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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>667</u>	Press <u>Mis.</u>
<u>353-354</u>	
Dated <u>21-6</u>	<u>18 65</u>

Not to be folded or roughly handled

12

*Proceedings of the Madras Government, Public Works Department,
21st April 1865.*

Read again Circular from the Secretary to the Government of India, Public Works Department, No. 79, dated 10th November 1864, and recorded in Proceedings of Government No. 3,674, dated 22nd December 1864.

No. 353. Read also the following letter from Lieutenant-Colonel T. GREEN-AWAY, Superintending Engineer, 6th Division, to Colonel C. A. ORR, R. E., Secretary to Government, Public Works Department, dated Tanjore, 27th March 1865, No. 2,832.

SIR,

List of levels of the River Harbour at Negapatam.
List of levels at Negapatam reduced to the Great Southern
of India Railway datum.
List of the Railway Company's bench marks at Negapatam.

1. I have the honor to forward the three documents as per margin, illustrative of reduction of levels of the Great Southern of India Railway to mean tide datum.

2. The levels were carefully taken, and the observations on the tide continued during a period from 27th April 1864 to 8th January 1865. This in the quiet water of the river harbour, yet within so very short a distance from the sea, appears sufficient to give as near an approximation as possible to the truth, and from check levels and further observations made by me and under my instructions, I think there is every reason to conclude the following results accurate within a fraction so small as to be quite sufficient for all practical purposes.

Difference between high and low water mark: Ordinary spring tides = 2.34.
Cill of door, Saint Peter's Church = 16.55 + mean tide level.

Cill of 2nd Weep hole, Grave yard = 15.94 + mean sea level.

3. These are fixed bench marks of the Railway Company, and are noted respectively as 140.51 and 139.90 + their datum (an imaginary one).

4. It appears, therefore, that by deducting 123.96 (the level of *M. T.* according to the same imaginary datum) from the Great Southern of India Railway's levels, the requisite reference to mean sea level will be effected.

5. I enclose, as formerly instructed, the estimate and plan for tidal gauge for further experiments, but really think it would be mere waste of money to put up an elaborate apparatus which might (or might not) make the present results more correct perhaps by a quarter of an inch.

No. 354. ORDER THEREON, 21st April 1865, No. 1,067.

CIVIL WORKS, No. 64.

1. With the letter recorded above the Superintending Engineer, 6th Division, submits, as directed in G. O. No. 3,480 of 26th November 1863, a plan and estimate for a tide gauge at Negapatam, with the view of reducing the levels furnished by the Great Southern of India Railway Company to the datum of mean sea level. The estimated cost of the apparatus is Rupees 1,430.

2. The Superintending Engineer also submits the results of observations on the rise and fall of the tide, taken near the entrance to the river harbour at Negapatam, from the 27th April 1864 to the 8th January 1865. From these observations it appears that the difference between high and low water mark at Negapatam, in ordinary spring tides, is 2.34 feet, and that the levels furnished by the Great Southern of India Railway Company can be reduced to the datum of mean tide by deducting

Reason to Conclude the following results

Proceedings of the Madras Government, Public Works Department,
21st April 1864.

from them 123.96 feet. Colonel Greenaway states that he has personally checked these results, and that he is quite satisfied of their accuracy.

3. Under these circumstances, the Government are of opinion that the object desired by the Superintendent of the Great Trigonometrical Survey has been attained, and that the construction of an expensive apparatus to determine the mean sea level at Negapatam is unnecessary. In any case, looking to paragraph 8 of the Proceedings* of the Governor General in Council, recorded at the head of this Order, the Government are of opinion that an expense of this nature, even if necessary, should not be borne by the Public Works Department.

4. The attention of the Superintending Engineer is drawn to Chapter XV. Section 3, paragraph 8 of the Code. In his letter above recorded no reference is made to the Order of Government to which it is in reply.

(True Extract.)

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

To the Superintending Engineer, 6th Division.
Financial Railway Department.

Exd. S. T. Augustin.

No 2832 Supg Engineer's Office 6th Div
Tanjore 27th March 1865

From

Lieut Col: J. Greenaway

Supg Engineer 6th Div

To

Colonel C. A. Orr R.E.

Secretary to Government P.W.D.

Sir,

Encs 6.

1 of levels of the River
bank at Negapatam.

1 of levels at Negapatam
referred to the Great Southern
India Railway Datum.

1 of the Railway Company's
bench marks at Negapatam.

I have the honor to forward the
three documents as per
marginal illustration of re-
duction of levels of the
Great Southern of India,
Railway to mean tide datum.

