(1) Number of pages 64

(2) Date of repair 1.7.87

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W DEPARTMENT

G.O. No. / B.P. No.	2018 W	Press. / Mis.
Dated	23.7.1883	198 .

Not to be folded or roughly handled.

Archives —1 10,006-9 80

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers:—

Demi-official from F. C. BLACK, Esq., dated 21st June 1883.
Letter from do. „ 23rd „ „ No. 85.

From F. C. BLACK, Esq., Assistant Engineer, to the Deputy Chief Engineer, Public Works Department, dated 9th July 1883, No. 100.

I have the honor to forward the estimate for the preservation of the Ancient Monuments at the Seven Pagodas, which estimate I have received back direct from the Curator with his remarks on the margin.

ENCLOSURE.

SEVEN PAGODAS, MAHAVELLIPUR.

ESTIMATE OF THE PROBABLE COST OF PRESERVING THE ALAITTA OR SHORE TEMPLE No. 6.

REPORT.

The Curator of Ancient Monuments states in his report for the year 1881-82—

This is a most remarkable monument, probably dating from the 8th or 9th century, and, if not the most early, is one of the best examples of structural primitive Dravidian architecture. * * * The stone masonry of the pagoda is much broken and displaced, and should be rendered secure and replaced. The interior should be cleaned out and the sand removed, so as to completely reveal the plinth of the exterior. Sand should also be removed to lay bare the outline of the walls which form the outermost enclosure. The removal of roots of creepers from the roof is important.

Replacing Masonry.—The number of stones to be rehoisted on to the enclosure wall is four of about 15 cwt. each. Five large stones of about 1 ton each have fallen out of the walls of the temple itself; also one of about 2½ tons; also several of the smaller granite ornaments, which latter are, however, almost all missing. The bas-relief of Siva in the sanctum has also got partly shifted from its place. The walls have been originally covered with stucco, but the stucco having got removed, the surface of the granite has much decayed. This is especially the case on the south and east sides, where the salt spray has made the carvings indistinguishable. The granite likewise decays much at the joints and becomes very insecure. It is therefore suggested to fill up the joints with spauls and lime mortar, and thus repoint the whole building, which will do much to preserve it for a long while. This filling of the joints is absolutely necessary to prevent the stones from subsiding and ultimately falling out of the walls. The mortar under some of the corner eave stones has disappeared for a depth of 4 feet, and other large stones are nearly as insecure. The outermost enclosure wall has almost all fallen down, so it is not proposed to do anything in the way of rebuilding it.

Specification.—The mortar will be made of lime of burnt shells and sand, in the proportion of 3 of sand to 1 of lime. This makes excellent mortar. The spauls will be chips of granite from the neighbouring quarry. The hoisting of the stones will be done with a small three-legged derrick made from three stout poles and a 2½-ton differential block and chain.

Rehoisting and setting stones—		
Stones of 2½ tons, 1	Tons	2½
Do. of 1 „ 5	„	5
Do. of 15 cwt., 5	„	3¾
Total ...		11
Rebuilding masonry	C. ft.	150

Removing sand—

Superficial feet	361 × 1	...	...	...	...	C. ft	360
"	108 × 4						
"	1,260 × 1	...	...	...	...	"	3,330
"	1,260 × 1						
"	1,260 × 1						
					Total, Sand ...		3,735

Pointing—

Superficial feet	...	...	...	...	...	...	2,283
"	...	...	...	...	...	...	1,569
"	...	...	...	...	...	...	444
"	...	...	...	...	...	...	1,278
"	...	...	...	...	...	...	1,771
"	...	...	...	...	...	...	
					Total, Pointing ...		7,346

Summary.

Hoisting and setting ½ tons stone, at 16-0-0	...	...	...	Rs.	110
Removing sand cubic feet 3,735, at 3-8-0	...	...	...	"	13
Pointing masonry sup. feet 7,346, at 4-0-0	...	...	...	"	293
Lime masonry 150 cubic feet, at 25-0-0	...	...	...	"	37
			Total ...		453

KRISHNA MANDAP No. 15.

The Curator of Ancient Monuments mentions—

The bas-relief representing Krishna with a group of herdsmen and cows is carved on the solid rock * * * The roof over this rock sculpture is built of masonry, and gives access to a stream of rain-water, thus destroying and wearing away the carvings and covering them with lichen. The roof should be made water-tight, and the interior as well as the carvings thoroughly cleansed. The front row of columns should be filled in with a frame of galvanized wire netting, and the centre fitted with a wicket gate under lock and key.

Leakage of Roof.—Since the report of 23rd June 1881 was written a channel has been cut on the slope of the granite hill as a catchwater, which will prevent any drainage from the ground above; but as a good deal of leakage still comes through the roof of the porch, it is proposed to remove the old concrete with which the stone-work was covered and make the roof quite water-tight with a fresh coat of concrete. The carvings in the temple will thus be preserved from further damage from water.

Frames of Galvanized Wire Netting.—The average price per superficial foot of these frames has been arrived at in the following manner:—The frames will be of teak-wood wrought, plain square, covered with galvanized wire netting of a large-sized mesh and attached to the side walls and columns by iron bolts ¾ diameter let in to the granite, and fixed with a little Portland cement or best lime mortar.

For one frame 8 feet × 12½ feet = 100 square feet—

Teak-wood—

2 × 12½ × ½ × ½ =	2½					
2 × 8 × ½ × ½ =	1⅓					
Total ...	3 5/12	at 4	...	...	...	13 10 0
Wire netting 7½ × 12 = 90 square feet, at 6 annas				...	...	33 12 0
Add for bolts and screws	...	...	...	...	...	0 6 0
Labor of fixing—						
One day mason, at 12 annas	...	...		0 12 0		
Half day carpenter, at 12 annas	...	...		0 6 0		
Carriage, &c.	...	...	...	0 4 0		
				1 6 0		1 6 0
						49 2 0

Divide by 90 supl. feet for the area of netting Rs. 49-2-0 ÷ 90 = 8·73 annas.
Thus price is 8·73 annas per foot superficial.

Removing old concrete—

48 × 27½ × ¾ =	...	...	...	...	...	C. feet	1,320
New concrete—							
48 × 27½ × ½ =	...	...	...	...	...	C. feet	880
Galvanized wire netting:—							
7 × 12 =	...	...	...	...	...	Supl. feet	84
9 × 12½ =	...	...	...	...	...	"	113
9 × 12½ =	...	...	...	...	...	"	112
8 × 12½ =	...	...	...	...	...	"	100
8 × 12½ =	...	...	...	...	...	"	100
						Total ...	509

Cleaning carvings.—

41 × 12 =	...	...	...	...	...	...	492
13 × 4 =	...	...	...	...	...	...	52
9 × 5 =	...	...	...	...	...	...	45
						Total ...	589

Summary.

