M.R.O. 1—77,006—8-6-37.

(1) Number of pages 116

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1049 Press Mis.

Dated 13-4- 1864.

Not to be folded or roughly handled

42

Proceedings of the Madras Government, Public Works Department, 13th April 1864.

No. 322. Read the following letter from F. L. MONCRIEFF, Esq., Civil Engineer, to Colonel C. A. ORR, R. E., Secretary to Government, Department of Public Works, dated Madras, 12th February 1864:—

SIR,

1. In compliance with your instructions, I have the honor to submit the following Memorandum on the subject of the proposed Workshops in connexion with the Public Works Store Department of this Presidency.

2. This Memorandum would be more satisfactory if I had sufficient means to ascertain to what extent the Workshops and Stores were likely to be indented on by the Executive Officers in the Provinces. My enquiries on this subject have failed to elicit more than this, that if a Workshop and General Mechanical Store were established at Madras, it would to a large extent be made available for supplying mechanical appliances and constructions which are not generally used now, because of the great difficulty of procuring them.

3. I have talked the matter over with the Mechanical Engineer at Abercrombie's Battery, and with two or three Officers of the Department, who have had considerable up-country experience. The result of this, as well as of my own experience as Superintendent of the Dowlaishwram Workshops, lead me to the conclusion that the establishment of a small Foundry and of a Workshop at Madras in connexion with a well selected stock of simple and handy machines and of materials ordinarily used in construction, would be a great boon to the Officers of the Department both at the Presidency and in the Provinces.

4. What seems to be necessary for the full development of this scheme is—

I. A small Foundry capable of producing castings, say, 2 tons weight. Work of this kind is now done at the Mint, but it would be more convenient if this scheme is carried out to concentrate all the works at one place.

II. Carpenters, Fitters and Smiths' Shops.

III. Vertical and Circular Steam Sawing Machinery.

IV. Storage for Scientific Instruments.

V. Storage for iron and other materials, and for ordinary implements used in the Department.

VI. Space sufficiently large to permit the engines and machines now at Abercrombie's Battery being erected, so that the several parts may be kept together, and the engines and machines themselves be at all times ready for work or use.

5. It appears to me that the most convenient form of buildings is that of a quadrangle, as shown on the accompanying sketch. The dimensions given to the Workshop are intended for the accommodation of the number of Artificers likely to be employed.

The machinery at present stored at the Battery occupies an area of about 5,468 square feet. For this machinery consisting of Steam Engines, Pumps, Cranes, &c., I have provided about the same space. The Brick Machines and others of a heavy and coarse description, I would propose to leave at the Battery.

The iron and other materials and small stores consisting of the various tools and implements used in the Department are now stored at Chepauk, and occupy an area of about 2,142 square feet. I have provided for these an area of 2,526 square feet.

The surveying and other scientific instruments are also stored at Chepauk in a space of about 2,131 square feet. The area provided for these is about 2,675 square feet.

It is proposed to construct a small two-storied building in the centre of the quadrangle for Offices.

6. In order to make the buildings as cheap as possible, it is proposed that instead of heavy solid walls of the ordinary thickness, all round, it shall consist of lines of pillars 15 feet high, with arches between.

The width of the buildings to be 25 feet, and the pillars to be 10 feet apart from centre to centre. The arched spaces between the pillars can be filled in with single brick walls, except at the Carpenters and Smiths' shops, which are proposed to be left open.

A verandah 10 feet wide to be constructed all round on each side, as shown on the sketch.

Simple king-post trusses to carry the tiled roof will rest on the pillars.

The buildings can be lighted with windows as shown on the sketch, or by ridge ventilators constructed of "Hartley's patent obscure glass" or by both.

A gateway 14 feet wide is proposed on each of the two sides of the quadrangle.

In the Machinery Store a travelling crane will probably be necessary.

A suitable railing or wall must be erected around the building.

The situation of the buildings to be decided on hereafter.

The probable cost of the two buildings proposed to be erected this year is Rupees 24,350.

7. The working machinery could be selected from that in store here, and from what could be spared from the Workshops at Bezwadah and Dowlaishweram, so that under this head there would probably be no outlay beyond the cost of carriage and packing.

The construction and repairs of the scientific instruments belonging to the Observat ory, the Public Works and Revenue Departments, are now done at Chepauk by Mr. Doderet at the total cost of Rupees 370 per month; besides repairing these instruments, there is I understand a great deal of Carpenters' and other sorts of work occasionally done by him. All this might be done at the proposed Workshops, and Mr. Doderet, who I believe is a skillful Mechanic, might be placed in charge of the Fitters and Turners, which would relieve him from the heavier and coarser part of his own particular class of work.

