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MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**

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Dated 12 - 8.	1870.

Not to be folded or roughly handled

No. 189. Read the following endorsement of the Acting Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, Fort Saint George, dated Madras, 29th July 1870, No. 314 :—

MADRAS RAILWAY.

INSPECTION REPORT.

Permanent Way.—The permanent way generally is in good order, but the portion of line between Arconum and Sholinghur is very short of ballast. Portions of the following miles also require additional ballast :—57th, 85th, 90th, 130th, and 290th.

The switch handles of points and distant signals are in several cases weighted with chairs and old iron, which are attached by string. In case of renewal or repair the necessity for this should, I think, be obviated.

2. *Fencing.*—The fencing generally is in good order, but in the portion of line between Salem and Coimbatore there were a good many gaps capable of admitting cattle. The construction of rubble walls between Coimbatore and Beypore is progressing; the live fence over a great portion is useless, and the sooner the present work of substituting walls is completed, the better. In one or two places the fence reaches the telegraph wires, and in some others I noticed the numbers on the telegraph posts are obscured by the fence in front.

3. *Stations.*—At three or four of the stations between Madras and Arconum the boards bearing the names of the stations are placed under the station roof: when the platform is crowded it is difficult to see them, and, as all others are outside and uniformity as to position adds to their usefulness, I think they should be placed outside.

4. *NOTES ON THE URINALS, SOUTH-WEST LINE.—Trivellore.*—The buckets in rear too high for the cisterns in which they stand; one cistern not used in consequence, but liable to receive urine if imperfectly plugged, as at the time of my inspection.

Cudumbathoor.—Drainage hole blocked; above remarks apply.

Chinnamapett.—Cistern in rear not provided with a bucket.

Arcot.—One bucket without a bottom; a second filled with rubbish, evidently not used; a third so placed as not to catch the discharge from the spout.

Vellore.—Two cisterns provided with small zinc buckets instead of the larger pattern; one had no bucket; several of the cisterns had stagnant offensive liquid standing in them, which ought to have found its way into, and been removed in, the bucket.

Guriattum.—Small zinc buckets in use; cistern lids broken; black offensive liquid standing in each cistern; one large size bucket had evidently not been emptied for days.

Mailputty.—Inside of buckets dirty.

Arconum, Jollarpett.—At these stations the additional accommodation for first-class passengers, suggested by the Acting Deputy Consulting Engineer at his last inspection, has been provided.

Bangalore Branch.

Colar Road.—Three cisterns without buckets; one cover to cisterns broken some time ago, but not re-placed.

Malloor.—Buckets quite full and most offensive; doors of cisterns stuck with tar, and only opened with difficulty. The mats in the Ladies' Waiting-room in a dilapidated condition.

Bangalore.—A bucket containing solid excreta, apparently of some days' standing outside the cisterns.

Tripatoor.—Buckets brimful. Three of the cistern doors could not be opened, being set fast with tar. In this station the basins in the Ladies' room are too small for the holes cut to receive them, which are accordingly "brought up" with nails. One basin missing.

Samulputty.—Filter chatties missing; drinking water said to be bad.

Shevaroy Hills Station.—Buckets very offensive, one brimful and running over, two others half full: had evidently been standing for days.

McDonald's Choultry.—The pipe leading from wall to bucket broken.

Peranduray.—Buckets full and very offensive. No doors to cisterns.

Wulkallee.—Cisterns dirty; cistern doors broken. No filter in station.

Arconashy.—Two cistern doors broken; one pail nearly full, very offensive; a very offensive cesspool at angle of building to collect the urine from the Station Master's cows, which live in the back verandah of the station buildings; rags and dirt abound here.

Somanoor.—Cistern door broken. Station Master's quarters in back verandah very dirty.

Tiroor.—Cistern most offensive; bucket smeared with solid excreta.

Perpengady.—No bucket. Cistern offensive; one cistern is too high above the ground to be emptied conveniently.

