



48647

ABSTRACT

Announcement made by Hon'ble Minister (Municipal Administration, Rural Development and Implementation of Special Programme) on 5.08.2016 - Mahatma Gandhi National Rural Employment Guarantee Scheme - Guidelines for manufacture of Fly ash bricks and Compressed Stabilised Earth block bricks by setting up units in convergence with MGNREGS Village Panchayat and Village Poverty Reduction Committee / Panchayat Level Federations of Tamil Nadu State Rural Livelihood Mission – Approved – Orders issued.

Rural Development and Panchayat Raj (CGS.1) Department

G.O.(Ms) No.93

Dated : 8.08.2016

Read:

Director of Rural Development and Panchayat Raj Letter R.c.No. 26594/2016/ MGNREGS –II-2, Dated 05.05.2016.

ORDER :

Hon'ble Minister (Municipal Administration, Rural Development and Implementation of Special Programme) has made following announcement on 5.08.2016, while moving Demand No.42 :

In order to provide sustainable livelihoods to the rural families, and to reduce the expenditure for bricks used in the housing scheme of the Government and the Individual Household Latrines, based on the orders of the Hon'ble Chief Minister of Tamil Nadu, 5 Fly ash brick units and 4 compressed, stabilized Earthen block units will be established at an allotment of Rs.1,78,12,000/-

2. The Director of Rural Development and Panchayat Raj in the letter read above has stated that revised Schedule I of the Mahatma Gandhi National Rural Employment Guarantee Act 2005, paragraph 4, sub paragraph (IV)(vii) Category D dealing with Rural infrastructure, provides for Production of building material required for construction works under the Act as a part of estimate of such construction works. Annual Master

Circular 2016-17 issued by the Ministry of Rural Development in paragraph 2.5.2.8, sub paragraph (a) dealing with Rural infrastructure, provides for

“Use of Appropriate technologies: The paragraph 13(a) of Schedule I of Mahatma Gandhi NREGA has mandated use of labour intensive and cost effective technologies and local materials in construction. Accordingly, the appropriate technologies for buildings under Mahatma Gandhi NREGA may be promoted, wherein, local building traditions/other appropriate technologies are used so that the use of cement, sand and steel in construction is substantially reduced, without compromising the durability of the structure. Suitable building materials may be selected for each building and produced at/near to the construction site under Mahatma Gandhi NREGA. States may consider setting up of a Centre for Appropriate Technologies for design, technology and training for eco-friendly building technologies and preparation/ dissemination of Information Education and Communication material to promote the same”.

Thus, Mahatma Gandhi National Rural Employment Guarantee Scheme permits the use of cost effective technologies and local materials in construction activities. Further, the production of suitable building material is also permitted under Mahatma Gandhi National Rural Employment Guarantee Act. Hence, activities such as manufacture of Fly ash bricks and Compressed Stabilised Earth blocks are permitted under Mahatma Gandhi National Rural Employment Guarantee Act.

3. The Director of Rural Development and Panchayat Raj has also stated that in order to provide sustainable livelihood for the rural households and to reduce the cost of material component towards bricks in scheme works, it is proposed to establish brick manufacturing units in Tamil Nadu to supply bricks for Individual Household Latrines(IHHL) constructed under Swachh Bharat Mission (Gramin) and Mahatma Gandhi National Rural Employment Guarantee Scheme and Government sponsored Housing Schemes. Hence, it is proposed to establish fly ash bricks manufacturing unit and compressed earth block production units in rural areas by engaging the Mahatma Gandhi National Rural Employment Guarantee Scheme workers. Fly ash is the residue of Thermal Power Plants and generally utilised only for Concrete as a partial replacement to cement. Hence, Fly ash is abundantly available in Thermal Power Plants. Thus, fly ash brick manufacturing units can be established in locations in close proximity to Thermal power plants. Fly ash bricks are cost effective and are better alternatives to burnt clay bricks by virtue of their good durability, fire resistance, partial resistance to sound, thermal insulation, small dead load and high speed of construction. The raw materials required for fly ash bricks are Fly ash, cement, sand and blue metal crusher powder. Compressed earth block (CEB), also known as a pressed earth block or Compressed soil block, is a building material made primarily from damp soil compressed at high pressure to form blocks. Compressed earth blocks use a mechanical press to form blocks out of an appropriate mix of fairly dry inorganic subsoil, non-expansive clay and aggregate. If the blocks are stabilized with a chemical binder

such as Portland cement they are called Compressed Stabilized Earth Block (CSEB) or Stabilized Earth Block (SEB).

