राजस्थान सरकार वन विभाग

क्रमांक प.1 (77)वन / 2023

जयपुर, दिनांक :--

Assistant Inspector General of Forests Government of India Ministry of Environment, Forests and Climate Change (FC Division) Indira Paryavaran Bhawan, Aliganj, Jor Bag Road, New Delhi - 110003

> विषय:- Proposal for diversion of 407.8227 ha for construction of Shahpur (1800 MW) Pumped Storage Project by M/s Greenko Energies Private Limited, in Hanumanth khera, Mungawali villages, G.P.-Mundiyar, Tehsil-Shahbad, Baran District, Rajasthan.

संदर्भः—आपका पत्रांक क्रमांक 8-25-2023-FC दिनांक 12.02.2024

महोदय,

उपरोक्त विषयान्तर्गत संदर्भित पत्र द्वारा जारी EDS क्रम में अतिरिक्त प्रधान मुख्य वन संरक्षक, प्राटेक्शन एवं नोडल अधिकारी एफसीए, राजस्थान, जयपुर के पत्रांक 14(Trans)2021/एफसीए/प्रमुवस/538 दिनांक 26.02.2024 से प्रेषित बिन्दुवार सूचना मय राज्य सरकार की अभिशंषा सहित प्रेषित कर, अनुरोध है कि विषयाकिंत प्रस्ताव के संबंध में आवश्यक स्वीकृति जारी करवाने का श्रम करावे।

भवदीया,

संलग्नः–उपरोक्तानुसार

(मोनाली सेन) विशिष्ट शासन सचिव, वन





कार्यालय प्रधान मुख्य वन संरक्षक (वन बल प्रमुख) राजस्थान,

अरण्य भवन, झालाना सांस्थानिक क्षेत्र, जयपुर-302004

क्रमांकः एफ. 14(Trans)2021 / एफसीए / प्रमुवसं. / 538 दिनांक 26 12 - 2020 विशिष्ठ शासन सचिव, वन, पर्यावरण एवं जलवायु परिवर्तन मंत्रालय, राजस्थान सरकार

शासन सचिवालय, जयपुर।

विषय:-Diversion of 407.8227 ha. of forest land for the development of Shahpur Pumped Storage Project by M/s Greenko Energies Private Limited, Shahabad Tehsil in Baran District, Rajasthan. (Proposal No.- FP/RJ/HYD/121439/2021)

सन्दर्भः—उप वन महानिरीक्षक, भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली का पत्रांक 8—25—2023—एफसी दिनांक 12.02.2024

महोदया,

उपर्युक्त विषयान्तर्गत संदर्भित पत्र के क्रम में मुख्य वन संरक्षक, कोटा के पत्रांक 704 दिनांक 20.02.2024 से प्राप्त सूचना के आधार पर प्रत्युत्तर बिन्दुवार निम्नानुसार है:—

S.No.	EDS	REPLY
1	The copy of approval from the concerned DCF, Baran has not been submitted for the Soil Erosion Treatment Plan, which needs submission.	technically checked and duly approved by DCF, Baran is enclosed herewith for
2	Govt. that the plantation raised in the year 2007 in 26 ha area which is now proposed for diversion. In this regard, it needs clarification	considered in tree enumeration of present

.... P.T.O.



3	As sought earlier, the State Govt. has not submitted the information on the encroachment of Agriculture land and Built-up as visible in the proposed forest land for CA.	that rem Stat the tow . CA som up strat by f land encr activ	all en oved a e Govt non-for ards CA area (areas ctures. followir will roachme vity.	ncroach nd sha free f rest lan (RDF) ulture e whic Encroa ng due be re ents be	nments II be from a d (pri salmer in Bar encroa ch a chmen legal p eleased fore t	an distr chment re not its will b procedur d by a aking u	ny sh over mbran d) pr ict is & fev n-per be Re re and eviction p pla	to the to the ces on oposed having v built- manent moved forest on of ination
4	Since, the Ministry vide letter dated 29.12.2023 has issued consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Van (Sanrakshan Evam Samvardhan) Rules, 2023 in suppression to all previous	Deg insta und per (Sar 202	raded ant project CA a the Su braksha 3. Th	Forest posal a und fall b-Rule n Eva ne deta	land re suit s with 13 gi um Sa uils of	nd as w propose able for in the co ven und wen und invardh Non-F given bo	sed i plan onform der th an) forest	n the tations nity as e Van Rules,
	guidelines & Rules in exercise of the powers conferred under section	S. No	District	Tehsil	Village	Chak / Block No.	Type of Land	Area in Ha
	3 C of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. In	1	Jaisalmer	Ramgrah -2	Kolu Tala A & Ekalpar	13,14,15 RRM, 5 RMSM & 3SLM	NFL	431 03
	view of that the State Govt. is therefore ascertain the suitability of Compensatory Afforestation land proposed over the Non-forest land as well as the Degraded forest land proposed in the instant proposal as per the Sub-Rule 13 given under the		hbad C n propontation nage i	Conserv osed fo to com	area c ation or Eco pensat	of 408 Reserve Restora e for the	, Bara ation e eco	an has (RDF) logical
	Van (Sanrakshan Evam Samvardhan) Rules, 2023.	Res	erve.					

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5	through the forest land wherein a component i.e. Upper Reservoir has been proposed. In this regard, a plan/ map showing the alternative roads	1 1 2 11
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भवदीया,

(शिखा मेहरा) अतिरिक्त प्रधान मुख्य वन संरक्षक, प्रोटेक्शन एवं नोडल अधिकारी एफसीए, राजस्थान, जयपुर

क्रमांकः एफ. 14(Trans)2021 / एफसीए / प्रमुवसं. / दिनांक प्रतिलिपि निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है:–

- सहायक महानिरीक्षक (वन), भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, इंदिरा पर्यावरण भवन, जोर बाग रोड, अलीगंज नई दिल्ली–110003
- 2. मुख्य वन संरक्षक, कोटा।
- 3. उप वन संरक्षक, बारां।
- उप महाप्रबन्धक, ग्रीनको इन्जीनियर प्रा0 लि0, प्लाट न0 1071, रोड़ न0 44, जुबलीहिल्स, हैदराबाद–500033

(दिनेश कुमार गुप्ता) उप वन संरक्षक (एफ.सी.ए.) अरण्य भवन, जयपुर

कार्यालय संभागीय मुख्य वन संरक्षक कोटा

 Add. Near Chambal Rest House, Kishorpura Kota- 324009 E-Mail:- ccffdp.kota@gmail.com Tel. no. 0744- 2500194

 क्रमांक एफ()एफसीए / समुवसं / 2023–24 / 70 4

 ·दिनांक: 20-2-2024

 निमित्त:

अति0 प्रधान मुख्य वन संरक्षक प्रोटेक्शन एवं नोडल अधिकारी एफसीए राजस्थान जयपुर

विषयः Proposal for seeking Prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 407.8227 ha for construction of Shahpur (1800MW) Pumped storage project by M/S Greenko Energies Private Limited, in Hanumanthkhera, Mungawali village, G.P Mundiyar, Tehsil-Shahabad, Varan district, Rajasthan.

प्रसंगः भारत सरकार के पत्र दिनांक 12.02.2024 के क्रम में

महोदय,

उपरोक्त विषयान्तर्गत निवेदन है कि भारत सरकार के प्रासंगिक पत्र से चाही गयी सूचना उप वन संरक्षक बारां द्वारा बिन्दुवार रिपोर्ट तैयार कर पत्रांक 1679 दिनांक 15.02.2024 से कार्यालय में प्रेषित किया है, जो निम्नानुसार है:--

SN	EDS	REPLY
1	The copy of approval from the concerned DCF, Baran has not been submitted for the Soil Erosion Treatment Plan, which needs submission.	Soil Erosion Treatment plan is duly Approved by the undersigned and has been uploaded in Part-II, at serial number 25 of Additional Information. The same is enclosed again herewith for ready perusal at. Annexure-1
2	It has been reported by the State Govt. that the plantation raised in the year 2007 in 26 ha area which is now proposed for diversion. In this regard, it needs clarification whether the said plantations have done against any forest diversion proposal or otherwise.	This plantation was not done against any forest diversion proposal and were planted as part of state Govt program. Further, these trees (plantations)were already considered in tree enumeration of present proposal.
3	As sought earlier, the State Govt. has not submitted the information on the encroachment of Agriculture land and Built-up as visible in the proposed forest land for CA.	 User agency has given an undertaking that all encroachments, if any shall be removed and shall be handed over to the State Govt free from all encumbrances on the non-forest land (private land) proposed towards CA in Jaisalmer. CA area for RDF in Baran district is having some agriculture encroachment & few built-up areas which are non-permanent structures. Encroachments will be Removed by following due legal procedure and forest
*		land will be released by eviction of encroachments before takes up planation activity.
4	Since, the Ministry vide letter dated 29.12.2023	Kes, the non-forest land as well as Degraded Forest Digitally signed by Ram, Aran Khairwa
		Designation : Chief Conservator Of Forest Date: 2024.02.20 17.39:14 IST Reason: Approved

has issued consolidated guidelines land proposed in the instant proposal are suitable for and clarifications issued under Van (Sanrakshan Evam plantations under CA and falls within the conformity as per the Sub-Rule 13 given under the Van (Sanrakshan Samvardhan) Adhiniyam, 1980 and Van Evam Samvardhan) Rules, 2023. The details of Non-(Sanrakshan Evam Samvardhan) Rules, 2023 in Forest Land proposed towards CA is given below: suppression to all previous guidelines & Rules in exercise of the powers conferred under section 3 S C of the Van (Sanrakshan Evam Samvardhan) Chak / Dist Tehsil Village Block Adhiniyam, 1980. In view of that the State Govt. is rict N No. therefore ascertain the suitability of 0 Compensatory Afforestation land proposed over the Non-forest land as well as the Degraded 13,14,15 Jais Kolu Tala Ramgrah RRM, 5 forest land proposed in the instant proposal as 1 alm А -2 RMSM & er &Ekalpar per the Sub-Rule 13 given under the Van 3SLM (Sanrakshan Evam Samvardhan) Rules, 2023. Grand Total Additionally, an area of 408 hectares in Shahbad Conservation Reserve, Baran has been proposed for õ RDF plantation to compensate for the ecological damage in the Shahbad Conservation Reserve. As intimated earlier, a road is passing through the The Kutcha Road visible in Satellite imagery from Kaloni forest land wherein a component i.e. Upper village to nearby agricultural lands passes through Reservoir has been proposed. In this regard, a forest are a temporary path/road being used by villagers. This is not a permanent road. However, after plan/ map showing the alternative roads which the private land acquisition is done for the project will be available for use by the villagers during & upper reservoir, this road will no longer be required. after completion of the project has not been submitted. This needs clarification. Apart from above mentioned Kutcha Road, villagers use various access roads/routes (non-forest/private land) for accessibility as may be seen from the image

संलग्नः—उपरोक्तानुसार।

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भवदीय

enclosed at Annexure-2. In view of the above, due to project execution, accessibility of villagers will not be

Type

of

Land

NFI

Area in

431.03

431.03

Ha

(रामकरण खैरवा) संभागीय मुख्य वन संरक्षक कोटा

servator Of

39:14 IST

क्रमांक एफ()एफसीए / समुवसं / 2023–24 /

दिनांकः

affected/obstructed.

प्रतिलिपि उप वन संरक्षक बारां को उनके पत्रांक 1679 दिनांक 15.02.2024 के क्रम में सूचनार्थ प्रेषित है।

Signature yalid RajKaj Ref Digitally signed by Ram Karan Khairwa 5687328 Designation : Chief Co Forest

Date: 2024.02.

Reason: Approved

कार्यालय उप वन संरक्षक, बारां

 <u>E-mail-dcf.brn.forest@rajasthan.gov.in , Tel.No.. 07453&230244</u>

 क्रमांक0 एफ () / एफ.सी.ए. / उ.व.स. / 2023 –24 / दिनांक

निमित्तः-

संभागीय मुख्य वन संरक्षक, कोटा।

विषय:— Proposal for seeking Prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 407.8227 ha for construction of Shahpur (1800MW) Pumped storage project by M/S Greenko Energies Private Limited, in Hanumanthkhera, Mungawali village, G.P Mundiyar, Tehsil-Shahabad, Varan district, Rajasthan.

संदभः- MOEF के पत्र दिनांक 12.02.2024 के कम में।

महोदय.

उपरोक्त विषयान्तर्गत निवेदन है MOEF के पत्र दिनांक 12.02.2024 के अनुसार चाही गई रिपोर्ट निम्नानुसार प्रेषित है।

SN	EDS	REPLY
1	The copy of approval from the concerned DCF, Baran has not been submitted for the Soil Erosion Treatment Plan, which needs submission.	Soil Erosion Treatment plan was duly Approved by the undersigned and has been uploaded in Part-II, at serial number 25 of Additional Information. The same is enclosed again herewith for ready perusal at. Annexure-1
2	It has been reported by the State Govt. that the plantation raised in the year 2007 in 26 ha area which is now proposed for diversion. In this regard, it needs clarification whether the said plantations have done against any forest diversion proposal or otherwise.	This plantation was not done against any forest diversion proposal and were planted as part of state Govt program. Further, these trees (plantations)were already considered in tree enumeration of present proposal.
3	As sought earlier, the State Govt. has not submitted the information on the encroachment of Agriculture land and Built-up as visible in the proposed forest land for CA.	 User agency has given an undertaking that all encroachments, if any shall be removed and shall be handed over to the State Govt free from all encumbrances on the non-forest land (private land) proposed towards CA in Jaisalmer.
		• CA area for RDF in Baran district is having some agriculture encroachment & few built-up areas which are non-permanent structures. Encroachments will be Removed by following due legal procedure and forest land will be released by eviction of encroachments before taking up planation activity.
4	Since, the Ministry vide letter dated 29.12.2023 has issued consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Van (Sanrakshan Evam Samvardhan) Rules, 2023 in	Yes, the non-forest land as well as the Degraded Forest land proposed in the instant proposal are suitable for plantations under CA and falls within the conformity as per the Sub-Rule 13 given under the Van (Sanrakshan Evam Samvardhan) Rules, 2023. The details of Non-

E/ GREENKO PROJECT 2023

suppression to all previous guidelines & Rules in exercise of the powers conferred under section 3 C of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. In view of that the State Govt. is therefore ascertain the suitability of Compensatory Afforestation land proposed over the Non-forest land as well as the Degraded forest land proposed in the instant proposal as per the Sub-Rule 13 given under the Van (Sanrakshan Evam Samvardhan) Rules, 2023.

5 N	Dist rict	Tehsil	Village	Chak / Block No.	Type of Land	Area in Ha
1	Jaisa Imer	Ramgrah -2	Kolu Tala A &Ekalpar	13,14,15 RRM, 5 RMSM & 3SLM	NFL	431.03

5 As intimated earlier, a road is passing through the forest land wherein a component i.e. Upper Reservoir has been proposed. In this regard, a plan/ map showing the alternative roads which will be available for use by the villagers during & after completion of the project has not been submitted. This needs clarification. Apart from above various access in for accessibility enclosed at Ann

Additionally, an area of 408 hectares in Shahbad Conservation Reserve, Baran has been proposed for RDF plantation to compensate for the ecological damage in the Shahbad Conservation Reserve.

The Kutcha Road visible in Satellite imagery from Kaloni village to nearby agricultural lands passes through forest are a temporary path/road being used by villagers. This is not a permanent road. However, after the private land acquisition is done for the project upper reservoir, this road will no longer be required.

Apart from above mentioned Kutcha Road, villagers use various access roads/routes (non-forest/private land) for accessibility as may be seen from the image enclosed at **Annexure-2**. In view of the above, due to project execution, accessibility of villagers will not be affected/obstructed.

(सागर पवार IFS)

उप वन संरक्षक

बारां

क्रमांक० एफ ()/एफ.सी.ए./उ.व.स./2022–23/ दिनांक प्रतिलिपिः– निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित हैः– 1.अतिःप्रधान मुख्य वन संरक्षक,प्रोटेक्शन एवं नोडल अधिकारी (एफ.सी.ए) राजस्थान जयपुर। 2. Greenko Energies Private Limited

> (सागर पवार IFS) उप वन संरक्षक बारां

E/ GREENKO PROJECT 2023

Greenko Energies Private Limited

CIN: U40109TG2000FTC034990

grænks

Dated 15.02.2024.

То

Deputy Conservator of Forests Baran Territorial Forest Division Rajasthan

GEPL/MoEFCC/EDS/SPSP/240215

Sub: Diversion of 407.8227 Ha forest land for the development of Shahpur (1800 MW) Pumped Storage Project by M/s Greenko Energies Private Limited (GEPL) in Baran Territorial Forest Division, Baran District of Rajasthan State (Online Proposal No. FP/RJ/HYD/121439/2021)-reg

Ref: 1. EDS of DCF, Baran vide letter dated 15.02.2024.2. EDS raised by MoEF & CC vide letter dated 12.02.2024

Dear Sir,

With reference to above mentioned subject matter, as desired reply to Point (5) of the observations of MOEF &

CC, EDS letter dated 12.02.2024 is herewith submitted below for your kind consideration and further necessary action:

S. No	EDS		Reply
5	As intimated earlier, a road is passing through the forest land wherein a component i.e. Upper Reservoir has been proposed. In this regard, a plan/ map showing the alternative roads which will be available for use by the villagers during & after completion of the project has not been submitted. This needs clarification.	•	The Kutcha Road visible in Satellite imagery from Kaloni village to nearby agricultural lands passes through forest are a temporary path/road being used by villagers. This is not a permanent road. However, after the private land acquisition is done for the project upper reservoir, this road will no longer be required. Apart from above mentioned Kutcha Road, villagers use various access roads/routes (non- forest/private land) for accessibility as may be seen from the image enclosed at Annexure-A . In view of the above, due to project execution, accessibility of villagers will not be affected/obstructed.

Thanking you, Yours faithfully,

Encl: As above

erg Authorized Signatory



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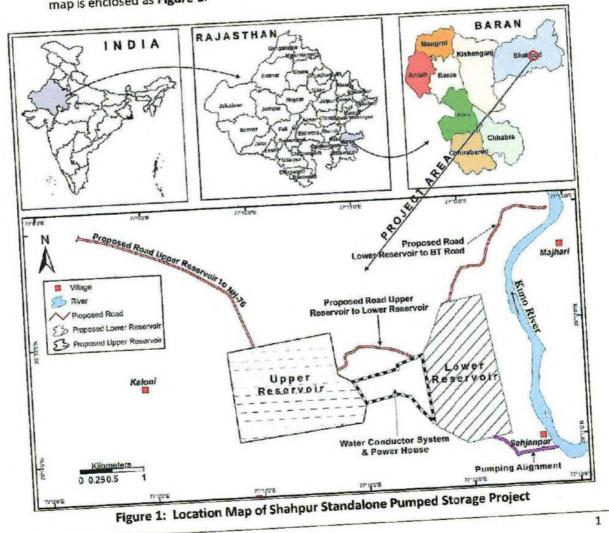
ANNEXURE: Cost Norms

INTRODUCTION 1.0

1.1

Shahpur Standalone Pumped Storage Project (PSP) with an installed capacity of 1800 MW / 10800 MWH storage capacity is located at Shahabad Tehsil, Baran District, Rajasthan. It envisages creation of upper reservoir & lower reservoir which are located away from all existing natural river systems and have negligible catchment areas. The project sites are accessible from NH-76 road close to Mahuri Khera from where Shahpur village road takes off; and is at a distance of approximately 6 Km. Nearest railhead is Baran Railway Station, about 77 kms from project site and nearest Airport is Gwalior Airport, about 200 km from project site The powerhouse is located near Shahpur village, which is in Shahabad Tehsil of Baran district.

This scheme envisages non-consumptive re-utilization of water by re-circulation. The water from the proposed lower reservoir will be pumped up and stored in the proposed upper Reservoir and will be utilized for power generation. The Geographical co-ordinates of the proposed upper reservoir are at longitude 77° 10' 55.78"E and latitude is 25° 11' 25.21"N and that of proposed lower reservoir are 25°11'40.00"N and 77° 11' 50.00"E. The project location map is enclosed as Figure 1.



Greenko Energies Pvt. Ltd

Soil Erosion Treatment Plan

The Shahpur Standalone Pumped Storage Project envisages construction of both upper reservoir and lower reservoir in Baran district of Rajasthan and involves construction of rockfill embankment with avg. height of 24.5 m for the length of 5309 m for creation of Shahpur PSP upper reservoir with 1.21 TMC gross capacity and construction of rockfill embankment with avg. height of 26.5 m for the length of 2937 m for creation of Shahpur PSP lower reservoir with 1.05 TMC gross capacity. Total 6 numbers of Independent Head Race Pipe / Pressure Shaft with one pressure Tunnel bifurcating into two-unit pressure tunnel convey water between Lower and Upper reservoirs. Surface Power/Pump House will be located at about 830 m from the intake structure and shall be equipped with six vertical shaft reversible Francis type units composed each of a generator/motor and a turbine/pump having generating/pumping capacity of 300 & 150 MW/330 & 165MW.

1.2 Salient Features

The salient features of the proposed Shahpur Standalone Pumped Storage Project are given in **Table 1**.

		Feature	Description
1		Name of the Project	Shahpur Standalone Pumped Storage Project (5 x 300 MW + 2 x 150 MW)
2		Location	
	а	Country	India
	b	State	Rajasthan
	С	District	Baran
	d	Village near Powerhouse	Shahpur
3		Geographical Co-Ordinates	
	a	Shahpur Standalone PSP Upper Reservoir- (Now Proposed)	
		Latitude	25°11'25.21"N
		Longitude	77°10'55.78"E
	b	Shahpur Standalone PSP Lower Reservoir - (Now Proposed)	
		Latitude	25°11'40.00"N
		Longitude	77°11'50.00"E
4		Access to Project Site	
	а	Airport	Gwalior Airport - 200 km from project site
	b	Railway Station	Baran Railway Station, 77 km from project site
	с	Road	NH 76 – 6Kms
	d	Port	Kandla Port - 980 km from project site
5		Project	
	а	Туре	Standalone Pumped Storage Project
	b	Storage Capacity	10800 MWH
	с	Rating	1800 MW
	d	Peak Operation Duration	6 hours
6		Shahpur Standalone PSP - Upper Reservoir	
	а	Live Storage	1.01 TMC (28.60 MCM)
	b	Dead Storage	0.20 TMC (5.66 TMC)
	С	Gross Storage	1.21 TMC (34.28 TMC)
7		Upper Reservoir	

Table 1: Salient Features of Shahpur Standalone Pumped Storage Project

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Soil Erosion Treatment Plan

		Feature	Description
	а	Full Reservoir level (FRL)	EL 507.00 m
	b	Min. Draw Down Level (MDDL)	EL 490.00 m
	с	Top Bund Level (TBL)	EL 510.00 m
	d	Type of Embankment	Asphalt Faced Rockfill Embankment
	e	Max. Height of Embankment	30 m
	f	Average Height of Embankment	24.5 m
	g	Length at the top of Embankment	5309 m
	h	Top width of the Embankment	10.0 m
	i	Type of Power Block	Gates with Concrete Breast Walls
1	i	Top Level of Power Block	510.00 m
	k	Maximum Height of Power Block	38.5 m
-	1	Length at the top of Power Block	162.0 m
-	m	Top width of Road at Power Block	10.0 m
8		Shahpur Standalone PSP - Lower Reservoir	10.0 m
-	а	Live Storage	1.01 TMC (28.32 MCM)
+	b	Dead Storage	0.05 TMC (1.42 MCM)
-	c	Gross Storage	1.05 TMC (29.74 MCM)
9	L	Lower Reservoir	1.05 TMC (25.74 MCM)
3	а	Full Reservoir level (FRL)	EL 349.00 m
-	b	Min. Draw Down Level (MDDL)	EL 328.00 m
-		Top Bund Level (TBL)	EL 352.00 m
-	d	Type of Embankment	
-			Asphalt Faced Rockfill Embankment
-	e	Average Height of Embankment	26.5 m
10	f	Length of Embankment	2937 m
10		Intake Structure	Diffuser Trace
-	a	Туре	Diffuser Type
+	b	No. of Vents	3 nos.
-	С	Size of Each Intake	24.00 m (W) x 11.2 m (H) including piers
	d	Length of each Intake	38.98 m (covered with RCC slab at top up to Intake Gate)
	e	Elevation of Intake center line	EL 476.30 m
	f	Elevation of Intake bottom	EL 472.55 m
	g	Design Discharge of each Intake (Turbine	220.04 cumec for 300 MW Unit and 220.50 cume
-		mode)	for 150 MW Units
_	h	Trash rack type	Vertical with inclination of 15°
	i	Size of Trash Rack	3 nos. of 7.00 m (W) x 11.60 m (Inclined Height) for each unit
-	,	Numbers & Size of Intoka Comics Cota	
-	1	Numbers & Size of Intake Service Gate	6 nos. of 6.20 m (W) x 7.50 m (H) 1 set - 6.20 m (W) x 7.50 m (H) with Moving
	k	Numbers & Size of Intake Emergency Gate	Gantry Crane
11		Head Race Pipe /Pressure Shafts	
	а	Туре	Finished steel lined - circular
	b	Number of Head Race Pipe / Pressure Shaft	Total 6 No. of Independent Head Race Pipe / Pressure Shaft with one pressure Tunnel
	~		bifurcating into two-unit pressure tunnel
-	С	Diameter of Horizontal Pressure Tunnel	7.5 m
	d	Diameter of unit Pressure Tunnel	5.3 m
			830 m (6 nos.)
			Length of Head Race Pipe from Intake to Vertical
			Pressure Shaft - 663 m
	e	Length of Head Race Pipe /	Length of Vertical Pressure Shaft - 72 m

.

