is herewith submitted as Enclosure B, and I would especially draw attention to the Superintending Engineer's evident wish for a satisfactory arrangement, such as I hope this department may, on their part be able to make. In reference to paragraph 4, if the Public Works Department will allow us to do so, we can arrange for the supply regularly, after this year, of the amount of sāl timber they require delivered at Masulipatam or (for easier landing) Cocanada, whence the canal can take it. We shall at once fell the timber necessary, so that in the early part of 1886 the first lot can go down and regular lots in subsequent years. The sāl timber should not cost more than Rs. 1-4-0 per cubic foot for small and Rs. 1-8-0 per cubic foot for large logs delivered at Cocanada. In reference to paragraph 5, the Collector of Godāvāri says that about "300 logs aggregating 3,000 cubic feet, more or less, varying in length from 12 to 20 feet and more and of an average of 3 feet bottom girth, can be supplied;" but such timber can only be the produce of young trees not yet fit for felling. So the Conservator proposes to postpone proposals till he visits Godāvāri in January next. In reference to paragraph 7, the Collector of Kurnool thinks that logs of 15 to 20 cubic feet of yepi (*Hardwickia binata*) can be obtained and delivered at Cumbum at Rs. 1-8-0 to Rs. 2 per cubic foot of squared

timber. This, too, the Conservator will consider on his approaching tour, and will endeavour, if possible, to meet Mr. Rundall and arrange a system of definite supply with him. It will take a year or two for the arrangements made to come into force, for works will have to be started where none have yet been, trees will have to be felled and time given for the wood to season.

4. Copy of the reply of the Superintending Engineer, III Circle, is also submitted (Enclosure C). The proposals to open large depôts is not really feasible; for, except from the Nallamalais, there is no sufficient supply of timber in the III Circle. The forests of Kurnool (other than Nallamalais) Cuddapah, Bellary and Anantapur contain little but small trees at present, while the native contracting agencies, who purchase timber on the western side of the Nallamalais, have the supply of the market, and it would not be judicious for Government to interfere with their trade.

5. Indeed, wherever intermediate agency can thus be secured, it is, in my opinion, far better for Government to restrict itself to sales in the forest on properly-prepared working schemes, leaving it to private enterprise to undertake the retail work. This can be done in Kurnool and probably in Cuddapah; but, of course, there are localities where the absence of sufficient intermediate agency renders it necessary for Government to undertake departmental works, and the chief of these localities is Ganjam. Even there, it will be well eventually to sell all produce as much as possible in the forests so that the market may regulate itself and complaints of high rates may not be caused.

6. From Ganjam arrangements will be made to supply the timber asked for yearly by the Superintending Engineer, II Circle, and referred to in paragraph 3; a small supply has also been indented for by the Public Works Store Department, and this will, I hope, be sent down at once, as well as some logs asked for by the Ordnance Department. Works in Ganjam are in their infancy and will take a little time to organize properly, especially as other heavy work such as the settlement and demarcation of reserved forests is in progress; but, before long, I hope to have the works in proper order and to be able to supply indents if due notice is given.

7. The great reason why the arrangements between this department and the Public Works Department are often unsatisfactory is that indents are sent to us with very short notice, when, possibly, fully-seasoned timber or timber of the proper description is not available and we are obliged to refuse to supply or to send unseasoned wood. It is impossible for us to keep up a large stock of seasoned wood in depôt as suggested by Colonel Vibart, merely on the chance of possible indents, or to keep up a number of depôts the management of which is expensive; and the one recommendation I have to make is simply this: that the Public Works Department inform us, at least one year (it should be two years) beforehand, of special amounts likely to be required, and, in respect to permanent yearly requirements such as the Superintending Engineer at Masulipatam speaks of, it be stated once for all that that amount will be taken over yearly; and we shall then be able to make arrangements. If I could now be told, before 1st January for instance, that so many cubic feet of sāl timber of such and such scantling are required at Cocanada, Masulipatam, and Madras, respectively, on or about the 1st January 1886, I think that, when the time comes for supply, there will be no complaint. We could especially provide narrow gauge sleepers suitable for such lines as the Nellore-Tirupati and the Bellary-Bezváda Railways, deliverable at one of the ports, though, in respect to cost, inquiries must first be made. The cost of freight is stated by the British India Steam Navigation Company to be—

Gopálpur to	Logs per ton of 50 Cubic Feet.	Broad Gauge Sleepers, each.	Narrow Gauge Sleepers, each.
	RS. A. P.	RS. A. P.	RS. A. P.
Calcutta ...	7 8 0	0 8 0	0 6 0
Cocanada ...	7 8 0	0 8 0	0 6 0
Masulipatam ...	10 0 0	0 12 0	0 10 0
Madras ...	10 0 0	0 12 0	0 10 0

and on these rates must the cost of delivery be calculated, adding to it the Russellkonda depôt price, the cartage, tolls and landing and shipping charges with a small sum for temporary establishment.

