Red, Red Roofs

Posted on
The beautiful roof of this structure in the Tampita Vihara complex in Kurunagala is patterned with etched flat tiles.

There’s nothing more striking than a red tiled roof against white wall and blue skies.

Words Daleena Samara **| Photographs** Rasika Surasena

Kochchikade, north of Negombo, in Sri Lanka’s Western Province is home to a thriving roof tile industry. Smoky furnaces fired by wood can be seen everywhere, with workers, usually small, wiry and wizened, toiling with superhuman strength to make beautiful red clay tiles.

Much of the Island’s roofing tiles come from cottage industries here and in other parts of the Island, such as Katana, Waikkal, Muruthana, Gonawila, Katugampola, Wennappuwa, and Marawila. The clay tiles are one of the most becoming components of the traditional Sri Lankan architectural aesthetic, perfectly complimenting the standard simplicity and clean lines. White walls are common and ideal for the hot tropical climate and what better to set them off than a rustic earthen roof against a brilliant blue tropical sky.

Sri Lanka’s tradition of clay-tiled roofing has been around for millenia. Professor Malinga Amarasinghe of the Department of Archeology of the University of Kelaniya, says archeological evidence of clay roof tiling goes back to Third Century BC. Frequent references to the “*ulu waduwa*” (tile maker) in the historical chronicle, the Mahawamsa, indicate that clay tile making was common back then. Clay roof tiling appeared in the country after the advent of Buddhism, most probably imported from India. It was quickly adopted as the roofing of abodes of the ruling classes, state officials and religious establishments. The abundance of aluvial deposits on riverbeds across the country made it eminently suitable for local production, adding to the list of clay industries such as pottery and brick making.

The first tiles were extraordinarily hardy, says Professor Amarasinghe. Archeological digs have discovered intact tiles of a quality and strength hard to match today. The ancient *ulu waduwas* were masters of the craft. The glaze that they used on tiles

retains a sheen to this date. They would glaze the tiles not only for beauty but to allow the rain to wash over them instead of getting absorbed into the clay and weakening the tile. Archeologists have still to decipher the technology used for such durable tiling and glazing.

The first indigenous clay roofing tiles were flat, called *pethi ulu* or Kandyan tiles. They was used extensively in the ancient capitals. In the 1500s, the Portuguese introduced the half circle tile, which became known as *Sinhala ulu*. This tile was further popularised by the Dutch who colonised parts of the country from 1640 to 1796. It is commonly seen on the roofing of various colonial-era buildings even today.

Today, a variety of modern tile shapes exist, the most common being *rata ulu*, a flat variety, and ridged tiles. The local tiling industry continues to operate using traditional technology to handmake tiles. A visit to a clay tile factory will leave you startled and even humbled when witnessing the extreme labour that goes into creating the rustic slabs that top our homes. We visited entrepreneur couple Anthony and Rita in Muruthana, Kochchikade, who founded a small tile-making business three decades ago. The arduous earth-to-roofing journey of their handmade *rata ulu* is something few builders or homeowners may realise.

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Thirty years ago, their key resource, *kiri matti*, was available across the Island, including in Muruthana. Today, environmental conservation legislation has restricted the harvesting of clay deposits and so they buy the more easily available red clay from contractors who deliver it to their factory by the lorry load. The industry is also facing a shortage of hands because the young generation is reluctant to take up such heavy manual work.

Processing a fresh order of tiles literally begins with a mudbath. The men loosen the huge mound of mud with shovels and mix it with a little water, stomping on the clay in a process called *matti paganawa* (trampling on clay). They work in sarong or shorts, often barebodied and barefoot, expending much energy as they stamp down on the soft earth, mixing it to just the right quantity of water. Then the women transport the pile, a bowlful at a time balanced on their heads, to a filtering

machine. The soil is then sifted to remove stones and any other debris, and processed into slabs of pure ochre clay, each the size of a tile.

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The slabs are treated with grease and placed in the tile press, where they take the requisite shape. Anthony says that there is high demand for *rata ulu* and ridged tiles, but rarely for any other style. Once pressed, the wet tile is yet again collected by the women workers who place them on wooden boards and carefully correct any flaws, especially on the edges, by hand. With decades of experience behind them, these workers are deft and skilled at what they do.

The boards bearing the wet tiles are then loaded onto wheel barrows and transported to a drying chamber where they are placed on racks and left to dry for about five days. The duration for drying depends on the weather. On rainy days, it may take up to a week or more. This is an important step because tiles that have not dried completely crack when fired.

The dry tiles are then stacked inside the kiln, which has a capacity of 14,500 tiles per firing. Once stacked, the doorways are bricked up and sealed. The tiles are fired in two stages. In the first, *dumadameema* (smoking), they are heated with low fires made of wood shavings and dry coconut husks for about five days. Then they are fired for about thirty hours at very high temperatures using log fires. Thereafter, the fires are extinguished and the tiles are left to cool for about two days. Opening the kiln up before this will cause the tiles to crack. A small hole is made at the bottom of the bricked up doorway and a metal rod of about twelve feet is passed into the kiln to test their readiness. Any signs of moisture indicate that more drying is required. When they are ready, the brick sealing is dismantled incrementally, allowing gradual entry to cool air. This too prevents the tiles from cracking.

The files are then graded. Grade 1 are perfect specimens, Grade 2 are those with slight chips, Grade 3 are cracked, and Grade 4 are the rejects. Only Grades 1 and 2 are sold, the latter for a lower price and usually used for the construction of walls and landscaping. Grade 4 is crushed and sometimes used in concrete mixtures. Anthony says that there are very few cracked or rejected tiles.

Tilemakers like Anthony and Rita say demand for clay tiles has dropped because of the ready availability of asbestos roofing, which though banned overseas prevails in the country. Nevertheless they keep alive a proud roofing tradition, their hands giving homes a touch of history and character.