Removing old concrete, cubic feet 1,320, at 1	...	...	...	13
Laying new " " 880, at 20	...	...	...	196
Galvanized wire netting, supl. feet 509, at 8·73 annas			...	278
Cleaning sculptures, " 589, at 3	...	...	...	17
			Total ...	504

CAVE No. 16, AN UNFINISHED ROCK EXCAVATION.

The orders of the Curator of Ancient Monuments regarding this cave are—

The second row of columns has been bricked up for dwelling purposes, and should be cleared. The cave should be cleaned out and kept in custody; and, in order to prevent natives from damaging the interior by lighting their cooking fires, the front should be railed in with a stone railing or wall.

The walls to be removed are portions of nine walls, amounting in all to 162 cubic feet.

The fence wall to be erected in front will be in all 70 feet long, and it is proposed to make it 1½ feet thick by 3 feet high with a foundation of 6 inches deep. The wall to be constructed of rubble masonry set in lime mortar, but not plastered.

Dimensions—

70 × 2 × ½ =	...	...	...	...	...	C. feet	70
70 × 1½ × 3 =	...	...	...	...	...	"	315
						Total ...	385

Summary.

Removing of walls, cubic feet 162, at Rs. 2	...	...	...	Rs.	3
Fence wall, cubic feet 385, at Rs. 20	...	...	...	"	77
			Total ...		80

CAVE No. 21, KAPALISVARA MANDAP.

This cave is a small one with three inches situated very near the Gopis Churn. The Curator of Ancient Monuments has ordered the front of the cave to be fenced to prevent damage.

It is therefore proposed to erect a small wall of solid masonry round the front of this cave. The wall will be 30 feet long in front with returned ends of 5 feet each, making a total of 40 feet. It will be 3 feet high and 18 inches thick, with a small foundation of 6 inches deep. To be constructed of rubble masonry set in lime, but not plastered.

Dimensions—

40 × 1½ × 3 =	...	...	...	...	...	C. feet	180
40 × 2 × ½ =	...	...	...	...	...	"	40
						Total ...	220

Cost—
Cubic feet 230 rubble masonry, at Rs. 20 ... ... Rs. 44

GANESA TEMPLE No. 24.

The Curator of Ancient Monuments states—

This temple is in fair preservation, but should have the three front openings between the pillars filled with frames of wire netting to prevent the inner chamber being damaged by use as a dwelling or cook-house.

The Ratha has been cleaned out and is now in good condition, the only things required being the addition of the frames of wire netting as ordered, the dimensions and cost of which will be as follows :—

Netting—
Superficial feet $2\frac{1}{2} \times 7$) $2\frac{1}{2} \times 7$) = ... $8\frac{1}{2} \times 7 = 59\frac{1}{2}$
" $8\frac{1}{2} \times 7$)

Cost—
Netting, $59\frac{1}{2}$ supl. feet, at As. 8·73 per foot ... ... Rs. 32

THE VAISHNAVA CAVE No. 25.

The Curator of Ancient Monuments has ordered—

The openings between the columns should be filled in with wire netting and the front cleared of debris.

Quarrying should be absolutely forbidden.

No quarrying is now going on at this spot.

The dimensions of the openings to be filled in with netting, and the cost will be as follows.

The openings are three in number with a total superficial area of 153 feet.

A sketch in the report of the Curator, dated June 1881, shows the manner of putting in these gratings at this cave.

Cost—
Galvanized wire netting in teak-wood frames, superficial feet 153, at 8·73 annas ... ... Rs. 83

No. 27, RAYALA GOPURAM.

It is proposed to excavate the earth from round this unfinished Gopura and cut-root the scrub jungle as ordered by the Curator of Ancient Monuments.

The dimensions are as follows :—

50 × 11 × 2 =	...	C. feet 1,100
30 × 5 × 2 =	...	" 300
20 × 5 × 2 =	...	" 300
10 × 10 × 3 =	...	" 300
10 × 10 × 3 =	...	" 300
	Total ...	2,300

Cost—
Clearing earth and stones, cubic feet 2,300, at 4 ... ... Rs. 9

CAVE No. 32, THE MAHISHMARDINI MANDAP.

The sculptures in this cave are very good; the one of Durga and Mahishasura especially so.

The orders of the Curator of Ancient Monuments are as follows :—

One of the four front pillars has completely fallen, and might, for appearance sake, be replaced; but the rock above is so massive that there is no actual need of support. The sculptures should be cleaned and the front openings closed with frames of wire netting.

The pillar, which will contain 0·6 cubic feet, will cost, it is believed, Rs. 1-8-0 per cubic foot.

The openings in front are five, $5 \times 5 \times 10\frac{1}{2} = 262\cdot5$ superficial feet.

Cleaning sculptures—		
13 × 8 =	...	104
13 × 8 =	...	104
4 × 12 =	...	48
5 × $14\frac{1}{2}$ =	...	$72\frac{1}{2}$
	Total ...	328½

2018 / 3

Summary.

Pillar, cubic feet 0·6, at Rs. 1-8-0	Rs.	14
Netting, superficial feet 262, at As. 8·73	"	143
Cleaning sculptures 263, at Rs. 3·00	"	8
Total ...		165

No. 34, OLAK ANESVARA TEMPLE.

The orders of the Curator regarding this temple are—

Debris ought to be cleared away from the interior. Creepers should be cut-rooted from the masonry and access made easier than at present, as visitors have to scramble over slippery rock to reach the building.

It is also now proposed to repoint the whole building as suggested for the Alaiva or Shore Temple No. 6. In the *Madras Journal of Literature and Science* for the year 1880 this temple is spoken of as follows :—

"This imposing relic is only the outer stone casing of a handsome structural temple which occupies the highest part of the rocks. * * * Outside it is very much weather-worn * * * and the whole structure looks as if it must soon fall down."

The joints are now so weather-worn as to be quite open in many places throughout the entire thickness of the wall, which makes them very unstable.

Creepers have already been removed from the masonry.

The best place to cut a path is on the south side of the temple, and at that spot it will be 21 feet long and of an average breadth of 2 feet.

Dimensions of pointing—		
21 × 15 =	...	Supl. feet 315
21 × 15 =	...	" 315
15 × 15 =	...	" 225
12 × 15 =	...	" 180
12 × 13 =	...	" 156
17 × 13 =	...	" 221
17 × 13 =	...	" 221
9 × 13 =	...	" 117
3 × 3 =	...	" 9
	Total ...	1,759
Cutting path—		
21 × 2 × ½ =	...	C. feet 21

The debris has already been removed.

Summary.

Pointing, supl. feet 1,759, at Rs. 4	Rs.	70
Cutting path, c. feet 21, at " 1-8-0	"	31
Total ...		101

THE SOUTHERN GROUP OF RATHAS Nos. 37, 39, 41, 42 AND 43.

The orders of the Curator of Ancient Monuments as regards these temples are as follows :—

No. 37, DRAUPADI'S RATHA.

The finial which surmounted the roof has fallen, and may probably be found in the sand, which should be removed so as to lay bare the plinth.

The sand has already been excavated from round this as well as from round the rest of the temples of this group. Two finials were found, one belonging to Draupadi's Ratha No. 37 and the other to Dharmaraja's Ratha No. 43.