Soil Erosion Treatment Plan

	_	Feature	Description
		Pressure Shaft	Length of Horizontal Pressure Tunnel - 95 m
	f	Length of Unit Pressure Tunnel	About 50 m each
	-	Design Discharge of each Head race Pipe /	220.04 cumec for 300 MW unit and 220.50 cume
	g	Pressure Shaft	for 150 MW units
	h	Design Discharge of each unit Pressure Tunnel	110.25 cumec
	i	Maximum velocity in the Head Race Pipe / Pressure shaft	4.99 m/sec
1	i	Maximum velocity in the Unit Pressure Tunnel	4.99 m/sec
12	-	Powerhouse	
	а	Туре	Surface Pit Type Powerhouse
-	b	Centre line of Unit	EL 298.0 m
+	c	Dimensions (Excluding service bay)	196.166 m (L) x 28.5 m (W) x 61.5 m (H)
+	d	Size of Service Bay	40 m (L) x 28.5 m (W)
-	e	Service Bay Level	EL 313.72 m
-	f	Size of Unloading Bay	
-			25m (L) x 28.5 m (W)
10	g	Unloading Bay Level	EL 336.70 m
13		Tail Race Tunnel	
-	a	Type & Shape	Concrete Lined – Circular
	b	Number of Tunnels	7 Nos.
-	c	Dia. of Tunnel for 300 MW Unit	8.50 m
	d	Dia. of Tunnel for 150 MW Unit	6.20 m
_	e	Length of the Tunnel	179 m for 8.5 m dia as well as for 6.2 m dia
	f	Design Discharge for 300 MW Unit	220.04 cumec
	g	Design Discharge for 150 MW Unit	110.25 cumec
14		Tailrace Outlet	
	a	Туре	Diffuser Type
	b	No. of Outlet	7 Nos.
	c	Size of each outlet	For 300 MW Unit - 24.00 m (W) x 12.50 m (H) including piers For 150 MW Unit - 18.00 m (W) x 9.0 m (H) including piers
	d	Length of each Outlet	31.40 m (covered with RCC slab at top up to Intake Gate)
	е	Elevation of outlet center line	For 300 MW Unit - EL + 315.30 m For 150 MW Unit - EL + 314.15 m
	f	Elevation of Outlet bottom	EL + 311.05 m for 300 MW as well as 150 MW uni
	g	Trash rack Type	Vertical with inclination of 15°
	h	Size of Trash rack	For 300 MW Unit - 3 sets of 7.0 (W) x 12.94 m (Inclined Height) for each unit For 150 MW Unit - 3 sets of 5.0 (W) x 9.32 m (Inclined Height) for each unit
	i	Tailrace outlet Service Gate	5 nos. of 6.00 m (W) x 8.50 m (H) and 2 nos. of 4.20 m (W) x 6.20 m (H)
	j	Tail Race outlet Emergency Gate	1 set - 6.00 m (W) x 8.50 m (H) 1 set - 4.20 m (W) x 6.20 m (H) with one common Gantry Crane
15		Tailrace Channel	
	a	Туре	Trapezoidal shape with concrete lined
	b	Bed Width	140.0 m
	с	Length of channel	717 m
	d	Full Supply Depth	6.8 m

Soil Erosion Treatment Plan

		Feature	Description
	e	Bed Slope	1:6400
	f	Side Slope	1H:6V
16		Electro-Mechanical Equipment	
	a	Pump Turbine	Francis type, vertical shaft reversible pump- turbine
-	b	Total No of units	5 nos. (5 X 300 MW) + 2 nos. (2x150 MW)
	c	Total Design Discharge (Turbine Mode)	1320.70 cumec (5 x 220.04 cumec + 2 x 110.25 cumec)
	d	Rated Net Head in Turbine mode	154.73 m for 300 MW unit and 154.41 m for 150 MW unit
	I	300 MW Turbines	
	a	Total No of units	5 Units (All fixed Speed)
-	b	Turbine Design Discharge	220.04 cumec
+	c	Pump Capacity	330 MW
+	d	Rated Pumping Head	162.56 m
+	e	Rated Pump Discharge	190.96 cumec
-	f	Synchronous Speed	187.50 rpm
-	11	150 MW Turbines	207.50 1911
1	a	Total No of units	2 Units (All Fixed Speed)
+	b	Turbine Design Discharge	110.25 cumec
-	c	Pump Capacity	165 MW
+	d	Rated Pumping Head	163.21 m
		Rated Pump Discharge	95.10 cumec
-	e f		
-	T	Synchronous Speed Generator-Motor	250.00 rpm
	a	Туре	Three (3) phases, alternating current synchronous generator motor semi umbrella type with vertical shaft
-	b	Number of units	5 Units (5 x 300 MW) and 2 Units (2x150 MW)
-			Generator - 300 MW & 150 MW
	с	Rated Capacity	Pump Input - 330 MW & 165 MW
-	d	Rated Voltage	18.0 kV
-	IV	Main Power Transformer	20.0
	a	Туре	Outdoor Single-Phase Power transformers with On Load Tap Changer (OLTC)
-	b	Number of units	23 Nos. i.e., 3 nos. per unit & 2 no spare
	с	Rated Capacity of each unit	16 no. (3x5 Working +1 Spare) of Single Phase, 18 kV/400kV, 123 MVA and 7 no. (2 x 2 Working + 1 spare) of Single Phase, 18 kV/400kV, 62 MVA
	d	Rated Voltage	Primary – 18.0 kV; Secondary - 400 kV adjustable range of the secondary voltage: +10% in steps of 1.25%
17		400 KV Gas Insulated Switchgear	
-	а	Type of GIS	Indoor Type
-	b	No. of GIS units	1 No.
-	c	Location	Inside GIS building above ground
-	d	Scheme	Double Bus Scheme with coupler and sectionalise
18	u	Power Evacuation	service ous service with couplet and sectionalise
10	2	Voltage Level (kV)	400 kV
-	a	No. of Transmission Lines	One no. 400 kV double circuit transmission lines
	b	no. of fransmission lines	one no. 400 ky double circuit transmission mes

Soil Erosion Treatment Plan

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		Feature	Description
	d	Total Length	One 400 kV Double Circuit Transmission Line of length 75 km (approx.) from PSP will be connected to 400/765 kV PGCIL substation at New Shivpuri of Madya Pradesh State for evacuation of stored power during generating mode and for supply of power during pumping mode.
19		Estimated Cost	
	a	Civil & Other works	4782.91
	b	E&M Works including Transmission	3096.20
	c	IDC & Others	1842.65
		Total Project Cost with IDC	9721.76

Source: Pre-Feasibility Report of Shahpur Standalone Pumped Storage Project

2.0 NEED FOR SOIL EROSION TREATMENT

It is a well-established fact that reservoirs formed by dams on rivers are subjected to sedimentation. The process of sedimentation embodies the sequential processes of erosion, entrainment, transportation, deposition and compaction of sediment. The steady erosion and sediment in reservoir reduce its capacity, and thus affecting the water availability for the designated use. Thus, a well-designed Soil erosion Treatment Plan is essential to ameliorate the above-mentioned adverse effects of soil erosion. Soil erosion can be defined as detachment, transportation and deposition of soil particles from one place to other by means of transporting agent like air, water or animals. Soil erosion is mainly affected by rainfall intensity and runoff, slope gradient and length, soil erodibility and vegetation cover (landuse pattern). Therefore, study of erosion and sediment yield from catchments are of great importance. Soil erosion leads to:

- loss in production potential
- reduction in infiltration rates
- reduction in water-holding capacity
- loss of nutrients
- increase in tillage operation costs
- reduction in water supply

To control the rate of soil erosion in the catchment, Soil erosion treatment is an ineluctable part. The Soil Erosion Treatment Plan pertains to preparation of a management plan for treatment of erosion prone areas through adequate preventive measures. An effective Soil Erosion Treatment Plan is a key factor to make the project eco-friendly and sustainable. Thus, a well-designed Soil erosion treatment plan is essential to ameliorate the above-mentioned adverse process of soil erosion. Soil Erosion Treatment Plan essentially consists of following steps.

- Calculation of soil erosion using Revised Universal Soil Loss Equation (RUSLE), combined with Remote Sensing (RS) and Geographic Information System (GIS) technologies.
- 2. Prioritizing the areas for treatment using Silt Yield Index (SYI).
- 3. Planning of suitable erosion control measures.
- 4. Cost estimation for Soil Erosion Treatment Plan.

3.0 METHODOLOGY ADOPTED FOR THE STUDY

The various steps, covered in the study, are as follows:

- Defining study area
- Defining data requirement
- Data acquisition and preparation
- Output presentation

The above-mentioned steps are briefly described in the following paragraphs:

3.1 Defining Study Area

Purpose of the study is for preparation of Soil Erosion Treatment Plan for the erosion prone areas within catchment of Shahpur Standalone Pumped Storage Project. Since the project involves construction of two different reservoirs therefore catchment area of both the reservoirs has been considered as study area. The total catchment area of both the reservoirs is **6.48 sq km**. The catchment area of both the reservoirs falls in Survey of India Toposheet No. 54G/4. In order to plan watershed management and to formulate action plans it requires subwatershed delineation, therefore, catchment area was further delineated into subwatershed. For the delineation of subwatershed, Watershed Atlas of India prepared by Soil and Land Use Survey of India (SLUSI) has been referred.

Soil and Land Use Survey of India (SLUSI) has Watershed Atlas of India under digital environment using GIS and produced a Digital Watershed Atlas (DWA) where the delineation and codification of watersheds in the country has been undertaken in GIS environment. The delineation for DWS has been done in seven stages starting with Water Resource Regions and their subsequent division and subdivisions into Basins, Catchments, Subcatchments, Watersheds, Subwatersheds and Microwatersheds in decreasing size of the delineated hydrologic unit.

As per Watershed Atlas of India, catchment areas of both the reservoirs falls in a two subwatersheds. Catchment area of lower reservoir falls in a single subwatershed, coded as 2D1B5f. Whereas, catchment area of upper reservoir falls in two subwatersheds, coded as 2D1B5f and 2D1B5c. The nomenclature of the subwatersheds forming the catchment area has been assigned as follows: Region (2) "Ganges drainage"; Basin (2D) "Chambal"; Catchment (2D1) "Chambal up to Banas confluence"; Subcatchment (2D1B); Watershed (2D1B5) "Kunu"; Subwatershed 2D1B5c and 2D1B5f (refer Figure 2).

3.2 Defining Data Requirement

Soil loss has been calculated through RUSLE (Revised Universal Soil Loss Equation) model which is computed by the following equation: Soil Loss (A) = R*K*LS*C*P

Wherein;

A = Soil loss (Tons/ha/year)

R is Rainfall & Runoff Erosivity Factor (MJ mm/ha-1/h-1/year-1), which depends upon the annual average rainfall in mm. Data required for R factor is rainfall intensity.

Soil Erosion Treatment Plan

K is Soil Erodibility Factor (Tons/ha/h/ha-1/MJ-1/mm-1), which depends on the organic matter, texture permeability and profile structure of the soil. Also, it is a constant value for each soil type. Data required for K factor is soil type.

LS is Topographic Factor (dimensionless) which depends upon flow accumulation and steepness and length of slope in the area. Data required for LS factor is slope length and slope gradient.

C = Vegetation Cover and Crop Management Factor (dimensionless), which is the ratio of bare soil to vegetation and non- photosynthetic material. It is a constant value for each land use category. Data required for C factor is land use/ land cover.

P is Conservation Supporting Practice Factor (dimensionless), which takes into account specific erosion control practices like contour bunding, bench terracing etc.

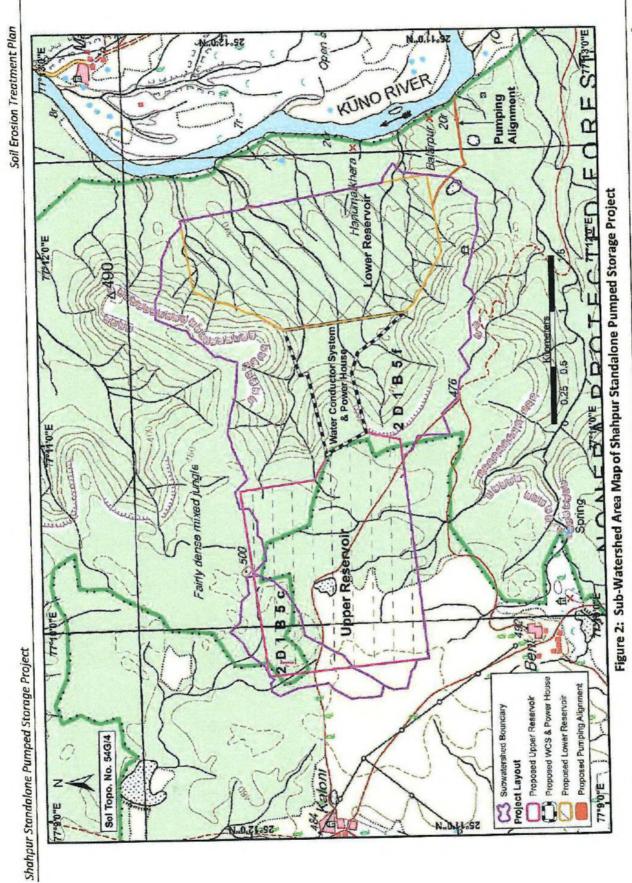
3.3 Data Acquisition and Preparation

The data on various aspects was collected from different sources. Soil map of the Catchment Area was prepared from soil map of Rajasthan procured from Regional Centre of National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), New Delhi. For the preparation of DEM and preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) has been used. For the preparation of land use/ land cover, forest cover map prepared by Forest Survey of India, map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space with Partner Institutions viz., State Remote Sensing Application Centre, Dept. of S&T, Govt. of Rajasthan has been used. The rainfall data in the Catchment Area has been sourced from Climatic Research Unit (CRU), a component of the University of East Anglia and one of the leading institutions concerned with the study of natural and anthropogenic climate change.

3.3.1 Rainfall Erosivity (R) Factor

R factor is a function of the falling raindrop and rainfall intensity and is estimated as the product of the kinetic energy (E) of the raindrop and the maximum intensity of rainfall (130) over duration of 30 min in a storm. The erosivity of rain is calculated for each storm, and these values are summed up for each year. In this study, the storm wise rainfall data were not available for the computation of rainfall erosivity factor (R); therefore, the relationship between seasonal value of R and average rainfall has been used. The rainfall erosivity factor has been defined as R = 81.5 + 0.38X, where, R is the average seasonal erosivity factor (MJ mm/ha⁻¹/h⁻¹/year⁻¹), and X is the annual average rainfall (mm).

For the estimation of rainfall erosivity in the Catchment Area, average rainfall of 10 years has been taken from the High-resolution gridded CRU datasets. In the absence of site-specific periodic data, CRU data from the year 2011 to 2020 has been used for the calculation of R factor. In and around the Catchment Area, average rainfall of 10 years have been taken from the rain gauge station for the estimation of rainfall erosivity. The rainfall erosivity factor (R) has been calculated using equation R = 81.5 + 0.38X for annual average rainfall of observed and simulated data. The value of R i.e. 384.51 has been adopted in this study to calculate soil erosion using RUSLE.



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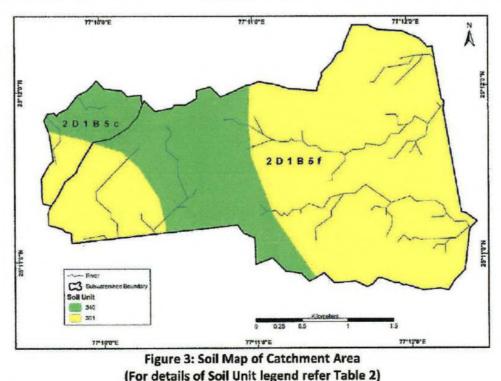
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3.3.2 Soil Erodibility (K) Factor

The K factor is an expression of the inherent erodibility of the soil or surface material at a particular site under standard experimental conditions. It is a function of the particle-size distribution, organic-matter content, structure, and permeability of the soil or surface material. Prior to deciding the K values, soil map for the area is prerequisite. Soil map procured from NBSS & LUP, Nagpur was digitized. Mapping Unit 351, characterised by deep, moderately well drained, fine soils on very gently sloping plateau with clayey surface, slight erosion covers 71.73% of the catchment area. Rest 28.27% of the catchment area is covered by Mapping Unit 340, characterised by rock-outcrops; associated with: shallow, well drained, loamy-skeletal soil, on very gently sloping foot slopes, severely eroded. Soil map has been shown in **Figure 3**. The legend for soil mapping unit classes is given in **Table 2**. As per the soil map of the Catchment Area, the soil can be classified in two categories. Shallow with loamy skeletal texture and severe erosion have high K value i.e. 0.325, because they are less susceptible to particle detachment and they produce runoff at high rates. Deep with fine texture and slight erosion have low K value i.e. 0.15.

Mapping Unit	Description	Taxonomic Classification	Area (ha)	Area (%)	
340	Rock-outcrops; associated with: Shallow, well drained, loamy-skeletal soil, on very gently sloping foot slopes, severely eroded.	 Rock-outcrops Lithic Ustochrepts 	183.18	28.27	
351	Deep, moderately well drained, fine soils on very gently sloping plateau with clayey surface, slight erosion; associated with: Deep, well drained, fine soils, moderately eroded.	Typic Chromusterts	464.82	71.73	
	Total		648.00	100	

Table 2: Description of Soil Mapping Units in the Catchment Area



3.3.3 Topographic (LS) Factor

The LS factor is an expression of the effect of topography, specifically hill slope length and steepness, on rates of soil loss at a particular site. The value of 'LS' increases as hill slope length and steepness increase, under the assumption that runoff accumulates and accelerates in the down-slope direction. Digital Elevation Model (DEM) and Slope of a particular area is prerequisite for LS factor. As already discussed, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) has been used for DEM and the same DEM has been used for the preparation of slope map. The LS factor prepared for the Catchment Area is given at Figure 4.

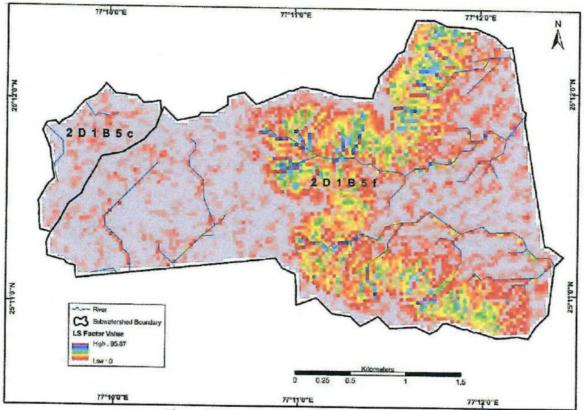


Figure 4: LS Factor Map of Catchment Area

3.3.4 Crop Management (C) Factor

The C factor is an expression of the effect of surface cover and roughness, soil biomass, and soil-disturbing activities on rates of soil loss at a particular site. The value of C decreases as surface cover and soil biomass increase, thus protecting the soil from rain splash and runoff. In the present study, forest cover map prepared by Forest Survey of India and land use/land cover map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space with Partner Institutions viz., State Remote Sensing Application Centre, Dept. of S&T, Govt. of Rajasthan has been used in the allocation of C factor for different land use classes.

The classified land use/ land cover map of the Catchment Area is shown as Figure 5. The land use/ land cover pattern of the Catchment Area has been given in Table 3. As can be seen from the map and table, the land use/ land cover pattern can be classified into six classes, out of

these, majority of the area i.e. 41.04% is covered by Open Forest, followed by Moderately Dense Forest, covering 27.38%. Fallow Land is covering 12.92% of the area. Scrub Land is covering 11.78% of the area. Agricultural Land is covering 6.84% of the area. Rest 0.04% of the area is covered by Waterbody.

able 3: Area Falling Under Differ Land use/ Land cover Classes	Area (ha)	Area (%)
Moderately Dense Forest	177.43	27.38
Open Forest	265.93	41.04
Scrub Land	76.36	11.78
Agricultural Land	44.31	6.84
Fallow Land	83.70	12.92
Waterbody	0.27	0.04
Total	648	100

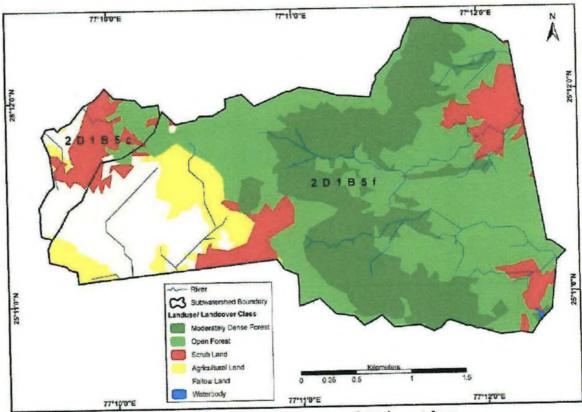


Figure 5: Land use/ Land cover Map of Catchment Area

3.3.5 Conservation Support Practice (P) Factor

The P factor is an expression of the effects of supporting conservation practices, such as contouring, buffer strips of vegetation, and terracing, on soil loss at a particular site. It is the ratio of soil loss with specific support practice to the corresponding loss with up-or down-slope cultivation. In the present study, the P factor has been considered as 1.

3.4 Output Presentation

A thematic map for soil loss of the Catchment Area has been prepared using RUSLE model mentioned in the above section. The Catchment Area was then demarcated into different soil

erosion intensity mapping units or classes based upon the extent of soil loss (see **Table 4 & Figure 6**). The Catchment Area under different Erosion Intensity categories is given in **Table 4**. As can be seen from the figure and table, around 44% of the catchment area is prone to less than 1 tons/ha/annum soil erosion, i.e. under negligible erosion intensity category and around 5% of its area is prone to Severe and Very Severe soil erosion.

S. No.	Soil loss in tons/hectare/annum	Erosion Intensity Category	Area (ha)	Area (%)	
1	<1	Negligible	283.58	43.76	
2	1-5	Slight	120.02	18.52	
3	5-10	Very Low	63.90	9.86	
4	10-20	Low	72.83	11.24	
5	20-40	Moderate	75.68	11.68	
6	40-80	Severe	25.86	3.99	
7	>80	Very Severe	6.12	0.95	
/	Total	648.00	100		

Table 4: Area f	alling under	different	Erosion	Intensity	Categories
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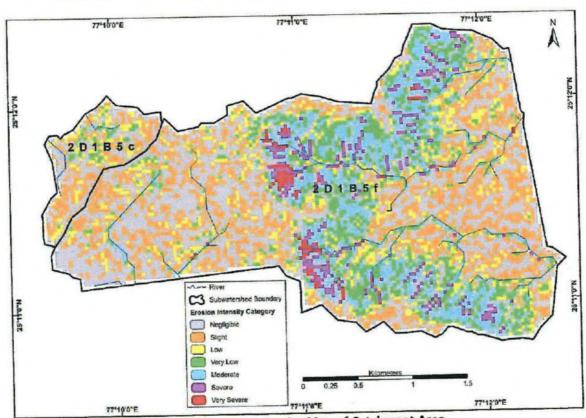


Figure 6: Erosion Intensity Map of Catchment Area

3.5 Prioritization

`Silt Yield Index' (SYI), method conceptualized by Soil and Land Use Survey of India (SLUSI) is being used for prioritization of smaller hydrologic units within river valley project areas. Since the catchment area is only 6.48 sq km and could be delineated into only two subwatersheds therefore, it is proposed to consider same priority for both the subwatersheds.

4.0 TREATMENT PLAN

4.1 Area to be taken up for Treatment.

Areas under severe and very severe erosion intensity category will be taken up for treatment. To arrive at such an area, first of all areas under severe and very severe erosion intensity category were extracted, which comes out to be **31.98** ha (refer **Table 5**). Thereafter, areas under severe and very severe erosion intensity category falling within the proposed project components such as lower reservoir, upper reservoir, water conductor system, etc. were removed as once the project is constricted this area will not be available for treatment. The area thus arrived at and considered as treatable area comes out to be 25.91 ha (or say **26** ha).

