

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	162	(9)	Press
B.P. No.			Mis.
Dated	22-1-		1876

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
22nd January 1876.*

No. 316. Read the following letter from Lieutenant D. Mc. NEIL CAMPBELL, R.E., Executive Engineer in charge of Kistna District, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation and Joint Secretary to Government, Public Works Department, dated Masulipatam, 20th December 1875, No. 107 :—

With reference to your No. 1,434, dated 7th December 1875, I have the honor to inform you that there are at present thirty-two iron punts in this district, and the average amount carried by each is 10 cubic yards stone. I take this material as being that principally required for works. Out of these punts about twelve are generally employed in dredging, in bringing lime from Ampapur, or in carrying stores, &c., landed from steamers, so that only about twenty are available for new works. The average amount of stone issued from the Bezwadah and Sectanagaram quarries is 25,550 cubic yards per year, and deducting the amount used for the anicut, cubic yards 5,888, it may be assumed that the remainder, cubic yards 19,662, has to be carried an average distance of 20 miles, which would occupy a punt five days to go and return, thus with all the twenty punts at work 200 cubic yards of stone would be carried 20 miles in five days; and supposing the canals to be open for eight months in the year, 9,600 cubic yards of stone would be carried in the season, which is utterly insufficient, and the work is only carried on at present at an increased cost by hiring dhonies (which are difficult to obtain), and even then it is often found impossible to collect all the required materials during the season. It will be seen from the foregoing that at present at least twenty more punts are necessary for stone alone, and allowing for other materials, it may safely be said that thirty more are required.

2. When the completion project is sanctioned and two or three lakhs required to be expended yearly, it may be assumed that at least Rupees 60,000 will be for masonry works, and that, say, 10,000 cubic yards of stone and 1,000 candies lime will have to be carried 20 miles in the eight months, this will require about thirty punts. I have not thought it necessary to go into detailed calculations concerning this matter, but I think what I have stated proves that a very large addition is necessary to the floating plant of this district, and long before even half the sixty punts I have mentioned as necessary are constructed. More accurate information can be obtained as to future requirements, but as a further proof I may mention that there are, I believe, ninety-six punts in the Godavery district, and even that number is found to be insufficient.

3. The pattern of punt at present used in this district is made with iron ribs, iron plates, and a wooden deck, the largest carrying only 13 cubic yards stone costs Rupees 8,000; they are awkward and slow and consequently expensive to use, and I propose with your consent to adopt a pattern used in the Godavery, and which the officers in that district inform me is the best and cheapest they have, it is made with iron ribs and wooden planking, carries 34 cubic yards stone, draws $2\frac{1}{2}$ feet water, and only costs Rupees 2,722. I have written to Major Beatty, R.E., for the plan, and as soon as received I will submit estimates to you for sanction. In the meantime I request that you will allow me to commence collecting materials for their construction as otherwise they cannot be completed in this year.

4. I will here observe that in your letter, No. 735, dated 8th July 1875, you state "there will be no objection to such an amount as may be required to complete punts already sanctioned being so made use of," but all the punts already sanctioned in

*Proceedings of the Madras Government, Public Works Department,
22nd January 1876.*

connection with projects have been completed, and what I now request is that you will allow me to expend the Rupees 10,000 allotted under Tools and Plant, Extraordinary, and intended, it is believed, to purchase a steamer or constructing new punts.

5. From your having referred to the sanctioning of the completion project, I presume there is a chance of the works being commenced within two or three years. If this be the case, it is, in my opinion very necessary that a large addition be made at once to Tools and Plant, that the workshops be put in thorough order, additional buildings constructed in connection therewith, the foundry re-opened, and an intelligent Superintendent appointed. If all these improvements be put in hand at once, there will doubtless be a considerable saving on the estimates, but otherwise there will be delay and consequently expense.

No. 317.

ORDER THEREON, 22nd January 1876, No. 162.

IRRIGATION, No. 23.	
Account.	

THE construction of six composite punts of the pattern recently adopted with good results in the Godavery is sanctioned for the Kistna. The latest estimate

from Dowlaishweram makes the cost of the punts Rupees 2,800 each, and there should not be any material difference in their cost at Bezwadah. Rupees 10,000 provided in the current year's Budget under Tools and Plant, Extraordinary, Navigation, are made available for the commencement of these punts.

2. It will be left to the Superintending Engineer to make any definite proposals which may be necessary in connection with the Bezwadah workshops.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the District Engineer, Kistna.
 " Controller of Public Works Accounts.
 " Chief Engineer for Irrigation.