8. It is not proposed to erect the whole of these buildings at the present time, but only so much of it as will be necessary for the Workshop and Scientific instrument Departments. These portions are drawn in black and red ink on the sketch. The other portions can be added from year to year as funds become available.

For Offices a part of the Scientific instrument Store and Fitters' shop is proposed to be partitioned off for the present.

A temporary railing will be necessary along the sides not built up this year.

The probable cost of the portion proposed to be built at present is Rupees 24,350, of this sum Rupees 15,770 are for Workshops, and Rupees 8,580 for Scientific instrument Store.

I may here remark that the roof of the building the scientific instruments are now placed in, is much out of repair, and I believe an Estimate of Rupees 3,000 has been framed for repairing it, which sum I would suggest should be used on the proposed new store.

9. The present Store Establishment is as follows:—

	Rs.	A.	P.
1 Superintendent	442	9	4
1 Mechanical Engineer	200	0	0
1 Store-keeper	90	0	0
1 Assistant Store-keeper	60	0	0
1 Clerk	80	0	0
12 Lascars	72	0	0
	894	9	4
1 Mathematical Instrument-maker and Apprentices	370	0	0
Total monthly expenditure ...	1,264	9	4

10. The Establishment I consider would be necessary for both Workshop and Store Departments is as follows:—

	Rs.	A.	P.
1 General Superintendent { Pay Rs. 600 / Carriage hire „ 60 }	660	0	0
1 Foreman, Fitters and Turners	200	0	0
2 Maistries	80	0	0

	Rs.	A.	P.
1 Draughtsman and Estimate-maker	50	0	0
1 Store-keeper	100	0	0
1 Assistant do.	40	0	0
1 Book-keeper	60	0	0
1 Assistant do.	30	0	0
1 Muster Writer	15	0	0
2 Office Peons	14	0	0
3 Day do. (Gate, &c.)	21	0	0
1 Duffadar and 3 night Peons	30	0	0
12 Store Lascars	72	0	0
	1,372	0	0
Add the amount paid to Mathematical Instrument-maker... ...	370	0	0
	1,742	0	0
Deduct present Store Establishment... ...	1,264	9	4
Excess of proposed Establishment	477	6	8

This Establishment is proposed on the supposition that the Workshops will be fully engaged, of course if they are not the Establishment will be proportionately reduced.

11. This letter is so long already that I am unwilling to enter further on the advantages likely to arise from the formation of the Workshops proposed, but this matter is of less consequence, as I am aware that you are yourself perfectly familiar with the whole subject.

I would only further remark that I think the Establishment should be directly under the orders of the Secretary to Government in the Public Works Department, and that the shops should be available for the execution of private work when not employed for public purposes.

12. In conclusion I have only to add, that Captain Beckley, R. E., allowed the approximate Estimates to be made out in his Office, and as directed this Memorandum has been drawn up in consultation with Mr. Fraser, C. E.

No. 323. ORDER THEREON, 13th April 1864, No. 1,049.

1. The expediency of forming a Store and Workshop at the Presidency, in connection with the Public Works Department, appears to have been first brought forward by Colonel Lawford, when officiating as Chief Engineer, in a letter dated 25th November 1858, No. 5,786, wherein he pointed out that much valuable machinery, for want of suitable accommodation, had long been lying exposed to the weather, and that great inconvenience was felt from the inability of the Department at Madras to set up and examine machines properly before they were sent up-country, which was often done in order that they might be better taken care of there than was possible at Madras.

2. Before passing orders on this letter, the Government desired* to be furnished with details, and in obedience to this order the Chief Engineer addressed Government, and explained at full length how, since the extension of the scale on which Public Works were being carried on, large quantities of tools, and apparatus of all kinds, and delicate as well as expensive machinery, which all required extensive stowage space and unremitting attention, were being received, and, for want of covered accommodation and an Establishment for their care, were left exposed and could not be properly taken charge of. He submitted the details of such buildings and Establishment as were in his opinion required to enable the Department satisfactorily to undertake the custody and issue of machinery and stores, and to form the "nucleus," as he expressed it, of a small Public Works Presidency Workshop. The Estimate for the buildings amounted to Rupees 61,000, and the cost of Establishment to Rupees 1,079-8-0, subsequently increased to Rupees 1,202-8-0 per mensem.

* Proceedings No. 10 of 3rd January 1859.