No. 39, ARJUNA'S RATHA.

The clearing of the sand has already been done as mentioned.

No. 41, NAKULA AND SHADEVA'S RATHA.

The same remark applies.

Abstract of Cost of Estimate for the Preservation of the Caves, Temples, and Sculptures.

Summary.

No. of Monument.	Name of Cave or Temple.	Rs.
6.	Alaiva or Shore Temple	453
15.	Krishna Mandap	504
16.	Panca	80
21.	Kapala	44
24.	Ganesa Temple	82
25.	Vishnu do.	83
27.	Rayal Gopura	9
32.	Mahishmardini	165
34.	Olak Anesvara Structural Temple	101
37.	Draupadi's and Dharmaraja's Ratha	11
42.	Bhima's Ratha	89
44, 46, 48, 50, 51, and 52	Caves, amongst which the two Koneri Caves, Nos. 51 and 52, are the most important	371
	Establishment (three watchmen)	180
	Total ...	2,122
	Contingencies, 5 per cent. ...	106
	Grand Total ...	2,228

(Signed) H. C. BLACK,
Archæological Engineer.

I approve the provisions of this estimate.

(Signed) H. H. COLE, Major, R.E.,
27th June 1883. Curator of Ancient Monuments in India.

Order—dated 23rd July 1883, No. 2018 W., Public Works.

The estimate, amounting to Rs. 2,228, for restorative work at the Seven Pagodas, is sanctioned.

2. The question as to allotment of funds is being separately considered with reference to paragraph 2 of G.O., No. 1741 W., dated 21st June 1883.

3. This sanction has been registered as Provincial No. 75 W. of 1883-84 and classified as Civil Buildings, Repairs.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To H. C. Black, Esq., Special Assistant Engineer.
To the Curator of Ancient Monuments in India.
,, Superintending Engineer, Fifth Circle.
,, Accountant-General.
,, Examiner, Public Works Accounts.
,, Public Department.

Exd. A. F. Goodall.

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BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of Madras.

PUBLIC WORKS.

Dated 3rd July 1883.

Read

Rect.

G.O. 3rd July 1883, No. 2018 W.

JULY.

Seven Pagodas

Estimate for restorative work at the —— sanctioned.

21st JUNE 1883, No. 1741 W., PUBLIC WORKS.

2018/3

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ— the following letter from Major H. H. COLE, R.E., Curator of Ancient Monuments in India, to the Chief Engineer, Public Works Department, dated Simla, 9th June 1883, No. 111 :—

With reference to your No. 995 C., dated the 21st May 1883, enclosing Mr. Black's estimate for work at the Hampi ruins, I have the honour to return the papers on which I have noted my general approval of the measures provided for.

2. I would, however, observe that it seems to me inexpedient to utilise all the available funds on Hampi alone. There will be a small estimate for completing remedies to the Seven Pagoda Monuments, and there will be some work at Amarávati even if the sculptures packed by Dr. Burgess should unfortunately be destined to find a foreign home.

3. The available funds after deducting Mr. Black's salary, &c., should, I submit, be divided into ten parts and apportioned to these works in the following proportion :—

Hampi, five parts.
Amarávati, three parts.
Seven Pagodas, two parts.

4. If this arrangement is agreed to, I would contribute a grant of Rs. 10,000 instead of one of Rs. 5,000, and the allotment of the Rs. 15,000 which would then be available would be—

	Rs.
Mr. Black's salary, establishment, &c. (say)	7,000
For Hampi work	4,000
„ Amarávati work	2,400
„ Seven Pagodas	1,600
Total ...	15,000

As regards Hampi, I think the main structure of the Vittala Swami Temple should be the first to be repaired.

5. I will, on receipt of a telegraphic message confirming these proposals, ask the Comptroller to allot the sum of Rs. 10,000.

ENCLOSURE.

PRESERVATION OF NATIONAL MONUMENTS.

Approximate Estimate for the preservation of Ancient Monuments at Bijanagger for the Year 1883-84.

REPORT.

The following approximate estimate has been framed in accordance with the orders contained in the report of the Curator of Ancient Monuments for the year 1881, as also in accordance with the orders which have been since issued by the Curator.

It provides for the complete preservation of Vittala Swami Temple, including the following items:—Restoration of the ashlar walls of the temple. Restoration of the broken portion of the roof of the Vimanah. Replacing the stone beams which supported the roof. Replacing the stonework which is damaged both in the entrance porch and at the entrance to the Vimanah. Restoration of the brickwork parapet round the top of the main and subsidiary buildings. Relaying the damaged flooring and repairs to the surrounding buildings.

It also provides for the necessary repairs to the Temple of Victory, the Queen's Baths, and the Raganath Swami Temple.

It also includes all necessary provision for establishment and for stationery, &c.

I approve of the works provided for in this estimate.

(Signed) H. H. COLE, Major, R.E.,
Curator of Ancient Monuments in India.

9th June 1883.

Approximate Estimate for the preservation of Ancient Monuments at Bijanagger for the Year 1883-84.

ABSTRACT.

Vittala Swami Temple.

Main Building.

		Rs.	Rs.
Ashlar walls, rebuilding 3,100 c. ft., at Rs. 20	... ...	620	
Roof of Vimanah, 2,800 sq. ft., at „ 25	... ...	700	
Stone beams, No. 14, each Rs. 35	... ...	490	
Stonework in front and in steps, 700 c. ft., at Rs. 1-8-0 per foot		1,050	
Brickwork round top, 4,800 sq. ft., at Rs. 15	... ...	570	
Flooring, relaying 6,200 „ at „ 10	... ...	620	
Brickwork in Goparas, 2,000 c. ft., at „ 30	... ...	600	
			4,650

Colonnades.

Re-erecting 800 lineal feet including re-roofing, 800 l. ft. at Rs. 3-8-0	... ...	2,800	
Chuggas, re-hoisting and setting 1,500 l. ft., at As. 8	...	750	
			3,550

Subsidiary Temples.

Brickwork on car and Kallian Mantapa, 2,000 sq. ft., at Rs. 15		300	
Flooring, relaying 3,200 sq. ft., at Rs. 10	... ...	320	
Repairs to Goparas { 1 at 100 / 1 at 50 }	... ...	150	
Gates for do. 3 at 50	... ...	150	
Clearing earthwork and debris	... ...	300	
			1,320
Total, Vittala Swami	...		9,520

Temple of Victory (Hazara Ramchandra).

Propping Masonry.

Masonry and stone pillary, 20 at Rs. 40 each	... ...	800	
Rails including fixing, 5 tons at „ 100	... ...	500	
Removing earthwork and debris	... ...	150	
			1,450

Queen's Baths.

Repairs to roof, 6,000 sq. ft., at Rs. 5	... ...	300	
			300

Raganath Swami.

Repairs to roof, 8,000 sq. ft., at Rs. 2-8-0	... ...	200	
Earthwork and removing debris, 9,000 c. ft., at Rs. 4	...	360	
			560

Establishment.