4. The Director of Rural Development and Panchayat Raj has further stated that bricks made of Compressed Stabilized Earth Block are highly durable, requires less maintenance. Manufacturing of these bricks could be undertaken in areas after conducting the required soil test of the site. To start with, pilot studies on Fly ash brick manufacturing unit may be taken up on pilot basis in Districts of Villupuram, Tiruvallur, Salem, Thoothukudi, Cuddalore, since Thermal Power Plants are located there. In case of Compressed Stabilized Earth Block manufacturing unit, pilot studies may be taken up in Sivagangai, Ramnad, Pudukkottai and Villupuram District and the requisite technical support could be obtained from Auroville Earth Institute. The site for setting up of the respective production units may be decided by the District Collectors after assessing the suitability of the place. The District Collector and Project Director, District Rural Development Agency shall facilitate the permission for utilising the earth and other Raw materials as per the Mines and Minerals Act with the assistance of DRO and Assistant Director (Mines). The Project Officer (Mathi) shall identify suitable Village Poverty Reduction Committee/Panchayat Level Federations federation from the units. Based on the experiences gained & lessons learnt from the working of the pilot units, the number of units may be increased and fresh units can be set up in the districts, where fly ash is available easily in case of Fly ash bricks and in all districts in case of Compressed Stabilized Earth Block.

5. The Director of Rural Development and Panchayat Raj has therefore requested the Government to issue orders on the approval of guidelines for the establishment fly ash bricks manufacturing units and Compressed Stabilised Earth Block production units in convergence with Mahatma Gandhi National Rural Employment Guarantee Scheme.

6. The Government, after careful examination of the proposal of the Director of Rural Development and Panchayat Raj, permit the establishment of 5 fly ash bricks manufacturing unit and 4 compressed Stabilised Earthen Block manufacturing units at a total cost of Rs. 1,78,12,000/- in rural areas by engaging the Mahatma Gandhi National Rural Employment Guarantee Scheme workers and to approve the guidelines therefor annexed to this order.

7. This order issues with the concurrence of Finance Department vide it's U.O.No. 129/S(E)/RD/16, dated 23.6.2016.

(BY ORDER OF THE GOVERNOR)

HANS RAJ VERMA
PRINCIPAL SECRETARY TO GOVERNMENT

To
The Director of Rural Development and Panchayat Raj, Chennai – 15.

All District Collectors (Through the DRD & PR, Chennai – 15)
All Project Directors, District Rural Development Agencies
(Through the DRD & PR, Chennai – 15)
The Accountant General, Chennai – 6/18/35
(Through the DRD & PR, Chennai – 15)

Copy to:

The Secretary,
Ministry of Rural Development,
Government of India,
Krishi Bhavan, New Delhi – 110 114. (w.e)
Finance (RD) Department, Chennai – 9. (w.e)
The Senior Personal Assistant to Hon'ble Minister (MA & RD, Impn.Spl.Prog.)
Chennai – 9. (w.e)
The Principal Private Secretary to the Principal Secretary to
Government, Rural Development and Panchayat Raj
Department, Chennai – 9. (w.e)
Rural Development and Panchayat Raj (OP.II) Department,
Chennai – 9. (w.e)
National Informatics Centre, Chennai – 9.
SF/SC

//Forwarded by order//


SECTION OFFICER

**Annexure to G.O. (Ms) No. 93 , Rural Development and
Panchayat Raj (CGS.1) Dept. dated 8.08.2016
Guidelines for Brick Making under MGNREGS**

1. Introduction:

Revised Schedule I of the Mahatma Gandhi National Rural Employment Guarantee Act 2005, paragraph 4, sub paragraph (IV)(vii) Category D dealing with Rural infrastructure, provides for Production of building material required for construction works under the Act as a part of estimate of such construction works.