From the map given at Figure 6 it can be seen that the areas under severe and very severe erosion intensity category falls under 2D1B5f subwatershed only. Further, the landuse and landcover classes falling inside this 25.91 ha of severe and very severe erosion intensity category area are Moderately Dense Forest (18.81 ha) and Open Forest (7.10 ha).

The period for implementing Soil Erosion Treatment Plan interventions including maintenance has been taken as 7 years. It is proposed to prepare micro plans, establish administrative setup and implement other entry point activities in the first year itself, followed by implementation of treatment measures in second year. Maintenance period (only for biological measures) will be for subsequent 5 years.

4.2 Treatment Measures

Watershed management is the optimal use of soil and water resources within a given geographical area so as to enable sustainable production. It implies changes in land use, vegetative cover, and other structural and non-structural action that are taken in a watershed to achieve specific watershed management objectives. The overall objectives of watershed management programme are to:

- increase infiltration into soil;
- control excessive runoff;
- manage & utilize runoff for useful purpose.

4.2.1 Biological Measures

The biological measures would comprise of planting under ANR model

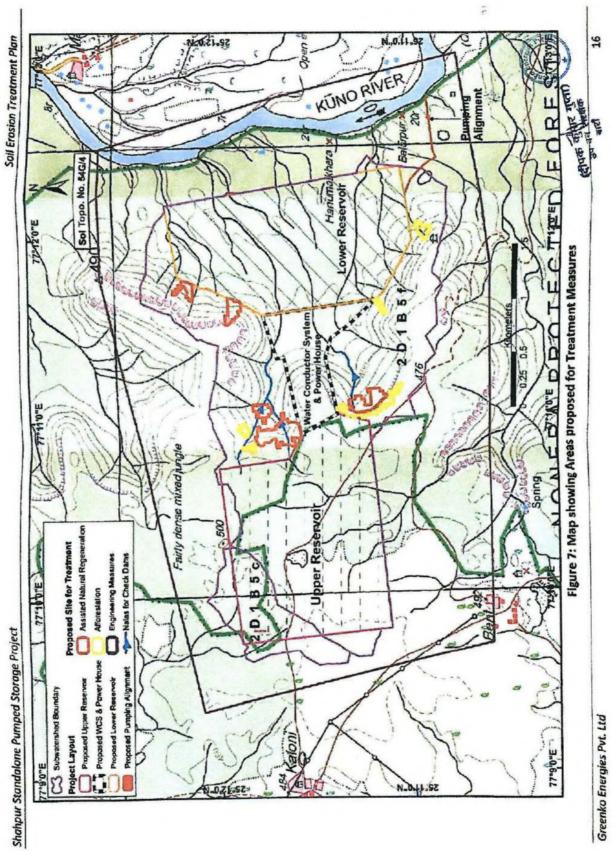
4.2.1.1 Assisted Natural Regeneration

In moderately dense forests, conditions are conducive to natural regeneration provided some sort of assistance is provided. Such area shall be taken up under this component. The areas shall be closed to reduce biotic interference. Ground surface will be cleared of slash, debris and felling refuse to afford a clean seed bed to the falling seed. At certain places some soil raking may also have to be done to facilitate germination of seeds. Where natural regeneration is found deficient. It will be supplemented by artificial planting. Patch sowing in suitable areas may also be done. 200 plants per hectare will be planted under this scheme. The plantation will be maintained for subsequent four years. Effective fencing will be done in the plantation areas. Total Rs 44,46,500.00 Will be expenditure in five years. Rate area taken as per prevailing model rate of Forest Department.

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4.2.2 Engineering Measures

Gullies in their upper reaches only must be treated to prevent further deepening and widening. The purpose of engineering measures is to reduce the gradient, reduce the flow velocity and protect the stream bank. The water is guided safely from a higher elevation to a lower elevation without causing erosion at the gully/nala bed and banks. The water pools behind the engineering promotes the percolation into the soils. Check dam is one such engineering measure. The other engineering measures proposed for soil & water conservation includes Gabion structures, Continuous Contour Trench (CCT), Mini Percolation Tank (MPT) etc. A lumpsum amount of **Rs. 6.00 lakh** has been kept for check dams and gabions and Rs. 4.00 lacs has been kept for various engineering measures like Continuous Contour Trench (CCT), Mini Percolation Tank (MPT) etc. Map showing the nalas on which check dams have been proposed and area for other engineering measures is given as **Figure 7**.



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Soll Erosion Treatment Plan

5.0 OTHER COMPONENTS OF SOIL EROSION TREATMENT PLAN

Apart from the biological and engineering treatment measures in the Soil Erosion Treatment. Plan there are other aspects of the Soil Erosion Treatment Plan to be addressed and their cost included in the overall cost estimate of the plan. The charges for operational support, forest protection, social mobilization, documentation and publication, monitoring and evaluation and providing environmental services are some of the integral ingredients which have to be considered and included while formulating the Soil Erosion Treatment Plans.

5.1 Administrative Charges

For an efficient management of forest resources, it is essential that operational support to the Forest Department is adequately developed. Similarly, in remote localities there are no places for shelter for the staff, people and trekkers. Therefore, a budgetary provision of Rs. 593674.00 has been kept as administrative charges.

5.2 Provision for Micro Planning

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out would require extensive detailing during the implementation of mitigation measures and a provision for micro-planning has been made in the total financial allocation. For this purpose, a provision of Rs. 1.09 lakh is being made.

5.3 Socio-economic

The following measures would help in rejuvenating the ecosystem and in reducing the soil erosion in the region. It shall be carried out for local villages near the catchment area.

- i. Avenue plantation using fuel wood trees with suitable fencing in the villages.
- ii. Establishment of training, awareness programmes for water and soil conservation in the village areas
- iii. Awareness program for conservation of natural resource.

A budgetary provision of Rs. 2.72 lakh has been kept under this component.

5.4 Monitoring & Evaluation

Monitoring and evaluation will be undertaken as a part of project management. A process of self-evaluation at specified intervals of time will ensure the field level verification of suggested treatment measures and efficacy of the Soil Erosion Treatment plan.

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out would require extensive detailing during the implementation of mitigation measures and a provision for microplanning has been made in the total financial allocation. Thereafter, annual work plan would be prepared well in advance after undertaking initial ground surveys during micro-planning, specifying physical and financial targets, sites, locations and beneficiaries of each component of the project activity. Month-wise work schedule of various items of each component for the financial year would also be prepared in advance and its timely implementation would be ensured. Monthly progress report on all activities would be submitted by the Range Officers

Soil Erosion Treatment Plan

to Divisional Forest Officer. The monitoring committee shall be constituted at the project level for this purpose which too would monitor on a regular basis the quality and quantity of works being carried out under the Soil Erosion Treatment Plan area. A provision of **Rs. 1.09 lakh** has been made for this component.

6.0 COST ESTIMATE

The estimated cost of implementation of Soil Erosion Treatment Plan as defined above is Rs. 65.30 lakh and is given at Table 5. Year wise physical and financial targets are given in Table 6.

S.	Item		Uni	T	arget
No			t	Physica I	Financial (Rs.)
1	Biological Measures				
1	Assisted Natural Regeneration				
	I) Creation	5831 5	На	2x25	29,15,750.0 0
	ii) Maintenance for 5 years		Ha	2x25	15,30,800.0 0
	Sub Total I				44,46,550.0 0
n	Engineering Measures				
	Check Dams and Gabian		cmt	LS	6,00,000.00
	CCT, MPT etc				4,00,000.00
	Sub Total II				10,00,000.0
	Treatment Cost (Sub Total I + II)				54,46,550.0
	Socio-economic Activity @5% of Treatment Cost				272327.00
	Micro planning and preparation of DPR @2% of Treatment Cost				108931.00
	Monitoring & Evaluation of the works @2% of Treatment Cost				108931.00
	Total				5936739.00
	Administrative Charges @10% of Treatment Cost				593674.00
	Grand Total				6530413.00

Table 5: Estimated Cost of Soll Erosion Treatment Plan Implementation

Technically checked & approved

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Sr.NO.	Name of Activity		Year wise expenditure in Rs						
1		2024-25	2025-26	2026-27	2027-28	2028-29			
1	Planting Activity: ANR plantation 2x25 ha =50 ha	2915750	849450	311000	185150	185150			
2	Check Dams and Gabions	200000	200000	200000	0	0			
3	CCT, MPT etc.	200000	100000	100000	0	0			
4	Socio Economic Activity	200000	72327	0	0	0			
5	Microplanning and 1089 preparation of DPR		0	0	0	0			
6	Monitoring and Evolution of works	0	0	0	108931	0			
	Administrative Charges	450674	50000	45000	20000	20000			
	Grand Total	4075355	1271777	656000	314081	205150			

Table 6: Year Wise Phasing of Physical and Financial Targets

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N for trust

Gopi Krushna N Deputy General Manager (DGM) Authorised Signatory Greenko Energies Private Umited

कार्यालय प्रधान मुख्य वन संरक्षक, (हॉफ), राजस्थान, जयपुर Ration - 06/12/22 क्रमांक एफ 3(13)प्रमुवसं/ ट्री/तक0/21-22/590-605 निमित. 1-परियोजना निदेशक, आर.एफ.बी.पी.-2 जयपुर।

2- समस्त सम्भागीय मुख्य वन संरक्षक जयपुर/अजमेर/भरतपुर/कोंटा/ जदयपुर/बीकानेर/जोधपुर/(वन्यजीव) जयपुर/कोटा/ जदयपुर/ सवाईमाधोपुर/सरिस्का/जोधपुर/विभागीय कार्य जयपुर

विषयः--नवीन माँडल कॉस्ट नोर्स्स त्यूनतम अमिक दर रू. 259/- एवं सामग्री दर 2021

महोदय.

उपरोक्त विषयान्तर्गत निवेदन है कि अभिक दर 259/-रूपये प्रति दिन के आधार पर प्राप्त हुए वृक्षारोपण मॉडल राज्य स्तरीय मॉडल कमेटी की अनुशंधा पर प्रधान मुख्य वन संरक्षक, (हॉफ) राजस्थान, जयपुर के अनुमोदन उपरान्त संलग्न कर आवश्यक कार्यवाही हेतु प्रेषित किये जा रहे हैं।

- (a) ANR (25 ha)
- (b) RDF-1 (25 ha)
- (C) RDF-II (25 ha)
- (d) Eco-restoration (25 ha)
- (e) Eco-restoration (50 ha)
- (f) Forest Guard Chowki
- (g) Boundary Pillar

उवत सभी मॉडल विभागीय वेबसाइट के निम्न लिंक पर उपलब्ध है।

http://www.forest.rajasthan.gov.in/content/raj/forest/en/forest,department/departmental-wings/forest-development/model-fordevelopmental activities.htm |

संलग्न-मॉडल की प्रति।

MMA

गुज्य-चन संरक्षक (आयोजना) राजस्थान, जयपुर।

Model Cost Norms ANR (Assisted Natural Regeneration)

UNIT : 25 Ha PERIMETER: 90 M/Ha. LABOUR RATE: Rs.259, /Day COST ESTIMATE: In Rs./Ha.

O YEAR (ADVANCE ACTION)

2 Su ite se 3 Fe 3 ba ba b) b) 44 4 C 5 D 6 D	Decilion of Data for Microplanning, eparation of microplan and management	Prorata					
2 Su ite se 3 Fe 3 Fe 3 ba ba b) ba 4 4 Co 5 Di 6 D	Dection of Data for Microplanning.	Dimmin			1208.66	101.22	1309.8
2 Su tre se 3 Fe 3 ba 4 Co 5 DO 4 TI 0 D 4 Co 7	Englighen al title al	Florad			1200.00		
2 Su tite se 3 Fe 3 ba ba ba ba ba ba ba ba ba ba c ba ba ba c c c c	an				694.14	77.12	771.2
3 Fei a). a). b) at 42 C) b) at 42 C) D at 5 D 0. 6 D	urvey of area. Layout of contour enches/ furrows, Pits and marking of ements /olois	Prorata					
a). ba bb b) at 42 C 5 D at D 0. 6 D 7 C	and he stone wall and or by dr.Ch.				16737.75	0,00	16737.7
42 5 Di 42 5 Di 6 D). Stone wall fencing 1,20m high 0.80m at ase & 0.60m at top(on an average 42	meter	45	371,95	(0101010		
b) at 42 5 D a. D a. D Tr 0. 6 D	that)		<u> </u>	280:69	12631.05	0.00	12631.0
42 4 C) 5 D) a. D Ti 0. 6 D 7 C). Ditch fencing 1.20m deep,1.50m wide t top & 0.90m at bottom (on an average.	meter	45	200:09	,		
4 Ci 5 Di a. D Ti 0. 6 D	2 m/ha.)			9.02	1381.20	602.20	1983,4
5 D a. D Ti 0. 6 D	ost of raising 220 seedlings	Plant no.	220	9.02	1001.20	0.00	
a. D Ti . 0. 6 D	Venton un Trenches !				12952.00	0.00	
6 D	Digging up 400 mt Staggered Contour renches with cross section size:	Méter	400	32.38	12952.00		
7 0	.45x0.45 Sqmt.	<u></u>	1000	20.27	4054.00	0.00	4054.0
7 0	Digging of 200 pits size: 0.45x(0.4+0.5/2)	na	200	20.21			
7 0			1	428.00	214.00	214.00	428.0
	Cost of collection and purchase of grass and other seeds of Indegenous trees and	per ha	1			0.00	4965.1
8 1	shrubs In situ Soll & Molsture Conservation measures like Check dam, Percolation	per ha	1	4965.17	4965:17	0.00	
17	Tanks Farthen Bunds elc.		1			150.00	150.0
9 F	Purchase or Construction of Water	Prorata	1				
<	Storage tank	Prorata			518.00	72.98	590.9
10 0	Construction of Thatched cattle guard hut.	FIUIAN	1				
		Prorata	+		0.00		
11	Purchase of tools and plants	Prorata			95,94	70.62	
12	Labour amenities	Prorata			1077.44	0.00	
13	Cattle guard wages for 4 months		_		1295.00		1295.0
14	Restoration of Natural regeneration by cutback cultural operation, pruning and by making crescent shaped ridges on lower	Prorata					
15	side of seedling and saplings Miso, and unforeseen expenses including	Prorata	+		490.57	99.23	589.8
	running of vehicles TOTAL YEAR		+		58314.92	1478.00	59792.9

उप वर्न संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

ग सिंह गाठपाल)

ग नन संरक्षक (आयोजन्म), जजरथान, जगपुर

	YEAR 3 : MAINTENANCE	Prorata		3230.82	0.00	3230.82
- 1	Watch & ward charges for 12 months			472.58	128.60	601.18
2	Expenditure on Maintenance including (Repair of fencing/Structures, Subsidiary silvicultural operations, Frost Protection, etc.)	Prorata				
<u> </u>	TOTAL YEAR 3.			3703.40	128.60	3832.00
		·				
	YEAR 4 : MAINTENANCE			3230.82		3230.82
1	Watch & ward charges for 12 months	Prorate		and the second s	128,60	601.18
2	Expenditure on Maintenance including (Repair of fencing / Structures; Subsidiary sitvicultural operations; Frost Protection,	Prorata		472,58		
۰.	etc.)			3703.40	128.60	3832.00
	TOTAL YEAR 4.			3703.40	120,00	
				88932.01	3307.91	92239.92
	GRAND TOTAL		جليب محمد جا	00004.01		

No.	Item of Works	Unit	Qty.	ral Regeneration Labour Cost	Material Cost	Total Cost
	AND A ADMINIST A STICK		-	 58315	1478	5979
1	YEAR 0 ADVANCE ACTION YEAR 1 - PLANTING YEAR			 16990	1426	1841
2	YEAR 2 - MAINTENANCE I		-	 6220	147	636
3	YEAR 3 - MAINTENANCE II			 3703	129	383
5	YEAR - 4 MAINTENANCE III			. 3703	129	3832
-	Grand Total			 88932	3308	92240

नोट :-- मॉडल्स कार्यस्थल विशेष पर कार्य सम्पादित कराने के लिये प्राक्कलन नहीं है बरन केवल मार्गदर्शक है। कार्यस्थल पर कार्य सम्पादित कराने के लिए कार्य स्थल की विशेषताओं/ परिस्थितियों के अनुसार प्राक्कलन के आधार पर कार्य कराये जावें।

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उप वर्न संरक्षक (प्रशासन) प्रधान गुख्य थन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

(अप्रम सिंह गोठवाल) अर्थ थन संरक्षक (आयोजना), गजस्थान, जवपुर

1	YEAR 1 (PLANTATION YEAR) Maintenance of 220 seedling in nursery	Plant no.	220	2.17	376.92	100.90	477.82
2	Digging of 30cmx30cm cross section trench along inner side of stone wall fencing and seed sowing	meter	42	21.67	910.14	0.00	910.14
3	Sowing/dibbling of seeds of grass, trees and shrubs including seeds of medicinal plants on the mounds of trench/dlich fencing.	meter	442	0.58	256.36	0.00	256.30
,4	Sowing of grass seeds including raking in the interspaces.	Prorata			587.07	0.00	587.0
5	Transportation of 200 plants from nursery to planting site	Plant no.	200	1.46	246.52	44.73	291.2
6	Planting of 200 seedlings including Refilling of pits	Plant no.	200	7:75	911.19	18:83	930.02
7	Purchase and application of insecticide and fertiliser in 200 plants	Plant no.	200	4.92	795.72	188.32	984.04
8	Making of 200 crescent shaped mounds below planted sapling after planting and dibbling of 3 seeds of throny tree species.	Plant no.	200	7.20	1440.00	0.00	1440.00
9	Weeding and Hoeing of 200 plants two times including repairing of plants mound	Plant no.	400	4.66	1864.00	0.00	1864.0
10	Weeding on contour trenches/V-ditches and spacement / singling	Rmt	442	4.56	.2015.52	0.00	2015.52
11	Restoration of Natural regeneration by cutback cultural operation, pruning and by making crescent shaped ridges on lower side of seadling and saplings	Prorata	1	1295.00	1295,00	0.00	1295.00
12	Raising of 10% Plants (20 plants) in Nursery for casualty replacement in year 2	Plant no.	20	9.02	125:56	54.75	180.31
13	Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230.82
14	Construction of approach roads / inspection path	Prorata			441.27	0.00	441.27
15	Construction of gate and fixing of sign boards	Prorata			1174:14	138.88	1313.02
16	Misc. and unforeseen expences including (additional watering, heeing, fencing and frost protection measures and running of vehicles etc.)	Pròrata			1319.77	879.59	2199.36
	TOTAL YEAR 1		2367	1358.99	16990.00	1426.00	18416.00

YEAR 2 MAINTENANCE

1	Maintenance of 20 plants in nursery	Plant no.	20	2.17	34.27	9,17	43.44
2	Repair of fencing	Prorata			360.00	0.00	360.00
3	Casualty replacement of 20 plants (10%) including re-digging of pits, transportation, planting, watering and application of insecticides	Plant no.	20	13.42	259.00	9.42	268.42
4	Weeding and Hoeing in 200 plants two times	Plant no.	400	4.66	1864.00	0.00	1864.00
5	Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230.82
6	Misc. and unforeseen expences including (additional watering, fencing and frost protection measures and running of vehicles etc.)	Prorata			472.20	128.12	600.32
	TOTAL YEAR 2				6220.29	146,71	6367.00

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(अमर सिंध गोठवाल) जन्म तन संरक्षक (आयोजना) राजण्णान जनगुर

Model Cost Norms RDF L UNIT : 25 Ha PERIMETER: 90 M/Ha. LABOUR RATE: Rs.259, /Day COST ESTIMATE: In Rs./Ha.

No	O YEAR (ADVANCE ACTION)	Unit	Qty.	Rato	LABOUR	MATERIAL	TOTAL
				+	1208.66	101.22	1309.88
1	Collection of Data for Microplanning, preparation of microplan and	Prorata			1200.00	101-0	
	management plan	El-State 1			694.14	77.12	771,26
2	Survey of area. Layout of contour tranches/ furrows, Pits and marking of segments /plots	Prorata					
3	Fencing by stone wall and or by ditch.						
.,			10	371,95	16737.75	0.00	16737.75
	a). Stone wall fencing 1:20m high 0.80m at base & 0.60m at top(on an average 45 m/ha.)	meter	45	:ar 1,95			
	b). Ditch fencing 1.20m deep 1.50m wide at top & 0.90m at bottom (on an	meter	45	280.69	12631.05	0.00	12631.05
	average 45 m/ha.)	Diantino	550	9.02	3453.01	1505.49	4958.50
4	Cost of raising 550 seedlings	Plant no.	240	2.29	361.85	187.68	549.53
5	Raising of 240 plants in TOCmX15 cm bags for planting on mounds of trenches and V ditches(includes 20% extra)	Plant	240	2.23			
-			tt-			0.00	
6 a	Digging up Trenches : Digging up 400 mt Staggered Contour Trenches with cross section size: 0.45x0.45 Sqmt.	Meter	400	32.38	12952.00	0.00	12952.00
7	Digging of 300 pits size: 0,45x(0.4+0.5/2) cum	no.	300	20.27	6081.00	0.00	6081.00
8		pèr ha	1	426.00	214.00	214.00	428.00
9	In situ Soll & Moisture Conservation measures like Check dam, Percolation Tanks, Earthen Bunds etc.	per ha	1	4964.85	4964.85	0,00	4964.85
10	Construction of Thatched cattle guard hut.	Prorata	1		518.00	72.98	590.98
11		Prorata	1			150.00	150.00
12		Protata			0,00	90.63	90.63
13	Labour amenities	Prorata			95.94	70.62	166.56
14	Caltia quard wages for 4 months	Prorata			1077.44	0.00	1077.44
15	Restoration of Natural regeneration by cutback cultural operation, pruning and by making crescent shaped ridges on lower side of seedling and saplings	Prorata			1295.00		1295.00
16	5 Misc, and unforeseen expenses Including running of vehicles	Prorata			490.57	99.23	589.80
-	TOTAL YEAR				62775.26	2568.97	65344.23

उप यन संरक्षक (प्रशासन) प्रयान मुख्य यन संरक्षक प्रशिक्षण, अनुसंचान, शिक्षा एवं गयार राजस्थान, जयपुर

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(जागर मेरुक (आयोजन). रज्य थन संरक्षक (आयोजन). गजस्थान, जबपुर

		ж. т	· · . ·	•. •				.:
	YEAR I (PLANTATION YEAR)		· · ·					, i
		Plant no.	550	2,17	942.31	252.25	1194,56	· .
			·			00.001	200 40	· . ·
	Maintenance of 240 plants in 10cmX15 cm bags	Plant	240	1.37	241.80	1	328.49	
	Digging of 200 pits size	Pit	200	20.27	4053.56	0,00	4053.56	Ċ
	0.45X(0.4+0.5)/2 Cum			21.67	910,14	0.00	910.14	
•	Digging of 30cmx30cm cross section trench along inner side of stone wall	meter	42	21.07	010.14		-	
5 .	tencing and seed sowing Sowing/dibbling of seeds of grass, itees	meter	442	Q.58	256.38	0.00	256.36	• .
	and shrubs including seeds of medicinal plants on the mounds of trench/ditch	Mičio	THE	*.*-				
	fencing.	Prorata	┝──┼		2029.52	444.05	2473.57	
6	Purchase of fertilizers and insecticide and its application	F.(UI 849					599 50	
7	Sowing of pellets of grass seeds / pieces of seed mud cakes in	Prorata		•	586,52	0.00	586.52	
-	between rows & pits	Plant no.	500	1.58	775.63	14.98	790.61	
8	Transportation of 500 plants from nursery to planting site	Liaur'năr						
9	Planting of 500 seedlings including Refilling of pits	Plant no.	500	7.75	3875.00	0.00	3875.00	
10	Transport 200 plants raised in 10 cmX15cm bags upto site including		200	0.95	169.11	0.00	189.11	
	loading and unloading (upto 5 kms.)							
		District		2,87	427,56	145.52	573,08	
11	Planting of 200 pre germinated plants, including local transport and watering		200	-2,07	427,00	140.02		
12	Restoration of natural regeneration	Plant no.	150	4.73	709.85	0.00	709.85	
	by making crescent shaped mounds on the lower slope of 150 seedlings and saplings							
13	Making of 500 crescent shaped mounds below planted sapling after planting and dibbing of 3 seeds of throny free	Plant no.	500	7.20	3600,00	0.00	3500.00	
14	species. Weeding and Hoeing of 500 plants two times including repairing of plants	Plant no.	1000	4.66	4660.00	0.00	4660.00	
15	mound Weeding on contour trenches/ V-ditches	Rmt	442	4.56	2015:52	0.00	2015.52	
16	and spacement / singling Restoration of Natural regeneration by cultural operations and by making crescent shaped ridges on lower side of	Prorata	1	1295.00	1295,00	0.00	1295.00	
	seedlings		┢═┿┝				451.00	
17	Raising of 10% Plants (50 plants) in Nursery for casualty replacement in year	Plant no.	50	9.02	314.59	136.41	401.00	
40	2 Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230.82	
18 19					375.48	40.66	416.14	
20		Prorata			441.27	0.00	441.27	
21	Inspection path	Prorata	╁╼┼	+	1174.14	138.88	1313.02	
	boards	Prorata	+ +		3300.00	2199.07	5499.07	
22	Misc, and undeseen experices including (additional watering,hoeing, fencing and frost protection measures and running of vehicles etc.)							·