		Rs.	Rs.
1 Engineer, 12 months, at Rs. 350	... ...	4,200	
1 Draftsman, do. at „ 100	... ...	1,200	
1 Overseer and Clerk { 1 at 40 / 1 at 25 } 12 months, at Rs. 65	...	780	
Travelling Allowance, 12 months, at Rs. 50	... ...	600	
			6,780
Photographic Apparatus and Chemicals	... ...	280	
Stationery		100	
			380
	Total ...		18,990

Order—dated 21st June 1883, No. 1741 W., Public Works.

The estimate, amounting to Rs. 18,990, for restorative work at the Hampi ruins in the Bellary District, is sanctioned.

2. The question of appropriation of funds and the distribution of allotments to the several works referred to in the foregoing letter will be considered on receipt of further information from Major Cole, who will shortly be addressed.

3. This sanction has been registered as Provincial No. 56 W. of 1883-84 and classified as Civil Buildings, Repairs.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To H. C. Black, Esq., Assistant Engineer, with Memorandum.
To the Curator of Ancient Monuments in India.
„ Superintending Engineer, Third Circle.
„ „ „ Fifth Circle.
„ „ „ Second Circle.
„ Accountant-General.
„ Examiner, Public Works Accounts.
„ Public Department, with Memorandum.

Ext. A. F. Goodall.
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BUILDINGS AND ROADS.
CIVIL WORKS.

G.O. (1883) Madras.

PUBLIC WORKS.

Dated June, 21st.

Read. *Encl.*

G.O., 21st June 1883, No. 1741 W.

JUNE.

Hampi Ruins

Estimate for restorative work at the —, sanctioned with remarks.

D.O. Letter Papers
21 June 1883

Major E. Brown R.E.
Deputy Chief Engineer
Dear Sir

I herewith beg to send a Memorandum of the estimate which I submitted to Major Cole C.E. I do not know if it is sufficiently detailed or if the information has been entered.

Yours truly
H. Black

Preservation of National Monuments

2018
9

Public Works Department
Madras

Siren Pagodas
Mahabalipuram

Estimate of the probable cost of preserving the Adaion or Shore Temple No 6

Report

The Senator of Ancient Monuments state in his report for the year 1881-82
"This is a most remarkable monument
"probably dating from the 8th or 9th century
"and if not the most early is one of the best
"examples of structural primitive Dravidian
"architecture. + + +. The stone masonry of
"the pagoda is much broken and displaced
"and should be restored secure and replaced
"The interior should be cleared out and the
"and removed, so as to completely reveal
"the plinth of the exterior. Sand should
"also be removed to lay bare the outline of
"the walls which form the enclosure en closing
"The removal of roots of trees from the
"roof is important.

Replacing Masonry

The number of stones to be refixed into the enclosure wall is 40 of about 15 cwt. each. Five (5) large stones of about 1 ton each.

dad have fallen out of the walls of the Tomb itself, also one of about 2½ Tons, also several of the smaller granite ornaments, which latter are bronzes almost all missing. The bas-relief of Siva in the sanctum has also got partly displaced from its place. The double base has originally covered with stucco but the stucco having got removed, the surface of the granite has much decayed. This especially the case on the South and East sides where the salt spray has made the pointings indistinguishable. The granite likewise decays much at the joints and becomes very insecure. It is therefore suggested to fill up the joints with chunks and lime mortar and thus repoint the whole building which will do much to preserve it for a long while. This filling of the joints is absolutely necessary to prevent the stones from subsiding and ultimately falling out of the walls. The mortar under stone of the corner base stones has disappeared for a depth of 4 ft. and other large stones are nearly as insecure. The outermost enclosure wall has almost all fallen down as it was not proposed to do anything in the way of rebuilding it.

Specification

The mortar will be made from lime of burnt shells and sand in the proportion of three of sand to one of lime. This makes excellent mortar. The chunks will be chips of granite from the neighbouring quarry. The hoisting of the stones will be done with a small three legged derrick made from three steel poles and a

22 Ton differential block & chain.

29/6/10

Rehoisting and setting stones

Stone of	2¼ Tons	1	Tons	2¼
do	do 1 do	5	"	5
do	do 15 cwt	5	"	3¾
			Total Tons	11

Rebuilding Masonry — C.ft 150

Removing Sand

Sup. ft	301 × ½	}	= C.ft 205
"	109 × ½		
"	1000 × 1	}	= C.ft 3530
"	1000 × 1		
"	1530 × 1		
	Total Sand		3735

Pointing

Sup. ft	2983
	1560
	444
	1278
	1071
Total pointing	7336

Summary

				Rs.
Hoisting & setting stones	11 Tons	@ per Ton	10/-	110
Removing sand	C.ft. 3735	@ per 100	3/0	13
Pointing Masonry	Sup. ft 7336	@ per 100	4/-	293
Lime Masonry	C.ft 150	@ per 100	25/-	37
		Total Rupees		453

Seven Pagodas

Krishna Mandap AD 15

The Curator of Ancient Monuments mention the bas-relief representing Krishna with a group of herdsmen and cows to carved on the solid rock. + + + +. The roof over this rock sculpture is built of masonry and gives access to a stream of rain water thro cracking and wearing away the carvings and covering them with lichen. The roof should be made water tight and the interior as well as the carvings thoroughly cleaned. The front row of columns should be filled in with a frame of galvanized iron netting and the centre fitted with a wicket gate under lock and key.

Leakage of roof

Since the report of 23 June 1881 was written a channel has been cut on the slope of the granite hills as a cutwater which will prevent any drainage from the ground above but as a good deal of leakage still comes through the roof of the porch it is proposed to remove the old concrete with which the stone work was covered and make the roof quite water-tight with a fresh coat of concrete. The carvings in the temple will thus be preserved from further damage from water.

Frame of galvanized wire netting

The average price per superficial foot of this frame has been arrived at in the following manner. The frames will be of teak wood wrought plain square covered with galvanized wire netting of a large sized mesh and attached to the side walls and columns by iron bolts ¾" diam. Let into the granite & fixed with a little portland cement & lime mortar.

Per one frame 8 ft x 12½ ft = 100 Sup ft.

Teak Wood

2 x 12½ x 6 x ½	= 25		
2 x 8 x 3 x ½	= 12		
Total	37	@ 4 f	13 - 10½
Wire netting 96 x 12 = 96 Sup ft @ 6 a			33 - 12
Add for bolts and screws			6
Labour of fixing			
1 Sby Bears @ 12 a		0 12	
½ " Carpenter do		6	
Coolies &c		4	
Total		1 6	1 6
			49 2

Divide by 90 Sup. ft as per area of netting 49.2 ÷ 90 = 8.73 annas

Thus the item is 8.73 annas per foot Superficial

12

Krishna Mandap cont.

Removing old Concrete

48 x 27½ x ½ = 1320 C.ft.