8. The only forests in this circle from which a regular constant supply of timber can at present be expected are those of Ganjam. I shall consider whether saw mills would be worth erecting, but my own experience is that the cost of taking the rough timber to the mill when that timber, as is the case with Sál, will not float, is prohibitive. A better system is to have a really good series of carting roads and to use manual labor for the sawing. Forests in the plains of India are not like the pine forests of Europe and America, where a large number of trees are found in one locality fit for conversion; here we have often to go considerable distances from tree to tree and a stationary saw mill often has its profits absorbed by the heavy cost of carriage of timber in log, a cost which is saved when it is cut by hand on the spot and transported in scantling. It is, however, probable that before long a better class of timber merchants may be attracted to Ganjam, and that all sales can take place by auction or tender in the forests, so that the trouble of conversion and retail sale can be saved by Government to the great advantage of the forest work of management and improvement to which the District Forest Officer could then devote more time.

ENCLOSURES.

From J. S. GAMBLE, Esq., Conservator of Forests, Northern Circle, to the Superintending Engineers, No. I Circle (Dowlaisweram), No. II Circle, (Masulipatam), and No. III Circle (Bellary), dated 20th April 1884, No. 116—118.

In Government of Madras, Revenue Department, G.O., No. 333, of 8th March 1884, I have been directed to report fully on the best means for furthering the supply of timber from the State forests to your department after consulting you on the subject.

The chief forests in this circle from which timber or produce likely to be of use to your department can be obtained at present are—

1. *Ganjam District*—The forests of Goomsur and Suradá. The principal tree is Sál (*Shorea robusta*), and before long I hope to be able to bring out a considerable quantity. Its price at the Russellkonda depôt is 10 annas per cubic foot round and 12 annas squared, but the logs now extracted are in short lengths only. If a year's previous notice be given, large logs can be procured. Other timbers, of which large amounts are available, are Maddi (*Terminalia tomentosa*), Chiriman (*Anogeissus latifolia*), and Satinwood (*Chloroxylon Swietenia*). Full arrangements for working are not yet set on foot, but we shall be glad to supply at Russellkonda what timber is wanted with at least a year's notice, or would start a depôt at Berhampore or Ganjam, if necessary. The cost at any given place may roughly be calculated at Russellkonda rates plus cost of cartage and freight.

2. Small supplies may eventually be made available from the *Vizagapatam* and *Godávári* forests, but at present arrangements are not fully completed. A small amount of teak will probably be regularly available at Dumagudiem or on the lower Godávári after about a year's time.

3. The forests of *Kurnool* can supply timber of several descriptions, such as Maddi, Yellema, Yepi (*Hardwickia binata*) and others, to any point on the Cuddapah-Kurnool canal or to places on the Kurnool-Cumbum road.

4. A regular supply of casuarina poles can be made available from the *Nellore* forests. I should be greatly obliged if you can inform me whether in future years you will be likely to require any of the timber referred to. As in none of the forests mentioned have proper workings hitherto been conducted, seasoned timber at short notice cannot be supplied, but if a regular supply is required with long notice, we shall use all our best endeavours to meet it and further the wishes of Government in the matter. A statement of your probable requirements during the next five years or so would enable me to reply to the letter of Government, and inform them what measures I propose to take to ensure a proper understanding regarding the supply of timber to your department. If you prefer to work only through contractors, perhaps you would not mind telling me what amount is likely to be purchased and whence it is usually procured. Contractors usually prefer to purchase from the Native States and Zemindaris, but an improvement in depôts and a good supply of timber might cause them to purchase from our depôts the amount of the annual yield of the forests. Soliciting an early reply, I have, &c.

From J. W. RUNDALL, Esq., Superintending Engineer, II Circle, to the Conservator of Forests, Northern Circle, dated Masulipatam, 30th April 1884, No. 38 G.L.