Exd. E. C. Shunker.
Spare Copies

Kristina District
Part VI

Detailed Estimate of Tools and plant of the Kristina District for 1876-77

Navigation Machinery
and Mills
Scientific
Instruments
Tools
Miscellaneous plant
Camp
Repairs
Equipage and Carriage

Navigational machinery and mills	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	1883-84	1884-85	1885-86	1886-87	1887-88	1888-89	1889-90	1890-91	1891-92	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68	2068-69	2069-70	2070-71	2071-72	2072-73	2073-74	2074-75	2075-76	2076-77	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88	2088-89	2089-90	2090-91	2091-92	2092-93	2093-94	2094-95	2095-96	2096-97	2097-98	2098-99	2100-01	2101-02	2102-03	2103-04	2104-05	2105-06	2106-07	2107-08	2108-09	2109-10	2110-11	2111-12	2112-13	2113-14	2114-15	2115-16	2116-17	2117-18	2118-19	2119-20	2120-21	2121-22	2122-23	2123-24	2124-25	2125-26	2126-27	2127-28	2128-29	2129-30	2130-31	2131-32	2132-33	2133-34	2134-35	2135-36	2136-37	2137-38	2138-39	2139-40	2140-41	2141-42	2142-43	2143-44	2144-45	2145-46	2146-47	2147-48	2148-49	2149-50	2150-51	2151-52	2152-53	2153-54	2154-55	2155-56	2156-57	2157-58	2158-59	2159-60	2160-61	2161-62	2162-63	2163-64	2164-65	2165-66	2166-67	2167-68	2168-69	2169-70	2170-71	2171-72	2172-73	2173-74	2174-75	2175-76	2176-77	2177-78	2178-79	2179-80	2180-81	2181-82	2182-83	2183-84	2184-85	2185-86	2186-87	2187-88	2188-89	2189-90	219
-------------------------------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	-----

Capital outlay
Extra-ordinary

Extra-ordinary

Eastern and Western Delta—10000 . 4550 boys 50 208 3400 1613

Ordinary

General of
Eastern and Western Delta 500 17600 5600 9243 700 1381 3000 2647

	10500	11000	11500	15313	920	1589	6400	4260
Total Capital								

Pravomud

Ordinary.

University of
Eastern and Western Delta

Repairs.

to a local

Grand total

Great is the
 duty. Engro affert 1. sm R
 Current of Bignone 1765 }

Camp Bazarar
24. November 1755

N-100

Supg. Engrs Office

Camp Begwadde

27 November 1875

From Lieutenant D. McK. Campbell &c
Executive Engineer in charge of the Kistna

To Lieutenant Colonel John Cullin &c
Chief Engineer for Irrigation
Madras.

Sir,
With reference to para 14 of L.O. 3036 dated 28th October 1875, I have the honor to forward herewith a revised Copy of Part VI of the Irrigation Budget for 1876-77 as therein requested.

Enclosure
one

2. The amount for repairs to navigation plant is increased from Rs 28985 to 34055, by Rs 5170 being the difference between Rs 15600 the additional amount required for expenditure during the current year and Rs 10430 allotted in the L.O. under reply.

3. The 10000 Rs referred to in latter part of para 4 of my letter no 73 dated 20th Sept 1875 not having been transferred as therein proposed, the B^o Range Officer has been directed to go on with 2 New Iron pumps and utilize fully that amount, submitting the requisite estimates &c for Government sanction.

Vide your memo
no 73878 2nd 1/1875

4. I respectfully take this opportunity of observing that no instructions have been

Enclosure in letter no
100 of 21 Sept 1875 from the
Executive Engineer in
charge of the Kistna District
to the Chief Engineer for
Irrigation Madras.

Part VI
Irrigation Budget
for 1876-77.

11/11/75

16/11/75

been furnished me to my last para of
No 73 above referred to, for my future
guidance

I have the honor to be,

Sir,

Your most obedt servant

J. W. Campbell Esq. R. M.
Executive Engineer in Charge

Superintending Engineer
Office Krishna District
Masulipatam
No 107
20th December 1876.
From

Lieut. D. McNeil Campbell R.E.
Executive Engineer in charge
Krishna District

To
Lieut. Col. J. Mullins R.E.
Chief Engineer for Irrigation

Sir,

With reference to your
No 1434 dated 27th December 1876
I have the honor to inform
you that there are at present
32 Iron punts in this District
and the average amount carried
by each is 10 cubic yards stone
I take this material as being
that principally required for
works. Out of these punts about
12 are generally employed in
dredging, in bringing lime
from Ampapur, or in carrying
Stores

To Ld. No. 143472 dated

No 100
No 2137
The Executive Engineer
in charge Krishna
District

To the Chief Engineer
for Irrigation

Recd. 27th Dec 1876
Recd. 27th Dec 1876

Enclosure one

Forwarded a memo
copy of Part VII the
Irrigation Budget
for 1876-77

M. 003/98
21/12/76

22 Jan 76 A. 316

Stones ~~via~~ landed from
Steamers so that only about
20 are available for new
works. The average amount
of stone issued from the
Berwada and Sutanagaram
quarries is 25550 cubic yards
per year and, deducting the
amount used for the anicut,
cubic yards 5888 it may be
assumed that the remainder
cubic yards 19662 has to be
carried an average distance
of 20 miles, which would
occupy a punt 5 days to go
and return, thus with all
the 20 punts at work 200 yards
of stone would be carried
20 miles in 5 days and
supposing the canals to be
open for 8 months in the
year, 9600 yards of stone
would be carried in the season
which is utterly insufficient
and the work is only carried

on at present at an increasing
cost by hiring Dhonies (which
are difficult to obtain) and
even then it is often found
impossible to collect all the
required materials during
the season. It will be seen
from the foregoing that
at present at least 20 more
punts are necessary for
stone alone and allowing
for other materials it may
safely be said that 30 more
are required.