Annual Master Circular 2016-17 issued by the Ministry of Rural Development in paragraph 2.5.2.8, sub paragraph (a) dealing with Rural infrastructure, provides for

"Use of Appropriate technologies: The paragraph 13(a) of Schedule I of Mahatma Gandhi NREGA has mandated use of labour intensive and cost effective technologies and local materials in construction. Accordingly, the appropriate technologies for buildings under Mahatma Gandhi NREGA may be promoted, wherein, local building traditions/other appropriate technologies are used so that the use of cement, sand and steel in construction is substantially reduced, without compromising the durability of the structure. Suitable building materials may be selected for each building and produced at/near to the construction site under Mahatma Gandhi NREGA. States may consider setting up of a Centre for Appropriate Technologies for design, technology and training for eco-friendly building technologies and preparation/dissemination of IEC material to promote the same".

Thus, MGNREGS permits the use of cost effective technologies and local materials in construction activities. Further, the production of suitable building material is also permitted under MGNREGA. Hence, activities such as manufacture of Fly ash bricks and Compressed Stabilised Earth blocks are a permitted activity under MGNREGA.

Further, in order to provide sustainable livelihood for the rural households and to reduce the cost of material component towards bricks in Scheme works, it is proposed to establish brick manufacturing units in Tamil Nadu to supply bricks for Individual Household Latrines constructed under SBM (G) and MGNREGS and Government sponsored Housing Schemes. Hence, it is been proposed to establish fly ash bricks manufacturing unit and compressed stabilised earth block production unit in rural areas by engaging the MGNREGS workers.

Fly ash is the residue of Thermal Power Plants and generally utilised only for Concrete as a partial replacement to cement. Hence, Fly ash is abundantly available in Thermal Power Plants. Thus, fly ash brick manufacturing units can be established in locations in close proximity to Thermal power plants. Fly ash bricks are cost effective.

Compressed earth block (CEB), also known as a pressed earth block or compressed soil block, is a building material made primarily from damp soil compressed at high pressure to form blocks. Compressed earth blocks use a mechanical press to form blocks out of an appropriate mix of fairly dry inorganic subsoil, non-expansive clay and aggregate. If the blocks are stabilized with a chemical binder such as Portland cement they are called **Compressed Stabilized Earth Block (CSEB)** or **Stabilized Earth Block (SEB)**.

Bricks made of CSEB are highly durable, requires less maintenance. Manufacturing of these bricks could be undertaken in areas after conducting the required soil test of the site.

Fly ash bricks manufacturing unit / CSEB bricks manufacturing units can be set up in convergence with MGNREGS, the Village Panchayat and VPRC/PLF functioning under TNSRLM.

2. Convergence activities under MGNREGS

2.1. Fly ash bricks manufacturing under MGNREGS convergence

The Fly ash manufacturing unit can be run by the VPRC/PLF by engaging the MGNREGS workers. The Tamil Nadu Corporation of Development of Women would allot an amount of Rs.10 lakh to the VPRC/PLF as an exclusive project for fly ash unit over and above the regular projects.

The raw materials required for fly ash bricks are Fly ash, cement, sand and blue metal crusher powder. Fly ash bricks proposed under MGNREGS should be preferably larger in size (38 x 20x 11 cm) than the normal burnt bricks (23 x 11 x 7 cm). Fly ash bricks are lighter and their compressive strength is around 80-85 Kg/Sqcm.

The following are the advantages of Fly ash bricks:

- i. They are better alternatives to burnt clay bricks by virtue of their good durability, fire resistance, partial resistance to sound, thermal insulation and small dead load.
- ii. Normally 440 bricks of size (23 x 11 x 7 cm) are required in case of normal burnt bricks whereas only 120 Fly ash bricks of size

(38 x 20x 11 cm) are sufficient for construction of IHHL. Since they are larger in size, less mortar is required and faster construction is achieved.

iii. Plastering is not required for the walls constructed using Fly ash bricks and the cost of plastering should be savings for the beneficiaries.

iv. Cost Analysis:

Sl. No	Description	Using Normal Clay burnt bricks	Using Fly ash Bricks	Savings (in Rs)
1	IHHL			
	1)Bricks	440 Nos(23 x 11 x7cm) @Rs.4.73/- (SoR)= Rs.2081	120 Nos(38 x 20 x11cm) @ Rs.12/- =Rs.1440	641
	2)Plastering for walls	Rs.1200	Not Required	1200
			Total	1841
2	IAY			
	1)Bricks	7400Nos(23 x 11 x7cm) @Rs.4.73/- (SoR)= Rs.35002	2500Nos(38 x 20 x11cm) @ Rs.12/- =Rs.30000	5002
	2)Plastering for walls	Rs.9500	Not Required	9500
			Total	14502

The following are the requirements for establishing the unit:

S. No.	Requirements	Approximate cost	In convergence with
I. Capital Cost			
A. Infrastructure			
1	Land (0.50 Acre or 20000 Sq.ft.)	Govt. / Panchayat Poramboke land	Village Panchayat
2	Covered Shed	Rs.2.00 lakhs	Village Panchayat
3	Concrete Platform (15m x 15m)	Rs.3.00 lakhs	Village Panchayat
4	Borewell with EB connection (1 HP motor)	Rs.1.20 lakhs	Village Panchayat
	Total	Rs.6.20 lakhs	
B. Machinery & Equipments			
5	Hydraulically operated concrete block making machine with quadruple (4) vibrators: hydraulic system – 5 HP, Mould vibrators – 5 HP, Ram vibrators – 3 HP, (1.5 HP – 2 Nos.) Travel motor – 1 HP	Rs.3.25 lakhs	VPRC/PLF Fund
6	Concrete mixer : 10/7 cft with 5 HP motor, hydraulic hopper and road wheels	Rs.2.00 lakhs	
7	Water dosing pump	Rs.0.30 lakhs	

8	Ram and mould for blocks - 4 sets	Rs.1.00 lakhs	
9	Wheel borrows with pneumatic wheels - 2 Nos.	Rs.0.20 lakhs	
Total		Rs.6.75 lakhs	
Total Capital Cost		Rs.12.95 lakhs	

The working capital cost is detailed in **Annexure-I**.

As per the Annexure-I, 10 numbers of MGNREGS labourers working for 7 hours a day can produce 1000 numbers of Fly ash bricks of size 38 x 20 x 11 cm. The cost of one brick works out to **Rs.11.58 (i.e. Material cost Rs.9.55 and Labour cost Rs.2.03)**.

Since the labour involved is met from MGNREGS funds this may be not accounted for in the manufacturing cost of the brick. Hence, the manufacturing cost of the block will be **Rs.9.55/Brick**.

Considering the manufacturing cost as Rs.9.55/brick of size 38 x 20 x 11 cm and the fact that the work is undertaken with the help of VPRC/PLF members who shall maintain the balance sheet for the works undertaken, the sale price of one brick may be fixed as **Rs.12.00/brick** after accounting for profit and wastage.

The annual incremental increase, if any, shall be done by DRD&PR in consultation with Secretary, RD&PR.

2.2. Compressed Stabilized Earth Block (CSEB)

CSEB are a mix of soil, sand, a stabilizer (often 5% of cement), and water. CSEB are compressed in a press (manual or motorised) and cured for 28 days. CSEB can reach a dry compressive strength of 92 Kg/sq.cm. Top soil is removed and only the deeper soil is extracted for the production of CSEBs.

2.2.1. Advantages

- The production of CSEBs can be made close to the worksite, thus, saving transportation, fuel costs and time.
- CSEB blocks requires minimum maintenance and they provide good thermal comfort
- Plastering is not required for the walls constructed using CSEBs and they also provide aesthetic wall finish.
- The cost of Bricks is more or less same as Normal clay burnt bricks as per SoR. The cost

involved in plastering would be savings for the beneficiaries.

Cost Analysis:

Sl. No	Description	Using Normal Clay bricks	Using CSEB Bricks	Savings (in Rs)
1	IHHL			
	Plastering for walls	Rs.1200	Not Required	1200
			Total	1200
2	IAY			
	Plastering for walls	Rs.9500	Not Required	9500
			Total	9500

- The CSEBs are sun dried and no heating is required thus saving trees.
- As the technology is simple, even unskilled workers will be able to learn the block making process and can start production in few weeks.
- CSEB is one of the most environment friendly alternatives for wall construction.