New Concrete

48 x 27½ x ½ = 880 C.ft

Galvanized wire netting

7 x 12	= 84 Sup ft	84
9 x 12½	= "	112
9 x 12½	= "	112
8 x 12½	= "	100
8 x 12½	= "	100
Total	Sup ft	509

Cleaning Carvings

41 x 12	=	492
13 x 4	=	52
9 x 5	=	45
Total		589

Summary

Removing old Concrete	C.ft 1320	@ 1 f	13
Laying new ditto	" 880	@ 2 f	176
Galvanized wire netting	S ft 509	@ 3.73	298
Cleaning sculptures	" 589	@ 3 f	17
	Total		504

8

Cave No 16 An unfinished rock excavation

The orders of the Curator of Ancient Monuments regarding this cave are

"The second row of columns has been divided up for dwelling purposes and should be cleared. The cave should be cleared out and kept in custody and in order to prevent cattle from damaging the interior by digging their scratching places, the front should be walled in with a stone railing or wall.

The walls to be removed are portions of nine walls amounting in all to 162 Cft

The fence walls to be erected in front will be in all 70 ft long and it is proposed to make it 2½ ft thick by 3 ft high with a foundation of 6 inches deep. The wall to be constructed of rubble masonry set in lime mortar, but not plastered

Dimensions

70' x 2' x ½ = 70
70 x 1½ x 3 = 315
Total C. ft 385-

Summary

	Rs
Removal of Walls C. ft 162 @ 2/-	3.
Fence Wall (Masonry) do 385 @ 20	77
Total Rs-	80

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Preservation of National Monuments

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Seven Pagodas

Cave No 21 Rajalinvara Mandapa

This cave is a small one with three niches situated very near the Yoga Shiva
The Curator of Ancient Monuments has ordered the front of the cave to be fenced to prevent damage

It is therefore proposed to erect a small wall of solid masonry round the front of this cave. The wall will be 30 ft long in front with returned ends of 5 ft each making a total of 40 ft. It will be 3 ft high and 18 inches thick with a small foundation of 6 inches deep. To be constructed of rubble masonry set in lime mortar but not plastered.

Dimensions

40 x 1½ x 3	= Cft	180
40 x 2 x ½	= "	40
Total		220

Cost

	Rs-
C. ft 220 of Rubble masonry @ 20/-	44

Ganesa Temple No 24

The Curator of Ancient Monuments states,
" This temple is in fair preservation but should
" have the three front openings between the
" pillars filled with frames of wire netting to
" prevent the inner chamber being damaged by
" use as a dwelling or cook House.

The Outlier has been cleared out and is now in good condition. The only thing required being the addition of the frames of wire netting as ordered. The dimensions and cost of which will be as follows

Wire netting	Super ft.	
2½ x 7		
2¾ x 7	= 8½ x 7 =	57½
3½ x 7		

Cost

Wire netting

57½ super feet @ fr ft As. 0.73 — As 42

Vaishnava Cave No 25

The Curator of Ancient Monuments has ordered

" The openings between the columns should be
" filled in with wire netting and the front
" cleared of debris
" Quarrying should be absolutely forbidden

No quarrying is now going on at this spot

The dimensions of the openings to be filled in with netting and the cost will be as follows

The openings are three in number with a total superficial area of 153 ft. A sketch in the report of the Curator dt. 23 June 1881 shows the manner of putting in these gratings at this cave.

Cost

Galvanized wire netting in Teak wood frames. S. ft 153 } @ fr Sft as. 0.73

Rs. 83.6

A.S.I. Royal Agreement

[illegible] to prepare the estimate for the work from [illegible] the unfinished Agreement and return the same [illegible] the Circle of the Curator of Ancient Monuments

The Measurements are as follows

20 x 11 x 2	= 110
20 x 5	x 2 = 200
20 x 5	x 2 = 100
10 x 10	x 1 = 100
10 x 10	x 2 = 200
Total Sqft.	230

Say

Cleaning Earth and Stone Off 230 @ 4/- per Sq. Yd. 9-

Preservation of National Monument

115

Seven Pagodas

Case No 32 The Bahirmardini Mandap

The sculptures in this case are very good, the one of Durga and Mahisasura especially so. The orders of the Curator of Ancient Monuments are as follows.

"One of the front pillars has completely fallen and might for appearance sake be replaced but the rock above is so massive that there is no actual need of support. The sculptures should be cleaned and the front openings closed with frame of wire netting.

The pillar which will contain 9.6 sqyds ft will cost it is believed Rs 1/8 per C. ft.

The openings in front are five
5 x 5 x 10½ = 262½ Sqy. ft.

Cleaning Sculpture

13 x 8	= 104
13 x 8	= 104
6 x 12	= 40
5 x 1½	= 7½
Total	263½

Summary

Pillar 9.6 ft. 9.6 @ 1/8	14
Netting 5.ft 262 @ as 0.13	143
Cleaning sculpture 263 Sft @ 3/-	8
Total	165

No 34 Black Animals Temple

The notes of the Curator regarding this temple are

"Debris appears to be cleared away from the bottom. Creepers should be removed from the masonry and drains made easier than at present. Visitors have to scramble over slippery rock to reach the building.

It is also now proposed to repoint the whole building in the same manner and for the same reasons as suggested for the Alamo or Shiva Temple No 6. In the Madras journal of Literature and Science for the year 1850, this temple is spoken of as follows. "This imposing "edifice is only the outer stone casing of a "handsome Pagodal Temple which occupies "the highest part of the rocks + + + Portions "of it are very much weather worn + + + and the "whole structure looks as if it must soon "fall down

The joints are now so weather worn as to be quite open in many places throughout the entire thickness of the walls which makes it very unstable

Creepers have already been removed from the masonry.

The best place to cut a path is on the south side of the Temple and at that spot it will be 2 ft long and of an average breadth of 2ft

Dimensions

Dimensions of Pointing

21	x 15 =	Sqs. ft	315
21	x 15 =	"	315
15	x 15 =	"	225
12	x 15 =	"	180
12	x 13 =	"	156
17	x 13 =	"	221
17	x 13 =	"	221
9	x 13 =	"	117
3	x 3 =		9
	Total Sqrs ft		1759

Cutting Path

21 x 2 x ½ = Cft 21

The debris has already been removed

Summary

Pointing	Sqs ft	1759 @ 4/-	Rs. 70
Cutting path	Cft	21 @ 1/6	31
		Total Rs	101

The Structural group of Cutcha Nos. 37-39-41 42 and 43

The orders of the Director of Ancient Monuments to repair these temples are as follows

No 37 Draupadi Ratha

The finial which surmounts the roof has fallen and some portions be found in the stand which should be removed so as to lay bare the floor.

The sand has already been excavated from around this as well as from round the west of the temple of this group. Two finials were found one belonging to Draupadi Ratha No 37 and the other to Dharmarajas Ratha No 43.