Mr. Bourdillon to Colonel Yule, 2nd May 1859, No. 1,014.

3. The Government on this concurred in all that the Chief Engineer had urged, and approving of his propositions, recommended them for the sanction of the Government of India, stating that "they were quite satisfied from the papers that had come before "them that the plan of a separate Work and Store Yard for the Public Works Department at "the Presidency was quite necessary." In reply, the Government of India, recognizing* "the necessity of having "a separate Store and Workshop for the custody of store, "belonging to the Public Works Department," sanctioned† the Estimate and Plan; and the cost of the proposed Establishment in connection with it was subsequently‡ sanctioned in the Financial Department.

* Colonel Yule to Mr. Bourdillon, 4th June 1859, No. 3,744.

† Proceedings of Government, 25th July 1859, No. 1,787.

‡ Proceedings of Government, dated 14th December 1859, No. 2,905.

4. The Estimate Rupees 61,000 was accordingly entered in the next and succeeding Budgets, and contracts for the building were called for. Of the tenders made, the only one thought to be sufficiently reliable was for Rupees 68,721 which was sanctioned, but on the tenderer for the contract having been found untrustworthy a revised Estimate of Rupees 76,390 was sanctioned, and the work ordered to be performed by the then Civil Architect. Indents for machinery specially for the shop were sent to England and the articles have been duly received. That the buildings have not been erected and the Workshop established, can be attributed only to the head of the Department having been so often changed during the last four years and to the urgency of demands for money for pressing public improvements elsewhere.

Proceedings of Government, 1st December 1859, No. 2,799.

Proceedings of Government, 3rd January 1860, No. 1.

5. The necessity of a Store and Workshop at the Presidency attached to the Public Works Department having been so fully admitted both by this Government and the Government of India, and by the Secretary of State, it is needless to do more than remark that the "necessity" continues as urgent as ever; large quantities of tools and scientific instruments being now stored partly in an old leaky building at Chepauk and partly in temporary sheds at Abercrombie's Battery, where also is lodged, under inflammable, temporary, and indifferent shelter, or none at all, machinery to an immense value, out of the ready reach of the Officer in charge of it, who consequently cannot exercise proper control over the Mechanical Engineer and the Artificers or Lascars or other workmen who are supposed to be engaged in keeping the machinery clean, or in making the minor repairs that the means at their disposal enable them to effect.

6. This inability to make rep airs amounting to anything like re-construction of parts, is a very serious matter, for at present machines when damaged to any extent, must either be laid aside as useless, or the broken parts be sent to the Mint where aid has always been readily afforded hitherto, but cannot be looked for as a right. Is is obviously anomalous that the Public Works Department should have to look to Establishments connected with other Departments for aid in a branch of mechanical engineering so closely pertaining to its appropriate duties as the repair or re-construction of parts of its own machinery. The present practice is inconvenient as well as unprofessional, and it appears advisable that no time should be lost in carrying out the scheme already so thoroughly discussed and approved of. A Workshop is more than ever required at the Presidency, since, under the new constitution of the Department, the Workshop attached to the Presidency District Engineer, has been broken up, and since it has been resolved not to establish one at Dowlaishweram on the extensive and complete scale at one time proposed.

7. A large Workshop at Dowlaishweram might have partially supplied the want of an Establishment of the kind; but owing to its position, it never could have been resorted to by the Department generally, as a Workshop centrically located at Madras is sure to be.

8. The Governor in Council, considering it in every way desirable that a substantial building for a Store and Workshop with Foundry, &c., should be erected at the Presidency, in connection with the Public Works Department, and being most anxious that no time should be lost in erecting these buildings, will be prepared to allot for the purpose, from the Reserve Fund of

* Government Order, 3rd January 1860, No. 1.

1864-65, the amount of the Estimate already* sanctioned Rupees 76,390, or such portion of it as may be necessary for the year's operations.

9. The Store should be large enough to contain all the machinery which is now lying at Chepauk and at Abercrombie's Battery, and should be so arranged as to admit of each machine being seen and inspected.

10. The Superintending Engineer, 4th Division, will be requested to prepare in communication with the Secretary to Government, Public Works Department, a suitable plan for the necessary buildings; and to report what portions of the estimated cost will be required for expenditure during 1864-65.

11. As Mr. Moncrieff has, under the orders of the Secretary of State, returned to India, he will be retained at Madras to superintend the Workshop, and to give his assistance to the Officers employed on the Sewage and Water Supply schemes, who will be glad to have his valuable assistance in planning the mechanical details of the arrangements they will have to propose and provide for.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 4th Division.
To F. L. Moncrieff, Esq.
To the Store Department.
" Controller and Auditor of Public Works Accounts.
" Accountant General.