उप वन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एथ प्रसार राजस्थान, जयपुर

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(आमर सिंह नोताला)) (र्थ्य यन संरक्षक (आयोजना), गुजस्थान, जबड्डा

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1	Maintenance of 55 plants in nursery	Plant no.	55	2.17	94.23	25.22	119.45
2	Repair of fencing	Prorata			360.00	0.00	360.00
3	Casualty replacement of 50 plants (10%) including re-digging of pits, transportation; planting, watering and application of insecticides	Plant no	50	13,44	649.56	22.47	672,03
4	Weeding and Hoeing in 500 plants two Unles	Plant no.	1000	4.66	4650.00	0.00	4660,00
5	Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230,82
6	Misc. and unforeseen expences including (If watering required; fencing and frost protection measures and running of vehicles etc.)	Prorata.		the second	472,20	128.12	600.32
	TOTAL YEAR 2				9466:81	175.81	9642.62

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1	Watch & ward charges for 12 months	Prorata	3230.82	0.00	3230,82
2	Expenditure on Maintenance including (Repair of fencing/Structures, Subsidiary silvicultural operations, Frost Protection, etc.)	Prorata	.472,58	128,60	601.18
	TOTAL YEAR 3.		3703.40	128.60	3832.00
	YEAR4 : MAINTENANCE				
1	Watch & ward charges for 12 months	Prorata	3230.82		3230.82
2	Expenditure on MaIntenance including (Repair of fencing / Structures, Subsidiary silvicultural operations, Frost Protection, etc.)	Prorata	472.58	²128.60	
	TOTAL YEAR 4.		3703.40	128.60	3832.00
_	GRAND TOTAL		115053.05	6460.49	121513.54

Year wise Cost Statement RDF1

No.	Item of Works	Unit	Qty.	Rate (Rs.)	Labour Cost	Material Cost	Total Cost
1	YEAR 0 ADVANCE ACTION				62775	2569	65344
2	YEAR 1 - PLANTING YEAR				35404	3459	38863
3	YEAR 2 - MAINTENANCE I				9467	176	9643
4	YEAR 3 - MAINTENANCE II				3703	129	3832
5	YEAR - 4 MAINTENANCE III				3703	129	3832
	Grand Total				115053	6460	121514

नोट :— मॉडल्स कार्यस्थल विशेष पर कार्य सम्पादित कराने के लिये प्राक्कलन नहीं है वरन केवल मार्गदर्शक है। कार्यस्थल पर कार्य सम्पादित कराने के लिए कार्य स्थल की विशेषताओं / परिस्थितियों के अनुसार प्राक्कलन के आधार पर कार्य कराये जावें।

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उप वन ररिक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिद्यण, अनुसंघान, शिक्षा एवं प्रसार राजस्थान, जयपुर

(अमप्र तिंह गोवनात) .ख्य धन संरक्षकं (आयोजना). गजस्थान, जनपुर

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Model Cost Norms RDF II UNIT : 25 Ha PERIMETER: 90 M/Ha. LABOUR RATE: Rs.259. /Day

COST ESTIMATE: In Rs./Ha. 0 YEAR (ADVANCE ACTION)

S.No	ITEMS	Unit	Qty:	Rate	LABOUR	MATERIAL	
1	Collection of Data for Microplanning, preparation of microplan and management plan	Prorata			1208.66		1309.88
2	Survey of area, Layout of contour trenches/ lurrows, Pits and marking of segments /plots	Prorata			694,14	77.12	771,26
3	Fencing by stone wall and or by ditch.						
	a). Stone wall fencing 1.20m high 0.80m at base & 0.60m at top(on an average 45 m/ha.)	meter	45	371.95	16737.75		16737.75
	b). Ditch fencing 1.20m deep,1.50m wide at top & 0.90m at bottom (on an average 45 m/ha.)	meter	45	280.69	12631.05		12631.05
4	Cost of raising 220 seedlings	Plant no.	220	9.02	1381.20	602,20	1983.40
5	Raising of 240 plants in 10cmX15 cm bags for planting on mounds of trenches and V ditches(includes 20% extra)	Plant	240	2:29	361.85	187.68	549.53
6	Digging up Trenches :					0.00	
а.	Digging up 400 rmt Staggered Contour Trenches with cross section size: 0.45x0.45 Sqmt.	Meter	400	32.38	12952.00	0.00	12952.00
7	Digging of 200 pits size: 0.45x(0.4+0.5/2) cum	no.	200	20.27	4054.00	0.00	4054.00
8	Cost of collection and purchase of grass and other seeds of indegenous trees and shrubs	per ha	1	428.00	214.00	214.00	428,00
9	In situ Soli & Moisture Conservation measures like Check dam, Percolation Tanks, Earthen Bunds etc.	per ha	1	4965.17	4965.17	0.00	4965.17
10	Construction of Thatched cattle guard hut.	Prorata	1		518.00	72.98	590.98
11	Purchase or construction of water storage tank	Prorata	1			150.00	150.00
12		Prorata			0.00	90.63	90.53
13	Labour amenities	Prorata	+ +		95.94	70.62	166.56
14		Prorata	<u> </u>	·	1077:44	0.00	1077.44
	Restoration of Natural regeneration by culback cultural operation, pruning and by making croscent shaped ridges on lower side of seeding and saplings	Prorata			1295.00	0.00	1295.00
16	including running of vehicles	Prorata			490.57	99.23	589.80
L	TOTAL YEAR 0	L			58676.77	1665.68	60342.45

उप वन संरक्षक (प्रशासन)

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प्रधान गुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

नुख्य वन संरक्षक (आयोजन्म), राजस्थान, जयपुर

Ŀ.	YEAR I (PLANTATION YEAR) Maintenance of 220 seedling in nursery	Piant no.	220	2.17	376.92	100.90	477.8
2	Maintenance of 240 plants in 10cmX15 cm bags	Plant	240	1.37	241.80	86.69	328.4
3	In situ Soil & Moisture Conservation	Prorata			2935.33	201.16	3136.4
	measures like Check dam, Nadis, Earthen Bunds etc.				•		
4	Digging of 30cmx30cm cross section trench along inner side of stone wall fencing and seed sowing	meter	42	21.67	910,14	0.00	910.1
5	Sowing/dibbling of seeds of grass, trees and shrubs including seeds of medicinal plants on the mounds of trench/ditch fencing.	meter	442	0.58	256,36	0.00	256,3
6	Sowing of grass seeds including raking in the interspaces.	Prorata			587.07	0.00	587.0
7	Transportation of 200 plants from nursery to planting site	Plant no.	200	1:46	246.52	44.73	291.2
8 '	Planting of 200 seedlings including Refilling of pits	Plant no.	200	7.75	911.19	18.83	930.0
9	Transport 200 plants raised in 10 cmX15cm bags upto site including		200	0.95	189.11	0.00	189.1
	loading and unloading (upto 5 kms.)						
10	Planting of 200 pre germinated plants; including local transport and watering	Plant	200	2.87	427.56	145.52	573.08
11	Purchase and application of insecticide and fertiliser in 200 plants	Plant no,	200	4.92	795.72	188.32	984.04
12	Making of 200 crescent shaped mounds below planted sapling after planting and dibbling of 3 seeds of throny tree species.	Plant no.	200	7.20	1440.00	0.00	1440.00
13	Weeding and Hoeing of 200 plants two times including repairing of plants mound	Plant no.	400	4.66	1864.00	0.00	1864.00
14		Rmt	445	4.56	2029.20	0.00	2029.20
15	Restoration of Natural regeneration by cutback cultural operation, pruning and by making crescent shaped ridges on lower side of seedling and saplings	Prorata	1	1295.00	1295.00	0.00	1295.00
16	Raising of 10% Plants (20 plants) in Nursery for casualty replacement in year	Plant no.	20	9.02	125.56	54.75	180.31
17		Prorata			3230,82	0.00	3230.82
18					375.48	40.66	416.14
19	inspection path	Prorata			441.27	0.00	441.27
20	boards	Prorata			1174.14	138.88	1313.02
21	Misc. and unforeseen expences including (additional watering,hoeing, fencing and frost protection measures and running of vehicles etc.)	Prorata			1319.77	879.59	2199.36
	TOTAL YEAR 1		3010	1364.18	21172.96		

उप वन संरक्षाक (प्रशासन) प्रयान मुख्य वन संरक्षक प्रशिषण, अनुसंयान, शिक्षा एवं प्रज्ञार पाजस्थान, जयपुर

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(अगर हिंद नोटा पुख्य वन संरक्षक (आयोजना) राजस्थान, जनप्रा

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	YEAR 2 MAINTENANCE		• .*				
1	Maintenance of 20 plants in nursery	Plant no.	20	2.17	34.27	9.1	7 43.4
2	Repair of tencing	Prorata	1		360.00	0.0	0 360.0
3	Casualty replacement of 20 plants	Plant no.	20	13.42	259.00	9.4	2 268.4
	(10%) including re-digging of pits,		- 1				
	transportation, planting, watering and						
	application of insecticides						
4	Weeding and Hoeing in 200 plants two	Plant no.	400	4.66	1864.00	0,00	1864.0
<u> </u>	times						
5	Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230.8
6	Misc. and unforeseen expences	Prorata			472.20	128.12	2 600,3
	Including (if watering required, fencing	•					
	and frost protection measures and						
•.	running of vehicles etc.)						
	TOTAL YEAR 2		-		6220.29	146.71	6367.0
	YEAR 3 : MAINTENANCE	1111-00					
1	Watch & ward charges for 12 months	Prorata			3230.82	0.00	3230.8
2	Expenditure on Maintenance including	Prorata			472,58	128:60	601.1
	(Repair of fencing/Structures, Subsidiary						
	silvicultural operations, Frost Protection,						
	etc.)						
	TOTAL YEAR 3.				3703.40	128.60	3832.00
	YEAR 4 : MAINTENANCE						
1	Watch & ward charges for 12 months	Prorata			3230.82		3230.82
2	Expenditure on Maintenance including	Prorata			472.58	128.60	601.18
	(Repair of fencing / Structures,		i i				
	Subsidiary silvicultural operations, Frost						
	Protection, etc.)						
	TOTAL YEAR 4.				3703.40	128.60	3832.00
_	GRAND TOTAL		() () () () () () () () () ()				

	Ye	ar wise Cos	t State	ment RDF I			
No.	Item of Works	Unit	Qty.	Rate (Rs.)	Labour Cost	Material Cost	Total Cost
<u> </u>	YEAR 0 ADVANCE ACTION				58677	1666	60342
2	YEAR 1 - PLANTING YEAR				21173	1900	23073
3	YEAR 2 - MAINTENANCE I				6220	147	6367
4	YEAR 3 - MAINTENANCE II				3703	129	3832
5	YEAR - 4 MAINTENANCE III				3703	129	
	Grand Total						3832
	Charles / Orlan				93477	3970	97446

नोट :-- मॉडल्स कार्यस्थल विशेष पर कार्य सम्पादित कराने के लिये प्राक्कलन नहीं है वरन केवल मार्गदर्शक है। कार्यस्थल पर कार्य सम्पादित कराने के लिए कार्य स्थल की विशेषताओं / परिस्थितियों के अनुसार प्राक्कलन के आधार पर कार्य कराये जावें।

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उप वन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

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(SPATINE T. न्ख्य वन संरक्षक (आयोजना) राजस्थान जयपुर

it: 25	Ha R: 90 M/HA		·				
- 6				2			
	ATE: 259/- DAY			• •	· · .		
10 COM 1, 1-1	MATES IN Rs./ha.						
st Year			1 Ohioi	Rate	Labour	Materia	Total Cos
S.No	Item	Unit	Qty:	in and	1. 7. 7		
1	Survey and demarcation of area, dividing of the area in:		27 19 19 19 19 19 19 19 19 19 19 19 19 19	1	1. S. S. S. S.	-	
·	sub plot and their semi permanent demarcation and		· 推动 · · · ·	an and			
	also preparation of treatement map and accordingly			484.4	379.4	7 10	484.4
		Hallson	t and the second second	404.4	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	* <u>· · ·····</u>	
2	Fencing of Areas.		A COMPANY A CLEAR AND	1	- 97-54 7 485		
	A. Ditch fencing 1.20m, Deep 1.50m Wide at top and				9 7017.2		7017.2
	0.80m. At bottom (on an average 25m/ha:)	Rmt	23.692	280.6	1017.2		
	B. Loose stone wall fencing 1.50 m. height, 0.80 at base			1. a			
	and 0.60m at top (on an average 25m/ha.)		AND THE REAL PROPERTY AND	14 1961			11600
		Rmt	25 B	464	1160	4	
	C. Masonary pucca wall height 1.5m, width 0.45m		1997 - Sec.				1
	With pillar having width 0.6m, Length 0.45m, At the	[
	Interval of 2.25m., At forest boundary where the forest	ł	÷.		1 ::		
	area is encroachment or mininig pron (on an average		111				
	15m/ha.)	1					52500
		Rmt	15	3500	21000	31500	52500
	D. Barbed Wire fencing of Height 1.5 mtr with RCC pole:		<u>1</u>				
	of height 2.1 Mtr supported by welded mesh wire (jaali)				ļ.		
	of height 1.5 mtr						
	(on an average 25m/ha.)				1362.5	4087.5	5450
		Rmt		218	1302,5	4007.5	
3	Treatement of nallas by construction series of loose						
•	stone check dams and dry random						
	rubble/earthen/Dykes/silt detention dams/ small				9819	1494.79	11314
	anicuts/nadis/ MPT/PT/ Gabion structure	Prorata			5015	1404.10	
4	Restoration of natural regeneration by cut back cultural						
	operation of root stock pruning and making crescent						
	shaped ridges on lower side of seedling and saplings.				1260	0	1260
		Prorata			1200		
5	Eradication of weeds like Juliflora /Parthenium/Lantana				200	2300	2500
		Prorata		Sec. Back Sec	200		
6	Digging of 400 rmt. of staggered / contionus contour		400	32,38	15064	1336	16400
•	transfer of crocs section 45×45 cm	Meter	400	1. J. (* 52,50	-15004	1550	
7	Collection and purchage of seeds of indegenous trees						1
	and shurbs species & grasses and including the cost						
	their sowing or dibbling . 4kg seeds/Ha.				173	445	618
		No.	1		518	81	599
8	construction of Thatched Callele guard not	No.					
9	Construction of apporach road, inspection path and		,		2030	268.57	2299
	walking trails.	No.	1.121.243	269.35	808	50	858
10	watch and ward for 3 months.			203.00	60	540	600
11	Purchase of sign board gate & their fixing	Prorata			228	104.86	333
12	Miscellaneous and unforeseen expend true.	Prorata			71519.22	42312.72	113832.7
	(otal	19.19 (n.19.55.*	1				
13	Contigency charges- Labour aminities, mate, nurse, water, shade etc: 3% of total cost					1269.38	1269.38
1.2		AND THE REAL PROPERTY.					115102,1

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उप वन संरक्षक (प्रशासन) प्रधान मुख्य यन संरक्षक प्रशिक्षण, अनुसंघान, शिक्षा एवं प्रशास राजस्थान, जयपुर

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भारता हरे। आधि वन संरक्षक (आयोजन्म). राजस्थान, जवपुर

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Second ye	ear						
			<u> </u>	1	10 200 At 10 10	7.57 5 1.7.181	1. 6:3
1	Etadlcation of weeds like juliflora /Parthenium/Lantana	Prorata			100	1150	1250.
	Repairing of Ditch fencing	Rmt	建华长 2	5 192	480	0	4
2	Collection and purchage of seeds of indegenous trees and shurbs species & grasses and including the cost their sowing or dibbling. 2kg seeds/Ha.	Na.			86.5	272-5	309.
3	Restoration of natural regeneration by cut back cultural operation of root stock, pruning, and making crescent shaped ridges on lower side of seedling and saplings.				630	Ō	630.
4	Watch and ward for 12months	month	322341	269.35	3232		(学家33
	Total	the mind and any sub-field	30 km s	教师 最优量	4528.5	1472.5	- 5001.
Third Mean							
Third Year 1		Rmt	2.5 A. 1.2.5	192	480	0	4
2	Repairing Loose stone wall fencing		1.5		348	0	- 3
3	Repairing Barbed Wire fencing of Height		15		164	0	16
4	Watch and ward for 12months	month	12	269.35	3232	100	33
	Total		i she ha ha ha		4224	100	4323
FourthYear							
1		month	<u> </u>	269.35	3232	100	33
	Total		创建的		3232	100	. 33
Fifth Year							
1	As profite (10, and a role real end to set the	month	T - 12	269.35	଼୍କ 3232	100	33
	Total				3232	100	333
	Grand Total				86735.7Z	45354.6	132090

उप धन संश्रतक (प्रशासन) प्रधान मुख्य धन रांखक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रधार राजस्थान, जयपुर

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अन्मनंतह गोठवाल) ;ख्य धन संस्तृक (आयोजन्ह) राजस्थान, जयपुर

	SOHa	TE FOR I	CO- RE	STO	RATION				
	METER: 60M/HA				-				
	UR RATE: 259/- DAY							· · ·	1
	ESTIMATES IN Rs./ha.	•							1
First				-					-
S.No		Uni	t Qti	1.	Rate	Labor	ur Mater	ial Total Cost	-
1	Survey and demarcation of area and also preparation treatement map and accordingly prepare estimate of site			33. 31 (1) 31 (1)	484.4		47	05 484:4	7
2	Fencing of Areas.	遼 Ha 🖂	<u> 22 (17 7 7 2</u> 2	<u></u>		1 3.451.5	T. 1. T. 1994	200	
	A-Ditch 1:20m, Deep 1/50m, Wide at top and 0.80m //	14	14.0×10	13.4			S. C. S. S.		9
	bottom (on an average 15m/ha.)			15	280.6	9 4210.	35	0 4210.3	9
• •	B. Loose stone wall 1.50 m. height, 0.80 at base and	22 24	1:05		,200.0	772100	55		9
	C.50m. At top (on an average 15m/ha.)	Rmt		15	46	69	50	0 6960	
-	C Masonary pucca wall height 1.5m., width 0.45m.	S OLD .	1873-08 1987 - 1	4					ł
•	With pillar having width 0.6m. Length 0.45m. At the interval of 2.25m., on the outer forest boundary (on ar				•	1.1			
	average 15m/ha.)	Bmt	1	5	· 3500	2100	3150	52500	
	D. Barbed Wire fencing of Height 1.5 mtr with RCC pol			-		2100		42500	<u> </u>
	of height 2:1 Mtr supported by welded mesh wire (jaal	5			÷		1		
	of height 1.5 mfr		1940	1	·	÷			
		Rmt	1	š e	218	817.	5 2452.	5 3270	
	Treatement of nallas by construction series of loose			1			1		
	stone check dams and dry random								
	rubble/earthen/Dykes/silt detention dams/ small								
	anicuts/nadis/ MPT/PT/ Gabion structure	Prorata				9819	1494.7	11313.79	
	Restoration of natural regeneration by cut back cultura	4							
	operation of root stock, pruning and making crescent				i			1.12	
	shaped ridges on lower side of seedling and saplings.		1						
		Prorata	L			971	10.7	981.7	
	Eradication of weeds like julifiora /Parthenium/Lantana etc.	Prorata				200	2300	2500	
	Digging of 400 rmt. Of staggered / contionus contour	19. A. I.	<i>水</i> 花的						
	trenches of cross section 45×45 cm and width as per								
_		Meter .	400	-	32.38	15064	1336	16400	
	Collection and purchage of seeds of indegenous trees						· ·		
	and shurbs species & grasses and including the cost								
ľ	their sowing or dibbling . 4kg seeds/Ha	No		1					
8 6	construction of Thatched cattele guard hut		<u>1</u> 1	<u>⊢</u>		173	445	618	
	Construction of apporach road, inspection path and	NU.				259	40	299	
		No.	1.			2020	200		
_		month	<u>িউ</u> জন	99D	150	2030 405	268.57 45	2298.57	
		Prorata	TTO AS	10		30	45 270	450	
		Prorata		- 11-11	<u></u> 28[3	228	104.86	300 332.86	
	Total					2546.32	40372.4	102918.74	
	Contigency charges-Labour aminities, mate, nurse, 100							102340.(1	
1						0	1211.17	1211.17	
<u></u>	Total				e	2546.32	41583.6	104129.913	
	Hutter							भारती इ.सिंह गोठवाल) । संरक्षक (आयोजन्ह्र),	~

उप वर्न संरक्षक (प्रशासन) प्रधान मुख्य दन संरक्षक प्रशिक्षण, अनुसंवान, शिक्षा एवं प्रजार राजस्थान, जवपुर

(अगर सिंह गोठवाल) तख्य यंत्र संरक्षक (आयोजन्ह), राजस्थान, जयपुर

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ecol	nd year			 F	r		
1	Eradication of weeds like julifiora / Parthenium/Lantana etc.	Prorata	<u> </u>			1150	4250 00
_	Repairing of Ditch fencing	Rmt		192	100		
2	Collection and purchage of seeds of indegenous trees and shurbs species & grasses and including the cost their sowing or dibbling . 2kg seeds/Ha:	No.	1		86.5		
3	Restoration of natural regeneration by cut back cultural operation of root stock, pruning and making crescent shaped ridges on lower side of seedling and saplings.	Prorata			485.5		485.50
4	Watch and ward for 12months	month	興業12	269.35	-3232	1.+ /100	
	Total		の語識が			1472.5	
hird 1	Year Repairing of Ditch fencing	Post	in and	autori en distanta	all's a second the		
2	Repairing Loose stone wall tencing	Rmt	1	192	192	0N	
ġ.	Repairing Barbed Wire fending of Height		1	232 109	232	0	232
4	Watch and ward for 12months	month	12	269.35	109 3232	0 100	109 3332
	Total			203.33	3765	100	3865
Duit	thYear		100 A 100 200	¥• • •		100	
10	Watch and ward for 12months	month	STE 12	269,35	3232	100	3332
	Total	2110-9115		G. M. C. C. S. S.	3232	100	3332
fth	Year		1	<u>r manaki </u> na wasa si		562 - 12 - 2 2 - 20	<u> </u>
10	Watch and ward for 12 months	month	12	269.35	3232	100	CA 933321
_	Total				3232	100	3332
	Grand Total				76967.32	43256.1	120323.41

उप वन संरक्षक (प्रशासन) प्रवान मुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

(अनर दिसनोजनात) (ख्य वन संरक्षक (आयोजन्म). राजस्थान, जयपुर

Model Estimate (Guard Chowki) (Salatory Installation Work)