I have the honor to acknowledge the receipt of your No. 117, of the 20th instant.

2. For the Kistna works our principal demand is for wood for boat-building and for lock gates.

3. For both these purposes I believe teak to be the best. We could take probably 8,000 to 10,000 cubic feet for these two purposes for the next eight or ten years. For lock gates a few logs of exceptional size are wanted, and for these probably we should always, as now, have to get Burmah teak; but for cross pieces and planking, logs 18' long which would give 9" or 10" planks would be the most suitable.

4. We could also take, and should be very glad to get, 3,000 to 4,000 cubic feet per annum of Sál wood for roofing purposes. Of this, say 15 per cent. should be in logs of over 20 feet in length.

5. This year we have had great difficulty in procuring Godávári wood; we have generally been able to purchase as much as we required in the local markets at Rajahmundry and Bezvada.

6. Do you think you could undertake to deliver any teak at Dumagudiem next December. If so, what quantity, what would be the scantling, and what the price.

7. As regards Nellore we have hitherto been dependent on the Madras markets, and for all first-class work are compelled to use Burmah teak. We require a good deal of wood for sluice shutters. Yepi might to some extent be used for this. Would you let me know what sizes you can supply delivered near Cumbum, and the probable price, also whether it would be in round or square logs. We might take 600 to 1,000 cubic feet per annum.

8. I do not know the Yellema mentioned by you, nor have I been able to find it in Balfour's Timber Trees.

9. As regards your last paragraph, I would much prefer to deal directly with the Forest Department, provided you can undertake to give us seasoned wood of the sizes we need.

10. The matter is one of pressing importance. Local markets are uncertain and prices have risen considerably during the last three years. This I conclude is in sympathy with the enhanced price of Burmah teak.

11. We must have wood for lock gates and boats, and if other sources failed, should have to purchase Burmah teak, which, as prices are now, would about double the cost of our timber.

12. With further information as to prices and available scantlings, I should probably be able to give you more detailed information.

From Lieutenant-Colonel H. M. VIBART, R.E., Superintending Engineer, III Circle, to the Conservator of Forests, Northern Circle, dated Rámandrug, 4th June 1884, No. 456.

With reference to your letter, No. 118, dated 20th April 1884, I have the honor to inform you that it is impossible to give you a forecast of requirements in the way of wood-work even for one year, much less for five, for it cannot be foreseen what works are likely to be sanctioned during that period.

2. The various classes of timber referred to are not very useful to this department. Teak and Ventek are the only kinds of timber extensively used on public buildings in this circle, which are usually procured by contractors from Madras and Pálghat depôts.

3. On account of the great distance of the localities, I do not think it would be practicable to utilise the timbers of Ganjam and Vizagapatam forests.

4. As far as Kurnool District is concerned, all timber other than teak required by the Public Works Department is obtained from the Government forests.

5. In my report to Government I have suggested the adoption of the following measures to facilitate the extensive use of Government timber on public works:—

- (1) To open depôts in practicable localities;
- (2) To maintain a stock of seasoned timber;
- (3) To reduce the prices so as to compete with those prevailing in the markets for similar wood;
- (4) To widely circulate from time to time lists of description of wood for sale and their prices.

6. Then in the case of works for which other than first-class teak-wood is required, the rate of the Forest Department, with cost of carriage and workmanship, might be entered in

the estimates, and a condition could then be made with the contractor that he should procure the woods from such and such Government depôt.

Resolution—dated 25th November 1884, No. ⁴⁰⁵³ Forest 415.

The question of the supply of timber from State forests to the Public Works Department was investigated in 1881, when general principles were laid down for the guidance of Public Works Officers—Public Works Department Proceedings, No. 2734 V, dated 4th November 1881. Changes in forest organization and in the price of teak having rendered the then collected information obsolete, Government resolved in their Order, No. 333, Revenue, dated 8th March 1884, that the question should be re-examined, and accordingly called, through the Board, on the Conservators for full report upon the subject after consulting the Superintending Engineers.

2. To this reference, communicated by Resolution, No. ¹⁰²⁵ Forest 38, dated 21st March 1884, the letters under consideration are a reply.