Exd. S. T. Augustin.

Madras 12th February 1864.—

To

Colonel C. A. Orr R E

Secretary to Government

Department of Public Works

Madras.

Sir.

1 In compliance with your instructions, I have the honor to submit the following Memorandum on the subject of the proposed Workshops in connexion with the Public Works Store Department of this Presidency.

2 This Memorandum would be more satisfactory if I had sufficient means to ascertain to what extent the Workshops and Stores were likely to be indented on by the Executive Officers in the Provinces. My enquiries on this subject have failed to elicit more than this, that, if a Workshop and general Mechanical Store were established at Madras, it would to a large extent be made available for supplying Mechanical appliances and constructions which

are not generally used now - because of the great difficulty of procuring them,

3. I have talked the matter over with the Mechanical Engineer at Abercrombys Battery - and with two or three Officers of the Department - who have had considerable up-country experience. The result of this - as well as of my own experience as Superintendent of the Dowlaishwaram Workshops - lead me to the conclusion that the establishment of a Small Foundry and of a Workshop at Madras in connexion with a well selected Stock of simple and handy machines and of Materials ordinarily used in construction would be a great boon to the Officers of the Department both at the Presidency & in the Provinces.

4. What seems to be necessary for the full development of this scheme is —

I A Small Foundry capable of producing castings say two tons weight - work of this kind is now done at the Mint, but it would be more convenient if this scheme is carried out to concentrate all the works at one place.

II Carpenters - Fitters - and Smiths' Shops.

III Vertical and Circular Steam Sawing Machinery.

IV Storage for Scientific Instruments.

V Storage for Iron and other Materials, and for ordinary implements used in the Department.

VI Space sufficiently large to permit the Engines & Machines now at Abercrombys Battery being erected, so that the several parts may be kept together, and the Engines and Machines themselves

be at all times ready for Work or use.

5. It appears to me that the most convenient form of Buildings is that of a quadrangle - as shown on the accompanying Sketch - The dimensions given to the Workshop are intended for the accomodation of the number of artificers likely to be employed.

The Machinery at present stored at the Battery - occupies an area of about 5,468 square feet. For this Machinery consisting of Steam Engines - Pumps - Cranes &c - I have provided about the same space. The Brick machines and others of a heavy & coarse description - I would propose to leave at the Battery.

The Iron and other Materials & Small Stores consisting of the various tools and implements used in the Department are now stored at Chepauk - and occupy an area of about 2,142 square feet. I have provided for these an area of 2,526 square feet.

The Surveying & other Scientific Instruments are also stored at Chepauk in a Space of about 2,131 square feet - The area provided for these is about 2,675 square feet.

It is proposed to construct a Small two storied building in the centre of the quadrangle for Offices —

6 In order to make the buildings as cheap as possible, it is proposed that instead of heavy solid walls of the ordinary thickness - all round - it shall consist of lines of Pillars 15 feet thick - with arches between. The width of the buildings to be 25 feet —

and the Pillars to be 10 feet apart from Centre to Centre.

The arched Spaces between the pillars can be filled in with single brick walls — except at the Carpenters & Smiths Shops — which are proposed to be left open.—

A Verandah 10 feet wide to be constructed all round on each side — as shown on the Sketch.—

Simple King-post trusses to carry the tiled roof will rest on the pillars.

The Buildings can be lighted with Windows (as shown on the Sketch — or by ridge ventilators constructed of "Hartleys patent obscure glass" or by both.

A Gateway 14 feet wide is proposed on each of the two sides of the quadrangle.

In the Machinery Store a Travelling Crane will probably be necessary.

A suitable railing or Wall must be erected around the building —

The situation of the buildings to be decided on hereafter.

The probable cost of the two buildings proposed to be erected this year is Rupees 24,350. 0. 0.

7, The working machinery could be selected from that in Store here — and from what could be spared from the Workshops at Bazoodah & Dowlaishwaram so that under this head there would probably be no outlay beyond the Cost of carriage and packing.

The construction and repairs of the Scientific Instruments belonging to the Observatory the Public Works & Revenue Departments — are now done at Cheapauk by Mr. Dodert — at the total cost of Rupees 370-0-0 per Month — Besides repairing these instruments there is I understand a great deal of Carpenters and other sort of work occasionaly done by him. All this might be done at the proposed Workshops. and Mr Dodert who I believe is a Skilful Mechanic might be placed in charge of the Fitters and Turners — which would relieve him from the heavier and coarser part of his own particular class of work.

