

Minutes of Focused Group Discussion on “Use of Resource Efficient Bricks in Construction sector” (held at TERI, Southern Regional Centre, Bangalore on 26th November 2010)

The purpose of the focused group discussion was to engage key stakeholder groups *viz.* public sector organizations, architects, builders and brick kiln entrepreneurs to raise awareness and enhance uptake of resource efficient bricks (REBs) in southern India. At the outset, Mr Pronab Dasgupta, Senior Advisor & Director, TERI-Southern Regional Centre welcomed the participants. Mr Monnanda Appaiah, Managing Director, Wienerberger Brick Industry Pvt. Ltd., Bangalore in his introductory remarks emphasized the importance of energy efficiency in the brick industry. He shared his observation on how clay building material was losing importance to other materials such as concrete. He mentioned that the brick industry needs process improvements and product designs and described the challenge for light-weight perforated products to reach the consumers. He further added that Wienerberger has plans to expand its marketing efforts from South to Northern parts of India.

After brief introduction of the participants (see **Annexure 1** for agenda and **Annexure 2** for list of participants), Mr N Vasudevan, Fellow, TERI made a detailed presentation about the UNDP-GEF project in Indian brick sector – objective and activities undertaken by the project. During his presentation he emphasized on the need for alternate methods of brick production and the need for better drying under shed, open air and artificial drying. He mentioned that a change in the drying mechanism will make change in the operating practices and some of the futuristic interventions include use of tunnel kiln, round-the-year production etc.

Mr Kundan Dhige, Manager – Product Development, Wienerberger presented about their market interventions in India and briefed about the opportunities for market potential for REB products. He emphasized the fact that for all stakeholders should work together to bring about change in the brick industry. He mentioned that the current production capacity of Wienerberger’s Kunigal unit is 40,000 per day. He provided a comparison between concrete blocks and REBs such as cost savings and thermal comfort factors (e.g. U-value). Mr Dhige further informed about the “Training Centre” and “testing facility centre” for clay and the products that are available at its Kunigal facility.

A set of questions was flagged off to the audience for initiating discussions. These included:

- Have REBs been included in the departmental specifications?
- If these are not included, are you interested to include these in departmental specifications?
- Procedure for inclusion of these products in the departmental specifications
- Architects and Builders: Are you currently using REBs? What are the challenges and issues in this regard?

- Steps you would recommend to project for promotion of these products
- What kind of support of policy interventions do you envisage that can promote sustainable use of REBs in India

The moderated discussion session followed, initiated by the inputs from architects as the lead discussants. They include Mr Anand Prakash, Mr Sathya Prakash Varanashi, Mr K S Chetan, Mr K Jaisim and Mr B Shahshi Bhooshan, who are prominent architects in Karnataka.

Salient discussion points

Introduction of REBs in the Indian market

The group agreed that REBs provide several benefits which include (1) energy saving opportunities (2) saving of mortar in construction using REBs, and (3) higher possibilities to reuse of REBs from old/ demolished buildings due to their better physical properties thereby reduction in wastage. It was pointed out that the exiting gaps between the construction sector and the brick industry need to be matched. It was felt that there is a need to diversify the existing set up to produce different types of products that would help in optimizing the construction procedures e.g. jolly block, taper block, U-block etc.

Some of the key important features emphasized during the discussions include structural safety, training and certification of masons to handle REBs, etc. It was further pointed out that aspects such as structural uniformity, ageing of bricks, etc need to be taken care while producing REBs. From the view point of end-users, these products should be resistant to exposure to sun and water. Better construction practices such as none or minimum use of plastering and painting would further help in reducing the construction costs. An example provided was the use of Porotherm blocks in Kerala that are already being used and exposed to varying weather conditions.

The involvement of brick kiln entrepreneurs in REB production would further help in ensuring supply of a variety of REB products that would meet the market requirements which would further complement the innovative approach/ design of architects. Representatives of brick kiln entrepreneurs elaborated their efforts in building awareness and adopting technologies. These include the recent visit to an international exhibition held in Jaipur, Rajasthan in November 2010 by a group of brick kiln entrepreneurs. Few of these entrepreneurs have installed machineries and started producing REB blocks on experimental basis. A strong market for these products would help in building confidence level among them and establish commercial production.

Wienerberger mentioned that there was a 10% increase in their sales and mentioned that the major challenge lies at the supply end from clay brick manufacturers. While the group voiced

their concern about the shortage of supply of hollow bricks, they agreed that production of large volumes of these new products will definitely have an implication on their costs. However, to create and sustain the market, the costs of REBs must be competitive with conventional solid bricks. This would help in market penetration as well as to establish REBs as eco-friendly product with better aesthetic value.

Increased use of REBs

The major task put forth to the stakeholders was the challenge to bridge the gap between supply and demand situation. The architect community felt that more manufacturers should come forward for consistent supply of REBs that would help in establishing a competitive environment. Use of different types of REBs and adopting better construction practices would help in minimizing wastage during plumbing and electrical works. Pre-planning for constructing may become pre-requisite for this purpose. Availability of a user-friendly manual on construction practices with REBs would further motivate the builders. A manual can be prepared to cater this need which may comprise various aspects of REB production, utilization and incorporate details on semi mechanisation, drying, firing schemes, testing and construction practices. Masons in India are mainly exposed to work with solid bricks/ concrete blocks. Training of masons would enable them to use REBs efficiently. Wienerberger expressed their willingness to provide their training centre at Kunigal for the purpose training and the project would coordinate this activity.

Next steps

The following points emerged out that will be included by the project that would help in creating market for REBs.