				Unit	Rate	Amount	
No.	B.S.R	Particular	Qty		2400	2400	
1	1.2.1	P & F Indian type white glazed vitreous china 1st quality	1	No	2400		
۰.		W.C. orissa pan (IS :2556 Mark) with 100 mint vitreous china			- + <u>1</u>		
		P or S trap including cutting and making good the wall and					
		flödri			· ·		
		Size \$30x410mm					
_			1	No	2189	2189	1 1 1 L
2	1.36.2	WASH BASINS:					
		1.36 P.& FWVC Wash basin (Ist quality IS:2556 Mark) of			· · ·		· · · ·
		approved make with C.I. brackets duly painted 1 No. 15 mm					1
		C.P. Pillar cock (IS:8934 Mark) & 32 mm C.P. brass waste		• •	· .		
1		coupling of approved make, P.V.C. Waste pipe with PVC					
		nut 32 mm complete including cutting & making good the					1 · · ·
		wall :					į
i		Size S10 mm x 400 mm					f
-		KITCHEN & LAB. SINKS:	1	No	3936	3936	
3	1.38.9.4	1.38 P & F Kitchen & Lab. Sink of approved make with C.I.					
		1.38 M& F Kitchen & Lab. Sink of approved make white an					
		brackets duly painted; 40 mm C.P. waste coupling, C.P.					· .
		Brass chain with rubber plug, 40 mm G.I. waste pipe up to					
_		floor level complete including cutting and making good the					
		wall & floor :	1		1		· · · · ·
		1.0 mm thick stainless steel AISI -304 & IS 13983-1994	1		{		
		kitchen sink of approved make as per Engineer-in-charge			1		
		with large waste coupling.			1. IS		
		Overall size Bowl size					
		22 x 18 x 7 20x16x7					-
4	1.23	P & F WVC (10 litres) low-level flushing cistern with cover.	1	No	753	753	-
5	1.44.1	P & F Bevelled edge Mirror/mirror with teak wood lipping	1	No	523	523	
-		around of special glass of approved make as per direction		. •			4
		of Engineer-in-charge complete with 6mm thick commercial		N			
		ply base fixed to wooden screws & washers.					
		Size 600 x 450mm x 4 mm thick					
	1 1 17 1	P & F Towel Rail or Ring of approved quality/make:	1	No	425	425	1
6	1.47.1	C.P. brass Towel Rail elbow type with concealed screws					
		size 450mm (Heavy duty). P & F Towel Rail or Ring of approved quality/make:	- 1	No	231	231	1
7	1.47.8		1				
	-i	C.P. Brass Towel Ring revolving type	1	No	142	142	
8	1.52.2	P & F Soap Dish or Tray of approved quality/make	1	ino ino	142	142	
		C.P. brass heavy and superior quality.		No	342	342	
9	1.55.2	P & F Bath Shower of approved quality/make.	1	INO	342	342	
		C.P. brass of Heavy & superior quality 150mm.			246	5100	
10	1.59	P & F Jet spray for water closet with C.P. Copper Tube	15	No	346	5190	
		flange of approved make.	_	-			
11	2.1.1	P & F G.I. pipes (Internal Work) with G.I. Fittings	1	RMT	209	209	
		excluding union (IS:1239 Mark) & M5 clamps					
		including cutting and making good the walls and					
	1	floors:					
		(a) Exposed on wall		1		S 8	
		2.1.1 15 mm dia nominal bore					
		'B' Class					
12	2.7.1		4	No	271	1084	
-		of approved make:				I 1	•
		Brass 400 gm,15mm nominal bore.					
13	2.15.1		2	No	206	412	
1.2	2,13.1	valve of approved make :			1		
1		Gun-metal 15mm nominal bore.			1		
L		I When a		<u> </u>	<u> </u>		
					~ 118	INA)	1
• :		वैनि संरक्षक (प्रशासन)			Sur	Y AN	
	T	वान मुख्य वन संरक्षक 1, अनुसंधान, शिक्षा एवं प्रसार		•	(अमर सिष्ट		- 30 ⁻¹⁰ , - 14
					रध्य वन सरक्ष		

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14	2,26.3	P & F PVC Storage Tank ISI Marked (IS: 12701)	1	No	3564	3564	
-		Indicating the BIS license No), of approved make					
		with cover, 25mm dia 1M long G.I. over-flow pipe					
		& 25 Cm. long wash out pipe with plug & socket,		F -			
		including making connection etc., complete of					
		approved design;					
-		500 litres capacity.					
15	3.16.2	RIGID FVC PIPE	3	RMT	161	.483	
		3.16 P&F rigid PVC Pipe (IS: 4985 mark) class II/ (4 kg. /Cm2 .)					··· ·
		approved quality /make including joining the pipe with		4			
		solvent cement rubber ring and lubricant.					
		75 mm dia		· · ·		1.1	
16	3.16.3	RIGID PVC PIPE	6	RMT	256	1536	
		3.16 P&F rigid PVC Pipe (15:4985 mark) class II/ (4 Kg. /Cm2 .)					
		approved quality /make including joining the pipe with					
-		solvent cement rubber ring and lubricant.				ł	
		110 mm dia					•
				1			
17	3.17.1	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved				0	
		quality /make including joining the pipe with solvent cement					
		rubber ring and lubricant:					
		Coupler (socket)					
							<u> </u>
		75mm dia	3	No	79	237	1
18	3.17.3	110mm dia	2	No	98	196	
10	3.17.5	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved				0	
		quality /make including joining the pipe with solvent cement					
		rubber ring and lübricant:					
		Plain Tee					ļ
		75mm dia	1	No	104	104	
19	3.17.4	110mm dia P&F rígid PVC pipe fittings (IS: 4985 mark) of approved	0	No	170	0	-
~	3.17.4	quality /make including joining the pipe with solvent cement	1	No	· 194	194	
		rubber ring and lubricant:					
		Door Tee					
		110mm dia					
20	3.17.9	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved					
		quality /make including joining the pipe with solvent cement				Q	
		rubber ring and lubricant:					
		Bend 87 .5					
		75mm dia	4	No	88		
		110mm dia	1	No	146	352 146	
21	3.17.23	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved	3	No	347	1041	
		quality /make including joining the pipe with solvent cement	-		547 .	1041	
		rubber ring and lubricant:					
		P- Trap					
		110mm dia					
22		VENT COWER	1	No	51	51	
23	.3.24,1	Construction of Soakage well in all types of soil of	1	No	4948	4948	
		approved drawing, top 90 Cm . Portion in 450mm thick					
		masonry with CM 1:6, 80 mm thick stone slab covering,					
		jointing of slab in CM 1:3 ,Raithal, kharanja 40mm thick M-					
		15 grade C.C flooring, earth work etc . complete including					
		disposal of surplus earth within a lead of 50 mtr .					
		Inner dia 90 Cm & 10 to 12 Mtr deep.					
		disposal of surplus earth within a lead of 50 mtr .				30688	

उप वन संरक्षक गवान मुख्य कन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जरापुर

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(आझ्म्सिह गोण्याल) मुख्य यन संरक्षक (आयोजनः) राजस्थान, जयपुर

(NA

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Model Estimate (Rain Water harvesting Structure/Water Tank)

No.	0.5.8	Particular					BSR	1 alour	(City Ci	rcie-2019)	
1	1.6	Earth work in exception by mechanical means (Hydraulic exception)/	No	1	D	Н	Qty	Unit	Rate	Amount	
		well as 10 storing over areas (exceeding 30cm in depth: 1.5m in width as well as 10 storing on plan) including disposal of exceivated earth, lead upta 50m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed: All kinds of soil	3.14	1.65	1.65	3,3	28-21	Cụm		4485	
2	3.1.6	Providing and laying in position coment concrete including.curing,	- 214	1.65	1.75	0.2	1.3.		'n 1 4 4	-	
		control of the source of the s	3124	1.03	1,02	1	2.71	Cum	3002	5133	
- 3	3,1,3	Providing and laying in position cement concrete including curing,	3.14	105	3	1			1		
		comparitonetc. complete in specified grade excluding the cost of centering and shullering - All work up to plinth level. M15 grade Nominal Mix.	3:14	2,23	13:	0.15	4.17	Cum	4131	1,7219	
		1: 2: 4 (1 coment : 3 coarse sand : 4 graded stone aggregate 40mm nominal size).									
4	4.10.1	Centering & shuttering with plywood or steel sheets including strutting, propping bracing both ways with steel props and removal	Z	3.14	2.95	3	55.58	Sgm	263	14617	
		or formwork for upto floor five level for : Walls (any thickness) including attached pilasters; buttresses plinth and string course.									
5	10.16	Stone slab roofing on ground floor with fine grained stone slab from	1	3.14	1.5	1.5	7.07	-	1400	10503	
		approved quarry including filling of joints of parapet and stab on both sides in cement sand mortar 1:4, with celling pointing in cement sand mortar 1 : 3 complete as per specification and instruction of Engineer. In Charge		3.44	1,5	1.2	7,07	Sqm	1498	10583	
6	5.18.1	Supplying and fixing stone lintels/bed plates of approved quarry rough dressed in cement mortar 1:4 : Upto 15 cm. thick.	2	3	Ó.23	0,1	0.14	Cum	8746	1207	
7		Supplying & Fixing R.C.C. Manholes covers with frame of approved make (Light duty). Size 450 X 450mm					1,00	No	290	290	
		Tetal		_							

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उप चन संरक्षक (प्रशासन) एयान पुढव यन संरक्षक प्र²⁹ान अनुसंधान, खिया एवं प्रसार राजस्थान, जयपुर

(अमर रिंह रुखित्त) भुख्य वन संरक्षक (आयोजनः) राजस्थान, जयपुर

	B.S.A.	Pankular	No	1	B	H H	d on USA : City	11.61		Ankoun
1,	1.6	Earth work in encavation by mechanical incens (Hydraulic encavator 1/		<u> </u>		7	<u>uny</u>	Ýna -	HALD.	Arneau
· .		mental and a second of the mechanical means (registeric exception)		1	ł. –	· ·		1		
- 1		manual means over areas (enceeding 30tm in depth. 1.5m in which as	1					l 1		
- 1		well as 10 some on plan) including discossi of encavated each load						1 3		
		upto Som and lift up to 1.5 m, disposed earth to be levelled and nearly	i					1.1		
- 1		drossed:	F .			1		1 1		
- 1			1		1			1 1		
·		All kinds of soil						1 1		
			1	3.28	0.9	1.05	3.10			1
	· · · · ·		_					·	·	
			2		0.9	1.05	7.92			
-	Y		Ľ	2.67	0.9	1.05	252			
. 1			Z '	2.05	0.9	1.05	3.89			
			_	4.5	0.9				-	i.
			2			1.05	851			
			2	5.11	0.9	1.05 ·	9.66			
			1	1.28	0.9	1.05	3.10			
			2	2.67	0.9	1.05	5.05			
-			1	1.19	0.9	1.05	3.96			
			1 m			_		<u> </u>		
-			1	2.05	69	1.05	1.95			
	s	Tota	5	1			/ 49.65	Cum	. 159	789
1	116	Providing and laying in position coment concrete including curing.	1	· ·						r
		compaction etc. complete in specified grade encluding the cost of				1				
		A REAL AND A	1	1.		1 3	1	1		
		centering and shuttering - All work up to plinth level.	1	1		1 3	1			
		1:4:8 [I coment i 4 coarse said : 8 graded stone aggregate 40 mm	1	1	1	1	1			1
1		nantinal size).	1	1		1 1	ŀ			
			t	tim	ta:	0.70	0.00	+		
			11	3.28	0.9	0,20	0.21		<u> </u>	
			Ĭ.	1.19	éġ-	0.20	1.51			Ľ
			i	267	60	0,20	0.48			
			2	2.06	0.9	0.20	0.74			—
		· · · · · · · · · · · · · · · · · · ·			_				-	- 1
			2	45	0.9.	0.20	1.62		-	<u> </u>
			12	5.11	09 .	0.20	1.64			
	-		11	3.28	0.9	0.20	0.59			
			12	2.07	03	0.20	0.96	-		
-	-		14							_
_			1	4.19	0.9	0.20	0.75			
			11	2.05	0.9	0.20	0.37		E C	
		Tot	1				9.07	Cum	3002	2721
·3 ·	6.1.6		1	-				Cum	3002	2721
Э.	6.1.6	Random Rubble stone masonry for with hard stone in foundation and	1	-				Cum	3002	2721
Э.	6.1.6	Random Rubble stone masonry for with hard stone in foundation and plinth in Gement Sand mortar above 30 CM thick wall in:						Cum	3002	2721
3.	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).					.9.07	Cum	3002	2721
3 .	6.1.6	Random Rubble stone masonry for with hard stone in foundation and plinth in Gement Sand mortar above 30 CM thick wall in:			0.75			Cum	3002	2721
	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	111	3.28	0.75	0.40	.9.07	Cum	3002	2721
.9	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	11	3.28	0.75	0.40	.9.07 0.98 2.51	Cum	3002	2721
3	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 1 2	3.28 4.19 2.67	0.75	0.40 0.40 0.40	9.07 0.98 2.51 0.80		3002	2721
3	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	11	3.28 4.19 2.67 2.06	0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1,24		3002	2721
3	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 1 2	3.28 4.19 2.67	0.75	0.40 0.40 0.40	9.07 0.98 2.51 0.80		30Q2	2721
3	6.1.6	Random Rubble stoke mascony for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (blok wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	11	3.28 4.19 2.67 2.06 4.5	0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70		3002	2721
3	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	11	3.28 4.19 2.67 2.06 4.5 5.11	0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 ,		30Q2	2721
3	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 2 1 2 2 2 1	3.28 4.19 2.67 2.06 4.5 5.11 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98		3002	2721
3	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	11	3.28 4.19 2.67 2.06 4.5 5.11	0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60		3002	2721
3	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 2 1 2 2 2 1	3.28 4.19 2.67 2.06 4.5 5.11 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98		3002	2721
3 ·	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 2 1 2 2 2 1	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 4.19	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07, 0.98 1.60 1.25		3002	2721
3	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 2:5 (1-Centent : 6 Sand). steps	1 2 1 2 2 1 2 1 2 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 1.67 4.19 2.06	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07, 0.98 1.60 1.25 0.52		3002	2721
3	6.1.6	Random Rubble stone mascenry for with hard stone in foundation and plinith in Cement Sand montar above 30 CM (block wall in: Cement Montai 1:56 (1-Centent : 6 Sand).	1 2 1 2 2 1 2 1 2 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 4.19 2.06 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.89		3002	2721
е страница и	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 2:5 (1-Centent : 6 Sand). steps	1 2 1 2 2 1 2 1 2 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 1.67 4.19 2.06	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 , 0.98 1.60 1.25 0.62 0.89 2.25		3002	2721
3	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 2:5 (1-Centent : 6 Sand). steps	1 2 1 2 2 1 2 1 2 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 4.19 2.06 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.89		3002	2721
e e e e e e e e e e e e e e e e e e e	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 2:5 (1-Centent : 6 Sand). steps	1 1 2 1 2 2 1 2 1 1 2 1 1 2 1 1 2 1	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 4.19 2.06 3.28 4.19 2.67 2.67	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.89 2.25 0.72		3002	2721
3	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 2 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1	3.28 (4.19 2.67 2.06 5.11 3.28 2.67 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.67 7.06	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.82 0.82 0.72 1.11		3002	2721
	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3,28 4,19 2,67 2,06 4,5 5,11 3,28 4,19 2,66 3,28 4,19 2,66 4,19 2,66 4,19 2,66 4,19 2,66 4,19 2,66 4,19 2,66 4,19 2,66 4,19 2,67 4,19 4,19 4,19 4,19 4,19 4,19 4,19 4,19	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 , 0.98 1.60 1.25 0.62 0.89 2.25 0.89 2.25 0.111 2.43		3002	
3	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 2 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1	3.28 (4.19 2.67 2.06 5.11 3.28 2.67 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.67 7.06	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.82 0.82 0.72 1.11		3002	
	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3,28 4,19 2,67 2,06 4,5 5,11 3,28 4,19 2,06 3,28 4,19 2,67 2,06 4,5 5,11	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07 , 0.98 1.60 1.25 0.62 0.89 2.25 0.89 2.25 0.111 2.43		30Q2	
	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3.28 4.19 2.67 5.11 3.28 2.67 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 5.11 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07, 0.98 1.60 1.25 0.62 0.62 0.89 2.25 0.72 1.11 2.43 2.76 0.89			
3	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3.78 4.19 2.67 2.06 4.5 5.11 3.28 2.67 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.67 2.06 4.5 5.11 3.28 2.67	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.89 2.25 0.62 0.72 1.11 2.43 2.76 0.89 1.44			
	6.1.6	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3.28 4.19 2.67 5.11 3.28 2.67 4.19 2.06 3.28 4.19 2.67 2.06 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 4.5 3.28 4.19 2.67 4.19	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07 1.25 0.89 2.25 0.72 1.11 2.43 2.76 0.89 1.24 1.13			
	6.16	Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 2 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2	3.78 4.19 2.67 2.06 4.5 5.11 3.28 2.67 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.67 2.06 4.5 5.11 3.28 2.67	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07 0.98 1.60 1.25 0.62 0.89 2.25 0.62 0.72 1.11 2.43 2.76 0.89 1.44			
	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 2 2 1 2 1 2 1 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 2 1 2 2 2 1 2	3.28 4.19 2.67 2.06 3.28 2.67 4.19 2.06 3.28 4.19 2.67 7.06 4.5 5.11 3.28 2.67 7.06 4.5 1.13 2.67 2.67 4.19 2.67 2.06	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98 1.60 1.25 0.62 0.72 1.11 2.43 2.76 0.89 1.24 1.13 2.76 0.89 1.44 1.13 0.56			
3		Random Rubble stone mascory for with hard stone in foundation and plinkh in Cement Sand mortar above 30 CM tbick wall in: Cement Mortar 3th (1-Centent : 6 Sand). steps	2 1 2 2 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 2 2 2 2 2 2 2 1 1 1 1 1 2	3,28 4,19 2,67 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 2,06 4,5 5,11 3,28 4,19 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,5 5,11 2,06 4,19 2,0,0000000000000000000000000000000000	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 3.07, 0.98 1.24 2.70 1.25 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.56 0.79			
3	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 1 2 2 1 2 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 2 2 2 1 1 2 2 2 1 2 2 2 1 2 2 2 2 1 2 2 2 2 1 2 2 2 2 2 1 2	3.28 3.28 4.19 2.67 2.67 3.28 4.19 2.67 3.28 4.19 2.66 4.5 5.11 3.28 4.19 2.67 4.19 2.66 4.5 5.11 3.28 4.19 2.66 4.5 5.11 3.28 4.19 2.66 3.28 4.19 3.28 3.2	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 1.60 1.25 0.62 1.25 0.89 2.25 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.56 0.79 2.01			
	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 1 2 2 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 2 2 2 2 2 2 2 1 1 1 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.06 3.28 4.19 2.26 3.28 4.19 2.26 3.28 4.19 2.26 3.28 4.19 2.26 5.20 5.20 5.20 5.20 5.20 5.20 5.20 5.20	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07 1.24 2.70 1.25 0.69 2.25 0.72 1.11 2.43 2.76 0.69 1.24 2.75 0.72 1.11 2.43 2.76 0.69 1.24 2.75 0.72 1.13 0.56 0.79 2.01 0.64			
3	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 1 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 2 1 1 1 2 2 2 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 1 1 1 1 2 2 2 1 1 1 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 2 1 1 2 2 2 2 2 1 1 2	3.28 4.19 2.67 2.06 4.5 5.11 3.28 2.67 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.06 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.67 3.28 4.19 2.06 3.28 4.19 2.26 3.28 4.19 2.26 3.28 4.19 2.26 3.28 4.19 2.26 5.20 5.20 5.20 5.20 5.20 5.20 5.20 5.20	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.80 1.24 2.70 1.60 1.25 0.62 1.25 0.89 2.25 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.56 0.79 2.01			
	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	3.28 4.19 2.67 2.06 4.5 3.28 2.67 4.19 2.06 4.5 5.11 3.28 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 5.11 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.06 4.5 3.28 2.67 2.67 2.67 2.67 2.67 2.67 2.67 2.67	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98 1.24 2.70 1.25 0.62 0.72 1.11 2.43 2.76 0.89 1.44 1.43 0.55 0.79 2.01 0.69 0.69 0.69 0.65 0.79 2.01			
· · · · · · · · · · · · · · · · · · ·	6.16	Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 2 2 2 2 1 2 2 2 2 1 2	3.28 4.19 2.67 2.06 4.5 3.28 2.67 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.5 3.5 4.5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5 5.5 5.5 5 5.5 5.5 5 5.5 5 5.5 5 5.5 5 5 5.5 5.	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 9.98 2.51 0.88 1.24 2.70 3.07, 0.98 1.24 2.70 1.25 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.25 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.56 0.79 2.01 0.59 2.16			
3		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	3,28 4,19 2,067 4,55 3,28 2,067 3,28 4,19 2,067 4,19 2,06 3,28 4,19 2,067 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,19 2,06 3,28 4,59 2,06 3,59 4,59 2,06 3,59 4,59 2,06 3,59 4,59 2,06 3,59 4,59 4,59 4,59 4,59 4,59 4,59 4,59 4	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 0.89 1.24 2.70 3.07 1.25 0.98 1.60 1.25 0.89 2.25 0.72 1.11 2.43 2.76 0.89 1.24 1.24 1.25 0.89 2.25 0.72 1.11 2.43 2.76 0.89 2.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25			
3		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 2 2 2 2 1 2 2 2 2 1 2	3.28 4.19 2.67 2.06 4.5 3.28 2.67 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.67 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.5 3.5 4.5 3.5 4.5 3.5 4.5 3.5 4.5 3.5 4.5 3.5 4.5 3.5 4.5 3.5 4.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 9.98 2.51 0.88 1.24 2.70 3.07, 0.98 1.24 2.70 1.25 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.25 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.56 0.79 2.01 0.59 2.16			
3		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3.28 4.19 2.67 2.06 3.28 3.28 4.19 2.06 3.28 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.19 2.06 4.5 3.28 3.28 4.19 2.06 4.5 3.28 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.19 2.06 4.5 3.28 4.5 5.11 2.67 7.00 4.5 3.28 4.5 5.5 1 1.06 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07 1.24 2.70 1.24 2.70 1.25 0.62 0.62 0.62 0.72 1.11 2.43 2.76 0.69 1.24 2.75 0.69 2.25 0.72 1.11 0.56 0.79 2.16 2.79 2.16 0.64 0.99 2.16 0.64 0.79 2.16 0.79			
3		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 2 2 2 2 2 2 1 2 2 2 1 2 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2	3.28 4.19 2.67 5.11 3.28 4.19 2.06 3.28 4.19 2.06 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 3.28 2.67 2.06 4.5 3.28 3.28 3.28 3.28 3.28 3.28 3.28 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98 1.24 2.70 3.07, 0.98 1.24 2.70 3.07, 0.62 0.62 0.62 0.72 1.11 2.43 2.76 0.89 1.44 2.76 0.89 1.43 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.69 1.44 2.76 0.69 1.44 2.76 0.69 1.44 2.76 0.69 1.44 1.43 0.56 0.64 0.65 0.69 1.44 1.43 0.56 0.65 0.55 0.65 0.65 0.65 0.65 0.65 0.75 1.11 0.65 0.79 2.16 2.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45			
		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 2 2 2 2 2 1 2 2 2 1 2 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	1.28 4.19 2.67 4.19 1.267 4.19 1.267 4.19 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.265 1.28 1.28 1.28 1.28 1.28 1.28 1.28 1.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 9.98 2.51 0.88 2.51 1.24 2.70 3.07 0.98 1.24 2.70 1.25 0.62 0.62 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.75 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.55 0.79 2.01 0.59 2.16 2.45 0.79 1.16			
		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 2 2 2 2 2 2 1 2 2 2 1 2 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2	3.28 4.19 2.67 5.11 3.28 4.19 2.06 3.28 4.19 2.06 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 5.11 3.28 4.19 2.06 4.5 3.28 2.67 2.06 4.5 3.28 3.28 3.28 3.28 3.28 3.28 3.28 3.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 0.98 2.51 1.24 2.70 3.07, 0.98 1.24 2.70 3.07, 0.98 1.24 2.70 3.07, 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.76 0.89 1.44 1.74 0.89 1.43 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 2.76 0.89 1.44 1.43 0.56 0.64 0.64 0.64 0.65 0.64 0.64 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.69 1.44 1.43 0.65 0.65 0.65 0.65 0.65 0.65 0.69 1.44 1.43 0.65 0.79 2.16 2.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45 00.45			
		Random Rubble stone masoury for with hard stone in foundation and plinit in Cement Sand mortar above 30 CM tbick wall in: Cement Mortai 3th (1-Centent : 6 Sand). steps steps	2 2 2 2 2 2 2 2 2 2 2 1 2 2 2 1 2 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	1.28 4.19 2.67 4.19 1.267 4.19 1.267 4.19 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.267 1.265 1.28 1.28 1.28 1.28 1.28 1.28 1.28 1.28	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.40	9.07 9.98 2.51 0.88 2.51 1.24 2.70 3.07 0.98 1.24 2.70 1.25 0.62 0.62 0.62 0.62 0.62 0.62 0.72 1.11 2.43 2.75 0.72 1.11 2.43 2.76 0.89 1.44 1.13 0.55 0.79 2.01 0.59 2.16 2.45 0.79 1.16			

Model Estimate (Guard Chowki)

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उप वन संरक्षक (प्रशासन) प्रचान मुख्य वन संरक्षक प्रशिक्षण, शनुसंघान, शिक्षा एवं प्रसार राजस्थान, जयपुर

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(अगर सिंह फोरवाल) मुख्य वन संरक्षक (आयोजना) राजस्थान, जयपुर