2 When the completion
project is sanctioned and
2 or 3 lacks required to
be expended yearly it may
be assumed that at least
Rs 60000 will be for
masonry works and
that say 10000 cubic yards
of stone and 1000 Candelis
lime will have to be carried

carried 20 miles in the
8 months, this will require
about 30 punts I have
not thought it necessary
to go into detailed calculations
concerning this matter
but I think what I have
stated proves that a
very large addition is
necessary to the floating
plant of this District
and long before even half
the 60 punts I have mentioned
as necessary are constructed
more accurate information
can be obtained as to future
requirements. but as a further
proof, I may mention that
there are, I believe 96 punts
in the Godavery District
and even that number is
found to be insufficient

3 The pattern of punts at
present used in this District
is made with iron ribs
iron plates and a wooden
deck

deck. the punts carrying
only 13 cubic yards stone costs
Rs 8000 they are awkward
and slow and consequently
expensive to use and I
propose with your consent
to adopt a pattern used
in the Godavery and which
the Officers in that District
inform me is the best
and cheapest they have,
it is made with iron ribs
and wooden planking carries
34 Cuyards stone draws 22
water and only costs Rs 2722
I have written to Major
Beatty R.E. for the plan and
as soon as received I will
submit estimates to you for
sanction In the meantime
I request that you will
allow me to commence
collecting materials for
their construction as otherwise
they cannot be completed in
this

this year
4. I will here observe that
in your letter No. 735 dated
8 July 1875 you state "there
will be no objection to such
an amount as may be required
to complete piers already
sanctioned being so made
use of" but all the piers
already sanctioned in connection
with projects have been completed
and what I now request is
that you will allow me to
expend the Rs. 10000 allotted
under tools and plant extra-
ordinary and intended it
is believed to purchase a
steamer or constructing new
piers.

5 From your having referred
to the sanctioning of the
completion project I presume
there is a chance of the works
being commenced within 2
or 3 years. If this be the
case

case it is in my opinion
very necessary that a large
addition be made at once
to the tools and plant, that
the Workshops be put in
thorough order, additional
buildings constructed in
connection therewith, the foundry
reopened, and an intelligent
superintendent appointed.
If all these improvements
be put in hand at once
there will doubtless be
a considerable saving on
the estimates but otherwise
there will be delay and
consequently expense

I have the honor to be
Sir

Your most obedient Servant

J. W. Campbell Esq. R. E.
Executive Engineer in charge
T. S. S. S.

No 162. Public Works Dept.
 Proceedings of the Madras Government
 Under date the 22 Jan 76
 Read the following:-

From the Resident Engineer } C.R.S. No 107 dt 20 Dec 1895
 in charge Kistna R.

The construction of
 6 composite punts of the
 pattern recently adopted
 with good results in the
 Kodavry is sanctioned for the
 Kistna. The latest estimate
 from Anolaiherum makes
 the cost of the punts Rs 2800
 each, and there should not
 be any material difference
 in their cost at Rayawadah.
 Rupees 10,000 provided in the
 current year's Budget under
 Tools and Plant Extraordinary
 Navigation

2828-Act 175 dt 140-442

From the Resident Engineer
 in charge Kistna R.
 to
 the Chief Engineer
 for S.W. of Madras

Dated 20 Dec 1895
 Received 25-1-96

S. D. No 107.

Agree on the
 necessity of adopting
 punts, being com-
 -pacted & well
 the necessary demand
 aspects of economy
 pattern for adoption
 from notices of
 economy and relative
 speed - and present
 permission to collect
 materials for their
 execution.
 S.O. No 162. 22.1.96

22 Jan 1896

Navigation are made available
for the commencement of
these points.

2. It will be left to the
Superintending Engineer
to make any definite pro-
posals which may be
necessary in connection with
the Beywadah workshops.

Adels
Amr

Dr. K. K. Kistna
Controller of M.A.
Chief Insp. for Div.
Supd: 1.2.76

5-11-76
B. K. S.

Navigation are made available
for the commencement of
these points.

317

2. It will be left to the
Superintending Engineer
to make any definite pro-
posals which may be
necessary in connection with
the Beywadah workshops.

Adels

Amr

Gobt. of 1876 India.
PUBLIC WORKS.

D. E. Kistna

24/1/76

G. O. 22 Aug. 1876, No. 112.

Nos. 316 - 317

Compendio Points for the
Sichuan Dist. - same the
Construction of 6 - 1/2
pattens adopted in the
Canton, Canton and
the supply of the
any of the points in the
dist. in the
the shops with

Remarks.

Supd: 1-2-76 B. H. S.