No 39 Arjunas Ratha

The clearing of the sand has already been done as mentioned

No 41 Nakula and Sahadeva Ratha

The same remark applies

No 42 Bhima Ratha

The clearing of sand having been done and the large block at the roof as well as the smaller one filled up it is now proposed to replace the portions of the lower cornice which have fallen off. The largest of these pieces has fallen from the SW corner in consequence of a vein in the rock. It weighs about 4 tons, and is triangular in shape sloping down to a point at the lower end. It can easily be replaced by cutting off the lower point square with the face and inserting a dowel block of stone in the building for the fragment to rest on.

On the large piece on the west side will be two more dowels to replace that with two large

Preservation of National Monuments

Seven Pagodas

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No 42 continued

Large dowells it can be supported. A third fragment has fallen down from the NW corna which can be supported & replaced as the fragment No 1 will be.

Some cracks require filling in three of the pillars of this Ratha

Summary

Hoisting and setting fragments 7 tons total weight @ 10/- per ton	Rs 70
Dowelling to support fragments 8 dowells of granite @ 2/4 each	18
Filling cracks 12 lineal ft.	1
Total Rupees	89

No 43 Pharmarajas Kattu

The finial of this has been found and will be rehoisted. The parapet wall of one of the galleries has cracked in three places and the cracks should be carefully filled in with lime mortar. About 20 lineal ft require to be done

	Rs
Raising and resetting Finial & ton @ 10/-	5
do for Temple No 37 } & ton @ 10/-	5
Daraspatis Kattu }	
Filling cracks 20 lineal ft	1
Total Rupees	11

Caves Nos 44, 46, 40, 50, 37 and 52

The orders of the Curator of Ancient Monuments as regards these are as follows.

" Means should be taken to prevent the visitors " from being used as dwelling, cook houses " for fishermen or cattle sheds and this can " only be effected done by fencing round the " entrance so as to prevent access to any " but authorized persons.

It is therefore proposed to erect low walls round the entrances of these caves which will serve to keep out cattle and also to prevent the caves being readily utilized as dwellings. The walls will be 3 ft high and of the same dimensions as those suggested for caves

No 16 & 21. The total length of wall for these caves will be as follows 18

Cave	No 44	Lineal ft	36
"	" 46	"	41
"	" 40	"	69
"	" 50	"	37
"	" 52	"	60
"	" 37		72
	Total		337

337 x 1½ x 3 =	C ft	1516½
337 x 2 x ½ =	"	337
Total C ft		1853½

Summary

	Rs
C ft Lime Masonry 1853½ @ 20/- per 10	371

Employment of Watchmen

The Curator of Ancient Monuments has offered three watchmen to be employed in order that a proper relief may be observed.

It is estimated that 5 Rs per month would be sufficient wages for each of these men which would be 60 Rs per annum, or a total of 180 Rs. for the three watchmen.

Cost	Rs
3 watchmen for 1 year @ 5/- each	180

20

Seven Pagodas

Mahavellipur, Madras

Abstract of Cost of Estimate for the preservation of the Caves, Temples and Sculptures

Summary

Number of Paragraph	Name of Cave or Temple	Rupees
6	Olaiveri Rock Temple	403
10	Krishna Mandapa	870
16	Varaha	80
21	Pataka	146
24	Ganesa Temple	82
25	Vishnu do	83
27	Royal Figures	9
32	Mahishamardini	165
34	Olak Aranya Sthanakal Linga	201
37	Draupadis and Sharmanjas	11
42	Bhima's Path	89
44, 46, 48, 50, 57 and 62	Caves amongst which the two former caves No 57 & 62 are the most important Establishment (Sanctioned)	371
	Total	2122
	Contingencies 5 p.c. ct	106
	Grand Total Rupees	2228

D. L. Blunt
Archaeologist in charge

2228
19

No 85

Seven Pagodas
23 June 1898

To
The Deputy Chief Engineer
Public Works Department
Madras

Sir

In answer to Memorandum 1154. C. I have the honor to state that I dispatched a duplicate copy of the estimate with a demi official letter from Seven Pagodas on 21 June. I had already sent a copy direct to the Secretariat at Simla.

I am now engaged in excavating the surrounding walls of the Olaiveri or Shore Temple, which walls are much more extensive and in much better preservation than was at first supposed.

I have the honor to be
Sir
Your most obedient Servt.

D. L. Blunt
Archt. in Chg.

Preservation of National Monuments

Public Works Department
Madras

Seven Pagodas
Mahavellipur.

Estimate of the probable cost of preserving the Alaiva or Shore Temple No 6.

Report

The Senate of Ancient Monuments state in his report for the year 1881-82
This is a most remarkable monument probably dating from the 8th or 9th Century and if not the most early is one of the best examples of structural primitive Dravidian architecture. + + + The stone masonry of the pagoda is much broken and displaced and should be cleaned down and replaced The interior should be cleared out and the sand removed so as to completely reveal the plinth of the interior. Sand should also be removed to lay bare the foundations of the walls inside from the outermost Enclosure The removal of roots of creepers from the roof is important.

Replacing Masonry

The number of stones to be replaced in the enclosure wall is two about 16 ft each. Five large stones of about 1 ton each

have fallen out of the walls of the Temple itself also one of about 2½ tons, also several of the smaller granite ornaments which latter are however almost all missing. The bas relief of Siva in the sanctum has also got partly shifted from its place. The walls have been originally covered with stucco but the stucco having got removed the surface of the granite has been exposed. This is especially the case on the South and East sides where the salt spray has made the carving indistinguishable. The granite likewise decays much at the joints and becomes very insecure. It is therefore suggested to fill up the joints with spauls and lime mortar and thus repoint the whole building which will do much to preserve it for a long while. This filling of the joints is absolutely necessary to prevent the stone from subsiding and ultimately falling out of the walls. The mortar under under one of the corner stone stone has disappeared for a depth of 4 ft and other large stone are nearly as insecure. The outermost enclosure wall has almost all fallen down as it is not proposed to do anything in the way of rebuilding it.

Specification

The mortar will be made of lime of burnt shells, and sand in the proportion of three of sand to one of lime. This makes excellent mortar. The spauls will be chips of granite from the neighbouring quarry. The hoisting of the stone will be done with a small stone legged derrick made from three stout poles, and a

a 2½ ton differential block & chain.

Rebuilding and setting stone

Stone of	2½ tons	1	Tons	2½
do	do 1	do	5	" 5
do	do 15 cwt.		5	" 3¾
		Total tons		11.

Rebuilding Masonry Cft 180

Removing Sand.

Sup ft	301 × ½	}	= Cft 2065
"	205 × ½		
"	1000 × 1	}	" 3830
"	1530 × 1		
	Total Sand		3736

Pointing

Sup ft	2983
"	1560
"	444
"	1298
"	1071
Total Pointing	7336

Summary

				No.
Resetting and setting	11 Tons stone	@ 10/-		110
Removing Sand	Cft 3735	@ 9d		13
Pointing Masonry	Sup ft 7336	@ 4/		293
Lime Masonry	Cft 180	@ 25/		37
	Total Rupees			453

Preservation of National Monuments

Seven Pagodas.