8, It is not proposed to erect the whole of

these buildings at the present time — but only so much of it as will be necessary for the Workshop and Scientific Instrument Department — These portions are drawn in Black & Red ink on the Sketch — The other portions can be added from year to year as funds become available —

For Offices a part of the Scientific Instrument Store & Fitters Shop is proposed to be partitioned off for the present,

A temporary railing will be necessary along the Sides not built up this year.

The probable cost of the portion proposed to be built at present is Rupees 24350 — of this sum Rupees 15,770 — are for Workshops, and Rupees 8,580 for Scientific Instrument Store,

I may here remark that the roof of the Building the Scientific Instruments are now placed in, is much out of repair and I believe an Estimate of Rupees 3000-0-0 has been framed for repairing it — which sum I would suggest should be used on the proposed new Store —

9. The present Store Establishment is as follows.

1	Superintendent	442	9	4
1	Mechanical Engineer	200	0	0
1	Store Keeper	90	0	0
1	Assistant Store Keeper	60	0	0
1	Clerk	30	0	0
12	Lascars	72	0	0
		894	9	4
1	Mathematical Instrument Maker & Apprentices	370	0	0
	Total Monthly expenditure Rupees	1264	9	4

10 The Establishment I consider would be necessary for both Workshop & Store Departments is as follows.

1	General Superintendent, Carriage Pay Rs 600-0-0	660	0	0
1	Foreman Fitters & Turners	200	0	0
2	Maistrys	80	0	0
1	Draftsman & Estimate Maker	50	0	0
1	Store Keeper	100	0	0
1	Asst do	40	0	0
1	Book Keeper	60	0	0
1	Asst do	30	0	0
1	Master Millwr	15	0	0
2	Office Peons	11	0	0
3	Day do (Sakt)	21	0	0
1	Daffidar & 3 night Peons	30	0	0
12	Store Lascars	72	0	0
		1372	0	0
	Add the amount paid to Mathematical Instrument Maker	370	0	0
		1742	0	0
	Deduct present Store Establishment — — —	1264	9	11
	Excess of proposed Establishment Rupees —	477	6	8

This Establishment is proposed on the supposition that the Workshops would be fully engaged — If contrac if they are not — the Establishment will be proportionately reduced.

11 This letter is so long already that I am unwilling to enter further on the advantages likely to arise from the formation of the Workshops proposed, but this matter is of less consequence — as I am aware that you are yourself perfectly familiar with the whole subject.

I would only further remark, that I think the Establishment should be directly under the orders of the Secretary & Government in the Public Works Department, and that the shops should be available for the execution of private work when not employed for Public purposes.

12 In conclusion I have only to add — that Captain Buckley R.E. allowed the approximate estimates to be made out in his Office, and as directed this Memorandum has been drawn up in Consultation with Mr. Fraser &c.

I have the honor to be
Sir
Your Most obedient Servant
W. Emerson
Civil Engineer D.P.W.

P.W. 1864 Depte
Rect. of Govt. for April
No. 633

From Mr. Mancieff
Civil Engineer.

Dated 12 } Feby
Received 13 }

81

Submitting a Memo.
on the subject of the pro-
-posed Workshops in connec.
-tion with the P.W. Store
Depts of the Madras
Presidency.

No. 1049 - 13th April/64.

No. 322

c. 24 Feby/64 R. 2nd Quarter

25th November 1858, No. 5786

Memorandum

Mr. Chapman's remarks on the
Public Works Store and Workshop
at the Presidency. He suggests
a Store and Workshop at the
Presidency in connection with the
Public Works Department esta-
-blishment at Salem.

Mr. Chapman's proposition would
be for the Presidency of forming
the establishment of Salem
for the manufacture of
Agricultural implements
and the repairs of
Machinery.

The site he has selected is
in the vicinity of the Salem
Jail & the Government
Bungalow on the Hill.

Mr. Chapman's proposition
is forwarded by Colonel Lawford,
when Officiating as Chief Engineer
in a letter dated 28th November
1858 No. 3786, wherein he points
out the much valuable machinery
for want of suitable accommodation
had long been lying exposed to
the weather, and that great incon-
=venience was felt from the
inability of the Department at
present to carry on its operations
with any degree of economy
Madras
25th November 1858.