Tanoor.—Bucket so placed in cistern as to be useless; old fruit and rubbish thrown into the cistern.

At Erode the accommodation recommended below for Arconum and Jollarpett is much needed; at present there is practically accommodation for one first-class passenger only at a time.

5. *Recommendations.*—With reference to the above notes I would recommend—

(1.) That all buckets be tarred inside and out, and the cisterns inside.

(2.) That smaller sized buckets be substituted for the large ones where possible, the greatest difficulty being experienced in procuring sweepers, and women and boys (who are frequently the only people procurable) not being able to lift the larger buckets if at all heavily laden.

(3.) That at least six inches of dry earth be thrown into each cistern, which should be removed and re-placed as often as necessary.

(4.) That in every case the Station Master be made clearly to understand where the contents of these buckets are to be thrown, as several cases have come to my notice where these buckets are emptied at the cistern itself.

At almost every station along the line the urinals themselves were perfectly clean, but it appears that these cisterns in rear being less conveniently situated have not received the attention they should.

6. "*Cinerators.*"—The "cinerators" for burning old rags, straw, and accumulations of the kind are completed at all stations, or nearly so. The arrangement is an excellent one, and well worthy of attention on the Great Southern of India Railway.

7. The compounds are for the most part now nicely kept. At many of the stations the lower five feet of all the walls have been neatly and thinly tarred: this might be extended to all stations with advantage, giving a less absorbent surface than plaster.

8. *Palar Bridge.*—The west abutment has commenced to settle within the last four months. The east abutment spandril has still further settled, though only slightly, since the last inspection. The two abutment piers show no signs of further settlement, but the disturbance here has been much greater than elsewhere. The bridge will continue to be as carefully watched as hitherto.

Bridge at 173½ mile.*—A new floor put in, and south abutment under-pinned to a depth of 6 feet and width of from 3 to 4 feet. No settlement apparent.

* Bangalore Branch.

Bridge at 175 miles 25 chains.—Foundations to Nos. 1 and 2 piers are completed from 13 and 15 feet depth below floor respectively; both curtain walls are completed: the work appears excellent.

9. *Bench-mark at Bangalore Station.*—I could find out nothing about this on the spot. There is a mark, difficult to decipher, which is said to indicate the site; but, whether it is the bench-mark itself or only a mark to indicate the position of rail referred to in the printed list of bench-marks, there is nothing to show.

10. *Steel Rails.*—I took the opportunity of inspecting the steel rails laid down on Bangalore and Salem Ghauts.

There is so little difference in the surface apparent to the eye between the steel and iron rails, that it was difficult to distinguish one from the other.

11. *Scotch Blocks.*—Scotch blocks 8 inches in height are, I believe, being gradually substituted for those 6 inches in height, over one of which latter the carriage lately ran from Jollarpett. A report should, I think, be asked for as to the result of this alteration, with a view to providing a more efficient remedy should this fail.

12. *ACCOMMODATION FOR CHOLERA PATIENTS AT JOLLARPETT AND ARCONUM.*—An existing small permanent building has, I understand, been suggested as affording sufficient cover for the purpose at Jollarpett. I think its position objectionable; there is no building available at Arconum. I am inclined to suggest temporary thatched buildings, which could be burnt after use, to be located well away from the station premises.

13. *Encroachment of the Sea at Beypore.*—The groyne erected to prevent further encroachment appears to have been successful; a good foreshore has now been recovered from the sea.

14. *Station Buildings.*—The following station buildings require repairs to the roof, which, I believe, only await suitable weather:—

Palghat, Luckady, and Wootapoliem.

THE GREAT SOUTHERN OF INDIA RAILWAY.

15. *Permanent Way.*—The permanent way is generally in good order.

Ballast is badly wanted in the following miles:—

N. B.—18th and 28th were noted as wanting ballast at the last inspection. (18th), 20th, 21st, 22nd, 23rd, 26th, (28th), 29th, 57th, 58th, 60th, 63rd, 64th, 65th, 66th, 73rd, and 75th.