Krishna Bandap No 15

The Curator of Ancient Monuments writes
The bas relief representing Krishna with a
group of herdsmen and cows is carved
on the solid rock + + + The roof over
the rock sculpture is built of masonry
and gives access to a stream of rain
water which destroying and wearing away
the carvings and covering them with lichen.
The roof should be made water-tight and
the interior as well as the carvings
thoroughly cleaned. The front row of columns
should be filled in with a frame of galvanized
iron netting and the centre fitted with a
wicket gate under lock and key.

Leakage of Roof

Since the report of 23 June 1921 was
written a channel has been cut on the
slope of the granite hill as a catchwater
which will prevent any drainage from
the ground above but as a good deal
of leakage still comes through the roof
of the porch it is proposed to remove
the old concrete with which the stone was
was covered and make the roof quite water
tight with a fresh coat of concrete. The
carvings in the temple will thus be preserved
from further damage from water

Frames of galvanized wire netting

The average price for 100 sft of these frames has been arrived at by the following means.
The frames will be of Teak wood throughout plain square wooded with galvanized wire netting of a large sized mesh, and attached to the side walls & columns by iron bolts the iron let in to the granite and fixed with a little portland cement & best lime mortar.
Take one frame 8ft x 12½ ft = 100 Sq ft.

Teak wood.

2 x 12½ x ½ x ½ =	2½		
2 x 8 x ½ x ½ =	1⅓		
Total	3⅚ @ 4ft	13.10⅓	
Wire netting 7½ x 12 = 90 sq ft	@ 6d	22.12	
Add for bolts & screws			6
Labour for fixing			
1 Mason @ 12d		0-12	
½ Carpenter do		0-6	
Carriage &c		4	
		1-6	1-6
			49-2

Deduct 6 sq ft for the
area of netting 6 x 2 = 90 = 0.75 cts

The price is 0.75 cts per sft.

Krishna Bandage cont.

Removing old concrete
40 x 27½ x ½ = 1320 Cft.

New concrete
40 x 27½ x ½ = 880 Cft.

Galvanized wire netting

7 x 12 =	84 sq ft.	84
9 x 12½ =	"	112
9 x 12½ =	"	112
8 x 12½ =		100
8 x 12½ =		100
Total		509

Cleaning carvings.

41 x 12 =	492	
13 x 4 =	52	
9 x 5 =	45	
Total	589	

Summary

Removing old Concrete	Cft 1320 @ 1/-	13
Laying new ditto	Cft 880 @ 2/-	176
Galvanized wire netting	Sft 509 @ 75	278
Cleaning sculpture	Sft 589 @ 3/-	17
Total		504

Case No 16 An unfinished rock excavation

The orders of the Director of ancient Monuments regarding this case are.

The second row of columns has been ordered up for standing purposes and should be cleared. The cave should be cleared out and kept in custody; and in order to prevent visitors from damaging the interior by lighting fires standing upon the front cave be railed in with a stone railing or wall.

The walls to be removed are portions of three walls amounting in all to 162 Cft.

The fence wall to be erected in front will be in all 76 ft long, and it is proposed to make it 3½ ft high 2 ft high and with a foundation of 6 inches deep. The walls to be constructed of rubble masonry set in lime mortar but not plastered.

Dimensions

70 x 2 x ½ = Cft 70
70 x 4½ x 3 = " 315
Total Cft 385

Summary

			Rs.
Removing of Walls	Cft 162 @ ½		3 0
Fence wall	" 385 @ 20		77 0
	Total	Rs.	80 0

Decoration of National Monuments

24

Seven Pagodas

Case No 21. Kapativana Pandaya

This cave is a small one with three niches situated very near the Agopis Ekara

The Senate of Ancient Monuments has ordered the front of the cave to be fenced to prevent damage

It is therefore proposed to erect a small wall of solid masonry round the front of the cave. The wall will be 30 ft long in front with returned ends of 5 ft each making a total of 40 ft. It will be 3 ft high and 18 inches thick with a small foundation of 6 inches deep. To be constructed of rubble masonry set in lime but not plastered

Dimensions.

40 x 1½ x 3 = Cft. 180
40 x 2 x 2 = " 40
Total " 220

Cost.

Cft 220 Rubble Masonry @ 20 Rs 44 0

Karnak Temple No 24

The Curator of Ancient Monuments states
The Temple is in fair preservation but those
Parts the Floor front opening between the pillars
filled with frames of wire netting to prevent
the Sacred Chamber being damaged by use
as a dwelling, or cook house
The Rubbish has been cleared out and is now
in good condition, the only things required
being the addition of the frames of wire
netting as ordered. The dimensions and cost
of which will be as follows

Netting 4 sup ft

2½ x 7)
2½ x 7) = 21½ x 7 = 87½
2½ x 7)

Cost
Netting 87½ sup ft @ 10 = 8.75 sup ft.
Rs. 32-

The Karnak Cave No 25

25

The Curator of Ancient Monuments has ordered
The openings between the columns should be filled in with wire netting and the floor cleared of debris
Quarrying should be absolutely forbidden

No quarrying is now going on at this spot

The dimensions of the openings to be filled in with netting and the cost will be as follows

The openings are three in number with a total superficial area of 153 ft.
A sketch in the report of the Curator of June 1881 shows the manner of putting in these gratings at this Cave.

Cost
Galvanized wire netting in
Teak wood frames 8 sup ft 153 @ 8.75 =
Rs. 83-0

No 27 Ayuba Lopesan

It is proposed to excavate the earth from round this unfinished Gopura and extend the south pinga as ordered by the Curator of Ancient Monuments

The dimensions are as follows

50 x 11 x 2	= 1100
30 x 5 x 2	300
30 x 5 x 2	300
10 x 10 x 3	300
10 x 10 x 3	300
Total Cft	2300

Cost

Clearing earth & stone Cft 2300 @ 1/4 = Rs 90.0

Preservation of National Monuments

Seven Pagoda

Case No 32 The Bahirawandini Mandap

The sculptures in this case are very good the one of Durga and Bahirawa especially so. The order of the Curator of Ancient Monuments are as follow

One of the four front pillars has completely fallen and might for appearance sake be be replaced but the roof above is so massive that there is no actual need of support. The sculptures should be cleaned and the front openings closed with frames of iron netting

The pillar which will contain 96 cubic ft will cost it is believed Rs 50 per cft

The openings in front are five
5 x 5 x 10½ = 262.5 Sup ft

Cleaning Sculptures

13 x 8	= 104
13 x 8	= 104
6 x 12	= 48
5 x 11½	= 57½
	263½

4 x 12 = 48

Summary

	Rs
Pillar Cft 96 @ 150.	14.0
Netting Sup ft 262 @ as 8.73	143.0
Cleaning sculp. 263 @ Rs 3.20	8.0
Total Rs	165.0

1834 Clerk Ancoona Temple

The orders of the Durbar regarding this Temple are.

Debris ought to be cleared away from the interior. Troopers should be entrusted from the Treasury and Peons made clean that at present, as visitors have to clamber over slippery rock to reach the building.