1 7	3,72	Inc. Inc. Long Street Str					-	÷			1.	
	311-2		T	1				1	1.1.1	· · ·	1	
Ľ		12:1 1) montar propagat with 15 solution of whiter proof compound complete.			1							
	· · · ·	75min thick										1.1
<u> </u>	+		ì	3.2B	0.23		0.75				1	
. · · ·	+		2	4.17	0.23	17.0	1.93	1				
· · · · ·	<u> </u>		1	2:67	0.71		0.01]	· . ·
	†		4.	2.00			20.0			· · ·	1	
			Z.	4.5	0,21	·	1.07	1			-	
	-		1		0.23	N	2.39					
			12	2.67	0:23		123				1	
	+		ĥ.	4.19	0.23		0.96	1				-
	 		1	2.05	0.23		0.47		· _		1	
5	5.2.1	Tota Brick work with F.P.S. bricks of class designation 75 in superstructure above					12.08	5qm	496	5994	-	
		Benut legit upto (four V lave) in al stages and sizes in t Cement mortar 1 : 6 (1 coment : 6 coarse said)										
-			1.	3.28	0.23	3.20	2.41	1			1	
-			2	4,19	0.23	320	6.17				1	
	f		1	2.62	0,23	1.20	1.97					
	1		2	2.06	0.75	3.20	3.03	-			4	
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			2			3 20	3.91				-	
			1.		0.23	3.20	3.08				1	
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	+	Prepa	1	25.21	0.73	0.45	Z.61]	
<u> </u>	+	Tota	1				41.28	1	:			
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			4	1.07	0.13	2:13	1.19		<u></u>		4	
	1	Window Market State	2	0.75	0.23	2.13	0.73	+			4	
		autore	4		0-23	1:23	1.39	-			1	
		VEN	1	0.60		0;60	0.08				1	
		Telà	1				4.00]	
6	5.8.3	.Net Tota	t _				37.28	Cum	4536	169096		
°	2.0.3	Hall brick masonry in Superstructure , above plinth level up to floor V level using bricks of designation 75		-								
	·	Kitchan	<u>_</u>	0.60	0.75	-	135	-	<u> </u>		-	
			1	8.70			3.92	-			-	
			2.	0.61			0.55	-	-		1	
		Tota	i)				5.81	Sam	478	2779	1	
7	4.10.2	Comering & shuttering with plywood or steel sheets including									1	
		strutting, propping bracing both ways with steel props and removal										
		of formwork for up to fizor, five level for : Suspended fleors, roofs, landings, stalreases, bakenies, pirgers,				1. I		Į –				
		Cantilevers, bands, coping bed plates, anchor blocks, slib,				1						
		chhajjas, lintel, beam, plinik bram etc.				1	-					
	1					1	5.25	-			1	
		Gute	1	35	0.15		7.67	1	1		1	
			1	4.19	1.83			-			1	
			r 1 1	1.19 1.96	1.83		12.08					
			r 1 1 1	1.19 1.96 2.44	1.83 3.05 1.83		12.08					
			r l 1 1 1	4.19 3.96 2.44 4.27	1.83 3.05 1.83 4.88		12.08 4.47 20,84					
			r 1 1 1 1 1	4.19 1.96 2.44 4.27 2.44	1.83 3.05 1.83 4.88 3.05		12.08 4.47 20.84 7.44					
		Oute	1 1 1 1 1	4.19 1.96 2.44 4.27 2.44 8.7	1.83 3.05 1.83 4.88 3.05 0.60		12.08 4.47 20.84 7.44 5.22					
			1 1 1 1 1	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60		12.08 4.47 20.84 7.44 5.22 3.05					
		Oute	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22	Sam	309	20787		
8	4.2	Oute	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Dute Dute Bran Bran Providing and laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing,	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Bran Bran Providing 3nd laying in position specified grade of cement concrete for RCC structural elements up to floor five level including curing, compaction, finishing with rendering in cement and mortar 1:3 []	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Bean Providing 3nd laying in position specified grade of cement concrete for REC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and motiar 1:3 [1 cement; 3 coarse sand) and making good the joints and cost of	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Bran Providing and laying in position specified grade of cement concrete for RICC structural elements into floor five level including turing, compaction, finishing with rendering in cement and mortar 1:3 (1) cement; 3 coasis asing) and making good the joins and cost of plastiters (if required) eacluding the cost of centering, shuttering	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Beam Beam Providing and laying in position specified grade of coment concrete for IECC structural elements upto floor five level including curing, compaction, finishing with rendering in coment and most at 1:3 [1 compaction, finishing with rendering in coment and most at 1:3 compaction, finishing with rendering in coment and most at 1:3 [1 compaction, finishing with rendering in coment and most at 1:3 plastizers [if required] calculuting the cost of contering, shuttering and reinforcement for Wolls (any thickness) including attached	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Bran Providing and laying in position specified grade of cement concrete for RICC structural elements into floor five level including turing, compaction, finishing with rendering in cement and mortar 1:3 (1) cement; 3 coasis asing) and making good the joins and cost of plastiters (if required) eacluding the cost of centering, shuttering	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Bran Providing 3nd laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and mortar 1:3 [1 cement; 3 coarso sand) and making good the Joints and cost of plastizers (if required) excluding the cost of centering, shuttering and zeintoecomont for Walts (any thickness) including attached pilasters, buttresses, plinits and sing courses, files, column,	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.47	1.83 3.05 1.83 4.88 3.05 0.60 0.23		12.08 4.47 20.84 7.44 5.22 3.05 1.26	Sam	309	20787		
8	4.2	Oute Brain Providing 3nd laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and motiar 1:3 (1) cement; 3 coarse sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement for Wolls (any thickness) including attached plasters, buttresses, plinih and string courses, filets, columns, plasters, buttresses, points and struct etc.	1 1 1 1 1 1 3	4.19 3.96 2.44 4.27 7.44 8.7 4.42 1.83	1.83 3.05 1.83 4.88 3.05 0.60 0.23 0.23 0.23	0.120	12.08 4.47 20384 5.22 3.05 1.26 67.27	Sam	309	20787		
8	4.2	Oute Brain Providing 3nd laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and motiar 1:3 (1) cement; 3 coarse sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement for Wolls (any thickness) including attached plasters, buttresses, plinih and string courses, filets, columns, plasters, buttresses, points and struct etc.	1 1 1 1 1 1 3	4.19 3.06 2.44 4.27 2.44 4.27 1.83 1.83 4.47 1.83 8.92 2.67	1.83 3.05 1.83 4.88 3.05 0.60 0.23 0.23	0.120	12.08 4.47 20.84 5.22 3.05 1.26 67.27 6.35 0.66	Sam	309	20787		
8	A.2	Oute Brain Providing 3nd laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and motiar 1:3 (1) cement; 3 coarse sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement for Wolls (any thickness) including attached plasters, buttresses, plinih and string courses, filets, columns, plasters, buttresses, points and struct etc.	1 1 1 1 1 1 3	4.19 3.06 2.44 4.27 7.44 8.7 1.83 4.47 4.47 8.83 1.83 2.67 3.28	1.83 3205 1.83 4.88 3 05 0.23 0.23 0.23 0.23 0.23 0.23 0.23 0.23	0.120	12.08 4.47 20.84 5.22 3.05 1.26 67.27 6.36 0.66 1.05	Sam	309	20787		
8	A.2	Oute Brain Providing 3nd laying in position specified grade of cement concrete for RCC structural elements upto floor five level including curing, compaction, finishing with rendering in cement and motiar 1:3 (1) cement; 3 coarse sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement for Wolls (any thickness) including attached plasters, buttresses, plinih and string courses, filets, columns, plasters, buttresses, points and struct etc.	1 1 1 1 1 1 3	4.19 3.06 2.44 4.27 2.44 4.27 1.83 1.83 4.47 1.83 8.92 2.67	1.83 3.05 1.83 4.88 3.05 0.60 0.23 0.23	0.120	12.08 4.47 20.84 5.22 3.05 1.26 67.27 6.35 0.66	Sam	309	20787		

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जप- पन संरक्षक (प्रशासन) एधान मुख्य एन संरक्षक प्रशिक्षण, अनुराधान, शिक्षा एवं प्रसार राजस्थान, जयपुर

(अगर किन्तालात) न्त्य्य धन संरक्षक (आयोजन्म), गजस्थान, जयपुर

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10	12.2	4.31 Providing and fabricating reinforcement for R.C.C. Work Including straightening, cutting, bending, placing in Postport and Binding lincluding room of binding withing all complete up to floor five level. (Ovignal producer) who manufacture billet directly from iron ones and roll the billets to produce steel conforming to [5:1736] (Herme-mechanically Treptod Sare (Contorting of relevent IS code (100 kg per cum of \$\vec{2}_{-2}\$)	•						0.00		65 54			
10	12.2	ones and roll the blets to produce steel conforming to IS(1786) (Refme-mechanically Treptod Bare (Conforming to IS(1786) (100 kg per cum of cc)	- 44 - - 1											
10	12.2	New Whet Could CE	•	· [ľ	-		-	•	•				
		2 Plater on new surface on walls in coment sand mortar 1:4				-	-				4			
		Including racking of folinizate, complete fine finish : 20mm thick			-							•	•.	
				101 Z 2 1/R 2	3.05	5	3.2	0 19	52					
	+			2	4.27	<u> </u>	3:2	J 31	23	+		1		•
	1-		Off	2 kt 2	1.83		3.2	0 11	'n			- -	:•	
	-		Veram	2 da 1 1	4,19		3.20	1 11	11		-			
, 	╞			2	2.83		3.70	2.8	6	+				
				1	3.80 1.50	1	0.60	2.2	8		-	7		
	-	Deduction		1		-	-	192.	58			-		
_			W	14	1,23	1.73	_	6.05				3		
_			0	16	1.07	2.13	-	9.12		-		4		
				1			E	4.47	-	-		1		
			Net Tota	1	11.07	-	-	136.0	i Sár	188	29705	1		
		Parapet laner		2	7,40		3.80	56.24				1		
11	12.5	6 mm thick coment plaster to ceiling of mix 1/3 (Icoment ; 3-line sand).	Teta	-		-	-		Sqri	168	26433	1		
-				1 1				7.44	1-	-	<u> </u>	1		
	_			1	4.19	1.83		7.67	1-			1		
								7,67	E					
2		complete	1014								6214	·		
3	17.36	Distempering with dry distemper of approved brand and shoke (two or more costs) and of required shake on new		-	-	-	-	211.58	Sqm	48				
4	12.41.1	even shade including all scatfolding. Finishing wall with water proofing cement pains of approved	_				_	157.24						
		even shade including all scaffolding: New work [Two or more coats applied @ 3 64 kg/10 spm).							oqm	48				
5	12.45.1	PAINTING				-	+							
_		With ready mix pink or gray primer of approved brand and manufacture on wood work bard and soft wood,			_									
-							05	25.83 15.58						
1		Applying priming coat : With ready mixed red oxide ting chromate primer of	1014	1	1			41.41	Sgm	26	1077			
+	<u>i</u>	ion/sieel works	1	14	37	1.2	13	5.26						
-	=		8			17	13	12.10 0.35	-					
i	Įn.	Painting with synthetic enamel paint of approved brand and hanolacture to give an even shade :			+-	1		17.73	am.	21	372			
-	_		21	0.9	5	2.0	S 1		+	_	1			•
Ŧ				1.0	1	1.2	1 1	5.26 2.10		-		1	•	
			- 14			0.50		7.36				-		
		2 12.22.1 2 12.22.1 12.45.1 12.45.3 12.45.3 12.45.3 12.45.3	Parapet Inner Parapet	Ve button Vera Ve	1 1 0cduction 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21 1 1/21	1 280 0ctbuctor Tetal 0ctbuctor Tetal 0ctbuctor 1 0ctbuctor 0 0ctbuctor 0 0ctbuctor 0 0ctbuctor 0 0ctbuctor 0 0ctbuctor 0 0ctbuctor 1 1 25.21 1 25.22 1 25.22 1 2.24 1 4.27 1 1 1 2.24 1 2.24 1 4.32 1 2.24 1 2.24 1 4.32 1 2.24 1 2.24 1 2.24 1 2.24 1 2.24	1 380 Predection Yetal Vii 2 1.07 Vii 4 1.02 Vii 4 1.02 Vii 4 1.02 Verands 1 1.02 Verands 1 1.03 Verands 1.03 1.03 Verands 1.03 1.03 Verands 1.03 1.03 Verands 1.03<	2 0.23 127 1 1 1 1 1 1 1 1 1 1 1 1 <td>2. 2.3 2.0 3.430 0.60 3.430 1. 1.30 0.60 0.9 0.60 0.9 Defaution Vehal 2 2.61 1.023 2.61 W1 2.50 1.023 2.61 1.023 2.61 W1 1.23 1.023 2.61 1.013 2.61 W1 1.23 2.63 3.20 W1 1.23 2.63 W1 1.24 1.23 2.64 4.84 4.97 1.3 1.25 2.44 8.65 3.20 9.13 1.3 1.25 2.44 8.66 3.66 9.56 1.3 1.25 2.44 8.66 3.66 4.62 1.4 1.45 2.44 1.52 1.52 1.56 1.4 1.53 1.62 1.52 1.56 3.66 2.24 3.66 5.22 1.5 5 5 5 5.5 5 5.5 <</td> <td>2 0.23 3.20 1.277 1 1.20 0.50 0.99 Deduction Yetal - 2.20 W1 2 1.07 1.25 0.50 W1 2 1.07 1.23 6.05 W1 2.24 1.23 6.05 W1 2.24 1.23 6.05 W1 2.24 1.23 3.30 W1 2.24 1.23 3.40 W1 2.24 1.23 3.40 W1 2.24 1.23 3.40 W1 2.24 1.25 1.24 3.00 W1 2.24 1.25 1.25 5.00 56.01 W1 2.24 1.25 1.25 5.00 56.02 1 3.25 5.60 55.24 1.33 3.61 1 2.24 1.25 1.24 3.05 7.44 1 2.24 1.25 1.24 1.25</td> <td>2 0.23 1.260 1.237 3.860 0.238 2.00 2.377 3.850 0.260 1.297 1.2 9 1.20 0.20 1.297 9 1.20 0.268 1.20 9 1.2 1.27 1.26 1.26 9 1.2 1.27 1.26 1.26 9 1.2 1.27 1.26 1.26 9 1.2 1.26 1.26 1.26 9 1.22 1.27 1.23 2.26 9 1.2 2.60 1.28 2.24 2.26 9 1.23 2.24 2.26 1.27 2.26 9 1.23 2.24 2.26 2.26 1.27 1.24 1.23 2.24 2.26 2.27 1.23 2.24 2.26 9 1.24 1.24 2.36 5.24 2.27 2.24 2.26 2.24 2.26 2.27<td>2 0.23 3.20 7.47 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.97.61 1.97.64 1 1.97.64 1 1.97.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.64 0.60 0.65 1 1 1.87.123 1.87.123 1.86 1.87.123 1.86 1.87.123 1 1.87.124 1.87.124 1.87.124 1.86.76 1 1.86.76 1 1 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1</td><td>2 0.03 3.10 1.247 1 1.200 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.07 1.23 1.24 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 0.50 1 1.02</td><td>2 0.023 1.200 0.027 1.200 0.000 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.232 1.240 0.40</td></td>	2. 2.3 2.0 3.430 0.60 3.430 1. 1.30 0.60 0.9 0.60 0.9 Defaution Vehal 2 2.61 1.023 2.61 W1 2.50 1.023 2.61 1.023 2.61 W1 1.23 1.023 2.61 1.013 2.61 W1 1.23 2.63 3.20 W1 1.23 2.63 W1 1.24 1.23 2.64 4.84 4.97 1.3 1.25 2.44 8.65 3.20 9.13 1.3 1.25 2.44 8.66 3.66 9.56 1.3 1.25 2.44 8.66 3.66 4.62 1.4 1.45 2.44 1.52 1.52 1.56 1.4 1.53 1.62 1.52 1.56 3.66 2.24 3.66 5.22 1.5 5 5 5 5.5 5 5.5 <	2 0.23 3.20 1.277 1 1.20 0.50 0.99 Deduction Yetal - 2.20 W1 2 1.07 1.25 0.50 W1 2 1.07 1.23 6.05 W1 2.24 1.23 6.05 W1 2.24 1.23 6.05 W1 2.24 1.23 3.30 W1 2.24 1.23 3.40 W1 2.24 1.23 3.40 W1 2.24 1.23 3.40 W1 2.24 1.25 1.24 3.00 W1 2.24 1.25 1.25 5.00 56.01 W1 2.24 1.25 1.25 5.00 56.02 1 3.25 5.60 55.24 1.33 3.61 1 2.24 1.25 1.24 3.05 7.44 1 2.24 1.25 1.24 1.25	2 0.23 1.260 1.237 3.860 0.238 2.00 2.377 3.850 0.260 1.297 1.2 9 1.20 0.20 1.297 9 1.20 0.268 1.20 9 1.2 1.27 1.26 1.26 9 1.2 1.27 1.26 1.26 9 1.2 1.27 1.26 1.26 9 1.2 1.26 1.26 1.26 9 1.22 1.27 1.23 2.26 9 1.2 2.60 1.28 2.24 2.26 9 1.23 2.24 2.26 1.27 2.26 9 1.23 2.24 2.26 2.26 1.27 1.24 1.23 2.24 2.26 2.27 1.23 2.24 2.26 9 1.24 1.24 2.36 5.24 2.27 2.24 2.26 2.24 2.26 2.27 <td>2 0.23 3.20 7.47 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.97.61 1.97.64 1 1.97.64 1 1.97.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.64 0.60 0.65 1 1 1.87.123 1.87.123 1.86 1.87.123 1.86 1.87.123 1 1.87.124 1.87.124 1.87.124 1.86.76 1 1.86.76 1 1 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1</td> <td>2 0.03 3.10 1.247 1 1.200 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.07 1.23 1.24 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 0.50 1 1.02</td> <td>2 0.023 1.200 0.027 1.200 0.000 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.232 1.240 0.40</td>	2 0.23 3.20 7.47 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.80 0.60 0.397 1 1 2.97.61 1.97.64 1 1.97.64 1 1.97.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.60 0.60 0.65 1 1 1.87.123 0.64 0.60 0.65 1 1 1.87.123 1.87.123 1.86 1.87.123 1.86 1.87.123 1 1.87.124 1.87.124 1.87.124 1.86.76 1 1.86.76 1 1 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1.87.124 1	2 0.03 3.10 1.247 1 1.200 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.250 0.50 0.50 0.50 1 1.07 1.23 1.24 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 1 1.02 1.02 1.02 1.02 0.50 0.50 0.50 1 1.02	2 0.023 1.200 0.027 1.200 0.000 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.200 0.600 1.200 0.600 1.200 1 1.200 0.600 1.232 1.240 0.40

18	1 5.19	Supplying and thing stone Bools/bod plates of approved guinty raugh				:						
1	1.00	Investor to commute mortar 1.4 v	14	1.50	0:23		4.83	Curr	8746	42243		
. *	1	Upto 15 cm. blok. Windwa/D					1 .		1.			
19	6.16	Providing data stone over Chollas duly lised in cement send mortar 1:6	1-	_					1	· · ·		
		E CANAD RECER S	17	1.80	0,23		2.90	Som	750	:2174		
20.	6.15	Sominishick. Providing and Stong horizontal chajja of Bed/ White same stone 40 mm	_		<u> </u>							
		Thick and Upto 80 cm grolociton in remeat most of 13 /1 domain at							E			'
	1	coarse sand) including pointing to while compare month? I.3.(I while compare 2 stone dust) with an administration of pigment matching the	1	1		•	-	· [·		12.1		
		sione shade,				1.			•	·		
-		Cha	a 7.:	1,5	0.23		2,42	+				4
		Kiteh	1	0:75			0.49				1	
			1.		0.60		1.81	+				
21	1.25	Felling available excavated earth (eachailing rack) in trenches, plinch side of	al				5.79	Ser	303	4652	1	
1		CONTRACTION FLC. IN TAYERS NOT EXCREDING 20 CTM: In dentity comoditation each								1	1	
		deposited layor by ramming and watering including lead up to 50 meter and with all the								ł .		- 1,
			+-	× 20/	2.90	0.60	4.00				-	
-			- î -		1.70		2.35	1		1 .		
			1		4.73		11.72					
			1	3.50	1.70	0.60	6.09				4	
12	11.26	Random rubble dry stone Kharanja under slopr.	1		1		24.24	Cum	58	2406		
		news and the bit store analants under floor.	-	2.30;	204	0.25	1.00	-		·	4	
			ì	2.30		0.15	0.59	1		<u> </u>		
-			1	4.13	_		2.93	-				
			1	4.00	2.50	0.15	1:02	+	<u>+</u>		1	
23	31.3	Providing and laying in position content concrete influding curing.	-					Cum	647	5132		
		compaction etc. complete in specified grade exclusion the sect of										
		centering and shuttering - All work up to plinth level.										
Í		M15 grade Nomihal Mik 1: 2: 4 (1 cement : 2 coarse sand : 4 grided stone aggregate 40mm										
_		nominal size). (Flooring)										
			1	2.94	3.05	0:05	0.45					
_			1		1.83	0.05	1.04			• • •		
			1	3.96	3.05	0.05	0.60					
	-	Step	1	4.19	1.83 0.30	0.05	0.38			_		
24		Teta		14,30	0.50	u,us	2.95	Cum	4131	12223		
	**.rd.1	Kota stone slab flooring 25 mm (block over 20 mm (average) thick base laid over and Jointed with grey coment slurry mixed with planent to match the shade of the slab including rubbing and polishing complete with base of coment morter 1 : 4 (2 coment 24 coarse sand)										
		For area of each stab from 901 to 2000 So.Cm : Som 864.00	-	1	2.05		+					
			1	2.64	3.25		8.58					
			1		3.25		13.52					
			4	4.39	2.03		8.91			-		
<u> </u>			4		0.15		2.58					
25	7.72.1	Providing and fizing 1st quality MAT & GLOSSY finished ceramic ule	1	2.4	1.83	-	61.46	Seni	864 661	53101 2003		
		confirming to IS : 13755 and IS : 15622 colour such as white, grey, ivery, forme red brown, light green, light blue and other light shades in floors,steps, pillars etc. bid on a bed of neat coment slurry finished with flush pointing in the white coment mixed with gigment to match the shade of the tile complete (including the cost of coment mortar bed 1:4). Size 250mm x 375mm Sqm 661.00								2505		
26	7.23.1	P 8, F 1st quality-leavy Duty Vinified Polished Digital Ules on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absortion less than or equal O.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grounting the Joints with white cement and matching pigment etc complete. Size 298mm x 298mm Sqm 641,00	2	2.44								
			2	1.83		2.10	10.25					
┟──┼			2	3.05		1.20	7.32					
			1	0.6		1.20	0.72					
		Total	È	+. 99		1.20	2.93 28.00	-				
		Deduction	_					_				
			2	0.75		2.10	3.15					1
<u> </u>		thelet .	1	1.07		1.20	2.57				आगि रहा रोग (अगर रहा रोग मुख्य यन संसाध (अ राजस्थान, जय	D.
	राग न	Total Net Total		\square			7.00					1
		ा रारपाया (प्रर((सन)		<u> </u>			21.90	5qm	EH1	14038	(3111 160	and J.
E_t												
E-t	प्रध	ान मुख्या वन संरक्षक अनुसंचान, शिक्षा एवं प्रसार									मुख्य यन सरसक ल	141 V. 10

4	2	지각 정말 같아요. 그 것같이 집 같은 것 같아요									
27	10.17.1	Grading roof for water proofing freatment with water profiling			<u>.</u>	· · ·					
		Fompound.						1		•	4
		Coment concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone				11					
-		aggregate 20 mm nominal size)		1				_			
			1	8:92	5.94	0.05	2.65	1			
		· · · · · · · · · · · · · · · · · · ·	1	2.67	2.06	0.05	0.28				-
_		Tota		3,28	2.07	0.05	3:36	Cum	4075	13701	
28	3.8	Providing & fixing precast coment concrete coping 1 : 2 : 4 mix			<u> </u>	·					
		50mm thick complete as per specification :									
			1	25.21			7.55				
-	<u>+</u>		1	10	0.15		1.50	10.00	334	3027	
29	8.13.2.2	Tota Providing and fixing external grade board solid core single jeaf flush door.			+ -	-	9.06	Sqm	334	3427	
		shulters (SI 2202-67 marked using Phenoi formal dehyderesin in glue both sldes with approved steel littings complete as per annexure 'A' t 30 mm thick Decorative teak vencer One side									
_											-00
			4	0.95	2.00		7,60	_			
			2:	0:6	Z.00	_	2.40		-		
30	9.28.1	Total Providing and fixing steel glazed window frame made out of 80x40 mm	<u> </u>			-	10.00	Sam	1848	18480	
30	and the	hollow sheet section of 16 gauge thickness, joint mitted welded and			1						
		grinded including hold fast of steel lugs 13mm x 3mm and 15 Cm long	1		F						
		embedded in C C block 15 x 10 x 10 Cm of 1;3:6 nominal concrete						1			
		and including fixing of plyoted hinges of superior quality, window									
		shutters made out of 50 x 25.0 mm hollow steel section 15 mm paitam									
		of 18 gauge thickness, joint mitred and grinded including 10mm x 10mm square bars welded to frame for pattain fixing float glass 4mm									
	1	Uhick panes with glazing clips and metal sash putty and fixing of									
		shutters frames pegistay, U shape handle 100 mm long, tower bolts		1		1					
		100 mm long of steel powder coated superior quality including fixing									
		and jointing with frame bloges priming coat with steel primer complete in all respect as per direction of Engineer in -charge									
		Window openable.									
			2.	1.07	1.23		2.63				
			1	1:23	1.23		1.51				
	I		1	0.60	0.60		0.36		in action		
31	16 76 1	Total Providing and fixing in CM 1 : 1 double pattam (rebated) stone door window					4.51	Sqm	3457	15574	
31	15,25-1	and ventilator frames of approved quarry :									
		Size 100 x 75mm,	12	2.10	-		25.20				
			4	0.95			3.80				
			2	0.75			1.50				
		Total		-	<u> </u>		30.50	mtr	180	5490	
32	7.5.1	Providing and fixing Granite stone slab mirror polisited and machine edge cut in walls, pillars, steps, Shelves, Sills Counters, Floors etc. laid on 12mm (Av.)									
		thick base of computer mortar 1/3 (1 computers, Places and) jointing with white									
		cement mortar 1:2 (Iwhite cement : 2 marbly dust) with pigment to match the									
		shade of the marble slab including grinding, rubbing and polishing complete.									
	· ·	Jhunjhunu / Jalore (Red/Choclate/Black/Pink Colour)	-								
		Up to 1500 Cm2 Tiles Sgm. 1812.00									
_			2.44	3.05	0.6		4.47				
			_	2.83	0.075	-	0.42				
	1	Total				-	4.88	Sgm	1812	8849	
33	6.17.1	Supplying and fixing in walls machine cut and polished stone shelves, tands and in CM 1:3 with machine cut edges : Sand or other approved stone 25mm thick.	3	3.05	0.6		5.49	5qm	458	2514	
34	7.8.2.1	Granile/Kota Stone Work Full Edge moulding	1	4.9			4.90	Mtr	212	1039	
	1	Total								719175	
	÷	Sanitory Work								31000	
									_		
		Electricity Fitting Under Ground 15000 Litre Capicity Water Tank								50000 53535	