16. *Fencing.*—The fencing is nearly all of wire, but in the 51th mile the wire was, I believe, removed. The fence is very poor, and, with portions of that in the 53rd and 54th miles, should receive early attention.

17. *Points and Crossings.*—I examined altogether twelve different sets of Ransom and Bidel's patent chilled box crossings, of which not one was perfectly free from damage; they all seem to chip off at the edges and points. They were all serviceable, and I only note the fact for future guidance.

NOTES ON URINALS.

Sanitary arrangement.

18. *Passoor.*—No latrines.

Codumudy.—Latrines clean, but there is a dangerous unprotected deep well in the Station Master's garden, which ought certainly to be protected, not only for his own sake but that of passengers who might easily mistake this way out of the station for the authorized route.

Curoor.—Drainage pipe from urinals stopped up; bank quite saturated, but inoffensive bucket system should be introduced.

Cottalay.—Cistern in rear very offensive; bottom of cistern worn or cut into a hollow, which was filled with liquid.

Lalapettah.—Dirty huts in the compound; cistern drainage imperfect; bucket system should be introduced.

The board-notice (Act XIII.) is quite illegible from wear and tear, and should be re-placed.

Ellambanoor.—Bucket absent; drain from cistern, if there is one, ineffective.

Satiamungalam.—Urinal cistern buckets are emptied into the bushes immediately adjoining the cistern itself.

Needamungalam.—Cistern emptied into adjoining grass; no bucket.

Kordachary.—No spout to the drain leading into cistern.

Kulicarray.—Buckets apparently emptied on to the adjoining grass.

Sickle.—No urinals; I imagine none are required at present.

19. *Telegraph Posts.*—The telegraph posts are obscured by bushes (their number, therefore, difficult to see) in the 26th and 75th miles.

The distant signal wire at Tanjore was disturbed in lengthening the siding; an additional "runner" at the angle is necessary to keep it from chafing against the buffer frame as at present.

20. *Traffic arrangements.*—The engine of the Department Public Works gravel train blows off on the siding, where there is no provision for it, and the greasy dirty water flows down fast the station into the space in front of the main building. A cesspool and drain connecting the siding with the main line pit would obviate this.

21. The Kulithalay Station Master's house is, as reported, surrounded by wet lands and pits which are always full of stagnant water, a state of things of frequent occurrence in all the irrigated deltas. It is only to be remedied at an expense quite incommensurate with the object.

22. The following stations have no name-boards up:—

Cottalay and Kulicarray.

23. The Scotch blocks on this line are all 4 inches high only; they should, I think, in case of renewal or repair, be re-placed by others 8 inches high.

24. *Railway Feeders.*—The necessity for a road from the ferry across the Cauvery to Passoor Station was mentioned to me by the Superintending Engineer of the 7th Division. This ferry is let for more than any other, (I was told,) and the Calingarayen Channel with its wet lands is a great obstruction.

25. *Negapatam Workshops.*—The buildings at Negapatam are nearly finished, and apparently of superior workmanship.

A new tank and well are in course of construction at Passoor.

26. *Rolling Stock.*—In three third-class carriages in one train (the 1 P.M., from Trichinopoly to Erode) the notice as to the number of passengers to be carried was illegible. In two of them it appeared never to have been pointed up at all; these carriages were extremely dirty, and in want of a coat of paint or varnish.

27. *Trichinopoly Station.*—The approach to the Trichinopoly Station first-class entrance was quite blocked on my arrival with third-class passengers. A barrier railing erected so as to separate the approaches to the two doors would, I think, be an improvement.

MADRAS,
14th July 1870.

(Signed) C. J. SMITH, Captain, R.E.,
Acting Deputy Consulting Engineer, for Railways.

SUBMITTED to Government.