- TERI would work along with key architects in bringing out a user-friendly manual on construction practices using REBs.
- As training of masons was considered critical in taking forward the initiative, TERI will work closely with Wienerberger on training of masons.
- TERI will facilitate a platform for networking with brick suppliers and builders.

Agenda



Focused Group Discussion on Use of resource efficient bricks in construction sector

Date: November 26, 2010 (10:30 AM to 01:00 PM)

**Venue: TERI, Southern Regional Centre,
4th Main, Domlur II Stage, Bangalore-560071**

Agenda

10:30 AM – 10:50 AM	<ul style="list-style-type: none"> • Welcome by Mr Pronab Dasgupta, Senior Advisor & Director, TERI-SRC • Introductory remarks by Mr Monnanda Appaiah, Managing Director, Wienerberger Brick Industry Pvt. Ltd. • Introduction of participants
10:50 AM – 11:10 AM	Background Presentation by Mr N Vasudevan, Fellow, TERI
11:10 AM – 11:30 AM	Marketing efforts of Wienerberger by Mr Kundan Dighe, Manager – Product Development, Wienerberger Brick Industry Pvt. Ltd.
11:30 AM – 12:50 PM	Focused Group Discussion (Moderated by TERI) <ul style="list-style-type: none"> • Flagging off discussion points • Inputs by Lead Discussants • Views and inputs of the Participants
12:50 PM – 12:55 PM	Summary and next steps by Mr Arupendra Nath Mullick, Research Associate, TERI
12:55 PM – 01:00 PM	Vote of thanks by Mr H S Satya Narayana Rao, Consultant for TERI brick initiative
01:00 PM onwards	Lunch

List of participants
(in alphabetical order as name of participant)

No.	Name	Organization & Address
1	Anand Prakash	Archi- technics Unit 202, 2nd floor, No.299 Landmark Plaza, Langford Road Akkithimmanahalli, Bangalore - 560 025
2	Babu (M Chandrashekar)	
3	Basivi Reddy	
4	Chetan K S	Kham Design Architecture - Interiors - Environmentalism No. 1, 1st Floor, Veena Kala Mandir Tata Silk Farm Circle, K.R. Road, Bangalore - 560 082
5	Girish P S	No.163, 3rd Main Road 4th Cross, Srinivasanagar Bangalore – 560 050
6	Jaisim K	Jaisim-Fountainhead 175/1, Pavilion Road Jayanagar East, 1st Block, Bangalore - 560 011
7	Jayabal K V	Sri Rahavendra Brick Works, Anitha Nilaya Old State Bank of Mysore Road Malur – 563 130, Kolar district
8	Kamanna K K	Maruthi Hollow Bricks Kolar Main Road, Doddkadathur Malur taluk – 563 130, Kolar district
9	Kumar R R	No.62/1, 6th Main, Opp. Canara Bank Road Mathikere, Bangalore – 560 054
10	Kundan Dighe	Wienerberger Brick Industry Pvt. Ltd
11	Manjunathappa M A	No.232, Ramanasree Nagar Kammanahalli Main Road Off. Bannerghatta Road Bangalore – 560 076
12	Manjunath M P	Malur Tiles & Bricks Jagadena Village Malur taluk – 563 130, Kolar district
13	Monnanda Appaiah	Wienerberger Brick Industry Pvt. Ltd
14	Nataraj G C	#3, 8th Cross, Shakthi Ganapathi Nagar 3rd Stage, 4th Block Basaveshwaranagar Bangalore 560 079
15	Paramesh N	Byraveshwara Brick Industries Nehru Extension Malur – 563 130, Kolar district
16	Raghava Reddy	Anjayneya Brick Works No.668, I D Main Road Domlur Layout Bangalore – 560 071
17	Ramakrishna N	N R Bricks & Tiles Guddahatty, Neralur Post Anekal Taluk, Pin 562 107

18	Ravi C E	Thirupathi Brick Works Masti Road, Malur, Kolar
19	Sathya Narayana Rao H S	Trident Ceramics Suchitra Villa 351, I Phase, 2nd "B" Cross V B H C, Girinagar, Bangalore - 560 085
20	Sathya Prakash Varanashi	Sathya Consultants 166, Kathriguppe Water Tank Road 4th Cross, 4th Block, 3rd Stage, Banashankari, Bangalore – 560 085
21	Satish P S	No. 187, 3rd Main 5th Cross, Srinivasanagar Bangalore – 560 050
22	Shahshi Bhooshan B	656 B, Fifth Cross Saraswathipuram Mysore 570 009
23	Shamanna	644, BSK IIIrd Stage Bangalore - 560 085
24	Shankarappa M V	S/o D Vellappa Srinidhi Hollow Bricks Dharmarayaswamy Temple Street Malur - 563 130, Kolar district
25	Srinivas C	Nehru Extension 2nd Main, Malur taluk – 563 130 Kolar district
26	Srinivas Murthy N	Sri Marikamba Tile WorksMalur
27	Srinivasa N	Vaishnavi Brick Industries No.208, 2n Main Road Mahalakshmi Layout, Near Saptagiri Kalyan Mantap, Bangalore 560 086
28	Srinivasa Reddy	
29	Venugopal Krishna H R	Managing Partner Sri Venkateshwara Bricks & Tiles Industry Malur Narasapur Road Hungenahalli ,Malur taluk Kolar district
30	Vijay Shankar C S	Padmanabhanagar
31	Vijayakumar S	Epsilon System Bangalore 560 078

Presentation by Mr N Vasudevan, Fellow, TERI