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उप वन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रतिजण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयहुर

anima-

(अगर रिंड गर्हक) मुख्य वन संरक्षक (आयोजना) राजस्यान, जयपुर

	Estimate	

i

No.	B.S.R	Particular	Nó	Í L	1 8	H	d on BSR : Qtv			Amoun
1			NO	<u> </u>	-	n	2408	- unit	frate.	1001000
, н .,		Earth work in excavation by mechanical means (Hydraulic excavator)/		1						
		manual means over areas (exceeding 30cm in depth. 1.5m in width as	4							
		well as 10 sqm on plan) including disposal of excavated earth, lead								
		upld 50m and lift up to 1.5 m , disposed earth to be revelled and neatly		1	•					
		dressed:								
		All kinds of soil							_	
			2	7.4	10.90	1.05	13 99			
			1	6.56	0.90	1.05	6.20			
		n service and s		4.5	0.90	1.05	12.76	-		
_			- 3							
			2	4.98	02.0	1.05	941	<u> </u>	12. 1	
			2	3.89	0.90	1.05	7.35			
			Í	4.53.	0.90	1.05	4.28			
			1	2.13	0.90	2.05	2.01			
				3.05	0,90	1.05	2.98			
						0.45	2.55			
_			11	9.45	0.60	0.45		-		
			Total				61.43	Cum	. 159:	9768
2	3.1.6	Providing and laying in position cement concrete including curing;		1	ľ	1				
	1	compaction etc. complete in specified grade excluding the cost of		L	1	1				
	1	centering and shuttering - All work up to plinth level.		1	ł.					
					1					
		1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm								
		nominal size);		-	-	<u> </u>		<u> </u>		
			12	7.4	0.90	0.20	2.66	· · · -		
_			1	6.55	0.90	0.20	1.18			
1.00			3	4.5	0.90	0.20	2.43			
_			2	4.98	0.90	0.20	1.79;			
			2	3.89	0.90	0.20	140			
						_	0.82			
			l	4.53	0.90	0.20				
			1	2:13	0.90	0.20	0.38			
			1	3.05	0.90	0.20	0.55			
			Total		1.		21.72	Cum	3002	33670
3	6.1.6	Random Rubble stone masonry for with hard stone in foundation and		1	1					
		plinth in Gement Sand mortar above 30 CM thick wall in:					ç.			
		Cement Mortar 1:6 (1:Cement : 6-Sand).			<u> </u>					
			2	7.4	0.75	0.40	4.44			
			1	6.56	0.75	0,40	1.97			
			3	4.5	0.75	0.40	4.05			
			2	4.98	0.75	0.40	2.99			
	-		2	3.69		0.40	2.33			
		<u></u>	1	4.53	0.75	0.40	1.36			
-									-	
			1	2.13	0,75	0.40	0.64			
			1	3:05	0.75	0.40	0.92	1		_
			2	7.4	0.60	0.45	4.00			
			1	6.56	0.60	0.45	1.77			
	_		1.			0.45	3.65			
				4,5	0.60					
			3	4.5	0.60					
			3	4.98	0.60	0.45	2.59			
			3 2 2	4.98 3.89	0.60 0.60	0.45 0.45	2.59			
			3 2 2 1	4.98 3.89 4.53	0.60 0.60 0.60	0.45 0.45 0.45	2.59 2.10 1.22			
			3 2 2 1 1	4.98 3.89 4.53 2.13	0.60 0.60 0.60	0.45 0.45 0.45 0.45	2.59 2.10 1.22 0.58			
			3 2 2 1	4.98 3.89 4.53	0.60 0.60 0.60	0.45 0.45 0.45	2.59 2.10 1.22 0.58 0.82			
			3 2 2 1 1	4.98 3.89 4.53 2.13	0.60 0.60 0.60	0.45 0.45 0.45 0.45	2.59 2.10 1.22 0.58			
			3 2 2 1 1 1 2 2	4.98 3.89 4.53 2.13 3.05 7.4	0.60 0.60 0.60 0.60 0.60 0.40	0.45 0.45 0.45 0.45 0.45 0.45 0.90	2.59 2.10 1.22 0.58 0.82 5.33			
			3 2 2 1 1 1 2 1 2 1	4.98 3.89 4.53 2.13 3.05 7.4 6.56	0.60 0.60 0.60 0.60 0.60 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.45 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.35			
			3 2 2 1 1 1 2 1 2 1 3	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.90 0.90	2.59 2.10 1.22 0.58 0.92 5.33 2.35 4.85			
			3 2 2 1 1 1 2 1 2 1 3 2 2 1 3 2	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.35 4.85 3.59			
			3 2 2 1 1 2 1 2 1 3 2 2 2	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98 3.89	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.36 4.85 3.59 2.80			
			3 2 2 1 1 1 2 1 2 1 3 2 2 1 3 2	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.36 4.85 3.59 2.80 1.63			
			3 2 2 1 1 2 1 2 1 3 2 2 2	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98 3.89	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.36 4.85 3.59 2.80			
			3 2 2 1 1 2 1 2 1 3 2 2 1	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98 3.89 4.53	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.36 4.85 3.59 2.80 1.63			
		Steps	3 2 2 1 1 2 1 2 1 3 2 2 2 1 1 3 2 2 1 1	4.98 3.89 4.53 2.13 3.05 7.4 6.56 4.5 4.98 3.89 4.53 2.13	0.60 0.60 0.60 0.60 0.60 0.40 0.40 0.40	0.45 0.45 0.45 0.45 0.90 0.90 0.90 0.90 0.90 0.90	2.59 2.10 1.22 0.58 0.82 5.33 2.36 4.85 3.59 2.80 1.63 0.77			

Ņ उप धन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिक्षण, अनुसंघान, शिक्षा एवं भारत राजस्थान, जरुहुह

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Sec. 1

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(अपर रिंड रोए कि) मुख्य वन संरक्षक (आयोजना) राजस्थान, जयपुर

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۰.									·** ·		5
4	3.7.2	Provide Found to a log					· · ·				
		Providing and laying damp-proof-course with tement concrete grade M-150 (1 : 2 : 4) mortal propared with 1% solution of water-proof compound complete as per specification. 75mm thick.		ŀ							
				-	1			4_	L	·	
_			2	7.4	0.40		5.92	-			
_			5	4.5	0,40		5,40				
			2	1.98			3.98				1
-			2	3.89			3.11				ľ
	-		1	4:53	_	-	1.81	-			ł
_			1	2,13		_	0.85	- .			ł
5		Total	-		10.00		24.92	Sqm	496	12362	1
,	5.2,2	Brick work with F.P.S. Bricks of class designation 75 in superstructure above, plinth level up to floor V level in all shapes and stors in : Cemient infortar 1 : 6 (1 cement : 6 course sand)	-								
			2	7.4.	0.23	3,20	10.89				
	· ·		1	6.56			4.83	1	<u> </u>		1
			3	4:5	0.23		9,94 7,33	+	-		
			I	3.89		3.20	5.73	-		 	
			1	4.53	0.23	3.20	3.33				
			1	2.13	0.23	3.20	1.57				
			1	3.05	0.23	3.20	2.24				
		Prepat Total	1	34:4	0.23	0:45	3.55 49.42			··	
-		Deduction					43.42				
		WINDOW	8	1.23	0.23	1.23	2.78				
-		D1		1.07	0,23	2.10	2.58				
		D2		0.75	0.23	2.10	0.72				
		Total		10.80	0.25	0.60	0.17				
5	5.8.3	Net Total					43,16	Cum	4536	195786	
_		Half brick masonry in Superstructure , above plinth level upto floor V level using bricks of designation 75									
		Prepat	1	9.45	0.45	-	4.25				
-			2		0.45		0.68				
			1	2.44			7.81	$\left - \right $			
			-		3.20		11:71				
-		Kitchan	3	· ·	0.75		1.35				
, †	4.10.7	Total Centering & shuttering with plywood or steel sheets including					27,72	. Som	478	13249	
		strutting, propping bracing both ways with steel props and removal of formwork for upto floor five level for : Suspended floors, roofs, landings, staircases, balconies, girders, cantilevers, bands, coping bed plates, anchor blocks, sills,									
-		chhajjas, lintel, beam, plinth beam etc.			_						
+			_		8.23		115.22				
		Bcam 		9,45 1.50	0.23		4.35	<u> </u>]		
					0.23		2.07				
		Total					123.81	Sam	309	38257	
		Providing and laying in position specified grade of cement concrete for RCC structural elements up to floor five level including curing, compaction, finishing with rendering in cement sand mortar 1:3 (1 cement: 3 concers sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement for Walls (any thickness) including attached pilastiers, buttresses, plinth and string courses, fillets, columns, pilasters, abutments, posts and struts etc. M20 grade Nominal Mix / Design Mix		-						July	
+				14	8,23	0.120	13.83		- 1		
			_	9.45	0.23	0.120 0.230 0.230	13.83 0:50 0.33				

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उप वन संरक्षक (प्रशासन) प्रधान मुख्य यन संरक्षक प्रशिक्षण, अनुसंघान, शिक्षा एवं प्रसार राजस्थान, जयपुर

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BULL (राम्य-तिरु गोलाज) मुख्य वन संरक्षक (आयोणन्त) राजस्थान, जयपुर

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9	4.13.3	STEEL REINFORCEMENT:				-	· · · · ·		-		
		4.13 Providing and fabricating relations with the bare					1465.96	Kg.	65	95287	
											· · · "
					t I		· · ·				
		V TO BUILD & SUVCEIS WIND MANUFACTURE Kitset Stander to Second									
		State									
		(net intermedian) Cally Treated bars (Cool are large at a large as in the		1.							
		(AAA ARDEL COULDE CE)		Ľ.	1			1		•	
10	12.2.2	Plaster on new surface on walk in compart and interest tot	·		<u> </u>		<u> </u>				
		including racking of joints etc. complete fing finish :					1				
		20mm thick		- 1							
			2	3.65		3:20	23.42				
_			2	4.3	I	3:20	27.52			·	
			2	3.05		3.20	19.52				
-			2	2.13		3:30	11.63				
			2	4.72		3.20	30,21				-
			2.	5.64		3.20	3610				
			7 :	2.44		3:20	15.62				
	-		ŧ	1.59		3,20	9.79				
			ż	1.7		3.20	10.88				
			2	1.53		3.10	9:79	-			
			2	4.27		3:20	27.33	-			
			2	4.57		3.20	29,75		·		
		Veramda Veramda	1	9.45		3.20	30,24	_	_		
			7	1	<u> </u>	3.20	6.40				
		Deduction			-		229.70				
		B1	_	1.07			11.24	· ·			
			2		2.1		3.15	·			
		Ŵ	5		1.23	- ·	3.03				
		Total	-	1.20			17.41				
		Net Total					272.29	Sam	188:	51190	1
		Duter	1	14,77	3.75		55.39]
			z	7.9	3.75		59.25				
			1.	4.05	3.75		15.19				
			2	0.85	3:75		6.38				
		Parapetinner	1	45.35		0.75	34.01				
		Total				ļ	170.21	Sam	168	28596	
11	12.5	6 mm thick cement plaster to ceiling of mix 1:3 (Icement :				1					
	-	3-fine sand)		1.00		<u>}</u>			-		{
			1		4.3		15.74		_		ł
_	•		1	4.72	5.64 2.13		26.62				{
_	<u> </u>		1	2.44	1.53		3.73				ł
			1	1.7	1,53		2.60				1
_		<u> </u>	1	4.27	4.57	1	19.51	1			
			ī	9.45	1.53		14.46				1 .
			2	9.45	0.23		4.35				1
· · ·			7	1.53	0.23		2.46		1		
		Total					95.97	Cum	116	11133	1
12	12.22.1	Providing and applying white cement based putty over			Γ		538.47	Sqm	76		
		plastered surface to prepare the surface even and smooth		1							
		complete		1			1				
	1.	New Plastered Surface (three or more coats)									
13	12.36	Distempering with dry distemper of approved brand and			1		368.26	Sqm	48		
		shade (two or more coats) and of required shade on new		1							
		work, over and including, priming coat of whiting to give an									
i landi	1.5000	even shade including all scaffolding.						-		· · · -	
14	12.41.1	Finishing wall with water proofing cement paint of approved		1	-		170.21	Sqm	48		
	1	brand and manufacture and or required shade to give an	1	1		1	1		1		
		even shade including all scaffolding:		1		1		1			
		New work (Two or more coats applied @ 3.84 kg/10 sqm).			+	-	-			+	-
15	12.45.1			1	1			1			
		Applying priming coat:	1	1		1		1			1
	1	With ready mix pink or gray primer of approved brand and				1		1			
		manufacture on wood work hard and soft wood.	10	0.95		2.05	19.48				4
				_	1	_		-	1	<u> </u>	-
		Total	4	0.61		2.05	5.00 24,48	Sam	26	636	

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उप वन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक प्रशिक्षण, अनुसंदान, शिक्षा एवं प्रसार राजस्थान, जयपुर

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(अगर तिंड गोल्ल्ल) मुख्य वन संरक्षक (आयोजनः). राजस्थान, जयपुर

									· · · · · ·	
16	12.45.3	PAINTING				ľ		1.		
		Applying priming coat :	1							
		With ready mixed red oxide zine chromate primer of	ŧ –			1				
		approved brand and manufacture on steel galvahised	1			1				
		Iron/steel works		12		1. 33	24.21	+		
			16	1.23		0.61	1.49			
			4	0.61		0.61	25.69	Sam	21	540
		Total	L		·	<u>+</u>	23.03		-	
17	12.46,1	Painting with synthetic enamel paint of approved brand and	1							
		manufacture to give an over shade :	1							• .
		Two or more coats on new work:				12.05	19.48			
			10	0.95		2.05	5.00	<u></u>	1	
			4	0.61		2.05	24 21			
_			15	£23	<u></u>	1.23	1.49	+ - +		
			4	0.61	I—	0.61	50.17	Sam	63	3161
		Total	_			<u>+</u>	4,49	1-2411		
18	6.18.1	Supplying and fitting stone lintels/bed plates of approved quarry rough	13	1,50	0,23		449			
		dressed in cement mortar 1.4 :								
		Upto 15 cm thick		1						
		Windwo/D								
· ·			2	0.75	0.23		0,35	E		
	1	Total	-				4.83	Cum	8746	4224
19	6.16.2	Providing dab stone over Chajjas duly fixed in cement sand mortar 1:6	7	1.80	0.23	1	2,90	Sqin	750	2174
-	0.10.2	complete :	1			ł				
	1	Some thick		1	1	i	1			
20	6.15	Providing and fitting horizontal chails of Red/ White sand stone 40 mm								
		ibick and upto 80 cm projection in cement morfar 1:4 (1 cement : 4								
		coarse sand) including pointing in white cement mortar 1:2 (1 white								
	1	cement - 2 stone dust) with an admixture of pigment matching the								
		stone shade.							1	
	1		11	1.53	0.60		0.92			
_	1		1	3.05	0.60		1.83			
			7	1.50	0.60		6.30			
	1		2	0.90	0.60	-	1.08			
-	1	Total				<u> </u>	10.13	Sqm	803	8133
21	1.25	Filling available excavated earth (excluding rock) in trenches, plinth side of								
		foundation etc. in layers not exceeding 20 cm. In depth, consolidating each								
		deposited layer by ramming and watering including lead up to 50 meter and								
		with all lift.			_					
			1	3.5D	4.15	0.60	8,72			
			1	4.57	5.50	0.60	15.08			
_			1	2.90	1.98	0.60	3.45			
			1	7.30	1.40	0.60	1,93			
			1	1.50	1.40	0.60	1.26			-
			1	4.12	4.40	0.60	10.88			
	-		1	9.30	1.35	0.60	7.53			
		Total	1				40.13	Cum	58	2327
22	11.26	Random rubble dry stone Kharanja under floor.	I							
			1	3.50	4.15	0.15	2.18			
			1	4.57	5.50	0.15	3.77			
			1	2.90	1.98	0.15	0.86			
-			1	2.30	1.40	0.15	0.48			
-			11	1.50	1,40	0.15	0.32			
-	-		1	4.12	4.40	0.15	2.72			
-			1	9.30	1.35	0.15	1.88			
	1	Tetal		-			12.21	Cum	847	10343
23	313	Total						1		
23	3.1.3	Providing and laying in position cement concrete including curing.								
23	3.1.3	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of								
23	3.1.3	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinith level.								
23	3.1.3	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grode excluding the cost of centering and shuttering - All work up to plinith level. M1S grade Nominal Mix								
23	3.1.3	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinith level.								
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm		164						
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1		4.15	0.05	0.73			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1	4.57	5.50	0.05	1.26			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1	4.57	5.50 1.98	0.05	1.26			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1	4.57 2.90 2.30	5.50 1.98 1.40	0.05 0.05 0.05	1.26 0.29 0.15			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1 1 1 1	4.57 2.90 2.30 1.50	5.50 1.98 1.40 1.40	0.05 0.05 0.05 0.05	1.26 0.29 0.15 0.11			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1	4.57 2.90 2.30 1.50 4.12	5.50 1.98 1.40 1.40 4.40	0.05 0.05 0.05 0.05 0.05	1.26 0.29 0.15 0.11 0.91			
23	3.1.3	Providing and laving in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level. M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 4Dmm	1 1 1 1 1	4.57 2.90 2.30 1.50 4.12	5.50 1.98 1.40 1.40 4.40	0.05 0.05 0.05 0.05	1.26 0.29 0.15 0.11			

उप वैन संरक्षक (प्रशासन) प्रयान मुख्य यन संरक्षक प्रविश्वण, अनुरावान, शिक्षा एवं प्रभार राजस्थान, जरणुर

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(अमर तिह गाएका) मुख्य वन संरक्षक (आयोजना). राजस्थान, जयपुर

						£.					f	
24									•			
4:4	11.18.1	Kota stone slab Rooring 25 mm thick over 20 mm (average)	F	1	P	T					Í	
		A new dead take over and context with gravit some at a farmer is at		1		1			1	•		Υ
•		The Providence indian she share of the else heat disc back the	-	1		1		0.15		-1		
		and purshing complete with base of compart mentand in side		1		1				• •		
		(content : 4 coarse sand)		1				1			1-	
		For area of each slab from 901 to 2000 So Cm : Sum 864.00										
	_		1	3.25	2.33		7.57					
			1	3.86	4,5		17.37					
		8	1	4.92	5.84		28,73					
-			1	4.47	4.77		21.32	F				
	<u> </u>		1	9.55	1.73		16.52	-		·		
			4	1.50	0.30		1.80					
		· · · · · · · · · · · · · · · · · · ·	4	1.50	0.3		1.80	-			1	
25	7.22.1	Tota Previding and fixing 1st quality MAT & GLOSSY Injshed ceramic die		1		+	95.12	Sqm	864	82183	-	
		confirming to IS : 13755 and IS : 15622 colour such as white, grey, luony,	1	Z.44	1.53	1	3.73	1	1		1	•
	1	fume red brown, light green, light blue and other light shades in floors steps,		1		1						
		pillars etc. laid on a bed of neat cement slurry finished with flush pointing in				1						
		the white coment mixed with pigment to match the shade of the the complete				1						
		including the cost of cement mortar bed 1:4).										
		Size 250mm x 375mm 5mm 661.00						1				-
		a de la de la de la dela de la dela de la dela de							-		1	
			1	1.7	1.53	-	2.60				1	
		Total		1		1	6.33	Sqm	661	4187	1	
26	7.23.1	P & F 1st qualityHeavy Duty Vitnified Polished Digital files on floor, skirting and		1	<u> </u>			1				
	-	isteps etc.in different sizes (thickness minimum 10mm) with water abortion	<u> </u>	-		<u> </u>		-			<u> </u>	
		less than or equal 0.08% and conforming to 15 15622 of approved make in all									1	
		colour and shade, laid with 20 mm thick CM 1: 4 including grounting the joints										
	1	with white cement and matching pigment etc complete.										
		Size 298mm x 298mm Sqm 641.00										
	<u> </u>			1								
• • •			2	2.44		2.10	10.25					
	-		1	1.53		2.10	3.21					
	<u> </u>		1	0.75		2,10	1.58					
27	10 171	Total		-	_		15.04	Sam	641	9638		
~	10.17.1	Grading roof for water proofing treatment with water proffing compound										
	1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone										
				1		1						
				1		1					-	
		aggregate 20 mm nominal size)	1	114	8.77	0.05	E 72					
		aggregate 20 mm nominal size)	1	14	8.23	0.05	5.76	Curre	4075	77476	1	
28	3.8	aggregate 20 mm nominal size) Total	1	14	8.23	0.05	5.76 5.76	Cum	4075	23476		
28	3.8	aggregate 20 mm nominal size)	1	14	8.23	0.05		Cum	4075	23476		
28	3.8	aggregate 20 mm nominal size) Total Providing & fixing precist cement concrete coping 1 : 2 : 4 mix	1	14	8.23 0.30	0.05		Cum	4075	23476		
28	3.8	aggregate 20 mm nominal size) Total Providing & fixing precist cement concrete coping 1 : 2 : 4 mix	1			0.05	5.76	Cum	4075	23476		
		aggregate 20 mm nominal size) Total Providing & fixing precist cement concrete coping 1 : 2 : 4 mix SQmm thick complete as per specification : Total	1	34.4	0.30	0.05	5.76 10.32 1.65			23476		
		aggregate 20 mm nominal size) Total Providing & fixing precist cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Total Providing and fixing external grade board solid core single leaf flush door	1	34.4	0.30	0.05	5.76					
		aggregate 20 mm nominal size) Total Providing & fixing precist cement concrete coping 1 : 2 : 4 mix 50mm thick complete as per specification : Total Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formal dehyderesin in glue both	1	34.4	0.30	0.05	5.76 10.32 1.65					
		aggregate 20 mm nominal size) Total Providing & fixing precast cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Total Providing and fixing external grade board solid core single leaf flush door shutters 151 2202-67 marked using Phenol formal dehyderesin in glue both sides with approved steel fittings complete as per annexure 'A' :	1	34.4	0.30	0.05	5.76 10.32 1.65					
		aggregate 20 mm nominal size) Providing & fixing precisit cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formal dehyderesin in glue both sides with approved steel fittings complete as per annexure 'A' : 30 mm thick	1	34.4	0.30	0.05	5.76 10.32 1.65					
		aggregate 20 mm nominal size) Total Providing & fixing precast cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Total Providing and fixing external grade board solid core single leaf flush door shutters 151 2202-67 marked using Phenol formal dehyderesin in glue both sides with approved steel fittings complete as per annexure 'A' :	1	34.4	0.30	0.05	5.76 10.32 1.65					
		aggregate 20 mm nominal size) Providing & fixing precisit cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formal dehyderesin in glue both sides with approved steel fittings complete as per annexure 'A' : 30 mm thick	1	34.4	0.30	0.05	5.76 10.32 1.65 11.97					
		aggregate 20 mm nominal size) Providing & fixing precisit cement concrete coping 1 : 2 : 4 mix S0mm thick complete as per specification : Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formal dehyderesin in glue both sides with approved steel fittings complete as per annexure 'A' : 30 mm thick	1	34.4	0.30	0.05	5.76 10.32 1.65					