2. The attention of the Railway Agents is being directed to the state of the station buildings and other points mentioned by Captain Smith.

3. *Paragraph 9.*—There is some doubt about the table of levels along the line, whether the final level of the Bangalore Station is correctly stated to be that of the rail, or if the figures really represent the level of a mark on the platform. The Chief Engineer of the Railway has promised to have the levels verified.

*Proceedings of the Madras Government, Public Works Department,
12th August 1870.*

4. Paragraph 21.—The excavation for the Kulithalay Station has left pits in which water collects, and which cannot be drained. The Consulting Physician *Vide G. O., No. 1,737, dated 20th July 1870.* has brought this to notice, but it is estimated that a sum of Rupees 10,000 would be required to have the pits filled in.

5. Paragraph 24.—As the Superintending Engineer, 7th Division, is preparing an estimate for a road from the Cauvery Ferry to the Passoor Station, it is to be hoped that Local Funds will be made available for the construction of the road.

(Signed) H. L. PRENDERGAST, Captain, R. E.,
Acting Consulting Engineer for Railways.

No. 190.

ORDER THEREON, 12th August 1870, No. 1,924.

RAILWAY, No. 22.

ORDERED to be recorded.

(True Extract.)

Colonel, R. E.,

Secretary to Government.

To the Acting Consulting Engineer for Railways

Exd. A. S. Rodgers.

Madras Railway

Inspection Report.

Permanent way.

The permanent way generally is in good order, but the portion of line between Arcotum and Sholingur is very short of ballast. Portions of the following miles also require additional ballast: 57th, 85th, 90th, 130th, and 299th.

The switch handles of points and distant signals are in several cases weighted with chair

chairs and old iron which are attached ~~by chains~~ in case of renewal or repairs, the necessity for them should ~~at least~~ be obviated.

2 Fencing. The fencing generally is in good order, but in the portion of line between Salem and Coimbatore, there were a good many gaps capable of admitting cattle. The construction of rubble walls between Coimbatore and Beypoor is progressing, the line fence over a great portion is useless and the want of the present work of substituting rubble walls

2
Walls is completed, the better.

In one or two places the fence reaches the telegraph wires, and in some others I noticed the numbers on the telegraph posts are obscured by the fence in front.

3 Stations. At three or four of the stations between Madras and Arcot the boards bearing the names of the stations are placed under the station roof, where the platform is crowded it is difficult to see them, and as all others are outside and uniformly as to position, add to their usefulness. I think they should be placed outside.

Notes on the original South-West Line. The
buckets in rear too high for a cistern
in which I keep stand, and
cistern not used in consequence, but
liable to receive sewage if imperfectly
plugged, as at the time of my
inspection.

Budumbator. Drainage hole
blocked, above removed & apply.
Chinnamapett. Cistern in rear
not provided with a bucket.

Areat. One bucket without
a bottom - a second filled with
rubbish evidently not used.
a third or placed as not to catch
the discharge from the spout.

Vellore. Two cisterns provided
with

with small zinc buckets instead
of the larger spatters, one had
no bucket, several of the cisterns
had stagnant offensive liquid
standing in them, which ought
to have found its way into, and
been removed in the bucket.

Coriattum. Small zinc buckets
in use, cistern lids broken, black
offensive liquid standing in each
cistern, one large size bucket
had evidently not been emptied
for days.

Moailputty. Inside of buckets
dirty.

Arconum, Jollasapett. At these
stations the additional accommodation
for

for 1st class passengers suggested
by the Acting Deputy Consulting
Engineer at his last inspection
has been provided.

Coast Road. There are two water
drum buckets, one under the cistern
broken some time ago but not
replaced.

Abalood. Buckets quite full
and most offensive; doors of
cistern stuck with tar and only
opened with difficulty. The
mat in the ladies waiting
room in dilapidated condition.