Madras to set up and examine Machinery properly before they Rest to be sent up Country, which they often were in order that they might be better taken care of there than was possible at Madras.

Before passing orders on this letter the Government desired to be furnished with details, and in obedience to this Order the Chief Engineer addressed Government, and explained at full length how, since the extension of the scale on which Public Works were being carried on, large quantities of tools, and apparatus of all kinds and delicate as well as expensive Machinery which all required extensive storage space and unremitting attention, were being received, and, for want of covered accommodation and an Establishments for their care, were left exposed

× Proc. No 10 of 3d Aug 1859

exposed and could not be properly taken charge of. He submitted the details of such buildings and Establishment as were in his opinion required to enable the Department satisfactorily to undertake the custody and issue of Machinery and Stores and to form the "nucleus" as he expressed it, of a small Public Works Residency Workshop. The estimate for the buildings amounted to Rupees 61,000 and the cost of Establishment to Rupees 1,079-8- subsequently increased to Rs 1,209-8 per Mensem.

Mr Bourchier to Colonel Yule 2nd May 1859 No 1014

The Government on this concurred in all that the Chief Engineer had urged, and approving of his proposition recommended them for the sanction of the Government of India stating that they are quite satisfied from the papers that have

25th November 1858, No 5786

"have come before them that the plan
"of a separate Work and Store Yard
"for the Public Works Department
"at the Presidency is quite necessary."
In reply the Government of India
recognizing "the necessity of hav-
"ing a separate Store and Work-
"shop for the custody of Stores
"belonging to the Public Works
"Department", sanctioned the
Estimate and plan, and the
cost of the proposed Establishment
in connection with it was sub-
sequently sanctioned in the Fi-
nancial Department.

Colonel Yule to Mr Bourdillon 4th June 1859 No 3744.

× Procs of Govt 25th July 1859 No 1787
* Do 14th Dec. 1859 No 2905.

The Estimate Rupees 61,000
was accordingly entered in the
next and ~~succeeding~~ succeeding
Budgets, and Contracts for the
Building were called for. Of
the tenders made the only one
thought to be sufficiently reliable
was for Rupees 68,721 or Rs 7,721
in

Procs of Govt 14th Dec 1859 No 2799

Procs of Govt 3d Jany 1860 No 1.

Secretary of State's Despatch 14th April 1860 No 33

in excess of the Estimate, and but
for this circumstance the Workshop
would now be in existence. The
additional sum was however
sanctioned, and on the tenderer
for the Contract having been
found untrustworthy, a revised
Estimate of Rupees 76,390 was
sanctioned and the work ordered
to be performed by the then Civil
Architect. Implements for Ma-
-chinery specially for the Shops
were sent to England, and
intimation in due course was
received that they would be com-
-plied with, as they have since
been. That the Buildings have work
been erected and the Workshops
established can be attributed
only to the head of the Depart-
-ment having been so often
changed during the last four
years, and to the urgency of
demands

demands for money for pressing public improvements elsewhere.

The necessity of a store and workshops at the Presidency attached to the Public Works Department having been so fully admitted both by the Government and the Government of India and by the Secretary of State, it appears to be needless to urge any thing more on the subject beyond simply remarking that the necessity continues as urgent as ever, as large quantities of tools and scientific instruments are now stored partly in an old leaky building at Chetpauk and partly in temporary sheds at Abercrombie's battery, where also is lodged, under temporary and indifferent shelter, or none at all, machinery to an immense value, out of ready reach of the

Officer

Officer in charge of it, and who consequently cannot exercise proper Control over the Mechanical Engineer and Artificers or Lascars, and other Government who are supposed to be engaged in keeping the Machinery clean or in repairing the minor repairs that the means at their disposal enable them to effect.

This inability to make repairs amounting to any thing like re-construction of parts is a very serious matter, for Machines are sometimes landed in a damaged state and many of those which have been sent out to the Districts, or have been in use, have sustained injury in transit or by dint of wear, and if these injuries are of any extent, the Machines must either be laid aside as useless, or the broken

parts

parts be sent to the Mint, unless aid has always been readily afforded hitherto, but cannot be looked for as a right. It is obviously anomalous that the Public Works Should have to look to Establishments connected with other Departments for aid in a branch of Mechanical Engineering so closely pertaining to its appropriate duties as the repair or reconstruction of parts of its own Machinery. The present practice is inconvenient as well as unprofessional and disadvantageous, and it appears advisable that no more time should be lost in carrying out the scheme already so thoroughly discussed and approved of. A Workshop is now more than ever required at the Presidency, since under the new Constitution of the Department, the Workshop attached to the Presidency District Engineer has been broken up

up, and since it has been resolved by Government not to establish one at Doulaishweram on the completed scale at one time proposed.