2.2.2. Requirements for the establishment of CSEB production unit

2.2.2.1.1. Identification of source for soil

The foremost important thing for the establishment of CSEB is the identification of the correct type of soil. Not every soil is suitable for making of CSEB blocks. The **ideal soil** for making of CSEB blocks should contain **Sand-50%, Gravel-15%, Silt-15% and Clay-20%**.

Normally red soil is preferred for the production of CSEB blocks. It is predominantly found in many districts. The Districts may identify such red soil available in the blocks and send the sample for laboratory test at Auroville to find the suitability of the soil for setting up of CSEB unit.

Top soil (upto 1') and organic soil must not be used. The type of stabilisation required shall be decided based on the grain size distribution of the soil. Cement stabilization will be better for sandy soils. Lime stabilization will be better suited for clayey soils. As far as possible, the earth should be sourced

nearer to the production unit so as to avoid the high cost of transportation of the soil.

2.2.2.2. Setting up of Block yard

A block making yard may preferably be of size 25 m X 5 m (1345 sq.ft) consisting of block making area and drying yard. It shall also contain required water supply arrangements through bore well or other source, Machineries, Electricity etc. The block yard should be such that the transportation of raw material is minimized as far as possible. Block yard should be as close as possible to the site of work.

2.2.2.3. Machinery

The Manual Earth Construction Equipment (AURAM Press 3000) has been specially developed by the Institute of Earth Science, Auroville. This machine is capable of producing around 1500 blocks in 7 hours.

2.2.3. Labour Required

There are about 6 stages involved in the production of CSEBs and the same has been indicated below along with the number of labourers required for each stage:

Sl.No	Stage	No.of labourers required
1	Preparation (Sieving)	4
2	Measuring	1
3	Mixing (dry+wet)	2
4	Pressing	3 (Skilled)
5	Initial curing and first stacking	1
6	Final curing and stacking	2
Total		13

Thus, 11 to 13 MGNREGS labourers would be required to one phase of manufacture of CSEB and 1500 blocks can be manufactured in one day.

2.2.4. Cost of Establishment of CSEB Block yard

Sl. No.	Requirements	Approximate Cost (Rs.)	Responsibility/ Source of Funds
I. Capital Cost			
A. Infrastructure			
1.	Land (0.25 acre) (10890 sq.ft)	Govt./Panchayat /Poramboke	Village Panchayat
2.	Covered Shed	1,00,000	Village Panchayat GF or Scheme funds
3.	Concrete Platform(15m x 5m)	1,00,000	
4.	Borewell with EB connection (1HP motor)	1,20,000	
	Total	3,20,000	
B. Machinery & Equipments			
5.	Manual Earth Construction Equipment (AURAM Press 3000)	1,65,000	MGNREGS Material Component
6.	Wheel Barrows/Sieves	60,000	
7.	Hand Tools/Small Equipment/Plastic sheets	30,000	
	Total	2,55,000	
	Total Capital Cost	5,75,000	

The working capital cost is detailed in **Annexure-II**.

As per the Annexure-II, 10 numbers of unskilled MGNREGS labourers at the rate of Rs.203 per day and 3 numbers of skilled labourers at the rate of Rs.404 per day working for 7 hours a day can produce 1500 blocks of size 24 x 11.5 x 9 cm. The cost of one block works out to **Rs.6.13 (i.e. Material cost Rs.3.96 , unskilled Labour cost Rs.1.36 and Skilled Labour Rs.0.81)**.

Since the labour involved is met from MGNREGS funds this may be not accounted for in the manufacturing cost of the block. Hence, the manufacturing cost of the block will be **Rs.3.96/Block**.

Considering the manufacturing cost as Rs.3.96/block and the fact that the work is undertaken with the help of VPRC/PLF members who shall maintain the balance sheet for the works undertaken, the sale price of one block may be fixed as **Rs.5.00/block** after accounting for profit and wastage.

The annual incremental increase, if any, shall be done by DRD&PR in consultation with Secretary, RD&PR.