Bangalore. A bucket con-
taining solid excreta, apparently
of some days standing, outside
the

Bangalore
Branch.

the cistern. Buckets being full.
Three of the cistern doors could
not be opened being set fast with
tar. In this station the basins
in the ladies room are two small
for the holes cut to receive them,
which are accordingly "tramped
up" with nails. One basin missing.
Samuelputty. Better chatties
missing; drinking water said
to be bad.
Shivrasay hills station. Buckets
very offensive; one basin full and
running over, two others half
full had evidently been standing
for days.

Macdonell's

Moedonelli healthy. The
pipe leading from wall to bucket
broken.

Panduray. Bucket full and
very offensive. No door to cistern.

Wathalla. Cistern dirty,
cistern door broken. No filter
in station.

Arenashy. Two cisterns
broken, one full nearly full,
very offensive, a very offensive
cesspool, at angle of building
to collect the urine from the
station master's cow. which lies
in the back veranda of the
station building, rags and
dirt abound here.

Somanoot. Cistern door broken.
Station master's quarters in back
veranda very dirty.

Coroot. Cistern most offensive,
bucket smeared with solid
excreta.

Petpungady. No bucket. Cistern
offensive, one cistern is too high
above the ground to be emptied
conveniently.

Tanoot. Bucket misplaced
in cistern as to be useless,
old fruit and rubbish thrown
into the cistern.

At Coode, the accommodation —
recommended below for Beaman
and Jollasapet is much needed,

at present there is practically no
accommodation for one first class
passenger only at a time.

5. Recommendations. Which
 I refer to the Librarian of the
 would recommend. Adm.

189. I. I. That all line sectors labeled
symptoms and ord, and the entire
sequence. I have, and will.

(2) That a smaller sized
~~man~~ be substituted for
 the large one, where possible,
 the greatest difficulty being
 experienced in procuring sweeps
 and women and boys (who
 are frequently the only people
 procurable) not being able
 to

to, left the larger buckets,
if at all heavily laden.

(3) That at least, six inches of dry earth be thrown onto each cistern, which should be removed and replaced, as often as necessary.

(4) That in every case the station master be made clearly to understand, where the contents of these buckets are to be thrown. As several cases have come to my notice where these buckets are emptied at the cistern itself.

At almost every station,
along the line, the animals &
themselves.

themselves were perfectly clean,
but it appears that their
interiors in fact, being left
inconveniently situated have not
received the attention they should
be "incinerators". The incinerators
for burning old rags & straw
and accumulations of the kind,
are completed at all stations or
nearly so. The arrangement is
an excellent one, and well worthy
of attention in the Great Southern
of India Railway.

7. The compounds are for
the most part now nicely kept.
At many of the stations the
lowest 5 feet of all the walls
have

have been neatly re-dressed
treated. This might be extended
to all stations with advantage
giving a less absorbent surface
than plaster.

8. Palas Bridge. The west
abutment has commenced to
settle with the last of last
months. The east abutment
spandrel has still further
settled, though only slightly,
since the last inspection. The
two abutment piers show no
signs of further settlement,
but the disturbance here has
been much greater than elsewhere.
The bridge will continue to
be as carefully watched as hitherto.
Bridge

* Bridge at 173 1/2 mile. "A new
flood put in, and sunk about
-ment underpinned to a depth
of 6 feet and width of from
3 to 4 feet. No settlement
apparent.

* Bridge at 175 m. 25 ch. Foundations
to No. 1 and 2 piers are completed
from 13 and 15 feet depth below
flood respectively. Both curtain
walls are completed, the work
appears excellent.

9. Bevel mark at Bangalore
station. I could find out
nothing about this, on the spot.
There is a mark, difficult to
discern as indicated depicted

* Bangalore station

depicted, which is said to in-
dicate the site, but whether
it is the B.M. itself or only a
mark to indicate the position
of rail referred to in the
printed list of bevel marks.
There is nothing to show.