As Mr. Moncrieff had, under the orders of the Secretary of State returned to India, he may with great advantage be retained at Madras to Superintend it and to give his assistance to the Officers employed on the Storage and Water supply scheme, who will be glad to have Mr. Moncrieff's valuable assistance in planning the Mechanical details of the arrangements they will have to propose, and provided for a Workshop at Doulaishweram, might have partially supplied the want of an Establishment of the kind, but owing to its position, it never could have been resorted to by the Department generally as a Workshop centrically located at Head Quarters at Madras is. The ordinary demands for fittings for buildings at Madras itself is sufficient to give employment to a large number of artificers

25th November 1858, No. 5786

Artificers in wood and metal, and it is purely better to have the work done in a Shop connected with the Department, than to transfer it as has been proposed, to the Gun Carriage Manufactory

Accompanying this is a Mem.ᵈᵘᵐ and plan prepared by Wᵐ. Morrieff, in communication with the Executive Engineer of the Presidency and Mess.ʳˢ Fraser and Kennedy, and the undersigned would suggest that the approval of the Government be given generally to the scheme, in order that, in communication with the undersigned and Wᵐ. Morrieff, the Superintending Engineer may have a well considered plan prepared in anticipation of a Grant of Say, Rupees 30,000 from the ensuing Year's Reserve for the Commencement of the Buildings after 1ˢᵗ. Augᵗ.

Lieut.ᵗ
23ʳᵈ. Febʸ. 64.

Lieut.ᵗ Col.ᵒ R.E.
Secretary to Govᵗ. P.W.D.

Recᵈ. 24th. Feby. 1864 - Rep. 2nd. March.

No. 1049

Public Works Departᵗ.

Proceedings of the Madras Government
dated 23 April 1864

Under date the 13th. Ultᵒ.

Read the following from Wᵐ. Morrieff Civil Engineer.

Submitting a Memorandum on the subject of the proposed Workshops in connection with the P.W. Store Departᵗ. of the Madras Presidency.

T.& D. 12th. February 1864.

(1)

The expediency of forming a Store and Work shop at the Presidency, in connection with the P.W.D, appears to have been first brought forward by Colonel Lawford, when Officiating as Chief Engineer, in a letter dated 25th. November 1858, No. 5786,

wherein he pointed out that much valuable machinery, for want of suitable accommodation, had long been lying exposed to the weather, and that great inconvenience was felt from the inability of the Department at Madras to set up and examine machines properly before they were sent up country, which they were often desirous in order that they might be better taken care of there than was possible at Madras. Before

† Pro: No 10 of 3d. Jany 1859

2 ff

2 Before passing orders on this letter, the Govt. + desired to be furnished with details, and in obedience to this order the Chief Engineer addressed Govt., and explained at full length how, since the extension of the scale on which Public Works were being carried on, large quantities of tools, and apparatus of all kinds, and delicate as well as expensive machinery, which all required extensive storage space and unremitting attention, were being received; and, for

for want of covered accommodation, and an establishment for their care, were left exposed and could not be properly taken charge of. He submitted the details of such building and establishment as were in his opinion required to enable the Department satisfactorily to undertake the custody and issue of machinery and stores, and to form the "nucleus" as he expressed it, of a small Public Works

Presidency

Mr Bamfield to Coll
dated 2nd May 1839
No 1014

Presidency Workshop.

The estimate for the buildings amounted to Rs. 61,000, and the cost of establishment to Rs. 1079-8—, subsequently increased to Rs. 1209-8— per mensem.

3- The Government on this concurred in all that the Chief Engineer had urged, and approving of his propositions, recommended them for the sanction of the Government of India, stating that "they were quite satisfied from the papers

"that had come before
"them that the plan
"of a separate work
"and Store Yard for the
"Public Works Department
"at the Presidency" was
"quite necessary" - In
reply the Govt. of India,
recognizing "the ne-
:cessity of having
"a separate Store and
"Workshop for the custody
"of Stores belonging to the
"P.W.D.," sanctioned the
estimate and plan;
and the agent of the
proposed establishment
in connection with it
was subsequently sanctioned
in the Financial De-
partment.