3. The Senior Conservator has consulted the Superintending Engineers of Circles IV, V, and VI, the Superintendent of Public Works Workshops, the Superintendent of Works, Presidency Division and the Consulting Architect, the general tenor of whose replies is to the effect that the chief obstacles to the extended use of Government timber is its high price as compared with the rulings of the open market, its general inferiority, especially as regards seasoning, and the difficulty of obtaining it in suitable scantling. The difficulty of forecasting the probable demand a year or more in advance of requirements is also indicated.

4. The Conservator admits that the existing arrangements for the conversion and transport of timber to market are rude and archaic, but deprecates the immediate introduction of extensive felling operations, the valuation surveys preliminary to which will divert the attention of the establishment from the more pressing duty of the selection and settlement of reserves; and he would not go further at present than to reiterate the already issued instructions that Heads of Departments should give the preference to the Forest Department in such cases as it can supply suitable timber at reasonable prices.

5. As it is, the Conservator proposes to fell 20,000 cubic feet of teak in the Anamalais this year, and can also supply considerable quantities from the Wynaad, Pálghat and Tinnevely.

6. Turning to the Northern Division, the Conservator of which has consulted the three Superintending Engineers, he points out that the only forests in the circle capable of yielding a constant supply of timber are those of Ganjam, from which the Superintending Engineer, II Circle, displays an evident desire to obtain his supply of Sál, which is considerable, if satisfactory arrangements can only be concluded with the Forest Department.

7. The Conservator has every desire to meet the wishes of the Public Works Department Officers, and is prepared to fell enough timber now to meet the demands of the coming year, but he is opposed to the plan advocated by the Superintending Engineer, III Circle, for the formation of depôts for seasoned timber owing to the obvious expense thereby entailed on Government without certainty of recompense.

8. The Board concur with both Conservators in thinking that the establishment of central depôts is for the present uncalled for, and that outlay on saw mills and other operations connected with the preparation of timber for market should be deferred, at any rate, until the demarcation and settlement of reserves has reached a more forward stage.

9. In the absence of Government forest timber depôts at Madras or other large centres where timber in large scantlings could be bought as required, one of

two alternatives seems necessary for adoption; either the Public Works Department Officers must give a year or two's notice of the quantity of timber they want to the Forest Department, or the Forest Department must send them notice of timber being felled, with its size, and also notice when it will be fit for use. As the Public Works Department say they cannot give notice long beforehand of their wants, the other alternative must, it seems to the Board, be adopted.

10. At the same time they are unable to see the great difficulty complained of by the Public Works Department Officers in furnishing the Forest Department with tolerably reliable forecasts of their requirements a year in advance of supply. Buildings are in contemplation for at least a year before construction, and there can be no difficulty in supplying an estimate of the timber required for them. If therefore the officers of the Public Works Department can reconcile themselves to a system of indenting for the timber they require (except perhaps the best teak which must always come from Moulmein) a year in advance of supply, there is no reason why the Forest Department should not, as its administration improves, be able to hold its own with the contractor, whom it must meet on equal terms, otherwise a fictitious profit will result at the expense of the purchasing department.

(True Copies and Extract.)

(Signed) C. F. MacCARTIE,
Acting Sub-Secretary.

Read—the following Proceedings of the Board of Revenue, dated 15th December 1884, No. ⁴³¹⁷ Forest 452 :—

Read—the following G.O., dated 24th November 1884, Mis. No. 5227, Revenue :—

Read—the following letter from the Superintending Engineer, I Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 25th October 1884, No. 277 G.C. :—

With reference to G.O., No. 761 W., dated 20th March 1884, I have the honor to submit a *résumé* of the opinions of the Executive Engineers in this circle regarding the practical difficulties which still exist to the more extensive use of timber from the Government Forest Department on public works, from which you will observe that the difficulties which exist can only be overcome by the exertions of the officers of the Forest Department themselves.

2. There is not the slightest practical difficulty to the utilizing of Government forest timber by the Public Works Department, provided it is actually forthcoming at the time it is required, and can be delivered on our works at the same prices in sufficient quantities and scantlings and under the same conditions as similar timber is procurable from the local markets.

3. The Forest Department have almost a complete monopoly of all timber grown in the country, and unless they can themselves compete with the local markets for the sale of their timber, it is simply out of the question for the Public Works or any other department of the State to assist them without placing the entire monopoly of an important trade in their hands.

Read—the following letter from Lieut.-Colonel H. M. VIBART, R.E., Superintending Engineer, III Circle, to the Chief Engineer, Public Works Department, dated Rámandrug, 28th April 1884, No. 164 :—

With reference to G.O., No. 761 W.,* of 20th March, I have the honor to state that I forwarded it to the Executive Engineers in the circle for their opinion.