10. Steel rails. I took the
opportunity of inspecting the
steel rails laid down on Bangalore
and Salem ghats.

There is so little difference
in the surface apparent to the
eye, between the steel and iron
rails, that it was difficult to
distinguish one from the other.

11. Scotch blocks. Scotch
blocks

blocks & inches in length & I believe being gradually substituted for those in use in height & over and of which latter, the carriage batch & haul from Jallaspet. As respects should I think be asked for as to the result of this alteration, with a view to providing a more efficient remedy should this fail.

12 Accommodation. An existing for cholera patients at Jallaspet and Arcamun. Small permanent building has I understand been suggested as affording sufficient cover for the purpose at Jallaspet. I think its position

23
position objectionable. There is no building available at Arcamun. I am inclined to suggest temporary thatched buildings which could be burnt after use to be located well away from the station premises.

13 Encroachment of the sea at Beyoor. The dyke erected to prevent further encroachment appears to have been successful, a good "foe-shore" has now been recovered from the sea.

14 Station buildings. The following station buildings require repairs to the roof which I believe only await suitable weather.
Palghat.
Ludhiana.
Moolapalem. The

The Great Southern India Railway

15. Permanent way. The permanent way is generally in good order.

Ballast is badly wanted in the following miles:-

(78). 21st, 21st, 22nd, 23rd, 26th (28th), 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th.
N.B. 11th and 21st were noted as wanting ballast at the last inspection.

16. Fencing. The fencing is nearly all of wire but in the 54th mile the wire was I believe removed, the fence is very poor, and with portions of that in the 53rd and 54th miles should require early attention.

17. Points and crossings.

examined altogether 12 different sets of Ransom and Bidels patent chilled iron crossings of which not one was perfectly free from damage, they all seem to chip off at the edges and points. They were all serviceable and I only note the fact for future guidance.

Notes on urinals.

Sanitary arrangement. 18. Passot. Mr. Latreues.

Goodmundy. Latreues' chair, but there is a dangerous deep set deep well in the station master's garden, which ought certainly to be protected, not only for his own sake but that of

of passengers who might easily
mistake the way out of the station
for the authorized route.

Basor. Drainage pipe
from urinals stopped up; bank
quite saturated, but in-offensive
bucket system should be in-
troduced.

Battalays. Cistern in rear
very offensive, bottom of cistern
worn or cut into a hollow which
was filled with liquid.

Lalapeltak. Dirty urine
in the compound, cistern drainage
imperfect, bucket system should
be introduced.

The board notes. At XIII is

quite

quite illegible from wear and tear
and could be replaced.
Elamkantar. Bucket absent,

drain from cistern, if there is
one, ineffective.

Salimnagar. Urinal cistern
buckets are emptied into the bushes
immediately adjoining the cistern
itself.

Perdmanagar. Cistern emptied
into adjoining grass, no bucket.

Horadachang. No spout to the
drain leading into cistern.

Chulicaray. Buckets appar-
ently emptied on to the adjoining
grass.

Chikla. No urinals, Penicillin
none

none are required at present.

19. Telegraph posts. The telegraph posts are obscured by bushes (their number therefore difficult to see) in the 26th and 75th miles.

The distant signal wire at Tanyue, was disturbed in lengthening the siding, an additional "runner" at the angle is necessary to keep it from chafing against the buffer frame, as at present.

20. Traffic Arrangements. The engine of the Department Public Works gravel train blows off on the siding, where there is

no provision for it, and the greasy dirty water flows down past the station into the space in front of the main building - a cesspool and drain connecting the siding with the main line pit would obviate this.

Hulithalay station } 21. The Hulithalay
reported unhealthy } station master's house
by the hon. Physician }
is as reported surrounded by
wet lands, and pits which are
always full of stagnant water
a state of things of frequent
occurrence in all the irrigated
deltas it is only to be remedied
at an expense quite incommensurate
with the object.

22. The following stations have no name-boards upon the battalys.

Glulicarray.