Coll.r Yule to Mr Boundillon
4th June 1859 No. 3744

† Pro: of Govt. 25th
July 1859 No. 1787

* do 14th Decr/59
No. 2948

4 The estimate Rs.
61,000 was accordingly
entered in the next and
succeeding Budgets, and
contracts for the build-
-ings were called for: -
Of the tenders made,
the only one thought
to be sufficiently reliable
was for Rs. 68,721
which was sanctioned,
but on the tenderer
for the Contract having
been found untrust-
-worthy, a revised es-
-timate of Rupees

Pro: of Govt. 1st Decr/59
No. 2799

76,390 was sanctioned, and the work ordered to be performed by the then Civil Architect - Indents for machinery specially for the shops were sent to England and the Articles have been duly received -

Pol. of Govt. 3rd January 1860 - No. 1

That the buildings have not been erected and the Workshop established

established can be attributed only to the head of the Department having been so often changed during the last four years, and to the urgency of demands for money for pressing public improvements elsewhere -

5 The necessity of a Store and Workshop at the Presidency attached to the P.W.D. having been so fully admitted both by this Govt and the Govt of India, and by the Secretary of State, it is needless

to do more than prevent
much of the weather
necessity continues as
urgent as ever. Large
quantities of tools
and scientific instruments
being now stored partly
in an old leaky building
at Chepauk and
partly in temporary
sheds at Abercrombie
Battery; where also
is lodged, under the
flammable, temporary,
and indifferent shelter
or none at all, machi-
nery to an immense
value out of the reach
of the Officer
in charge of it, who
consequently cannot
exercise proper control
over the Mechanical
Engineer and the artificers
or Lascars or other work-
men who are employed
to be engaged in Keep-
ing the machinery
clean, or in making
the minor repairs that
the means at their
disposal enable them
to effect.

6. This inability to
make repairs amount-
ing to any thing

like re-construction of parts, is a very serious matter, for at present machinery when damaged to any extent, must either be laid aside as useless, or the broken parts be sent to the Mint where aid has always been readily afforded hitherto, but cannot be looked for as a right. It is obviously anomalous that the Public Works Dept should have to look to establishments connected

connected with other Departments for aid in a branch of mechanical engineering so closely pertaining to the appropriate duties of the repair or reconstruction of parts of its own machinery. The present practice is inconvenient as well as unprofessional and it appears advisable that no time should be lost in carrying out the scheme already so thoroughly discussed and approved of. A Workshop is more than ever required at

the Presidency, since
under the new con-
-stitution of the Depart.
the workshop attached
to the Presidency Distt
Engineer has been
broken up, and since
it has been resolved
not to establish one at
Vandaiseluveram on the
extensive and complete
scale at one time
proposed

7th A large Work-
-shop at Vandaiseluveram
might have partially
supplied the want of
an

-ain establishments of
the Road-cart service,
to the Presidency, it never
could have been
-ended to by the Depart.
generally as a Work-
shop centrically located
but Madras is the
the only

8th The Governor in
Council, considering
that in every view desirable
that a substantial build
-ing for a Store and
Workshop with Boundary
Wall should be erected
at the Presidency, in
connection with the Pub.
lic Works Depart. and

and being most anxious that no time should be lost in erecting these buildings, I will now proceed to Allot for the purpose, from the Revenue Fund of 1864/65, the amount of the Estimate already Sanctioned No. 76, 390, or such portion of it as may be necessary for the year's operation

9th. The Store should be large enough to contain all the machinery which is now lying at

J. O. 3rd Jany/60
No 1

43

at Chepauk and at Abercrombies Battery, and should be so arranged as to admit of each engine being seen and inspected.

10th. The Superintending Engineer 4th Div. will be requested to prepare in communication with the Secretary to Govt. Revenue Board, a suitable Plan for the necessary buildings; and to report what portion of the estimated cost will be required for expenditure

during 1864/65.

Mr. Mowcroft has, under the orders of the Secretary of State, returned to India he will be retained at Madras to superintend the Workshops and to give his assistance to the Officers employed on the Railway and water supply schemes, who will be glad to have his invaluable advice obtained in planning the mechanical details

details of the arrange
ments they will have
to propose and provid

The Superintendent
of Stores
Coach W
Accts

Public Works Dept.

Despatch 14th April

21-2-23

46 11
42

(5)

(11)

1864 Despatch
Pub. of Govt. for April

No 1049

Pub: of the Gazette
of 13th April 1864

Letter from Wm
Monerieff C.E. Submitting a
Memorandum on the subject of
the proposed Workshops in con-
nection with the P.W. Store Dept.
of the Madras Presidency.

No 322. 320

dated April 1864 Pr. 6th