* Regarding the supply of timber from the State forests to the Public Works Department.

2. The Executive Engineer, Bellary division, states that the practical difficulties are—

- (1) The objection made by Government to keeping a "reserve stock."
- (2) The risk of purchasing timber in log.
- (3) The difficulty in inducing contractors to take "stock wood" whereby they lose chance of profit.

3. He further adds that timber perfectly sound on the outside prove sometimes worthless when sawn up; such risk is now taken by the contractor, and he deprecates alteration of the existing practice.

4. He is further of opinion that the Forest Department should lower the rates for timber in the log and thus encourage a ready sale.

5. Cuddapah Division Executive Engineer reports Forest Department timber cannot be used for the following reasons:—

- (1) That works are carried out by contract, and that the contractor can hardly be restricted to purchase wood from a particular market.
- (2) The timber is sold standing, and it is not advisable to purchase it thus and then to season it and keep it in stock for use when required.

6. He considers that if the Forest Department could keep a stock of seasoned logs and could supply them cut into scantlings at fixed rates, the estimates could be framed accordingly and the timber purchased from them, but the demand is so irregular that he anticipates no advantage.

7. Kurnool Executive Engineer reports that there are no depôts in Kurnool from which seasoned wood can be obtained.

8. The Forest Department do not work departmentally, but merely grant passes for the felling of timber.

9. If the Forest Department could undertake to supply seasoned wood to the required scantling, all timber other than teak could be procured from that department.

10. The Executive Engineer, Canal division, says in Kurnool district the buyer has to cut and remove the trees; such a task cannot be undertaken by this department, but that timber can be obtained from the Forest Department of other districts if the prices compare favorably with market prices and if the Forest Department can supply well-seasoned wood in logs or scantlings.

11. Practical difficulties do exist as mentioned by the Executive Engineers in the way of utilising Government wood; but Government being anxious that their stock of timber should be extensively used on public works, every attempt should be made to overcome the difficulties and to carry out the wishes of Government by degrees.

12. To admit of this being done the Forest Department, I think, will have to adopt the following measures:—

- I. To open depôts in practicable localities.
- II. To maintain a stock of seasoned timber.
- III. To reduce the prices so as to compete with those prevailing in the markets for similar wood.
- IV. To widely circulate from time to time lists of description of wood for sale and their prices.

13. Then, in the case of works for which other than first-class teakwood is required, the rate of the Forest Department, with cost of carriage and workmanship, might be entered in the estimates; and a condition could then be made with the contractor that he should procure the wood from such and such Government depôt. I do not think the contractors would object to this, provided the rates are ample.

14. The contractors in Bellary have always obtained Moulmein teak from Madras. Since ven teak has been introduced, they get the same from Pálghat depôt in logs and have them sawn up here.

Read—the following letter from Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 1st April 1884, No. 173-E.W.:—

As directed in paragraph 3 of G.O., No. 761 W., of 20th instant, I have the honor to report that in my opinion the great practical difficulty in the way of the more extensive use of the Government timber by the Public Works Department arises from the Forest Department only supplying wood in the rough log.

2. It will always be most convenient and economical to this department to contract for the delivery of timber according to lists of scantlings; but the Forest Department will not undertake to provide pieces according to dimensions given.

3. I cannot suppose that Government would sanction the establishment by this department of timber depôts and saw mills; where timber could be received from the Forest Department, reduced to scantlings, and then supplied to the contractors by whom most of our works are carried out, such a system might be a source of revenue to the Forest Department, but I doubt if it could be worked with advantage to this department.

4. Those who are in charge of the State forests are in the best position to undertake the delivery of timber in scantling. They doubtless have their depôts for the storage and sale of timber in the neighbourhood of those forests, and all that is wanted is that they should arrange there to provide the scantlings wanted. I have no doubt that Executive Engineers would be found most willing to avail themselves of such a source of supply, and that this arrangement would best promote the more extended use of Government timber by the Public Works Department.

Read—the following letter from Colonel W. H. BURTON, R.E., Officiating Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated Chepák, 28th May 1884, No. 815:—

In reference to paragraph 3 of G.O., No. 761 W., dated 20th March 1884, I have the honor to report that the following officers, to whom the proceedings accompanying above Government order were duly communicated, report as follows on the subject:—

Colonel Burton, R.E., Executive Engineer, Presidency division, states—

"As the Forest Department does not supply wood in scantling at Madras, he prefers buying the wood he requires from the local dealers who do so."