उप वन संरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक ा. अनुवंधान, शिक्षा एवं प्रशार राजस्थान, जयपुर

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(377 2000 मुख्य यन संरक्षक (आयोजनः). राजस्थान, जयपुर

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						•			·		
										·	Los La Pres
30	9.28.1	Providing and fixing (fee) all start whether									
		Providing and fixing steel glazed window frame made out of 80x40 mm hollow sheet section of 16 gauge thickness, joint mitred welded and srinded including hold for all sectors and sectors	V - 74								
									1		
										1	
		The second								1	
								ł			
1 1		10mm square bars welded to frame for paitam fixing float glass from thick panes with glazing clips and metal sach purty and fixing of						1			
1		shorters frames peg stay. U shape handle 100 mm long tower hate.									
		AVV men long of steel powder costed superior muslim lachulter Eving	1								
		and jointing with frame hinges printing cost with steal trimer complete									
		it all respect as per direction of Engineer-in-charge									
		Window openable;						1			
					1.23		17.10	-			
-				0,51	0:61	I	0.74		3457	44413	
. 31	15.25.1	Providing and fixing in CM 1 : 4 double paitam (rebated) stone door window			·		12.85	Sqm	3457	49913	
		and ventilator frames of approved quarry :									
-	<u> </u>	Size 100 x 75mm.			1			1			
				2.10			14.70				
			<u> </u>	1.07			7.49				
32	751	Total Providing and fixing Granite stone slab mirror polished and machine edge cut					22.19	mtr	180	3994	
		in walls, pillars, steps, Shelves, Sills Counters, Floors etc. laid on 12mm (Av.)									
		thick base of cement mortar 1:3 (1 cement : 3 coarse sand) jointing with white									
		cement mortar 1:2 (1white cement : 2 marble dust) with pigment to match									
		the shade of the marble slab including grinding, rubbing and polishing complete.									
		Jhunjhunu / Jalore (Red/Chioclate/Black/Pink Colour)									
	<u> </u>	Up to 1500 Cm2 Tiles Sqm, 1812.00							[
-			1	1.53	0.6		0.92				
` <u> </u>					0.6 .		0.92				
	- <u> </u>			1.53	0.1		0.31				1
33	5.17.1	Total Supplying and fixing in walls machine cut and polished stone shelves,	_	4.3	0.6	_	2.14	Sqm	:1812	3881	
		tands and in CM 1:3 with machine cut edges :	[`		~~		10.32				
		Sand or other approved stone Z5mm thick.						ł			
			3	3.05	0.6	-	5.49	1			
-		Total					15.81	5qm	458	7241	
34	7.8.2.1	Granite/Kota Stone Work	2	153			3.06	Mtr	212	649	
· · ·		Full Edge moulding									
		Eotal Sanitory Work				- 1		I		1022628	
			<u>⊢</u> -		<u> </u>			l		47500	
		Electricity fitting	[73000	

उप वन संरक्षक (प्रशासन) प्रधान गुख्य पन संरक्षक प्रशिक्षण, अनुतंबान, शिक्षा एवं प्रसार राजस्थान, जयपुर

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(अगर १६० भारतीयां) मुख्य वन संरक्षक (आयोजगो) मुख्य माजस्थान, जयपुर

Model Estimate (Range Office) (Saintory Installation Work)

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	8.5.R	Particular		the second s	Rate	Circle-2019) Amount
1	1.2.1	P& E Indian type white alterations	Qty	Unit		
		P.& E Indian type white glazed vitreous china 1st quality	1	No	2400	2400
		Markey Markey Control Markey Mich 100 Service And State				1
		P or S trap including cotting and making good the wall and floor;		·		F I
		*		•		
-		Size 530x410mm.				
2	1.3	P.& F European type white glazed vitreous china 1st quality			2200	2200
•		W.C pan (IS : 2556 Mark) with P or S trap including cutting	1.	No.	2200	2200
		and making cutting			1	
3	1.7.2	and making good the wall and fipor		1		
	1.7.2	P.& F water closet Seat Covers with brass hinges complete :	1	No	441	441
		150110 PVC (IS 2548 marked) grade-I White for FWC				
4	1.36.2	WASH BASINS:	2.	No	2189	4378
		1.36 P & F WVC Wash basin (Ist quality IS:2556 Mark) of	¥.	(40	1105	
· . · .		2020 miles was been been was a second and the second mark) of				
		approved make with C.J. brackets duly painted 1 No. 15 mm]		1 1
		C.P. Pillar.cock (IS:8934 Mark) & 32 mm C.P. brass waste				1 1
		coupling of approved make, P.V.C Wasta pipe with PVC		1		4 1
		nut 32 mm complete including cutting & making good the				1 1
	Į	wall :				r !
	1					1
	· · · · · · · · · · · · · · · · · · ·	Size 510 mm x 400 mm	1			1 1
5	1.38.9.2	KITCHEN & LAB. SINKS	1	No	3936	3936
		1.38 P & F Kitchen & Lab. Sink of approved make with C.I.				
		brackets duly painted, 40 mm C.P. waste coupling, C.P.		I. I		
		Brace chain with mither than the				
		Brass chain with rubber plug, 40 mm G.I. waste pipe up-to	1			
		floor level complete including cutting and making good the				1
		wall & floor :				
		1.0 mm thick stainless steel AISI -304 & IS 13983-1994				
		kitchen sink of approved make as per Engineer-in-charge				
		with large worte equalize				
		with large waste coupling.				
		Overali size` Bowl size				
		22 x 18 x 7 20x16x7				
6	1.23	P & F WVC (10 litres) low-level flushing cistern with cover.	2	No	753	1506
7	1.44.1	P & F Bevelled edge Mirror/mirror with teak wood lipping	2			
			2	No	523	1046
	•••	around of special glass of approved make as per direction				
		of Engineer-In-charge complete with 6mm thick commercial				
		ply base fixed to wooden screws & washers.				
		Size 600 x 450mm x 4 mm thick				
8		P & F Towel Rail or Ring of approved quality/make:				
~ I			2	No	425	850
- 1		C.P. brass Towel Rail elbow type with concealed screws				
		slze 450mm (Heavy duty).				
9	1.47.8	P & F Towel Rall or Ring of approved quality/make:	2	No	231	462
		C.P. Brass Towel Ring revolving type		,	291	402
10		P & F Scap Dish or Tray of approved quality/make	+			
~			2	No	142	284
_		C.P. brass heavy and superior quality.				
11	1.55.2	P & F Bath Shower of approved quality/make.	2	No	342	684
1		C.P. brass of Heavy & superior quality 150mm.			342	004
2		P & F Jet spray for water closet with C.P. Copper Tube				
~			20	No	346	6920
		lange of approved make.		A		
3	2.1.1	P & F G.I. pipes (Internal Work) with G.I. Fittings	1	RMT	209	209
		excluding union (IS:1239 Mark) & MS clamps	1 1		205	205
		ncluding cutting and making good the walls and				l i
			1	1		l
		loors:	1			
		a) Exposed on wall				
	2	2.1.1 15 mm dia nominal bore	1	1		
		B' Class	1			
4		& F Bib Cock (iS : 8931 Mark), Superior quality	7	No	271	1897
		of approved make:	1 1			-
		rass 400 gm,15mm nominal bore.	1 1			- A IT
			1		, ul	NO/
	५४ वन-४	निरद्वाक (प्रशासन)		-	show C	-
	प्रधान म	ख्य वन संरक्षक		1	अमर सिंह गो	Selei /
-iCh-						
NIK	क्षण, अनुस	धिन, शिक्षा एवं प्रसार		भुख्य	राजस्थान, प	तयपुर
		यान् जयपुर			ALCONG NOT 1	-

15:	2.15.1	P & F Full-way Valve (IS:778 Mark) or wheel	3	No	206	618
•		Valve of approved make : Gun-metal 15mm nominal bore.		<u>.</u> .		
16	2.26.3	P & F PVC Storage Tank ISI Marked (IS: 12701)	2	No	.3564	7128
•		indicating the BIS license No), of approved make	-		+066	140
		with cover, 25mm dia 1M long G.L over-flow nine.				
	[& 45 Cm. long wash out pipe with plug & sorket				
		including making connection etc., complete of				
2 .		approved design:				
17	3.16.2	SOO litres capacity. RIGID PVC RIPE				
	-130.2		6	RMT	161	966
		3:16 P&F rigid PVC Pipe (IS:4985 mark) class I// (4 Kg. /Cm2.)				
		approved quality /make including joining the pipe with solvent cement rubber ring and lubricant.		1		1. 1
		75 mm dia	1			;
18	3.16.3	RIGID PVC PIPE				
		3.16 R&F rigid PVC Pipe (IS:4985 mark) class II/ (4 Kg. /Cm2.)	9	RMT	256	2304
i		approved quality /make including joining the pipe with				
		solvent cement rubber ring and lubricant.	1		1	
		110 mm dia				
19	'9 '4'					
19	3.17.1	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved		1	1	0
		I quality / make including joining the nine with solvant comons	1	-	1	
		rubber ring and lubricant: Coupler (socket)			1	
		contrier (socker)				
		75mm dia				
20		110mm dia	6	No	79	474
21	3.17,3	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved	4	No	98	392
		quality /make including joining the pipe with solvent cement				0
		rubber ring and lubricant:				
		Plain Tee				
_		75mm dia	Ž	No	104	208
22	3.17.4	110mm dia	1	Nö	170	170
22	3.17.4	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved	2	No	194	388
		quality /make including joining the pipe with solvent cement rubber ring and lubricant:				
		Door Tee				
		110mm dia				
23	3.17.9	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved				
		quality /make including joining the pipe with solvent cement				0
		rubber ring and lubricant:				
		8end 87 .5				
		75mm dia	6	No	88	528
	2 4 7 - 2	110mm dia	1	No	146	146
24	3.17.23	P&F rigid PVC pipe fittings (IS: 4985 mark) of approved	5	No	347	1735
		quality /make including joining the pipe with solvent cement				
		rubber ring and lubricant: P- Trap				
		110mm dia				
25		VENT COWER	2	No		102
26	3.24.1	Construction of Soakage well in all types of soil of	1	No	51 4948	102 4948
		approved drawing, top 90 Cm .Portion in 450mm thick			1340	4540
		masonry with CM 1:6, 80 mm thick stone slab covering,				i
		jointing of slab in CM 1:3 ,Raithal, kharanja 40mm thick M-				
		15 grade C.C flooring, earth work etc . complete including				
		disposal of surplus earth within a lead of 50 mtr .		-	-	
		Inner dia 90 Cm & 10 to 12 Mtr deep.			MA	7
	নত স			34	MUL.	47320
	V-1 4	न सरक्षक (प्रशासन)		3444	सिंह गाठवाले नंखक (आयोज	[ar
	1.000	न मुख्य यन संरक्षक		1 214 498 1000 -		

Detailed Estimate of Coumpound Wall of Forest Chouki

Length of compound wall = 100 mir and Height of compound wall = 2.10mir (1.20 stone wall + 0.90mir Chain link fencing) BSR - PWD integrated BSR of Rajasthan 2022

	BSR Item No.	Item Description	Unit	Nos	Length	Width	Height/ Depth	Qty	Rate	Amount
1	2019/1,8	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms/lift up to 1.5 m, including taking out the excavated soil and depositing and refuling of jhirt with watering & ramming and disposal of surplus excavated soil as directed with in a lead of 50 meter. All kinds of soils		1.00	109.00	0.60	0.75	45.00	178.00	BD10.05
2	2019/ 3.1.7	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work	CUM	1.00	100.00	¢.60	0.10	6.00	2956:00	37736.00
		up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size).	•							
3	2019/ 6.1.6	Random Rubble stone masonary for foundation and plinth in Cement Sand Mortar above 30 Cm. thick wall in : Cement Mortar 1:6 (1-Cement:6-Sand) First Footing								
+		Pillars	CUM	20.00	0.60	0.60	0.38	2.74		
-		Walls	CUM	1.00	88.00	0.53	0.38	17.72		
-1		Second Footing								
-		Pillars	сим	20.00	0.50	0.50	0.38	1.90		
+		Walls	ĊUM	1.00	90.00	0.45	0.38	15.39		
								37.75	2838.00	107132.23
4		Random Rubble stone masonary for superstructure above plinth level one storey height above 30 Cm. thick walls in : Cement Mortar 1:6 (1-Cement:6-Sand).								
		Pillars	CUM	20.00	0.45	0.45	1.20	4.86		
		Walls	CUM	1.00	91	0.38	1.20	41.50		
_								46.36	3479.00	161272.52
5		Providing and laying damp-proof course with cement concrete grade M-150 (1 : 2 : 4) mortar prepared with 1% solution of water- proof compound complete as per specification . 50mm thick.								
-+			Sqm	20.00	0.45	0.45		4.05		
_		Walls	Sqm	1.00	91	0.38		34.58		
								38.63	391.00	15104.33

उप वन संरक्षक (प्रशासन) अष्मण नुखा दन संरक्षक प्रधिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयषुर

मुख्य वन संरक्षक (आयोजनः) अमर राजस्थाल, जरादुर

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6	2019/ 12.3.1	Plaster on new surface on walls in cement sand mortar 1;6 including racking of joint etc. complete fine finish :		-				. 4		
•		25mm thick.						-		
		Pillars	Sam	80.00		0.035	1,20	3.36		
				40.00		0.45	1.20	21.6		
-								24.96	211.00	5266.56
7	2019/ 12:31.2	Polhting on stone masonry in cement sand mortar 1:3 (1 cement : 3 sand) :								
		Wall	Sqm	2.00	91		1,20	218.4	233.00	50887.20
8	2019/ 9.36,1	Supplying and fixing of chain link fencing with angle iron posts 50x50x6mm placed at every 3 Mtr. agart 30cm in ground embedded in cement concrete 1:3:6 (30x30x45cm) corner and every tenth post to be strutted with (50 x 50 x 6cm) angle iron provided and fixed and fitted with posts including earth work in excavation etc. complete with chain link size:								
			•	- · [1	·			
9	2019/	50mm x 50mm x 3:15mm. Distempering with oil bound washable distemper of approved brand and	Sam	1.00	100.00		0.90	90	629.00	56610.00
		manufacture to give an even shade including all scaffolding: New work (two or more coats) over and including scrapping and priming coat with cement primer.			•					
10			Sam			Ť.		17.65	75.00	1323.75
11										1657.41

Per running meter cost = 4250.00

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उप वर्न संरक्षक (ग्रशासन) प्रधान मुख्य थग रांधतक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रसार राजरथान, जरण

Sa : Maria

Marga.

(अमरतिह गोठियाल) भुख्य वन तरेशक (आयोजनः). राजस्थान, जररुएर

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में स		5		63	N				a	
उप दर्भ संरक्षक (प्रशासन) प्रयान जुद्ध वन संरक्षक प्रायान जुद्ध वन संरक्षक प्रायानगान, जयपुर		Unfroseen and miscellaneous extenditure	A Thera lation of solar Lighting system with 2. KW	3 Installation of solar pump motor with acessories 5 HP	2 Supply of strainer pipes made of ERW M.S. black pipe ISI mark of following sizes at the saite of work including required size of slotrring as per IS:8110-1985	Nominal bore 200mm dia. Depth uo to 100 mtr	Construction of tube well up to 100 metre depth and above from ground level	Particulars	I Construction of Tube well / Solar Pu	
			2 KW	sories 5 HP	S. black pipe ISI mark of following d size of slotrring as per IS:8110-1985	0 mtr	depth and above from ground level to	lars	Model Estimate Solar Pump Moter / Solar Light / Unfre	
					50.00 Mtr	175.00 Mtr		QTY	oseen &	
			Nos.	Nos.	Mtr	Mır		unit	froseen & Miscellaneous	
			LS	LS	2630.00	1464.00		Rate	neous	
अगर तिह गठिवात) पुख्य दन संख्या (आयोजना) राजन्यान, जयपुर	1000000.00	12300	150000_00	450000.00	131500.00	256200.00		Amount		50

					•	•
				Ň	S.No.	
प्रशिक्षण, अनुसंयान, शिक्षा एवं प्रताष्ट्र राजस्थान, जयपुर	तम तन संस्थाक (प्रशासन)		Floor, 50 mm thick stone slab partitio walls, Supply of Soling Stone 23cm, IScm Stone Agg. 40 mm, 20mm, 6-12mm, PVC Pipe 110mm, Bend 45 degree, Plain Tee, 4 nos. stone Fotrest of approved design, two No. 450 mm dia each per approved drawing including desposal of surplus earth with in a lead of 50 mm size 203 X 110 X 150 cm (for 20 users) with 1.15 mm thick RCC (M-20) slab with Tor steel reinforcement 10 mm @ 15cm CC bothways including shuttering complete in all respect.		Particulars	
	· ·		walls, Supply of Soling Stone 23cm, walls, Supply of Soling Stone 23cm, mm, PVC Pipe 110mm, Bend 45 of approved design, two No. 450 mm ing desposal of surplus earth with in a m (for 20 users) with 1.15 mm thick preement 10 mm @ 15cm CC ite in all respect.	X 1.10 X 1.50 Mtr. In all types soil	construction of Septic Tank	Model Estimate
	Je	LS			OTY	
	्रानसान, राजस्थान,	LS			unit	
	द्धारात् जयपूर	S			Rate	
		40,000.00			Amount	

Model Cost Norms for Boundary Pillar

Cost estimate - 9000/ unit .

S.No	Description of work	Bsr i.no	Unit	Quantity	Rate	Cost
1	2	3.	4	5	6	.7
1	Earth work in excavation in soil foundation length 1.20m, width 1,20m, depth 0.30m per pillar volumn 0.432 cum.	PWD-BSR2019 Jaipur circle Item no-1.8 ch- B1	cum	0.432	162.0 D	69.98
2	Cement concrete in foundation & 40mm size aggregate 1:4:8	PWD-BSR2019 Jaipur circle Item no-3.1.6 ch- B3	:cum	0.432	3002/ p.cum	1296,86
	mixer.pillar size -1.20m.l x1.20m w x0.30m d.=0.432cum					
3	Cement concrete in sub structure & 40mm aggregate 1:4:8 mixer cement concrete Lower size – 1.20 m.l x	Jaipur circle Item no-3.2.4 ch- B3	cum	1.04	3927 /p.cu. m	4084.08
	1.20 m.w (A1) Upper size – 0.80 m.l x 0.80 m.w (A2)					
	height – 1.00 m (H) volumn – (H/3)x(A1+A2+√A1xA2) .=					
	(1.00x3)(1.44+0.64+√1.44 x0.64 = 1.0133 cum					
	Top 0.30x0.30x0.30 = 0.027 cum Total Qty = 1.04 cum					

उप वन सिरक्षक (प्रशासन) प्रधान मुख्य वन संरक्षक ५००००, अनुसंधान, शिक्षा एवं प्रसार राजस्थान, जयवन्त्र (अगर लिए गोठवाल) मुख्य वन संरक्षक (आयोजना) राजस्थान, जयपुर and share and all to the

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4	Providing and fabricating		1	T.5kg	77	115	
	reinforcement for R.C.C work						
	including straightening, cutting,					·	
	bending, placing in position and		1				1
	binding(Including cost of binding		1		•	· [·	
	wire) all complete for whole						
	structure.						1
	Cold twisted deformed			1 .			1
	bars(IS:1786)4 x0.35=1.40m						
	2 x1.10=2.20m						·
	Total=3.60m				1.		1
	(3.60 x 0.395=1.42kg or 1.5 kg						-
5	Centering & shuttering to settle	PWD-	Sq m	5,88	341	2005	Τ
	column and pillar.	BSR2019			/p.sqm		
	ground -4 x1.2 x.30= 1.44	Jaipur circle		-	1		
	middle- 4x <u>0.80+1.20</u> x1.02=4.08	Item no-					
	2	4.10.3 ch-					
	Top-4x0.3x0.3=0.36	B4					
6	Plaster on 15mm thick as 1:6	PWD-	Sqm	5.00	133/	665	
	1x4x1.20+.80x1.00=4.00	BSR2019			p.sq.m		
	2	Jaipur				1	
	Top-1 x.80 x.80= 0.64	circle Item no-				· ·	
	1x4x0.30x0.30=0.36	12.3.3 ch-					
	Total Plaster = 5.00 sq.m	B12		<u></u>			
7	Water Curing	· · · · · · · · · · · · · · · · · · ·			Lum-	400	
			·		sum		
8	Paint and carving on pillar			on ·	Lum-	400	
Ş	rame and carving on pillor			market price	sum .		
					Total	9035 Say-9000	

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उप' वन संरक्षक (प्रयासन) प्रधान मुख्य दन संरक्षक भ्रिमण, अनुसंचार, शिक्षा एवं प्रसार राजस्थान, जयपुर

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(अमर किए नोठवाल) मुख्य रान संरक्षक (आयोजन) राजरथान, जायपुर

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Build

いたのであるという संख्या (लास चेंट 1.20M 100 à. 4 4 . } Э 20

S. S. A. Status

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उप वन संरक्षक (प्रशासन)

प्रयान संरक्षक प्रचान मुख्य वन संरक्षक प्रशिक्षण, अनुसंधान, शिक्षा एवं प्रभार राजस्थान, जयषुर

1

 $SC_{1} \in E_{1}^{2}$

(अग्रम-सिंह गीठगाल) मुख्य यन संरक्षक (आयोजन: सजरथान, जयपुर

Full title of the Project	:	Construction of Shahpur (1800 MW) Pumped Storage Project by M/s Greenko Energies Private Limited, in Hanumanthkhera, Mungawali villages, G.P-Subhdhara; Baint Village, G.P-Bichi; SahjanpurVillages, G.P-Kasba Nonera; Kaloni, Shahpur Villages, G.P-Mundiyar; Tehsil-Shahbad; Baran District, Rajasthan.
Proposal no	:	FP/RJ/HYD/121439/2021
Date of Proposal	:	03-02-2021
Diversion Area	:	407.8227 Ha

Undertaking

M/s. Greenko Energies Private Limited hereby affirm and undertakes that the Non-Forest Land (NFL) proposed for creation of Compensatory Afforestation shall be transferred, mutated andhanded over to the State Forest Department free from all sorts of encumbrances and encroachments before Stage-II approval under the FC Act.

Date: 15.02.2024

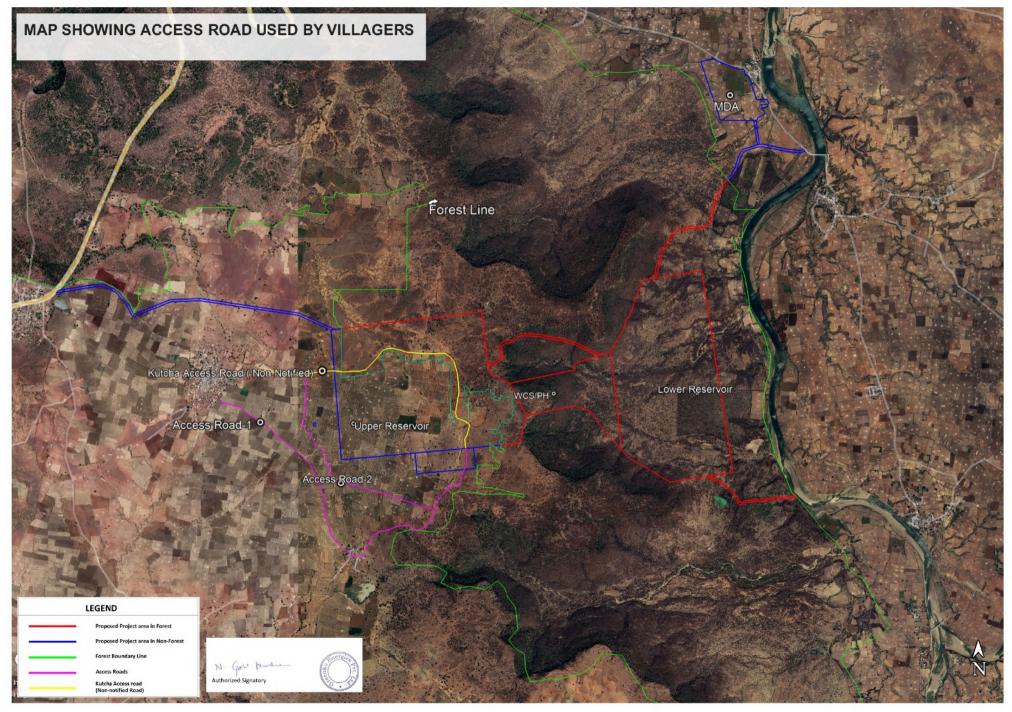
Name: Gopi Krushna N

N. Gol' kunte

Gopi Krushna N Deputy General Manager (DGM) Authorised Signatory Greenko Energies Private Limited

Place: Hyderabad

Authorized Signatory



Annexure-2