3. Responsibilities of Stakeholders:

For smooth functioning of the unit, an agreement can be signed by fixing the responsibilities of VPRC/PLF, Village Panchayat and Block Development Officer jointly. The responsibilities of stake holders are provided below:

3.1. Responsibilities of Village Panchayat President:

- i. Un-objectionable Government Poramboke land or Village Panchayat Poramboke land can be identified for establishing the Fly ash/CSEB unit.
- ii. The basic infrastructure facilities such as Covered shed, Cement Concrete Platform, Borewell with motor, Approach road can be provided by the Village Panchayat.

3.2. Responsibilities of VPRC/PLF

- i. A separate Current Bank account should be opened and all transactions should be carried out through banking.
- ii. A separate ledger can be maintained for procurement of Raw materials, Expenditure and sale of Fly ash/CSEB Blocks.
- iii. Electricity charges and other administrative expenses can be maintained in this account.
- iv. The treasurer of VPRC/PLF should maintain the accounts and all transactions.
- v. Repayment of Bank loan should be made from this account in instalments as per bank schedule.
- vi. The net profit will be calculated every month and proper accounts to be maintained. The dividend can be shared among the members of the VPRC/PLF by the end of the year.

3.3. Responsibilities of Block Development Officer (VP):

- i. The Block Development Officer should periodically monitor the Fly ash/CSEB unit and facilitates smooth functioning of the unit.
- ii. Convening of Periodical meeting of VPRC/PLF and proper account maintenance should be monitored.
- iii. The sale of Fly ash/CSEB blocks for IHHL construction should be arranged.
- iv. Technical advice needed for the effective monitoring of the unit should be provided or arranged by the BDO(VP).

4. Non-Negotiables for Brick Manufacturing:

- The entire quantity of brick production should be supplied only for IHHL construction and Government sponsored Housing Schemes at a concessional rate.
- The site for setting up of the respective production units may be decided by the District Collectors and Project Directors, DRDA after assessing the suitability of the place.
- The District Collector and Project Director, DRDA shall facilitate the permission for extracting the earth and other raw materials as per the Mines and Minerals Act with the assistance of Assistant Director (Mines).
- The PO (Mathi) shall identify suitable VPRC/PLF Federations to run the units.
- Identification of land and Skill training to the VPRC & technical officials shall precede the setting up of the Brick unit.

5. Execution of work

- i. The Village Panchayat shall be the implementing agency.
- ii. Nominal Muster Roll will be issued by the President of the Village Panchayat.
- iii. Measurement of works for the purpose of weekly payment of wages to workers shall be done by the Overseer of Rural Development and Panchayat Raj Department.
- iv. Processing of bills and issue of Fund Release Order shall be done by the Block Development Officer (Village Panchayat) through e-FMS.

6. Online reporting:

All works taken up should be entered in MIS (www.nrega.nic.in) and properly monitored as is being undertaken for all other MGNREGS Works.

7. Audit:

All the expenditure incurred towards Brick making undertaken under Mahatma Gandhi National Rural Employment Guarantee Scheme shall be brought under Social Audit and this shall be done through Social Audit Society of Tamil Nadu.

8. Documentation:

Proper documentation should be done pertaining to the Brick making undertaken under Mahatma Gandhi National Rural Employment Guarantee Scheme. Photographs of the site before undertaking the work, during execution and after execution should be taken and properly documented under the Assets

Register maintained for Mahatma Gandhi National Rural Employment Guarantee Scheme in every Village Panchayat.

The Director, Rural Development and Panchayat Raj is empowered to modify these guidelines, whenever necessary, in consultation with the Secretary, Rural Development and Panchayat Raj Department from time to time.

HANS RAJ VERMA
PRINCIPAL SECRETARY TO GOVERNMENT

//True Copy//


SECTION OFFICER

**Annexure-I to G.O. (Ms) No.93, RD&PR.,(CGS.1) Dept.
dated 8.08.2016**

Details of Production Cost of Fly ash bricks

Working Capital Cost

10 numbers of MGNREGS labourers working for 7 hours a day can produce 1000 numbers of Fly ash bricks of size 38 x 20 x 11 cm. Hence, the cost of material and labour required for producing 1000 Fly ash bricks is detailed below:

For Production of 1000 Fly ash bricks:

S. No.	Raw material	Qty	Rate in Rs.
1	Cement (@ Rs.400/bag)	15.69 bag	6276.00
2	Fly Ash (transportation cost only @ Rs.545/Cu.m)	2.36 Cu.m	1286.00
3	Blue Metal Crusher Powder (@ Rs.368/Cu.m)	1.48 Cu.m.	545.00
4	Sand (@ Rs.1400/Cu.m)	0.45 Cu.m.	630.00
5	Electricity	127 Units	818.00
6	Labourer* (@ Rs.203)	10	2030.00
	Total		11585.00

Note: Additional cost will be involved depending on the distance between the source of Fly ash & other raw material required for the brick making unit.