He suggests that—

"The Forest Department should send out into the forests small establishments, each provided with a circular saw and portable steam engine, in order to cut up the timber on the spot either to the exact dimensions and quantities required by an Executive Engineer, or to some generally useful dimensions, as slabs 3½" to 6" thick, 12' and upwards in length, which would be available for rafters and joists, &c., bundles containing some known quantity of 2" x ¾" reapers as 250 lineal feet—500 lineal feet, &c., and girders as asked for.

"The difficult and costly carriage, may be of a very cumbersome log (a great percentage of which might probably be waste when cut up), would be avoided, and the necessary refuse and waste out of every log so cut up would be utilized on the spot as fuel for the portable engine."

Colonel Burton states he has seen this actually practised in the Northern forest of Hampshire and in the large woods in Cumberland and Westmoreland.

Lieutenant-Colonel Smalley, R.E., Executive Engineer, Chingleput, states that—

"Thirty-three feet or large beams are not obtainable from the Forest Department, and that Government timber cannot be relied upon as free from flaws when cut up, and that scantlings to order cannot be obtained."

He adds—

"As local markets do not present him with such difficulties, he prefers the local market."

Major Drake-Brockman, R.E., Executive Engineer, Buckingham canal, states—

"The Forest Department have made no arrangement for sawing up timber; they supply at Rs. 2-8-0 per cubic foot in log delivered at Madras, i.e., about same price as sound Burmah teak in log, and that Burmah teak is better seasoned."

He recommends—

"Logs being cut up into scantlings required at some central depôt at Madras near the railway station."

Read—the following letter from Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, VI Circle, to the Chief Engineer, Public Works Department, dated Kodaikānal, 10th April 1884, No. 63 T. J. :—

With reference to G.O., No. 761 W., dated 20th March 1884, I have the honor to inform you I do not consider that the changes in the Forest Department and the price of teak has in any way altered the value of the information collected in 1881 and embodied in G.O., No. 2734 W., dated 4th November 1881, and I see no reason to alter the views I expressed in my letter, No. 259 E. W., dated 20th June 1881, when the Superintending Engineer of the then II circle.

2. The amount of timber used by this department is comparatively a small quantity compared with that used by the general public in the country, and I can see no advantage to Government in trying to make the Public Works Department deal direct with the Forest Department, especially as the Forest Department are not in a position to supply what the Public Works Department require, viz., scantlings of seasoned wood.

3. It must be remembered that it is only where workshops are established that logs can be cut up by this department, and even for large works owing partly to reduced establishment (and I may add to a certain extent the requirements of the Account Department) it is but seldom thought advisable to establish a work-yard, purchase logs and make up the wood-work of buildings departmentally. In this circle at present there is not a single workshop, all required wood-work, beams, joists, doors, windows, &c., are supplied by contractor completely finished, and generally by contractors who undertake the whole work, and who make their own arrangements for procuring wood, the same as they do other materials. Government in all their orders have encouraged this system, and I believe they are right in doing so.

4. I believe that the obstacles which have hitherto prevented the Public Works Department from procuring timber from the Forest Department are the same that have prevented the general public from having extensive dealings with them.

They may be summed up as follows :—

Inferior quality of the wood supplied.

High prices.

Forest depôts not being situated in trade centres.

If these drawbacks are removed by the new Forest Department, and if they compete fairly with private dealers, I see no reason why they should not be able to dispose of their available wood at fair prices; and of course if this is done the Public Works contractors will purchase their wood from them, the same as the general public.

The Forest Department must (as other Government departments are supposed to do) be prepared to go into the open market.

Read—the following letter from Captain W. L. C. BADDELEY, R.E., General Superintendent, Public Works Stores and Workshops, to the Secretary to Government, Public Works Department, dated 21st July 1884, No. 489-S. :—

With reference to G.O., dated 20th March 1884, No. 761 W., Public Works, I have the honor to state that the only difficulty in the use of Anaimalai teak is the distance of the nearest wood depôt from any railway station.

2. If the depôt was near to any station, so as to admit of ready inspection and removal to Madras, there seems no reason why the Anaimalai teak should not be utilized in preference to Burmah teak. I have intimated to the Conservator of Forests that the workshops would require 100 tons annually, if the quality and price of Anaimalai teak compared favorably with imported teak.