It is also now proposed to repoint the whole building as suggested for the Adam in Khoe Temple No 6. In the Madras Journal of Literature and Science for the year 1836, this Temple is spoken of as follows

"This imposing relic is only the entire stone casing of a handsome structural temple which occupies the highest part of the rocks. + + + Outside it is very much weather worn. + + + and the whole structure looks as if it must soon fall down.

The joints are now so weather worn as to be quite open in many places through out the entire thickness of the wall, which makes them very unsightly.

Troopers have already been removed from the Treasury

The best place to cut a path is on the south side of the Temple, and at that spot it will be 2½ ft long and of an average breadth of 2 ft.

Dimensions.

Dimensions of Painting

21	x	15	= Sup. ft.	315
21	x	15	=	315
15	x	15	=	225
12	x	15	=	180
12	x	13	=	156
17	x	13	=	221
17	x	13	=	221
9	x	13	=	117
3	x	3	=	9
		Deta Sup ft		1759

Cutting path

21 x 2 x ½ = Sft 21

The debris has already been removed

Summary

Painting	Sup. ft	1759 @ 4d	70
Cutting Path	S. ft	21 @ 1½	31
		Deta Rs	101

The Southern group of Buildings 37. 39. 40. 42. and 43.

The orders of the Secretary of Ancient Remains as regards these Temples are as follows

No 37 Dravidian Ratha

The finial which ornamented the roof has fallen & may probably be found in the road which should be removed so as to lay bare the plinth

The road has already been excavated from round this so as to lay bare from round the rest of the Temples of this group. The finials were found on belonging to Draupadis Ratha No 37 and the other to Nakul Sahadeva Ratha No 43.

No 39 Ajeena Ratha

The clearing of the road has already been done as mentioned

No 40 Nakul Sahadeva Ratha

The same remarks applies

No 42 Bhima Ratha

The clearing of road having been done and the large finial on the roof to which the smaller one fitted up it is now proposed to replace the portion of the lower course which have fallen off. The largest of these pieces has fallen from the S.W. corner in consequence of a crack in the rock. It weighs about 2 tons, and is triangular, sloping down to a point at the lower end. It can easily be replaced by cutting off the lower point square with the face and inserting a square block of stone in the building for the frag[ment] to fit upon.

Ratha

Preservation of National Monuments

Seven Pagodas

No 42 east

Another large piece on the west side will be rather more difficult to replace but with two large dowels it can be supported. A third fragment has fallen from the NW corner which can be supported & upstand as the fragment No 1 will be.

Some cracks require filling in three of the pillars of this Ratha

Summary

Raising and setting fragments 7 tons total weight @ 10/- per ton	70.
Dowelling to support fragments 8 dowels of granite @ 2/6 each	10
Filling cracks 12 linear ft	1.
Total £	81

Mr. Hammonds Estate

The period of this hire is to be found and will be reported. The principal levels of one of the pattern has already been taken and should be carefully filled with lime concrete before the lime for cement is to be done.

	Rs.
Whitewashing and cutting Pinnel-ts Two @ 1½	5
Do Do for Verges	5
Mason Drawing the Patterns	1
Filling drains Do Lime & Ft.	
Total Rs.	11

Cane Nos 44, 46, 40, 60, 32, 37

The orders of the Director of Ancient Monuments as regards them are as follows

Means should be taken to prevent the visitors from being near the dwellings, cook houses for Fodder or cattle sheds and this can only be effected by some to fences round the entrance so as to prevent access to any but authorized persons.

If it is thought proper to erect low walls round the entrance of these canes, which will seem to keep out cattle, and also to prevent the canes being readily utilized as dwellings. The walls will be 3 ft high and of the same dimensions as those suggested for canes Nos 16 and 21

The total length of walls for these will be as follows.

29

Cane No 44	Length	36	
" " 46	"	41	
" 40	"	69	
" 60	"	37	
" 32	"	60	
" 37	"	52	
	Total	"	337

337 x 12 x 3 = Cft 12132
337½ x 2 x ¼ = " 337½
12469½

Stone Masonry
Cft Lime Concrete 12469½ @ 3½ Rs 437-

Employment of Watchmen

The Director of Ancient Monuments has ordered three watchmen to be employed in order that a proper duty may be observed It is estimated that 5 Rs per month would be sufficient wages for each of these men which would be 60 Rs for annum or a total of 180 Rs for the three watchmen.

Cost	Rs.
3 watchmen for 1 year @ 60 per year	180

20

Estimate

Abstract of Cost of Estimate for the Preservation of the Arches, Temples and Sculptures.

Summary

No of Drawing	Name of Item or Temple	Rs.
6	Obelisk & Pier Temple	453
15	Krishna Mandap	824
16	Pavan	Do
21	Ragoba	Ditto
24	Ganesh Temple	32
25	Krishna do	83
29	Angel Square	9
32	Mahadeo Mandir	165
34	Old Arcade Shankar Temple	101
37	Dungeon and Staircase Ditto	11
42	Animal Ditto	89
Nos 46, 47, 51, 52, 57 and 62 Plans comprehend the Pen Shrine Cows &c and 52 are the Cover Shrines		371
Establishment (Contingent)		1180
	Total	2922
	Contingencies 5% ditto	106
	Gd. Total Rs.	2228

A. Blair
Archaeological Engineer

I approve the foregoing & the estimate
H. H. Cousens
Major R.E.
Superintending Archaeologist Western Circle
Poona 3rd June 1893

No 100

From A. F. Blair
Asst. Engr.

To
The Deputy Chief Engineer
Public Works Department
Bombay

Dated 9 July 1893

Sir

I have the honor to forward the estimate for the preservation of the ancient monuments at Deva Gadhwa, which estimate I have received direct from the Curator, with his remarks as to charges &c.

I have the honor to be
Sir
Your most obedient Servant
A. F. Blair
Asst. Engr.

PUBLIC WORKS DEPARTMENT.

No 2018-20

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 25th July 1883

Read the following

Demi-official from J. Black Esq. C.E. No. — of 21st June 1883

Letter from — No. — of —

to — No. — of —

Memorandum

1. Forwarding for the sanction of Government a statement showing the works on the 2nd class of the Ootacamund Road for which funds are required during the year 1883-84.

2. The question as to allotment of funds is being separately corresponded with reference to para 2 of G.O. No. 1371 P.W. dated 2nd June 1883.

3. This sanction has been registered as Provisional No. 95 W of 1883 and is transferred

Civil Building Regulations

Ch

Cl

117

12/7/83 FW 13/7

Ch

Elect Supp Special Staff Supp
Senator General Commanding
Sec'ries
Supply Supp Pers Pers Clerks
Accts Genl
Sy Insp Gen Accts
Pubs Pers Pers
(Sec Chief Secretary for Commissariat)

Cl

PUBLIC WORKS

Seven Pagodas

Estimate for
Water Course with
the _____
Aqueduct &c

50/9

Estimate Rupees Rupees