***The cost of labour shall be met by utilizing MGNREGS labourers @ 10 mandays per day (i.e 10 nos @Rs.203/-).**

Production cost of one brick (Rs.11585/1000)	Rs.11.58
Since the labour involved is met from MGNREGS funds this may be not accounted for in the manufacturing cost of the block. Hence, the Production cost of one brick (Rs.9555 / 1000)	Rs.9.55
Selling cost per brick	Rs.12.00
Net profit per brick	Rs.2.45
No.of bricks produced per day	1000 Nos.
Selling cost for 1000 bricks (1000 bricks x Rs.12.00)	Rs.12, 000.00
Production cost for 1000 bricks	Rs. 9,550.00

Net profit per day (1000 bricks x Rs.2.45)		Rs. 2,450.00
Working Capital required for VPRC/PLF		
No.of bricks produced for a month (25 working days)		25000 Nos.
Production cost for 25000 bricks x Rs.9.55		Rs. 2, 38,750.00
Working capital required for a month to run the unit		Rs.3.00 lakh (approximately)

HANS RAJ VERMA
PRINCIPAL SECRETARY TO GOVERNMENT

//True Copy//

K. Saravanan

SECTION OFFICER

**Annexure – II to G.O. (Ms) No.93, Rural Development
and Panchayat Raj (CGS.1) Dept. dated 8.08.2016
Details of Production Cost of CSEB Blocks**

Working Capital Cost

10 numbers of unskilled MGNREGS labourers at the rate of Rs.203 per day and 3 numbers of skilled labourers at the rate of Rs.404 per day working for 7 hours a day can produce 1500 blocks of size 24 x 11.5 x 9 cm. Hence, the cost of material and labour required for producing 1500 CSEB blocks is detailed below:

For Production of 1500 CSEB blocks:

S. No.	Raw material	Qty	Rate in Rs.
1	Sand (@ Rs.1400)	1.43 Cu.m	2002.00
2	Cement (@ Rs.400)	9.62 bag	3848.00
3	Soil*	5.78 Cu.m	
4	Electricity		100.00
4	Labourer**		3242.00
Total			9192.00

Note: Additional cost will be involved depending on the distance between the source of earth & sand and the block making yard.

*** The soil excavated from tanks/ponds/ooranies under MGNREGS shall be utilised for the production of blocks and hence, the cost of this need not be accounted for separately.**

****The cost of labour shall be met by utilizing MGNREGS labourers @ 10 unskilled mandays per day (i.e 10 nos @Rs.203/-) and 3 skilled mandays @ Rs.404 per day (i.e 3 nos @Rs.404/-)**

Production cost of one block (Rs.9192/1500)		Rs.6.13
Since the labour involved is met from MGNREGS funds this may be not accounted for in the manufacturing cost of the block. Hence, the Production cost of one block (Rs.5950 / 1500)	-	Rs.3.96
Selling cost per block	-	Rs.5.00
Net profit per block	-	Rs.1.04
No.of blocks produced per day	-	1500 Nos.
Selling cost for 1500 blocks (1500 bricks x Rs.5.00)	-	Rs.7, 500.00
Production cost for 1500 blocks	-	Rs. 5,940.00
Net profit per day (1500 blocks x Rs.1.04)	-	Rs. 1,560.00
Working Capital required for VPRC/PLF		
No.of blocks produced for a month (25 working days)	-	37500 Nos.
Production cost for 37500 blocks x Rs.3.96	-	Rs. 1, 48,500.00
Working capital required for a month to run the unit	-	Rs.1.50 lakh (approximately)

HANS RAJ VERMA
PRINCIPAL SECRETARY TO GOVERNMENT

//True Copy//


SECTION OFFICER