Read—the following letter from Major J. L. L. MORANT, R.E., Officiating Consulting Architect to the Government of Madras, to the Chief Engineer, Public Works Department, dated Chepāk, 9th May 1884, No. 200 :—

With reference to Public Works G.O., No. 761 W., dated 20th March 1884, regarding the supply of timber from the State forests to the Public Works Department, I have the honor to report that I have lately entered into an arrangement with the Public Works Workshops to supply me with the timber I require. I shall therefore not have a direct interest in the question.

2. But I may state that in endeavouring to obtain a supply from the Forest Department there are many difficulties. A typical case which has just occurred in this division will illustrate some of them. On the 13th of March 1884 I applied to Conservator of Forests, Southern Circle, for ten teak logs, then urgently required. He tried his best to render me every assistance, and wrote to and referred me to the District Forest officer at Coimbatore. The District Forest officer at Coimbatore replied that 10 logs were available, but they must be inspected before selection as their soundness could not be guaranteed, or they must be taken with all risks. I then addressed the Superintending Engineer at Coimbatore asking him to have them examined; he replied that it was impossible at that season (when all the officers were measuring up and paying for work at the close of the official year) to depute an officer. I at length on 22nd April received the intimation from the Superintending Engineer that the logs above referred to are some of those which were inspected for the Vellore jail and rejected in October 1883.

3. I am of opinion, so far as this office is concerned, that the Forest Department ought to have the timber available for sale in Madras. I believe their firewood is sold in Madras retail. Why not their teak timber either in the log or in scantlings? If the timber was made available at certain central and conveniently visited localities, it appears to me to matter little whether the timber be cut into scantlings or not.

4. Owing to the scanty and inferior supply from Burmah, lately, other teak timber has been in great demand. If the Forest Department had had a depôt of timber in Madras, it would have realized a handsome profit.

No. 1843 C.

The papers read above are transferred to the Revenue Department, with advertisement to orders in that department, No. 333, dated 8th March 1884.

2. It would appear from these papers that, if the Forest Department can arrange to establish timber depôts in convenient localities, to maintain at such depôts ample stocks of well-seasoned teak, sāl, and other suitable woods, and to offer the same at the local rates charged by private dealers, officers of the Public Works Department would gladly avail themselves of timber from the State forests.

3. Adverting to paragraphs 11 and 12 of the letter from the Superintending Engineer, II Circle, it is suggested that the Forest Department should send to the Public Works Workshops specimen scantlings of the timbers named by Mr. Rundall, and of other timbers considered likely to prove useful for building purposes.

4. The necessary experiments would then be conducted by the General Superintendent of the Workshops.

12th November 1884.

Order—dated 24th November 1884, Mis No. 5227, Revenue.

Communicated to the Board of Revenue, with reference to paragraph 2 of G.O., dated 8th March 1884, No. 333, with the request that the report therein called for may be submitted without delay, and that the suggestion contained in the above memorandum, paragraphs 3 and 4, may be carried out.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

Resolution—dated 15th December 1884, No. ⁴³¹⁷ Forest 452.

Recorded with reference to Board's Proceedings, dated 25th November 1884, No. 4053, submitting the Conservators' reports to Government.

2. True copy of paragraphs 11 and 12 of Mr. Rundall's letter will be communicated to both Conservators of Forests, with a request that they will arrange for the despatch to the Public Works Workshops of the specimen scantlings of the timber named by the Superintending Engineer, II Circle, and of any other species which they may consider suitable for building purposes.

APPENDIX.

EXTRACT from letter from J. W. RUNDALL, Esq., Superintending Engineer, II Circle, dated 22nd August 1884, No. 165-G.L.

11. In his letter to me the Conservator mentions the following timbers of which large quantities are available in Ganjam :—

- (1) Maddi—*Terminalia tomentosa*.
- (2) Chiriman—*Anogeisus latifolia*. (Is also available from the Kurnool forests.)
- (3) Satinwood—*Chlorozylon swietenia*.

12. An authoritative ruling as to whether these timbers (properly seasoned of course) can be used for public buildings is required.

(True Copies and Extract.)

(Signed) C. F. MACCARTIE,
Acting Sub-Secretary.

Order—dated 17th March 1885, No. 332, Revenue.

Forest, No. 55.