2 The levels were carefully taken
and the observations on the tide contin-
ued during a period from 27th April 1864
to 8th January 1865 - This in the quick
water of the river harbour yet within so
very short a distance from the sea
appears sufficient to give as near an
approximation as possible to the truth
and from check levels and further obser-
vations made by me and under my
instructions, I think there is every
reason to conclude the following results
accurate -

accurate within a fraction so small as
to be quite sufficient for all practical
purposes.

Difference between High and
Low water mark. Ordinary Spring tides =
2.34. Cill of door St Peter's Church =
16.55 + mean tide level.

Cill of 2^d large hole Graveyard =
15.94 + Mean Sea level.

3 These are fixed Bench marks of
the Railway Company and are noted re:
spectively as 140.51 and 139.90 + their
datum (an imaginary one.)

4 It appears therefore that by de-
ducting 123.96 (the level of **MT** according
to the same imaginary datum) from
the Great Southern India Railway's
levels, the requisite reference to
mean Sea level will be effected.

5 I enclose, as formerly instructed,
ed, the Estimate and Plan for Tidal
Gauge for further experiments, but
really think it would be more waste
of money to put up an elaborate
apparatus which might or might
not make the present results more
correct.

correct perhaps by a quarter of an
inch -

I have the honor to be
Sir

Your most obed^t Servant.

W. C. Cawley St. John's B.
Superintendent of the

Civil Works Public Works Dept
 1867
 Proceedings of the Madras Government
 Underdate the 21st April/65

Road again Crenetan from the Sea to the Govt
 of India O.D. No. 79 dated 10th Nov. 1864
 and recorded in Proceedings of Govt No. 3674
 dated 22nd Decr. 1864. Read also the following

From the Supg Engr. 6th Div.
 Forwarding documents illustrating
 various calculations of levels of the
 Great Southern of India Railway to
 mean tide datum

S.I.C. 2nd March/65
 No. 2832

With the letter recorded
 above the Sup. Engineer,
 6th Division, submits, as
 directed in S.O. 3480,
 of 26th Nov. 1863, a plan
 and estimate for a tide
 gauge at Negapatam,
 with the view of reducing
 the levels furnished by
 the Great Southern of India
 Railway Company to the
 datum of mean sea level.
 The estimated cost of the
 apparatus is Rs. 1450.

The Sup. Engineer also
 submits the results of
 observations on the rise
 and fall of the tide, taken
 near the entrance to the
 river harbour at Negapatam,
 from the 27th April 1864 to the
 8th January 1865. From
 these observations it
 appears that the difference

110

20

W.D.

1864
 11/10/64
 The Sup. Engineer
 6th Division

The Secretary to Govt
 6th Division

1864
 11/10/64
 The Sup. Engineer
 6th Division

No. 2832
 6

Forwarding the same with
 illustrative of production
 of levels of the G.S.I.
 Railway to mean tide
 datum

1864-1067-2143 April 1865

1865

1865

between
high and low water
mark at Kegapatan,
in ordinary spring tides,
is 2.34 feet, — and
that the levels furnished
by the St. S. of P. Railway
Co. can be reduced to
the datum of mean tide
by deducting from them
123.96 feet. COT.

Greenaway states that
he has personally checked
these results, and that he
is quite satisfied of their
accuracy.

Under these circum-
stances, the Govt are of
opinion that the object
desired by the Sup^t of
the Great Brit. Survey has
been attained, and that
the construction of an
expensive apparatus to
determine the mean sea
level at Kegapatan is
unnecessary. In any case,
looking to para 8 of the
Pro^t of the Gov. Gen. in C.
recorded at the head of
this order, the Govt are
of opinion that an
expense of this nature,
even if necessary, should

* 10. Nov. 1884.
Circular W. 79

9C
not be borne by the
P.W. Dept. -

The attention of the
Sup. Eng. is drawn to
Chapter XV, section 3,
para 8, of the Code.
In his letter above recorded
no reference is made to
the order of Govt to which
it is in reply.

C.A.B.

To L & Co. of India
To Genl. Dy. Supt.

Dec^r 22nd April.

to 1865 Depoite
 No. of Govt for April

No. 1067

No. of the Algon
 D/21 April 65

Letter from the Supg. Eng.
 6th Dec. Submitting a plan &
 estimate for a tide gauge at
 Nagapattam with the view of
 reducing the levels furnished
 by the Great Southern of India
 Railway Co. to the datum of
 mean sea level. with notes
 thereon.

A. 353. 354.