23. The signal blocks on the line are all 4" high only, they should I think in case of renewal or repair be replaced by others 8 inches high.

24. Railway Feeders. The necessity for a road from the ferry across the country to Passort station was mentioned to me by the Superintending Engineer of the 7th Division. This ferry is let for more - I have any other (I was told)

and

and the batting clerical with its land is a great distraction.

25. Negapatam Workshops. The buildings at Negapatam are nearly finished and apparently of superior workmanship.

A new tank and well are in course of construction at Passort.

26. Calling Stock. In three third class carriages in one train (the 1st P.M. from Trincomalee to Cuddalore) the notice as to the number of passengers to be carried was illegible, in two of them it appeared never to have been pointed up at all, these carriages were extremely dirty and in want of a coat of paint or varnish.

29. Gelechiopala station: in the
approach to the Gelechiopala
station. 1st class exchange. unav.

quite blocked on my arrival
2. with third class passengers
A barred railing erected near
to separate the passengers to
the two doors would I think
be an improvement.

Madison
14th July
1840

From the Hon. Secy. of the Navy

(No. 100 - Volume 100) 100

1. *Phragmites australis* (Cav.) Trin. ex Steud.
 2. *Scirpus americanus* (L.) Link.
 3. *Eleocharis acicularis* (L.) Rostk Schmidt
 4. *Sagittaria arifolia* (L.) Link.
 5. *Alisma plantago-foliosa* (L.) Rostk Schmidt
 6. *Sparganium angustifolium* Michx.
 7. *Najas* sp.
 8. *Chara* sp.
 9. *Utricularia* sp.
 10. *Hydrocotyle* sp.
 11. *Salvinia* sp.
 12. *Wolffia* sp.
 13. *Elodea canadensis* (Mill.) B. S. P.
 14. *Hydrilla verticillata* (L.) Rostk Schmidt
 15. *Utricularia* sp.
 16. *Hydrocotyle* sp.
 17. *Salvinia* sp.
 18. *Wolffia* sp.
 19. *Elodea canadensis* (Mill.) B. S. P.
 20. *Hydrilla verticillata* (L.) Rostk Schmidt
 21. *Utricularia* sp.
 22. *Hydrocotyle* sp.
 23. *Salvinia* sp.
 24. *Wolffia* sp.
 25. *Elodea canadensis* (Mill.) B. S. P.
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 31. *Elodea canadensis* (Mill.) B. S. P.
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 34. *Hydrocotyle* sp.
 35. *Salvinia* sp.
 36. *Wolffia* sp.
 37. *Elodea canadensis* (Mill.) B. S. P.
 38. *Hydrilla verticillata* (L.) Rostk Schmidt
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 40. *Hydrocotyle* sp.
 41. *Salvinia* sp.
 42. *Wolffia* sp.
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 179.

[Faint handwritten notes at the bottom of the page]

470314

Submitted to Government.

The attention of the
Railway Agents is being direct-
ed to the state of the station
buildings, and other points
mentioned by Captain Smith.

Paragraph 9. There
is some doubt about the table
of levels along the line, &
whether the final level of the
Bangalore station is correctly
stated to be that of the rail,
or if the figures really represent
the level of a mark on the
Platform

Platform. The Chief Engineer of the Railway has promised to have the levels verified.

Paragraph 21. The excavation for the Kulithalay station has left pits in which water collects, and which cannot be drained. The Consulting Physician has brought this to notice. ^{Vide S.C.N. 1737 dated 20 July 1870} but it is estimated that a sum of Rs 10,000 would be required to have the pits filled in.

Paragraph 24. As the Superintending Engineer of the Division, is preparing an estimate for a road from the Cauvery Ferry to the Pappoor Station; it is to be hoped that Local

35/10
Local Funds will be made available for the construction of the road.

See also

29th July/70

Under Secretary Capt R.E.
Asst. Engr. for Railway

The Secretary to Government
Public Works Deptt.
Fort St. George

With an order