* G.O., 8th March 1884, No. 333.

timber from State forests to the Public Works Department.

With the foregoing proceedings the Board submit the results of the further inquiries ordered by Government to be undertaken * in regard to the supply of

2. The Government regret to find that the matter is left very much as it was in 1881, and that practically nothing has been done to bring the Forest and Public Works Departments into closer relation. The same causes are assigned as before, viz., the inability of the Forest Department to supply timber otherwise than in log, the inconvenient situation of their depôts, the high prices and uncertain quality of the timber, the variable character of the Public Works Department demand, and the short notice usually given. Both Conservators of Forests deprecate the formation of large depôts for the sale of timber departmentally. Major Walker observes that the department has been busy since the reorganization in the selection and settlement of reserves, which must precede systematic operations for the supply of large quantity of timber departmentally; and Mr. Gamble avows his preference for intermediate agency between Government and the consumers.

3. The Government are prepared to admit that the Forest Department, short-handed as it is and must for some time be, is at present fully occupied with demarcation and settlement of State forests and with the organization of systematic working, and that attempts to form large depôts of prepared timber for departmental sale must for the present be deferred. It must also be recognized that, while the chief demand

in the Public Works Department is for teak, the stock of that wood in the State forests is very small, and it is only in a very few localities that competition can be maintained with Burmah teak.* The impossibility of supplying Indian teak to meet even the Public Works Department demand for that timber throughout the greater part of the country is incontestable.

4. But as regards other timbers, the Forest Department should be able to meet all demands, and the use of these woods in public buildings should, in the opinion of Government, be encouraged. It will be considered in the Public Works Department whether it is possible to issue specific orders either limiting the use of teak or prescribing that of other timbers in particular classes of buildings or of work; and the Government desire that information as to the results of the experiments initiated on timbers of certain kinds in the Presidency Workshops may speedily be made available.

5. Whenever possible, special arrangements to meet requirements which are of regularly recurring amount or which can be foreseen—such as those for the supply of sâl timber from Ganjam to the Public Works Department in the Godâvari district—should be effected between the two departments, and in such cases it must be understood that the Public Works officers must take the timber, if of stipulated kind and quality, whether it is immediately required at the time of supply for works in hand or not. In such cases the timber will, it is to be understood, be brought out of the forests and delivered by the Forest Department at a depôt or other place to be agreed upon between the two departments.

6. Though the Government are not disposed to press at present for the establishment of additional depôts for the sale of Government timber or for any great increase of stock in existing depôts, they desire that the attention of the Forest officers be steadily directed to the measures suggested by Major Walker, viz., the improvement of the methods of conversion and transport, and the better location of the depôts with reference to the requirements of trade. Lists of kinds of wood in stock, sizes, and prices should be prepared at short and regular intervals and circulated as widely as possible. The Government trust that all departments concerned will do their utmost to give effect to the wishes of Government in the matter.

(True Extract.)

(Signed) M. HAMMICK,
for Secretary to Government.

ORDER—dated 9th April 1885, No. 860 W., Public Works.

Communicated to officers of the Public Works Department, whose special attention is drawn to the strongly-expressed desire of Government that timber of indigenous growth should in future be more largely utilised than has hitherto been found practicable; the agency of the Forest Department being employed for obtaining supplies.

2. With the view of giving effect to this policy, it will be necessary for Public Works officers to restrict the use of Burmah teak within the narrowest possible limits. That timber should be used only in first-class buildings, and on works, such as lock gates, sluice shutters, &c., for which teak of large size and superior quality is necessary.

3. Each divisional officer will now be authorised to obtain from the Forest Department timber of suitable kinds, sufficient to meet his probable requirements for five years. At the commencement of the working season, every divisional officer will indent on the nearest Forest officer for the timber required in his division, specifying the description of timber and the number and approximate sizes of the logs required. After the first year, the indent would be limited to the balance required to supply the deficiency in the reserve stock. The timber will be delivered by the Forest officer at a depôt, or other place agreed on between the two departments. After delivery, the price will be settled by mutual agreement.

4. Effect should also be given, as early as possible, by the General Superintendent, Public Works Workshops, to the order to undertake experiments on timber of certain kinds, to be supplied by the Conservators of Forests; the results being reported to the Chief Engineer, by whom they will be circulated for general information.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Consulting Architect to Government.
" Superintendent, Madras Harbour Works.
" Examiner, Public Works Accounts.
" Revenue Department.